

**EFFECT OF INTERNATIONAL FINANCIAL REPORTING STANDARDS  
ADOPTION ON VALUE RELEVANCE OF ACCOUNTING  
INFORMATION OF NIGERIAN LISTED FIRMS**

**MUYIWA EZEKIEL ALADE**

**DOCTOR OF PHILOSOPHY**

**(Accounting)**

**JOMO KENYATTA UNIVERSITY OF  
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**Effect of International Financial Reporting Standards Adoption on Value  
Relevance of Accounting Information of Nigerian Listed Firms**

**Muyiwa Ezekiel Alade**

**A thesis submitted in partial fulfilment for the degree of Doctor of Philosophy in  
Accounting in the Jomo Kenyatta University of Agriculture and Technology**

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**DECLARATION**

This thesis is my original work and has not been presented for a degree in any other University.

Signature:.....

Date:.....

**Muyiwa Ezekiel Alade**

This thesis has been submitted for examination with our approval as the University supervisors.

Signature:.....

Date:.....

**Dr. Tobias Olweny, PhD**

**JKUAT, Kenya.**

Signature:.....

Date:.....

**Dr. Oluoch Oluoch, PhD**

**JKUAT, Kenya.**

## **DEDICATION**

I dedicate this Thesis to the Almighty God, my wife and children.

## **ACKNOWLEDGEMENT**

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## **ACRONYMS**

<b>ADF</b>	Augmented Dickey Fuller
<b>BVPS</b>	Book Value of Equity per Share
<b>CAMA</b>	Companies and Allied Matters Act
<b>CFOPS</b>	Cash Flows from Operation per Share
<b>CINDEX</b>	Compliance Index
<b>CoV</b>	Coefficient of Variation
<b>EPS</b>	Earnings per Share
<b>EMH</b>	Efficient Market Hypothesis
<b>FAS</b>	Financial Accounting Standards
<b>FASB</b>	Financial Accounting Standards Board
<b>FRCN</b>	Financial Reporting Council of Nigeria
<b>FTSE</b>	Financial Times Stock Exchange
<b>GAAP</b>	Generally Accepted Accounting Principles
<b>HAC</b>	Heteroscedasticity and Autocorrelation
<b>IAS</b>	International Accounting Standards
<b>IASB</b>	International Accounting Standards Board
<b>ICAN</b>	Institute of Chartered Accountants of Nigeria
<b>IFC</b>	International Finance Corporation
<b>IFRIC</b>	International Financial Reporting Interpretation Committee

<b>IFRS</b>	International Financial Reporting Standards
<b>Ln</b>	Natural Logarithm
<b>MSCI</b>	Morgan Stanley Capital International
<b>NAPS</b>	Net Assets per Share
<b>NASB</b>	Nigeria Accounting Standard Board
<b>NSE</b>	Nigeria Stock Exchange
<b>OLS</b>	Ordinary Least Square
<b>RWH</b>	Random Walk Hypothesis
<b>SAS</b>	Statement of Accounting Standards
<b>SEC</b>	Securities and Exchange Commission
<b>SIC</b>	Standard Interpretation Committee
<b>SP</b>	Share Price
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>VR</b>	Value Relevance

## **DEFINITION OF KEY TERMS**

**Accounting Information:** These are financial (quantitative) and qualitative (non-financial) information shown on the financial statements and its notes, reflecting the structure and dynamics of the company's wealth, financial position and results which can inform various users' economic decision making functions (Scorte, Cozma & Rus, 2009).

**Book Value of Equity:** is the balance sheet (now known as statement of financial position) measure of net assets that generate earnings (Penman, 1998). It is the difference between total assets (current and non-current) and total liability (current and non-current).

**Cash flows from Operation:** This refers to cash inflows or cash outflows arising in normal trading activities – that is cash flows derived primarily from principal revenue-generating activities of the entity, (ICAN, 2014). It is general cash effects of the main operational transactions and other events that enter into the determination of net income.

**Earnings:** This is the income statement measure of returns from net assets (Penman, 1998). It is determined as net profit after tax and other charges, attributable to ordinary shareholders at the financial year-end.

**Financial Statements:** These are structured representation of the financial position and performance of an entity, intended to meet needs of diverse users who are not in a position to require an entity to prepare reports tailored to their particular needs (IASB, 2010). Contents of the statement includes income statements; balance sheet; cash flows

statement; value added statement; notes to the accounting; five years financial summary; statement of accounting policies and group financial statement in case of holding company (CAMA, 2004).

**International Financial Reporting Standards:** These are global generally accepted principles based accounting standards intended to be observed by reporting corporate entities as a common accounting language across international boundaries so that financial statements can be transparent, understandable and comparable across nations (Chiang, 2013).

**Local GAAP:** This refers to national or regional (rule) based generally accepted accounting principles or accounting frameworks expected to be observed by all concerned reporting corporate entities within that jurisdiction (Ramanna & Sletten, 2009).

**Stock Market Value:** This is the present value of net financial assets plus present value of all future free cash flows operating activities of a listed company (Feltham and Ohlson 1995). It can also be expressed as price of a company's security arrived at through market forces at a point in time which investors see as the worth of the firm at that time (Oyerinde, 2011). The term is used interchangeably as market/stock/equity value or share price in this study.

**Value Relevance:** This is the ability of accounting information contained in the published financial statements to capture and summarise stock market prices which can also be measured through statistical association between the accounting information and stock

market value and returns (Karđin, 2013; Vishnani & Shah, 2008).

## ABSTRACT

This study investigates effect of IFRS adoption on value relevance of accounting information issued by Nigerian listed firms with specific attention on bottom-line items of three contents of financial statement and level of compliance with the standard. Aside from rapid increase in adopting IFRS by several countries of the world due to its assumed intrinsic quality, studies have documented confounding empirical submissions regarding probable improved quality of accounting information issued based on accounting methods and principles of the standard. Thus, the position of stock market efficiency, and information asymmetry crusades by signalling theory become unclear especially from the Nigerian Stock Exchange (NSE) context where IFRS became mandatory for listed firms since 2012. Descriptive research design approach was adopted which is built on mixed research paradigm. Purposive sampling technique was used to draw sixty-nine sample firms from 128 targeted Nigerian quoted companies over a period of eight years (i.e. 2008 – 2015). The study relied on balanced panel data sourced from the NSE as well as audited annual financial reports of the quoted firms, and self-developed compliance index to assess the level of compliance with IFRS mandatory disclosure requirements. Panel least square regression based on modified Ohlson price valuation model was employed. Based on results of inferential statistics performed, the study rejects null hypothesis that there is no significant effect of IFRS adoption on value relevance and finds out that IFRS adoption has positive and significant effect on value relevance of income statement and financial position accounting information from the NSE. Nevertheless, there was no sufficient statistical evidence to reject the hypothesis that IFRS adoption has no significant influence on cash flows accounting data. The study also documented 91 percent level of compliance with IFRS by the Nigerian listed firms which is positively and significantly value relevant but more for low compliant firms. In addition, the study confirmed moderating influence of firm size and industry category factors on value relevance of the IFRS-based accounting data but more for large firm and financial industry. The findings provided empirical evidence based on Nigerian financial reporting environment with conclusion that IFRS is of higher quality and its accounting data are relatively and incrementally more value relevant than erstwhile Nigerian SAS. Consequently, IFRS adoption could reduce information asymmetry, improves market informational efficiency, reduces potential agency cost that could emanate from non-compliance with mandatory requirements of the standards, and enhances stakeholder interest. The study therefore recommends that listed firms should keep themselves updated periodically on improved knowledge of IFRS demands that could result in enhanced compliance especially by non-financial industry category. Stock markets regulators are also encouraged to structure out all-inclusive measures that engender improved compliance with IFRS by the listed firms. However, this study is not exhaustive as it is constrained by four-year post-adoption period examined, targeted listed firms and value relevance based accounting quality measure adopted. Hence, future studies should explore these areas.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

The fundamental drive for issuing accounting standards is to protect the interest of both shareholders and other stakeholders of the firms (Kasum, 2011). According to International Accounting Standards Board, IASB (2010), the main objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful (value relevant) to existing and potential investors, lenders and other creditors in making decisions about providing resources to the entity. Since the emergence of International Accounting Standards (IAS) in 1973, it has provided essential guidance and reference point for many issuers of local accounting standards, preparers and examiners of financial reports. This is aimed at providing support for capital market efficiency as a way of mitigating the effect of information asymmetry on value relevance (BoliBok, 2014; Kothari, 2000). Therefore, standardising financial reporting fundamental principles and methods which serves as guide for producing relevant and reliable accounting information is an indispensable regulatory framework. This is due to the fact that stock market participants desire high-quality accounting information to strengthen their confidence in the local or global stock markets (Nobes & Parker, 2008; Kothari, 2000).

Prior to the emergence of International Financial Reporting Standards (IFRS) in April 2001, corporate financial reporting system of many countries was subjected to country-based and/or regional-based accounting standards which might have evolved from IAS or United States Financial Accounting Standards (U.S. FAS). For instance, Nigerian listed firms were formerly required to prepare and present their financial reports in compliance with Nigerian Statement of Accounting Standards (SAS) which were drawn

from IAS until September 2010 when federal government of Nigeria issued a roadmap for convergence to IFRS (Edogbanya & Kamardin, 2014).

Over time, these (diverse) local accounting standards were characterised with frail update and disclosure demands due to globalisation and increasing complexity of financial reporting requirements (Muhammed & Lode, 2015; Umoren & Enang, 2015). The local Generally Accepted Accounting Principles (GAAPs) were also found of its inability to aid global capital market efficiency in terms of cross-border comparison especially in this era of global business integration (Paul & Burks, 2010; Nobes & Parker, 2008). Consequently, qualitative attributes of accounting information issued under divergent accounting standards are undermined thereby becoming irrelevant, unreliable and incomparable especially to foreign investors. Whereas, quality of accounting standards determines quality of the accounting information prepared and issued under it.

Prior research has shown that diverse accounting policies (*vis-à-vis* standards) imply different relevance of the consequential accounting information for investment decisions (Chalmers, Clinch & Godfrey, 2011). For instance, inventory valuation practices in major countries differ such as the use of cost (First-in First-out, Last-in First-out – LIFO or weighted average) by Japanese companies; lower of First-in First-out and net realizable value in the United Kingdom, and lower of LIFO and current replacement cost as common practice in the US (Nobes & Parker, 2008). Apparently countries under their economic influence usually adopt or adapt similar accounting methods. This disparity in accounting fundamentals results in different effects on accounting information such as earnings or book value of equity (Nobes & Parker, 2008). It therefore calls for need to harmonise accounting standards that would eliminate those contradictions and strengthen global capital market through improved and qualitative accounting information. This accounts for one of the key reasons for emergence of IFRS.



Since April 2001 when IFRS emerged, about 150 countries of the world had jettisoned their various local or regional standards in order to adopt or converge to IFRS (Umoren & Enang, 2015; Vázquez, Valdés & Herrera, 2007). In the opinion of Odia and Ogiedu (2013), and Daske, Hail, Leuz and Verdi (2008), introduction of IFRS for listed companies in many countries around the world is one of the most significant regulatory advancements in accounting history, which has also been ‘greeted’ with controversies (Armstrong, Barth & Riedl, 2010). However, adoption of IFRS is expected to enhance stock market efficiency through reduced information lop-sidedness (Cormier, 2013; Barth, 2008).

Increasing adoption of IFRS across the globe may be connected to benefits it offers. Some of the identified benefits of adopting IFRS in literature are, production of high quality financial reports (Barth, 2008); global economic and financial integration (Ramanna & Sletten, 2009; Hope, Jin & Kang, 2006); global capital market integration or cross-border listing (Ball, 2006; BoliBok, 2014; Karğın, 2013; Odia & Ogiedu, 2013); better comparability of financial reports (Barth, 2008, Flynn, 2008); accessibility to foreign direct investment (Gordon, Loeb & Zhu, 2012); decision useful financial reports among others. Most importantly to this study, empirical findings have suggested significant improvement in quality of accounting information issued under IFRS (Agyei-Mensah, 2013; Cormier, 2013; Daske *et al.*, 2008; Umoren & Enang, 2015). This is expected to have influence on value relevance of the IFRS-based accounting information made available by listed companies to participants in the stock markets.

However, according to Barth, Landsman and Lang (2008), and Wu, Koo and Kao (2005), IFRS adoption could improve accounting quality because the standards are principle-based accounting rules which are potentially more difficult to circumvent, eliminate certain accounting alternatives leading to reduction in managerial discretions. It also encourages the use of fair value accounting measurements which reflect underlying economics over local standards (Wu *et al.*, 2005). On the other hand, Barth *et*

*al.* (2008) enumerate further that accounting quality could be undermined through IFRS adoption as it lacks detailed implementation guidance and highly susceptible to the use of less appropriate accounting alternatives by the managers of the firms. This suggests importance and supportive roles of national accounting standards bodies along with well-established legal framework. All the same, the ideal and improved accounting standards are expected to ensure fundamental and enhanced qualitative characteristics of financial information.

According to Kothari (2000), there is a near harmony among regulators and investors in their quest for high-quality financial reporting due to widespread belief that the quality of financial reporting directly impacts capital markets. Therefore, IFRS can only improve quality of accounting information on which it is applied only if the accounting standard itself is of better quality than local standards. Meanwhile, Ahmed, Neel and Wang (2013) posit that, if IFRS is of higher quality than local accounting standards and is appropriately enforced, it should be expected that mandatory adoption of IFRS would improve accounting quality, thereby making it more value relevant. Thus, qualitative attribute of IFRS is sequestered in its ability to furnish capital markets' participants (or investors) with better useful (value relevant) accounting information. However, Hellström (2006) stresses that, it is not only the quality of accounting standards (or policies) observed in preparation of accounting information that matters, but also the implementation of (and compliance with) the standards. Additionally, Hodgona, Tondkard, Harlessb and Adhikari (2008) submit that, the level of compliance with IFRS is as important as the standards itself.

Compliance with IFRS is part of disclosure research that seeks to examine the level or extent of firm's compliance with requirements of accounting standards as disclosed in the financial reports. It is generally measured in most of the extant literature with the use of compliance index – CINDEXTM (Ballas & Tzovas, 2010; Glaum & Street, 2003; Yiadom & Atsunyo, 2014). Thus, adequate compliance with IFRS could be expected to

drive value relevance of accounting information (Agyei-Mensah, 2013; Alfaraih, 2009; Alfaraih & Alanezi, 2015).

On the flipside, Hofstedt (1972) describes accounting information (figures or data) as quantitative, structured, formal, audited, numerical and past oriented material. Whereas, Jackson and Sawyers (2007) view it as quantitative and non-quantitative information of corporate entities used by diverse decision makers. It can therefore be opined that accounting information is a periodic financial and non-financial information of an entity, which enables its users to make well informed economic decision about the entity. This information presents all economic activities that the entity has undertaken within a reporting period by showing its state of financial performance and position among others. Participants in the stock market depend on the information as soon as it is made available in the market to make diverse economic choices. Accounting information prepared with due cognisance of high quality accounting standards is expected to assist investors' optimal investment decision which will consequently reflect on the firm's market value. Also, according to Barth *et al.* (2008) higher-quality accounting information does not only reveal less earnings management and more timely loss recognition but also higher value relevance of the earnings and book values of equity.

Existing empirical literature has put accounting information in diverse forms. In line with Ohlson (1995) price model, Alfaraih (2009), Clarkson, Hanna, Richardson and Thompson (2011), and Umoren and Enang (2015), present accounting information as book value of equity and earnings which represent corporate financial position and income statement's bottom-line information respectively. Camodeca, Almici and Brivio (2014), Nyabundi (2013), Omokhudu and Ibadin (2015) modify the model by including cash flows from operation and dividends. Thus, net income (earnings), book value of equity, and cash flows from operation among others have been used as proxy for accounting information in extant literature.

Income statement otherwise called profit and loss account or comprehensive income statement is one of the required financial statement contents that must be disclosed according to IAS 1. Prior studies have shown that some income statement's items such as operating income, net income, dividend, and earnings per share are relatively or incrementally value relevant, even after IFRS adoption (Karampinis & Hevas, 2009; Santos & Cavalcante, 2014; Chiha, Trabelsi & Hamza 2013). On the contrary, studies by Paananen (2008), Schielbel (2007), Tsalavoutas, André and Evans (2012) have shown that income statement information (net income) is neither not value relevant nor incrementally value relevant after IFRS adoption. In addition, statement of financial position and cash flows statement information (or items) that have been employed in prior studies include net assets (or book value of equity), cash flows from operation, and net cash flows among others (BoliBok, 2014; Omokhudu & Ibadin, 2015; Saaydah, 2012).

Literarily, value relevance is the ability of financial statements accounting information to capture information that is capable of influencing share value in the stock market (Barth, Beaver & Landsman, 2001; Karđin, 2013). Al-Hogail (2004) posits that, value relevance concept is all about how much of an entity's market value can be described by accounting information disclosed. According to Barth *et al.* (2001), test of value relevance is one approach to operationalise stated criteria of relevance and reliability (qualitative characteristics of accounting information) by the standards setters. Also, value relevance is one of the desirable attributes (or measures) of accounting quality (Francis, LaFond, Olsson & Schipper, 2004). Generally, etymology of value relevance study has been traced to Ball and Brown's (1968) seminar through which they argued that newly released useful accounting information will affect efficient capital market (BoliBok, 2014; Desoky & Mousa, 2014; Okafor, Anderson & Warsame, 2016). Nevertheless, the emergence and subsequent mandatory adoption of IFRS in Nigeria is assumed to have altered value relevance of accounting information issued by listed companies if IFRS is of better quality (or value) than former Nigerian local GAAP.

Prior to the adoption of IFRS, numerous extant literature have documented varying results of value relevance of accounting information (Chen, Chen & Su, 1999; Ghayoumi, Nayeri, Ansari & Raeesi, 2011; Hellström, 2006; Kwon, 2009). However, after the adoption of IFRS, there is a vast account of empirical findings on value relevance of accounting information (Alfraih & Alanezi, 2015; Agyei-Mensah, 2013; BoliBok 2014; Chalmers *et al.*, 2011; Kargın, 2013; Umoren & Enang, 2015). Their hardly congruent findings depend on individual study's focus and approach, information used, methodologies adopted, models employed and so on. Furthermore, value relevance can be studied in three ways which are relative, incremental and marginal association studies (Holthausen & Watts, 2001). Relative approach seeks to examine the relationship between share price or market capitalisations (or changes thereof) and alternative accounting figure. Incremental association explores how accounting figure of interest explains market value (or changes thereof), given other specified financial data, over a period of time. Marginal approach on the other hand investigates the relationship amid accounting data of interest and abnormal market capitalisation changes over a short period of time around the financial reporting data's publication date.

As a market-based accounting research, it becomes necessary to provide concise account of Nigeria Stock Exchange (NSE) historical status. NSE, like some other related developing or emerging economies' capital markets in Africa is ranked as frontier stock market (Dey, 2014; Financial Times Stock Exchange [FTSE] Group, 2015 September). On the contrary, Afego (2012), Adelegan (2004), Omokhudu and Ibadin (2015), and Magnusson and Wydick (2002) as well as few other stock market ranking groups address NSE and some other African stock markets as emerging markets. Regardless of bases that informed the ranking status of the stock market as well as other related emerging markets in Africa, the focus of this subsection is to concisely appraise the form of the NSE.

The stock market was established to create requisite facilities for corporate entities and government to raise funds for growth and development as well as platform for arbitrage of different securities through stockbrokers. According to Osaze (2007), and Olowe, Matthew and Fasina (2011), NSE was a product of Lagos Stock Exchange incorporated as Limited Liability Company in September 1960, through indigenization decree of 1977. The market has undergone several regulatory reforms in the past decades. Part of the reforms are; establishment of second-tier security market of the NSE in April 1985; incorporation of Central Securities Clearing System (CSCS) on July 29, 1992 as the official clearing and depositing of the NSE; listing of the first foreign stock, M-Net Supersport of South Africa in 1998 on the floor of NSE etc (Osaze, 2007).

In 1995, Nigerian federal government internationalised Nigerian capital market through abrogation of laws that restrained foreign investors from participating in the market. Business activities on the floor of NSE are jointly regulated by Nigerian Security and Exchange Commission (SEC) through Investment and Security Act 2007 and the NSE itself as self-regulatory body. It is the duty of the market regulators to ensure healthy, efficient and fair play in the market with regards to listing and post-listing requirements. Specifically, post-listing demands require listed firms to ensure timely release of their information to the stock market. Understanding that there is a list of NSE functions, the specific one to this study is to provide a central meeting place for members to buy and sell existing stocks and shares. This function is pivotally geared by each entity's idiosyncratic (certified) financial and non-financial information issued to the market periodically, and other macro-economic factors or information. This presupposes possible effect of any change in the fundamentals that are observed in the preparation of these accounting information on the ability of the accounting data to influence the market share values.

Regarding NSE operational performance so far, succinctly the market reached an all-time All Share Index (ASI) of 43,031.83 points in July 2014 and one of the top

performing exchanges globally in 2012 (Onyema, 2013). Being the second largest financial centre in sub-Saharan Africa, as at December 31 2015, the NSE (2016) record shows total market capitalisation of ₦17.00trillion (\$85.29billion) ) comprising equity and bonds markets, 184 listed companies with equities market capitalisation of ₦9.86trillion (\$49.46billion), representing about 58% of the total market capitalisation. Upon directive by the federal government of Nigeria for corporate entities to comply with IFRS in 2010, NSE embraced this order and consequently required all listed firms to comply as appropriate.

### **1.1.1 IFRS Adoption and Value Relevance of Accounting Information: Global Perspective**

Globally, studies have been extended to elucidate multifaceted impact of IFRS adoption on capital markets, reporting qualities, accounting practices etc. (Daske *et al.*, 2008; Liu, Yao, Hu & Liu, 2011). For instance, Armstrong *et al.* (2010), Byard, Li and Yu (2011), and Daske *et al.* (2008) observe that, mandatory adoption of IFRS adds incremental value to the quality of financial reports as well as providing support for information need of investors. Emergence and subsequent increasingly mandatory adoption of IFRS was basically to strengthen capital market through improved value relevant accounting information. Soderstrom and Sun (2007) stress further that prior studies have documented improved accounting information quality after IFRS adoption.

European Union (EU) countries, Australia, were among the first set of countries that made the move for early convergence from local standards to IFRS. With effect from January 2005, all EU countries that were striving to have common accounting standard before 2002 were mandatorily required to converge to IFRS (Armstrong *et al.*, 2010; Chalmers *et al.*, 2011). In order to ensure international best practice and reduction in firms' cost of equity capital, Australia Accounting Standard Board was obligated to implement full convergence to IFRS in July 2002, thereby ensuring that all Australia listed firms' financial reports are in compliance with IFRS (Chalmers *et al.*, 2011). In

China, issuance of financial reports that are IFRS compliant became mandatory for all listed firms starting from 2007 (Liu *et al.*, 2011). In Brazil, transition period from local code law GAAP to IFRS occurred in two stages, covering years 2008 and 2009 (Santos & Cavalcante, 2014) which actually became mandatory from 2010 accounting year-end. Canada also converged to IFRS in 2011 (Cormier, 2013).

According to Paul and Burks (2010), Norwalk Agreement issued in 2002 marked the commitment of IASB and Financial Accounting Standard Board (FASB) to develop a single set of high quality standards that would provide better information for investors, reduce cost and increase capital market efficiency. ‘This was majorly to support growth of global markets, desire of multinational companies for one set of financial statements, and the demand for one common global reporting language’ (Paul & Burks, 2010:2). However, up till the time of this study, U.S. Securities and Exchange Commission (SEC) only permits foreign private firms in the U.S. stock markets to prepare their financial reports for submission in accordance with IFRS without reconciliation to U.S. GAAP since November 2007 (Carmona & Trombetta, 2008; Paul & Burks, 2010). Although, U.S. SEC reaffirmed its continuing support for a single set of high-quality globally accepted accounting standards and noted that, IFRS is best positioned to serve in that role (US SEC, 2012), the effort to incorporate IFRS into the reporting regime for domestic issuers is in doubt as there is reported little progress in recent years by the U.S. (KPMG, 2015).

Drawing from the global perspective, extant literature have recorded diverse value relevance of accounting information before and after IFRS adoption. For instance, Chalmers *et al.* (2011) observe that combined relevance of book value of equity and earnings of Australian Security Exchange listed firms alters little with IFRS adoption as earnings becomes more value relevant while book value does not. On the contrary, Clarkson *et al.* (2011) record no difference in the impact of IFRS adoption when compared with the information under local GAAPs.



Furthermore, Cormier (2013) shows evidence that moving from Canadian GAAP to IFRS has reduced the information gap between managers and investors, enhanced value relevance of earnings and stock markets' ability to anticipate future earnings. Okafor *et al.* (2016) confirm that accounting information prepared and disclosed under IFRS in Canada exhibits higher price and returns value relevance than accounting information prepared previously under local GAAP. Cotter, Tarca and Wee (2012) note that, analyst forecast accuracy in Australia improves and no significant dispersion in IFRS adoption year. Nonetheless, according to Liu *et al.* (2011), there are incongruities between protagonists and antagonists of IFRS as to its ability to increase quality and value relevance of accounting information. It is hoped that this disparity has not led to self-selection that could lead to bias conclusion on value relevance study under IFRS.

Value relevance study under IFRS has been pragmatically related to level of compliance with the standard by corporate entities from global context. As case in point, Alfraih and Alanezi (2015), observe a significant association between extent of compliance with IFRS and the value relevance of earnings and book values in Kuwait Stock Exchange investors while Tsalavoutas and Dionysiou (2014) report incremental value relevance of IFRS compliant information. Even though empirical study on extent of compliance with IFRS and value relevance of accounting information appears not copious, studies that seek to find out level of compliance with IFRS and possible influencing factors abound.

Considering the level of compliance with IFRS globally, variation has been observed. According to Jermakowicz and Gornik-Tomaszewski (2006), majority of the sampled EU-listed companies have adopted IFRS even at the expense of costly, complex and burdensome processes. Nevertheless, Bebburigton and Song (2004) note that, general positive response of EU countries to IFRS adoption apart from unfavourable response from financial service industry, was towards attaining a common European market. Specifically in Turkey, Demir and Bahadir (2014) show compliance levels ranging from 64% to 92%, with an average of 79%. Tower, Hancock and Taplin (1999), and Glaum

and Street (2003) report 94% and 81% compliance with IAS/IFRS in Australia and Germany respectively. In another vein, Hodgona *et al.* (2008) stress that compliance with IFRS disclosure requirement reduces information asymmetry and enhances the ability of financial analysts to provide more accurate forecasts. Although Kasum (2011) claims 91% international benchmark of compliance level with standards, Eberlin and Richardson (2012) stress that there is no objective benchmark for full compliance with accounting standards.

### **1.1.2 IFRS Adoption and Value Relevance of Accounting Information: Africa Perspective**

IFRS adoption in Africa has so far taken different dimensions compared with developed economies probably because there is no developed capital market in Africa (Dow Jones, FTSE, MSCI and S&P rankings, 2016 January). According to these stock markets ranking groups, only South Africa stock market belongs to advanced emerging market while Egypt belongs to secondary emerging market. Other African countries' capital markets like Nigeria, Kenya, Ghana, Morocco, Côte d'Ivoire etc. were ranked as frontier markets. These rankings appear to be associated with individual African country's attitude towards convergence to IFRS and subsequent mandatory requirements by their stock markets for listed firms to comply with the standards.

South Africa took the convergence lead in 2005, followed by Ghana in 2007 and Nigeria in 2012 among others. Kenya's bold step to adopt International Financial Reporting and Auditing Standards fully in January 1, 1999 was made by Council of the Institute of Certified Public Accountants of Kenya (ICPAK) in 1998 following stumbling Kenyan businesses due to numerous banks' failure in the 1980s and 1990s (United Nations Conference on Trade and Development [UNCTAD], 2006). Nevertheless, Kenya had set aside local standards for IAS before IFRS emerged even though its Companies Act that prescribes what should be included in financial reports has been found short of IFRS requirements (Bova, 2008; UNCTAD, 2006). Nnadi's (2015) submission that most

former British colonies in Africa seem to follow their colonial rulers in adopting IFRS could not be disputed in this regard. However, many African countries appear to have complied with IFRS possibly because of the perceived and expected improvement in Foreign Direct Investment, cross-border listing (Madawaki, 2011; Odi & Ogedu, 2013) and capital market efficiency (Daske *et al.*, 2008) emanating from IFRS adoption.

As to value relevance of accounting information before the emergence of IFRS in Africa, findings from numerous extant empirical studies are confounding. Association between firms' market value and earnings, book value, cash flows from operation, and dividend have been well studied (Nyabundi, 2013; Oyerinde, 2011; Ragab & Omran, 2008). Results of these studies also differ which might be as a result of disparity in local standards adopted prior to IFRS adoption, methodology used, self-selection bias, form of the economy (i.e. bank-led or market-led) etc. For instance, Nyabundi (2013) finds positive significant association in the relationship between share price, and dividend, earning and book value of listed companies in Kenya. Also, Ragab and Omran (2008) report relevancy of earnings and book value from Egypt by employing both share price and returns model. However, findings on value relevance of accounting information under IFRS in Africa differ significantly and limited.

Study on the association between levels of compliance with IFRS and value relevance in Africa is generally anecdotal. Notwithstanding, Yiadom and Atunso's (2014) finding on level of compliance with IFRS by Ghana listed firms revealed an overall mean compliance of 85.8% while Agyei-Mensah (2013) submits that, company size and auditor-type have statistical significant association with the quality of information disclosed by listed firms in Ghana with disclosure compliance mean of 76.80% (pre-) and 87.09% (post-) IFRS adoption.

### **1.1.3 IFRS Adoption and Value Relevance of Accounting Information: Nigeria Perspective**

According to Institute of Chartered Accountants of Nigeria (2014), purpose of regulating accounting information is to ascertain that users of financial statements receive minimum information that will enable them to make meaningful decisions and also ensure similar accounting treatments for related items among entities. Nigerian financial reporting system like any other country in the world was being guided by a set of rules and principles otherwise referred to as Statement of Accounting Standards (SASs). This was dated back to the establishment of Nigerian accounting standards regulatory body known as Nigerian Accounting Standards Board (NASB) in 1982 as a private sector idea which later became government agency in 1992 (Kasum, 2011; Umoren & Enang, 2015). The board was responsible for developing, issuing and ensuring compliance with SASs to be observed by all corporate reporting entities, especially listed companies. The first three SASs were launched in November 21, 1984.

Furthermore, section 335(1) of Nigerian Companies and Allied Matters Act (CAMA), 2004 (as amended) provided legal support for the then NASB functions. Thus, enactment of NASB Act 2003 ushered a new dawn in the legal responsibility of NASB which set autonomous legal basis for the body to perform its functions. In 2010, the federal government of Nigeria rolled out a road map of convergence from Nigerian SAS to IFRS. This led to conversion of the old NASB to Financial Reporting Council of Nigeria (FRCN) through enactment of FRCN Act, 2011 to repeal erstwhile NASB Act 2003. As a result, all listed firms were directed to file their financial reports in compliance with IFRS with effect from January, 2012. Subsequently, NSE made this directive a major requirement for all listed companies in the stock market. However, section 333 (1) of the proposed Nigerian CAMA (2016) now requires form and contents of corporate entities' financial statements to comply with accounting standards issued from time to time by FRCN as a way of providing legal support to strengthen activities of the local accounting standard setting body.

As at the time of convergence to IFRS in Nigeria, there were twenty-nine (29) IASs and thirteen (13) IFRSs (i.e. 42 standards altogether) in issue together with a list of Standard Interpretations Committee (SIC Interpretations – 33) and International Financial Reporting Interpretation Committee (IFRIC Interpretations – 21). Whereas, at the same time (i.e. 2010), Nigerian SASs were ‘starved’ with ineffective update of thirty-one (31) standards (some of which were connected to already repealed IASs). According to Umoren and Enang (2015), there were sixteen (16) IASs/IFRSs without corresponding SASs, although in recent past IAS 17 has been superseded with IFRS 16 which becomes effective from January 2019. A few out of the 16 standards are IFRS 15, IFRS 14, IFRS 13, IFRS 9, IFRS 2, IFRS 1, IAS 41, IAS 29 etc (titles as presented in Appendix I).

In addition, some (disclosure) contents of erstwhile Nigerian SASs were not in tandem with related IAS/IFRS. For example, some dissimilarities in the two GAAPs are not limited to profit and loss accounts, and balance sheet (contents of financial statement) under SAS 2 which have been restructured as statement of comprehensive income (or income statement) and statement of financial position respectively under IFRS 1/IAS 1; statement of changes in equity as contained in IFRS 1 which has no place in SAS; presentation of extra-ordinary items that is now prohibited under IFRS while it was required by Nigerian SASs 6; under IFRS, dividend proposed or declared after financial year-end but before financial statements are authorised for issue is not recognised as liability whereas, it was recognised under SAS; fair value measurement crusades by IFRS which was never the case under SAS. However, global economic integration, effort to attract more foreign investors and enhance investors’ protection among others precipitated the need to adopt IFRS in Nigeria. Succinctly at the moment, there are forty-four (44) IAS/IFRS already in issue (Appendix I).

Although existing studies such as Omokhudu and Ibadin (2015), and Oyerinde (2011) have been conducted to unearth value relevance of accounting information issued by the Nigerian listed firms prior to IFRS adoption, a few studies including Umoren and Enang

(2015), Yahaya, Onyabe and Usman (2015) have empirically examined possible implications of IFRS adoption on value relevance of accounting information after it was adopted in Nigeria. For instance, Yahaya, Onyabe and Usman (2015) observe that only earning per share has higher explanatory power over other variables while accounting data's explanatory power increase during IFRS period. On the contrary, Umobong and Akani (2015) find out that, earning and book value are less value relevant in post-IFRS period in Nigeria.

Overview of extant studies regarding extent of compliance with accounting standard prior to the adoption of IFRS in Nigeria revealed erratic findings. For example, Kasum (2011) find out that Nigerian companies reasonably complied with accounting standards but the level of compliance was below international benchmark of 91% while Saidu and Dauda (2014) report semi-strong compliance with IFRS among Nigerian listed banking firms. However, after IFRS adoption in Nigeria, there are anecdotal of empirical study on extent or level of compliance with IFRS *vis-à-vis* its relationship with market value.

In summary, adequate compliance with IFRS requirements may be expected to influence value relevance of accounting information issued under the standards. Moreover, income statement, financial position statement and cash flows statement's accounting data issued under IFRS could be expected to have altered when compared with the one produced under local GAAP and thereby signifying different effect on stock market values. This is due to the fact that the two different accounting standards require different accounting methods, policies and fundamentals to be observed while preparing accounting information issued under each of them. Not only that, firm specific factors are also adduced to be playing certain role in the valuation model especially in exercising influence over the association between accounting information and stock market values. Thus, since existing literature have shown possible relationship between accounting information and market value (Chen *et al.*, 1999; Omokhudu & Ibadin, 2015) and that, mandatory adoption of IFRS has confounding relationship with value relevance

of accounting data issued under it (Chalmers *et al.*, 2011; Kargın, 2013; Santos & Cavalcante, 2014; Umoren & Enang, 2015), this study is poised to extend literature by examining the way IFRS adoption has influenced value relevance of accounting information issued by the Nigerian listed companies. The study is also goaded by the submission of Hellström (2006) and Kaaya (2015) that studies have not really measured implication of IFRS adoption and compliance on value relevance of accounting information especially in developing nations as well as Chamisa (2000) who states that, relevance of IFRS to developing countries is still an issue of interest for academic accountants.

## **1.2 Statement of the Problem**

Information asymmetry, weak comparability, and poor support for capital markets integration among others are some of the shortcomings of various local accounting standards which spur the need for adopting more improved alternative accounting standards (i.e. IFRS). It should therefore be expected that change in accounting standard would imply change in applicable accounting principles, measurements and demands. This further suggests issuance of different accounting information especially at the Nigerian stock market where adoption and compliance with IFRS demands became mandatory since 2012 in place of erstwhile Nigerian SAS. Whereas, local GAAPs have been widely punctured for its failure to support global capital market in this era of economic globalisation, foreign capital market integration and listing requirements (Cormier, 2013; Barth, 2008; Odi & Ogiedu, 2013).

Since stock market thrives not just based on any but high-quality and value relevant accounting information, specifically NSE participants have suffered unquantifiable losses in the past due to low-quality or asymmetric accounting information issued to the stock market through local accounting standards (Goddy, 2010). That is, investors have been starved with optimum economic result oriented accounting data through local

GAAPs. Thus, it may not be far from truth that emergence, and enhanced quality of IFRS over local GAAPs are indispensable to boost capital market information efficiency. However, existing literature have shown mystifying and inconsistent findings on the superior quality of its principles and methods over that of local GAAPs to improve value relevance. For instance, Agyei-Mensah (2013), Landsman, Maydew and Thornock, (2012), Liu *et al.* (2011) have found IFRS to be of better quality than local GAAPs, whereas contrary view has been documented by Ahmed *et al.* (2013) using sampled firms from twenty countries that adopted IFRS in 2005, and Umobong and Akani (2015) through sampled quoted manufacturing firms in Nigeria. It is therefore empirically uncertain that accounting information issued under the two ‘regimes’ could influence corporate market values differently.

Ahmed *et al.* (2013) stress further that, the impact of IFRS on accounting quality (relevancy) is an empirical question. Consequently, IFRS adoption and its acclaimed improved information environment have called for more studies on how it actually influences value relevance in the stock market (Hellström, 2006; Kaaya, 2015). Nevertheless, there is no unanimous submission so far in literature. For example Chalmers *et al.* (2011) and Umoren and Enang (2015) observe from Australia securities exchange and Nigerian stock exchange respectively that earnings (income statement information) becomes more value relevant while book value (financial position information) does not after IFRS adoption. Camodeca *et al.* (2014) confirm that earnings and cash flows are value relevant accounting data in Italy and UK respectively. Karğın (2013) observes from Turkish based study that only book value is value relevant in determining market value. These mixed findings under IFRS as basis for preparing contents of financial statement call for more empirical insight on value relevance of ensuing accounting information especially in Nigeria where such study appears to have been considered majorly in financial sector or on sectoral basis. This explains the first cardinal concern that propelled this study as expressed through the first three specific objectives of the study.



Additionally, qualitative accounting standards in itself may not be able to impact positively on quality of accounting information except it is well complied. Conversely, empirical findings have shown low but above average compliance with IFRS with its vague value relevancy especially from emerging stock markets. Even though companies claim compliance with IFRS, significant deviation exist (Hodgdona *et al.*, 2008). Also, in order to make outcome of value relevance researches more consequential to standard setters, existence and strength of forces (e.g. compliance level) other than equity valuation should be investigated (Holthausen & Watts, 2001). As a result, there is a need not only to investigate extent of compliance with IFRS but also confirm whether it is capable of significantly influencing market value. This accounts for the second drive of this study and as conveyed by the fourth specific objective. Although this ‘call’ has been accorded reasonable response in Europe and other part of the world, such attention is sketchy in Nigeria’s value relevance literature (and also in Africa).

The third concern that necessitated this study is that firm-specific factors influencing the level of compliance with IFRS (which may consequently influence accounting information) and its relationship with market value cannot be generalised yet due to varying or mixed submissions. That is, the size of a firm (with respect to total assets) as well as industry category it belongs could modify value relevance of accounting information differently. As a case, Khanagha (2011) notes higher value relevance of firm size accounting data during pre-IFRS but more for small firms while Alfaraih (2009) confirms more for large firm size and industry categories using price model. In addition, most of the existing empirical findings such as Aljifri, Alzarouni, Nz and Tahir (2014), Inchausti (2010) appear to have been conducted from Europe, Asia and other developed economies, thereby calling for expanded investigation from developing economies after IFRS adoption of which Nigeria is one.

Succinctly, relative and incremental value relevance of earnings, book value of equity, and cash flows from operation issued based on IFRS accounting methods are mixed.

According to Kaaya (2015), influence of IFRS adoption as well as its resultant compliance level on value relevance ideology is still sketchy in emerging economies especially in Africa. As such, there is a need to extend literature concerning its influence and relationship in this regard. Influence of firm-specific factors on value relevance of accounting information when it is controlled for also calls for more empirical facts (Chandrapala, 2013). These are drives for this further study especially in Nigeria where such study could be adduced as inadequate.

### **1.3 Objectives of the Study**

In order to provide direction for this study, its objective statement is categorised into two. That is, general and specific objectives.

#### **1.3.1 General Objective**

The broad objective of this study is to examine effect of IFRS adoption on value relevance of accounting information of the Nigerian listed firms.

#### **1.3.2 Specific Objectives**

In an effort to achieve the overall objective, specific objectives are stated which are to;

1. Assess the effect of IFRS adoption on value relevance of income statement accounting information of the Nigerian listed firms
2. Evaluate the effect of IFRS adoption on value relevance of financial position statement accounting information of the Nigerian listed firms
3. Measure the effect of IFRS adoption on value relevance of cash flows statement accounting information of the Nigerian listed firms
4. Investigate the effect of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms

5. Examine the moderating effect of firm-specific factors on value relevance of IFRS-based accounting information of the Nigerian listed firms.

#### **1.4 Statement of Hypotheses**

In line with the specific objectives of this study, the following null conjectures were raised to guide the statistical analyses of the research data.

- H<sub>01</sub>: There is no significant effect of IFRS adoption on value relevance of income statement accounting information of the Nigerian listed firms
- H<sub>02</sub>: There is no significant effect of IFRS adoption on value relevance of financial position statement accounting information of the Nigerian listed firms
- H<sub>03</sub>: There is no significant effect of IFRS adoption on value relevance of cash flows statement accounting information of the Nigerian listed firms
- H<sub>04</sub>: There is no significant effect of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms
- H<sub>05</sub>: There is no significant moderating effect of firm-specific factors on value relevance of IFRS-based accounting information of the Nigerian listed firms.

#### **1.5 Significance of the Study**

Basically, this study is motivated by limited studies in this research area after the adoption of IFRS in Nigeria most importantly by capturing all categories of the NSE listed firms sectoral groups. Therefore, the study made attempt to unearth possible improved (or otherwise) benefit of adopting IFRS in the Nigerian stock market on value relevance of accounting data issued under the accounting standards as compared with the trend under Nigerian local GAAP – SAS.

Since value relevance research provides significant insight into questions of interest to standard setters and other non-academic constituents, findings of this study would be primarily beneficial to all participants in the Nigerian stock market including the regulators. The outcome of the study is also envisioned to provide utmost support to the market participants in enhancing their investment decision making strategy at the stock market. Relevancy of income statement information, financial position and cash flows information statements prepared under IFRS would enhance the trust of accounting information users with regard to difference(s) in accounting principles based on IFRS and local GAAPs.

Further, the thrust of this research also involved attempt to divulge the extent at which companies listed in the NSE have complied with IFRS and its effect on value relevance. This provided a unique empirical finding that unveils informativeness of the extent of compliance with IFRS to the stock market regulators, other participants in the markets as well as management of the listed firms. Hence, capital market regulatory bodies and related institutional policy makers (e.g. standard setting bodies) would obtain empirically established information on the degree of compliance with IFRS and its significant influence on value relevance at the market with a view to celebrate the way forward. In addition, results of this study would be of immense concerns to both managements and boards of the Nigerian listed companies as well as their external auditors on agenda that would enhance the firms' adherence to IFRS requirements.

With respect to the economy and stock market, this study is positioned to expand value relevance literature by unveiling possible impacts of IFRS adoption on value relevance of accounting information in an emerging stock market of Nigerian's developing economy. As the study focused four years of IFRS adoption, its findings would add to value relevance literature (especially from Africa) more so that very rare studies have captured such period of time after IFRS adoption in Nigeria. In addition, prior value relevance studies that focused on either financial or non-financial sector in Nigeria did

not capture compliance aspect of IFRS in a robust or detailed form. As a result, prospective researchers in related research direction are also expected to find the outcome of this study as relevant pedagogical rigour and reference point in their future investigation.

As regard theoretical justification, it has been established that high-quality accounting standard reduces information asymmetry, sends reliable and relevant signal to participants at the stock market resulting in improved market efficiency and reduced agency cost which consequently influences market value. In this respect, this study unveiled insightful empirical position of the theories from the unique Nigerian economic and stock market settings. Thus, the study is structured to fill identified gaps in value relevance literature, thereby adding to knowledge in the spirit of positive theory of accounting. These provided fundamental rationales for embarking on this study.

### **1.6 Scope of the Study**

The focus of this study is on IFRS adoption in the Nigeria stock market and how it has influenced value relevance of accounting information issued by the Nigerian listed firms within the first four years of the adoption. Special attention was accorded to informative perspective of the accounting information because of the focus on mandatory disclosure demands of IFRS considered. In terms of population of the study, the attention was on all equity listed companies (i.e. the entire twelve sectors) on the Main Board of the NSE with specific focus on firms that complied with IFRS reporting demands starting from 2012. The choice of companies listed on the Main Board is premised on the fact that it has the larger number of listed companies (186 as at 2015 financial year-end) over Alternative Securities Market (ASeM) that has around ten (10) companies all through the period of the study. Not only that, this set of listed firms' risk of being delisted could have high negative impact on the total equity market capitalisation at the NSE. Thus, the need for compliance with IFRS is a primacy.

Also, the study targeted listed companies with December 31 as their financial accounting year-end for uniformity, logical analysis and comparison purposes. More importantly, the choice of companies with the same accounting year-end is to eliminate effect of possible arbitrage nature of investors' behaviour by switching to another more profitable firm whose accounting information arrives later in the market. Furthermore, since stock markets capture equity for trading in shares, debentures, bonds and other derivatives of listed companies and governments, this study focused equity for trading in share for a period of eight (8) years.

The attention of the study was set on accounting information drawn from audited financial reports of listed firms at the NSE for the eight (8) years study period (i.e. 2008 – 2015). That is, quantitative bottom-line items of three main contents of the financial reports (income statement, financial position and cash flow statements). The period of the study is limited to 2015 because listed firms' share price data were not readily available beyond 2016 relative to the time of this study and due to the choice of companies with December 31 as financial year-end used. Thus, share prices in March and June-end were drawn as response variable. The essence of this step is to address identified inefficiency (precisely concerning unpredictable arrival of audited annual financial reports) in the Nigerian stock market (Omokhudu & Ibadin, 2015; Osaze, 2007). Coincidentally, the survey commenced and ended in a period that marked the dawn of global financial crisis's spillover effect in the Nigerian economy (i.e. 2008), its recovery from it and the beginning of national economic recession that was confirmed in 2016. It is therefore believed that this period was reasonably sufficient to provide a meaningful data towards attaining the objectives of this research since it captured equal years pre- and post-IFRS (i.e. four years pre- and four years post-IFRS period).

Moreover, in order to achieve specific objective four, focus was set on appropriate IASs/IFRSs mandatory disclosure requirements with effective due date starting from on or before January 2012. Additionally, attention was directed to applicable accounting

standards relevant to Nigerian financial reporting environment. This is majorly to ensure that companies are not arbitrarily penalised for not complying with standards or disclosing items that were not required on or before IFRS adoption in Nigeria. Put together, thirty-one (31) standards (Appendix II) were considered appropriate for the reporting environment and were accorded focus for this study.

Finally, scope of the study was extended to firm-specific attributes such as firm size and industry category. This step becomes necessary because of the perceived role of these attributes on firms level of compliance with IFRS as well as accounting information generated through the accounting standards which is adduced to impound influence on value relevance of the accounting data (Tsalavoutas & Dionysiou, 2014; Alfraih & Alanezi, 2015). Also, even though there is a set of multiple factors that determine properties of accounting numbers as stressed by Barth *et al.* (2010) as well as Ahmed *et al.* (2013) who argue that constraint on managers' financial reporting choices is one out of these multiple factors, the focus of this study is on the constraint that could be imposed on managers' financial reporting choices through IFRS principle-based disclosure requirements.

### **1.7 Limitation of the Study**

A number of constrictions were encountered in the course of this study. However, concerted efforts were made to ensure that they did not have significant or material negative consequences on the success of the study. First and foremost, period of the investigation is limited to eight years because of non-availability of required data beyond four years of IFRS adoption. This engendered the need to consider all sectors in the Main Board of NSE. It is viewed that this step which resulted in improved firm-year observations for the study has been able to address the inadequacy.

Secondly, the study focused on listed companies with December 31 as annual financial reporting date rather than giving chance to all firms listed in the Main Board. The crux

of this study-plan was to focus on entities whose annual accounting information arrived in the market around the same period and note how it explains individual firm's market value at the same time. This limitation was meant to also ensure inclusion of sizeable number of financial sector's firms in the study sequel to the directive of the Central Banks of Nigeria (CBN) that all financial institutions should observe December 31 as uniform financial year-end since 2008. This directive was equally supported by NSE's order that firms with December 31 should relay their audited annual reports to it latest three months (March 31 in the case of this study) after the financial year-end.

Thirdly, the study was intended to investigate entire target population (that is, firms with December 31 as financial year-end), incomplete data of some entities reduced the sample to 69 companies due to balanced panel data (survey) employed. Nevertheless, effort was made to ensure that no company with both share price and other required accounting information all through the study period was not fairly considered. Also, this study does not incorporate corporate governance based information which is also capable of influencing value relevance. The reason is that corporate governance issue has distinct nature compare to IFRS fundamentals and its disclosure requirements which formed the focus of this study. In addition, it is only financial statement based accounting data that reflect impact of IFRS-based accounting principles and methods unlike corporate governance demands.

Additionally, as to compliance index used, unweighted items scoring (i.e. equal scoring) system was employed because the study focused on many users group unlike weighted system which is preferable when attention of the study is on a particular user group (Alfaraih, 2009). Thus, caution is required in the interpretation of the result on compliance measure.

Further, this study acknowledged several measures of accounting quality (such as accrual quality, earnings management, persistence, loss recognition, value relevance etc) which IFRS was issued to address. However, the study adopts value relevance 'path' not



only because it is well appreciated in literature but also due to accounting information used and the fact that changes in its properties naturally results from the new standards (Ahmed *et al.*, 2013). In addition, theoretical bases on which the study is structured are acknowledged to be limited in a way. Justification for their appropriateness to this kind of research as drawn from extant literature formed basis for using those theories in this study.

Finally, yearly accounting information based on audited annual financial reports as well as firms' market values at March and June-end were employed in line with the focus of this study rather than quarterly, half-yearly unaudited or interim financial reports issued by the listed firms. This also suggests precautions in the way submissions of this study would be articulated and interpreted.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In a bid to establish sound theoretical, empirical and conceptual bases for the study, this chapter presents relevant literature that have been consulted on IFRS adoption, compliance with IFRS and value relevance of accounting information. As a result, the chapter is organised to present theoretical background for the study, empirical literature reviewed, and showcases conceptual framework on which the study was built as well as identifying gap that necessitated the study.

#### **2.2 Theoretical Background**

According to Kothari (2001), since interpretation of empirical study is impracticable without theoretical direction, empirical research is and should be informed by theory. In like manner and specifically to value relevance study, Holthausen and Watts (2001:4) stress that, ‘without descriptive theories to interpret empirical association, value-relevance literature’s associations have limited implications or inferences for standard setting’. Therefore, in order to theorise for the influence of IFRS adoption on value relevance of accounting information disclosed by Nigerian listed firms, signalling theory, efficient market hypothesis, agency theory, stakeholder theory were drawn for this study as related to positive theory of accounting framework.

This approach of theorising in accounting seeks to provide explanation of different accounting practices currently in use and their impacts so as to identify and embrace the best practice. Watts and Zimmerman (1976) provide the beginning of positive theory of accounting by investigating factors that influence management’s attitudes on accounting standards. Although this theoretical framework has been well employed in various aspects of accounting research, it has been well critiqued due to its structure which seeks

to examine what accountants do rather than what they ought to do (Milne, 2002). Nevertheless, fundamental of this theoretical approach is considered appropriate to the focus of this study which is built on the assumption that accounting data supply information for security market investment decisions (information perspective), informing the need to examine the association between the data and stock prices (Watts & Zimmerman, 1990). It is also based on the fact that change in accounting standards (practice) that provide guide in the preparation of accounting information could inform incremental information content of the new accounting standard based information. Thus, the identified theories are discussed as connected to this study as well as related specific objectives they addressed.

### **2.2.1 Signalling Theory**

According to Morris (1987) and Spence (1973), signalling theory emerged specifically to address information asymmetries between the preparers of financial reports and various users in the markets. The theory showcases how these asymmetries can be reduced by the ‘body’ with more information signalling it to others (Morris, 1987). This is one of the expected purposes of adopting IFRS (Hodgdon *et al.*, 2008; IASB, 2010). Drawing from the NSE context for example, IFRS adoption requires that listed firms provide more disclosures beyond the disclosure requirements of the erstwhile Nigerian SAS. As a case, judgement made by a reporting entity in applying any accounting policy as contained in IAS 1 must be clearly disclosed. This improved informative nature of IFRS suggests a different signal to stock markets participants because concept of rationality applies to accounting information disclosure (Okafor *et al.*, 2016; Kothari, 2001).

Signalling theory was first put forth by Spence (1973) when he employed labour market to model the signalling function of education. It is a unique theory that is broadly used in several disciplines such as education, psychology, pure and applied sciences, medical science, and management science among others. Specifically in accounting discipline,

signalling theory has been widely applied. For example, it has been employed in signalling treatment of dividend pay-out by Miller and Rock (1985) and Ross (1977); signalling and accounting information according to Myers (1989); disclosure study by Jaggi and Freedman (1992); and signalling role of conservatism in a debt market with asymmetric information (Wang, hÓgartaigh & Ziji, 2009). This theory provides an opportunity to integrate an interactive theory of symbolic communication and social benefit with materialist theories of individual strategic action and adaptation (Bird & Smith, 2005). Thus, with respect to accounting research, proponents of signalling theory argue that managers manage accounting information to convey insider information about firm's prospects which thereby serves as signalling mechanism (Sun & Rath, 2008).

According to Frankfurter and Wood (2002), generalisation of Akerlof's (1970) model became the prototype for all financial models of signalling postulate. Afterward, Connelly, Certo, Ireland and Reutzel (2011) stress that general example which helps to illustrate basic signalling model was provided by Kirmani and Rao (2000). By distinguishing between high and low quality firms Kirmani and Rao (2000) observe that, even though firms know their own true quality, outsiders do not, which gives opportunity to individual firm to either signal or not signal its true quality to outsiders (i.e. information asymmetry). This forms one of the indicators of capital market imperfection already identified by scholars such as Afego (2012), Nwosa and Oseni (2011), and Oyerinde (2009).

Information asymmetry (as one of the key issues address by signalling theory) is a situation where insiders are in possession of certain corporate information that is not made available in the market which may be revealed to the market through insiders' action and thereby change stock prices (Tsalavoutas, 2009). That is, it is a situation in which an agent in a business relation possesses information while others involved in the same business do not. This may be due to weak regulatory framework (standards) that are expected to be followed in disclosing relevant business information to users.

Considering developing markets, there is severity of information asymmetry than developed markets (Alfaraih, 2009). This may either send good or bad signals to market's participants (domestic and international). Emergence of IFRS to replace local GAAPs is expected to ameliorate this situation if the former is indeed more qualitative and informative than the later.

Arguably and although controversial, IFRS has more qualities than local GAAPs. This is envisioned to curtail (or reduce) the level of 'information trading' by insiders of corporate entities if the standard is well complied with by the reporting entities. According to Connelly *et al.* (2011), signalling theory is suitable in describing performance when two parties have access to different information. However, if there is a specific reliable platform through which differences between the two parties could be narrowed down and is well observed, variegated outcomes may be reduced or eliminated. Therefore, signalling hypothesis suggests that, where certain generally acceptable conditions are complied with, true signals would be believed and false ones discarded (Toms, 2002). It is therefore expected that mandatory adoption of, and reasonable high compliance with IFRS has latent to reduce information asymmetry and thereby allows some improved level of trust in the accounting information disclosed under the principle-based accounting standards (IFRS).

Despite the wide use of signalling theory in accounting and other disciplines, its inherent veracity in theorising for empirical discourse has been punctured. For instance, Wai (2008) stresses that there is intrinsic noise in accounting information which constitute 'dissonance' representation of economic reality due to the spectrum of accounting alternatives available to meet diversity of information needs. This could affect plausibility of the information leading to inability of the users to distinguish between 'bad' and 'good' news as advanced by Myers (1989). Consequently, this results in decision-makers to either overlook signals that truly require attention or mistake noise for signals (Wai, 2008). This suggests possible caveat of signalling theory. However,

going by signal detection theory perspective which expects decision-makers to determine whether there is a symptom indicating presence of a problem or not (noise), stock market participants are believed to be knowledgeable and rational 'sets' who process accounting information signal as such for efficient economic results.

Furthermore, signalling theory otherwise referred to as information content hypothesis has been adopted as fundamental ground for IFRS-based value relevance studies such as Hodgdon *et al.* (2008), Tsalavoutas (2009), and Nyabundi (2013). The finding by Hodgdon *et al.* (2008) suggests that compliance with the disclosure requirements of IFRS reduces information asymmetry and enhances the ability of financial analysts to provide more accurate forecasts (value relevance). Also, Tsalavoutas (2009) confirms that higher compliance with mandatory disclosures reduces information asymmetry and palliates uncertainty about companies' fundamentals which are consistent with the premise of signalling theory. Nyabundi (2013) further establishes that accounting information are signalling tools that convey value relevant information which reflect on stock prices upon public announcement. Thus, relying on signalling theory, this study proposed improved value relevance of accounting information as a result of mandatory adoption and high compliance with IFRS. Thus, signalling theory is found relevant to this study.

Although, signalling theory is also related to voluntary disclosure studies as suggested in some extant literature like Shehata (2014), Birjandi, Hakemi and Sadeghi (2015), this study employs the theory in order to explain possible signal that IFRS adoption and extent of compliance with the accounting standard by Nigerian listed firms might send to capital markets' participants (or investors) with regard to value relevance of accounting information disclosed under the standards. According to Ross (1977), issuers can signal quality of their equity to the investors by resorting to additional mechanisms when verification is costly. This could results in incremental information content when the new mechanism is embraced. Thus, this study proposed a positive shift in the value

relevance of accounting information due to mandatory adoption of (and sound compliance with) IFRS in the Nigerian stock market while attributes of the listed firms could possibly modify the value relevance hypothesis. Hence, this theory is structured to provide theoretical basis for the specific objective one to five identified in this study.

### **2.2.2 Efficient Market Hypothesis**

The ideology of efficient market theory is that market reacts quickly to new information with a view that capital markets are informationally efficient (Adelgan, 2004; Oyerinde, 2009). In a specific term, Tsalavoutas (2009) accentuates that market efficiency is centred on the way that information is absorbed and processed by market participants. Capital market theories of which particular attention is accorded to Efficient Market Hypothesis (EMH) in this study seek to explain triple roles of capital market as financial information market, financial securities market and capital allocation market towards economic improvement (Adelegan, 2004). As such, the market is expected to be efficient. Hence, as a way of strengthening discussion on value relevance of accounting information issued with special regard to IFRS accounting principles which is enhanced through ‘sound’ compliance and appropriate disclosure to the stock market, EMH is considered relevant to this study. Arguably, accounting information is fundamental to determining at least informational efficiency of the security market.

Even though there are several definitions of efficient security market (Scott, 2009), etymologically, the term ‘efficient market’ was first defined by Fama (1965) in his landmark empirical analysis of stock market prices with a conclusion that they follow a random walk. Meanwhile, random walk on the other hand is an offshoot of scholars’ search for developing and setting models of stock behaviour (Fama, 1965), which was eventually developed by Kendall (1953). The basis for EMH has long been traced to acceptance of Random Walk Hypothesis – RWH (Dupernex, 2007), which deals with the question on whether future stock prices can be determined from past prices (Jakata, Hlupo & Gondo, 2013). Thus, Fama (1970) eventually puts efficient market as a market

in which prices always fully reflect available information. Grossman (1976) stresses further that informationally, efficient market price systems aggregate diverse information perfectly. Also, a market is said to be efficient with regard to certain information set if it is impossible to make economic profits by trading on the basis of such information set (Jensen, 1978). Besides, since EMH asserts that financial markets are efficient, Sewell (2011) argues on one side that the term ‘fully’ is a fastidious requirement suggesting that no real market could ever be efficient.

According to Sewell (2011:2), efficient markets were obviously revealed in a book entitled ‘The Stock Markets of London, Paris and New York by Gibson (1889)’ who noted that when shares grow to be publicly known in an open market, the value which they are acquired may be regarded as the opinion of the best intelligence concerning them. Prior to this time, Sewell (2011) traces history of EMH to prominent Italian mathematician Girolamo Cardano in 16th century, Scottish Botanist Robert Brown in 1828, a French stockbroker Jules Regnault in 1863 who observed that the longer you hold a security, the more you can win or lose on its price disparity. Several decades later after many scholars have expanded literature on capital market and its random walk studies, Friedman as cited in Sewell (2011) notes that the case for EMH can be made in situations where the trading strategies of investors are correlated due to arbitrage. Meanwhile, ‘Paul H. Cootner (1962) submits that the stock market is not a random walk as Osborne (1962) examines deviations of stock prices from a simple random walk and finds result showing that stocks tend to be traded in concerted bursts’ (Sewell, 2011:3).

Shortly after Fama’s study in 1965 according to Sewell (2011), Harry Roberts in 1967 made an effort to draw out distinction between weak and strong forms of efficient market which later became the typical nomenclature in Fama’s (1970) study. Therefore, it is pertinent to point out three forms of market efficiency that exist. They are; strong, semi-strong and weak forms. A market is said to be in strong form if share price reflects all the information that is available about a company (i.e., including past and future



information) while it is in semi-strong form when price of a share fully reflect all the publicly available information about the security (Fama, 1970; Scott, 2009). Weak form of market efficiency is a situation where share prices reflect only the historical information about the security (Fama, 1970). Consequently, Scott (2009) puts efficient security market as the one where prices of security traded on that market at all times fully reflect all information that is publicly known about those securities (i.e. semi-strong form). Since it may be difficult to have perfect strong form of market efficiency (Watts & Zimmerman, 1990; Scott, 2009; Sewell, 2011), Scott (2009) may be right in describing efficient security market as semi-strong form because, market is efficient when full information about a listed firm is publicly available. In a nutshell, three points are noteworthy. That is, market price efficiency is addressed by publicly available information; market is efficient relative to a stock of publicly available information and investing is a fair game if the market is efficient (Scott, 2009).

As informationally driven efficient market study grows, it was greeted with criticisms from scholars like Beja (1977), Grossman and Stiglitz (1980), LeRoy and Porter (1981), Shiller (1981), Cutler, Poterba and Summers (1989), among others. For instance Beja (1977), and Grossman and Stiglitz (1980) could not find market to be informationally efficient because information is costly while LeRoy and Porter (1981), and Shiller (1981) posit that stock prices demonstrate high volatility to be justified by subsequent changes in dividends. Also, Cutler *et al.*, (1989) do not find 'news' to adequately explain market movement. On the other hand, Lo and MacKinlay (1988) strongly reject random walk model through the behaviour of small stocks. Dupernex (2007) also argues that assumption that share prices follow a random walk is now uncertain and therefore, EMH no longer holds. Nevertheless, response by Malkiel (2003) to EMH criticisms is that stock markets are far more efficient and far less predictable than some academic studies have shown. Also, Sewell (2011) reiterates that strictly speaking EMH is false, but in spirit it is deeply true. In addition, Tsalavoutas (2009) submits that financial information holds a key role in ascertaining the level of market efficiency.

Regarding efficiency form of Nigerian stock market, divergent empirical submission abound. For instance, by testing for random walks in the monthly index returns over the period of 1984-2009, Afego (2012) examines the weak-form efficient markets hypothesis in the Nigerian stock market with a conclusion that NSE does not follow a random work. This finding concurs with Nwosa and Oseni (2011) who submit that NSE is informationally inefficient and that stock price does not exhibit random walk. On the flipside, Adelegan (2004) finds no enough evidence to reject the validity of weak form EMH at the NSE. These findings presupposed mixed submission concerning efficient status of the NSE.

Prior studies such as Okafor *et al.* (2015), Oyerinde (2011), Tsalavoutas (2009), and Uthman and Abdul-Baki (2014) have employed this theory in their related empirical investigations. Specifically, Tsalavoutas (2009) documents sturdy support for the proposition of EMH as one of the free market theories on which the study was grounded by submitting that book value and level of compliance with IFRS play significant role in valuing market prices of listed firms. Also, in line with prior capital market-based value relevance studies such as Ball and Brown (1968) and Kothari (2001), Okafor *et al.* (2015) employ EMH to arrive at consistent results with other earlier studies that value relevance is a test of market efficiency with respect to accounting information using book value and earnings. Noting that Nigerian stock market exhibits weak form of market efficiency, Oyerinde (2011) builds her study on efficient market theory and confirms value relevant role of accounting information from the stock market. Regardless of its form, Adelegan (2004) stresses that information is of paramount importance in market share value's determination in the stock market. This presupposes that, following these prior studies, accounting information is related to market share value based on EMH. Nonetheless, this study assumes weak form of market efficiency at the NSE.

With respect to limitations of EMH as pointed by its critics, since effect of new information release to the market can still be felt practically on share prices, efficiency of stock market cannot be completely discarded. In addition, to ensure enhanced efficiency of a capital market, regulation at all levels is very germane. That is, for market to be more efficient through accounting information made available to it, regulated and relatively strong accounting and auditing profession, clear and distinct information needs of the market participants, and quick/wide spreading of the information provided by the listed companies must be priorities (Keane as cited in Tsalavoutas, 2009). This explains the role of the stock markets' regulators in adopting and ensuring subsequent compliance with any identified framework that could strengthen the market improved information efficiency.

IFRS emerged to improve quality of accounting information that is made available publicly in order to support decision making power of the stock market participants. It also strives to improve relevance and reliability (value relevance) of the accounting information (Barth *et al.*, 2001). It can be inferred therefore that, a well observed IFRS should be able to improve efficiency of the security market either as weak or semi-strong form. That is, market efficiency is expected to improve through more qualitative (or value relevant), timely and fully disclosed accounting information. Making this information available publicly could subsequently be used to inform stock market participants about 'bad' or 'good' news as prepared by the managers which could be costly to the firm. Agency issue (managerial incentives) may consequently set in such that, managers would want to trade-off among several factors so as to manage their own interest and that of the firm.

This theory is found relevant to this study in that, it helps not only to theorise for value relevance study but to also address the effect of adopting assumed more informative IFRS on value relevance of accounting information disclosed to the stock market participants under the accounting standards. Also, the theory is sought to guide in

unearthing both relative and incremental value relevance of accounting numbers and how IFRS adoption has been able to improve the stock market efficiency through reduced information asymmetry stimulated by greater compliance with IFRS. In the spirit of EMH, this study also proposed influence of firm attributes as information that drive value relevance of the IFRS-based accounting data. Thus, EMH provides theoretical basis for primary objective of this study as well as other specific objectives.

### **2.2.3 Agency Theory**

Agency relationship is a contractual agreement under which one or more persons (principal) engage another person (the agent) to perform certain service(s) on their behalf including delegation of some decision making authority to the agent (Jensen & Meckling, 1976). To Scott (2009), agency theory is a branch of game theory that studies the design of contracts to motivate a rational agent to act on behalf of the principal when the agent's interests would otherwise conflict with those of the principal. Eisenhardt (1989) presents the theory as an important but controversial theory with ubiquitous relationship. Its critics like Perrow (1986) sees it as addressing no clear problems while Hirsch and Friedman (1986) call it excessively narrow theory, focusing only on stock price. In the face of more qualitative and disclosure demanding IFRS however, this study employs agency theory to understand hypothetical implication of value relevance with regards to how well issuers of accounting information (managements) have complied with the standard to the benefit of their principal (investors).

The origin of agency theory appears in literature in different forms. It has been traced to '1960s and early 1970s when economists explored risk-sharing problems that ensued when cooperating parties have different attitudes toward risk especially among individuals and groups' (Arrow & Wilson as cited in Eisenhardt, 1989). According to Bricker and Chandar (1998), Berle and Means's (1932) thesis was the foundation for subsequent capital markets agency models in accounting of which Jensen and Meckling (1976) synthesize the earlier works by Berle and Means with the property rights and

contracting literature developed by Coase (1937, 1960), and Alchian and Demsetz (1972). Although principal-agent dilemma in a corporate context had been pondered as early as the 18th century by Adam Smith, a separate theory of agency did not emerge until the early 1970s when Ross (1973) and Mitnick (1973) working independently, each presented a theory of agency (Delves and Patrick, 2010). However different the history of agency theory might have appeared, the point is that it emerged to address relationship and problems that exist between two or more contractual and/or implied parties.

Agency theory has been widely used in literature that seek to express relationship or problem that may subsist between principal and agent, either as contractual or bondholding agreements (Scott, 2009; Watts & Zimmerman, 1983). According to Delves and Patrick (2010), the most recognizable form of agency relationship is that of employer and employee or shareholders and Chief Executive Officer (CEO). Other forms may include creditors and corporate entities; shareholders and auditors; management and other stakeholders etc.

Ross (1973) presents agency theory as a universal principle and not just a theory of the firm, which addresses the problem of incentive as well as a model for inducing the agent to produce maximum gains for the principal. Mitnick (1973) points out agency problems in three ways which are principal's problem, agent's problem, and policing mechanisms and incentives. However, Eisenhardt (1989) stresses that agency theory addresses two problems such as; problems that arise when goals of the principal and agent are in conflict and problems that arise when the principal and agent have different attitudes towards risk. This results in different actions being taken by the duo. While principal's problem helps to motivate the agent to act in a manner that will achieve the principal's goals, that of the agent has to do with decisions to act either in the principal's interest, his own interest, or compromise between the two when they do not coincide (Delves & Patrick, 2010). Policing mechanisms are machineries and incentives intended to limit the

agent's discretion, such as surveillance or specifically directed tasks. Incentive systems are mechanisms that offer rewards to the agent for acting in accordance with the principal's wishes, such as bonuses and increased pay (positive incentives) or fear of punishment (negative incentives). Nevertheless, the major drawback of policing and incentives is that, they create costs for the principal.

In addition to already identified monitoring of the agent's actions as a source of agency cost by Mitnik (1973), Jensen and Meckling (1976) explore agency costs and its sources further by confirming it and identify two other sources (Delves & Patrick, 2010). That is, bonding costs borne by the agent (e.g. bonding against malfeasance, contractual limitations on his power, which limits his ability to take full advantage of profitable opportunities etc), and the wealth loss borne by the principal when the agent's actions do not maximize his welfare otherwise called residual loss. Presuming that the way incentives are structured would maximise principal's welfare, Jensen and Meckling (1976) further investigate the incentives faced by each of the parties. Separation of ownership and control was also explored by Fama and Jensen (1983) while Jensen and Murphy (1990) argue that cash compensation should be structured to provide huge rewards for exceptional performance and meaningful penalties for poor performance. This accounts for managers' personal incentives that could usher in or lead to information asymmetry which can impede value relevance of accounting information and full compliance with IFRS demands upon its adoption.

According to Pastoriza and Ariño, (2008), stewardship theory developed by Donaldson and Davis (1991, 1993) forms a new perspective to understanding the existing relationships between ownership and management of the company which arises as an important counterweight to agency theory. While agency theory argues that shareholder interests require protection by separation of incumbency of board chair and CEO roles, stewardship theory stresses that, shareholders' interests are maximised by shared incumbency of these roles (Donaldson & Davis, 1991). However form it takes, the thrust

of these theories is to ensure adequate protection of shareholders' stakes in the business. On the contrary, despite the fact that stewardship theory addresses some of the reductionist assumptions of agency theory, it suffers from being static as it considers the relationship of principal-agent at a single point in time and assumes no learning of individuals as a result of their interactions (Bricker & Chandar, 1998).

Since accounting (financial reporting) is concerned with information flows and its organization which are central to business operations, managerial decision-making, and the nature and efficiency of capital markets, the development of accounting is embedded in issues relating to the development of markets and corporations (Bricker & Chandar, 1998). Thus, it would be expected that there is a link between firm market value and accounting information prepared and presented by the 'agent' under IFRS. As an agent and steward, interest of the 'principal' is expected to be prioritised through adequate compliance with IFRS mandatory requirements capable of ensuring improved value relevancy of accounting information issued to the stock market. This also explains bonding relationship between management and shareholders.

The relevance of this theory to the study is that, it helps to explain how preparers of accounting information prepare IFRS compliant financial reports that can properly position the entity in the stock market on behalf of the shareholders. Management as the agent is expected to perform their ideal fiducial duty of releasing asymmetric-free financial report to the capital market. According to Al-Shammari (2011) and Tsalavoutas (2009), it may be argued that increased mandatory adoption of IFRS and disclosures reduce agency costs deriving from information asymmetry and strengthen the reputation of the management as it has incentives to provide a high level of compliance with IFRS mandatory disclosure demands. Since IFRS is suggested as qualitative accounting standard, it should have potential to improve value relevance of accounting information due to reduced managerial discretion over accounting choices, earnings smoothing, low loss recognition etc (Ahmed *et al.*, 2013; Barth *et al.*, 2008).

This also explains shareholder incentives from the relationship. However, since it has been empirically confirmed that there is a positive and significant link between firm's level of compliance and share value in the stock market (Alfaraih, 2009; Al-Shammari (2011); Tsalavoutas, 2009), if the compliance level is low, investors may receive a reduced reliance signal from the market participants. This could pose consequential effect on firm's value, which explains agency cost. Thus, agency theory is positioned to provide theoretical basis for the general objective as well as specific objective four of this study.

#### **2.2.4 Stakeholder Theory**

The development of stakeholder theory has been widely accredited to Richard Edward Freeman's (1984) landmark book publication (Donaldson & Preston, 1995; Mitchel, Agle & Wood, 1997). According to Freeman, Wicks and Parmar (2004), stakeholder theory is an expansion of agency theory that stresses that managers have fiducial relationship with stakeholders, while stakeholders are those who have stakes in, or claims on the firm. Stakeholder theory was developed to solve some problems such as value creation and trade, ethics of capitalism and managerial mind-set (Freeman, Harrison, Wicks & Parmar, 2010). It seeks to address moral and ethicality in managing corporate entity. This theory is intended both to explain and guide the structure, and operation of the establishment by viewing company as an organizational entity through which numerous and diverse participants accomplish multiple, and not always entirely congruent purposes (Donaldson & Preston, 1995). Thus, the theory is general and comprehensive. However, Donaldson and Preston (1995) posit that, one of the central problems in the evolution of stakeholder theory has been confusion about its nature and purpose.

Stakeholder theory of the firm offers two purposes which are to explain how organizations operate and to help predict organizational behaviour (Brenner & Cochran, 1991). This explains the essence of this theory to IFRS compliance study and its relation



to firm value. Nevertheless, Donaldson and Preston (1995) explain the distinction between a stakeholder conception of the corporation and a conventional input-output perspective noting that, the former consist of customers, suppliers, investors, employees, governments, political group, trade association and community while the latter involves investors, employees, customers and suppliers. In a more concise form, Freeman (1984) identifies stakeholders as group of individuals who stand to benefit from or be harmed by and/or whose rights may be violated or protected by corporate actions. In an attempt to fill the gap of identifying who stakeholders are, Mitchell *et al.* (1997:853-854) generated a typology of stakeholders which are identified as: 'primary or secondary stakeholders; owners and non-owners of the firm; owners of capital or owners of less tangible assets; actors or those acted upon; those existing in a voluntary or an involuntary relationship with the firm; rights-holders, contractors, or moral claimants; resource providers to or dependents of the firm; risk-takers or influencers; and as legal principals to whom agent-managers bear a fiducial duty'. This framework explains bonding relationship between corporate entities and all its stakeholders whose interests are expected to be fairly captured in financial statement that is issued with due reference to qualitative accounting standards.

Based on its descriptive accuracy, instrumental power and normative validity as identified by Donaldson and Preston (1995), stakeholder theory has been advanced and justified in management literature. Donaldson and Preston (1995) examine these three aspects of the theory and critique with a conclusion that they are mutually supportive and that the normative basis of the theory is fundamental. Descriptive stakeholder theory describes how organizations manage or interact with stakeholders; normative stakeholder theory prescribes how organizations ought to treat their stakeholders; while instrumental theory include such statements as, if you want to maximize shareholders' value, you should pay attention to key stakeholders (Donaldson & Preston, 1995; Freeman, 1999). Jones (1995) also enhanced stakeholders theory by stressing that, the theory is an integrating theme that offers an instrumental theory of stakeholder

management based on a synthesis of the stakeholder concept, economic theory, behavioural science, and ethics. In a recent study by Harrison, Freeman and Sá de Abreu (2015), stakeholder theory was found to be a particular useful perspective for addressing some of the important issues in business from an international perspective. This includes financial reporting to the global environment, especially capital markets.

As an extension to Donaldson and Preston (1995), Jones and Wicks proposed a convergent stakeholder theory (Freeman, 1999). Jones (1995) showcases a wide spectrum of agreement by those who are stakeholder theorists, laid emphasis on instrumental stakeholder theory as the most result-oriented theoretical development that links stakeholder theory to broader areas of management study. However, Freeman (1999) argues that Jones and Wicks' attempt at grand-theorizing goes awry, suggesting that Donaldson and Preston's (1995) claims are dubious and can lead theorists such as Jones and Wicks in the wrong direction. According to Freeman (1999), firms whose managers will achieve competitive advantage are those who build on values and instrumental relationships. Conversely, some of the critics of stakeholder theory are Milton Friedman, Michael Jensen, Michael Porter, Oliver Williamson (Freeman *et al.*, 2010), Blattberg (2004) and Mansell (2013). For instance Mansell (2013) argues that stakeholder theory undermines principles on which market economy is based by applying political concept of social contract to the corporation. Blattberg (2004) on the other hand punctures the theory for assuming that the interest of various stakeholders can be conceded or unprejudiced against each other.

For the purpose of this study, instrumental stakeholder theory is found relevant so as to provide support for agency theory since the latter could not capture all stakeholders at the stock market such as stockbrokers, portfolio managers, financial analysts, potential investors, stock market regulators, and standards setters etc., who use/receive annual financial reports for multifarious (economic) decision purposes. It provides theoretical basis for explaining how diverse information needs of numerous individuals and

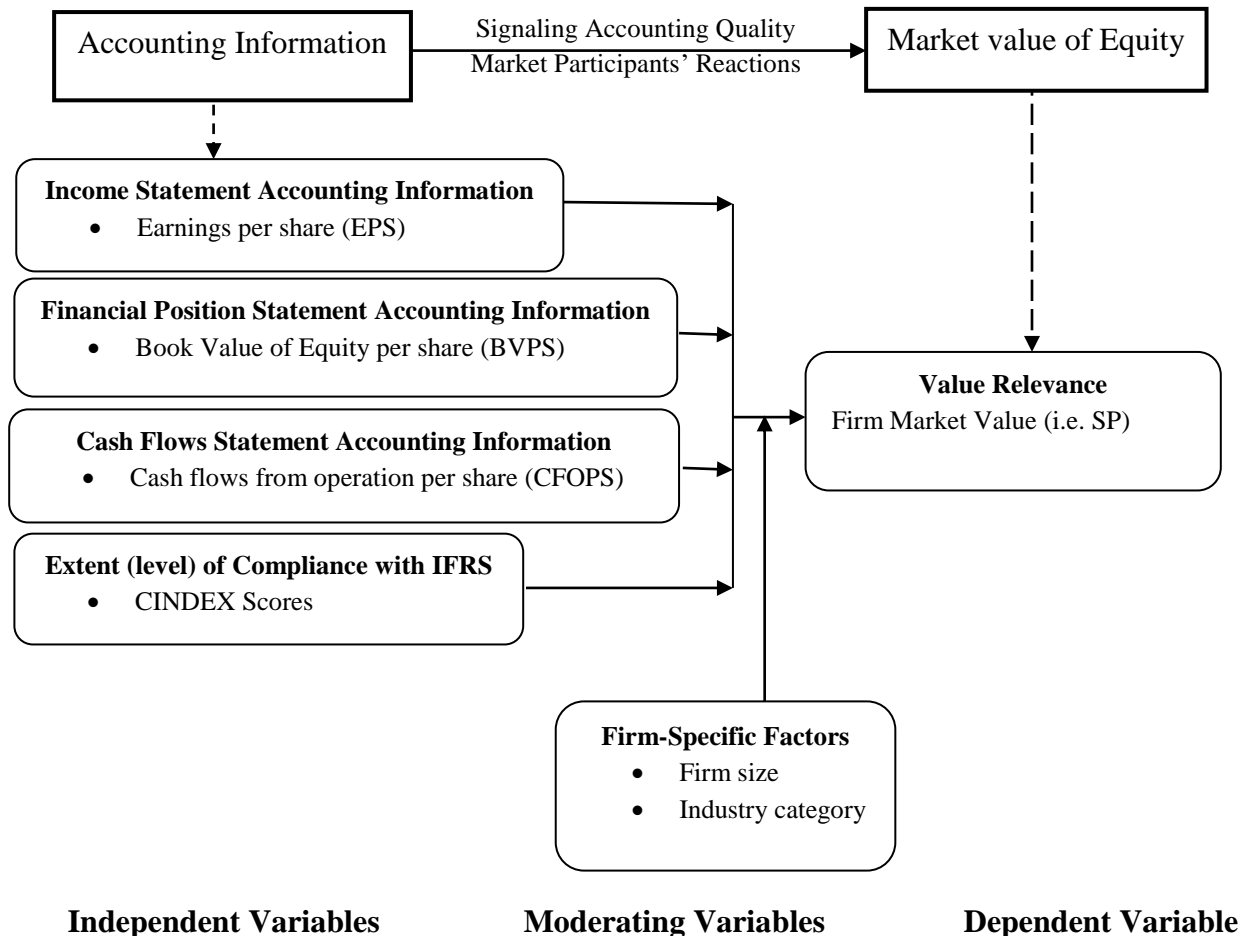
institutions within and outside the entity are met through sound compliance with qualitative accounting standards. Thus, the theory is adopted to provide theoretical explanation for specific objective four in that, if managers have interest of all stakeholders at heart, they should comply fully with IFRS mandatory demands as instructed by the stock market regulatory bodies. Extant literatures that have adopted this theory in compliance, disclosure and value relevance related studies are Karampinis and Hevas (2010), Jensen (2010) and Robert (1992) among others.

### **2.3 Conceptual Framework**

Drawing from Miles and Huberman (1994), conceptual framework is a visual or written product that explains, either graphically or in a descriptive form, the main issue to be studied (i.e. the key factors, concepts or variables), and the supposed correlation among them. As such, deduction from the theoretical background (and empirical review) implies that stock market value (i.e. share prices) of listed companies under examination stands as dependent variable and accounting information as the predictors. Thus, since conceptual framework is a network of interlinked concepts that provides a comprehensive understanding of a phenomenon or phenomena (Jabareen, 2009), this study is conceptualised as depicted in figure 2.1.

According to Barth *et al.* (2001), value relevance studies that examine share prices are interested in determining what is reflected in firm value. Consequently, the choice of the variable as dependent is based on the fact that they respond to new relevant accounting information that is made available in the stock market (Ball & Brown, 1968; Chalmers *et al.*, 2011, Desoky & Mousa, 2014). As adduced by Omokhudu and Ibadin (2015) and Akinsulire (2014), share prices indicate collective behaviour of investors (and other market participants) in the capital market from time to time. That is, at any point in time, stock price is a reflection of the financial position and performances of a listed entity (and other relevant information) as ‘processed’ by the market participants. This response

variable has been employed in prior related studies like Alfraih and Alanezi (2015), Al-Shammari (2011), and Al-Shammari *et al.* (2008), Alfaraih (2009), Daske *et al.* (2008).



**Figure 2.1: Conceptual Framework**

These basic accounting information are earnings (net income) and book value of equity (net assets) representing the two bottom-line items of income statement (financial performance) and financial position statement (erstwhile balance sheet) respectively. Although several studies have invariantly employed these two variables as value relevance regressor such as Okafor *et al.* (2016), Clarkson *et al.* (2011), Chalmers *et al.* (2011), Daske *et al.* (2008), Collins *et al.* (1997), investors' idiosyncratic behaviours in

the market and stock market type (developed or otherwise) might have engendered inclusion of dividend and cash flows from operation in some other related studies like Omokhudu and Ibadin (2015), and Oyerinde (2011). Therefore, explanatory variables (i.e. accounting information) such as earnings, net assets, net cash flows from operation, and level of compliance with IFRS are employed in this study. This is premised on the ability of these information to influence firm's market values as revealed in existing literature such as Chalmers *et al.* (2011), Omokhudu and Ibadin, (2015), Oyerinde, (2011), Tsalavoutas and Dionysiou, (2014).

Level of compliance with IFRS is presumed as additional information that investors can incorporate into the valuation model if greater compliance with IFRS is valued by them (Alfaraih, 2009; Tsalavoutas, 2009; Kothari, 2001). Not only that, the perceived informative nature of IFRS-based accounting information which may enhance investors' information need and with respect to how well the listed entity has complied with the standards (Holthausen & Watts, 2001) suggest value relevancy of the accounting information. These formed bases for including this variable as one of the value relevance predictors in the regression model.

Also, since prior studies have documented mixed controlling influence of several firm-specific factors on value relevance of accounting information and level of compliance with IFRS (Alfaraih & Alanezi, 2015; Aljifri *et al.*, 2014; Khanagha, 2011; Alfaraih, 2009; Tsalavoutas, 2009), this study made attempt to examine moderating effect of firm size and industry category on the relationship between share values and accounting data from the NSE context. Moderation test is hypothesized to identify when and condition under which one variable regarded as predictor (antecedent) influences the other one called criterion (Baron & Kenny, 1986; Fairchild & Mackinnon, 2009). In other words, moderating variables are conceptualised as the condition through which independent variables influence dependent variables. As such, the coefficient of the interaction term between the moderator and predictor serves as basis to understand its moderating effect.

Consequently, this study examines moderating influence of firm size and industry category in the value relevance regression model. Firm size explains how large or small firms are positioned (in terms of total asset) could modify value relevance of accounting information while industry category seeks to observe the way accounting information of industry categories influence the association between the accounting information and share value when it is controlled for.

## **2.4 Review of Empirical Literature**

This section appraises empirical findings of extant studies on value relevance as well as influence of IFRS adoption on value relevance of accounting information. For barely two decades of convergence to IFRS globally, increasing number of countries have chosen to adopt or adapt the accounting standard while researchers have expanded literature in the same direction. Particularly, increasing mandatory adoption of IFRS across the globe has prompted scholars to examine its effect on value relevance of accounting information. Therefore, the ensuing subsections present empirical studies of scholars as they are related to the overall and other specific objectives of this study in that order.

### **2.4.1 Influence of IFRS Adoption on Value Relevance of Combined Accounting Data**

Emergence of IFRS and its consequent growing adoption world-over has drawn the attention of several scholars especially in the developed nations (or capital markets) where it has gained early adoption. Drawing from Ohlson (1995) price valuation model or its modification, researchers such as Alfaraih (2009), Chalmer *et al.* (2011), Clarkson *et al.* (2010), Karđin (2013), Nyabundi (2013), Tsalavoutas (2009) and Umoren and Enang (2013) have carried out studies seeking to unearth the impact of IFRS adoption on value relevance of accounting information. Since this is an event investigation, it is

therefore pertinent to present empirical findings of studies on value relevance of accounting information prior to IFRS adoption followed by post-adoption studies. Hence, this subsection presents some existing empirical studies on value relevance of combined accounting data in a multiple regression model.

In an effort to provide evidence of the ability of Mexican accounting numbers to summarize the information underlying stock prices, Vázquez *et al.* (2007) employ econometric terms to test the variables with the use of Ohlson (1995) model. The study relied on panel data of a 13-year period (i.e. 1991 to 2003) using share price at three month after fiscal year-end while adjusted  $R^2$  was employed for data analyse. Heteroscedasticity in the data was addressed using White Consistent Covariance. The analysis consequently comprises 1,046 company-year observations drawn from 145 financial and non-financial companies. Panel analysis results show that, book value and earnings are significantly value relevant, while only book value is value relevant under Ordinary Least Squared (OLS) Regression analysis. Meanwhile, in place of earnings, explanatory power of dividend, EBITD, operative cash flows and net cash flows tested (with modified Ohlson model) were not significant. In addition to basic Ohlson model results, an alternative model was presented (by adding operative cash flows but not substituted for earnings) as a better proxy of the value relevance of the characteristics of Mexican information. The study suggests that result of the alternative model tests provide extra information and better statistics than the original Ohlson model, although significant but at reduced adjusted  $R^2$ .

Unlike Vázquez *et al.* (2007), Ragab and Omran (2008) employ both price and returns models to observe whether national and international investors in the Egyptian stock market identify accounting information based on the Egyptian accounting standards to be suitable in stock valuation. All Egyptian firms listed in the International Finance Corporation (IFC) global index during 1998 – 2002 were targeted with unbalanced sample across years. The study obtained evidence of value relevance of accounting

information in the stock market and that stock prices in Egypt are less informative about the future value of the firms than accounting information. By employing the two models and based on both pooled cross-sectional time-series regressions, returns models indicate that earnings levels are significantly associated with stock returns. The price model incorporates both income statement and balance sheet measurements with their statistical findings showing that both earnings and book value are positive and significantly related to Egyptian firms' market values using F-test and  $R^2$  outputs. This demonstrates consistent finding with Vázquez *et al.* (2007). Thus, the study appreciates the two models and thereby provides separate evidences on value relevance from Egypt stock market which is relatively higher compare with those reported in sophisticated and large emerging markets.

Sequel to controversial results from previous studies globally regarding usefulness of earnings levels or earnings changes models as the explanatory variable for assessing relationship between earnings figures and stock returns, Dimitropoulos and Asteriou (2009) investigate the relationship between accounting information and stock returns of 105 companies listed in the Athens Stock Exchange. Per share value of income statement and balance sheet bottom-line items (earnings and book value) were used in order to address heteroscedasticity. By applying four models proposed by Kothari and Zimmerman (i.e. price, return, differenced and deflated models) on individual Greek stocks as well as portfolios of the sampled firms between 1994 and 2004, the results of the  $R^2$  used show a significant value relevance of accounting earnings prepared under the Greek GAAP but was lower than the one from developed markets contrary to Ragab and Omran (2008). Thus, the study stresses that in the Greek stock market, price model produces less biased Earnings Response Coefficients (ERC) than the returns model while the use of cross-sectional and time-series aggregated data results in a large increase in the explanatory power of earnings for returns model yielding more significant ERC.



In comparison between two stock markets from different economic status, Hellström (2006) confirms plausibility of value relevance methodology by exploring value relevance of accounting information of companies listed at the Prague Stock Exchange as compare with Stockholm Stock Exchange in the period of 1994 – 2001. The study predicts that value relevance of transitional economy's (Czech Republic) accounting information should be lower throughout the period than the value relevance of a well-functioning (Swedish) economy and that the value relevance of the former increase throughout the study period. Grouping the study period into two (i.e. 1994-1997 and 1998-2001) due to political change as well as growth in economy that later turned into economic recession in 1997 results in the use of unbalanced data obtained from non-financial industries for the two markets. The study adopted Ohlson deflated price (at March 31) valuation model as well as Easton and Harris (1991) share returns model and were tested using  $R^2$ . The prediction was confirmed and thereby established value relevance of accounting information ideology.

Further, with a view to determining whether accounting information has the ability to influence share prices of firms listed in the Nigerian Stock Market (NSE), Oyerinde (2011) investigates value relevance of accounting data in the stock market. By using primary and secondary (panel cross-sectional and time-series) data, information content of various accounting numbers (i.e. book value, earnings and dividends) were measured through OLS, Random Effects Model (REM), and Fixed Effects Model (FEM). The study focused on 68 NSE listed companies for the period of 2002 to 2008 making 476 firm-year observations. Ohlson (1995) model was adapted. Findings show significant relationship between accounting information and share prices of the listed firms with dividends being the most broadly used information, followed by earnings and net book value. This investigation also revealed that manufacturing sector is more informative and that a significant negative relationship exists between negative earnings and share prices of the NSE listed companies while perceptions of institutional and individual investors about the value relevance of accounting information are not significantly

different. In line with its structure, the study unveiled additional value relevant accounting figures in addition to the already confirmed accounting data by Ragab and Omran (2008) and Vázquez *et al.* (2007) using modified Ohlson price valuation model.

In a sectoral based form different from Oyerinde (2011), Omokhudu and Ibadin (2015) also examine the extent at which accounting information is associated with firm value, from an emerging market context by using modified basic Ohlson (1995) model that includes cash flows from operation, and dividends in separate models to ascertain value relevance of these accounting information in the Nigeria Stock Market. By accommodating relative inefficiency of the market, the study used stock prices at third and sixth months after the financial year-end as dependent variable. Pooled and panel secondary data that cover 1995 to 2013 study period were obtained and analysed through OLS and dynamic model estimations while Random and Fixed effects variants were employed in the regression. Their findings show that earnings, cash flows and dividends were statistically significantly associated with firm value while book value was statistically not significant but related. The result is partly in consonance with that of Umoren and Enang (2015) which focused on banking industry from the same market.

In a unique form of investigating likely role of firm attributes on value relevance study, Chandrapala (2013) investigates the impact of ownership concentration and firm size on value relevance of earnings and book value combined, given by firms listed in Colombo Stock Exchange (CSE) in Sri Lanka from 2005 to 2009 resulting in 882 firm-year observations. Pooled cross-sectional time series data were used while the dependent variable is taken as price of shares 3 months after the end of financial year. The study employed adjusted coefficient of determination ( $\text{adj. } R^2$ ) for the analysis based on Ohlson valuation model. The study finds out that the value relevance of earnings and book value is below average but value relevance of ownership concentrated firms is higher than that of ownership non-concentrated firms. The study confirms further that the two variables show higher value relevance for larger firms than for smaller firms. Thus, this finding

suggests inclusion of firm-specific attributes in the statement of financial position and income statement value relevance model to examine how it explains (or mediates) value relevancy of the accounting data.

Summarily, prior value relevance studies that captured events before IFRS adoption established varying nature of value relevance of accounting information and from different stock markets. The studies are generally based on multifarious methodological approaches. Also, findings are mixed while specific accounting information that explains share prices or returns majorly cannot be generalised. However, empirical findings after IFRS adoption (or studies that cover pre- and post-IFRS adoption) are reviewed in the ensuing paragraphs.

In a bid to investigate whether the adoption of IFRS increases value relevance of accounting information of firms listed on the Australian Securities Exchange, Chalmers *et al.* (2011) embark on a longitudinal study that covers pre-IFRS and post-IFRS periods of 1990 – 2008, 2005 being convergence year. Using earnings and equity reconciliation unbalanced data with share price at third month after financial year-end, yielding a maximum total sample of 18,613 firm-year observations across 19 years test period, regression analysis was carried out with the use of basic Ohlson price valuation model estimated separately for each year and for a pooled data. Likelihood of data error and over-influence of extreme observations (outliers) were tackled by winsorizing data used in the regression at 99<sup>th</sup> and 1<sup>st</sup> percentiles which suggests superiority of the regression results over other literature that failed to observe this (Anderson, Sweeney & Williams, 2008). Through t-statistic and adjusted R<sup>2</sup>, the study observes that earnings become more value-relevant whereas the book value of equity does not, such that earnings becoming more persistent around IFRS adoption while the impact is concentrated in the sub-samples of both large and small industrial firms. Robustness of the study's results was confirmed with the use of 6,354 observations from firms with data spanning through entire period of the study. The study submits that even for a country considered by

strong investor protection and high-quality financial reporting and enforcement, IFRS adoption influences the associations between accounting information and market value.

Using different perspective from Chalmers *et al.* (2011), Liu *et al.* (2011) examine the impact of IFRS adoption on accounting quality in a regulated market of China for the period 2005 to 2008 using 870 Chinese listed firms. Stock price at sixth month after fiscal year-end was used as dependent variable. Incremental value relevance model for price valuation model was employed based on Ohlson (1995) framework while value relevance was tested with significantly positive coefficient estimates for interaction terms between the accounting information and post-IFRS dummy. The results of the study indicate that accounting quality improved with increased value relevance of accounting measures after IFRS adoption. This is partly at variance with finding by Chalmers *et al.* (2011) concerning incremental information content of earnings and book value of Australia listed firms. However, it is not clear whether the study made attempt to ensure that the model represents best linear unbiased estimation.

In a similar study, Okafor *et al.* (2016) investigate whether financial information prepared and disclosed under IFRS has incremental value relevance over the accounting information issued under Canadian GAAP. Using archival unbalanced data of companies listed at the Toronto Stock Exchange for 2008 – 2013 study period (leading to 1,816 firm-year observations), the study employed a difference in differences methodology. Value relevance was estimated using adjusted  $R^2$  of regressions on the relationship between stock price and, book value and earnings as well as stock returns and, earnings and changes in earnings, and time series incremental association return estimation. Multiple models including Ohlson (1995) model and a modified Balachandran and Mohanram (2011) model were used to investigate value relevance. Their findings show that accounting information prepared and disclosed under IFRS exhibits higher price and returns value relevance than accounting information prepared under local GAAP consistently with Liu's *et al.* (2011) findings from China.

In a different empirical test, Bogstrand and Larsson (2012) examine the value-relevance of Scandinavian earnings information (accrual and cash flows based earnings) and book values so as to know whether the widespread global adoption of IFRS/IAS has improved accounting quality as regards economic decision-usefulness to equity investors. A sample of 4,310 firm-year observations for 431 listed companies at NASDAQ, OMX Nordic and Oslo Stock Exchange between 2001 and 2010 was obtained for the study. Two price regressions and one return regression were employed while capitalized values of equity or annual changes thereof was proxy for firm value as book value, accrual-based and cash flows-based earnings were proxy for accounting information.  $R^2$  was employed to measure the explanatory power of accounting information. The results of the study show significant empirical signs of an increased value-relevance in both Scandinavian earnings information and book values in tandem with Liu *et al.* (2011) and Okafor *et al.* (2016). This formed basis for drawing significant and impacting conclusions regarding the information content of financial statement unveiled in the Scandinavian region.

Using markets comparison dimension, Desoky and Mousa (2014) attempt to explore predictability attributes of earnings as accounting information provided under IFRS in the Bahrain Bourse (BHB) and the Muscat Securities Market (MSM), Oman. The study covers 2005 to 2011, comprising 2005 – 2007 (before adoption) and 2008 – 2011 (after adoption). The sample consist 280 and 203 firm-year observations from 40 and 29 different companies listed in BHB and MSM respectively. Security price at three months after fiscal year-end was taken as price model response variable. The study employs both return and price-earnings model as suggested by Ohlson (1995) and Burgstahler and Dichev (1997) to determine the  $R^2$  and adjusted  $R^2$ . The study reveals that, the idea that adoption of IFRS improves value relevance of financial reporting contradicts predictability attribute as predictability of accounting information in listed companies of BHB is reduced after the adaption of IFRS while that of MSM improved. Desoky and

Mousa (2014) submit a clear indication that IFRS adoption by companies in MSM enhances the predictability of accounting information more than in BHB.

Following mandatory adoption of IFRS in European Economic Area in 2005 and the directive that listed firms should restate 2004 financial statements, Gjerde *et al.* (2008) consider sample consisting 145 restatements from Norwegian GAAP to IFRS for firms listed on the Oslo Stock Exchange in Norway. Testing whether IFRS accounting figures correlate more strongly with stock market values than the corresponding Norwegian GAAP figures with the use of both  $R^2$  and Adjusted  $R^2$ , the study finds out little evidence of increased value-relevance after adopting IFRS when comparing and evaluating the two regimes unconditionally. The study uncovers distinctive finding on theoretically established incremental information content of the accounting data upon IFRS adoption against that of Liu *et al.* (2011), Okafor *et al.* (2016), and Umoren and Enang (2015).

In a finding related to Gjerde *et al.* (2008), BoliBok (2014) made attempt to investigate the impact of IFRS on the value relevance of fundamental accounting data announced by banks listed on the Warsaw Stock Exchange (Poland) for a period of 1998 – 2012. The study employs Ohlson residual income valuation model using linear regression with OLS method to analyse pooled data of 174 bank-year observations from 17 banks. Based on Chow test, empirical evidence of the study indicates that, the observed increase in value relevance of both book values of equity and residual incomes of banks after the introduction of IFRS is statistically insignificant which confirmed the previous finding in Polish capital market contrary to Okafor *et al.* (2016) from Canada. Nevertheless, insignificance effect of the accounting data might be due to methodology adopted to carry out the regression analysis.

Additionally, through sample drawn from different continents of the world, Clarkson *et al.* (2011) investigate the impact of IFRS adoption on the relevance of book value and earnings for equity valuation in Europe and Australia listed firms. Using original

accounting numbers reported for 2004 financial year and restated one in compliance with IFRS demands for 3,488 firms, they employed linear and product models to determine the adjusted  $R^2$  for the model. Stock price of the sixth month after the year of adoption was used. Basic Ohlson (1995) price model was estimated using OLS and weighted OLS regressions. The result of traditional linear pricing models submit that EPS and BVPS numbers measured under IFRS information have similar explanatory power for firm stock price with the same accounting information under original local GAAPs while the same model suggests decrease in price relevance for firms in common law countries and increase in code law countries when the samples were partitioned. This suggests possible influence of the country based form of developing laws on value relevance. Yet, the finding of the basic OLS is at variance with others from developed and developing markets. However, when cross-product term was introduced into the price model by assuming non-linearity in the relationship (product model), estimated coefficient on the variable is statistically significant and negative, showing increasing non-linearity in the model while increase is more pronounced in common law countries. This reveals most likely disparity in the regression results when different methodologies are employed.

In order to showcase study on IFRS adoption and Value relevance from Nigeria stock market, Umoren and Enang (2015) examine whether mandatory adoption of IFRS has improved value relevance of earnings and book value by focusing on twelve (12) listed banks between pre-IFRS (2010-2011) and post-IFRS (2012-2013) adoption periods. This led to 24 firm-year observations each for pre- and post-IFRS and 48 observations for the two periods. Relying on Ohlson price model, analysis was conducted with the use of descriptive and least square regression to examine relative and incremental value relevance of the accounting data. The results of adjusted  $R^2$  indicate that, book value and earnings of the banks are relatively value relevant to share price under IFRS than under the Nigerian GAAP while incremental findings show that EPS is incrementally value relevant while book value of equity per share is incrementally less value relevant during

the post-IFRS period. The finding is a reflection of incremental value relevance of the accounting data after adopting IFRS as confirmed from more developed Australian stock market. Nevertheless, it may be very crucial if the same finding could be obtained when sample is drawn from all the listed firms. However, the study recommends inclusion of cash flows from operation information in the subsequent study.

In an attempt to document evidence of value relevance of accounting information disclosed by companies listed on the Nairobi Securities Exchange (NSE) in Kenya, Nyabundi (2013) considered dividends, earnings and book values accounting numbers and share price for a six-year period (i.e. 2005 to 2010). Using simple and multiple linear regression models on panel data for the analysis, the study found evidence that dividends, earnings and book values have significantly and positively impacted on stock prices for the listed firms while dividends shows higher explanatory power over earnings and book values. The study demonstrates a within-the-IFRS period type. As suggested by Umoren and Enang (2015) and in the spirit of Ohlson (1995) regarding ‘other information’ in the price valuation model, Nyabundi (2013) showcased plausibility of including additional relevant information in the model although with theoretical justification.

Khanagha (2011) examines value relevance of accounting information pre- and post-IFRS periods between 2001 and 2008 by using the regression and portfolio approaches for seventeen (17) listed United Arab Emirate (UAE) companies sampled. The sample consist 136 firm-year observations for price model and 119 firm-year observations for return model as well as portfolio approach. Results obtained from a blend of regression and portfolio approaches reveal that, accounting information is value relevant in UAE stock market. A comparison of results for the period before and after IFRS adoption based on explanatory power ( $R^2$ ) of regression and portfolio approaches indicate a decline in value relevance of accounting information post-IFRS adoption showing that IFRS in UAE did not improve value relevancy of accounting information. This is



consistent with observed decline in accounting quality measured through income smoothing, accrual aggressiveness, timeliness of loss recognition, and earnings management by Ahmed *et al.* (2013) from twenty countries that adopted IFRS in 2005. Conversely, Khanagha (2011) notes post-IFRS increase in cash flows' incremental information content based on portfolio approach.

Thus, it can be drawn from the above prior studies that adoption of IFRS is capable of influencing the existing relationship between firm market value and various accounting information but in a variegated form. These prior studies provide guide for selection of accounting information employed in this study and as connected to three main forms (elements) of reporting accounting figures in the financial statement. In a more specific form, the following subsections concisely present prior empirical studies as related to each specific objective of this study.

#### **2.4.2 Income Statement Information and Value Relevance under IFRS**

Income statement (the supposed erstwhile profit and loss account) otherwise referred to as statement of comprehensive income under IFRS contains some items of information of which net operating income and earnings (net income) have been used in value relevance models (Karampinis & Hevas, 2009; Ben Ayed & Abaoub, 2006; Vázquez *et al.*, 2007). Not only that, dividend, a fallout of income statement information has also been included in the regression model to showcase value relevance conjecture. However, inclusion of dividend and earnings together in a single valuation model might lead to high correlation between the two variables because earnings has potential in determining dividend. Thus, this study employs earnings as variable representing income statement information. The following empirical studies account for how income statement information explains share price in the capital markets.

Tsalavoutas *et al.* (2012) observe value relevance of net income (earnings) together with book value of equity before and after the mandatory changeover to IFRS in Greece by

using a period of one year before and after the adoption of IFRS (i.e. 2004 and 2005). Market value of the sampled firms one month after the publication of the financial statement relating to the end of the financial period under examination was used. Financial institutions, companies with incomplete data, companies with June 30 as their year-end date, and early IFRS adopters among others were excluded from the sample leading to final sample of 153 firms. The study relied on fundamental Ohlson (1995) price model. Contrary to their expectations, the result of net income shows no significant change in the explanatory power of value relevance regressions ( $R^2$ ) between the two periods. Although the coefficient of net income is positive and significant in both periods, the study observed a decrease in its coefficient under IFRS regime. Even though the study focused transition year to IFRS to achieve its objective, period of this study is relatively short while firm-year observation could be improved on to convey ideal value relevance discourse. Nevertheless, Söderlund (2010) and Karğın (2013) obtain similar result from Finland and Turkey respectively confirming that value relevance of income statement information decrease during IFRS period.

Furthermore, Kwon *et al.* (2014) examine whether the adjusted operating income obtained due to convergence to IFRS in 2011 in Korea is more value relevant and shows higher explanatory power than the operating income prepared under Korean GAAP. The study focused on non-financial firms whose financial data were available excluding non-December year-end firms. Market value of the firms at three month after the fiscal year-end was employed. Considering a study period of 2007 to 2012 (i.e. 2007 – 2010 pre-IFRS and 2011 – 2012 post-IFRS), 3,011 firm-year observations were obtained for the regression analysis. With respect to the use of adjusted  $R^2$ , finding of the study revealed that adjusted operating income for IFRS has incremental and relative information content over Korean GAAP-based operating income contrary to Tsalavoutas *et al.* (2012) and Söderlund (2010). All the same, the study fails to show that the regression estimation represents best linear unbiased estimate.

Alashi and Dumlu (2015) measure the impact of IFRS adoption on value relevancy of income statement accounting information (net income) of 100 manufacturing firms listed in Borsa Istanbul between 1996 and 2013. Sample that lacked consecutive data are eliminated to construct balanced pooled data model. The study employed pool, random and fixed effect regression models on a dataset divided into two periods (i.e. pre-IFRS 1996 to 2004 and post-IFRS adoption 2005 to 2013). Regression models were used to measure explanatory power of earnings over weighted average of share price at announcement day. The result of the cross-sectional analysis indicates that value relevance of accounting information increases after the adoption of IFRS as adjusted  $R^2$  increase from 74.5% to 80.3%. The strength of the study is pointed by its sizeable equal length of years before and during IFRS adoption. However, it is observed that the study does not justify several regression models used by establishing specification effect of balanced panel data employed as basis for its submission.

Karampinis and Hevas (2009) test the effect of the mandatory adoption of IFRS on value relevance of earnings and book values using data from the Athens Stock Exchange that covered a period of two years before and two years after the mandatory adoption of the accounting standards (i.e. 2003 to 2006 altogether). Sample consists 85 non-financial firms resulting in 170 firm-year pre-IFRS and 170 firm-year post-IFRS observations. The sample was later adjusted for firm with losses to record 64 sample with 128 each for pre and post-IFRS firm-year observations. The study establishes that adoption of IFRS positively affected value relevance of consolidated net income although it had no effect on its unconsolidated counterpart and that consolidated accounting numbers are by far more value relevant than unconsolidated ones in both periods. Also, the study shows that disaggregating net income increases the explanatory power of the earnings – book value capitalization model even though the overall explanatory power of the model increased; the incremental explanatory power of both net income and financial income decreased. However, it may be argued that the study should not have employed stock price at six month after fiscal year-end since it was not logically justified.

In a bid to re-evaluate information utility of accounting earnings and alternative measures such as operating earnings, cash flows from operation, earnings from ordinary activity, special items in Tunisian Stock market, Ben Ayed and Abaoub (2006) test value relevance of these variables to explain security returns. 43 firms were sampled to obtain 262 firm-year observations covering the period of 1995 – 2004. Univariate and multivariate regression models were estimated with pooled method to determine adjusted coefficient of determination (adj.  $R^2$ ). Results show that operating income, income before taxes, special items and income taxes are value relevant for firm valuation and that investors distinguish between components of accounting earnings and the value relevance of those variables to explain security returns. Even though the study was able to tackle its goal, the main concern is the possibility that variables employed could be measuring the same thing (multicollinearity).

Further, in different a dimension, Jermakowicz, Prather-Kinsey and Wulf (2007) examine value relevance of income statement information (i.e. earnings) of DAX-30 companies, the German premium stock market among other objectives. The study covers the period of 1995 – 2004. Based on a survey sent to DAX-30 company executives, OLS regression analysis was performed on 265 firm-year observations drawn to find out that, adopting IFRS or US GAAP, or cross-listing on the New York Stock Exchange significantly increases the value relevance of earnings relative to market prices.

#### **2.4.3 Statement of Financial Position Information and Value Relevance under IFRS**

Information contained in the statement of financial position (formerly called balance sheet) especially book value of equity (or net assets) has been examined in prior value relevant studies. It forms one of the two variables on which Ohlson valuation model is built. Value relevancy (and otherwise) of this accounting information has been confirmed in earlier studies before the adoption of IFRS (Omohkudu & Ibadin, 2015; Oyerinde, 2011). Upon adoption of IFRS, relative and incremental value relevance of

financial position information has been found mixed in the literature (Söderlund, 2010; Tsalavoutas, 2009; Umoren & Enang, 2015). For instance BoliBok (2014) investigates the impact of IFRS on the value relevance of fundamental accounting data announced by 17 sampled banks listed on the Warsaw Stock Exchange over the period of 1998 – 2012 resulting into 174 company-year observations. The analyses were based on the Ohlson residual income valuation model. Contrary to Karğın (2013), Tsalavoutas *et al.* (2012) and Söderlund (2010), Bolibok's (2014) empirical evidence indicates that, observed increase in the value relevance of book values of equity after introduction of IFRS is statistically insignificant at 5% level of significance with reduction in adjusted R<sup>2</sup> from 0.93 to 0.84. This finding is also in consonance with the submission of Umoren and Enang (2015) that employed similar methodologies and model for twelve (12) listed banks in Nigeria although for two years pre and post-IFRS periods.

Furthermore, Karğın (2013) investigates value relevance of accounting information in pre- and post-financial periods of IFRS adoption for Turkish listed non-financial firms from 1998 to 2001. Pooled accounting data for the study period resulting in 1,954 firm-year observations were collected for the study while Ohlson (1995) forms the basic model for the study. Representing financial position accounting information with book value of equity per share in the model, Karğın (2013) observes that in overall, OLS regression results indicate that book value is value relevant in determining market value or stock price. The R<sup>2</sup> result shows that value relevance of book values improved in the post-IFRS period (2005-2011). Notwithstanding, it is highly unclear if market value per share at the fiscal year-end used is capable of capturing influence of the year-end accounting data.

In like manner, Söderlund (2010) reports increase in value relevance of financial position accounting information while that of income statement decreased for firms adopting IFRS in Finland. Being a qualitative archival study, Söderlund (2010) employs content analysis of financial statements method for 10 carefully selected non-financial

companies. The aim of the study was to know if IFRS is more value relevant than Finnish Accounting Standard (FAS) by comparing the accounting numbers under FAS with the one under IFRS. The study used a qualitative method to investigate differences in value relevance in disaggregated level for line items. Despite the fact that the study showcases sizeable number of related extant empirical findings, it fails to logical address theoretical foundation on which the study's hypothetical drive was constructed.

Premised on the logical assumption that GAAP aims at informing investors could show a higher association with share prices (value relevance) than GAAP aimed at protecting creditors, Schiebel (2007) examines the value relevance of IFRS and German GAAP. OLS regression was applied to analyse data drawn from 24 companies listed on the Frankfurt Stock Exchange publishing exclusively either IFRS or German GAAP consolidated financial reports over the period of 2000 to 2004. Using panel data restricted to a single capital market in order to eliminate pricing differences, the study generated 57 and 55 firm-year observation for IFRS and German GAAP respectively. Market capitalisation around the financial year-end and equity book value were proxy for value relevance and accounting information (i.e. dependent and independent variables) respectively. The adjusted  $R^2$  results of the logarithm regression model employed due to non-normality show that German GAAP is statistically and significantly more value relevant than IFRS. The ability of the study to adopt natural logs model as a result of observed non-normality stands it out of other related studies.

Succinctly, an inference from the above submission is that, value relevance of the statement of financial position information is mixed especially based on studies from different capital markets.

#### **2.4.4 Cash Flows Information and Value Relevance after IFRS Adoption**

Cash flows statement is one of the unique contents of financial statement that helps to show operating, investing and financial activities (in terms of cash movement) that an

entity has expended or received during a financial period. Specifically, it reveals flows of cash which include cash and cash equivalents, as well as capability of the entity to generate and effectively utilise cash towards corporate expansion, long term growth prospect and investors' benefits. As such, it forms one of the value relevant accounting data source to stock market participants. Prior study has shown that some of its items such as operating cash flows and net cash flows could be value relevant (Saaydah, 2012).

Khodadadi, Nikbakht and Nikbakht (2012) carry out an investigation by comparing the value relevance of operating cash flows provided based on Iranian accounting standard and IAS in Tehran Stock Exchange from 2002 to 2007. The study used panel data consisting 1,379 firm-year observations and employed Wald test and Vuong (1989) test to compare the incremental and relative value relevance respectively using adjusted  $R^2$ . The results indicate that, operating cash flows based on IAS have significant incremental value relevance than operating cash flows based on Iranian accounting standard. Nonetheless, the results of Vuong test show that there are no significant differences between the value relevance of operating cash flows based on IAS and Iranian accounting standard.

Result obtained by Khodadadi *et al.* (2012) corroborates submission of Asselman (2012) who observes that the outcome of the regression analysis performed reveals increased value relevance of cash flows and decrease in earnings after IFRS adoption with the use of 74 Dutch firms. On the contrary, Papadatos and Makri (2013) investigate value relevance of earning and cash flows after the mandatory adoption of IFRS in Greece. The study covers 2005 to 2010 and used cross-sectional data with OLS regression model. When both earnings and cash flows were included in the same model, the major finding shows that cash flows under IFRS do not contain incremental information as compared to the earning under IFRS.

Camodeca *et al.* (2014) also verify the value relevance of accounting information with reference to United Kingdom (UK) and the Italian stock markets for a three-year period (i.e. 2011 – 2013) post-IFRS adoption. The sample consists 75 and 67 non-financial companies listed on the Milan Stock Exchange and London Stock Exchange respectively which were ranked by market capitalization related to the fourth month subsequent to the fiscal year-end date and third month for those companies that their information was not available according to Hellström (2006). The study adopts Edward, Bell and Ohlson's (1995) approach which was transformed to classical OLS regression approach. Adjusted  $R^2$  was used for the analysis. The two primary findings of the study show greater value relevance of accounting information in Italy than in the UK even based on sample's characteristics and that, in Italy, the most value relevant accounting data is earnings while in the UK, the focus is mainly on cash flows. Nevertheless, the period of this study could be punctured as being so short for value relevance empirical discourse as emphasised by Omokhudu and Ibadin (2015).

By using price and returns regression models approaches for seventeen (17) financial and non-financial listed United Arab Emirate (UAE) sampled companies, Khanagha (2011) examines value relevance of accounting information pre and post-IFRS periods (i.e. 2001-2008). Sample selection was based on several criteria with specific target on companies with December 31 as fiscal year-end in order to ensure common period for sampled firms. The results obtained from a combination of regression and portfolio approaches show that accounting information is value relevant in UAE stock market. However, with sample of 136 firm-year observations for price model and 119 firm-year observations for portfolio approach, Khanagha (2011) reports post-IFRS increase in cash flows' incremental information content based on portfolio approach consistently with Asselman (2012). However, stock price at the date of accounting announcement used was apparently made unclear while fundamental basis on which consistency and efficiency of the regression estimation was built could not be established.



Attempt was made to review value relevance of cash flows measure before IFRS adoption. For instance, Puspa (2006) carries out a measure on value relevance of cash flows from operation along with earnings between 1996 and 2001 with a view to understand which of the accounting information's value relevance is higher. The study target 79 listed companies in the Jakarta stock exchange.  $R^2$  is used as the primary metric to assess the value relevance based on the pooled regression-variations approach. Generally, the study observes that both accounting information are value relevant only that, value relevance of earnings was higher than cash flows information. Although the study demonstrate cross-sectional and pooled regression analyses that informed the conclusion, appropriate diagnostic tests that formed its basis were not showcased.

Also, driven by unclear kind of accounting information to be employed for the purpose of valuation and fundamental analysis in Egypt, Habib and Elhamawy (2009) sample 88 actively trading non-financial firms in the Egyptian stock market in year 2005. Data were drawn from published financial statements for the year ended 2005. By adopting residual income valuation model of Pope and Wang (2005), accounting earnings was represented with net income after taxes (NI) while NI is disintegrated into operating cash flows and accounting accruals with a view that, both cash flows and accounting accruals are individually replicated in equity market values in the Egyptian equity market. The result of the study shows a positive (negative) correlation between cash flows (accounting accruals) and equity market values in Egypt. Though the study is established on logical theoretical ground, unjustifiable sampling bias is shown by eliminating firms with negative equity value to address outliers.

#### **2.4.5 Extent of Compliance with IFRS and Value Relevance of Accounting Information**

Alfraih and Alanezi (2015) explore the association between the level of compliance with IFRS mandatory disclosures and value relevance of accounting information of listed companies in the emerging economy of Kuwait to market participants. The study is

structured such that it first examines the level of compliance with mandatory IFRS disclosures of Kuwait Stock Exchange (KSE) listed firms in 2010 through a disclosure index drawn from IFRS disclosure demands. Subsequently, it also investigates value relevance of earnings and book values using Ohlson's (1995) valuation model that incorporates the level of compliance with IFRS among KSE listed firms. The sample consists of 119 non-financial firms. Using self-constructed compliance index for 24 IAS/IFRS to generate 397 mandatory disclosure requirements, the study reports approximately 72% compliance level with minimum and maximum level of 41% and 94% respectively. Assessing the association through explanatory power ( $R^2$ ) of the regression model, the results show a significant association between greater level of compliance with IFRS and the value relevance of earnings and book values to KSE investors. Noting evidence of noncompliance with the standards from review of literature, the study recommends further investigation in this direction. The position of the study that mandatory disclosure policies are relatively constant and rarely change overtime which constricted the study to a year investigation is understandable. However, this does not imply that listed firms' level of compliance with IFRS cannot improve over time due to 'direct and indirect' additional knowledge acquire by the management on IFRS requirements.

A prior related study by Alfaraih (2009) reports similar finding only that 27 IAS/IFRS that led to 418 disclosure items for both financial and non-financial firms was used. Period of the study was 1995 to 2006 while compliance study was limited to 2005 only. Both price and return models were employed to perform the OLS regression. The study obtained 72.6% compliance level among all the listed companies with the use of self-developed compliance index. The two models demonstrate significant association between (higher) extent of compliance with IFRS and value relevance of accounting information used.

Tsalavoutas and Dionysiou (2014) respond to calls for research regarding the valuation implications of mandatory disclosure requirements by examining the extent of compliance with 418 IFRS mandatory disclosure items in 150 Greece listed companies for 2005 financial year. The study also explored whether the compliance scores (measured through un-weighted method) are value relevant and whether the value relevance of accounting figures varies across high- and low-compliance firms. By employing basic Ohlson model, firm factors were incorporated in order to observe controlling role of the factors included. Findings indicate 75% average level of compliance with mandatory disclosures while levels among industries are not only relatively value relevant (through  $R^2$ ), the valuation coefficient of net income of high-compliance firms is significantly greater than that of low-compliance firms. Nevertheless, reliability test of the instrument employed that involved the researchers themselves could have led to self-interest bias.

Under Nigerian local GAAP, Kasum (2011) examines the impact of compliance with standards on profitability and assets of forty-four (44) sampled listed companies during 2000 – 2006. Profitability, asset and compliance data of the companies were collected from the NSE and annual reports of companies. Pearson Product Moment and Spearman's Rank Correlation statistics were used to test the impact of compliance, while t-statistic was used to investigate the extent of compliance. Findings of the study suggest that Nigerian companies reasonably comply with Nigerian accounting standards (GAAP) but the level of compliance is below the international benchmark of 91%. The study also showed that, compliance resulted in improved profitability and higher net-asset, but the improvements are not significant. According Kasum (2011), outcome of the study does not have much different from the study by Adeyemi (2005) who reports reasonable compliance by Nigerian firms but that the extent of compliance is positively and significantly influenced by multinational companies' equity participation while firm size does not. However, these studies account for pre-IFRS adoption compliance with Nigerian local GAAP.

In a relatively restricted scope, Yiadom and Atsunyo (2014) examine the extent to which 31 companies listed on the Ghana Stock Exchange (GSE) complied with IFRS disclosure requirements in 2010. With the aid of a checklist, an index of compliance was self-constructed to quantify the level of compliance with six IFRS (i.e. IAS 1, 7, 12, 16, 18 and IAS 19). The findings reveal overall mean compliance of 85.8%. Yiadom and Atsunyo's (2014) submission is relatively similar to several other studies conducted around the world such as 94% compliance level reported by Tower *et al.* (1999) in Australia, 80.7% reported by Omar (2012) in Bahrain, 81% reported by Glaum and Street (2003) in Germany, 80% reported by Tsalavoutas (2009) in Greece. All these studies examined influence of firm-specific attributes on extent of compliance with IFRS in order to establish their effects. However, they did not establish its association with and influence on value relevance of accounting information as examined by Alfraih and Alanezi (2015), Alfaraih (2009), and Tsalavoutas and Dionysiou (2014).

Drawing from the above literature, it is evident that most of the studies on extent of compliance with IFRS and value relevance have been empirically established outside Africa while there is sketchy record of such aspect of value relevance study under IFRS from Nigeria. Nevertheless, despite the fact that there are several studies that have investigated extent of compliance with IFRS after its adoption world-over (Juhmani, 2012; Amoako & Asante, 2012; Al-Shammari, Brown & Tarca, 2008; Fekete, Matis̃ & Lukàcs, 2008), Tsalavoutas and Dionysiou (2014), Kaaya (2015), and Hellström (2006) call for more studies that unearth influence of IFRS adoption (implementation) and its level of compliance on market value especially from emerging markets.

#### **2.4.6 Firm-Specific Attributes and Value Relevance under IFRS**

A number of firm-specific attributes have been observed as controlling (or moderating) drives in value relevance studies (Alfraih & Alanezi, 2015; Tsalavoutas, 2009). These factors include but not limited to firm size, auditor type, profitability, industry

categories. For instance, Alfaraih (2009) incorporates firm size, profitability and industry categories as controlling variables in the price and returns models employed to investigate value relevance of accounting information. The study notes significant and positive influence of two out of the three firm-specific factors on share values. That is, dummy variables proxy for industry category and firm size have positive and statistically significant coefficient estimates in the price model but were insignificant at 0.10 level in the return model. However, estimate of loss dummy (profitability) is negative but significant in the two models. Nonetheless, the study failed to examine direct independent influence of these variables on share values. Also, Tsalavoutas (2009) draws a number of firm characteristics in the study which were only related to compliance level but made no attempt to investigate their moderating role in value relevance conjecture.

Furthermore, Khanagha (2011) incorporates firm size and industry category as controlled variable in the price and returns model employed to examine value relevance of accounting information of listed firms at Abu Dhabi Securities Market in the UAE. The study obtained improved and statistical significant coefficient of value relevance of small size firms' accounting information with higher  $R^2$  pre-IFRS compared to post-reform period. Noting reverse result for coefficient of large firms' accounting data, the study observes generally that variability of the firm size was higher during pre-IFRS than post-IFRS and that there is a difference in value relevance of accounting data between small and large firm in the stock market. As to industry category, general decline was noted in value relevance of accounting data for both financial and non-financial categories but with improved significant coefficients of only earnings per share for financial industry after the reform. However, one of the shortcomings of the study is unequal period pre- and post-IFRS reform on which the analysis and conclusion is based.

In a nut shell, it can be inferred from the above prior studies that there is possible moderating function of firm-specific characteristics on value relevance of accounting information model after IFRS adoption. Also, greater or low extent of compliance with IFRS has been noted in extant literature which also has latent to reveal value relevancy or irrelevancy of IFRS-based accounting data (Alfaraih 2009). This is important because high-quality accounting information helps to mitigate information asymmetry between issuers of financial reports and market participants (Kothari, 2000). In addition, income statement, financial position and cash flows statements' accounting items have been observed with confounding value relevance nature pre- and post-IFRS periods. However, most of these prior studies failed to recognise heterogeneity of individual unit sampled by employing panel regression model that accommodate specification test. Since Greene (2003) stresses that individual effect (heterogeneity) across units is an integral part of the analysis, this oversight might have resulted in susceptibility of assumed veracity of the estimation results to delusion. According to Baltagi (2006), time series and cross-sectional study that fails to control for this heterogeneity in sample units run the risk of obtaining biased results.

## **2.5 Review of Empirical Models**

Generally, value relevance research has been majorly conducted by using either Ohlson (1995) price valuation and/or Harris and Easton (1991) returns models. While Ohlson price model considers share prices as response variable in value relevance regression model, Harris and Easton adopts security returns. Nevertheless, the most widely used measure of firm value relevance in accounting literature has being share price in line with Ohlson (1995) model (Alfaraih, 2009; Clarkson *et al.*, 2010; Umoren & Enang, 2013).

Precisely, Ohlson price valuation model presents firm value as a linear function of book value of equity and the present value of expected future abnormal earnings (Barth *et al.*,

2001). Notwithstanding, Schielbel (2007) employs market capitalisation in place of share price while adopting the model. As to returns model, Harris and Easton (1991) argue that in the multivariate regressions of security returns on both current earnings level and change in earnings variables, coefficients of the two explanatory variables are generally significantly different from zero. Therefore, they presented a submission that the two variables are relevant for explaining share returns and not just a substitute.

In addition to Ohlson (1995) model, a reasonable number of literature had employed Easton and Harris (1991) returns model to measure relationship between accounting information (earnings and changes in earnings level) and share returns (Daske *et al.*, 2008; Alfaraih, 2009; Alfraih & Alanezi, 2015). For instance, in other to provide a better explanation of the association between accounting information and firm value, Alfaraih (2009) doubles the model by adding Easton & Harris (1991) returns model. Nevertheless, slope coefficient of price model has been identified to be less biased than those of returns model even though returns model has been noted with less econometric problems than price model (Dimitropoulos & Asteriou, 2009; Kothari & Zimmerman, 1995). Thus, since the two models measure the same value relevance although with closely related accounting information and share values, this study considers price model more appropriate since it captures all accounting data under investigation unlike returns model. Also, since the two models address different research questions and that, the intention of this study is to determine what is reflected in firm value rather than what is reflected in changes in value over a particular period of time (Barth *et al.*, 2001), Ohlson price model is considered most appropriate.

There are three specific analytical assumptions of Ohlson valuation model. According to Ohlson (1995), the first assumption is based on present value of expected dividend which determines market value, as standard in neoclassical models of security valuation. The second states that, accounting data and dividends satisfy the clean surplus relation, and dividends reduce book value without affecting current earnings. The third conjecture

declares that a linear model frames the stochastic time-series behaviour of abnormal earnings which is defined as current earnings minus the risk-free rate times the beginning of the period book value (i.e. earnings minus a charge for the use of capital). Ohlson (1995) stresses further that these assumptions therefore result in linear, closed-form model through which firm market value equals book value plus a linear function of current abnormal earnings and the scalar variable representing other information. However, the superiority of the modified Linear Information Model (LIM) over other LIMs that omit other information has been observed by Ota (2002) through the results of modified LIM test while using stock market data.

In a nut shell, Alfaraih (2009) and Bernard (1995) posit that Ohlson price valuation model provides construct that could be employed to examine association between financial statement data and market value. Also, Dimitropoulos and Asteriou (2009) confirm that price model produces less biased earnings response coefficient than returns model consistently with Kothari and Zimmerman (1995). According to Ragab and Omran (2008), another benefits of price model is that the two accounting information incorporated (unlike returns model) play different roles in stock pricing which help in expanding the scope of assessing value relevance into both 'balance sheet' and income statement. These evidences provided further support for using price model in this study. The model formed basis for assessing relative and incremental value relevance measures between share prices and accounting information for this study.

## **2.6 Critique of Empirical Studies**

A critical review of the existing empirical studies points out a number of research methodology issues worthy of note. This subsection presents a concise look at some of these issues emanating from the reviewed studies as a way of drawing research path for the current investigation.



Despite multi-dimensional regression approaches showcased by Vázquez *et al.* (2007), the study failed to establish normality (Gaussianity) of the data distribution to support generalisation of the findings based on parametric tests performed. Just like Vázquez *et al.* (2007), and Nyabundi (2013), Chalmers *et al.* (2011) did not uncover how observed positive skewness (leptokurtic) and non-normality of the pooled data were addressed to support best linear unbiasedness of the regression estimation. In addition, similar shortfall in demonstrating how findings of the regression estimation are consistent with Classical Linear Regression Model (CLRM) assumptions was observed in Ragab and Omran (2008) as it did not demonstrate relevant diagnostic checks on which efficiency and consistency of the regression estimates were based. Whereas, based on Gauss-Markov theorem and given CLRM assumptions, OLS estimators have minimum variance and depict best linear unbiased estimators (Gujarati, 2010) which are expected to form bases on which the statistical findings are established. Failure to observe this normality process could cast doubt on efficiency and reliability of the regression estimates which Singh and Masuku (2014) argue would impede validity of such parametric test.

According to Greene (2003), individual heterogeneity across sample units is an integral part of panel regression analysis especially when the sample is drawn from population with diverse features. Gujarati (2004) suggests the use of Hausman specification test in such situation especially when OLS is employed. On the contrary, panel data employed by Vázquez *et al.* (2007) was not subjected to specification test to inform appropriate effect model that is most efficient. Also, pooled regression has been punctured for its failure to account for individual (firm) specific heterogeneity and time specific error (Gujarati, 2004) which could have undermined strength of the submission made by BoliBok (2014).

Cause-and-effect hypothesised empirical tests are expected to be built on sound theoretical justification (Anderson *et al.*, 2008; Kothari, 2001). This was accorded no serious priority in Dimitropoulos and Asteriou (2009) as the finding of the study lacks

existing theoretical connection between the variables and hypothetical bases that informed its inferences. In like manner, Desoky and Mousa (2014) demonstrate no basis on which its hypothetical guess was built.

As regard Hellström (2006), even though the study addressed scaling problem with the use of logarithm regression, unbalance data employed might have constituted distortion in the findings due to inconsistency in the sample across the period under examination. This is found necessary based on the accentuation by Gujarati (2004) that panel data provide more useful information about dynamics of the units under investigation. This was appreciated and accorded special attention in Chalmers *et al.* (2011) by revalidating its pooled regression results using data that spanned through the period under investigation separately.

Concerning the use of deflated price valuation model variables, Bogstrand and Larsson's (2012) argument on scaling of the variables (non-deflated) because of the nature of panel model is sceptical and has been critiqued by Omokhudu and Ibadin (2015). Deflated figure (variable) is assumed to address heteroscedasticity in the panel regression model (Barth & Clinch, 2009). Furthermore, returns regression employed was devoid of net dividend in determining stock returns according to Easton and Harris (1991) and as widely employed in extant literature.

Also, inefficiency of the information timeliness in the stock market as observed and addressed by Omokhudu and Ibadin (2015) was not accorded attention in the analysis that informed submission contained in Oyerinde (2011). This might impede unravelling how and when the accounting information are value relevant in a capital market where there is observed inefficiency in the information timeliness.

The uniqueness of the study by Oyerinde (2011) is hinged on the use of primary information assumed to have been objectively drawn to unravel value relevance construct along with secondary data. However, share price at the financial year-end used

as regressand in the study could be controversial since it is logical to posit that the market price would not have reflected information contents of the listed companies' annual reports in the stock market as the financial reports would not have gotten to the stock market on that same day. Similar financial year-end period's market value was also employed by Okafor *et al.* (2016) suggesting possible loophole in the kind of data used to obtain its findings.

Various regression analysis approaches demonstrated by Omokhudu and Ibadin (2015) and Vázquez *et al.* (2007) would have been necessary if that was the intent of the study. Rather, sample units specification effect test should have been prioritized as basis to unearth most efficient model to rely on, since sample was drawn from heterogeneous population. Whereas, Baltagi (2006) stresses that there is a risk of obtaining bias results when longitudinal study fails to control for heterogeneity in the sample units.

Eliminating observations with low and high share price, EPS and BVPS haphazardly as demonstrated in Clarkson *et al.* (2011) could be adduced as being biased with the sample observations which Andersen *et al.* (2008) affirm should remain if the observation was correctly entered. Whereas, Gujarati (2004:390) stress further that 'inclusion and exclusion of such observation could substantially alter the results of regression analysis especially in a small sample'. However, presence of potential outliers identified in Gjerde's *et al.* (2008) sample observations was not addressed because of limited observations but it is a potential cause of heteroscedasticity, though sample of the study was not interpreted as universe of the observations.

Concerning time scope of the investigation, existing study suggests inherent limitation in the conclusion of a short time value relevance study, obstructing its comparison with the one done in more mature markets (Omokhudu & Ibadin, 2015). Some of the existing studies that examined implication of IFRS adoption on value relevance were investigated in the first year of adoption or within a short period of time of the adoption such as Alfaraih (2009), Tsalavoutas (2009), Umoren and Enang (2015), Gjerde's *et al.*

(2008). As such, there is need for expanded time of such investigation especially from emerging stock market. Conclusively, the existing studies demonstrated weak consideration for investigating possible role of firm-specific attribute in the value relevance construct especially after the adoption of IFRS. These identified empirical concerns from reviewed studies opened ground for further examination in this regard.

## **2.7 Research Gaps**

A review of related extant empirical studies regarding influence of IFRS adoption on value relevance of accounting information uncovered vacuums which ‘ignited’ the urge for this study. The process unveiled a number of vacuities in literature which were identified and discussed in this subsection. To start with, although many of the prior studies had related accounting information used to contents of financial statement (i.e. income statement, financial position statement and cash flow statement), on rare occasion were they examined from these financial statement’s contents perspective. The three contents are principal statement of accounts that convey all economic activities of a reporting entity within a period of time, and to which other financial and non-financial information are linked. This suggests the first uniqueness of this study.

Additionally, previous value relevance studies after IFRS adoption in Nigeria have not really captured all categories of listed firms. Most of the existing studies were carried out on financial institution firms alone (Umoren & Enang, 2015; Tanko, 2012). In addition, these studies considered less than three years post-IFRS period. However, this study was structured such that, all industry categories were captured as either financial or non-financial and for four years pre- and post-IFRS periods. Since industry category is one of the firm-specific factors of value relevance of accounting information included in the regression model, and that heterogeneity in the sample units is accorded statistical attention, distinct attribute of financial industry category could not obstruct findings of this study.

Furthermore, the empirical review process has shown limited investigation regarding the impact of extent of compliance with IFRS on value relevance. For instance, studies by Alfaraih (2009), Tsalavoutas's (2009), and Alfraih and Alanezi (2015) on association between extent of compliance with IFRS and value relevance are limited to a year study period. Alfaraih (2009) reports this as a limitation in his study and recommends extension in the period of related study in future. Also, many of the studies on implications of IFRS adoption on value relevance of accounting information within and outside Nigeria did not incorporate possible influence of level of compliance with IFRS on accounting information as well as its resultant effects on firm's share value. Whereas, empirical studies have shown that compliance with IFRS is low (Alfaraih, 2009). As argued by Ahmed *et al.* (2013), a quality standard in itself may not lead to qualitative accounting information without sound compliance or enforcement. Thus, this study extends literature by considering four years post-IFRS adoption period especially in the developing or emerging economy of Nigeria.

Also, prior studies on compliance with IFRS/IAS in Nigeria considered either one standard or few additional (for instance Siyanbola *et al.*, 2014). Having being motivated by some related studies from Europe which considered all relevant IFRS for listed companies in their selected reporting environments, this study filled this gap in the Nigerian's value relevance literature and related economies by exploring thirty-one (31) accounting standards (IFRSs/IASs).

Likewise most of the literature did not consider firm-specific factors that could exhibit moderating influence over value relevance of accounting information in their investigations like Alfaraih (2009). Such omission might have led to sub-optimum finding and conclusion on value relevance of accounting information issued under IFRS. This gap was identified in this study and accorded empirical investigation.

Finally, empirical review exercise revealed weak consideration for industry specific heterogeneity in the value relevance regression analysis especially in studies that

considered multi-sectoral group of listed firms in the stock market. That is, many of the studies that employed panel data used either OLS with balanced or unbalanced data, or considered fixed and random effect without specifying any of the effect test's results that was found most appropriate using Hausman specification test (Alfaraih, 2009; Omokhudu & Ibadin, 2015). As such, this study made concerted effort by employing panel least square regression model with special consideration for specification check to address this gap and by using balanced panel data. In addition, this step became expedient in the light of submission by Baltagi (2006) who notes that beta coefficient of ordinary least square (OLS) regression using panel data is inconsistent. Summarised empirical studies showing research gaps is presented on Table 2.1.

**Table 2.1: Summarised Prior Empirical Studies Showing Research Gaps**

<b>Authors &amp; Year of study</b>	<b>Country of the Study</b>	<b>Objective</b>	<b>Methodology / Data</b>	<b>Key Finding(s)</b>	<b>Gaps</b>
Vázquez <i>et al.</i> (2007)	Mexico	Ability of accounting data to summarize information underlying stock prices	Employed Ohlson (1995) model and its modified form using panel data covering 1991 to 2003 of 145 firms	Book value and earnings are significantly value relevant while alternative model tests provide better statistics than original Ohlson model	Comparison between local and International Accounting Standard based Accounting data
Ragab and Omran (2008)	Egypt	Whether local and international investors identify accounting data based on Egyptian accounting standards suitable in stock valuation	Both price and returns models were employed using unbalanced data for 1998 – 2002	The models provided separate evidences on value relevance (VR) while F-test and R <sup>2</sup> results showed that earnings and book value are positive and significantly related to Egyptian firms' market values	Limited to local accounting standard based accounting information
Hellström (2006)	Czech Republic and Sweden	To find out plausibility of value relevance methodology using two different stock markets under diverse economic conditions over 1994 and 2001	Ohlson deflated price (at March 31), and Easton and Harris (1991) returns models tested using R <sup>2</sup> using unbalanced data of non-financial industries.	The prediction that VR of accounting data of transitional economy should be lower throughout the period than that of a well-functioning economy was confirmed	It was centred around local standards based accounting data and without consideration for the role of firm attributes
Oyerinde (2011)	Nigeria	To determine whether listed firms' accounting information has ability to drive share prices in the stock market	Primary and secondary (panel) data of 68 firms for 2002 to 2008 using Ohlson (1995) model	Accounting data are related to share prices significantly with dividends being the most broadly used information, followed by earnings and net book value, while investors' perceptions about VR of the data are	Relative short period of investigation and findings were based on national accounting standard based accounting data

				not significantly different.	
Omokhudu and Ibadin (2015)	Nigeria	To examine the extent at which accounting information is associated with firm value	Employed modified basic Ohlson (1995) model using secondary data of 47 non-financial firms covering 1995 to 2013	Earnings, cash flows and dividends were statistically significantly related with firm value but not for book value even though related	Possible inclusion of IFRS based accounting data in the non-financial sector sample with no attention to possible effect of firm factors
Chandrapala (2013)	Sri Lanka	Investigates the impact of ownership concentration and firm size on value relevance of earnings and book value	Pooled data of listed firms between 2005 and 2009 using share prices at March end after financial year-end.	VR of earnings and book value were below average but higher for large firm size and for ownership concentrated firms than ownership non-concentrated firms	Short period of the study, pool data employed and local accounting standard based accounting information
Chalmers <i>et al.</i> (2011)	Australia	Whether IFRS adoption increases value relevance of accounting information of listed firms	Regression analysis based on basic Ohlson price valuation model using earnings and equity reconciliation unbalanced data with share price at third month after financial year-end	Earnings become more value-relevant whereas the book value of equity does not based on t-statistic and adjusted R <sup>2</sup> results	Effect of firm attributes on VR conjecture and Hausman specification test
Liu <i>et al.</i> (2011)	China	Impact of IFRS adoption on accounting quality in a regulated market	Incremental value relevance metric using Ohlson model and data of 870 firms between 2005 and 2008, and stock price at sixth month after fiscal year-end	Accounting quality improved with increased value relevance of accounting measures after IFRS adoption.	Unclear evidence of CLRM assumptions tests and possible influence of firm specific attributes
Okafor <i>et al.</i> (2016)	Canada	To investigate whether financial data prepared and issued under IFRS has incremental value relevance over accounting	Archival unbalanced data of the listed firms within 2008 – 2013 using Ohlson and modified Balachandran and Mohanram (2011) models estimated	Accounting data issued under IFRS exhibits higher price and returns value relevance than the one prepared under local GAAP	Considered three equal years pre and post-IFRS adoption using unbalanced data



		information issued under local GAAP	using adjusted R <sup>2</sup> of regressions		
BoliBok (2014)	Poland	To examine impact of IFRS on the value relevance of fundamental accounting data	Ohlson residual income valuation model using OLS to analyse pooled data of 17 banks and Chow test	Increased value relevance of both book values and residual incomes of the banks after IFRS was adopted is statistically insignificant	Centred on banking firms alone
Clarkson <i>et al.</i> (2011)	Europe and Australia firms	Investigates the impact of IFRS adoption on the relevance of book value and earnings for equity valuation	Employed linear and product models to determine the adjusted R <sup>2</sup> for the basic Ohlson model using share value at sixth month after financial year-end and restated accounting data in 2004 based on IFRS demands	Traditional linear pricing models show that EPS and BVPS under IFRS have similar explanatory power of firm stock price with the same accounting data under original local GAAPs	Limited to one year restated accounting data with no attention regarding extent of compliance with the IFRS's disclosure demands
Umoren and Enang (2015)	Nigeria	Whether mandatory adoption of IFRS improves value relevance of earnings and book value	Least square regression based on Ohlson model using panel data of 12 banking firms between 2010 and 2013	Book value and earnings are relatively value relevant under the Nigerian GAAP incrementally VR for EPS but less value relevant for book value in the post-IFRS period.	Only banking sector was captured, limited to two years pre- and post-IFRS while possible effect of firm factors were not considered as well as the firms' extent of compliance with IFRS.
Khanagha (2011)	United Arab Emirate	Value relevance of accounting information pre- and post-IFRS periods	Employed price and returns model using regression and portfolio approaches	IFRS adoption in UAE did not improve value relevancy of accounting information based on R <sup>2</sup> results	It is not clear how well the firms complied with IFRS mandatory disclosure demands
Alfraih and Alanezi (2015)	Kuwait	To examine association between level of compliance with IFRS	Data were drawn from 119 non-financial firms for 2010 while self-constructed	72% compliance level with minimum and maximum level of 41% and 94%	Lack of specification effect test and cross-sectional based

		mandatory disclosures and VR of accounting information	Cindex consisting 397 items from 24 IAS/IFRS was used and the analysis based on Ohlson model	were obtained with significant association between greater level of compliance with IFRS and VR of earnings and book values to KSE investors	investigation of the influence of IFRS adoption
Tsalavoutas <i>et al.</i> (2012)	Greece	To finding out VR of net income and book value of equity before and after the mandatory changeover to IFRS	Accounting data of 153 firms for 2004 and 2005 and market value at one month after year-end were employed using Ohlson (1995) invariant model	R <sup>2</sup> of net income shows no significant change in VR between the two periods while the coefficient decreased during after IFRS adoption	The study was limited to the year of convergence alone
Alfaraih (2009)	Kuwait	To investigate compliance with IFRS and VR of accounting information	27 IAS/IFRS were employed leading to 418 disclosure items to draw level of compliance with IFRS by financial and non-financial listed firms in 2005 and the OLS regression was based on price and return models	Cindex results unveil 72.6% compliance level while the two models reveal significant association between (higher) extent of compliance with IFRS and value relevance of accounting information	The study was limited to one year regarding extent of compliance with IFRS examined
Tsalavoutas and Dionysiou (2014)	Greece	Examined whether level of compliance with IFRS is value relevant in the stock market	418 IFRS-based mandatory disclosure items using 2005 annual financial reports of 150 listed companies. Regression analysis was based on basic Ohlson model.	Using un-weighted scoring method, 75% level of compliance with IFRS demands was obtained while levels among industries are not only relatively value relevant, valuation coefficient of net income of high-compliance firms is significantly greater than that of low-compliance firms.	Possible self-interest bias in the validity test of the instrument (Cindex)

## **2.8 Summary**

This chapter has showcased theoretical background and empirical literature that provided support for this study as well as conceptual framework that was employed. Relevant theories such as signalling, EMH, agency and stakeholder were drawn and linked to the objectives of this study. Empirical studies on value relevance of income statement, financial position and cash flows statements accounting information issued before and under IFRS separately and jointly as well as implication of compliance level with IFRS on value relevance were reviewed in this chapter. This paved way for identification of research gaps that this study strived to fill and with cognisance of critique of empirical studies reviewed. Also, empirical model that provided modelling guide for this study was also reviewed. Through the empirical review exercise, Ohlson (1995) price valuation model was identified as basis for the modified Ohlson price model adopted in this study while share price and accounting information such as earnings, book value, cash flows and extent of compliance with IFRS were empirically drawn as response and explanatory variables respectively. Conclusively, firm size and industry category firm-specific attributes were also drawn for this study (based on existing literature) as moderating factors capable of influencing value relevance of accounting information issued based on IFRS accounting methods and principles.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents scientific principles and procedures that served as guide to achieving objectives of this study. According to Frankfort-Nachmias and Nachmias (2009:13), ‘scientific methodology is a system of explicit rules and procedures upon which research is based and against which claims for knowledge is evaluated’. As such, underpinning paradigms as well as rationale that informed the choice of research methods employed in this study are presented in the subsections of this chapter. More specifically, the chapter showcases techniques adopted for manipulating appropriate data to test the study’s conjectures. Thus, this chapter covers research design, population, sampling methods, pilot test, data processing and analysis, and models of the study.

#### **3.2 Research Philosophy**

Research philosophy or paradigm is a set of assumptions about what is important to study and be known (ontology and epistemology), research designs and tools that are suitable as well as standards that should be employed to judge the quality of the study (Crossan, 2003; Mkansi & Acheampong, 2012). As such, mixed methods paradigm provided basis for the methodology of this study. That is, the study drew from combined assumptions of positivistic and naturalistic (or interpretivistic) perspectives of research philosophy. According to Crossan (2003), positivism adopts a clear quantitative approach to investigate events while naturalistic approach explains and explores in-depth phenomena from a qualitative perspective. The adoption of this combined paradigms is anchored on its key feature of methodological pluralism or eclecticism, which frequently results in superior research, with maxim refers to as sensible effect-oriented (or outcome oriented) rule through thinking, practical experiences or

experiments (Johnson & Onwuegbuzie, 2004). The choice of this research paradigm also hinged on quantitative accounting information and qualitative compliance with IFRS demands as well as firm-specific attributes employed for this study.

### **3.3 Research Design**

The study adopted descriptive research design. Descriptive research includes ‘surveys and fact-finding enquiries of different kinds with major purpose of describing the state of affairs as it exists at present’ (Kothari, 2004:2). Since descriptive research design can utilize elements of both quantitative and qualitative research methodologies (Knupfer & McLellan, 1996), it is found appropriate for this research because the study is built on mixed research paradigm. This approach is also found necessary for the reason that, a mixed research design allows researcher to base knowledge claims on rational grounds and also help to reduce or neutralise biases inherent in either quantitative or qualitative method (Creswell, 2003). The quantitative aspect provided guide for investigating association between historical market value (share price) and accounting information such as earnings, book value of equity and cash flows from operation, and their significant effect. These are continuous variables which are disclosed in each firm’s audited annual reports or as maintained by the NSE. Qualitative part lent basis for evaluating Cindex and firm-specific attributes functions. IFRS requirements are qualitative attributes expected to be observed and disclosed by the reporting entities which formed the Cindex for measuring extent of compliance with the standards. These processes served as guide in data triangulation as related design has been employed in prior studies such as Alfaraih (2009), and Al-Shammari *et al.* (2008).

### **3.4 Target Population**

The population of this study consisted eleven (11) sectors on the Main Board of NSE with 186 listed companies (Appendix III) whose shares were actively in trade as at 31

December 2015 excluding utility sector due to absence of listed firm in the sector. As such, this study was carried out on a population of 1,488 firm-year observations with each firm-year covering a period of twelve (12) consecutive months that represent financial year of each entity under the study.

Table 3.1 presents sectoral breakdown and number of listed firms on the Main Board of the NSE. For the purpose of rational comparison, the study specifically targeted entities with December 31 as financial year-end. Based on this criterion alone, the target population indicated 128 Nigerian listed companies as shown in Table 3.1 which implied 1,024 targeted firm-year observations. The above criterion has been employed in prior studies such as Omokhudu and Ibadin (2015), Tsalavoutas, (2009), Umoren and Enang, (2015) to draw target population and sample.

**Table 3.1: Population of the Study**

<b>Sector</b>	<b>Number</b>	<b>Firms with Dec. 31</b>	<b>Sampled Firms</b>
Agriculture	5	4	4
Conglomerate	6	5	2
Construction & Real Estate	9	4	2
Consumer Goods	27	11	8
Financial Service	56	47	23
Healthcare	11	9	5
ICT	9	6	3
Industrial Goods	21	16	6
Natural Resources	5	3	3
Oil and Gas	14	9	5
Services	23	14	8
<b>Total</b>	<b>186</b>	<b>128</b>	<b>69</b>

**Source:** Nigerian Stock Exchange (NSE) Archival Data, 2016.

### **3.5 Sampling Frame**

A list consisting of items from which sample for this study was drawn was NSE Fact Books. The Fact Books contain list of actively trading firms in the NSE and summarised

audited financial reports on annual basis. Fact books for 2008 to 2015 provided guide for the selection of appropriate sample for the purpose of meeting objectives of this study. This sampling frame has been employed in prior studies such as Umoren and Enang (2015), and Yahaya *et al.* (2015).

### **3.6 Sample Size and Sampling Techniques**

By adopting purposive sampling technique on the targeted population, sample size of 69 listed companies emerged based on balanced panel data employed. The following eligibility criteria that enhance rational and viable comparison as used in prior studies such as Alashi and Dumlu (2015), Kwon *et al.* (2014), Desoky and Mousa (2014) and Tsalavoutas *et al.* (2012) provided guide in the determination of the 69 sampled firms. That is, the listed company's share must have been actively in trade all through the period of the study; the eligible listed company must have share prices information for third and sixth months after each of the financial year-end; the company's financial statements were published and readily available all through the period under investigation; the company's annual financial reporting date remains unchanged all through the period under investigation; annual financial report of the firm starting from 2012 must have indicated that it was prepared in accordance with IFRS demands and not earlier; companies listed during the period of the study were excluded from the sample. Thus, firms excluded from the target population represent those that either failed to meet those criteria, its required data were not completely available for the entire period under study or the entities were not listed before the commencement of the period of the survey. The choice of this sampling procedure is to help concentrate on the main required and appropriate sample for the study (Singh & Masuku, 2014) since the study was built on balanced panel survey.

### **3.7 Data Collection Instrument and Procedure**

Panel data employed for this study were collected using data collection sheets shown in Appendix IVA and IVB. The two data sources (quantitative and qualitative) were found expedient to achieve the mixed method research paradigms adopted. Also, most of the prior value relevance longitudinal studies employed pooled ordinary least square and/or panel regression models, using either balanced or unbalanced panel data (Okarfor *et al.*, 2016; Omokhudu & Ibadin, 2015; Alfaraih, 2009). However, balanced panel data were sourced and used for this study. According to Gujarati (2004), panel data provide very useful information on the dynamics of units (firms) under investigation and by taking heterogeneity in these units explicitly into account. In addition, the use of panel data was considered appropriate because it gives more informative data, more variability, less collinearity among the variables, more degrees of freedom and more efficiency (Baltagi, 2006).

In order to obtain required quantitative balanced panel data for the study, both NSE Fact books for 2008 – 2015 (including archival databank) and published annual financial reports of individual listed company that met the criteria for this study were sourced. That is, all the necessary accounting data (i.e. earnings, book value of equity, and net operating cash flows), were hand-collected personally by the researcher from the companies' annual financial reports while share prices were obtained from NSE archival databank using data collection sheet in Appendix IVA. Share prices in March and June-end for the entire study period were provided by the NSE on request through application. Share prices in March and June-end were sourced basically to address documented information inefficiency of the NSE (Nwosa & Oseni, 2011; Osaze, 2007; Osamwonyi as cited in Omokhudu & Ibadin, 2015) especially as regard timeliness in the arrival of the audited annual reports of listed firms in the NSE.

Qualitative data (i.e. level of compliance with IFRS disclosure requirements) were also personally drawn by the researcher from individual firm's published audited annual



financial reports. Following prior related studies such as Al-Shammari (2011), Alfaraih (2009), and Al-Shammari *et al.* (2008), self-developed item-based Cindex was employed to gather information on level of each sampled listed firm's compliance with IFRS/IAS disclosure requirements as presented in the annual reports using data collection sheet in Appendix IVB. The Cindex contains thirty-one (31) accounting standards (both IAS and IFRS) which were found applicable to the Nigerian corporate financial reporting environment out of thirty-seven (37) standards with effective date starting from on or before January 2012 (Appendix I & II). Disclosure requirements for each standard were extracted to form the Cindex which was also crossed-examined with similar instrument used by Alfaraih (2009) and Tsalavoutas (2009). Nevertheless, the instrument was constructed to reflect disclosure requirements as relevant to Nigerian financial reporting environment. This data collection process is in line with prior studies such as Alfraih and Alanezi (2015) and Tsalavoutas and Dionysiou (2014).

**Table 3.2: Industry Category and its NSE Sectoral Classification**

<b>Industry Category for the Study</b>	<b>NSE Sectoral Classification</b>
<b>Financial Service Industry</b>	Financial Service.
<b>Non-financial Service Industry</b>	Industrial goods, Construction & Real Estate, Consumer goods, Agriculture, Healthcare, Conglomerate, other Service, ICT, Natural Resource, Oil and Gas, and Utility.

**Source:** NSE Website, 2016.

Regarding collection of data on firm-specific factors, total assets of each firm was hand-collected by the researcher from their respective published financial reports as proxy for firm size. Since there are twelve sectors in the NSE, to aid clearer analysis, the sectors were subgrouped into two industry categories as shown in Table 3.2. That is, financial and non-financial industry categories.

Concisely, Table 3.3 presents summary of measurement of variables used. As presented in Table 3.3, share prices of each sampled firm at March and June-end after financial year-end were sourced as dependent variable. Explanatory variables were measured as follows. Income statement information was measured with the use of earnings per share (EPS) of each company at the financial year-end while financial position statement information was assessed through book value of equity per share – BVPS (or net assets per share) at the year-end. Cash flows statement information was measured with the use of cash flows from operation per share (CFOPS) of the respective sampled firms at the end of each financial year. In order to guide against heteroscedasticity disturbances and scaling problems, per-share value of all the accounting information variables was employed as recommended by Kothari and Zimmerman (1995) and as employed in prior studies such as Al-Shammari (2011), Omokhudu and Ibadin (2015), and Umoren and Enang (2015).

**Table 3.3: Summary of Variables, Measurement and Sources of Data Employed**

S/N	Variable Name	Description	Measurement	Source of data	
1	Share price (SP) (Dependent Variable)	This is the value of a company's share in the stock market at any point in time	Daily summary of stock market price of individual firm's equity at time $t$	NSE Fact books / Archival data	
2	Income Statement Accounting Information	Earnings per share (EPS)	This is the basic earnings per ordinary share outstanding at the year-end	Basic EPS as reported in annual financial reports	Published annual reports / NSE Fact books
3	Financial Position Accounting Information	Book value of equity per share (BVPS)	This is the excess of total assets over total liability per ordinary share outstanding at the year-end	Total assets minus outstanding liability or Net Asset deflated by weighted average number of ordinary share outstanding at the year-end	Published annual reports of the firms / NSE Fact books
4	Cash flows Statement Accounting Information	Net Cash flows from operation per share (CFOPS)	This is the excess of operating cash inflow over operating cash outflow per ordinary share outstanding at the year-end	Operating cash inflow minus operating cash outflow deflated by weighted average number of ordinary share outstanding at the year-end	Published annual reports of the firms
5	Cindex	Level (extent) of compliance with IFRS	IFRS Disclosure index (checklist)	Published annual reports of each listed firm	
6	Firm size	Size of the sampled listed firms in term of its total assets position as at each financial year-end under investigation	Total assets per ordinary share outstanding at the financial year-end	Published annual reports of the firms	
7	Industry Category	Financial or non-financial industry category	Dummy that equals 1 if financial service industry, zero otherwise	Published annual reports of the firms	

Furthermore, unweighted scoring method was employed to determine level of compliance with IFRS. This method is considered appropriate because the study focused on mandatory disclosure items with target on all users group (Alfaraih, 2009). Appropriately disclosed information was scored 1, zero (0) otherwise, while inapplicable standard/disclosure was reported as 'Not Applicable' (NA) for the concerned company.

Thus, in line with prior studies (Alfraih & Alanezi, 2015; Tsalavoutas, 2009), Cindex was measured as the ratio of total item disclosed to maximum possible score applicable to each company and expressed as follows;

$$\text{Total disclosure (TD)} = \sum_{i=1}^m d_i \quad \text{where } d = 1 \text{ if item } d_i \text{ is disclosed; } d = 0 \text{ if item } d_i \text{ is not disclosed while } m \leq n.$$

$$\text{Maximum Score (M)} = \sum_{i=1}^n d_i \quad \text{where } d \text{ is the expected disclosure items; } n \text{ is the number of item that the company is required to disclose.}$$

$$\text{Therefore, } Cindex = \frac{\sum_{i=1}^m d_i}{\sum_{i=1}^n d_i} \text{ OR } \frac{TD}{M} \quad \text{----- (3.1)}$$

Finally, information about firm-specific moderating factors were obtained from individual company's annual financial reports and were measured by using their dummy variable.

### 3.8 Pilot Test

Pilot testing in an academic research is a way of guiding against fruitless empirical exercise. According to Kothari (2004), and Kothari and Grag (2014), a sound measurement must meet the tests of validity, reliability and practicality. Thus, Cindex was pilot tested so as to strengthen reliability and validity of the instrument. The test subsequently provided basis for certain adjustment on the measuring instrument prior to full investigation.

#### 3.8.1 Validity Test

Degree at which the measuring instrument (Cindex) actually assessed concept it intended or claimed to measure with respect to the scope of this study was examined.

Wallace and Naser (1995), and Barako, Hancock and Izan (2006) stress that there is no established theory that provide guidance on the number and selection of standards to be included in compliance index (Cindex) intended to be used for compliance study. Nonetheless, it is the focus of the research that determines standards to be selected (Wallace & Naser, 1995) which lent credence to this study. As such, Cindex was constructed personally by the researcher based on mandatory disclosure requirements as structured in each standard assessed and in line with prior related studies. IAS/IFRS mandatory disclosure requirements with effective compliance date starting from on or before January 1, 2012 and as applicable to Nigerian corporate financial reporting environment formed bases for constructing the self-developed Cindex employed.

However, to strengthen its content validity, first and foremost it was subjected to separate independent review of the supervisors. Since all Nigerian listed firms are either audited by national (local) and/or international auditing firms (any 4-Big audit firms), in order to enhance validity of the instrument, the Cindex was subsequently sent to senior representative each from one purposively selected reputable local audit firm and one randomly selected 4-Big audit firm for professional review of the Cindex in line with their disclosure checklists. This effort was mainly taken so as to incorporate views of the two forms of auditing firms in enhancing validity and applicability of the instrument to the Nigerian reporting environment. The upshot of their separate independent reviews, comments and suggestions were aggregated together and later discussed with the supervisors who are also experts in financial reporting and finance. Outcome of this validity assessment processes led to Cindex as presented in Appendix IVB which was later used to measure extent of Nigerian listed firms' compliance with IFRS. Related technique have been adopted by Tsalavoutas and Dionysiou (2014), Alfaraih, (2009), Al-Shammari, (2011), Tsalavoutas, (2009) to validate the instrument.

### **3.8.2 Reliability Test**

According to Mugenda and Mugenda (2008), measurement is said to be reliable if when repeated second time, it gives the same results as it appears in the first time. Reliability of disclosure index checklist (Cindex) was examined by scoring six of the listed companies' compliance with IFRS (two from financial services industry category and four from non-financial industry category). The sample for reliability test was selected purposively and based on the proportion of number of financial and non-financial listed firms (i.e. 47 to 81). Unlike Tsalavoutas (2009) who involved herself and one of the supervisors in the reliability test which could lead to self-interest conflict, this study employed two independent scholars in the field of corporate financial reporting and accounting/finance. That is, a professional colleague in academics who is a specialist in corporate reporting and IFRS, and another independent practicing financial analyst in the field of finance/accounting. Therefore, published financial reports of the randomly selected six companies for 2012 to 2015 were sent to the two assessors for their independent scoring of the instrument with respect to the companies' level of compliance with IFRS mandatory disclosure demands. They were adequately guided on the purpose of the exercise and scoring measures which require prior extensive study of the financial reports before scoring.

Non-parametric Mann-Whitney U test was employed to observe whether the median of the two samples are significantly different from each other. This was also supported with the use of its alternative parametric independent t-Test that allows the use of sample means. The two measures provided bases for testing whether probability that scores from the two independent Cindex pilot assessors came from the same population. Tsalavoutas (2009) employs related reliability test on the Cindex used which was found suitable for this process.

### **3.9 Data Processing and Analysis**

This section presents data processing and analysis methodology used to achieve the set goal of this study. Panel data sourced were made up of continuous and categorical variables. The data were initially collated by using excel spread sheet. To ensure that the data are consistent with the requirements for acceptable value relevance estimation and evaluation through panel regression, the raw data were subjected to cleaning process. Subsequently, resultant data were arranged based on industry category groups and made ready for proper analysis.

First and foremost, descriptive analysis of the data was performed to unravel evocative nature of the data. This involved the use of central tendency measures such as mean, median, and measures of dispersion such as standard deviation, coefficient of variation, skewness and kurtosis. In addition, since the data were collected for eight years period comprising four equal years of pre- and post-IFRS adoption in Nigeria, trend analysis was also carried out using yearly mean value of each variable which was presented through graphs. Adjusted  $R^2$  of yearly cross-sectional regression analyses was also used to present time trend analysis of value relevance of the accounting information. Afterward, inferential statistical analyses were conducted using appropriate panel regression model which were preceded by relevant diagnostic tests otherwise refer to as econometric considerations. That is, to ensure that the panel regression model presents best linear unbiased estimator (blue), assumptions of linearity, normality, homoscedasticity, non-multicollinearity, no autocorrelation and unit root were assessed through relevant statistics. According to Gujarati (2010), popular use of OLS is not only because it is easy but because it possesses strong theoretical properties summarized in the well-known Gauss-Markov theorem. Econometrics Views (E-views) statistical package (version 8) was used for the data analysis.

As regard normality assumption, Jarque-Bera (J-B) statistical test of normality based on E-View statistical packaged was conducted to reveal whether the sample was drawn

from a normally distributed population or not. The essence of normality test is to ensure validity of inference procedures and reliability of the regression estimation (Alejo, Galvao, Montes-Rojas & Sosa-Escudero, 2015). Its null hypothesis ( $H_0$ ) is that, sample data are not significantly different from a normal population which should be accepted or rejected at 0.05 level of significance. Since J-B test accepts normality if its significance value is greater than 0.05 and that 95% confidence interval (i.e. 5% significance level) is adopted for this study, normality is assumed if the test result is greater than 0.05, otherwise non-normality (Ghasemi & Zahediasl, 2012). This test was supported with not more than  $\pm 0.50$  skewness and around 3 kurtosis value as well as near equal value between mean and median scores of the variables. According to Alejo *et al.* (2015), skewness and kurtosis allow researchers to identify departure away from Gaussianity in the error component of a standard panel regression.

Additionally, Fisher type test using Augmented-Dickey Fuller (ADF) unit root test was carried out to observe whether the data were stationary or not across time under review. ADF Test is considered because it assumes individual unit root process. Its  $H_0$  assumes presence of unit root (non-stationary) while its alternative hypothesis ( $H_1$ ) assumes that the panel data do not have unit root (stationary). ADF test identifies presence of unit root when its p-value is above 0.05 level of significance, otherwise stationarity of the panel data is assumed. The essence of this test is to guide against spurious regression which may debar generalisation of its outcome to other time period and forecasting (Gujarati, 2004).

For multicollinearity test, correlation value of not more than 0.7 among variables was assumed. According to Anderson *et al.* (2008), there is a potential multicollinearity problem if the absolute value of the sample correlation coefficient exceeds  $\pm 0.7$  for any two of the independent variables. This assumption or rule of thumb was also supported with Variance Inflation Factors (VIF) value that fall within 1 and 5, as well as Tolerance value that is close to 1 to establish that there is no statistically significant level of



multicollinearity among the variables used. The essence of this test is to guide against high standard error leading to inaccurate estimation as a result of high collinearity among the variables employed.

To confirm that variance of the error terms is constant (homoscedasticity), Breusch-Pagan-Godfrey heteroscedasticity test was adopted to test and control for heteroscedasticity. Its  $H_0$  assumes presence of homoscedasticity (which is desirable) while its  $H_1$  assumes heteroscedasticity. This Breusch-Pagan-Godfrey method of heteroscedasticity test is suggested when the heteroscedasticity structure is unknown (Lee, 2000). Thus, based on Breusch-Pagan-Godfrey Test, homoscedasticity is identified if its Chi-square p-value is greater than 0.05 level of significance and its observed R-squared value is less than critical value. However, suspected or observed presence of heteroscedasticity is addressed through White heteroscedasticity-corrected standard errors and t-statistics to ensure that the estimation is efficient and hypothesis testing is reliable as suggested by Gujarati and Forter (2010). According to Gujarati and Forter (2010:275), 'researchers have observed that heteroscedasticity is usually found in cross-sectional data and not in time series data'. As such, White cross-section robust standard errors and covariance corrector estimation based on Eviews statistical package was employed to address identified heteroscedasticity issue.

Furthermore, one of the assumptions of classical linear regression model is that error term should be independent (Gujarati & Forter, 2010; Anderson *et al.*, 2008). Therefore, as regard test for possible serial correlation of the error terms, Durbin-Watson test value was used. Durbin-Watson test value of around 2 was considered appropriate indication of no positive or negative first order autocorrelation while value close to 0 or 4 indicates otherwise (Anderson *et al.* 2008; Lee, 2000). The essence of the test is to ensure that estimates of the model parameters are efficient since autocorrelation problem arises in time series data which form part of the panel data used in this study. Also, since the same set of sample was surveyed, data are not expected to be orthogonal all through the

period of the investigation. As such, White cross-sectional standard error was employed to address probable cross-sectional dependence in the panel data, erroneously ignoring of which Hoechel (2007) argues could result in severely biased statistical results. Nevertheless, this test for yearly cross-sectional regression was based on Newy-West Heteroscedasticity and Autocorrelation-Consistent (HAC) error estimation. According to Gujarati and Forter (2010), HAC does not really change value of the estimator but only correct their standard errors for possible autocorrelation problem.

Consequently, inferential statistics were performed which involved the use of panel least square regression model. This necessitated specification test by using Hausman effect Test. Its  $H_0$  indicates appropriateness of random effect model while  $H_1$  suggests that fixed effect model should be employed.  $H_0$  is accepted if p-value of Hausman test result is greater than 0.05 level of significance, otherwise fixed effect option is considered as appropriate. Thus, inference is made about the population if random effect is observed otherwise, inference is restricted to the behaviour of the set of sampled firms.

Both simple and multiple regression models were used for relative and incremental value relevance measures of the variables. Commonly used Ohlson (1995) price model form basis for model specification for this study. Precisely, modified Ohlson price model was used in line with prior related studies such as Omokhudu and Ibadin (2015), Umoren and Enang (2015), Daske *et al.*, (2008), Alfaraih (2009), and Alfaraih and Alanezi (2015).

Both t-Test and F-Statistic were employed to examine significance of each coefficient of independent variable employed in each model and for the model correspondingly which were evaluated using probability value (p-value) at 5% level of significance. According to Omokhudu and Ibadin (2015), value relevance is determined by the estimated regression coefficients of accounting variables included in the model and its adjusted coefficient of determination ( $R^2$ ). Accordingly, adjusted  $R^2$  was used to provide information about variability in value relevance measure that could be attributed to the

variable(s) included in the model (i.e. proportion of variance explained by the regression line). Whereas, regression coefficient of individual parameter indicates the direction of association with, and significant effect on value relevance. However, the regression estimation was based on white cross-section robust coefficient covariance method which helps in the computation of coefficient standard error.

Sequel to deviation of the data from Gaussianity, natural logarithms (log) in the data logarithmic transformation was used. This is because coefficients in the natural log scale are directly interpretable as approximate proportional differences in the real dataset which also forms basis for indicating how the rate of change in the log-transformed variables represents change in its actual variables (Benoit, 2011; Oluoch, 2015). In addition, Benoit (2011) states that logarithmic transformation is a convenient mean of transforming a highly skewed variable into one that is more approximately normal while Schielbel (2007) reiterates that taking logs of a dataset is generally considered a permitted procedure to obtain assumption of normality and homoscedastic residual. Thus, natural logarithm of the modified Ohlson (1995) price valuation model was employed.

More specifically, inferential statistical analyses commenced by examining pre- and post-IFRS as well as the overall eight years effect of the three main accounting information jointly on share price in March and June-end. The step was majorly taken to obtain preliminary clue of relative value relevance of the accounting data prior to individual specific objective test as well as general model analysis. As a result, model specified in equation 3.2a to 3.2c were adopted to achieve this purpose.

**Model 1:**  $\ln SP_{mit} = \beta_0 + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \varepsilon_{it}$  ----- (3.2a)

**Model 2:**  $\ln SP_{jit} = \beta_0 + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \varepsilon_{it}$  ----- (3.2b)

**Model 3:**  $\ln SP_{it} = \beta_0 + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \varepsilon_{it}$  ----- (3.2c)

Where;

$\ln SP_{mit}$  and  $\ln SP_{jit}$  are the natural logarithm of share price of company  $i$  at time  $t$  (i.e. March and June-end correspondingly) after the financial year-end of time  $t$  for pre- and post-IFRS periods separately while  $\ln SP_{it}$  stands for share price for the combined period in March and June-end separately;  $\beta_0$  is the intercept (i.e. constant term) in respective model;  $\beta_1 - \beta_3$  are the coefficients of each independent variable in each model;  $\ln EPS_{it}$  represents natural logarithm of earnings per share of company  $i$  at time  $t$ ;  $\ln BVPS_{it}$  represents natural logarithm of book value of equity of company  $i$  at time  $t$ ;  $\ln CFOPS_{it}$  represents natural logarithm of cash flows from operation of company  $i$  at time  $t$ ;  $\varepsilon_{it}$  represents error term;  $t$  stands for year 2008, ... 2011 for pre-IFRS period, 2012, ... 2015 for the post-IFRS period and 2008, 2009 ... 2015 for the eight-year period.

Moreover, relative and incremental value relevance tests were performed on the first three hypotheses one after the other. That is, share price was regressed on accounting data employed for each hypothesis testing. According to Barth *et al.* (2008), higher accounting quality is expected to demonstrate higher value relevance of the accounting information. Relative association measure involved comparison of coefficient of each model's parameters and its adjusted  $R^2$  between pre- and post-IFRS periods jointly and separately. The higher the explanatory power of post-IFRS period's adjusted  $R^2$  and related coefficient over pre-IFRS period, the higher (improved) relative value relevance of the variable in the regression analysis under IFRS.

On the flipside, incremental regression model is observed to be incrementally value relevant under IFRS if the coefficient of the interactive variable between a specific accounting data and dummy for post-IFRS period is positive and statistically significant. Otherwise, such variable is regarded as not incrementally value relevant in the post-IFRS period. Succinctly, differences in value relevance between pre- and post-IFRS period are expected to be indicated through statistically significant and positive coefficient of the interactive terms between the accounting information and post-IFRS dummy for it to be incrementally value relevance while higher explanatory power and

valuation coefficient that is statistically significant and positive indicates improved relative measure as employed in prior studies such as Liu *et al.* (2011), and Umoren and Enang (2015). Therefore, the first three hypotheses were modelled and analysed using models 4 to 6 specified in equation 3.3 to 3.5 respectively. Hypotheses were tested using 0.05 level of significance which formed basis for accepting (or otherwise) null hypothesis presented in each case.

To test for the effect of income statement accounting information issued under IFRS as represented by earnings per share (EPS) on value relevance (VR) and as presented through hypothesis one, share price (SP) in March and June-end as well as EPS were drawn. Incremental and relative VR models in equation 3.3a and 3.3b respectively were employed.

**Model 4a:**  $\ln SP_{it} = \beta_0 + \beta_1 \ln EPS_{it} + \beta_2 \text{PostIFRS} + \beta_3 \ln EPS_{it} * \text{PostIFRS} + \varepsilon_{it}$  ----- (3.3a)

**Model 4b:**  $\ln SP_{it} = \beta_0 + \beta_1 \ln EPS_{it} + \varepsilon_{it}$  ----- (3.3b)

Where  $\ln SP_{it}$  is the natural logarithm of share price of company  $i$  at time  $t$  (March and June-end) after the financial year-end of time  $t$  for pre- and post-IFRS periods;  $\beta_0$  is the intercept in each model;  $\beta_1 - \beta_3$  are respective coefficients and  $\varepsilon_{it}$  stands for error term in each model;  $\ln EPS_{it}$  is the natural logarithm of earnings per share of company  $i$  at time  $t$ , pre- and post-IFRS periods; PostIFRS is a dummy variable that equals 1 if IFRS period, otherwise zero (0); and  $\ln EPS_{it} * \text{PostIFRS}$  is the interactive variable between  $\ln EPS_{it}$  and PostIFRS dummy.

To examine the effect of financial position statement accounting data issued under IFRS which is represented by book value of equity (BVPS) on VR as conveyed through hypothesis two, share price (SP) in March and June-end as well as BVPS were drawn. Incremental and relative VR models in equation 3.4a and 3.4b respectively were used.

**Model 5a:**  $\ln SP_{it} = \beta_0 + \beta_1 \ln BVPS_{it} + \beta_2 \text{PostIFRS} + \beta_3 \ln BVPS_{it} * \text{PostIFRS} + \varepsilon_{it}$  -- (3.4a)

$$\text{Model 5b: } \ln SP_{it} = \beta_0 + \beta_1 \ln BVPS_{it} + \varepsilon_{it} \quad \text{----- (3.4b)}$$

Where  $\ln SP_{it}$ ,  $\beta_0$ ,  $\beta_1 - \beta_3$  and  $\varepsilon_{it}$  are as stated in model 4a and 4b;  $\ln BVPS_{it}$  is the natural logarithm of book value of equity of company  $i$  at time  $t$ , pre- and post-IFRS periods;  $\text{PostIFRS}$  is a dummy variable that equals 1 if IFRS period, otherwise zero; and  $\ln BVPS_{it} * \text{PostIFRS}$  is the interactive variable between them.

Thirdly, the effect of cash flows statement accounting information issued under IFRS which is represented by cash flows from operation (CFOPS) on VR based on hypothesis three was investigated using share price (SP) in March and June-end separately as dependent variable and CFOPS as independent variable. Incremental and relative VR models in equation 3.5a and 3.5b respectively were adopted.

$$\text{Model 6a: } \ln SP_{it} = \beta_0 + \beta_1 \ln CFOPS_{it} + \beta_2 \text{PostIFRS} + \beta_3 \ln CFOPS_{it} * \text{PostIFRS} + \varepsilon_{it} \quad (3.5a)$$

$$\text{Model 6b: } \ln SP_{it} = \beta_0 + \beta_1 \ln CFOPS_{it} + \varepsilon_{it} \quad \text{----- (3.5b)}$$

$\ln SP_{it}$ ,  $\beta_0$ ,  $\beta_1 - \beta_3$  and  $\varepsilon_{it}$  are as stated in model 4a and 4b;  $\ln CFOPS_{it}$  is the natural logarithm of cash flows from operation of company  $i$  at time  $t$ , pre- and post-IFRS periods;  $\text{PostIFRS}$  is a dummy variable that equals 1 if IFRS period, otherwise zero; and  $\ln CFOPS_{it} * \text{PostIFRS}$  is the interactive variable between them.

To assess the effect of extent of compliance with IFRS on VR, model 7 was used. Natural log of share price in March and June-end were drawn as dependent variable while dummy variable ( $\text{CindexDum}$ ) that equals 1 if firm's compliance score is greater than median of the firms' overall compliance scores, otherwise zero was used as independent variable. The median score employed in separating firms compliance mean scores into high and low compliant is in line with prior studies such as Alfaraih (2009), Tsalavoutas and Dionysiou (2014), and Alfaraih and Alanezi (2015).

$$\text{Model 7: } \ln SP_{it} = \beta_0 + \beta_1 \text{CindexDum}_{it} + \varepsilon_{it} \quad \text{----- (3.6)}$$

$\ln SP_{it}$  is the natural log of share price of firm  $i$  at time  $t$  (March and June-end);  $\beta_0$  is the intercept;  $\beta_1$  is the coefficient of the independent variable;  $CindexDum_{it}$  is the dummy variable that equals 1 if compliance score is above median, zero otherwise;  $\varepsilon_{it}$  is the error term;  $t$  is the post-IFRS period (i.e. 2012, ... 2015).

Moderating effect of firm specific factors on value relevance of accounting information under IFRS was also explored by using model 8. Two firm specific factors were considered. That is, firm size (as proxy of firm's total assets) and industry category (i.e. financial and non-financial categories) as moderating variables which were examined separately on the association between the accounting data and market share value. Median of the natural logarithm of total assets was used as measure to partition the sampled firms into large and small firm-size. According to Babalyan as cited in Alfaraih (2009) using median is better than average size as average size might not be useful estimate when large firms are included in the sample. This method has also been adopted in Bae and Jeong (2007). However, in a normally distributed sample, either mean or median could be useful because the two values should not be significantly different from each other. Nevertheless, in line with prior studies such as Chalmers *et al.* (2011), Khanagha (2011) and Vázquez *et al.* (2007), the sample was subsequently partitioned into large and small firm sizes as well as financial and non-financial industry categories to examine how value relevant is the accounting information of each specific subsample firms.

This aspect of the study was limited to share price in March-end alone since the focus here is to examine moderating influence of firm-specific factors on value relevance conjecture. Therefore, regression analyses were performed by regressing share price in March on each firm-specific moderating factor, interaction term together with each accounting information individually. Statistical significance outcome of the coefficient of each interaction term formed basis for determining its moderating influence on the association between accounting information and share value under IFRS. Model in

equation 3.7a was used to examine moderating influence of firm size on value relevance of accounting information while equation 3.7b model was used to obtain that of financial industry category on value relevance of the accounting information.

$$\text{Model 8a: } \ln SP_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 \ln TA_{it} + \beta_3 X_{it} * \ln TA_{it} + \varepsilon_{it} \quad \text{----- (3.7a)}$$

$$\text{Model 8b: } \ln SP_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 \text{FinCat}_{it} + \beta_3 X_{it} * \text{FinCat}_{it} + \varepsilon_{it} \quad \text{----- (3.7b)}$$

$\ln SP_{it}$  is the natural log of share price of company  $i$  at time  $t$  (March-end after the financial year-end);  $\beta_0$  is the intercept,  $\beta_1 - \beta_3$  are the variables' coefficients;  $X_{it}$  represents each accounting information (i.e.  $\ln EPS$ ,  $\ln BVPS$ ,  $\ln CFOPS$  and  $CindexScore$ ) of company  $i$  at time  $t$ ;  $\ln TA_{it}$  is natural log of total assets of firm  $i$  at time  $t$ ;  $\text{FinCat}$  represents dummy variable that equal 1 if financial service industry, otherwise zero;  $\varepsilon_{it}$  is the error term;  $t$  is the post-IFRS period (i.e. 2012, ... 2015).

Finally, by using post-IFRS panel data alone, share price at March-end was regressed on all the accounting information in the general model in other to establish the overall objective of this study. Model 9 was used to achieve this multiple regression analysis. In addition, to make the result more robust, pre- and post-IFRS relative value relevance regression models were examined and compared. The processes assisted in forming general conclusion of findings regarding influence of IFRS adoption on value relevance of accounting information in the Nigerian stock Market.

$$\text{Model 9: } \ln SP_{it} = \beta_0 + \beta_1 \ln INCSTI_{it} + \beta_2 \ln FPSI_{it} + \beta_3 \ln CFSI_{it} + \beta_4 CINDEX_{it} + \varepsilon_{jt} \quad (3.9)$$

Where;

$\ln SP_{it}$  is the share price of company  $i$  at time  $t$ , March-end after the financial year-end of time  $t$ ;  $\beta_0$  is the intercept (i.e. constant term);  $\beta_1 - \beta_4$  are the coefficients of each independent variables;  $\ln INCSTI_{it}$  represents natural log of income statement accounting information (represented with  $\ln EPS$ ) of company  $i$  at time  $t$ ;  $\ln FPSI_{it}$  stands for natural log of financial position statement accounting information (i.e.  $\ln BVPS$ ) of



company  $i$  at time  $t$ ;  $\ln\text{CFSI}_{jt}$  is cash flows statement accounting information (represented with  $\ln\text{CFOPS}$ ) of company  $i$  at time  $t$ ;  $\text{CINDEX}_{it}$  represent dummy variable for extent of compliance with IFRS adoption which equals 1 if above overall compliance mean score, otherwise zero;  $\varepsilon_{it}$  represents error term;  $t$  stands for year 2012, .... 2015.

### **3.10 Ethical Consideration**

As a way of ensuring ethical research, information (data) obtained for this study were accorded anonymity by coding the identity of individual firm sampled. In addition, in order to ensure confidentiality of the data used, excel spread sheet was used to micro-aggregate all information obtained. These two techniques among others have been advanced by Frankfort-Nachmias and Nachmias (2009) as a way of permitting outsiders' access to data without compromising its required confidentiality. Nevertheless, the information sourced for this study are publicly available information.

On the other hand, literature considered for the study and other secondary information have been appropriately acknowledged. In an empirical study like this, Anderson *et al.* (2008) stress the need for statistical ethicality as it plays important role in the collection, analysis, presentation and interpretation of data. In this spirit, pilot testing, data collection and analyses, and this written report conveying information developed from the study are based on fair, thorough, objective and neutrality admonished by Andersen *et al.* (2008).

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

In line with specific objectives and stated hypotheses of this study as revealed in chapter one, this chapter presents findings from various analyses performed on balance panel data sourced along with ensuing discussions. As such, pilot test results regarding instrument employed to investigate extent of compliance with IFRS, descriptive analyses and inferential statistics of the research models are sequentially presented in this section.

#### **4.2 Pilot Testing**

Prior to full investigation on extent of compliance with IAS/IFRS by Nigerian listed companies, validity and reliability of the data collection instrument used (Cindex) was ensured. As stated in chapter three, Table 4.1 presents the outcome of content validity test conducted. The effort resulted in 503-item compliance index which was used to measure degree at which Nigerian listed companies have complied with IAS/IFRS mandatory disclosure demands within four years of its adoption (i.e. 2012 – 2015) in the country.

Out of applicable 37 IASs/IFRSs (Appendix I) with at most January 2012 as effective due date of compliance, 31 standards (i.e. 24 IASs and 7 IFRSs) were found relevant to the Nigerian financial reporting environment (Appendix II) and in line with the nature of existing corporate business operations as at the time of this study. Table 4.1 shows improvement in the self-developed Cindex for the study from 464 disclosure items drawn by the researcher to 503 items through the validity test procedure. This was largely explained by some other insightful disclosure requirements suggested to be included in the Cindex through the pilot test exercise.

Outcome of separate assessments of the instrument by the two auditing firms' representatives (i.e. one of the 4-Big and one local audit firms) indicated inclusion of 511 items. The supervisors were later consulted to discuss areas of differences. Disparity in the final number of items used in this study and collapsed responses from the two auditing firms were majorly explained by repeated items between standards. These processes led to 503 items Cindex which were subsequently employed to measure Nigerian listed companies' compliance with IFRS disclosure demands.

**Table 4.1: Results of Cindex Validity Test**

S/N	IAS/IFRS Number	Items identified by the researcher	Items suggested by the two independent auditors (combined)	Final Cindex (after consultation with the supervisors)
1	IAS 1	75	78	78
2	IAS 2	8	8	8
3	IAS 7	17	18	18
4	IAS 8	16	19	21
5	IAS 10	6	8	7
6	IAS 11	8	8	8
7	IAS 12	17	19	18
8	IAS 16	15	16	15
9	IAS 17	20	20	20
10	IAS 18	7	7	7
11	IAS 19	17	21	20
12	IAS 21	6	6	6
13	IAS 23	3	5	2
14	IAS 24	9	13	11
15	IAS 26	3	3	3
16	IAS 27	15	15	15
17	IAS 28	15	15	15
18	IAS 31	9	9	9
19	IAS 33	10	11	10
20	IAS 36	21	21	21
21	IAS 37	13	13	13
22	IAS 38	14	15	14
23	IAS 40	15	18	20
24	IAS 41	22	22	22
25	IFRS 1	4	6	6
26	IFRS 2	13	15	15
27	IFRS 4	11	11	11
28	IFRS 5	14	15	15
29	IFRS 6	3	4	4
30	IFRS 7	38	52	51
31	IFRS 8	20	20	20
	<b>TOTAL</b>	<b>464</b>	<b>511</b>	<b>503</b>

The 503 disclosure items identified for this study shows higher mandatory disclosure items over 481 items identified and used by Tsalavoutas (2009) from 31 standards employed as well as 419 items drawn from 27 standards by Alfaraih (2009) at the related emerging markets in Greece and Kuwait respectively. It was observed that relative higher disclosure items identified in this study over extant studies may not be unconnected to improvement in the disclosure requirements of some of the standards by IASB over the years and standards used due to financial reporting environment of the study. For instance, 72, 45 and 69 disclosure items were employed for IAS 1 alone by Tsalavoutas (2009), Alfaraih (2009) and Alfaraih and Alanezi (2015) respectively while this study identified and used 78 items for the same accounting standard. Also, IAS 30 was found relevant as part of the standards considered by Alfaraih (2009) which has been superseded by IFRS 7 and thereby becomes irrelevant to this study.

The final Cindex used in this study reveals wide variation of items among the standards with IAS 23 and 26 indicating lowest 2 and 3 disclosure items in that order while IAS 1 and IFRS 7 record leading items of 78 and 51 correspondingly. Highest disclosure items of 78 relating to IAS 1 may not be divorced from general presentation based mandatory disclosure items expected to be observed by the reporting firms as contained in the standard rather than more complex disclosures relating to measurement and recognition. On the other hand, the lowest 2 mandatory disclosure items identified for IAS 23 could be due to the fact that the standard mainly focuses on (capitalisation of) borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset while other borrowing costs are recognised as an expense. The same number of measurement items was used by Al-Shammari *et al.* (2008) for companies listed at Gulf Co-operation Council member states and Alfaraih and Alanezi (2015) at the Kuwait stock exchange. Thus, validity of the instrument is believed to have been improved through the steps taken and has extensively reduced probable self-selection bias of items included in the instrument in line with existing studies such as Alfaraih (2009), and Wallace and Naser (1995).

Afterward, step to ensure accuracy of the measurement (i.e. reliability test) was taken. This involved administering the instrument on two professionals that were carefully identified and selected (as described in chapter three) for reliability assessment. Two companies were randomly selected from financial industry category (i.e. each from deposit money banks and insurance companies) while four companies were randomly drawn from non-financial industry category (i.e. each from Extractive industry, ICT, Other service and Manufacturing Industry). The number of sample selected for reliability test was based on the proportion of the two firms' categories in the target population. That is, 47 financial service companies and 81 non-financial companies indicating approximately ratio 1 to 2 of the firms' categories. Results of the reliability test is as presented in Table 4.2. Sample selected from each industry group are represented with letter A to F. Scores indicate compliance score of each sample on yearly basis.

Drawing from the pilot compliance reliability assessment results, it is observed from Table 4.2 that on yearly basis, there is no wide disparity in the two assessors' scores for financial industry category subsample unlike non-financial subgroup except extractive industry. Even though extractive industry disclosure compliance level appears to be better ranked between 2013 and 2015 and general persistent improvement in the compliance level based on the assessors' evaluation, the ranking does not follow specific pattern all through. These observations might not be dissociated from possible yearly disclosure compliance demands which vary across industries and years.

Also, the first assessor appeared to be more conservative in the assessment and scoring of the firms' annual reports with general lower compliance scores relative to that of the second assessor. This observation particularly informed observed higher mean and median scores from the second assessor's compliance scores between 2013 and 2015. Nevertheless, the results suggest independent judgment of the two assessors regarding

level of compliance with IFRS disclosure requirements by the listed firms for the period under examination.

**Table 4.2: Results of Cindex Reliability Test**

Year	Company	Industry Category						Mean	Median	
		Extra ctive	ICT	Other Serv.	Man ufact.	Fin. Serv1	Fin. Serv2			
2012	Assessor 1	Scores	0.88	0.80	0.86	0.95	0.92	0.87	0.88	0.88
		Ranking	3	6	5	1	2	4		
	Assessor 2	Scores	0.88	0.85	0.89	0.86	0.93	0.88	0.88	0.88
		Ranking	4	6	2	5	1	3		
	<b>Test Result</b>	Mann-Whitney <i>U</i> Test: p = 0.317; Z value = -1.000								
2013	Assessor 1	Scores	0.97	0.83	0.89	0.88	0.94	0.89	0.90	0.89
		Ranking	1	6	4	5	2	3		
	Assessor 2	Scores	0.97	0.86	0.93	0.95	0.94	0.91	0.93	0.93
		Ranking	1	6	4	2	3	5		
	<b>Test Result</b>	Mann-Whitney <i>U</i> Test: p = 0.317; Z value = -1.000								
2014	Assessor 1	Scores	0.98	0.86	0.91	0.92	0.95	0.91	0.92	0.92
		Ranking	1	6	4	3	2	5		
	Assessor 2	Scores	0.98	0.89	0.95	0.88	0.95	0.93	0.93	0.94
		Ranking	1	5	3	6	2	4		
	<b>Test Result</b>	Mann-Whitney <i>U</i> Test: p = 0.317; Z value = -1.000								
2015	Assessor 1	Scores	0.98	0.88	0.91	0.90	0.96	0.92	0.93	0.92
		Ranking	1	6	4	5	2	3		
	Assessor 2	Scores	0.98	0.91	0.95	0.96	0.95	0.93	0.95	0.95
		Ranking	1	6	3	2	4	5		
	<b>Test Result</b>	Mann-Whitney <i>U</i> Test: p = 0.317; Z value = -1.000								
	<b>Overall Test Result:</b>	Mann-Whitney <i>U</i> Test: p-value = 0.149; Z = -1.443; r = 0.208 Independent samples t-Test: p = 0.425 (2-tailed); Levene's test equal variance assumed p = 0.740								

Mann-Whitney *U* Test p is the Asymp. Sig. (2-tailed) value. The reliability tests are based on 95% confidence interval.

Statistically, Mann-Whitney (M-W) *U* Test and its alternative parametric independent samples t-Test were used to examine whether the two sets of scores from the two different assessors were from the same population. The two test methods were employed because the former uses median while the later relies on mean scores. Nevertheless, in a normally distributed sample or population, the two methods are expected to return similar conclusions even though M-W does not really assume normality. The null hypothesis of M-W *U* Test states that the distribution of scores for the two groups are equal while its alternative indicates that they are not equal. On the other hand, null hypothesis for independent t-Test states that population mean from the two groups are equal while its alternative implies non-equality of the population mean.

Yearly M-W *U* Test results showed that there is no statistically significant difference in the scores from the two independent assessments with p-value generally far above 0.05 level of significance. The overall M-W *U* Test revealed  $p = 0.149$  ( $Z = -1.443$ ;  $\alpha = 0.05$ ) which suggests that, for the four financial years of IFRS adoption, median of the two extent of compliance scores are not significantly different from each other since  $p > 0.05$ . Using mean scores of the two samples, insignificant M-W *U* Test's result was further confirmed through independent samples t-Test. The t-Test result revealed p-value of 0.425 which is greater than alpha at 0.05 level of significance.

The outcome of these two tests indicates that the samples are from the same population since the tests returned statistical insignificant difference between compliance scores from the two assessors. That is, irrespective of independence of time, individuality and condition, the instrument can reliably measure the concept of interest consistently. As such, this finding revealed reliability of the instrument which paved way for its adoption to measure extent of compliance with IFRS by Nigerian listed firms in this study. Result of the reliability test as obtained in this study confirms applicability of the measuring instrument in accordance with prior study that employed related statistical method such

as Tsalavoutas (2009). However, six companies used for this test were excluded from the main study's sample.

### **4.3 Descriptive Statistics of the Sampled Firms**

Prominent approach to investigating value relevance involves the use of accounting information extracted from audited annual financial reports issued to the public by individual listed entity and its corresponding market values. Consequently, by following sample selection criteria spelt out under sampling technique in chapter three, sixty-nine (69) listed companies were obtained as sample for this study. This sample represents 54% of the target population. According to Anderson *et al.* (2008), a sample size that is greater than or equal to 50 is considered appropriate if the population distribution is believed to be highly skewed or has outliers. Since prior studies such as Umoren and Enang (2015) from the NSE context as well as Alfaraih (2009) from Kuwait stock market have documented non-normality of the sample data used based on its skewness issue (nonsymmetrical), 69 sample size drawn for this study is therefore considered as appropriate.

Breakdown of the sample size as presented in Table 4.3 reveals that, the sample consist twenty-three (23) financial service and forty-six (46) non-financial industry category firms (i.e. twenty-five (25) Manufacturing firms, twenty-three (23) Financial service firms, Ten (10) Other service firms, eight (8) Extractive industry firms and three (3) ICT industry firms). This implies 33% financial and 67% non-financial sampled firms (Figure 4.1). Coincidentally, industry under each sector at the NSE was represented in the sample as shown in Table 4.3.

Specifically, manufacturing subgroup recorded the highest sample size of 25 firms followed by financial services with 23 companies. The two leading subgroups are therefore well represented in the sample obtained for this study. For instance as identified by Umoren and Enang (2015), banking sector which forms substantial part of



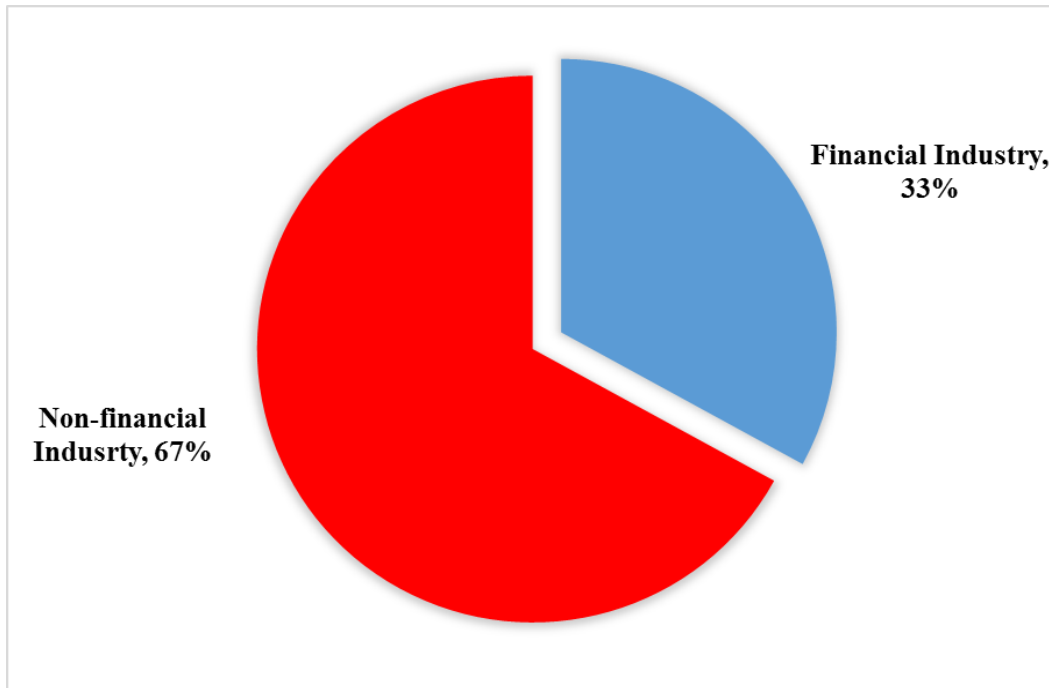
the financial service category is one of the pillars of Nigerian economic development. However, Information and Communication Technology sector recorded lowest sample size of 3 companies.

**Table 4.3: Breakdown of Sampled Firms and Categories**

S/N	Industry Categories	Subcategories	No. of Firms	Percentage	Sectors and Number of firms sampled
1	Financial	Financial Service	23	33%	Financial service (23).
		Extractive	8	12%	Oil and Gas (5) , Natural Resource (3).
		Non-ICT	3	4%	ICT (3).
2	Financial Category	Other Services	10	15%	Services (8), Construction & Real Estate (2).
		Manufacturing	25	36%	Conglomerate (2), Consumer goods (8), Industrial goods (6), Healthcare (5), Agriculture (4).
<b>Total</b>			69	100	

In concise, the sample size for the study was arrived at based on the scope of this study using balanced panel data thereby leading to 552 firm-year observations covering eight (8) years period (i.e. 2008 – 2015). The 69-firm sample employed for this study is not substantially greater than 68 obtained by Oyerinde (2011) but significantly higher than 47 firms used by Omokhudu and Ibadin (2015) in related studies of listed firms at the Nigerian stock market. This further affirms peculiar missing data problem specially associated with empirical study in developing markets and economies according to

Castellacci and Natera (2011), and Stecklov and Weinreb (2010) when compared relatively with the targeted population of the study.



**Figure 4.1: Chart of Sampled firms Industry Categories**

#### **4.3.1 Descriptive Statistics of Price Model Variables for the Entire Period**

Accounting information (explanatory variables) such as earning per share (EPS), book value of equity per share (BVPS), cash flows from operation per share (CFOPS) were drawn for the price valuation model. Dummies of extent of compliance with IFRS (Cindex) as well as firm-specific factors such as firm size (proxy for total assets) and industry category form additional variables incorporated in the valuation models. Share price of the sampled firms at March and June-end of each year (under investigation) after the financial year-end was used as dependent variable.

Descriptive statistics based on balanced panel data of the sampled firms for the entire eight years period are presented in Table 4.4. Starting with descriptive analysis of the

dependent variable (i.e. share price), it is evident from Table 4.4 that mean (median) of share price in March-end for the 8-year period is ₦17.39 (₦4.19) with slightly higher mean (median) of ₦18.49 (₦4.32) observed for June-end. This suggests noteworthy marginal difference in means (median) of the share prices for the two months. This result confirmed similar finding by Omokhudu and Ibadin (2015) from the same stock market using sample from non-financial firms' category alone. It is also a practical demonstration of insignificant difference of change in the share prices between the two months even if there was any information other than accounting information that gets to the stock market to drive share prices between March and June. The results also indicate that arrival of information that is capable of driving stock market values is not widely skewed to either March or June-end for the eight-year period.

**Table 4.4: Price Model Descriptive Statistics for 2008 – 2015 Firm–Year Data**

<b>Variables</b>	<b><i>N</i></b>	<b>Mean</b>	<b>Median</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>Skewness</b>	<b>kurtosis</b>
<b>SP<sub>m</sub></b>	552	17.39	4.19	35.36	0.50	293.23	3.88	17.87
<b>SP<sub>j</sub></b>	552	18.49	4.32	37.53	0.50	253.94	3.53	13.42
<b>EPS</b>	552	1.24	0.29	2.54	-2.54	16.01	2.94	10.52
<b>BVPS</b>	552	7.52	3.40	11.69	-2.25	82.59	3.60	16.06
<b>CFOPS</b>	552	2.44	0.36	8.76	-1.54	160.82	4.44	18.42
<b>T.A(₦' m)</b>	552	244680	16100	580691	321	3750327	3.32	11.79

*N* is the number of observations; SP<sub>m</sub> is share price of firm *i* at time *t* (March-end after the financial year-end); SP<sub>j</sub> is share price of firm *i* at time *t* (June-end after the financial year-end); EPS is earning per share of firm *i* at time *t*; BVPS is the book value of equity per share of firm *i* at time *t*; and CFOPS is cash flows from operation of firm *i* at time *t*. Figures are in Nigeria Naira (One Nigeria Naira (₦) equals 100kobo, approximately 0.00327 US\$) except T.A. (total assets) that is in million naira.

Furthermore, share prices in March and June indicate standard deviation of ₦35.36 and ₦37.53 with minimum (maximum) value of ₦0.50 (₦293.23) and ₦0.50 (₦253.94) respectively. As indicated by minimum and maximum values in March and June, the

standard deviation results depict wide dispersion among the sampled firms' market values during the period but more in June. That is, the share values in the dataset used are farther away from its mean for the two months separately. This implies generally that attribute of the Nigerian listed firms with regard to their market values are not concentrated around same value, suggesting how widely different the firms are valued by the market participants at the stock market. Nevertheless, since standard deviation is widely acknowledged as stable measure of dispersion irrespective of sample employed (Frankfort-Nachmias & Nachmias, 2009; Kothari, 2004), this study documents that stock market values are largely spread among listed firms in the emerging/frontier stock market.

Kothari (2004), and Frankfort-Nachmias and Nachmias (2009) suggest that coefficient of variation should be calculated and reported for the purpose of comparing the degree of dispersion relative to mean of the distribution especially when ratio scale is used and that the distribution has different means. This becomes necessary because of share prices in March and June employed. As such, the study observed slightly higher relative degree of deviation from the mean in March than in June with 2.033 and 2.030 coefficient of variation respectively. This suggests lower degree of closeness of share price in March than in June indicating that there is marginal greater spread effect of the drivers of market values in March than in June at the Nigerian stock market.

As regards asymmetric distribution of share price for the period, skewness of 3.88 and 3.53 were obtained for March and June respectively. These results indicate that the distribution of the firms' share values is not symmetrical (non-normality) as it is positively skewed suggesting that the values are concentrated more in one direction of the distribution than the other. It implies that more of the Nigerian listed firms' market values tailed towards zero axis rather than higher price level. Kurtosis results also revealed leptokurtic manner of the market values' distribution with 17.87 in March and

13.42 in June. The results of these measures of asymmetry revealed clusteredness and pickiness of the distribution, indicating dispersion from normality.

Moreover, the eight-year period descriptive analysis of the three main accounting information for the price model as shown in Table 4.4 reveals mean (median) of ₦1.24 (₦0.29), ₦7.52 (₦3.40) and ₦2.44 (₦0.36) for EPS, BVPS and CFOPS correspondingly. Relative to minimum and maximum values, the accounting information generally depicts low mean scores reflecting the effect of low and/or negative financial performance and position of the listed firms. Also, standard deviation results of the variables indicate high dispersion from mean. That is, EPS (₦2.54), BVPS (₦11.69) and CFOPS (₦8.76). These imply that even though each of the accounting information has low mean on the average, individual variable demonstrates significant wide spread within itself. In other words, attributes of the sampled Nigerian quoted firms as construed by their economic performance, position and cash flows from operation are widely dispersed. In addition, their skewness and kurtosis revealed positive skewed and leptokurtic respectively [i.e. EPS – 2.94 (10.52); BVPS – 3.60 (16.06) and CFOPS – 4.44 (18.42)]. Thus, these results generally revealed non-normality of the distribution of the accounting information. The same case is also noted for total assets as presented in Table 4.4.

The study further presents descriptive statistics of the data for pre- and post-IFRS periods separately as shown in Table 4.5A and B since adoption of IFRS at the Nigerian stock market became effective starting from 2012 financial reporting year.

Mean scores of the variables are generally higher during post-IFRS period as contained in Table 4.5A and B as well as depicted on Figure 4.2. For instance, separate descriptive analyses of the two periods indicate improved average share price in the post-IFRS period for both March (i.e. from ₦14.89 during pre-IFRS to ₦19.90 in post-IFRS) and June (i.e. from ₦16.03 during pre-IFRS to ₦20.94 during post-IFRS), suggesting improved value relevancy in the post-IFRS period. These results also uncovered

improved higher mean score difference of ₦5.01 at March-end compared to ₦4.91 at June-end between pre- and post-IFRS periods indicating that firm market value is slightly more valued around March-end. Also, EPS, BVPS and CFOPS generally depict improved average value in the post-IFRS period over pre-IFRS. The result is in consonance with significant increase in the mean and median of both market value and net assets obtained by Tsalavoutas *et al.* (2012) from the Greece stock market after IFRS was adopted.

**Table 4.5A: Descriptive Statistics of the Variables for Pre-IFRS Period**

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>	<b>Skewness</b>	<b>CoV.</b>
<b>SPm</b>	276	14.89	27.45	0.50	216.92	3.75	1.844
<b>SPj</b>	276	16.03	31.81	0.50	253.94	4.04	1.984
<b>EPS</b>	276	1.11	2.38	-2.54	16.01	2.89	2.144
<b>BVPS</b>	276	6.24	9.65	-2.25	72.95	3.86	1.547
<b>CFOPS</b>	276	2.58	10.73	-1.45	160.82	12.45	4.159
<b>T.A (₦' m)</b>	276	185639	418980	321	2463543	3.09	2.257

Figures are in Nigeria Naira (100 kobo equals one Nigeria Naira). *N* indicates number of observations. CoV indicates coefficient of variation.

**Table 4.5B: Descriptive Statistics of the Variables for Post-IFRS Period**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>	<b>Min</b>	<b>Max</b>	<b>Skewness</b>	<b>CoV.</b>
<b>SPm</b>	276	19.90	41.70	0.50	293.23	3.58	2.096
<b>SPj</b>	276	20.94	42.41	0.50	240.00	3.14	2.025
<b>EPS</b>	276	1.37	2.69	-1.76	15.71	2.96	1.964
<b>BVPS</b>	276	8.80	13.32	-1.81	82.59	3.29	1.514
<b>CFOPS</b>	276	2.30	6.23	-1.54	45.97	4.55	2.709
<b>T.A (₦' m)</b>	276	303721	702227	422	3750327	2.95	2.312

Figures are in Nigeria Naira (100 kobo equals one Nigeria Naira). *N* indicates number of observations. CoV indicates coefficient of variation.

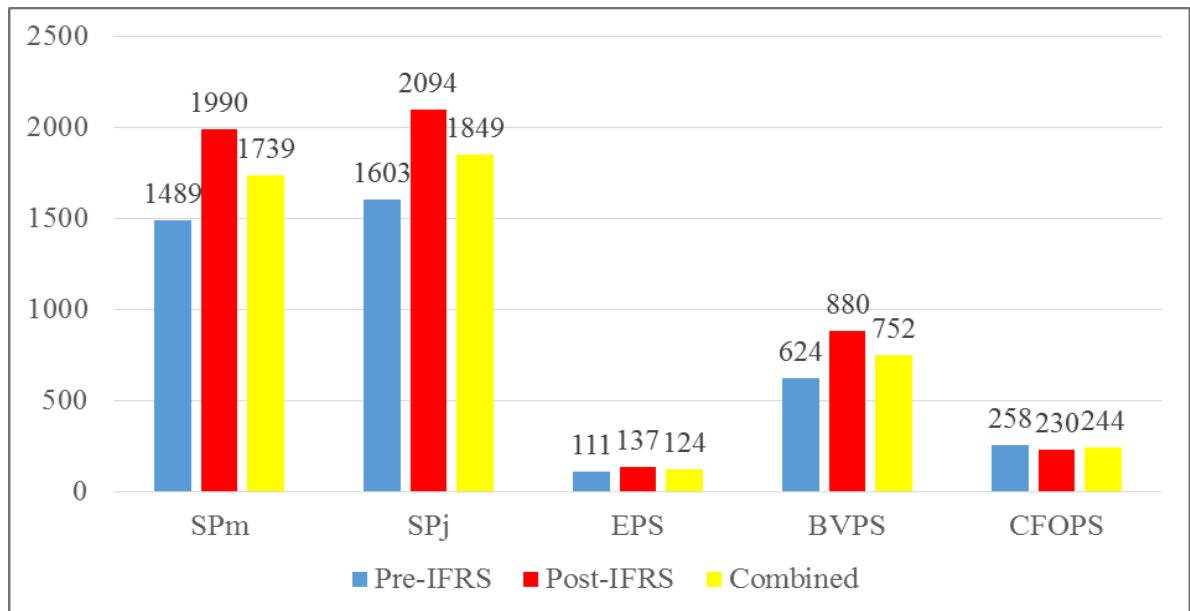
The standard deviation results indicate wider spread of the value of each variable in post-IFRS period than pre-IFRS period except for CFOPS that records reduced deviation

from ₦10.73 in pre-IFRS to ₦6.23 in the post-IFRS period. However, results of coefficient of variation (CoV) unveiled better comparison of dispersion in the data during the two periods showing that, there is higher degree of variation in the market values during post-IFRS period (March and June-end) than pre-IFRS period. On the contrary, the three accounting information revealed lower degree of variation in the data during post-IFRS period (i.e. 1.964, 1.514 and 2.709 for EPS, BVPS and CFOPS respectively) when compared with pre-IFRS accounting data which are 2.144, 1.547 and 4.159 for EPS, BVPS and CFOPS in that order.

These results suggest that observed lower degree of variation in each accounting information when principle-based IFRS accounting methods were applied imply apparent higher degree of closeness in the firms' market value during the post-IFRS period at the Nigerian stock market. That is, IFRS-based accounting fundamentals possess attributes that could reduce management choices of accounting principles that could precipitate lower degree of variation among listed firms' accounting data after the accounting standard was adopted consistently with position of Barth *et al.* (2008), and Wu *et al.* (2005) regarding features of IFRS to enhance accounting quality. This further presupposes that IFRS reporting framework has latent to reduce disparity in the accounting data which could not be addressed by local GAAPs. Therefore, this is a preliminary supposition that IFRS accounting principles could inform improved accounting quality than Nigerian local SAS. Nevertheless, it resulted in lower degree of closeness of the resultant firms market values in the market.

The results can further be interpreted to suggest that adoption of IFRS and its fundamentals are capable of addressing accounting attributes (or alternative choices) which could inform how accounting data are dispersed among the listed firms with consequential broader spread in the resultants market values. In order words, adoption of the new accounting standards unveil more informed state of financial performance and

position of the entities which could enable market participants to have better view about the firms, thereby translating to how individual firm could be better valued by them.



**Figure 4.2: Price Model's Variables Means Chart for Pre-IFRS, Post-IFRS and Combined Periods**

In summary, the descriptive analysis suggests that both stock market values and accounting information employed in this study showed general improved value with increased dispersion after IFRS was adopted in the market. As touching the degree of dispersion of the data relative to its mean values, only share prices at March and June-end indicate higher spread in the post-IFRS period. Whereas, the degree of spread reduced for all the accounting information after IFRS adoption. This simply implies that values of the accounting information reported under IFRS revealed lesser degree of dispersion or higher level of closeness than accounting data prepared and issued based on Nigerian local standard (SAS). It is an indication that fundamental accounting bases for preparing financial statement as required by IFRS is observed and was able to narrow down disparity in the accounting data reported by the Nigerian listed firms which



consequently resulted in increased degree of dispersion in the respective firms' share values.

Generally, the above descriptive results indicate that sample distributions of the variables are positively skewed and leptokurtic during pre- and post-IFRS periods as well as combined period with a wide deviation among firms as indicated by the variables' dispersion from mean (Table 4.4 and 4.5). Mean was also observed to be commonly higher than the median values. These results suggest conspicuous deviation from Gaussian distribution. This might have been explained by a sizeable number of listed firms representing financial services (23 companies altogether) whose share prices and other variables are generally tailed towards zero as revealed by their means and maximum values compared with other entities under non-financial industry categories with higher values (Table 4.6A & B).

Considering the firms market values, the coefficient of variation (CoV) used to compare degree of variation of the data for the two categories of firms revealed lower degree of closeness among non-financial industries' share prices than financial industry subgroup. This suggests higher spread of Nigerian listed non-financial firms' share value over its financial counterpart. Meanwhile, low minimum share price of ₦0.50 under non-financial industry category is mainly explained by companies under ICT and extractive sectors.

**Table 4.6A: Descriptive Statistic of Financial Service Industry Category Variables**

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>Skewness</b>	<b>CoV</b>
<b>SPm</b>	184	4.94	6.19	0.50	28.95	1.89	1.253
<b>SPj</b>	184	5.14	6.36	0.50	27.01	1.75	1.237
<b>EPS</b>	184	0.55	1.86	-1.53	8.74	-4.46	4.537
<b>BVPS</b>	184	4.60	4.94	-1.42	17.42	-0.60	1.113
<b>CFOPS</b>	184	0.93	4.04	-1.30	14.66	-0.68	20.200

**Table 4.6B: Descriptive Statistics of Non-financial Industry Category Variables**

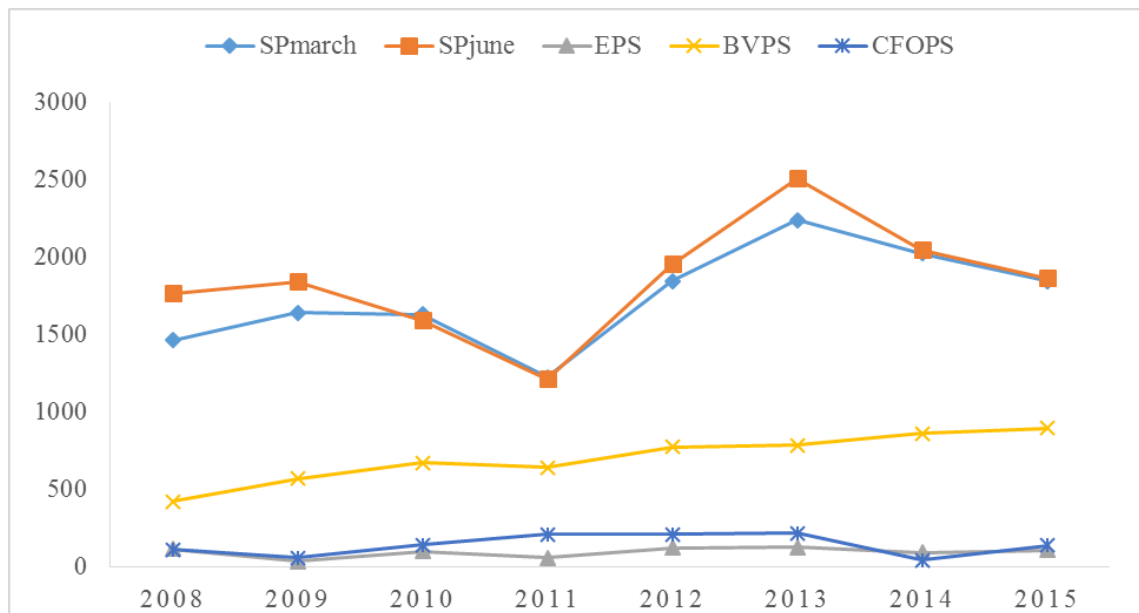
<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min.</b>	<b>Max.</b>	<b>Skewness</b>	<b>CoV</b>
<b>SPm</b>	368	23.62	41.97	0.50	293.23	3.09	1.756
<b>SPj</b>	368	25.17	44.54	0.50	253.94	2.77	1.749
<b>EPS</b>	368	1.59	3.39	-2.54	16.01	0.70	2.322
<b>BVPS</b>	368	8.98	13.91	-2.25	82.59	2.96	1.554
<b>CFOPS</b>	368	3.20	10.87	-1.54	160.82	9.49	3.660

However, Alejo *et al.* (2015) stress that lack of Gaussianity sometimes harms the reliability of sample estimation and testing procedures which calls for better method under alternative distributional assumptions of which data transformation using natural logarithm is among. Therefore, in lieu of departure from normality conjecture, variables employed for the price valuation model were transformed by using their natural logarithm (ln) form consistently with the view of Benoit (2011). This involved adding a constant to bring the smallest (negative) value to at least 1 as employed in prior studies such as Alfaraih (2009), and Tabachnick and Fidell (2007). Consequently, skewness of the share price in March and June-end drastically reduced to 0.20 and 0.14 respectively after the transformation procedure was applied. These values are within acceptable limits of  $\pm 0.5$  for normality test using skewness with kurtosis of 3.14 and 2.60 for the two months respectively (Appendix VI). Similar results were noted on all other explanatory variables employed after the transformation procedure. Also, this procedure helped to address possible presence of outliers among the sample observations.

#### **4.3.2 Trend Analysis of the Price Model Variables**

Yearly means of the share price as presented in Figure 4.2 and Appendix V range between ₦12 in 2011 and ₦22 in 2013 for March-end, and ₦12 in 2011 and ₦25 in 2013 for June-end. Apparently these imply general low mean scores of the share price during pre-IFRS period (2011) and the highest in post-IFRS period (2013). The same

attribute is observed concerning the mean trend of earnings per share and book value of the listed firms as EPS indicates lowest and highest mean scores of ₦0.31 and ₦1.22 in 2009 (pre-IFRS) and 2013 (post-IFRS) respectively while BVPS records ₦4.20 (2008) and ₦8.93 (2015) in that order. Except CFOPS whose lowest and highest mean scores are indicated in 2014 (₦0.40) and 2013 (₦2.14), mean trend of the variables are generally higher during IFRS adoption period. This further explains higher values of the IFRS-based accounting information and its corresponding stock market values.



**Figure 4.3: Mean Trend of the Price Valuation Model Variables**

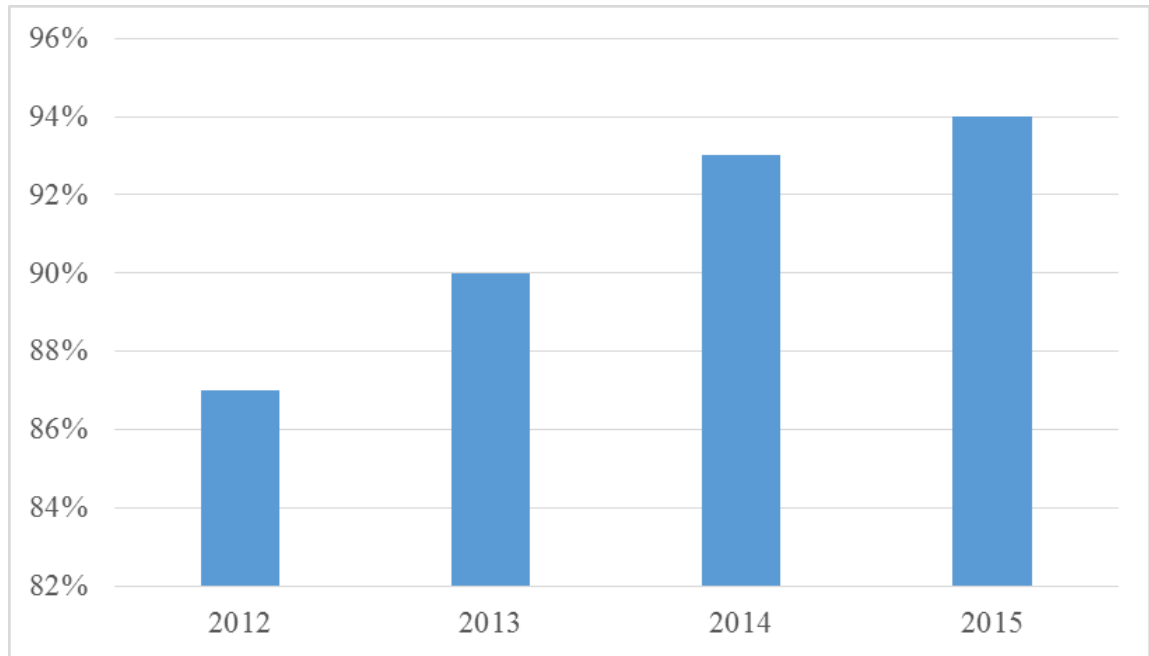
Figure 4.3 presents descriptive mean trend of the price model continuous variables for the 8-year period. The chart unveils how share price between March and June-end behaved throughout the period under investigation. Share price in June-end was largely found lying above share price in March-end. However, share prices in the two months were closely around each other in 2010 and 2011 during pre-IFRS period as well as 2014 and 2015 of post-IFRS period. This observation could explain tightened economic condition in the country within these periods, and an indication of relaxed corporate economic performances leading to weak volatility of the share prices. Meanwhile, the

share price recorded lowest value around 2011 (pre-IFRS period) and highest value in 2013 (post-IFRS period).

Furthermore, book value of equity of the sampled firms demonstrated persistent growth all through the eight-year period with noticeable stiffness around 2011. This suggests that weak or low market value in 2011 could have been prompted by book value of equity accounting information issued based on erstwhile SAS. Both earnings and cash flows from operation per share revealed criss-crossing pattern all through the eight years. Year 2009 recorded the least corporate performance in terms of earnings which could be traced to influence of 2007/2008 global financial crisis's impact in the Nigerian stock market. However, year 2012 and 2013 recorded the highest earnings with a slight reduction in 2014. This situation might not be disconnected from application of IFRS-based accounting principles as instructed by the NSE regulatory body starting from 2012. As to cash flows from operation, year 2012 and 2013 data show that sampled listed firms were able to record highest positive net cash flows from their various core operating activities than other years of the study. On average, Figure 4.3 revealed better corporate performance in terms of earnings, book value of equity, and cash flows from operation reported in the post-IFRS period than pre-IFRS period.

#### **4.3.3 Descriptive Statistics for Extent of Compliance with IFRS**

Compliance index (Cindex) used to measure extent of individual sampled company's level of compliance with mandatory requirements of IFRS consist 503 items (Appendix IVB) drawn from thirty-one (31) standards. Appendix IVB presents compliance items for each standard with IAS 23 having least items (2) while IAS 1 has the highest items of 78 disclosure requirements. Each entity was assessed based on relevant accounting standards and its disclosure requirements as applicable to it.



**Figure 4.4: Yearly Overall Compliance Scores**

Yearly overall compliance scores of the listed firms as indicated in Figure 4.4 based on 31 accounting standards assessed revealed 87%, 90%, 93% and 94% for 2012, 2013, 2014 and 2015 respectively with 91% average compliance score for the entire 4-year post-IFRS period. This shows noteworthy improved level of compliance with accounting standards among Nigerian listed firms compared with below 91% (i.e. 82%) overall average compliance of forty-four listed firms with twelve Nigerian SAS obtained by Kasum (2011). The highest and lowest compliance scores among sampled firms were 99.4% (from financial industry category) and 66% (non-financial category) respectively which are marginally lower than 100% and 81% highest and lowest obtained by Tower *et al.* (1999). These results indicate persistent improvement in the level of compliance with mandatory disclosure demands of IFRS by the sampled firms.

The results also revealed higher level of compliance with IFRS from NSE context compared with 75% reported by Tsalavoutas and Dionysiou (2014) from related emerging Greece stock market, 85.8% observed by Yiadom and Atunyo (2014) from

Ghana stock market, 73% obtained from Kuwait stock market by Alfaraih (2009) but below 94% reported from more developed economy of Australia by Tower *et al.* (1999). This is an indication that even though compliance level improves at the emerging market, there is notable gap between its compliance ‘performance’ and the one reported from developed market. Thus, more efforts is required by listed firms at the emerging or frontier markets to improve on its level of compliance with IFRS demands. Nevertheless, the implication is that companies listed at the emerging market strives to ensure improved adherence to IFRS disclosure requirements while preparing their financial reports.

Observed yearly improvement in the level of compliance with IFRS disclosure requirements might have been engendered by either NSE mandatory requirement for listed entities to comply, possible follow-up by the regulators or firms’ improved acquaintance with IFRS dictates through reporting entities’ staff training and development. However, it was envisaged that overall average compliance score would have been levitating around 100% in the fourth year of adoption, based on existing directives on compliance with IFRS disclosure demands in Nigeria. Whereas, countries with lax regulatory directives like Greece and Kuwait recorded average compliance scores of 80% and 72% respectively in the first year of IFRS adoption alone (Tsalavoutas, 2009; Alfraih & Alanezi, 2015). However, with the least observed 87% overall compliance in the first year of IFRS adoption in Nigeria (i.e. in 2012), it is also implied that strict regulatory pronouncement has latent to inform higher IFRS compliance among listed firms relative to lower results reported from economies with lax regulatory support.

As presented in Table 4.7, in 2012, 2013 and 2014, results of compliance assessment of the sampled firms based on each accounting standard employed show that IAS 1 and IAS 18 were well complied with while IAS 23 recorded lowest overall compliance mean scores. But in 2015, IFRS 1, IFRS 2, IAS 1 and IAS 18 were mostly well observed while

IAS 23 remained the least complied standard with improved (71%) average compliance score.

**Table 4.7: Firms Yearly and Overall IFRS Compliance Scores by each Standard**

<b>Applicable IAS / IFRS</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Overall Mean</b>	<b>Overall Min.</b>	<b>Overall Max.</b>
IAS 1	0.98	0.98	0.98	0.99	0.98	0.89	1.00
IAS 2	0.80	0.86	0.90	0.93	0.87	0.72	1.00
IAS 7	0.86	0.87	0.88	0.91	0.88	0.72	0.96
IAS 8	0.86	0.90	0.94	0.96	0.91	0.73	0.99
IAS 10	0.89	0.92	0.94	0.96	0.93	0.67	1.00
IAS 11	0.94	0.94	0.94	0.94	0.94	0.93	0.94
IAS 12	0.86	0.89	0.91	0.92	0.89	0.71	0.95
IAS 16	0.87	0.92	0.94	0.95	0.92	0.81	1.00
IAS 17	0.86	0.88	0.90	0.90	0.88	0.71	1.00
IAS 18	0.97	0.97	0.98	0.98	0.97	0.88	1.00
IAS 19	0.71	0.78	0.82	0.85	0.79	0.46	0.92
IAS 21	0.71	0.78	0.80	0.86	0.79	0.00	1.00
IAS 23	0.17	0.35	0.68	0.71	0.49	0.00	1.00
IAS 24	0.83	0.87	0.88	0.92	0.87	0.77	0.95
IAS 26	0.71	0.75	0.80	0.83	0.77	0.67	0.94
IAS 27	0.78	0.96	0.95	0.97	0.91	0.51	1.00
IAS 28	0.86	0.89	0.91	0.91	0.89	0.66	0.94
IAS 31	0.84	0.92	0.93	0.96	0.92	0.67	1.00
IAS 33	0.88	0.91	0.92	0.93	0.91	0.77	0.98
IAS 36	0.82	0.87	0.89	0.90	0.87	0.58	0.95
IAS 37	0.89	0.91	0.91	0.93	0.91	0.72	0.98
IAS 38	0.86	0.89	0.91	0.93	0.90	0.81	0.96
IAS 40	0.85	0.87	0.88	0.89	0.87	0.76	0.94
IAS 41	0.68	0.78	0.76	0.76	0.74	0.68	0.78
IFRS 1	0.93	0.96	0.92	0.98	0.94	0.83	1.00
IFRS 2	0.75	0.86	0.90	0.98	0.86	0.63	1.00
IFRS 4	0.86	0.87	0.91	0.97	0.90	0.86	0.97
IFRS 5	0.85	0.87	0.88	0.90	0.88	0.77	0.96
IFRS 6	0.88	0.88	0.87	0.88	0.88	0.88	0.88
IFRS 7	0.81	0.86	0.88	0.90	0.86	0.57	0.91
IFRS 8	0.84	0.87	0.88	0.89	0.87	0.76	0.90

In the overall, IAS 1 and IAS 23 were the highest (98%) and lowest (49%) observed standards respectively. As noted by Al-Shammari *et al.* (2008), high degree of compliance with IAS 1 may not be separated from its presentation-based disclosure items which makes it relatively easy for listed firms to comply. On the other hand, weak compliance with IAS 23 might be due to low cases involved as well as inability of the few firms concerned to explicitly indicate how the borrowing cost related to qualifying assets of each firm was capitalised. Table 4.7 also indicates some level of yearly closed variation in the rate at which sampled Nigerian listed firms complied with each IFRS disclosure demands within the period under examination.

Looking at extent of compliance based on industry categories, non-financial industry category recorded persistent lower but progressive average compliance scores across the four-year period (i.e. 2012 – 85%; 2013 – 90%, 2014 – 92% and 2015 – 93%). On the contrary, financial services industry category appears to have maintained consistent and progressive higher compliance mean scores for the same period (Table 4.8). Their overall mean scores revealed 93 and 90 percent for financial and non-financial categories respectively suggesting higher compliance with IFRS by the NSE listed financial firms.

**Table 4.8: Yearly Industry Categories Average Compliance Scores**

<b>Industry Category</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Overall</b>	<b>CoV</b>
<b>Financial Services</b>	91%	93%	94%	95%	93%	0.0398
<b>Non-Financial Industry</b>	85%	90%	92%	93%	90%	0.0701

In addition, coefficient of variation results indicate that there is higher degree of homogeneity in the level of compliance with IFRS among financial industry category with lower relative degree of deviation from mean of 0.0398 as compared with higher degree of deviation of 0.0701 by firms under non-financial category. This implies further that improved compliance with IFRS at the Nigerian stock market was largely led by financial industry category firms even though it represents about half of sampled



non-financial firms. It therefore indicates that both management of non-financial industry category and NSE regulators have much to do in ensuring enhanced compliance with IFRS mandatory disclosure requirements at the market. All the same, observed gap in-between the two industry categories might be due to the influence of other exogenous regulatory demands expected to be observed by listed financial companies such as prudential guidelines of the central bank of Nigeria among others.

In a nut shell, through the descriptive analysis presented, this study documents that extent of compliance with IFRS has improved within four years of adopting the standards by the Nigerian listed companies with well above average overall compliance level of 91%. The result implies consistent improvement in the adoption of IFRS-based accounting methods and principles while preparing financial reports of the Nigerian listed firms. This result is above 81 percent recorded from Germany by Glaum and Street (2003) suggesting that emerging markets could comply with IFRS better than listed firms at developed markets as well as 79 percent compliance level indicated through 168 sampled listed firms in Turkey by Demir and Bahadir (2014). Yearly improvement in the level of compliance with IFRS at NSE is also higher than 86 to 90 percent obtained by Peng *et al.* (2008) through sampled 79 China listed firms between 1999 and 2002. Yet, noted yearly improvement in the level of compliance with IFRS in this study still indicates that there is potential for improve compliance with regard to growing but low average compliance scores among non-financial firms.

#### **4.4 Share Price Valuation Inferential Statistics and Test of Hypothesis**

This subsection presents results and discussion of inferential statistics of the modified Ohlson (1995) price valuation regression model employed. Value relevance study seeks to unearth the pattern in which certain information (accounting data) explains share values. Therefore, share price at March-end (SP<sub>m</sub>) and at June-end (SP<sub>j</sub>) immediately after each financial year-end under investigation were obtained as response variable

(value relevance). Also, income, financial position and cash flows statements' bottom-line items were taken in this study as earnings per share (EPS), book value of equity per share (BVPS), and cash flows from operation per share (CFOPS) respectively. These accounting information were drawn from respective sampled firms' audited annual financial reports for the eight financial years covered in the study. Thus, value relevance of these three main accounting information were accorded preliminary inferential statistical analysis in order to examine their combined value relevance in the pre-IFRS, post-IFRS and for the entire eight years period.

#### **4.4.1 Diagnostic Tests Results and Discussion**

To ensure that the price valuation model represents best linear unbiased estimation (blue), model validation tests of normality, multicollinearity, autocorrelation and heteroscedasticity were performed. Drawing from the transformed data used due to deviation from Gaussianity, Jarque-Bera (J-B) normality test was used to verify normality assumption. As regard the share prices for pre- and post-IFRS periods, the result indicates J-B value of 3.008 and 0.763 with equivalent probability value (p-value) of 0.222 and 0.683 for March and June-end respectively in the pre-IFRS period, and 2.188 and 5.680 J-B values with corresponding p-value of 0.335 and 0.058 for March and June-end in the post-IFRS period. The results as shown in Appendix VI also indicate J-B value of 4.273 and 5.532 with corresponding p-value of 0.118 and 0.063 for share prices at March and June-end respectively for the two periods combined (i.e. the entire 8-year period).

Generally, these results showed normal distribution ( $p > \alpha = 0.05$ ) of the transformed data through natural logarithm scale used during pre and post-IFRS period, and for the entire (pooled) eight-year period under investigation. Thus, the null hypothesis of the normality assumption cannot be rejected, indicating that the sample distribution is not significantly different from the population or the population that the sample represents is normally distributed. This further confirmed respective skewness and kurtosis values which could also be employed to examine normality of the sample (Alejo *et al.*, 2015;

Benoit, 2011) as well as mean and median results of the transformed data as presented in Appendix VI.

**Table 4.9: Panel Unit Root Test Results**

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Exogenous variables: Individual effects

Automatic selection of maximum lags

<b>Method – ADF - Fisher Chi-square</b>	<b>Statistic</b>	<b>Prob.**</b>
Pre-IFRS March	9.67980	0.0000
Pre-IFRS June	11.0677	0.0000
Post-IFRS March	189.216	0.0001
Post-IFRS June	150.004	0.0331
Overall March	227.440	0.0000
Overall June	256.600	0.0000

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Subsequently, Fisher – ADF test was performed to confirm the nature of the panel data unit root. The test results as shown in Table 4.9 was conducted at level and based on individual intercept included in the test equation option. The results generally indicate p-value below 0.05 level of significance. That is, p-value is less than 0.01 in the overall period,  $p < 0.05$  during post-IFRS period and  $p < 0.01$  during pre-IFRS period. This suggests that null hypothesis of non-stationary of the data cannot be accepted. Thus, the panel data is stationary – no unit root (i.e. variances and covariance do not vary systematically over time), suggesting that its resultant regression results cannot be regarded as spurious.

Further, possible multicollinearity among the variables was tested. The results of Pearson correlation coefficient among the variables as shown in Table 4.10 reveal correlation below 0.7 which implies absence of collinearity among the explanatory variables used. Sample correlation coefficient that is greater than  $\pm 0.7$  for two variables is a rule of thumb indicating probable problem of multicollinearity (Anderson *et al.*, 2008) which could impede reliability of individual parameter estimation. The result of

this test was further confirmed with Tolerance value of the independent variables which are generally around 1 (i.e. lnEPS – 0.80; lnBVPS – 0.81, and lnCFOPS – 0.96), as well as Variance Inflation Factor (VIF) of 1.25, 1.24 and 1.04 for the three predictors respectively which are far less than 5. These evidences suggest absence of statistically significant multicollinearity among independent variables which could have arbitrarily inflated coefficient of determination ( $R^2$ ).

**Table 4.10: Pearson Correlation Matrix of the Price Valuation Model**

<b>Variables</b>	<b>lnSPm</b>	<b>lnSPj</b>	<b>lnEPS</b>	<b>lnBVPS</b>	<b>lnCFOPS</b>	<b>lnFsize(TA)</b>
<b>lnSPm</b>	1					
<b>lnSPj</b>	0.67**	1				
<b>lnEPS</b>	0.31**	0.48**	1			
<b>lnBVPS</b>	0.34**	0.47**	0.50**	1		
<b>lnCFOPS</b>	0.14**	0.18**	0.18**	0.11**	1	
<b>lnFsize (TA)</b>	0.18**	0.23**	0.37**	0.46**	0.07	1

\*\* , indicates correlation is significant at 0.01 level (two-tailed).

Constant variance of the error term (i.e. homoscedasticity) is also expected. To ascertain this assumption, Breusch-Pagan-Godfrey heteroscedasticity test type was used to check for this residual diagnostic requirement. Outcome of the test as shown in Table 4.11 based on pooled unstructured/undated data loading option suggests presence of heteroscedasticity for the three periods separately (i.e. pre-, post-IFRS and the 8-year periods). Since all p-value are less than 0.05, null hypothesis of homoscedasticity cannot be accepted. Nevertheless, since panel least square regression method is adopted in this study, the regression estimation was subjected to White standard errors and covariance for the purpose of addressing possible heteroscedasticity and suspected autocorrelation in the panel data.

**Table 4.11: Extract of Breusch-Pagan-Godfrey Heteroscedasticity Test Output**

<b>Pre-IFRS March</b>	Obs*R-squared	54.08874	Prob. Chi-Square(3)	0.0000
<b>Post-IFRS March</b>	Obs*R-squared	10.21409	Prob. Chi-Square(3)	0.0168
<b>Pre-IFRS June</b>	Obs*R-squared	51.50757	Prob. Chi-Square(3)	0.0000
<b>Post-IFRS June</b>	Obs*R-squared	9.909496	Prob. Chi-Square(3)	0.0194
<b>Overall March</b>	Obs*R-squared	61.74380	Prob. Chi-Square(3)	0.0000
<b>Overall June</b>	Obs*R-squared	60.22561	Prob. Chi-Square(3)	0.0000

Durbin-Watson  $d$  statistic value based on each regression output was recognised to unearth whether error terms are correlated or otherwise (autocorrelation). As revealed by each regression results using the natural log scale and based on HAC or White standard errors as applicable, autocorrelation problem could not be identified as Durbin-Watson values are generally within the threshold of around 2. This suggests that the regression error terms are random or stochastic (i.e. two share values are uncorrelated) with an implication of no specification bias or error that could have led to inefficient regression estimation and standard error due to lack of possible minimum variance resulting in non-reliability of the  $t$  and F tests as well as  $R^2$ . Thus, the regression estimations and standard errors are efficient while  $R^2$ ,  $t$  and F tests could be regarded as reliable.

Since the study employed panel least square regression model analysis, it becomes necessary to address estimation and inference problems inherent in the use of panel data (Gujarati, 2004). Thus, to ascertain whether intercepts vary among entities across the years or not, Hausman Specification Test was conducted. Pre- and post-IFRS periods' Hausman Test results indicate Chi-Square (Chi-Sq.) value of 5.47 and 5.98 for March, and 10.72 and 25.12 for June with statistically insignificant p-value of 0.20, 0.14, and 0.10, 0.17 for the two periods respectively. According to the results of Hausman specification tests presented in Table 4.12, for the combined 8-year period, the test revealed a statistical significant p-value of 0.0000 and 0.0000 with Chi-Square value of 25.72 and 30.20 for March and June-end respectively.

These results suggest that intercepts of each cross-sectional unit are not correlated with the regressor in the pre- and post-IFRS models separately but are correlated in the overall period model. Thus, null hypothesis of random effect cannot be rejected for pre- and post-IFRS models but is rejected for the overall period model. The outcome of these specification effect tests informed the use of random effect model for pre- and post-IFRS periods' regression analyses but fixed effect model for the combined 8-year period panel least square regression models.

**Table 4.12: Output of Hausman Specification Effect Test for March and June-end**

Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
<b>Pre-IFRS Period March:</b>			
Cross-section random	5.471782	3	0.2003
<b>Post-IFRS Period March:</b>			
Cross-section random	5.984008	3	0.1426
<b>Pre-IFRS Period June:</b>			
Cross-section random	6.471782	3	0.1026
<b>Post-IFRS Period June:</b>			
Cross-section random	5.862691	3	0.1649
<b>Overall Period (March-end):</b>			
Cross-section random	25.714746	3	0.0000
<b>Overall Period (June-end)</b>			
Cross-section random	30.199052	3	0.0000

#### 4.4.2 Preliminary Price Valuation Model Regression Analysis

Accordingly, by using appropriate specification effect model of the natural logarithm (ln) panel regression, statistical findings of the preliminary price model analyses are indicated in Table 4.13 and as shown in the model output presented in equation 4.1 to 4.3.

**Table 4.13: Pre-, Post-IFRS and Combined Preliminary Price Valuation Models Inferential Statistics**

Models	$\ln SP_{mit} = a_0 + a_1 \ln EPS_{it} + a_2 \ln BVPS_{it} + a_3 \ln CFOPS_{it} + \epsilon_{it}$		$\ln SP_{jit} = b_0 + b_1 \ln EPS_{it} + b_2 \ln BVPS_{it} + b_3 \ln CFOPS_{it} + \epsilon_{it}$		Combined Period Model (i.e. 2008 – 2015)	
	Pre-IFRS March	Post-IFRS March	Pre-IFRS June	Post-IFRS June	Combined March	Combined June
<b>Intercept</b>	3.36201** (3.25216)	-1.061550 (-0.815128)	3.13316** (3.010387)	0.254738 (0.172598)	4.07094** (7.916389)	4.21802** (9.761320)
<b>lnEPS</b>	0.187732* (2.419577)	0.760211** (3.111713)	0.26276** (2.842597)	0.677258** (3.408104)	0.25676** (2.680961)	0.29464** (2.949884)
<b>lnBVPS</b>	0.252475* (2.039384)	0.372950** (3.053095)	0.238074* (1.969201)	0.268575 (1.730347)	0.113484* (2.231360)	0.073923 (1.319186)
<b>lnCFOPS</b>	0.026425 (0.388403)	0.052246 (1.523536)	0.006906 (0.101132)	0.033064 (0.931874)	-0.026038 (-0.88090)	-0.042202* (-2.50122)
<b>R<sup>2</sup></b>	0.268186	0.421013	0.280502	0.392527	0.911846	0.921065
<b>Adj. R<sup>2</sup></b>	0.257598	0.412275	0.270054	0.383351	0.898793	0.909377
<b>F-stat.</b>	6.439489	26.43627	7.704444	20.98191	69.85777	78.80545
<b>P-value</b>	0.000318	0.000000	0.000059	0.000000	0.000000	0.000000
<b>D-Watson</b>	1.845648	1.955660	2.017201	2.263053	2.046062	1.608346

\*, \*\* denote significance at 0.05, 0.01 levels respectively (2-tailed), *t*-statistic in parenthesis. *t*-statistic results are based on White cross-section standard errors and covariance estimation.  $\ln SP_{mit}$  indicates natural log of share price of firm *i* at time *t* (March-end after the financial year-end);  $\ln SP_{jit}$  implies natural log of share price of firm *i* at time *t* (June-end after the financial year-end);  $\ln EPS_{it}$  indicates natural log of earnings per share of firm *i* at *t*;  $\ln BVPS_{it}$  denotes natural log of book value of equity of firm *i* at time *t*;  $\ln CFOPS_{it}$  denotes natural log of cash flows from operation of firm *i* at time *t*. Pre-IFRS and Post-IFRS periods stand for 2008-2011 and 2012-2015 respectively with *N* equals 276 observations in each period leading to 552 observations for combined model.

**March-end Models:**

**Pre-IFRS:**  $\ln SP_{mit} = 3.362 + 0.188 \ln EPS + 0.253 \ln BVPS + 0.026 \ln CFOPS + \epsilon_{it}$  (4.1a)

**Post-IFRS:**  $\ln SP_{mit} = -1.062 + 0.760 \ln EPS + 0.373 \ln BVPS + 0.052 \ln CFOPS + \epsilon_{it}$  (4.1b)

**June-end Models:**

**Pre-IFRS:**  $\ln SP_{jit} = 3.133 + 0.263 \ln EPS + 0.238 \ln BVPS + 0.007 \ln CFOPS + \epsilon_{it}$  (4.2a)

**Post-IFRS:**  $\ln SP_{jit} = 0.255 + 0.677 \ln EPS + 0.269 \ln BVPS + 0.033 \ln CFOPS + \epsilon_{it}$  (4.2b)

**2008 - 2015 Overall Models:**

$$\textit{Pre-IFRS: } \ln SP_{mit} = 4.071 + 0.257 \ln EPS + 0.114 \ln BVPS - 0.026 \ln CFOPS + \varepsilon_{it} \quad (4.3a)$$

$$\textit{Post-IFRS: } \ln SP_{jit} = 4.218 + 0.295 \ln EPS + 0.074 \ln BVPS - 0.042 \ln CFOPS + \varepsilon_{it} \quad (4.3b)$$

The adjusted coefficient of determination ( $R^2$ ) for pre- and post-IFRS periods of 0.258 and 0.412 for March-end models, and 0.270 and 0.383 for June-end models were obtained while the 8-year period revealed 0.899 and 0.909 adjusted  $R^2$  for March and June-end respectively. These results indicate significant variation in the explanatory power of the three accounting information included in the models for pre-, post-IFRS and the combined eight-year period when they were regressed on share prices at March and June-end. That is, March-end result revealed that about 26% of change in market value of the Nigerian listed firms is explained by accounting information included in the model in the pre-IFRS period which increased to 41% in the post-IFRS period. The models are statistically significant at 0.01 level (F-statistics are above critical F value of 4.61), suggesting how well the three accounting information fit as independent variables in the panel regression model of stock market value (share price) as the dependent variable. Nevertheless the results suggest that other information such as national economic policies, political structure, and corporate governance mechanism (e.g. ownership structure and quality, board oversight function) etc account for unexplained variability in the market value.

The results also revealed that the three accounting information used in the post-IFRS model jointly explained noticeable higher variability in equity market value of the Nigerian listed firms after IFRS adoption. It also suggests that IFRS-based accounting data possess increased value relevance attribute, indicating that accounting information issued under the IFRS are of stock market-based quality than the one issued under Nigerian SAS. Umoren and Enang (2015) observe similar increased explanatory power of accounting data of 12 Nigerian listed banks employed from 69% to 78% after IFRS adoption, and from 11% (pre-IFRS) to 23% (post-IFRS) as reported by Bogstrand and Larsson (2012) using 431 listed companies at NASDAQ, OMX Nordic and Oslo stock



exchange. On the contrary, improved explanatory power of the accounting data recorded in the post-IFRS period of this study shows converse of decline explanatory power observed by Khanagha (2011) from 90% (pre-IFRS) to 51% in the post-IFRS period using 17 listed companies at the Abu Dhabi stock market.

Furthermore, observed 38.3% explanatory power of the independent variables for post-IFRS June model indicates that value relevance of IFRS-based accounting information is higher in March (41%) than in June. Also, the study revealed that these variables jointly explained slightly higher variability in the equity share value during pre-IFRS June (27%) than pre-IFRS March (25.8%) but was reversely higher for post-IFRS March (41.2%) than post-IFRS June (38.3%). These results also suggest that accounting information got to the stock market earlier and became more value relevant after IFRS was adopted than it was in the pre-IFRS period.

This observed change in the explanatory power of the accounting data from June to March could be traced to NSE directive for listed companies in Nigeria to relay their audited financial reports to the market on or before third month (in this case March 31) after the financial year-end. This regulatory directive was more explicit than provisions of section 354 of the Nigerian CAMA, 2004 (as amended) on the period within which audited annual financial reports should be issued/disclosed for public consumption. Nevertheless, the result is a pointer to improved efficiency as regards prompt informativeness in the stock market with respect to audited annual accounting information issued to the stock market. Although all the models are statistically significant ( $p < 0.05$ ; alpha value ( $\alpha$ ) = 0.05), inference from this preliminary relative measure suggests improvement in the value relevance of accounting information prepared under IFRS-based accounting standards around March over the one issued under the Nigerian local GAAPs (i.e. SAS and CAMA among others).

On the other hand, accounting information is said to be value relevant when its estimated coefficient in the regression model is significantly different from zero (Holthausen &

Watts, 2001). To test statistical significance of relationship between the independent variables (EPS, BVPS, and CFOPS) and dependent variable (SP<sub>m</sub> and SP<sub>j</sub>) in each model, significance of all the regression coefficients ( $\beta$ ) in the models were subjected to t-test to observe whether the coefficients are significantly different from zero or not. The null hypothesis states that  $\beta = 0$ , meaning that in the case of this study, there is no significant effect of IFRS-based accounting information on value relevance in the Nigerian stock market as the slope  $\beta = 0$  (that is to say there is no relationship between the variables).

The results in Table 4.13 showed that slope coefficient of lnEPS is significantly different from zero (0) since the p-values are less than 0.05 level of significance in the pre- and post-IFRS March and June as well as combined model for March and June. Whereas, coefficient of lnBVPS is only significant in pre- and post-IFRS March, pre-IFRS June and combined period model in March ( $p < 0.05$ ). These parameters generally indicate positive linear direction of association with share values in the period before IFRS adoption, post-IFRS and combined periods.

Also, coefficients of these accounting information generally denote increased sensitivity in the stock market value during post-IFRS period over pre-IFRS period. This further suggests that accounting data prepared and issued under IFRS demonstrate higher information content than the SAS-based accounting data. More importantly, the equity market values are more sensitive to change in the accounting data after IFRS adoption than pre-IFRS period but more around March than in June. Coefficient of earnings per share suggests that the highest change in the Nigerian equity stock prices is caused by income statement accounting information issued under IFRS both in March (0.760) and June (0.677) followed by financial position statement accounting information. Nonetheless, regression coefficient of lnCFOPS is only statistically significant in the combined period model in June ( $p < 0.05$ ) but with inverse relationship with the stock market values (-0.042). This suggests that cash flows information does not improve the

regression models in the pre- and post-IFRS periods as its results indicate positive but statistical insignificant effect on share values. Also, the variable indicates negative and insignificant value relevance in the combined period regression in March (t-stat. = -0.88090) while its negative but statistical significant influence declined in the combined model for June.

These results indicate that relatively, investors value income statement, financial position statement and cash flows statement bottom-line items prepared under IFRS in determining share value over the one prepared under local Nigerian SAS at the NSE but more for income statement accounting information in March and June-end than for book value and cash flows information. In addition, both earnings and book value accounting information fit the models well while cash flows information does not improve the model in the pre- and post-IFRS periods. The implication of these results is that IFRS-based income statement and statement of financial position accounting data positively and significantly influence stock market value and are more value relevant to the participants at the Nigerian stock market after IFRS adoption. Also, the results also suggest that IFRS-based accounting principles and methods have improved the accounting quality relatively in the stock market.

The above findings concur with the findings by Okafor *et al.* (2016) who observe higher value relevance of book value and earnings of companies listed at the Toronto stock exchange market prepared under IFRS over accounting information issued under the local Canadian GAAP. Higher explanatory power of earnings and book value in the post-IFRS period over pre-IFRS period documented in this study is also in consonance with that of Umoren and Enang (2015) who report relative higher value relevance of earnings and book value of twelve (12) Nigerian banks under IFRS over Nigerian SAS-based accounting information. However, increased value relevance of accounting data documented in this study using their explanatory power is at variance with the findings of Clarkson *et al.* (2011) and Ahmed *et al.* (2013) in view of their studies.

Generally, the overall model for March and June-end indicate adjusted  $R^2$  of approximately 90% and 91% respectively. Data employed demonstrate significant fitness for each of the two models with the p-value less than 0.01 (F-statistic outside acceptance region). Also, value relevance of earnings is statistically significant both in March and June ( $p < 0.01$ ) but only in March for book value ( $p < 0.05$ ). Whereas, value relevance of cash flows is negative and statistically insignificant in March (t-stat. = -0.88090) but significantly declined in June (t-stat. = -2.50122). This connotes that investors at the Nigerian stock market consult and use income statement, financial position statement and cash flows statement altogether to value share price in the market but declined for cash flows.

This finding is not in isolation as it corroborates submission of Ragab and Omran (2008) from related emerging market from Egypt noting value relevance of book value and earnings, but at variance with Omokhudu and Ibadin (2015) who establish significant value relevance of earnings and cash flows of 47 non-financial firms in the Nigerian stock market. Additionally, the results obtained in the overall model of this preliminary investigation as regard insignificant difference in the adjusted  $R^2$  between March and June models is not in close tandem with 58% in March and 51% in June reported by Omokhudu and Ibadin (2015) using 47 non-financial firms quoted at the NSE between 1995 and 2013. Nevertheless, higher explanatory power of the three variables revealed in this study over Omokhudu and Ibadin (2015) could be as a result of improved reliance on IFRS-based methods by the market participants at the NSE and/or combined financial and non-financial industries sample employed in this study. Although results of the combined period model is outside the scope of this study, it is an additional confirmation of the fact that accounting information are capable of explaining variability in value relevance from the NSE context. Thus, theoretical implication is that accounting information is capable of sending signals to market participants at the NSE and could address asymmetric information when improved quality and investors' protection driven accounting principles (i.e. IFRS) are adopted. This also has latent to support information

efficiency at the stock market resulting in stock market value fully reflecting available information as advanced by Fama (1970) and Grossman (1976) which is consequently more value relevant.

#### **4.4.3 Cross-sectional Trend Regression Analysis**

Yearly cross-sectional multiple and simple regression estimations showing variability in share value explained by the accounting information are showcased in Table 4.14.

The results indicate that the accounting data jointly explained yearly increase in the share values' variability from approximately 40% in 2008 to 49% in 2010 which slightly declined to 46.7% in 2011. The trend significantly improved to 55.6% in 2012 which was the first year of IFRS adoption in the stock market followed by 63.4% in 2013. However, the situation marginally declined in 2014 to about 60% with improved variability of 70% in 2015. The trend analyses demonstrate general higher explanatory power of the IFRS-based accounting data, an indication of its incremental information content attribute over SAS-based accounting information. The individual accounting information simple regression model revealed that none of the accounting information individually explained consistent yearly increase in variability of the share value as they crisscrossed all through the eight-year period but became fairly stable and higher after 2012 except cash flows information. Nevertheless, book value appeared to be more stable than the other two accounting information while explanatory power of cash flows alone noticeably levitates below the other data as earnings and book value depict higher variability and improved volatility or change in the market value during post-IFRS period over pre-IFRS regime. That is, explanatory power of the accounting information and rate of change in the stock market value are higher in the post-IFRS period over and above SAS-based accounting period.

**Table 4.14: Yearly Multiple and Simple Regression Analyses of the Accounting Information (March Models only)**

**Model A<sub>1</sub>:**  $\ln SP_{mi} = \beta_i + \beta_1 \ln EPS_i + \beta_2 \ln BVPS_i + \beta_3 \ln CFOPS_i + \varepsilon_i$   
**Model B<sub>1</sub>:**  $\ln SP_{mi} = a_i + a_1 \ln EPS_i + \varepsilon_i$   
**Model C<sub>1</sub>:**  $\ln SP_{mi} = b_i + b_1 \ln BVPS_i + \varepsilon_i$   
**Model D<sub>1</sub>:**  $\ln SP_{mi} = c_i + c_1 \ln CFOPS_i + \varepsilon_i$

	Model A <sub>1</sub>			Adj. R <sup>2</sup>	F-Stat	Model B <sub>1</sub>		Model C <sub>1</sub>		Model D <sub>1</sub>	
	$\beta_1$	$\beta_2$	$\beta_3$			a <sub>1</sub>	Adj. R <sup>2</sup>	b <sub>1</sub>	Adj. R <sup>2</sup>	c <sub>1</sub>	Adj. R <sup>2</sup>
<b>2008</b>	1.1653 (1.728)	0.3352 (1.025)	0.2983 (1.771)	0.395	15.35	1.771** (2.963)	0.38	1.10** (2.826)	0.28	0.664** (3.0981)	0.17
<b>2009</b>	0.4677 (1.907)	0.857** (3.2853)	0.23286 (1.3126)	0.406	16.05	1.382** (3.3072)	0.22	1.0789** (4.155)	0.37	0.5919* (2.4365)	0.12
<b>2010</b>	0.244* (2.498)	0.831** (3.6318)	0.667** (3.6509)	0.494	22.44	0.49145 (0.9346)	0.06	1.07** (4.577)	0.36	0.942** (4.5888)	0.26
<b>2011</b>	0.840* (2.279)	0.23912 (0.7233)	0.588** (2.8118)	0.467	20.29	1.851** (4.8344)	0.38	0.713* (2.046)	0.24	0.974** (4.4715)	0.37
<b>2012</b>	1.45** (2.785)	0.7874* (2.6205)	0.11451 (1.2038)	0.556	28.57	2.473** (6.6276)	0.47	1.36** (6.428)	0.49	0.19286 (0.7704)	0.01
<b>2013</b>	1.73** (3.975)	0.748** (2.739)	0.1414 (0.8947)	0.634	39.07	2.812** (7.5314)	0.58	1.579** (9.054)	0.52	0.888** (3.1921)	0.26
<b>2014</b>	1.276* (1.969)	1.053** (3.289)	-0.1053 (-1.8504)	0.596	33.45	2.474** (5.5088)	0.49	1.59** (12.74)	0.55	0.29049 (1.1613)	0.03
<b>2015</b>	1.40** (3.284)	0.768** (3.484)	0.405** (2.8946)	0.700	52.27	2.700** (9.5631)	0.59	1.546** (13.94)	0.57	0.951** (3.1712)	0.26

\*, \*\* indicate significance at 0.05 and 0.01 level respectively (2-tailed), t-stat in parenthesis. The regression estimations are based on Newey-West HAC standard errors and covariance.

Similar result was observed for June yearly cross-sectional simple and multiple regression models as presented in Appendix VII (Panel A). In each case, the models are statistically significant establishing fitness of the models. More importantly, the trend results suggest improved value relevance of the IFRS-based accounting information of the Nigerian listed firms after IFRS adoption but not clearly evident for cash flows statement accounting information.

As to yearly cross-sectional regression result of value relevance of extent of compliance with IFRS disclosure demands by the sampled Nigerian listed firms, the regression

coefficient indicate positive association with stock market share value as presented in Appendix XI. Variability in market value accounted for by the variable revealed yearly decline from approximately 16 percent in 2012 to 13 percent in 2015. Change in market value as a result of any improvement in the level of compliance with IFRS by the firms indicate slight yearly increase from 6.242 (2012) to 7.839 (2015). The trend suggests that as Nigerian listed firms improves on compliance with IFRS disclosure requirements, the rate at which it improves market value increases, whereas its explanatory power decreases. Thus, results of this trend analysis implies that NSE market participants do not accrue improving cognisance to how well Nigerian equity listed firms respond to IFRS mandatory disclosure items in their quest for information that could influence stock market value.

Besides, in order to establish specific effect of each accounting information captured in the general model by way of addressing each specific objective, both relative and incremental value relevance metrics analyses were performed. As it has been expressed in chapter three, relative value relevance metric measures explanatory power of each (univariate) accounting information on share prices for pre- and post-IFRS period separately, while incremental metric measures whether each accounting information in the post-IFRS period is incrementally more or less value relevant. Results of these analyses are reported and discussed in the ensuing subsections.

#### **4.4.4 Effect of Income Statement Information under IFRS on Value Relevance**

In line with specific objective one of this study, model for the first hypothesis was tested using F-test while statistical significance of each coefficient of the model's parameters were checked using t-test statistics.

##### **Hypothesis 1:**

H<sub>0</sub>: There is no significant effect of IFRS adoption on value relevance of income statement accounting information of the Nigerian listed firms.

**Table 4.15A: Inferential Statistic of Value Relevance of Earnings under IFRS (March-end)**

<b>Model 4a(i): <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \text{PostIFRS}_{it} + \beta_3 \ln EPS * \text{PostIFRS}_{it} + \epsilon_{it}</math></b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	4.753881**	0.789247	6.023312	0.0000
<b>lnEPS</b>	0.250167**	0.088641	2.822240	0.0049
<b>PostIFRS</b>	3.402685**	1.312079	2.593353	0.0098
<b>lnEPS*PostIFRS</b>	0.566384**	0.215396	2.629497	0.0088
<b>R<sup>2</sup></b>	0.331925			
<b>Adj. R<sup>2</sup></b>	0.327030			
<b>F-stat.</b>	26.95002			
<b>P-value</b>	0.000000			
<b>Durbin-Watson</b>	2.04775			

\*\* indicate significance at 0.01 level (two-tailed). The regression estimation was based on White cross-section standard error and robust coefficient covariance method.

**Table 4.15B: Inferential Statistic of Value Relevance of Earnings under IFRS at June-end**

<b>Model 4a(ii): <math>\ln SP_{jit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \text{PostIFRS}_{it} + \beta_3 \ln EPS * \text{PostIFRS}_{it} + \epsilon_{it}</math></b>				
	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	4.515370**	0.749376	6.025507	0.0000
<b>lnEPS</b>	0.292389**	0.100547	2.907987	0.0038
<b>Post-IFRS</b>	2.792009*	1.252277	2.229545	0.0262
<b>lnEPS*Post-IFRS</b>	0.467364*	0.207139	2.256283	0.0245
<b>R<sup>2</sup></b>	0.322842			
<b>Adj. R<sup>2</sup></b>	0.317896			
<b>F-stat.</b>	24.83473			
<b>P-value</b>	0.000000			
<b>Durbin-Watson</b>	1.61417			

\*, \*\* indicate significance at 0.05, 0.01 levels respectively (two-tailed). The regression estimation was based on White cross-section standard error and robust coefficient covariance method. As shown in Table 4.15A and B,  $\ln SP_{mit}$  is the natural log of share price of company  $i$  at time  $t$  (March-end after the financial year-end);  $\ln SP_{jit}$  is the natural log of share price of company  $i$  at time  $t$  (June-end after the financial year-end).



Table 4.15A and B present results of incremental value relevance results of income statement accounting data (represented with earnings per share) using panel regression model in equation 4.4a<sub>1</sub> and 4.4a<sub>2</sub> for March and June-end respectively.

The first statistical hypothesis of this study asserts that income statement accounting information under IFRS has no significant effect on value relevance in the Nigerian stock market. Earlier preliminary findings in this study already indicated that income statement information as represented by earnings per share significantly improved during the IFRS period by using its coefficient in the multiple regression analysis which increased from 0.1877 (pre-IFRS) to 0.7602 (post-IFRS) in March with similar result in June (Table 4.13). However, to establish whether this accounting information is incrementally more or less value relevant after IFRS adoption, natural logarithm of share price is regressed on lnEPS (representing income statement data), a dummy variable that equals 1 if IFRS period otherwise zero, and their cross product or interaction. Thus, Table 4.15A and 4.15B present results of incremental metric of the effect of income statement accounting information under IFRS on value relevance by using random effect model of panel least square regression. Its model outputs are as shown in equation 4.4a<sub>1</sub> and 4.4a<sub>2</sub> for share price in March and June-end in that order.

$$\ln SP_{mit} = 4.754 + 0.250 \ln EPS + 3.403 \text{PostIFRS} + 0.566 \ln EPS * \text{PostIFRS} + \epsilon_{it} \quad (4.4a_1)$$

$$\ln SP_{jit} = 4.515 + 0.292 \ln EPS + 2.792 \text{PostIFRS} + 0.467 \ln EPS * \text{PostIFRS} + \epsilon_{it} \quad (4.4a_2)$$

The results indicate that each of the models fits the data given that adjusted R-square value of 0.327030 was obtained for March-end and 0.317896 for June-end. This suggests that approximately 33 and 32 percent of variation in share price in March and June-end correspondingly are explained by combined influence of lnEPS, IFRS period dummy, and interaction between the two variables which are statistically significant ( $p < 0.01$ ) for the two models (F-Stat. equals 26.95 and 24.84 for March and June-end respectively). The F-ratio and p-value further confirmed suitability of the panel least

square regression model. The implication is that earnings per share, IFRS period and their interaction as independent variables fit well in the panel regression model of share price as dependent variable. However, marginal reduction in the explanatory power of the variables at June-end using adjusted  $R^2$  is an indication that incremental value relevance of earnings per share after IFRS was adopted is better explained around March-end than in June-end. This suggests that income statement accounting information gets to the stock market more around March-end and well used by the market participants to make economic decision that influences share prices at the Nigerian stock market. Nevertheless, low explanatory power of the variables obtained in this study suggests that there are other important variables beyond the accounting information included in the model that are capable of driving changes in the stock market share prices. Also, this might have been as a result of the random effect regression model employed which gives cognisance to individual firms' heterogeneity effect in the regression analysis.

To test the significance of the relationship between earnings per share (EPS) and share price at March and June-end, the regression coefficients ( $\beta$ ) of the models were subjected to t-test to validate the null hypothesis that the coefficients are zero or otherwise. The null hypothesis state that  $\beta = 0$ , suggesting that there is no significant effect of income statement accounting information (EPS) under IFRS on value relevance in the Nigerian Stock Market as the slope of  $\beta = 0$  (that is, there is no relationship between the variables). Therefore, based on the incremental value relevance measure results presented in Table 4.15A and B, the coefficient of  $\ln\text{EPS}$  in March (0.250) and June-end (0.292) are positive and significantly different from zero (0) at 0.01 level (t-statistics = 2.822 and 2.908 respectively). Also, positive coefficient of PostIFRS dummy variable indicates reduced positive value between March (3.403) and June-end (2.792) models but are statistically significant with p-value equals 0.0098 in March and 0.0262 for June-end model. Coefficient of their interactive variable ( $\ln\text{EPS}*\text{PostIFRS}$ ) reveals reduced value from 0.566 in March to 0.467 at June-end. The standard errors of the

incremental valuation estimators (lnEPS and lnEPS\*PostIFRS) are 0.089 and 0.215 for March model and 0.101 and 0.207 for June model respectively. They are based on White robust standard error estimation for the purpose of addressing heteroscedasticity. Thus, it unveils sampling variability that could enhance precision or reliability about the estimators.

The slope coefficient of the interactive variable in each model is also used to buttress incremental value relevance findings unveiled by the adjusted  $R^2$  of the regression model. This is because the variable accounts for IFRS-based income statement accounting information in the model. Its coefficient revealed positive direction of association with share price which is statistically significant at 0.01 level ( $p = 0.0088$ ; t-statistic at rejection region) in March and at 0.05 level ( $p = 0.0245$ ; t-stat. = 2.256283) in June and are both higher than the coefficient of lnEPS which suggests improved incremental value relevance after IFRS adoption. The implication of these results is that there is significant fit in the models since the null hypothesis is rejected in each of these cases and the models are statistically significant ( $p < 0.01$ ). The results of the estimates also imply that income statement accounting data issued based on IFRS accounting principles is incrementally more value relevant than Nigerian SAS-based earnings.

Likewise, statistical significance and increment in the positive coefficient of the univariate model that showcases relative value relevance metric of the association between earnings and stock market value of the Nigerian listed firms pre- and post-IFRS as presented in Table 4.16 support incremental value relevance findings. Improvement in the explanatory power of the relative value relevance measure between pre-IFRS period (i.e. 11% in March and 17% in June) and post-IFRS period (i.e. 26% in March and 24% in June) also concurs with incremental value relevance metric regression results. This implies further that income statement accounting information under IFRS is relatively and incrementally more informative and value relevant than the one issued under Nigerian local standards.

**Table 4.16: Relative Value Relevance for Pre- and Post-IFRS Univariate Regression Models**

**Model 4b(i):**  $\ln SP_{mit} = a_{it} + a_1 \ln EPS_{it} + \varepsilon_{it}$   
**Model 4b(ii):**  $\ln SP_{jit} = b_{it} + b_1 \ln EPS_{it} + \varepsilon_{it}$

	Variable	Coefficient	Std. Error	t-Statistic	P-value	R <sup>2</sup>	Adj. R <sup>2</sup>	F-Stat.
<b>Pre-IFRS</b>	Intercept	5.151567	0.910106	5.660406	0.0000			
<b>March</b>	lnEPS	0.180947	0.100280	1.804426	0.0723	0.1183	0.1127	5.801*
<b>Post-IFRS</b>	Intercept	4.465031	1.093337	4.083855	0.0001			
<b>March</b>	lnEPS	0.946848	0.184597	5.129271	0.0000	0.2657	0.2612	21.77**
<b>Pre-IFRS</b>	Intercept	4.752664	0.935445	5.080646	0.0000			
<b>June</b>	lnEPS	0.251087	0.151674	1.655436	0.0990	0.1701	0.1681	10.99**
<b>Post-IFRS</b>	Intercept	4.761360	0.945134	5.037761	0.0000			
<b>June</b>	lnEPS	0.801328	0.177235	4.521274	0.0000	0.2489	0.2433	19.66**

\*, \*\* indicate significance at 0.05 and 0.01 level respectively.  $a_1$  and  $b_1$  are the beta coefficient of variable in each model. Number of observation equals 276 for each period (Pre- and Post-IFRS). Models 4b(i) and 4b(ii) stand for March and June univariate regression respectively in the pre and post-IFRS periods. The regression estimation are based on White cross-section standard errors and covariance robust coefficient estimation

The results also suggest that IFRS-based accounting methods engender improved accounting quality with respect to income statement accounting data over Nigerian SAS-based income statement information. This did not only confirm value relevance of IFRS-based income statement accounting information in driving stock market value in line with EMH (Fama, 1970; Grossman, 1976) and signalling theory but also established that the accounting information contains higher market-based accounting quality as described by Alashi and Dumlu (2015) than the erstwhile local standard.

The above finding is in agreement with the finding by Jermakowicz *et al.* (2007) who report increased value relevance of income statement accounting data (i.e. earnings) using the model's adjusted R<sup>2</sup> and coefficient of the variable based on data drawn from DAX-30 companies from German premium stock market. The finding is also in tandem with slight improvement in the explanatory power of the variable and its coefficient obtained by Kwon *et al.* (2014) from Korea stating that adjusted operating income for IFRS has incremental and relative information content over Korean GAAP-based operating income. Relating the findings to previous investigation conducted by Umoren

and Enang (2015) from the Nigerian stock market using 12 listed banks, this study observes higher coefficient but lower explanatory power of the accounting information under IFRS than that of Umoren and Enang (2015). This disparity may not be divorced from different target population, sample size and form of regression model adopted. On the contrary, findings of this study contradict empirical findings of Tsalavoutas *et al.* (2012) who note no significant change in the explanatory power of the accounting data as well as decrease but positive and significant coefficient of net income under IFRS regime from Greece stock market.

With respect to this finding, it can therefore be submitted that there is statistically significant influence of income statement data (EPS) reported under IFRS on value relevance of accounting information in the Nigerian stock market as at the end of both March and June. Therefore, the study fails to accept the null hypothesis that there is no significant effect of IFRS adoption on value relevance of income statement accounting information of the Nigerian listed firms. That is, participants in the Nigerian stock market value income statement accounting information under IFRS more in determining share prices of the Nigerian listed companies. This finding also concurs with finding by Alashi and Dumlu (2015) who establish that value relevance of earnings increased after the adoption of IFRS at Borsa Istanbul using balanced pooled data of 100 listed manufacturing firms but in contradiction with no observable improvement in the value relevance of earnings obtained by Karğın (2013) from Turkey stock market.

As regards the month in which the accounting data are more value relevant, although the three explanatory variables included in model 4a(i) and 4a(ii) are positive and statistically significant in March and June-end, the coefficient of interactive variable diminish in June. Variability in the market value for the two months as shown in Table 4.15A and B indicates marginal higher value in March (33%) than in June (32%) which is supported by the higher 26% in post-IFRS March over 24% in post-IFRS June as revealed through the relative measure (Table 4.16). These results suggest that a

proportionate number of firms responded well to NSE directive concerning prompt release of the firms' audited annual reports to the stock market latest third months after the financial year-end. This underscores less impact of the interactive variable and explanatory power of the accounting parameters that could be felt on share price in June. Using relative value relevance measure to evaluate change in the coefficient of the variable between the two months, finding from this study is in tandem with that of Omokhudu and Ibadin (2015) based on random effect model results reported in the study. This is a pointer that income statement accounting data of listed firms from all sectors (not just non-financial firms alone) is more value relevant to stock market participants around March-end than June-end from the Nigerian stock market context.

#### **4.4.5 Effect of Financial Position Statement Accounting Information under IFRS on Value Relevance**

Based on specific objective two, hypothesis two was framed which is presented and analysed as follow.

##### **Hypothesis 2:**

H<sub>0</sub>: There is no significant effect of IFRS adoption on value relevance of statement of financial position accounting information of the Nigerian listed firms

In an attempt to statistically unearth possible influence of IFRS adoption on value relevance of financial position statement accounting information of Nigerian listed firms as hypothesized through null hypothesis two, natural logarithm of book value of equity per share was obtained to represent financial position statement accounting data. Both relative and incremental association of this variable with stock market values were examined. Relative metric compares explanatory power and slope coefficient of the variable when share price in March and June-end during pre- and post-IFRS are regressed on the accounting information while incremental metric relies on significance and direction of association of the interactive variable in its model.

**Table 4.17A: Inferential Statistics of Value Relevance of Book Value under IFRS at March-end**

<b>Model 5a(i): <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln BVPS_{it} + \beta_2 PostIFRS_{it} + \beta_3 \ln BVPS * PostIFRS_{it} + \epsilon_{it}</math></b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	4.314039**	0.507736	8.496617	0.0000
<b>lnBVPS</b>	0.295023**	0.072590	4.064233	0.0001
<b>PostIFRS</b>	-1.215688	0.836630	-1.453076	0.1468
<b>lnBVPS*PostIFRS</b>	0.161690**	0.042819	3.776127	0.0002
<b>R<sup>2</sup></b>	0.286146			
<b>Adj. R<sup>2</sup></b>	0.280993			
<b>F-stat.</b>	16.71666			
<b>P-value</b>	0.000000			
<b>Durbin-Watson</b>	2.0679			

**Table 4.17B: Inferential Statistics of Value Relevance of Book Value under IFRS at June-end**

<b>Model 5a(ii): <math>\ln SP_{jit} = \beta_{it} + \beta_1 \ln BVPS_{it} + \beta_2 PostIFRS_{it} + \beta_3 \ln BVPS * PostIFRS_{it} + \epsilon_{it}</math></b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	4.571251**	0.575743	7.939745	0.0000
<b>lnBVPS</b>	0.255237**	0.063211	4.037845	0.0001
<b>PostIFRS</b>	-0.962916	0.889332	-1.082794	0.2794
<b>lnBVPS*PostIFRS</b>	0.130412**	0.048854	2.669423	0.0078
<b>R<sup>2</sup></b>	0.263494			
<b>Adj. R<sup>2</sup></b>	0.258213			
<b>F-stat.</b>	12.02296			
<b>P-value</b>	0.000000			
<b>Durbin-Watson</b>	1.6364			

Table 4.17A and B present results of incremental value relevance analyses for March and June-end in that order.

To understand whether book value is incrementally more or less value relevant, a dummy variable that equal 1 if IFRS period, zero otherwise was incorporated along with the natural log of book value (lnBVPS) and their interaction in the incremental association regression model. Hence, natural logarithm of the share price is regressed on

the three variables for March and June-end separately. Based on Hausman Test, random effect model of panel regression was used and its results are presented on Table 4.17A and B. The models' outputs are also indicated in equation 4.5a<sub>1</sub> and 4.5a<sub>2</sub> for share price in March and June-end respectively.

$$\ln SP_{mit} = 4.314 + 0.295 \ln BVPS - 1.215 \text{PostIFRS} + 0.162 \ln BVPS * \text{PostIFRS} + \varepsilon_{it} \quad (4.5a_1)$$

$$\ln SP_{jit} = 4.571 + 0.255 \ln BVPS - 0.963 \text{PostIFRS} + 0.130 \ln BVPS * \text{PostIFRS} + \varepsilon_{it} \quad (4.5a_2)$$

Drawing from the results of incremental value relevance regression models in equation 4.5a<sub>1</sub> and 4.5a<sub>2</sub> and as detailed in Table 4.17A and B, adjusted coefficient of determination indicates that about 28% and 26% of change in share prices in March and June-end respectively are explained by variables employed in each model. The models are statistically significant. That is, p-value equals 0.0000 which is less than alpha value ( $\alpha$ ) at 0.01 level of significance (F-Stat = 16.717 in March and 12.023 in June). The p-value and F-ratio results confirmed goodness of fit of the panel regression models. These results suggest that variability in the market value of the Nigerian listed firms is more explained in March than in June through the variables used in the models. The two models demonstrate statistical significance of incremental value relevance of the accounting data using the explanatory power of each model's variables. Nevertheless, relative low explanatory power of the examined estimators may not be divorced from the choice of the regression methodology employed as well as other non-accounting principles based variables such as macro-economic, political and other corporate governance attributes which are outside the scope of this study.

Regarding statistical significance of each coefficient in the models, coefficients of book value ( $\ln BVPS$ ) for both March (0.295) and June (0.255) are positive and significant ( $p < 0.01$ ) as t-statistics are outside acceptance region. This implies that for every one kobo change in book value of equity of the firms listed at the NSE, the market value derives positive response of about 0.295 kobo (in March) and 0.255 kobo (in June) which are



significantly different from zero. Also, there is a notable marginal reduction in the sensitivity of market value that could be driven by the accounting data in June than in March. Furthermore, slope coefficient of the dummy variable representing IFRS period (i.e. PostIFRS) revealed inverse relationship with market value ( $-1.215$  in March and  $-0.963$  in June) which are statistically insignificant (t-stat. =  $1.453076$  and  $1.082744$  in that order). This indicates that negative effect of the variable does not improve the model. In addition, coefficient of the interactive variable (i.e.  $\ln BVPS * \text{PostIFRS}$ ) in March ( $0.162$ ) and in June ( $0.130$ ) are positive and significant ( $p < 0.01$ ) for the two months but are generally less than coefficient of  $\ln BVPS$ . This suggests decline positive association of the post-IFRS book value accounting data with market value. The standard errors of the accounting information are based on White robust standard error ( $\ln BVPS - 0.0726$ ;  $\ln BVPS * \text{PostIFRS} - 0.0428$ ), suggesting possible insignificant variability of the estimators if other sample is drawn from the same population.

Since the attention of incremental value relevance metric is on the direction of relationship and statistical significance of the interactive variable, this result suggests that book value of equity is value relevant during pre-IFRS period and after IFRS was adopted in the Nigerian stock market but with a noteworthy reduced positive association with share value for both March and June-end. This is a unique and significant finding as it is not in agreement with decrease (negative) value relevance of the accounting information observed by Umoren and Enang (2015) from the same stock market using 12 listed banks, and improved value relevance of book value after IFRS adoption revealed by Karđın (2013) using non-financial listed firms in the Istanbul stock exchange, Turkey. Nevertheless, this study documents positive and significant effect of the statement of financial position accounting information on market value using incremental value relevance metric.

The relative association analysis using univariate regression model as shown in Table 4.18 indicates that adjusted  $R^2$  of book value of equity increased from 12% in the pre-

IFRS period ( $p < 0.05$ ) to 21% during post-IFRS ( $p < 0.01$ ) in March and from 9% in pre-IFRS ( $p < 0.05$ ) to 17% in post-IFRS of June ( $p < 0.01$ ). The results indicate improved erraticism in the market value accounted for by book value of equity in the post-IFRS period but more in March than June. This finding does not agree with observed higher adjusted  $R^2$  of the German GAAP-based accounting information which is statistically and significantly more value relevant than IFRS-based accounting data according to Schiebel (2007) using companies listed on Frankfurt stock exchange.

**Table 4.18: Relative Value Relevance for Pre- and Post-IFRS Univariate Regression Model**

**Model 5b(i):**  $\ln SP_{mit} = a_{it} + a_1 \ln BVPS_{it} + \epsilon_{it}$

**Model 5b(ii):**  $\ln SP_{jit} = b_{it} + b_1 \ln BVPS_{it} + \epsilon_{it}$

	Variable	Coefficient	Std. Error	t-Statistic	P-value	R <sup>2</sup>	Adj. R <sup>2</sup>	F-Stat.
<b>Pre-IFRS</b>	Intercept	4.740271	0.696525	6.805598	0.0000			
<b>March</b>	lnBVPS	0.228033	0.100574	2.267326	0.0242	0.1301	0.1245	9.388**
<b>Post-IFRS</b>	Intercept	4.189470	1.045565	4.006896	0.0001			
<b>March</b>	lnBVPS	0.686684	0.101163	6.787897	0.0000	0.2214	0.2131	16.79**
<b>Pre-IFRS</b>	Intercept	4.809321	0.925031	5.199090	0.0000			
<b>June</b>	lnBVPS	0.217820	0.101826	2.139138	0.0333	0.0992	0.0902	8.216**
<b>Post-IFRS</b>	Intercept	4.826591	1.076170	4.484973	0.0000			
<b>June</b>	lnBVPS	0.544024	0.173128	3.142322	0.0023	0.1689	0.1653	9.674**

\*\* indicates significance at 0.01 level.  $a_1$  and  $b_1$  are the slope coefficient of variable in each model. Number of observation equals 276 for each period (Pre- and Post-IFRS). Models 5b(i) and 5b(ii) stand for March and June univariate regression respectively in the pre and post-IFRS periods. The regression estimation are based on White cross-section standard errors and covariance robust coefficient estimation

Moreover, the coefficients demonstrate the same pattern of explanatory power for the two months during the two periods. That is, slope coefficient of lnBVPS (although positive in the two periods and for both March and June-end) increased significantly from 0.228 in the pre-IFRS period (t-stat. = 2.267) to 0.687 in the post-IFRS (t-stat. = 6.788) for March-end and from 0.218 (t-stat. = 2.139) to 0.544 (t-stat. = 3.142) for the two periods respectively at June-end. This implies that book value of equity per share reported under IFRS-based accounting methods explains more sensitivity in the Nigerian listed firms' share value than it was under Nigerian local GAAPs especially in March.

That is, value relevance of IFRS-based book value of equity is significantly higher than Nigerian SAS-based accounting information in March-end.

The relative metric results suggest mixed finding as regards incremental and relative value relevance of book value under IFRS but this evidence provided clearer guide on submission of this study regarding value relevance of statement of financial position based accounting data. Implication of these findings is that, the more the adoption of IFRS-based accounting fundamentals as bases for preparing financial statements, the higher the stock market-based quality of the accounting information issued by the NSE listed firms under the accounting standards with possible improved global stock market effect. It also indicates that participants in the stock market employed the IFRS-based accounting information more efficiently than SAS-based accounting data to drive the stock market values.

The observed improved relative value relevance of book value from the NSE context noted in this study does not demonstrate an isolated finding as it concurs with that of Karđın (2013) and Söderlund (2010) from Turkey and Finland stock markets respectively, who reported that book value of equity improved better under IFRS in their studies. However, this finding disagrees with statistically insignificant and declined explanatory power of book value over share price under IFRS regime reported by Bolibok (2014) from Warsaw stock exchange. It also aligns with theoretical expectation that improved informative accounting data would reduce information asymmetry, meet information need of stock market participants and drive efficiency of the stock market better.

In a nut shell, the results provided basis for rejecting the statistical (null) conjecture that there is no significant effect of IFRS adoption on value relevance of statement of financial position accounting information of the Nigerian listed firms. Hence, IFRS adoption has positive and statistical significant effect on value relevance of the accounting information.

#### 4.4.6 Effect of Cash Flows Statement Information under IFRS on Value Relevance

With respect to specific objective three, the following statistical hypothesis three was advanced. The results of the various analyses performed and the ensuing discussions are presented accordingly.

##### **Hypothesis 3:**

H<sub>0</sub>: There is no significant effect of IFRS adoption on value relevance of cash flows statement accounting information of the Nigerian listed firms.

The third specific objective of this study is to measure the effect of IFRS adoption on value relevance of cash flows statement accounting information of the Nigerian listed firms. On this basis, null hypothesis three was built. To achieve this proposition statistically, natural logarithm of cash flows from operation per share (lnCFOPS) and its interaction with dummy variable that equal 1 if IFRS period, zero otherwise were employed to obtain ability of the parameters to be incrementally value relevant or otherwise in the post-IFRS period. Subsequently, relative association of the variable (lnCFOPS) with share price was examined using univariate panel regression model for pre- and post-IFRS periods at March and June-end separately.

By using panel least square regression, incremental value relevance of lnCFOPS was measured. Results of the random effect model based on Hausman Test are presented in Table 4.19A and B with the model outputs as shown in equation 4.6a<sub>1</sub> and 4.6a<sub>2</sub>.

$$\ln SP_{mit} = 6.839 - 0.119 \ln CFOPS - 1.128 \text{PostIFRS} + 0.194 \ln CFOPS * \text{PostIFRS} + \varepsilon_{it} \quad (4.6a_1)$$

$$\ln SP_{jit} = 6.848 - 0.120 \ln CFOPS - 0.954 \text{PostIFRS} + 0.168 \ln CFOPS * \text{PostIFRS} + \varepsilon_{it} \quad (4.6a_2)$$

**Table 4.19A: Inferential Statistics of Value Relevance of Cash flows under IFRS at March-end**

<b>Model 6a(i): <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln CFOPS_{it} + \beta_2 \text{PostIFRS}_{it} + \beta_3 \ln CFOPS * \text{PostIFRS}_{it} + \varepsilon_{it}</math></b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	6.838724	0.912871	7.491445	0.0000
<b>lnCFOPS</b>	-0.118691	0.052624	-2.255457	0.0245
<b>PostIFRS</b>	-1.128304	0.744790	-1.514929	0.1304
<b>lnCFOPS*PostIFRS</b>	0.193763	0.122511	1.581597	0.1143
<b>R<sup>2</sup></b>	0.131852			
<b>Adj. R<sup>2</sup></b>	0.126392			
<b>F-stat.</b>	5.834174			
<b>P-value</b>	0.000632			
<b>Durbin-Watson</b>	2.0499			

**Table 4.19B: Inferential Statistics of Value Relevance of Cash flows under IFRS at June-end**

<b>Model 6a(ii): <math>\ln SP_{jit} = \beta_{it} + \beta_1 \ln CFOPS_{it} + \beta_2 \text{PostIFRS}_{it} + \beta_3 \ln CFOPS * \text{PostIFRS}_{it} + \varepsilon_{it}</math></b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>
<b>Intercept</b>	6.847931	0.795653	8.606685	0.0000
<b>lnCFOPS</b>	-0.119633	0.087888	-1.361192	0.1740
<b>PostIFRS</b>	-0.953989	0.624316	-1.528055	0.1271
<b>lnCFOPS*PostIFRS</b>	0.168094	0.066859	2.514171	0.0122
<b>R<sup>2</sup></b>	0.123711			
<b>Adj. R<sup>2</sup></b>	0.118206			
<b>F-stat.</b>	5.306908			
<b>P-value</b>	0.005141			
<b>Durbin-Watson</b>	1.6382			

Table 4.19A and B indicate that about 13% (for March-end) and 12% (for June-end) of variability in stock market value of the Nigerian listed firms are accounted for by the variables included in the two models separately. The two models are statistically significant at 0.01 level of significance ( $p < 0.01$ ), F-stat. > critical F-ratio of 4.61 which rejects the proposition that the models are ill-suited for the representation of the

variables. That is, the results imply that the models statistically fit the data in explaining variation in share price although the variability explained is very small.

Furthermore, coefficient of lnCFOPS shows inverse relationship with share price both in March (-0.118691) and June-end (-0.119633) models but statistically significant in March ( $p = 0.0245$ ;  $t\text{-stat.} = -2.255457$ ). Whereas, the accounting information indicates insignificant association in June Model ( $p > 0.05$ ;  $t\text{-stat.} = -1.361192$ ). The results is a pointer that value relevance of cash flows from operation decreased using March model but fails to significantly improve the model in June before IFRS was adopted. Dummy for PostIFRS is not significant in the two models, indicating negative association with share value which suggests that its presence does not contribute to improvement of the models statistically.

**Table 4.20: Relative Value Relevance for Pre- and Post-IFRS Univariate Regression Model**

		<b>Model 6b(i): <math>\ln SP_{mit} = a_{it} + a_1 \ln CFOPS_{it} + \varepsilon_{it}</math></b>							
		<b>Model 6b(ii): <math>\ln SP_{jit} = b_{it} + b_1 \ln CFOPS_{it} + \varepsilon_{it}</math></b>							
	<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>P-value</b>	<b>R<sup>2</sup></b>	<b>Adj. R<sup>2</sup></b>	<b>F-Stat.</b>	
<b>Pre-IFRS</b>	Intercept	6.106838	0.817338	7.471620	0.0000				
<b>March</b>	lnCFOPS	0.015657	0.059300	0.264032	0.7920	0.0995	0.0961	0.1395	
<b>Post-IFRS</b>	Intercept	5.870155	0.621111	9.451058	0.0000				
<b>March</b>	lnCFOPS	0.045254	0.032330	1.399752	0.1628	0.1078	0.1040	2.0826	
<b>Pre-IFRS</b>	Intercept	6.201238	0.660195	9.393045	0.0000				
<b>June</b>	lnCFOPS	0.008117	0.026107	0.310919	0.8523	0.1452	0.1401	0.0678	
<b>Post-IFRS</b>	Intercept	6.019674	0.535870	11.23345	0.0000				
<b>June</b>	lnCFOPS	0.067240	0.024856	2.705205	0.0077	0.1151	0.1137	0.004**	

\*\* indicate significance at 0.01 level.  $a_1$  and  $b_1$  are the coefficients of variable in each model. Number of observation equals 276 for each period (Pre- and Post-IFRS). Models 6b(i) and 6b(ii) stand for March and June univariate regression respectively in the pre and post-IFRS periods. The regression estimation are based on White cross-section standard errors and covariance robust coefficient estimation

Also, slope coefficient of the interactive variable for both March (0.193763) and June (0.168094) models suggest positive incremental association of cash flows from operation with share price which is only statistically significant in June-end model ( $p = 0.0122$ ;  $t\text{-stat.} = 2.514171$ ) but insignificant around March-end ( $p = 0.1143$ ;  $t\text{-stat.} =$

1.581597). Value of the coefficient in March showed higher positive rate of change in share price than in June suggesting that the market value derives greater influence (or sensitivity) from cash flows accounting information under IFRS around March than in June. Thus, drawing from the outcome of the interactive variable in the models, the results suggest that positive association of cash flows statement accounting information under IFRS is only significantly value relevant around June-end statistically while its positive incremental value relevance is not significantly different from zero in March. Reliability of the estimators as unveiled by their standard errors (i.e. 0.0526 and 0.1225 in March and 0.0879 and 0.0669 in June) are based on White robust standard error.

On the other hand, drawing from univariate relative value relevance metric (Table 4.20), coefficient of cash flows from operation revealed positive association with share value pre- and post-IFRS around March-end (i.e. 0.0157 and 0.0453) as well as pre- and post-IFRS around June-end (0.008 and 0.067). Nevertheless, this association is only statistically significant ( $p < 0.01$ ) in the post-IFRS June but with reduced explanatory power of 11% from 14% during pre-IFRS period. This further confirmed that cash flows from operation under IFRS is only value relevant in June, suggesting that the accounting information is relatively and incrementally value relevant during post-IFRS June only. Its positive relationship with market value in March of the post-IFRS period indicates zero effect (not significantly different from zero) relatively and incrementally ( $p > 0.05$ ).

These results also suggest mixed findings between March and June. Nevertheless, the results imply that although market value is positively responsive (or slightly more informative) to this accounting data as issued under IFRS-based financial reporting system than it was under Nigerian SAS-based financial reporting framework relatively and incrementally, it is only statistically significant around June-end of the post-IFRS period. However, reduction in the ability of the accounting information to explain variability in share value around June-end as well as insignificance of the variable

around March-end relatively and incrementally suggest that the accounting information cannot be concluded to be significantly different from zero.

These findings therefore suggest that investors are shifting their attention from cash flows statement accounting information under IFRS regime to other preferred information in the Nigerian stock market. Also, since cash flows from operation conveys economic information about cash movement in respect of various requisite operational activities of an organisation within accounting period, it may appear less attractive to investors/stockbrokers compared to earnings and book value during IFRS-based financial reporting regime.

The unique theoretical implication is that market participants received statistically insignificant but positive signals (from cash flows statement data) that can assist them to make informational need of the stock market more efficient in the spirit of signalling theory and EMH. Also, the findings contradict theoretical expectation that financial constraint firms are more likely to depend on internal funds to finance its potential investment (Alejo *et al.*, 2015) which could be showcased through cash flows information and thereby become significantly value relevant to the market participants. It is also an indication that Nigerian equity market investors accrue less attention to cash flows information as the alternative source of funding prospective investment opportunities open to the firms or the firms could not be identified as being financially constrained. Thus, cash flows statement accounting information issued under IFRS in the Nigerian stock market does not significantly drive capital market efficiency based on March-end panel regression model.

This finding corroborates reported insignificant incremental value relevance of cash flows information under IFRS from the Greece stock market by Papadatos and Makri (2012). However, the finding is also noteworthy as its insignificant nature in March is contradictory to the findings of Khanagha (2011), Asselman (2012) and Khodadadi *et al.* (2012) who observe and report significant incremental value relevance of cash flows



from operation of firms listed in the Tehran stock exchange under IAS over Iranian-based accounting standards as well as significant incremental value relevance of the cash flows accounting information of companies listed in the London stock exchange according to Camodeca *et al.* (2014).

Sequel to the above findings and owing to the fact that comparison between March and June value relevance periods is not the key focus of this study, there is no sufficient evidence to reject the null hypothesis that there is no significant effect of IFRS adoption on value relevance of cash flows statement accounting information of the Nigerian listed firms.

#### **4.4.7 Effect of Extent of Compliance with IFRS on Value Relevance**

In order to investigate possible influence of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms, the fourth statistical hypothesis was raised. The results of analyses carried out and the ensuing discussions are presented as follow.

#### **Hypothesis 4:**

H<sub>0</sub>: There is no significant effect of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms.

Based on possible informative nature of IFRSs, hypothesis four was constructed to address specific objective four that seeks to investigate the effect of extent of compliance with IFRS on value relevance at the Nigerian stock market. To achieve this, a dummy variable (CindexDum) that equals 1 if firm-compliance score is above median score, zero otherwise was adopted. Subsequently, natural logarithm of share price was regressed on this variable to establish whether higher level of compliance with IFRS disclosure requirements has influence on value relevance. Random effect model of panel least square was found suitable because of the Hausman Test Chi-Square ( $\chi^2$ ) statistic value of 2.172505 with p-value of 0.1405 (at one degree of freedom) for March and  $\chi^2$

value of 2.060755 with p-value = 0.1511 for June which are greater than alpha value at any conventional level of significance. Findings of the univariate regression analysis are presented in Table 4.21 and as indicated in the output model 7a and 7b for March and June models in that order. White cross-section estimation method which aids computation of robust coefficient standard errors and covariance was adopted. That is, t-statistic was based on White cross-section standard errors and covariance estimation for the purpose of addressing possible heteroscedasticity.

**Table 4.21: Regression Output of High Level of Compliance with IFRS**

<b>Model 7a:</b> $\ln SP_{mit} = \beta_{it} + \beta_1 CindexDum_{it} + \varepsilon_{it}$			<b>Model 7b:</b> $\ln SP_{jit} = \beta_{it} + \beta_1 CindexDum_{it} + \varepsilon_{it}$	
<b>Variables</b>	<b>Intercept</b>	<b>CINDEX</b>	<b>Intercept</b>	<b>CINDEX</b>
<b>Coefficient</b>	2.495861	0.06259	2.731821	0.07194
<b>Std. Error</b>	0.049966	0.02330	0.048437	0.03081
<b>t-Stat.</b>	49.95081	2.68671	56.39972	2.33528
<b>P-value</b>	0.0000	0.0082	0.0000	0.0203
<b>R<sup>2</sup></b>	0.127232		0.124213	
<b>Adj. R<sup>2</sup></b>	0.118130		0.113431	
<b>F-stat.</b>	7.01840		4.97920	
<b>P-value</b>	0.0082		0.0203	
<b>Durbin-Watson</b>	2.099182		2.132046	

$$\ln SP_{mit} = 2.496 + 0.063CindexDum + \varepsilon_{it} \quad \text{-----} \rightarrow (4.7a)$$

$$\ln SP_{jit} = 2.732 + 0.072CindexDum + \varepsilon_{it} \quad \text{-----} \rightarrow (4.7b)$$

As presented in Table 4.21, the explanatory power of CindexDum in the two models indicate approximately 12% and 11% adjusted R<sup>2</sup> for March and June-end respectively which are both statistically significant at p-value less than 0.05 level (F-Stat. equals 7.018 in March, and 4.979 in June). This suggest that the two models returned proper fitness (F-statistic pointing to rejection region) with marginal higher explanatory power in March over June. The observed low variability in stock market value of the Nigerian listed firms accounted for by higher degree of compliance with IFRS is an indication

that compliance with IFRS alone contributes relatively low rate of change in share price at the stock market. Also, the coefficient of the independent variable in the two models are positive and statistically significant in March ( $p < 0.01$ ;  $t\text{-stat.} = 2.68671$ ) and in June ( $p < 0.05$ ;  $t\text{-stat.} = 2.33528$ ). This indicates that higher compliance with IFRS is capable of expressing increment in value relevance at the Nigerian stock market. These findings suggest that there is positive and significant effect of higher level of compliance with IFRS on stock value of the Nigerian listed firms.

Notwithstanding, untabulated regression analysis of value relevance of extent of compliance with IFRS among the listed firms for March and June models revealed positive valuation coefficient of 1.597336 and 1.351569 respectively. The models are statistically significant at 0.05 ( $p = 0.0208$ ;  $t\text{-stat.} = 2.329755$  for March and  $p = 0.0326$ ;  $t\text{-stat.} = 2.151587$  for June) with 12.17% and 12.50% adjusted  $R^2$  in that order. These simply reconfirmed value relevance of extent of compliance with IFRS (score) by the sampled Nigerian listed firms is also value relevant. It implies that level of compliance with IFRS demands is of significant interest to the stock market participants to guide their economic decision's response to the position of stock market value. This result is in conformity with the findings of Tsalavoutas and Dionysiou (2014) who observe relative value relevance of levels of compliance among listed industries from Greece stock market.

The general implication of these results is that equity market investors are not only impressed by extent of compliance with IFRS among Nigerian listed firms but also interested in higher degree of compliance with IFRS mandatory disclosure demands in making economic investment decision that affects market values at the stock market. These findings provide empirical support to claim by Tsalavoutas (2009) who states that levels of compliance with mandatory disclosure of IFRS have valuation effect in the Greece stock market. The finding is also consistent with the position of Kothari (2000) and Alfaraih (2009) that quality of accounting standards does not just influence quality

of accounting information, but the macrocosm and enforcement of efficacious laws that propel compliance with the standards.

Sequel to the above findings, further attempt was made to unveil pattern in which accounting information of high or low compliance companies are value relevant at the NSE with special attention on share price in March-end alone since comparison between March and June is not the main focus of this study. Therefore, post-IFRS sample was sub-divided into two (i.e. companies with high and low compliance scores using median score). Share price at March-end was regressed on lnEPS, lnBVPS and lnCFOPS jointly and individually for the two subsamples differently. The results for high compliant firms subsample are presented in Table 4.22.

**Table 4.22: Regression Results for High Compliant (Cindex) Scores Sub-Sample**

<b>Model 7c<sub>1</sub>: <math>\ln SP_{mit} = a_{it} + a_1 \ln EPS_{it} + a_2 \ln BVPS_{it} + a_3 \ln CFOPS_{it} + \varepsilon_{it}</math></b> <b>Model 7d<sub>1</sub>: <math>\ln SP_{mit} = b_{it} + b_1 \ln EPS_{it} + \varepsilon_{it}</math></b> <b>Model 7e<sub>1</sub>: <math>\ln SP_{mit} = c_{it} + c_1 \ln BVPS_{it} + \varepsilon_{it}</math></b> <b>Model 7f<sub>1</sub>: <math>\ln SP_{mit} = d_{it} + d_1 \ln CFOPS_{it} + \varepsilon_{it}</math></b>				
Variables	Model 7c <sub>1</sub>	Model 7d <sub>1</sub>	Model 7e <sub>1</sub>	Model 7f <sub>1</sub>
<b>Intercept</b>	1.26568 (1.01200)	2.171127** (20.697)	1.581548** (8.538)	1.95062 (1.460)
<b>lnEPS</b>	0.15977* (2.591)	0.213616** (3.942)		
<b>lnBVPS</b>	0.30833** (3.600)		0.35658** (5.373)	
<b>lnCFOPS</b>	0.10081 (0.27357)			0.18039 (0.455)
<b>R<sup>2</sup></b>	0.289636	0.1837	0.2552	0.1512
<b>Adj. R<sup>2</sup></b>	0.274451	0.1783	0.2402	0.1466
<b>F-stat.</b>	9.854188	15.5357	28.8712	0.2072
<b>P-value</b>	0.000005	0.0001	0.0000	0.6491
<b>Durbin-Watson</b>	2.083099			
<b>N</b>	172			

\*, \*\* indicate significance at 0.05 and 0.01 levels respectively; t-statistic in parentheses.

The results show that coefficients of earnings and book value of high IFRS compliant companies are statistically significant jointly and individually ( $p < 0.05$ ) while the valuation coefficients indicate positive association with share values. The models are jointly and individually significant ( $p < 0.01$ ) except separate model for cash flows statement accounting information. Specifically, based on individual simple regression model of each accounting information (Table 4.22), coefficient (0.35658) and explanatory power (24%) of book value is higher than that of earnings (i.e. 0.213616; 18%) and cash flows from operation (i.e. 0.18039; 15%). Nevertheless, explanatory power of the joint model for the high compliant firms revealed 27.45% adjusted  $R^2$  which is statistically significant at 0.01 level (F-stat. = 9.854188). Findings from this further test suggest that earnings and book value accounting information of high degree of compliance with IFRS among Nigerian listed firms are value relevant in the post-IFRS period. The results imply that statement of financial position accounting information of the NSE high IFRS mandatory disclosure requirements compliant listed firms is of utmost value to the stock market participants followed by income statement information. Thus, the findings corroborate that of Alfaraih and Alanezi (2015), and Alfaraih (2009) who note significant association between higher/greater level of compliance with IFRS and value relevance of earnings and book value accounting data from Kuwait stock market.

On the other hand, attempt was made to obtain regression results of the low compliant firms (Appendix VIII) which revealed statistical significance of the valuation coefficients jointly and individually ( $p < 0.05$ ). When the models were separately estimated for low compliant companies, individual regression model indicates that positive valuation coefficient of each of the three accounting information of the firms is notably higher (0.285; 0.357 and 1.335 for earnings, book value and cash flows respectively) than that of high compliant firms and significant at 0.05 level (t-stat. = 4.374; 4.562 and 2.122 in that order). This finding disagrees with Tsalavoutas and Dionysiou (2014) who observe that valuation coefficient of accounting information (i.e.

net income) is significantly greater for high-compliant firms than low-compliant firms. Adjusted  $R^2$  of earnings, book value and cash flows univariate regression model are 25%, 26% and 13% respectively which are also conspicuously higher than that of high compliant firms. Nonetheless, variability in value relevance of the three accounting data jointly for low and high IFRS compliant firms revealed higher adjusted  $R^2$  of 32% for low compliant firms (Appendix VIII) than for high compliant firms with 28% (Table 4.22).

The results signify that, in a low compliant firm, investors has higher quest for the three accounting information to determine its stock market value. That is, the three accounting data explain more variability in the share prices of low IFRS compliant firms than high compliant firms. Whereas, attention of the Nigerian stock market participants is only on earnings and book value of high compliant firms in determining whatever happens to the stock values. Implication of this is that, when a listed firm is perceived as a low IFRS compliant firm, stock market participants desire more accounting information than earnings and book value. This is another pointer that extent of compliance with IFRS is value relevant in the Nigerian stock exchange market.

Thus, results of the further investigation confirmed that extent of compliance with IFRS has inherent capability to drive share value in the Nigerian stock market but more for low compliant firms. As such, null hypothesis that there is no significant effect of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms is rejected. Theoretical advancement of this study in line with information content hypothesis is that, there is statistically significant and positive association between how well listed firms comply with IFRS disclosure demands and stock market value, and that the IFRS-based accounting data could send positive signal to stock market participants in driving the market value. Consistently with agency and stakeholder theories, IFRS adoption from NSE context could be adduced as accounting standards capable of reducing agency cost that could emanate from information

lopsidedness, reduce agent or management's discretion, and improve shareholders value in the spirit of institutional stakeholder theory accentuated by Donaldson and Preston (1995) by capturing stakeholder financial information needs regarding the listed firms.

#### **4.4.8 Moderating Effect of Firm-specific Factors on Value Relevance of Accounting Information**

This subsection presents results and discussion on possible moderating influence of firm-specific attributes on value relevance of accounting information issued under IFRS by the Nigerian listed firms with a view to addressing objective five and its corresponding hypothesis.

##### **Hypothesis 5:**

H<sub>0</sub>: There is no significant moderating effect of firm-specific factors on value relevance of IFRS-based accounting information of the Nigerian listed firms

In order to investigate this hypothetical statement, two firm-specific factors were drawn. That is, firm size as proxy of firm's total assets, and industry category (i.e. financial and non-financial). Natural logarithm of share price (lnSP) in March was employed and regressed on each accounting information together with each firm-specific factor individually in order to establish moderating effect of the factor in each model. According to Baron and Kenny (1986), the essence of moderation test is to examine when or the condition under which a predicting variable influences response variable.

Starting with firm size, natural logarithm of total asset was employed due to distribution issue while median of the firm factor was used to subgroup the sample into large and small size firms for subsample based analysis. On the other hand, industry category attribute was also indicated as 1 if financial service, zero otherwise which was subsequently subgrouped into financial and non-financial subsamples for subsample based regression analysis. Each model under this subsection was subjected to Hausman heterogeneity effect test. Generally, the specification effect test results indicated appropriateness of random effect as each test returned insignificant p-value ( $p > 0.05$ )

with Chi-Square statistics value generally found in the acceptance region. Thus, null hypothesis of random effect could not be rejected. Also, t-statistics of the tests are based on White cross-sectional standard errors and covariance estimation.

Table 4.23 presents panel regression results of the moderating effect of firm size on value relevance of accounting information of the Nigerian listed firms issued under IFRS-based accounting methods using model 8a. The direction of regression coefficient for the interaction term and its statistical significance (p-value) provide bases to understand how firm size affect strength and/or direction of the association between market value and the IFRS-based accounting information. The regression model outputs are shown in equation 8a<sub>1</sub> to 8a<sub>4</sub>.

**Table 4.23: Inferential Statistics for Firm Size Moderating Factor**

Variables	Reg. Coeff.	Std. Error	t-Stat	P-value	R <sup>2</sup>	Adj. R <sup>2</sup>	F-stat	P-value	Durbin Watson
<b>Model 8a<sub>1</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \ln TA_{it} + \beta_3 \ln EPS * \ln TA_{it} + \epsilon_{it}</math></b>									
Intercept	14.485	7.6965	1.8821	0.0609	0.426	0.417	25.676	0.000	1.9452
lnEPS	-2.158	1.3004	-1.660	0.0982					
lnTA	-0.554	0.3157	-1.755	0.0805					
lnEPS*lnTA	0.1245	0.0530	2.3468	0.0197					
<b>Model 8a<sub>2</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln BVPS_{it} + \beta_2 \ln TA_{it} + \beta_3 \ln BVPS * \ln TA_{it} + \epsilon_{it}</math></b>									
Intercept	3.2409	2.7927	1.1605	0.2469	0.338	0.329	14.123	0.000	1.7542
lnBVPS	0.0038	0.1661	0.0229	0.9817					
lnTA	-0.044	0.1549	-0.283	0.7772					
lnBVPS*lnTA	0.0243	0.0097	2.5192	0.0124					
<b>Model 8a<sub>3</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln CFOPS_{it} + \beta_2 \ln TA_{it} + \beta_3 \ln CFOPS * \ln TA_{it} + \epsilon_{it}</math></b>									
Intercept	2.6113	3.0180	0.8652	0.3877	0.248	0.237	4.4495	0.005	1.9364
lnCFOPS	-0.320	0.1540	-2.079	0.0386					
lnTA	0.1390	0.1419	0.9792	0.3284					
lnCFOPS*lnTA	0.0143	0.0059	2.4175	0.0163					
<b>Model 8a<sub>4</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 CindexSc_{it} + \beta_2 \ln TA_{it} + \beta_3 CindexSc * \ln TA_{it} + \epsilon_{it}</math></b>									
Intercept	-14.23	7.0721	-2.012	0.0453	0.268	0.258	6.4424	0.000	1.6289
CindexSc	14.897	8.6283	1.7265	0.0854					
lnTA	0.9567	0.3229	2.9630	0.0033					
CindexSc*lnTA	-0.742	0.4013	-1.848	0.0658					

$$\ln SP_{mit} = 14.485 - 2.158 \ln EPS - 0.554 \ln TA + 0.125 \ln EPS * \ln TA + \epsilon_{it} \text{ -----} \rightarrow (4.8a_1)$$

$$\ln SP_{mit} = 3.241 + 0.004 \ln BVPS - 0.044 \ln TA + 0.024 \ln BVPS * \ln TA + \epsilon_{it} \text{ ----} \rightarrow (4.8a_2)$$

$$\ln SP_{mit} = 2.611 + 0.051 \ln CFOPS - 0.320 \ln TA + 0.139 \ln CFOPS * \ln TA + \epsilon_{it} \text{ --} \rightarrow (4.8a_3)$$



$$\ln SP_{mit} = -14.226 + 14.897CindexSc + 0.957\ln TA - 0.742CindexSc*\ln TA + \epsilon_{it} \quad (4.8a_4)$$

As indicated in Table 4.23, variation in share price explained by each model when moderating effect of firm size was tested ranges between 42% for model 8a<sub>1</sub> (earnings) and 24% for model 8a<sub>3</sub> (Cash flows) using adjusted R<sup>2</sup>. This implies that model for earnings per share has the highest explanatory power of variability in stock prices of the Nigerian listed firms when moderating influence of firm size was examined. This was followed by book value of equity per share, extent of compliance with IFRS among the firms (using compliance scores) and cash flows from operation with approximately 33%, 26% and 24% respectively. In addition, the four models (8a<sub>1</sub>, 8a<sub>2</sub>, 8a<sub>3</sub> and 8a<sub>4</sub>) are statistically significant at 0.01 level (F-stats outside acceptance region) indicating proper goodness of fit of each model, providing basis for suitability of the models and ensuing interpretation.

Regarding moderating effect in model 8a<sub>1</sub>, regression coefficient of the interaction term between the firm size and earnings indicates that market value would increase by 0.124479kobo as the interaction increases which is statistically significant at 0.05 (p-value = 0.0197). Whereas, inverse relationship of the main predictor (i.e. earnings; -2.158) and moderating factor (i.e. total assets; -0.534) in the model are statistically insignificant (p > 0.05). These suggest enhancing effect with an indication that size of the Nigerian listed firms modifies value relevance of the IFRS-based accounting information (earnings). That is, value relevance of earnings under IFRS regime depends or is conditional on how large or small the size of the firm is in term of total assets. This simply implies that qualitiveness of the accounting information to drive market value of share depends on the size of the firm as processed by the NSE market participants.

Further, slope coefficient of the moderator between book value of equity and firm size unveiled positive association with market value (0.024334) which is statistically significant at 0.05 (p = 0.0124; t-stat. = 2.519219). Positive (0.003805) and antithetic (-0.04388) association of book value and total assets respectively are insignificant at 0.05

level in the model (8a<sub>2</sub>), suggesting moderating role played by the firm size regarding value relevance of book value of equity issued under IFRS demands by the Nigerian listed firms. This also implies that strength of the association between this accounting information and market value as well as its effect is moderated by the size of the firms.

In model 8a<sub>3</sub>, association of the moderating variable (interaction between firm size and cash flows from operation) with the market share value is observed to be positive (0.014272) and statistically significant ( $p = 0.0163$ ). Conversely, coefficient of the main predictor (lnCFOPS) revealed inverse relationship (-0.31998) with share value which is significant statistically ( $p < 0.05$ ) while positive association of firm size (0.138952) is statistically insignificant. The result also implies enhancing effect of firm size over value relevance of IFRS-based cash flows information. As to moderating effect of firm size over value relevance of extent of compliance with IFRS by the listed firms, regression coefficient of the interaction term is negative (-0.74157) and statistically insignificant ( $p = 0.0658$ ;  $t\text{-stat.} = -1.84777$ ). This suggests that inverse relationship of the moderating influence does not improve the model (i.e. antagonistic moderating effect). Thus, size of a firm does not provide condition for the association between how well the firms comply with IFRS and market value. Whereas, observed positive association between both level of compliance with IFRS (Cindexscore; 14.89708) and total assets (0.956656), and market value in the model was only significant statistically for total assets ( $t\text{-stat.} = 2.962995$ ).

Summarily, firm size as proxied with total assets demonstrates statistical significant moderating effect on the association that subsist between IFRS-based accounting data and market value except for the level at which the firms have complied with mandatory disclosure demands of IFRS. That is, value relevance of accounting information issued based on IFRS accounting principles and methods depends or is conditional on how large or small the listed firms' size are. The implication is that, NSE market participants incorporate size of a listed firm while processing the stock market based quality of the

accounting information to determine stock market value. Thus, these findings suggest that the stated null hypothesis cannot be accepted except for model 8a<sub>4</sub>. In other words, regarding firm-size specific factor, there is moderating effect of firm attribute on value relevance of IFRS-based accounting information from the Nigerian financial reporting environment and NSE context.

**Table 4.24A: Large Firm Size Subsample Univariate Moderating Effect Results**

	<b>Reg. Coeff.</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>	<b>R<sup>2</sup></b>	<b>Adj. R<sup>2</sup></b>	<b>F-stat.</b>	<b>P-value</b>	<b>Durbin Watson</b>
<b>Intercept</b>	-0.5377	2.49622	-0.2154	0.8298					
<b>lnEPS</b>	1.26239	0.37794	3.34016	0.0011	0.273	0.267	49.4819	0.0000	1.91746
<b>Intercept</b>	0.46916	1.16819	0.40161	0.6886					
<b>lnBVPS</b>	0.93350	0.13132	7.10874	0.0000	0.192	0.1863	31.4500	0.0000	1.94876
<b>Intercept</b>	6.76877	0.67937	9.96331	0.0000					
<b>lnCFOPS</b>	0.05334	0.04091	1.30384	0.1946	0.100	0.078	1.60707	0.2071	1.93236
<b>Intercept</b>	7.42717	1.54402	4.81030	0.0000					
<b>CindexSc</b>	-0.3940	1.97376	-0.19963	0.8421	0.081	0.073	0.060	0.8064	1.62824
<b>Intercept</b>	7.24864	0.53560	13.5338	0.0000					
<b>HCindex</b>	0.30195	0.11741	2.57176	0.0114	0.155	0.147	6.6109	0.0115	2.01541

*t*-Statistic values are based on White cross-sectional standard errors and covariance estimation.

**Table 4.24B: Small Firm Size Subsample Univariate Moderating Effect Results**

	<b>Reg. Coeff.</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>	<b>R<sup>2</sup></b>	<b>Adj. R<sup>2</sup></b>	<b>F-stat.</b>	<b>P-value</b>	<b>Durbin Watson</b>
<b>Intercept</b>	2.55520	1.32435	1.9294	0.0558					
<b>lnEPS</b>	0.49463	0.18350	2.6955	0.0079	0.190	0.184	11.96	0.0007	1.76729
<b>Intercept</b>	4.33967	0.84997	5.1057	0.0000					
<b>lnBVPS</b>	0.16521	0.11205	1.4745	0.1427	0.119	0.113	1.536	0.2175	1.67961
<b>Intercept</b>	5.27427	0.39254	13.436	0.0000					
<b>lnCFOPS</b>	0.01720	0.04199	0.4096	0.6828	0.081	0.075	0.099	0.7538	1.71186
<b>Intercept</b>	7.09602	0.22755	31.185	0.0000					
<b>CindexSc</b>	-1.93927	0.44745	-4.334	0.0000	0.267	0.259	9.397	0.0026	1.67737
<b>Intercept</b>	5.49706	0.33953	16.190	0.0000					
<b>HCindex</b>	-0.2631	0.07196	-3.656	0.0004	0.269	0.262	15.17	0.0002	2.19158

*t*-Statistic values are based on White cross-sectional standard errors and covariance estimation.

To obtain how differently the accounting data could be value relevant based on each firm size as either large or small using median value of the natural log of the proxy for firm size (i.e. total assets), simple and multiple regression analyses were performed. The results are presented in Table 4.24 and Appendix IX respectively.

Furthermore, moderating effect of firm size was investigated in which sampled firms were subgrouped into two and the models were estimated separately for large and small firm subsamples. The results as presented in Table 4.24A for large firm size univariately indicate that variation in share price of large firms at the NSE is explained by earnings (27.3%), book value of equity (19.2%) and high compliance with IFRS (15.5%) in the post-IFRS period which are statistically significant at 0.05 level. The respective valuation coefficient of each variable is positive and significant ( $p < 0.05$ ) except for cash flows (0.0355) and inverse association of extent of compliance with IFRS demands (i.e.  $p$ -value  $> 0.05$ ) which informed a need to statistically examine significance of high compliance scores.

These results suggest mixed finding regarding moderating influence of large firm-size on value relevance of cash flows accounting information. That is, it is the moderating influence of firm size that could possibly inform value relevance of cash flows accounting information in the stock market. The finding was further confirmed through

multiple regression analysis for the large firms subsample (Appendix IX) with approximately 51% explanatory power of the four IFRS-based accounting data (excluding high compliance dummy) over the corresponding market share value ( $p = 0.0000$ ; F-Stat. = 16.157) using adjusted coefficient of determination. This finding is in consonance with the finding by Alfaraih (2009) who obtains positive and statistically significant coefficient of book value and earnings estimates of large firm size from Kuwait listed firms using invariant Ohlson price model. Nevertheless, this study further documents moderating influence of firm size in the association between market value and cash flows statement accounting information from the NSE reporting environment.

On the flipside, moderating effect of small size firms as presented in Table 4.24B suggests that variability ( $R^2$ ) in the value relevance for this subsample group is explained better by earnings (19%) and high compliance with IFRS (27%) as their t-statistics are outside acceptance region (t-stats = 2.6955 and -3.6562 respectively). Notwithstanding, statistical significance of high level and extent of individual firm's compliance with IFRS suggest inverse relationship with share value of the small firms. This is an indication that for every 1 kobo change in earnings of small size firm, its market share value receives about 0.495 kobo (positive) response but decline for both high level (-0.2631) and extent of compliance with IFRS (-1.93927). It implies that only earnings of small firm-size improves value relevance to participants in the stock market. Multiple regression result for the small-firm subsample as indicated in Appendix IX corroborates this finding from univariate regression but with lower 30.6% explanatory power of the variables ( $p = 0.0001$ ; F-stat. = 6.186) compared to explanatory power of large-firm subsample. The finding shows empirical contradiction to Khanagha (2011) and Alfaraih (2009) who find out that earnings and book value accounting information of small size firms employed for the price valuation model are statistically value relevant and jointly capable of explaining variability in the market share values.

Additionally, in order to examine moderating effect of industry category on value relevance under IFRS, dummy variable that equals 1 if financial service industry category (FinCat), zero otherwise and natural log of each accounting information (lnEPS, lnBVPS, lnCFOPS) and CindexScore were employed while natural log of share price at March-end (lnSPm) was taken as response variable. Coefficient of the interaction term between each accounting information and dummy of financial category (FinCat) forms basis for explaining moderating influence of the interaction variable on value relevance of each accounting information.

Findings from the regression analyses regarding moderating role of FinCat as proxy for industry category are presented in Table 4.25 and as indicated in the model output in equation 4.8b<sub>1</sub> to 4.8b<sub>4</sub>.

$$\ln SP_{mit} = 1.508 + 0.843 \ln EPS - 8.464 \text{FinCat} + 1.318 \ln EPS * \text{FinCat} + \varepsilon_{it} \text{ -----} \rightarrow (4.8b_1)$$

$$\ln SP_{mit} = 2.505 + 0.590 \ln BVPS - 11.26 \text{FinCat} + 1.818 \ln EPS * \text{FinCat} + \varepsilon_{it} \text{ --} \rightarrow (4.8b_2)$$

$$\ln SP_{mit} = 6.328 + 0.024 \ln CFOPS - 1.302 \text{FinCat} + 0.058 \ln EPS * \text{FinCat} + \varepsilon_{it} \text{ } \rightarrow (4.8b_3)$$

$$\ln SP_{mit} = 7.282 - 0.912 \text{CindexSc} + 1.059 \text{FinCat} - 2.196 \ln EPS * \text{FinCat} + \varepsilon_{it} \text{ } \rightarrow (4.8b_4)$$

**Table 4.25: Inferential Statistics for Industry Category Moderating Factor**

Variables	Reg. Coeff.	Std. Error	t-Stat	P-value	R <sup>2</sup>	Adj. R <sup>2</sup>	F-stat	P-value	Durbin Watson
<b>Model 8b<sub>1</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \text{FinCat}_{it} + \beta_3 \ln EPS_{it} * \text{FinCat}_{it} + \epsilon_{it}</math></b>									
Intercept	1.5080	0.6861	2.1979	0.029	0.44	0.43	27.96	0.000	1.84159
lnEPS	0.8428	0.1137	7.4106	0.000					
FinCat	-8.4639	2.3583	-3.589	0.000					
lnEPS*FinCat	1.3175	0.4075	3.2330	0.001					
<b>Model 8b<sub>2</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln BVPS_{it} + \beta_2 \text{FinCat}_{it} + \beta_3 \ln BVPS_{it} * \text{FinCat}_{it} + \epsilon_{it}</math></b>									
Intercept	2.5051	0.7810	3.2078	0.002	0.40	0.39	21.725	0.000	1.74595
lnBVPS	0.5898	0.0804	7.3324	0.000					
FinCat	-11.263	0.2458	-45.82	0.000					
lnBVPS*FinCat	1.8175	0.0540	33.677	0.000					
<b>Model 8b<sub>3</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \ln CFOPS_{it} + \beta_2 \text{FinCat}_{it} + \beta_3 \ln CFOPS_{it} * \text{FinCat}_{it} + \epsilon_{it}</math></b>									
Intercept	6.3282	0.3053	20.725	0.000	0.23	0.22	3.0912	0.028	1.83746
lnCFOPS	0.0244	0.03720	0.6564	0.512					
FinCat	-1.3022	0.5147	-2.530	0.012					
lnCFOPS*FinCat	0.0577	0.0650	0.8878	0.376					
<b>Model 8b<sub>4</sub>: <math>\ln SP_{mit} = \beta_{it} + \beta_1 \text{CindexSc}_{it} + \beta_2 \text{FinCat}_{it} + \beta_3 \text{CindexSc}_{it} * \text{FinCat}_{it} + \epsilon_{it}</math></b>									
Intercept	7.2816	0.5517	13.199	0.000	0.24	0.23	3.3470	0.020	1.80800
CindexSc	-0.9116	0.8768	-1.040	0.299					
FinCat	1.0588	1.3645	0.7760	0.438					
CindexSc*FinCat	-2.1958	1.3560	-1.619	0.107					

Regression results of the four models unveiling moderating effect of industry category as indicated in Table 4.25 showed that, explanatory power (using adjusted R<sup>2</sup>) of earnings over market value is the highest (i.e. 43.3%) when moderated by financial industry category. This was followed by models for book value, extent of compliance with IFRS and cash flows accounting information with 0.389, 0.226 and 0.223 explanatory power in that order. The models are generally statistically significant ( $p < 0.05$ ). These results indicate remarkable different variability in share values at the Nigerian stock market obtained when moderating influence of financial industry category was tested for each accounting information.

Regression coefficient of the interaction term between the financial industry category and earnings indicates that market value tends to increase by 1.317532kobo as the interaction increases which is statistically significant at 0.01 ( $p\text{-value} = 0.0014$ ). Similar result was obtained regarding moderating effect of industry category over the

relationship between financial industry dummy and book value of equity. The coefficient of the interaction term in the model is positive (1.817509) and statistically significant at 0.01 level. Also, the rate of change in market value accounted for by the IFRS-based earnings (0.8428) and book value (0.5898) in the separate models 8b<sub>1</sub> and 8b<sub>2</sub> are positive and statistically significant (p-value < 0.01 in each case) with significant inverse relationship of the moderating factor (i.e. financial industry dummy) in each model. The results portend enhancing effect of being a financial industry firm in the association between IFRS-based earnings (and book value of equity) and market value of the Nigerian listed firms. That is, value relevance of earnings and book value under IFRS financial reporting demands depend on industry category the firm belong.

On the contrary, slope coefficient of the moderator between cash flows information (and extent of compliance with IFRS), and financial industry category revealed positive (and negative) association with market value (i.e. 0.0577 and -2.1958 respectively) which are statistically insignificant at 0.05 (t-stat. in the acceptance region). That is, the association between the interaction variable for model 8b<sub>4</sub> and market value suggest antagonistic moderating effect rather than enhancing. Thus, insignificant statistical findings from the two model 8b<sub>3</sub> and 8b<sub>4</sub> imply that value relevance of cash flows information and extent of compliance with IFRS are not conditional on moderating role of being a financial industry firm.

In summary, financial industry category as proxy for industry category demonstrates statistical significant moderating effect on the association between IFRS-based accounting data and market value except for cash flows information and the level at which the firms have complied with mandatory disclosure demands of IFRS. In other words, value relevance of accounting information issued based on IFRS accounting fundamentals depends or is conditional on industry category that the listed firms belong especially for earnings and book value accounting data. The implication is that, NSE market participants incorporate attributes of industry category that a listed firm belong



while processing the stock market based quality of the accounting information to determine stock market value. Thus, these findings suggest that the stated null hypothesis cannot be accepted except for model 8b<sub>3</sub> and 8b<sub>4</sub>. In other words, regarding industry category firm factor, there is moderating effect of the attribute on value relevance of IFRS-based accounting information from the NSE context.

Due to possible shortcoming of financial industry category dummy variable employed regarding moderating effect of industry category on value relevance of the IFRS-based accounting data, the sample was subsequently subgrouped into financial and non-financial industry categories. Value relevance of the accounting data were tested univariately and multivariately based on each separate subsample.

The results as presented in Table 4.26A revealed positive coefficient and statistically significance effect of earnings per share (2.41351) and high compliance with IFRS (0.46004) for financial industry category of the listed firm ( $p < 0.01$  in each case). The individual univariate model of these two accounting information are significant (F-statistics = 48.0278 and 35.9099 for earnings and high compliance models correspondingly). However, slope coefficient of cash flows univariate regression model indicate positive relationship (0.08192) but statistically insignificant (t-stat. = 1.21021) while that of book value and compliance score are also insignificance ( $p = 0.1287$  and 0.2176 respectively) for financial industry category. This robust finding provide more specific result about the association and statistical significant effect of the financial industry category's accounting information over market value. Thus, accounting data of the financial industry category demonstrate statistical significant influence on value relevance of earnings and high compliance with IFRS at the Nigerian stock market.

**Table 4.26A: Financial Industry Category Subsample Univariate Moderating Effect Results**

	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>	<b>R2</b>	<b>Adj. R2</b>	<b>F-stat.</b>	<b>P-value</b>	<b>Durbin-Watson</b>
<b>Intercept</b>	-8.4094	0.83341	-10.090	0.0000					
<b>lnEPS</b>	2.41351	0.18758	12.8668	0.0000	0.348	0.3407	48.028	0.0000	1.86317
<b>Intercept</b>	-0.7505	3.63743	-0.2063	0.8370					
<b>lnBVPS</b>	0.96922	0.63213	1.53326	0.1287	0.137	0.1271	14.245	0.0003	1.89507
<b>Intercept</b>	5.02675	0.66493	7.55979	0.0000					
<b>lnCFOPS</b>	0.08192	0.06769	1.21021	0.2294	0.031	0.0201	2.8709	0.0937	1.92235
<b>Intercept</b>	8.04656	1.61457	4.98371	0.0000					
<b>CindexSc</b>	-2.79222	2.24894	-1.24157	0.2176	0.026	0.0156	2.4390	0.1219	1.73322
<b>Intercept</b>	5.55616	0.44113	12.5952	0.0000					
<b>HCindex</b>	0.46004	0.12337	3.72895	0.0003	0.234	0.2242	35.910	0.0003	1.93169

*N* = 92 Observations. *t*-Statistic values are based on White cross-sectional standard errors and covariance estimation.

**Table 4.26B: Non-Financial Industry Category Subsample Univariate Moderating Effect Results**

	<b>Reg. Coeff.</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value</b>	<b>R<sup>2</sup></b>	<b>Adj. R<sup>2</sup></b>	<b>F-stat.</b>	<b>P-value</b>	<b>Durbin-Watson</b>
<b>Intercept</b>	1.7109	1.41499	1.2091	0.2283					
<b>lnEPS</b>	0.8082	0.18809	4.2971	0.0000	0.175	0.170	36.95	0.0000	2.05527
<b>Intercept</b>	2.3401	1.13502	2.0617	0.0407					
<b>lnBVPS</b>	0.6144	0.10198	6.0248	0.0000	0.128	0.123	25.55	0.0000	2.22366
<b>Intercept</b>	6.3328	0.56704	11.168	0.0000					
<b>lnCFOPS</b>	0.0236	0.04290	0.5494	0.5835	0.061	0.049	0.345	0.5580	2.21136
<b>Intercept</b>	7.3154	0.55907	13.085	0.0000					
<b>CindexSc</b>	-0.949	0.87142	-1.089	0.2775	0.008	0.002	1.374	0.2426	1.77131
<b>Intercept</b>	2.5708	0.0558	46.098	0.0000					
<b>HCindex</b>	-0.0008	0.0772	-0.010	0.9921	0.096	0.0905	2.724	0.1007	2.20623

*N* = 184 Observations. *t*-Statistic values are based on White cross-sectional standard errors and covariance estimation.

On the other hand, univariate regression results for non-financial industry category as presented in Table 4.26B showed that earnings and book value explained 17% and 12% of change in share value of non-financial industry subsample with significant p-value at

0.01 level (F-Stat. = 36.9518 and 25.5522 accordingly). Conversely, regression model as well as slope coefficient of cash flows, extent of and high compliance with IFRS are not significant statistically while coefficient for extent of compliance (-0.949) and high compliance with IFRS (-0.0008) returned inverse relationship. These results further unveiled value relevance of earnings and book value of non-financial industry category accounting data consistently with Khanagha (2011) based on UAE listed firms. The implication is that participants in the Nigerian stock markets are influenced by earnings and book value of equity to make investment decision regarding share value of the non-financial industry category. Whereas, earnings and high degree of compliance with IFRS become targeted accounting information with respect to their economic decisions concerning share value of financial industry category.

Multiple regression results for the two industry categories separately confirmed the above findings using univariate models but with higher explanatory power for financial industry subsample (53%) over non-financial subgroup (41%) through their adjusted  $R^2$  (Appendix X). That is, the combined value relevance of the IFRS-based accounting data (without cognisance to high degree of compliance with IFRS) is higher for financial than non-financial industry category. Also, positive rate of changes in market value that earnings (2.110621) and extent of compliance with IFRS (3.610443) of the financial industry accounted for are generally higher than that of the non-financial subsample. This suggests higher stock market quality or value relevance of financial industry sampled firms' accounting data over non-financial industry firms at the NSE.

By drawing from these results and ensuing discussions, it can be adduced that firm size and industry category play noticeable moderating influence on value relevance of accounting data at the Nigerian stock market. As such, the null hypothesis that there is no significant moderating effect of firm-specific attributes on value relevance of accounting information issued under IFRS by the Nigerian listed firms could not be accepted. Hence, this study documents significant influence of firm-specific attributes

(i.e. firm size and industry category) on the relationship between accounting information issued under IFRS and market value in the Nigerian stock market but more for large firm size and financial industry category. The finding is in tandem with Alfaraih (2009) who note positive and statistically significant controlling effect of firm size and industry category on value relevance of accounting information employed for price model valuation under IFRS.

#### **4.5 General Model Inferential Statistics**

In overall, this subsection presents results and discussion on general regression model analysis which incorporates all the variables measured under various specific objectives. The essence is to understand the significance and direction of each variable as well as the explanatory power of the general model when the variables are combined in a model in order to address the general objective of this study.

The general objective of this study seeks to examine the influence of IFRS adoption on value relevance of accounting information in the Nigerian stock market. In a specific term, to investigate this overall objective, natural logarithm panel least square regression model was developed. The model incorporates natural logarithm of share price in March-end as response variable and natural logarithm of earning per share (lnEPS), book value of equity per share (lnBVPS), cash flow from operation per share (lnCFOPS) as well as dummy variable that represents high level of compliance with IFRS (CindexDum) as value relevance predictors (i.e. accounting information). CindexDum is a dummy variable that indicates 1 if a listed firm's level of compliance with IFRS (compliance score) is above median compliance score, otherwise zero. However, since the focus of the general objective centres on influence of IFRS-based accounting information on share values, panel data for post-IFRS period alone were used, leading to 276 firm-year observations. Also, regression model that is based on share price at the last working day in the month of March alone was considered for the analysis. This is

due to the fact that results of specific objective one to four statistical analyses suggested more value relevance in March-end models than June, and that comparison between March and June-end data is beyond the main focus of this study.

Robustness of the regression model estimation was ensured through multiple linear regression diagnostic tests. This was necessary in order to establish that the model represents best unbiased estimation of value relevance in the NSE. As a result, model validation tests of normality, multicollinearity, serial correlation and heteroscedasticity were undertaken. Jarque-Bera econometric statistic was employed to verify normality assumption. The result as shown in Appendix VI (Panel C) indicate a value of 2.187930 with a corresponding insignificant p-value of 0.334886 ( $p > \alpha = 0.05$ ). Since p-value is greater than 0.05, the null hypothesis of normality for the model cannot be rejected. Thus, the model residual values are in consonance with normality expectation.

**Table 4.27: Pearson Correlation Matrix of the General Model Variables**

	<b>lnSPm</b>	<b>lnEPS</b>	<b>lnBVPS</b>	<b>lnCFOPS</b>	<b>lnTotal Assets</b>	<b>Cindex Score</b>
<b>lnSPm</b>	1					
<b>lnEPS</b>	0.534**	1				
<b>lnBVPS</b>	0.428**	0.728**	1			
<b>lnCFOPS</b>	0.324**	0.325**	0.307**	1		
<b>lnTotal Assets</b>	0.185**	0.239**	0.306**	-0.069	1	
<b>Cindex Scores</b>	0.159**	0.083	0.250**	-0.027	0.266**	1

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

Table 4.27 presents test result of collinearity among the variables employed for the post-IFRS panel regression model using Pearson correlation coefficients. Based on the general rule of thumb, correlation among variables that is not greater than  $\pm 0.7$  as indicated by its coefficient value suggests non-multicollinearity (Anderson *et al.*, 2008).

Also, Gujarati (2004) states that pair-wise correlation coefficient above 0.8 should be considered as serious multicollinearity problem. Thus, multicollinearity problem could not be identified among the variables employed for the general model regression analysis.

Since it is also expedient to ensure that the estimation is efficient through homoscedasticity (i.e. constant error term), the regression estimation was subjected to Newey-West heteroscedasticity and autocorrelation-consistent error check and was tested using Breusch-Pagan-Godfrey heteroscedasticity method. This becomes necessary since the study adopts balanced panel data for the analysis and as the variables are also assumed not to be independent across years of this study. The output of the test as shown on Table 4.27 revealed that null hypothesis of homoscedasticity should be rejected ( $P < 0.05$ ; Observe R-Squared value of 14.40351). This suggests that variance of the error term is not constant. In order to address this problem so as to achieve efficient estimation, the regression model was subjected to White cross-section standard errors and covariance estimation.

In addition, Hausman specification effect test for unit heterogeneity was carried out. As presented in Table 4.28, the result indicated insignificant p-value of 0.1423 (Chi-Sq. Stat. = 2.981990). Consequently, null hypothesis of random effect could not be rejected. As such, random effect model was noted to be more appropriate for the general model regression analysis.

Other results of the panel regression analysis are indicated in Table 4.28 while the outputs of the model are presented in equation 4.9. The adjusted R-square of the general model regression is established at 0.435108. This implies that the four independent variables included in the general model explained about 44% of variation in value relevance (as represented with share price) in the Nigerian stock market without mediating factors. The appropriateness of this model is further confirmed through F-value of 21.51727 which is greater than the critical F-ratio of 3.78 ( $F_{cal} > F_{tab}$ ), and p-

value less than 0.01 level of significance. This evidence of suitability of the general model regression test result provided ground for rejecting the proposition that the model is ill-suited for the representation of the variables. Consequently, the validation test paved way for the interpretation of the findings on Table 4.28.

**Table 4. 28: General Model Inferential Statistics Results without Moderating Factors**

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>P-value</b>
<b>Intercept</b>	-0.852592	1.283328	-0.664360	0.5070
<b>lnEPS</b>	0.695595	0.218013	3.190616	0.0016
<b>lnBVPS</b>	0.418731	0.084003	4.984712	0.0000
<b>lnCFOPS</b>	0.048201	0.037451	1.287048	0.1992
<b>CindexDum</b>	0.217224	0.101866	2.132448	0.0339
<b>R<sup>2</sup></b>	0.446567			
<b>Adj. R<sup>2</sup></b>	0.435108			
<b>F-stat.</b>	21.51727			
<b>P-value</b>	0.000000			
<b>Durbin-Watson</b>	2.122964			
<b>Jarque-Bera</b>	0.118064			
<b>Breusch-Pagan</b>	0.0168			
<b>Hausman T.</b>	0.1423			
<b>Number of observations</b>	276			

$$\ln SP_m = -0.853 + 0.696 \ln EPS + 0.419 \ln BVPS + 0.048 \ln CFOPS + 0.217 CindexDum + \varepsilon$$

-----> (4.9)

The general model's explanatory variables demonstrate statistical significance of the valuation coefficients as showcased by their t-values that fall beyond the critical t-value as well as p-value that fall below 0.05 level of significance except for lnCFOPS. The findings suggest that all the four value relevance predictors (lnEPS, lnBVPS, lnCFOPS, and CindexDum) have positive linear association with equity share value at the Nigerian stock market as indicated by their coefficients. However, positive association of lnCFOPS slope coefficient (0.048201) does not improve the model as indicated by its statistical insignificant p-value (0.1992) and t-statistic (1.287048) that falls within the acceptance region. Positive coefficient of lnEPS (0.695595) as well as its statistical

significance ( $p = 0.0016$ ) suggests that IFRS-based earnings per share contributes the most responsiveness in the share prices of firms listed in the NSE. It also implies that equity investors are more interested in the income statement accounting information to make their economic decision about the market's equity share value. Previous studies have observed that investors appreciate dividend more in the Nigerian stock market (Oyerinde, 2011; Omokhudu & Ibadin, 2015) which is informed by the reported earnings of the listed firms. In addition, book value of equity 'claims' the next best alternative accounting information that drive volatility in stock market value from the NSE context through its positive coefficient (0.418731) that is also significantly different from zero ( $t\text{-stat.} = 4.984712$ ).

These findings suggest that, apart from cash flows statement accounting information (as represented with cash flows from operation) that its positive coefficient is not significantly different from zero, accounting information included in the model are capable of explaining variability in share prices on the floor of the Nigerian stock exchange after the adoption of IFRS. It could also be obtained from the results that greater compliance with IFRS is value relevant to the participants in the market as its positive valuation coefficient (0.217224) is significantly different from zero ( $p = 0.0339$ ,  $t = 2.132448$ ). That is, share prices of companies listed on the Nigerian stock exchange are sensitive to the extent at which the listed firms comply with IFRS (high level of compliance). This further suggests that improved informativeness of accounting information issued under IFRS-based financial reporting system which is engendered by high degree of compliance with the accounting standards is value relevant. As such, the results provided basis to submit that accounting information issued under IFRS-based accounting principles and methods portend market-based quality and are value relevant in the Nigerian stock market.

The finding is generally in line with previous findings within and outside Africa and from developed and emerging markets such as Umoren and Enang (2015) from the



Nigerian stock market using listed financial firms, Karğın (2013) using Turkish listed non-financial firms, Alfaraiah (2009) from Kuwait using all listed firms, Camodeca *et al.* (2014) using non-financial companies listed on Milan and London Stock Exchanges for a three-year post-IFRS period. However, the finding is at variance with the submission of Clarkson *et al.* (2011) who note no difference in the explanatory power of accounting information for equity valuation of Europe and Australia listed firms under IFRS using traditional linear pricing models. Also, Gjerde *et al.* (2008) discover little evidence of increased value-relevance after adopting IFRS when comparing and evaluating whether IFRS accounting figures correlate more strongly with stock market values than the corresponding Norwegian GAAP unconditionally.

In summary, direction of association and statistical significant effect of the IFRS-based accounting information on value relevance with respect to each null hypothesis stated in this study are summarised and presented in Table 4.29.

**Table 4.29: Summary of Statistical Hypotheses Testing Results**

Null Hypothesis	Models	Statistical Significance	Decision		Relationship	
			Incremental VR	Relative VR	Incremental VR	Relative VR
1	March	Yes	Reject	Reject	+ve/increase	+ve/increase
	June	Yes	Reject	Reject	+ve/increase	+ve/increase
2	March	Yes	Reject	Reject	+ve/decrease	+ve/increase
	June	Yes	Reject	Reject	+ve/decrease	+ve/increase
3	March	No	Accept	Accept	+ve/increase	+ve/increase
	June	Yes	Reject	Reject	+ve/increase	+ve/increase
4	March	Yes		Reject		Positive
	June	Yes		Reject		Positive
5	Firm-Size	Yes		Reject		
	Industry Category	Yes		Reject		

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

Consistently with the core objective of this study which seeks to examine the influence of International Financial Reporting Standards (IFRS) on value relevance of accounting information in the Nigerian stock market, the thrust of this chapter is to provide summary of findings of the study based on descriptive results and tested statistical hypotheses stated in chapter one. Findings from each hypothesis testing provided basis for arriving at conclusion on each specific objective of this study as well as its overall goal as presented in this section. The chapter also presents recommendations based on research findings which subsequently paved way for suggestion for further research.

#### **5.2 Summary**

Being a stock market-based accounting research, the essence of this study was built on unclear nature of IFRS adoption to significantly ameliorate inefficiency of national local GAAPs and enhance stock market informativeness with respect to value relevance concept specifically at the Nigeria stock market. On this basis, three-point research problems were identified to address the general objective of this study as structured to investigate influence of IFRS adoption on value relevance in the Nigerian stock market.

Sequel to IFRS adoption due to increasing globalisation of capital markets worldwide which is one of the key indicators of national or global economic enhanced performance, there is lack of clarity as to the ability of IFRS-based accounting information to engender improved value relevance in the stock markets. Also, beyond equity valuation under new assumed qualitative accounting standards, the extent at which financial reporting entities comply with IFRS's mandatory disclosure requirements varies and has been observed not encouraging to drive value relevance properly. More importantly, this

aspect of value relevance study appears new in literature which was accorded priority in this study. Lastly, there are existing mixed submissions regarding influence of firm-specific attributes on value relevance of accounting data issued under IFRS corporate financial reporting regime.

Given the research problems, five specific objectives were established as pointers to tackle the problems. The objectives informed five statistical hypothesis statements. As a directive for all listed companies on the floor of NSE, the study was structured to capture equal period before and after IFRS adoption in the Nigeria stock market (i.e. 2008 – 2011 and 2012 – 2015). Nigerian listed companies with December 31 as financial year-end became target population of the study. Nevertheless, failure to meet established sample selection criteria led to exclusion of fifty-nine companies from the target population, leading to sixty-nine purposively selected sample firms. The companies were grouped as financial and non-financial for inferential statistics purpose and based on unique nature of financial service sector.

Theoretically, the study draws guide from signalling, efficient market hypothesis, agency and stakeholder theories. These theories helped to understand theoretical form of association between IFRS-based accounting information and value relevance, and its implication on relationship between the preparers of the accounting data and related stakeholders. Review of extant empirical studies informed identified gaps that this study sought to fill and its tenacity to add to knowledge. Value relevance of the accounting information was based on three main contents of financial statement (i.e. income statement, statement of financial position and cash flows statement). Both financial and non-financial industry categories were considered while more improved and increased IFRS/IAS compliance index was employed to measure extent at which Nigerian listed firms have complied with IFRS within four years of its adoption as well as its value relevance. More importantly, this study based its inferential statistics and submission on

special consideration for possible specification effect with respect to industry specific heterogeneity among the sampled firms.

Mixed research paradigm provided philosophical research guide for the study. Consequently, descriptive research design was employed as ‘blueprint’ for addressing identified research problems and basis for collecting secondary (balanced panel) data used. NSE Fact books and archival data, and audited published annual financial reports of the sampled firms were sourced while improved self-developed IFRS compliance index was used to assess extent of compliance with IFRS. Descriptive and inferential statistics provided bases for evaluating stated objectives. While mean, skewness, and graphs among others were used for descriptive analyses, inferential statistics involved the use of simple and multiple linear regression for specific and overall general objectives. Natural logarithm form of the modified Ohlson price valuation model based on panel linear regression was used to test value relevance of accounting information issued under IFRS at the Nigerian stock market. In a nut shell, summary of findings regarding the research objectives based on test of each statistical hypothesis of this study are presented in the following subsections.

### **5.2.1 Value Relevance of Income Statement Accounting Information under IFRS**

Specific objective one of this study statistically proposed that there is no significant effect of IFRS adoption on value relevance of income statement accounting information of the Nigerian listed firms. Drawing from descriptive analysis, earnings per share of the Nigerian listed firms (proxied as income statement bottom-line item) did not follow a specific pattern all through the years under investigation. Also, trend between pre- and post-IFRS period revealed that earnings mean score in the post-IFRS (i.e. ₦1.37) represents about 123% of pre-IFRS period (i.e. ₦1.11) which indicates a noteworthy improvement in the post-IFRS period. However, results of coefficient of variation suggest higher degree of closeness in the accounting data during post-IFRS period than pre-IFRS period. This indicates that income statement accounting information issued under IFRS-based accounting principles is less dispersed than the one issued under

Nigerian local GAAPs. The result also pre-empted higher quality of IFRS accounting information over SAS-based accounting data, suggesting better quality of IFRS over Nigerian SAS.

The results of panel regression model employed indicated that income statement accounting information represented with earnings per share is incrementally and relatively more value relevant under IFRS in the market. The findings revealed positive association of the variable with share price both in March and June-end which are statistically significant. Precisely, incremental association model results indicated that approximately 33% (March-end model) and 32% (June-end model) of variation in share price could be explained by earnings and its interaction with IFRS dummy in the post-IFRS period which are significant at 0.01 level. Furthermore, relative association test indicated remarkable and statistically significant improvement in the rate of change in share price that could be informed by any change in earnings under IFRS regime as compared to accounting data under Nigerian local GAAPs both in March and June-end. The relative association measure also showed increase in the explanatory power of earnings between pre-IFRS (11%) and post-IFRS (26%) for March-end models, and pre-IFRS (17%) and post-IFRS (24%) for June-end models. These results provided basis to asseverate that income statement accounting information under IFRS are more value relevant than the one issued under pre-IFRS regime from the NSE financial reporting environment. The implication is that adoption and adherence to accounting principles and fundamentals as enshrined in IFRS improve stock market based quality (value relevance) of income statement accounting information over national GAAP (SAS) based counterpart. That is, NSE participants value the accounting information much more than the erstwhile SAS-based earnings. Therefore, this study fails to accept the null hypothesis suggesting no significant effect of IFRS adoption on value relevance of income statement accounting data of the Nigerian listed firms.

This result could be interpreted in the light of signalling theory in the sense that, income statement accounting information issued under IFRS communicates improved (positive) signals to the investors because basis for preparing the information is more informative, timely efficient, relevant and reliable to them. That is, since IFRS-based income statement data is more value relevant, it is an indication that qualitiveness of IFRS has been signalled to the market participants. This implies relevancy of signalling theory to value relevance study under IFRS-based financial reporting system. This result also demonstrates theoretical justification regarding efficient market hypothesis. The fact that relative association measure indicates higher explanatory power and slope coefficient in March over June during post-IFRS imply that the Nigerian stock market is becoming more informationally efficient during IFRS financial reporting regime around March in terms of timely arrival of the accounting information in the market. Explanatory power of the incremental association metric and the slope coefficient of its interactive variable which are higher in March also corroborate this submission. Hence, income statement information issued under IFRS improved informational efficiency of the Nigerian stock market after it adopted IFRS. Therefore, EMH was found appropriate in the value relevance of post-IFRS corporate financial reporting system at the NSE.

### **5.2.2 Value Relevance of Financial Position Statement Accounting Information under IFRS**

The thrust of specific objective two is to evaluate effect of financial position statement's accounting information under IFRS on value relevance. Descriptive analyses results showed that, book value of equity of the Nigerian listed companies (proxy for financial position statement accounting information) indicates persistent yearly increase for the period under review. Additionally, this accounting information recorded about 41% increase in the mean value during post-IFRS period (i.e. ₦8.80) over pre-IFRS period average score of ₦6.24. This accounting information also showed lower degree of dispersion through its coefficient of variation in the post-IFRS period suggesting that IFRS-based financial reporting framework has potential to lessen wider variation in the

accounting data (possibly informed by its accounting principles) unlike the one issued under Nigerian local standard.

As hypothesised, the statistical test results of incremental association study showed that about 28% (March-end model) and 26% (June-end model) of variation in the share price at the Nigerian stock market could be explained by book value of equity and its cross-product with IFRS dummy which are both statistically significant. Also, relationship of book value under IFRS was positive and statistically significant using its interactive variable in the models. Univariate relative value relevance association test revealed increased explanatory power of book value on share price from 12% to 21% in the post-IFRS period for March-end and 9% in pre-IFRS period to 17% during post-IFRS for June-end models. Coefficient of the variable in each model indicates positive association with stock market values which is statistically significant. The coefficients are generally higher in the post-IFRS period compared to pre-IFRS for both March and June models except for incremental value relevance models.

These inferential and descriptive analyses suggest improved information efficiency (EMH) and reduced asymmetric accounting information that is capable of communicating good signals to the market participants after IFRS adoption at the Nigerian stock market. In addition, higher explanatory power of the variable around March-end over June-end in the post-IFRS using both incremental and relative value relevance metrics indicate improved timeliness regarding the time that published annual financial reports of the Nigerian listed companies get to the stock market. Consequently, since the variable's coefficient is positive and statistically significant using the two metrics, there was no sufficient evidence to accept the null hypothesis that IFRS adoption does not have significant effect on value relevance of statement of financial position accounting information of the Nigerian listed firms. Thus, the accounting information is more value relevant incrementally and relatively in March than June at the Nigerian stock market.

### **5.2.3 Value Relevance of Cash Flows Statement Accounting Information under IFRS**

As construed by specific objective three of this study, summary of the test results of hypothesis that states that there is no significant effect of cash flows statement accounting information under IFRS on value relevance in the Nigerian stock market is presented in this subsection. In the first instance, means of the yearly descriptive analysis indicated no specific direction of the variable as it crisscrossed all through the eight-year period under investigation although with stagnant average value between 2011 and 2013. Its post-IFRS mean score (₦2.30) revealed about 10.9% drop in its mean scores from ₦2.58 during pre-IFRS period. This indicates a downward trend in the average scores of the accounting information which could signal its reduced relationship with each unit of equity value. Nonetheless, coefficient of variation values in the two periods (i.e. pre- and post-IFRS) showed that degree of dispersion of the variable among firms in the post-IFRS period (3.863) reduced compared to pre-IFRS period (4.933). This symbolises higher level of closeness in the data after IFRS was adopted in the stock market. Thus, based on the sample employed in this study, this result also suggests that IFRS-based accounting principles has narrowed down impact of several accounting choices on the accounting data in the Nigerian stock market.

Incremental association test results revealed inverse relationship of the variable with market value in both March and June before IFRS adoption which was only statistically significant in March. The tests also indicate higher positive relationship of the interactive variable in both March and June-end (during post-IFRS period) which is only statistically significant in June. There was marginal higher explanatory power of the accounting information in March-end model (13%) over June-model (12%). Relative measure showed similar results for June but with a declined explanatory power over share values from 14% in pre-IFRS period to 11% in the post-IFRS. Positive association of the variable with stock market value in pre- and post-IFRS March and June were not statistically significant for March. This suggests mixed findings on value relevance of



cash flows information under IFRS between March and June. However, since comparison between March and June models is not the main objective of this study, the study fails to reject the null hypothesis that effect of IFRS adoption on value relevance of cash flows accounting data is not statistically different from zero using March-end model relatively and incrementally. Even though cash flows statement information helps to unveil cash movement during accounting period with respect to operational, investment and financing activities each firm has engaged itself, result of this study showed that market participants at the Nigerian stock market have demonstrated statistically insignificant but positive reliance on the accounting information for economic decision at the stock market after IFRS adoption.

This finding suggests unique theoretical implication that positive value relevance of cash flows statement accounting information issued under IFRS is no longer statistically efficient (informationally) at the Nigerian stock market with regards to EMH postulation. That is, cash flows information (represented by cash flows from operation) under IFRS could not be well relied on and incorporated properly in the information processing and absorption by the market participants in the NSE. It also implies that its positive signal to the market participants at the Nigerian stock market is not statistically significant, meaning that the equity market investors and other participants get more value relevant signals from other preferred accounting information in the spirit of signalling theory. However, apart from statistical significance of this accounting information in June, its coefficient and explanatory power demonstrate that it is more incrementally value relevant in March than in June. Hence, IFRS accounting fundamentals could not drive cash flows statement accounting information more value relevantly upon the adoption of the accounting standards at the NSE. This might be due to the fact that this accounting figure only presents cash movement regarding core business operations of the firms within a reporting period unlike accrual based information which could be more influenced by IFRS accounting principles and methods.

#### **5.2.4 Value Relevance of Extent of Compliance with IFRS**

Observed research gap and confounding evidences from literature concerning the quality of accounting standards (i.e. IFRS) in generating qualitative accounting information which is expected to address identified weaknesses in the local GAAPs informed the need to investigate extent of its compliance among Nigerian listed firms and its resultant effect on value relevance. This served as hinge for the fourth specific objective. This aspect of the study is limited to post-IFRS period alone since Nigerian local SAS was meant to have been observed in the pre-IFRS period. 503-item IFRS compliance index was designed to examine extent of sampled Nigerian listed firms' compliance with IFRS. Descriptive results indicated overall 91% compliance mean score for the entire sampled firms through 31 IAS/IFRS accounting standards assessed. This was largely explained by progressive higher mean score of financial service industry category over non-financial industry throughout the four years of the investigation (i.e. 2012 – 2015).

The results of its inferential statistics primarily indicated positive valuation coefficient of high compliance with IFRS in March and June which are significantly value relevant. The regression models of greater compliance with IFRS for both March and June were also significant suggesting that high degree of compliance with IFRS is value relevant in the Nigerian stock market. Also, valuation coefficient of level of compliance among the listed firms revealed positive and significant value relevance.

Further attempt was made to unearth how accounting information of high and low extent of compliance with IFRS are value relevant in the stock market. As such, sampled firms were subdivided into high and low compliant firms. The outcome of the tests revealed that separate models for high and low compliant firms were statistically significant and that the variables included in each model jointly explained 28% and 32% change in share price for high and low compliant firms correspondingly. The results further suggest that participants at the market significantly seek for earnings and book value of equity of high compliant firms in their economic decision about share price of the firms

subsample. Whereas, they look out for cash flows from operation accounting information in addition to earnings and book value of low compliant firms concerning market equity valuation of the firms. In view of the fact that the results of this further test also unveiled statistical significant models and positive valuation coefficient of the accounting information of both high and low compliant firms jointly and individually which were also significant statistically, the null hypothesis that there is no significant effect of extent of compliance with IFRS on value relevance of accounting information of the Nigerian listed firms is rejected. Hence, extent of compliance with IFRS is not only value relevant from NSE context but accounting information prepared under it are also value relevant.

Drawing from Signalling, Agency and Stakeholder theories conjectures, progressive improvement in the mean compliance scores of both financial and non-financial industry categories is an indication that Nigerian listed firms are becoming better-off in complying with IFRS mandatory disclosure requirements. This could have sent positive signal to the market participants about improved quality (value relevance) of the accounting information issued under the standards. It could also be adduced to possible cost-benefit trade-off strategy implemented by the managements of the firms for their own benefit, the shareholders and that of the numerous stakeholder such as potential investors, stockbrokers, analysts, portfolio managers, market regulators and other stock-listing bodies among others. It is also an indication that managements (agents) of the Nigerian listed firms appropriate and evaluate agency costs properly well to the benefit of their principal (investors), themselves and other stakeholders. This is because, the listed firms risk being delisted in case of failure to imbibe and observe post-listing demands of the market which include compliance with IFRS mandatory disclosure requirements.

### **5.2.5 Influence of Firm-specific Factors on Value Relevance of Accounting Data under IFRS**

For a detailed value relevance study devoid of being parochial, attempt to exhume possible moderating influence of firm-specific attributes becomes expedient. This is because, firm's unique characteristics such as firm size and industry category among others are capable of exhibiting pivotal function in the economic decision of the stock market participants about listed firms' market values based on issued accounting data. As a result, it has special role in the value relevance regression model. In addition, these attributes have capability to influence level of compliance with IFRS. Owing to these facts, the fifth specific objective was framed and hypothesised. Natural logarithm of the sampled firms' total assets (due to departure from normality) was used as proxy for firm size while its median value was considered as basis for partitioning the firms into small and large firm sizes.

When market share value was regressed on each accounting information together with the moderator and their interaction term separately, inferential regression results indicated that firm size provides enhancing moderating effect on the association between earnings, book value and cash flows accounting information issued under IFRS. The coefficient are positive and statistically significant except for extent of compliance with IFRS demands by the sampled NSE listed firms. Further test for high level of compliance with IFRS univariately returned no moderating influence of the firm size. Nevertheless, robust examination using partitioned subsample firms revealed that only earnings and book value of equity of large firm-size are positively and significantly related to market value statistically. Whereas, only value relevance of earnings and extent (as well as high level) of compliance with IFRS among the small size firm subgroup were noted, although inverse for the latter. Also, large-firm subsample demonstrates higher value relevance or quality of the combined accounting data (51%) over small size firms (31%) using their multiple regression results. These results indicate

significant moderating effect of firm size factor on value relevance of accounting information under IFRS at the Nigerian stock market.

As regard industry category, a dummy variable that equals 1 if financial industry, otherwise zero was introduced and included in the separate regression models of each accounting information as moderating factor. Results of the moderating effect tests for each accounting information showed that interaction between financial industry category dummy variable, and earnings and book value separately modifies the association that the two accounting data has with market value of the industry category but not for cash flows and extent of compliance with IFRS. However, when the sample was subgrouped into financial and non-financial subsamples, earnings and extent of compliance with IFRS of financial industry category are statistically and positively related to market value with higher explanatory power of about 53% over non-financial category with value relevance of only earnings and book value, and variability of approximately 41 percent using multiple regression results. From the NSE context, these findings imply that industry category that a listed firm belong has influence on value relevance of the accounting information issued to the market by the respective firms and as processed by the stock market participants. Consequently, there was no sufficient evidence to accept the null hypothesis that there is no moderating effect of firm specific factors on the value relevance of IFRS-based accounting information of the Nigerian listed firms.

An inference from the results of statistical tests regarding moderating influence of the two firm-specific factors identified and examined in this study is that there is significant effect of the firm attributes on the relationship between accounting information and value relevance in the Nigerian stock market. Theoretically, this finding provides basis for establishing applicability of signaling theory and EMH to moderating influence of firm-specific factors on value relevance of accounting information under IFRS in the Nigerian stock market. That is, firm-specific attributes play significant moderating role regarding variability in stock market value as the stock market participants draw signal

about firm-based attributes of the accounting information issued which influences market value based on how they process each listed firms attributes. Thus, these factors form conditional drive on the way participants at the NSE value accounting information in the stock market when making investment decision that affect equity value of the listed firms.

Conclusively, results of the general model inferential statistics indicated that income statement and financial position statement accounting information as well as high compliance with IFRS are generally value relevant in the post-IFRS period. The coefficients of the variables were positive and significant statistically except for cash flows whose t-statistic was found within the acceptance region. Also, statistical evidence from preliminary analysis using the rate of change and explanatory power results uncovered higher value relevance or accounting quality of IFRS based accounting data (41%) over pre-IFRS period's accounting information (26%) using March model. This provides basis for this study to submit that accounting information issued with regard to principle-based IFRS accounting methods and principles possess more market-based quality than the one issued under Nigerian local standards (SASs).

### **5.3 Conclusions**

This section presents conclusions of findings based on descriptive and inferential analyses carried out. They are highlighted in the following paragraphs.

First and foremost, descriptive analysis established high volatility in the mean scores of the Nigerian listed firms' earnings for the period under review and that it did not follow a specific pattern. In the post-IFRS period, earnings per share was generally higher than pre-IFRS period. Thus, results of the inferential analysis concerning the effect of income statement bottom-line item (earnings) under IFRS on value relevance revealed that earnings per share is more value relevant and positive predictor of share price in the Nigerian stock market. It was also noted that this accounting information is relatively

and incrementally value relevant both in March and June-end. These findings provided basis for the conclusion that, income statement accounting information (as represented with earnings per share) of Nigerian listed firms is significant and more value relevant under IFRS-based financial reporting system. That is, principle-based IFRS fundamentals possess attributes that could make accounting information prepared and issued under the standard more informative and of higher quality to NSE participants. Thus, this study contributes to stock market-based accounting knowledge that IFRS adoption has significant effect on value relevance of income statement accounting information of the Nigerian listed firms.

Secondly, this study also discovered that book value of equity (a proxy for financial statement accounting information) was also positive driver of share price in the NSE. The results of both relative and incremental association of the variable with share price was positive for March and June-end periods. It was also noted that the explanatory power of book value over share price and its coefficient increased in the post-IFRS period than for pre-IFRS period relatively. This submission was also supported by findings from descriptive analysis which revealed about 41% rise in the mean score of book value in the post-IFRS period. Univariate relative association measure of value relevance of book value between pre- and post-IFRS periods for March and June also provided basis to established improved timeliness in the arrival of the accounting information in the Nigerian stock market. Consequently, this study concludes and advances market-based accounting research finding that financial position accounting information issued by various forms of listed firms under IFRS in the Nigerian stock market has positive and significant effect on value relevance. This submission unveiled higher quality of the accounting figure under IFRS which presupposes its improved qualitative attributes to the NSE participants over former local SAS.

Thirdly, although it was established that cash flows statement accounting information is relatively more value relevant under IFRS period around June, its explanatory power

decreased in the period when compared with pre-IFRS period. However, its incremental association test indicated inverse relationship with share price in the post-IFRS period. Even though its descriptive results suggested about 11% decrease in mean value in the post-IFRS period, the outcome of its relative and incremental value relevance tests showed mixed findings and conclusion between March and June. Nevertheless, drawing from March model analysis, there is no sufficient evidence to conclude that cash flows statement accounting information as represented by cash flows from operation per share has significant effect on value relevance under IFRS. That means, IFRS-based accounting fundamentals and demands possess no sufficient feature to make cash flows information more value relevant statistically to the market participants upon its adoption at the NSE. As such, this study contributes to value relevance accounting knowledge that cash flows statement accounting information issued by the Nigerian listed firms under IFRS does not have statistical significant effect on stock market value in the Nigerian stock market.

Furthermore, extent of Nigerian listed firms' compliance with IFRS was measured and the results generally revealed reasonable and fairly acceptable high mean score of 91%. This was largely contributed by yearly increase in the compliance level of financial industry category. Univariate regression analysis of share price on high compliant firms revealed positive and statistically significant value relevance. In addition, the study notes further that accounting information of both high and low compliant sub-sample firms are significantly and positively value relevant. This provided basis for rejecting null hypothesis that extent of compliance with IFRS is not significantly value relevant from the Nigerian stock market context. Consequently, this study concludes by adding to IFRS compliant accounting research that extent of compliance with IFRS has positive and significant effect on value relevance from the NSE financial reporting environment which has latent to reduce information asymmetry and mitigate uncertainties about companies fundamentals. Also, the finding implies that burden of compliance risk exhibit by the corporate entities' managers hinges on its aftermath implication on



shareholders values in the stock market. Thus, this study documents that IFRS adoption and compliance with its mandatory disclosure demands possess statistically significant value relevance attribute and also informative to stock market participants.

Also, moderating effect of firm size and industry category firm-specific attributes on value relevance of the Nigerian listed firms' accounting data were examined. Drawing from the statistical analyses of moderating effect models and partitioned subsamples for firm size analyses, this study revealed that size of the Nigerian listed firms modifies value relevance of earnings, book value of equity and cash flows accounting information. In addition, the IFRS-based accounting information of large firm indicate higher stock market quality in terms of rate of change convey and combined explanatory power over market value than small size thereby contributing to accounting research in this regard. It therefore implies that as size of the listed firms improves, IFRS-based accounting data would become more value relevant. On the other hand, moderating influence of financial industry category was observed in the value relevance of earnings and book value but not for cash flows and level of the firms' compliance with IFRS. Nevertheless, statistical results for financial and non-financial industry category subsamples based separate analyses showed that combined accounting data of financial industry firms are more value relevant than that of non-financial firms. This finding might be linked with how well the former has complied with IFRS demands as indicated by the descriptive analysis of compliance with IFRS.

The outcome of these various moderating effect analyses formed basis to conclude that there is significant and positive effect of firm-specific attributes on value relevance of accounting information in the Nigerian stock market. That is, Nigerian stock market participants consider firm-specific attributes to determine value relevance of accounting information after IFRS adoption thereby expanding accounting research in this regard. Thus, this study concludes that there is statistical significant moderating effect of firm-

specific attributes on value relevance of accounting information from NSE perspective which consequently paved way for rejecting null hypothesis five.

Finally, the general objective of this study also provides another unique frame to understand and draw conclusion on the value relevance of identified explanatory variables explored in this study. Post-IFRS general regression model showed that about 44% of variation in share price of the Nigerian listed firms is explained by all variables included in the panel regression model. Regression coefficient of the variables are generally positive and statistically significant at 0.05 level excluding cash flows statement accounting information. Also, results of the relative measure between pre- and post-IFRS periods using preliminary regression models corroborate this finding, revealing eminent higher value relevance of IFRS-based accounting information over the Nigerian SAS-based accounting data in both March and June. As such, this study advances accounting research knowledge that income statement and financial position statement issued under IFRS, and high level of compliance with IFRS are valued by the Nigerian stock market's participants in predicting share values in the post-IFRS financial reporting period. This could be as a result of the identified attributes of the principle-based IFRS such as fair value measure, reduction in managerial discretion about accounting alternatives, more information disclosure requirement resulting in voluminous pages of financial reports among others.

Therefore, this study concludes that IFRS adoption demonstrate statistically significant influence on value relevance of accounting information in the Nigerian stock market. Also, Nigerian SAS fundamentals were less conservative than IFRS consistently with some existing studies. As such, findings of this study portend that IFRS adoption provides higher stock market-based support for accounting information issued under the standards which could ameliorate sub-optimal investment decision and information asymmetry, resulting in improved information efficiency at the stock market, enhancing foreign investors' reliability on the accounting information as basis for improved foreign

direct investment. Besides, relative to accounting information, this study documents improved informational efficiency of the NSE as the market share values reflect available accounting information examined based on the scope of the study.

## **5.4 Recommendations**

Qualitative and globally accepted accounting standards that support issuance of value relevant accounting information which are reliably relevant for improved cross-border investment decision in the stock market is a necessity and prominent. Drawing from findings and conclusions of this study, the following managerial and policy recommendations are advanced.

### **5.4.1 Managerial Recommendations**

IFRSs emergence as better alternative accounting standards in place of local, national or regional based accounting standards has come to stay. More importantly, this study has established that accounting information prepared under IFRS are more value relevant than those prepared under local GAAPs from Nigerian stock market setting and economy. As a result, this study recommends that managements of corporate entities should invest more in keeping themselves and staff up-to-date on improved knowledge of IFRS demands and compliance. This process has potential to minimise likely agency cost arising from failing to disclose value relevant information quest of the existing and potential local and international participants (investors) in the stock market. The step would also offer enhanced informativeness that can engender capital market efficiency in terms of relevant and reliable accounting information. The resultant effect is that such local stock market would become international investors' preference that is capable of supporting improved foreign direct investment among others. It could also be instrumental to engender cross-border listing of such locally traded stocks. This will consequently have positive transferred or spillover effect on national economy as well as global capital market.

In addition, management of non-financial industry category should rise up to the above challenge by ensuring improved compliance with IFRS. This is because, even though accounting information of both high and low levels of compliance with IFRS were noted to be value relevant in this study contrary to some extant empirical submissions, the result of extent and greater compliance with IFRS for non-financial industry category univariately and multivariately indicated statistical insignificant and inverse relationship with the firms' market values. As it was also confirmed by general low compliance mean score of this industry category group as presented through descriptive finding, this study opines that if its compliance level with IFRS improves, it has high potential to make its (or the) accounting information more value relevant under IFRS. Therefore, Financial Reporting Council of Nigeria (FRCN) and NSE regulatory bodies should make frantic effort to ensure closer watch over this industry category on improved compliance with IFRS.

#### **5.4.2 Policy Recommendations**

Furthermore, although level of compliance with IFRS among Nigerian listed firms is relatively high, since its compliance is value relevant in the stock market, much more is expected from the firms because compliance with IFRS is mandated for all listed firms in the market. Therefore, NSE should put a framework in place that measures the rate of compliance of each listed firm's annual reports with IFRS demands such that, firm that records below expected compliance level should be sanctioned accordingly. That is, the rule and disclosure demand that reporting entity should indicate whether it complies with IFRS or not should be interpreted beyond 'book'. Through this policy, it is expected that compliance with IFRS will improve among Nigerian listed firms. The effort will consequently improve reliably relevant accounting information that gets to the market for local and international investors' efficient and optimum economic decisions.

Also, based on the findings of this study, the study recommends that FRCN and other accounting standards setting bodies globally should support the effort to ensure improved compliance with IFRS as a matter of policy. This should be done by

organising compulsory regular training and re-training programmes for management and staff of all listed firms on importance as well as need to observe all the mandatory disclosure requirements of IFRS. The step is foreseen to enhance confidence of local and most importantly foreign investors on accounting information ‘consumed’ to drive their investment decision in the stock market. Through this process, the market capitalisation is not only envisioned to improve but will also lead to increased foreign direct investment to the economy. This is also expected to be a booster for both emerging and frontier stock markets globally.

Since understanding the effect of mandatory adoption of IFRS on properties of accounting data is of potential interest to standards-setters and securities regulators of nations that have already adopted the accounting standards and those considering its adoption, as a matter of policy, FRCN, NSE and Nigerian Security and Exchange Commission should work together with practising auditing firms to map out specific and unique compliance index that should be observed by the Nigerian listed companies when preparing their annual reports. This should be structured base on each accounting standards so as to address multifaceted needs/requirements of individual listed firms and sectoral categories. The essence of this policy is not only to serve as basis for compliance assessment of each firm’s annual report by NSE (agency policing mechanism), but also as a result-oriented guide for financial reports preparation, acceptable instrument for future research purpose and appreciable support to International Accounting Standards Board’s (IASB) persistent review and re-upgrading of IFRS disclosure requirements. This policy recommendation is also applicable to related stock markets and economies.

As matter of policy, this study recommends further that stock markets’ regulatory bodies should be stricter about specific period of time that annual audited financial reports of all listed firms should arrive in the stock market. Defaulting firm should be promptly sanctioned as deterrent to others. This becomes necessary especially for primary

emerging and frontier stock market where there is likelihood of information inefficiency. This will serve as a way of improving on the stock market efficiency.

Finally, by way of enhancing positive accounting theory, this study contributes to the field of accounting research by establishing incremental informative content and quality of IFRS based accounting information from the NSE perspective. In other words, a deduction from the findings imply that IFRS based accounting data reduce information asymmetry, improve stock market information efficiency, possess attributes to reduce agency cost and enhance stakeholders' interests. This thereby necessitates urgent need for improved efforts of the IASB and various locally constituted IFRS implementation bodies to identify, process, issue standards devoid of management discretion, monitor compliance and encourage more adoption of IFRS globally especially in the developing economies. This will also provide support for global stock markets, encourage improved cross-border listing and reliably relevant capital markets comparison.

### **5.5 Areas for Further Research**

To start with, this study suggests that future study should consider a longer period of investigating influence of IFRS adoption on value relevance of accounting data since value relevance theory could be better unearth when the study covers longer period of time. This study is limited to four equal years pre- and post-IFRS period due to non-availability of data beyond four years of IFRS adoption in the Nigeria stock market. Also, justified attempt could be made to incorporate firms with financial year-end other than December 31 in the sample.

Moreover, since IFRS is a principle-based accounting standard, this study suggests that future study should attempt to investigate possible role of corporate governance measures that include extent of compliance with IFRS in the value relevance study under IFRS-based reporting regime. The study advances further that weighted method of IFRS compliance measure and/or combined methods should be employed in future study to

unearth possible implication of the different methods on value relevance measure especially from related emerging or frontier stock market.

Since value relevance is one of the numerous means through which accounting quality could be measured, future studies are encouraged to explore other medium such as earnings management, income smoothing, accrual quality, and reporting aggressiveness among others to unravel more effect of IFRS adoption on value relevance of accounting data. Additionally, owing to the fact that value relevance could be studied through either price and/or returns valuation models, this study suggests that future study should employ returns model to unveil influence of IFRS adoption on value relevance of accounting information. Also, moderating effect of other forms of firms attributes such as profitability and auditor type could be examined in future study.

Similarly, in a capital market where publishing of quarterly and half-yearly audited financial reports are made mandatory for listed firms, it is suggested that value relevance of accounting information under IFRS should be examined in this regards. That is, quarterly or half-yearly share prices should be regressed on corresponding accounting data. The importance of this suggested research focus is to guide against possible influence of new accounting information on value relevance findings.

Having observed statistical significant influence of greater compliance with IFRS on value relevance in this study, further investigation in this direction is recommended especially from emerging and frontier stock markets. This is majorly expected to provide more empirical findings regarding univariate result of greater or low compliance regression model on value relevance as documented in this study.

In future related stock market-based accounting research under IFRS where arrival of annual financial reports in the market is not concentrated in a certain period or mandated to arrive in the market within a specified period of time, share value of two or more periods (month-end) should be considered in order to establish the period that

accounting information is observed as being/or more value relevant. The essence is to strengthen value relevance literature and to also ascertain value relevancy (or irrelevancy) of accounting data in the capital market especially under IFRS.

Finally, beyond the use of secondary data, this study also advocates that future research should explore the use of primary data source to unearth perception of the stockbrokers on value relevance of accounting information under IFRS especially when compared with local GAAP-based reporting regime. This is perceived to be needful because the stockbrokers and other participants in the stock market such as financial analysts, portfolio managers are the main users of this supposedly improved or more qualitative accounting data under IFRS on behalf of their clients (i.e. investors). It is expected that this attempt would provide supporting evidence to establish findings through secondary data based value relevance study and also expand value relevance literature in that regard.



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## APPENDIXES

### Appendix I: List of IASs/IFRSs, Titles and Effective Dates

**Table A:** Current Status and Effective Dates of IASs/IFRSs

Standards	Title	Effective Date
IAS 1	Presentation of Financial Statements	1 January 2009
IAS 2	Inventories	1 January 2005
IAS 7	Cash Flows Statement	1 January 1994
IAS 8	Accounting Policies, Changes in Accounting Estimates and Events	1 January 2005
IAS 10	Events After Balance Sheet Date	1 January 2005
IAS 11	Construction Contracts	1 January 1995
IAS 12	Income Taxes	1 January 1998
IAS 16	Property, Plants and Equipment	1 January 2005
IAS 17	Leases	1 January 2005
IAS 18	Revenue	1 January 1995
IAS 19	Employee Benefits	1 January 1999
IAS 20	Accounting for Government Grants and Disclosure of Government Assistance	1 January 1984
IAS 21	Effects of Changes in Foreign Exchange Rates	1 January 2005
IAS 23	Borrowing Costs	1 January 2009
IAS 24	Related Party Disclosures	1 January 2011
IAS 26	Accounting and Reporting by Retirement Benefits Plans	1 January 1988
IAS 27	Consolidated and Separate Financial Statements	1 July 2009
IAS 28	Investments in Associates	1 January 2009
IAS 29	Financial Reporting in Hyperinflationary Economies	1 January 1990
IAS 31	Interest in Joint Ventures	1 January 2005
IAS 32	Financial Instruments: Presentation	1 January 2005
IAS 33	Earnings Per Share	1 January 2005
IAS 34	Interim Financial Reporting	1 January 1999
IAS 36	Impairment of Assets	31 March 2004
IAS 37	Provisions, Contingents Liability and Contingent Assets	1 July 1999
IAS 38	Intangible Assets	31 March 2004
IAS 39	Financial Instruments: Recognition and Measurement	1 January 2005
IAS 40	Investment Property	1 January 2005
IAS 41	Agriculture	1 January 2003
IFRS 1	First-time Adoption of International Financial Reporting Standards	1 July 2009
IFRS 2	Share-based Payment	1 January 2005
IFRS 3	Business Combinations	1 July 2009
IFRS 4	Insurance Contracts	1 January 2005
IFRS 5	Non-current Assets Held for Sales and Discontinued Business	1 January 2005
IFRS 6	Exploration for and Evaluation of Mineral Resources	1 January 2006
IFRS 7	Financial Instruments: Disclosure	1 January 2007
IFRS 8	Operating Segments	1 January 2009
IFRS 9	Financial Instruments	1 January 2013
IFRS 10	Consolidated Financial Statement	1 January 2013
IFRS 11	Joint Arrangement	1 January 2013
IFRS 12	Disclosure of Interest in Other Entities	1 January 2013
IFRS 13	Fair Value Measurement	1 January 2013
IFRS 14	Regulatory Deferral Accounts	1 January 2016
IFRS 15	Revenue From Contracts with Customers	1 January 2018

**Source:** The official IASB volume for 2011 which include amendments made by IFRSs issued up to 31 December 2010, Pacter (2015) (IFRS Foundation), Poole (2015) (Deloitte)

## Appendix II: IASs/IFRSs Included and Excluded from Compliance Checklist

**Table B1: IASs/IFRSs Included in Compliance Checklist**

Standards	Title
IAS 1	Presentation of Financial Statements
IAS 2	Inventories
IAS 7	Cash Flows Statement
IAS 8	Accounting Policies, Changes in Accounting Estimates and Events
IAS 10	Events After Balance Sheet Date
IAS 11	Construction Contracts
IAS 12	Income Taxes
IAS 16	Property, Plants and Equipment
IAS 17	Leases
IAS 18	Revenue
IAS 19	Employee Benefits
IAS 21	Effects of Changes in Foreign Exchange Rates
IAS 23	Borrowing Costs
IAS 24	Related Party Disclosures
IAS 26	Accounting and Reporting by Retirement Benefits Plans
IAS 27	Consolidated and Separate Financial Statements
IAS 28	Investments in Associates
IAS 31	Interest in Joint Ventures
IAS 33	Earnings Per Share
IAS 36	Impairment of Assets
IAS 37	Provisions, Contingents Liability and Contingent Assets
IAS 38	Intangible Assets
IAS 40	Investment Property
IAS 41	Agriculture
IFRS 1	First-time Adoption of International Financial Reporting Standards
IFRS 2	Share-based Payment
IFRS 4	Insurance Contracts
IFRS 5	Non-current Assets Held for Sales and Discontinued Business
IFRS 6	Exploration for and Evaluation of Mineral Resources
IFRS 7	Financial Instruments: Disclosure
IFRS 8	Operating Segments

**Table B2: IASs/IFRSs Excluded from Compliance Checklist**

Standards	Title	Reason for Exclusion
IAS 20	Accounting for Government Grants and Disclosure of Government Assistance	Not relevant to NSE Listed Companies
IAS 29	Financial Reporting in Hyperinflationary Economies	Not applicable to Nigeria Economy
IAS 32	Financial Instruments: Presentation	Does not include any disclosure requirement
IAS 34	Interim Financial Reporting	Not relevant to the focus of the study
IAS 39	Financial Instruments: Recognition and Measurement	Mainly on recognition and Measurements
IFRS 3	Business Combinations	Not relevant to the scope of this study
IFRS 9	Financial Instruments	Effective beginning from January 2013
IFRS 10	Consolidated Financial Statement	Effective beginning from January 2013
IFRS 11	Joint Arrangement	Effective beginning from January 2013
IFRS 12	Disclosure of Interest in Other Entities	Effective beginning from January 2013
IFRS 13	Fair Value Measurement	Effective beginning from January 2013
IFRS 14	Regulatory Deferral Accounts	Effective beginning from January 2016
IFRS 15	Revenue From Contracts with Customers	Effective beginning from January 2017

### Appendix III: Listed Companies on the Nigeria Stock Exchange

S/N	Name of the Company	Sector
1	Ellah Lakes Plc	<b>Agriculture</b>
2	FTN Cocoa Processors Plc	„
3	Livestock Feeds Plc	„
4	Okomu Oil Palm Plc	„
5	Presco Plc	„
6	A. G. Leventis Nigeria Plc	<b>Conglomerate</b>
7	Chellarams Plc	„
8	John Holt Plc	„
9	SCOA Nig Plc	„
10	Transnational Corporation of Nig. Plc	„
11	UACN Plc	„
12	Arbico PLC	<b>Construction / Real Estate</b>
13	Costain (WA) Plc	„
14	G CAPP PLC	„
15	Julius Berger Nig. Plc	„
16	Roads Nig. Plc	„
17	Skye Shelter Fund Plc	„
18	Smart Products Nig. Plc	„
19	UACN Property Development Co. Ltd	„
20	Union Homes Real Estate Investment Trust	„
21	7-Up Bottling Comp. Plc	<b>Consumer Goods</b>
22	Cadbury Nig. Plc	„
23	Champion Brew. Plc	„
24	Dangote Sugar Refinery Plc	„
25	DN Trye & Rubber Plc	„
26	Flour Mills Nig. Plc	„
27	Golden Guinea Brew. Plc	„
28	Guinness Nig Plc	„
29	Honeywell Flour Mill Plc	„
30	International Breweries Plc	„
31	Jos Int. Breweries	„
32	MCNichols Plc	„
33	Multi-Trex Integrated Foods Plc	„
34	N Nig. Flour Mills Plc	„
35	Nascon Allied Industries Plc	„
36	Nestles Nigeria Plc	„
37	Nigerian Brew. Plc	„
38	Nigerian Enamelware Plc	„
39	P S Mandrides & Co Plc	„
40	P Z Cussons Nig Plc	„
41	Premier Breweries Plc	„
42	Rokana Industries Plc	„
43	U T C Nig. Plc	„
44	Unilever Nig. Plc	„
45	Union Dicon Salt Plc	„
46	Vitafoam Nig. Plc	„

47	Vono Products Plc	„
48	Abbey Mortgage Bank Plc	<b>Financial Service</b>
49	Access Bank Plc	„
50	Africa Prudential Registrars Plc	„
51	African Alliance Insurance Company Plc	„
52	AIICO Insurance Plc	„
53	ASO Saving and Loans Plc	„
54	Axamansard Insurance Plc	„
55	Consolidated Hallmark Insurance Plc	„
56	Continental Reinsurance Plc	„
57	Cornerstone Insurance Co. Plc	„
58	Custodian and Allied Plc	„
59	DEAP Capital Management & Trust Plc	„
60	Diamond Bank Plc	„
61	ECO Bank Transnational Incorp.	„
62	Equity Assurance Plc	„
63	FBN Holding Plc	„
64	FCMB Group Plc	„
65	Fidelity Bank Plc	„
66	Fortis Microfinance Bank Plc	„
67	GoldLink Insurance Plc	„
68	Great Nigerian Insurance Plc	„
69	Guaranty Trust Bank Plc	„
70	Guinea Insurance Plc	„
71	Infinity Trust Mortgage bank Plc	„
72	International Energy Insurance Company Plc	„
73	Investment and Allied Assurance	„
74	LASACO Assurance Plc	„
75	Law Union & Rock Insurance Plc	„
76	Linkage Assurance Plc	„
77	Mutual Benefits Assurance Plc	„
78	N.E.M. Insurance Co (Nig) Plc	„
79	Niger Insurance Co. Plc	„
80	Nigeria Energy Sector Fund	„
81	NPF Microfinance Bank Plc	„
82	Omoluabi Saving and Loans Plc	„
83	Prestige Assurance Co. Plc	„
84	Regency Alliance Insurance Company Plc	„
85	Resort Savings & Loans Plc	„
86	Royal Exchange Plc	„
87	SIM Capital Alliance Value Fund	„
88	Skye Bank Plc	„
89	Sovereign Trust Insurance Plc	„
90	Stanbic IBTC Holding Plc	„
91	Standard Alliance Insurance Plc	„
92	Standard Trust Assurance Plc	„
93	Sterling Bank Plc	„

94	UNIC Insurance Plc	„
95	Union Bank Nig Plc	„
96	Union Homes Saving & Loans Plc	„
97	United Bank for Africa Plc	„
98	Unity Bank Plc	„
99	Unity Kapital Assurance Plc	„
100	Universal Insurance Company Plc	„
101	WAPIC Insurance Plc	„
102	WEMA Bank Plc	„
103	Zenith International Bank Plc	„
104	Afrik Pharmaceuticals Plc	<b>Healthcare</b>
105	EkoCorp Plc	„
106	Evans Medical Plc	„
107	Fidson Healthcare Plc	„
108	Glaxo Smithkline Consumer Nig Plc	„
109	May & Baker Nigeria Plc	„
110	Morison Industries Plc	„
111	Pharmaceuticals Plc	„
112	Nigeria-German Chemicals Plc	„
113	Pharma-Deko Plc	„
114	Union Diagnostic & Clinical Services Plc	„
115	Chams Plc	„
116	Computer Warehouse Group Plc	<b>ICT</b>
117	Courteville Business Solution Plc	„
118	E-Tranzact International Plc	„
119	Mass Telecommunication Innovations Nig. Plc	„
120	MTech Communications Plc	„
121	NCR (Nigeria) Plc	„
122	Omatek Ventures Plc	„
123	Tripple Gee and Company Plc	„
124	Adswith Plc	<b>Industrial Goods</b>
125	African Paints (Nigeria) Plc	„
126	Ashaka Cem Plc	„
127	Austin Laz & Company Plc	„
128	Avon Crowncaps & Containers	„
129	Berger Paints Plc	„
130	Beta Glass Co Plc	„
131	CAP Plc	„
132	Cement Co. of North Nig. Plc	„
133	CUTIX Plc	„
134	Dangote Cement Plc	„
135	DN Meyer Plc	„
136	First Aluminium Nig. Plc	„
137	Greif Nig. Plc	„
138	IPWA Plc	„
139	Lafarge African Plc	„
140	Nigerian Ropes Plc	„
141	Paints and Coatings Manufactures Plc	„
142	Portland Paints & Products Nig. Plc	„
143	Premier Paints Plc	„
144	W A Glass Ind. Plc	„
145	Aluminium Extrusion Ind. Plc	<b>Natural</b>

		<b>Resources</b>
146	Aluminium Manufacturing Plc	„
147	B.O.C. Gases Plc	„
148	Multiverse Mining and Exploration Plc	„
149	Thomas Wyatt Nig. Plc	„
150	Anion International Plc	„
151	BECO Petroleum Product Plc	<b>Oil and Gas</b>
152	Capital Oil Plc	„
153	Conoil Plc	„
154	Eterna Plc	„
155	Forte Oil Plc	„
156	Japaul Oil & Maritime Service Plc	„
157	Mobil Oil Nig Plc	„
158	MRS Oil Nig Plc	„
159	Navitus Energy Plc	„
160	Oando Plc	„
161	Rak Unity Pet. Comp. Plc	„
162	Seplat Petroleum Development Company Ltd	„
163	Total Nig. Plc	„
164	Academy Press Plc	<b>Service</b>
165	Afromedia Plc	„
166	Airline Service & Logistics Plc	„
167	Associated Bus Company Plc	„
168	C & I Leasing Plc	„
169	Capital Hotel Plc	„
170	Caverton Offshore Support GRP	„
171	DAAR Communications Plc	„
172	Ikeja Hotel Plc	„
173	Interlinked Technologies Plc	„
174	Juli Plc	„
175	Learn Africa Plc	„
176	Lennards (Nig.) Plc	„
177	Nigerian Aviation Handling Plc	„
178	R T Briscoe Plc	„
179	Red Star Express Plc	„
180	Secure Electronic Technology Plc	„
181	Studio Press (Nig.) Plc	„
182	Tantalizers Plc	„
183	Tourist Company of Nig. Plc	„
184	Trans-Nationwide Express Plc	„
185	Transcorp Hotels Plc	„
186	University Press Plc	„
	Nil	<b>Utility</b>

**Source:** Extracted from NSE website, 2016.

**Appendix IVA: Secondary Data Collection Sheet**

			20 08	20 09	20 10	20 11	20 12	20 13	20 14	20 15	20 16
<b>Company Name</b>	<b>Sector</b>	<b>Variable Name</b>									
		Share price (March-end)									
		Share price (June-end)									
		Earnings Per Share (in kobo)									
		BVPS (in kobo) / Total Equity									
		Cash Flows from Operation									
		Total Assets (₦m)									
		No of Shares									
		Industry Category									
		Cindex Score									



## Appendix IVB: IFRSs/IASs Compliance Checklist\*\*

Name of the Company:

Industry Category:

Total Disclosure (TD) Score:

Maximum Score (M):

IFRS/IAS and Paragraphs	Item No.	Disclosure Requirements	Scores*
<b>IAS 1</b>		<b>Presentation Of Financial Statement</b>	
Para. 10 (a-f)		<i>A complete set of financial statements should include;</i>	
Para. 10 (a)	1	A statement of financial position as at the end of the period	
Para. 10 (b)	2	A statement of comprehensive income for the period	
Para. 10 (c)	3	A statement of changes in equity for the period	
Para. 10 (d)	4	A statement of cash flows for the period	
Para. 10 (e)	5	Notes, comprising a summary of significant accounting policies and other explanatory information	
Para. 10 (f)	6	A statement of financial position as at the beginning of the earliest comparative period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or when it reclassifies items in its financial statements	
Para. 16	7	An entity whose financial statements comply with IFRSs should make an explicit and unreserved statement of such compliance in the notes.	
Para 17c	8	Financial statement should include additional disclosures when compliance with the specific requirements in IFRSs is insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance	
Para 19 & 20		<i>If the management of an enterprise concludes that compliance with a requirement in an IFRS would be so misleading that it would conflict with the objective of financial statements set out in the Framework and decide to depart from that requirement, the entity's financial statement should disclose;</i>	
Para 20 (a)	9	That management has concluded that the financial statements present fairly the entity's financial position, financial performance and cash flows	
Para 20 (b)	10	That it has complied with applicable IFRSs, except that it has departed from a particular requirement to achieve a fair presentation	
Para 20 (c)	11	The title of the IFRS from which the entity has departed, the nature of the departure, the reason for the departure and the treatment adopted	
Para 20 (d)	12	For each period presented, the financial effect of the departure on each item in the financial statements that would have been reported in complying with the requirement.	
Para 21	13	When an entity has departed from a requirement of an IFRS in a prior period, and that departure affects the amounts recognised in the financial statements for the current period, it should make the disclosures about the title of the IFRS, nature of departure, reason for departure and the treatment adopted.	
Para 27	14	An entity should prepare its financial statements, except for cash flows information, using the accrual basis of accounting	
Para 29	15	An entity should present separately each material class of similar items.	
Para 36	16	An entity should present a complete set of financial statements (including comparative information) at least annually.	
Para 38	17	An entity should include comparative information for narrative and descriptive information when it is relevant to an understanding of the current period's financial statements.	

Para 41	18	When the presentation or classification of items in financial statements has been changed, an entity shall reclassify comparative amounts unless reclassification is impracticable. When the entity reclassifies comparative amounts, the entity should disclose the nature of the reclassification, the amount and the reason for the reclassification.	
Para 42	19	When it is impracticable to reclassify comparative amounts, an entity should disclose the reason for not reclassifying the amounts, and the nature of the adjustments that would have been made if the amounts had been reclassified.	
Para 49	20	An entity should clearly identify the financial statements and distinguish them from other information in the same published document	
Para 51	21	An entity should clearly identify each financial statement and the notes.	
Para 51		<i>In addition, an entity should display the following information prominently, and repeat it when necessary for the information presented to be understandable:</i>	
Para 51 (a)	22	The name of the reporting entity or other means of identification, and any change in that information from the end of the preceding reporting period	
Para 51 (b)	23	Whether the financial statements are of an individual entity or a group of entities	
Para 51 (c)	24	The date of the end of the reporting period or the period covered by the set of financial statements or notes	
Para 51 (d)	25	The presentation currency	
Para 51 (e)	26	The level of rounding used in presenting amounts in the financial statements.	
Para 60	27	An entity should present current and non-current assets, and current and non-current liabilities, as separate classifications in its statement of financial position except when a presentation based on liquidity provides information that is reliable and more relevant. When that exception applies, an entity should present all assets and liabilities in order of liquidity.	
Para 61	28	Whichever method of presentation is adopted, an entity should disclose the amount expected to be recovered or settled after more than twelve months for each asset and liability line item that combines amounts expected to be recovered or settled: (a) not more than twelve months after the reporting period, and (b) more than twelve months after the reporting period.	
Para 77	29	An entity should disclose, either in the statement of financial position or in the notes, sub-classifications of the line items presented, classified in a manner appropriate to the entity's operations.	
Para 78 (a)	30	Items of property, plant and equipment are disaggregated into classes	
Para 78 (b)	31	Receivables are disaggregated into amounts receivable from trade customers, receivables from related parties, prepayments and other amounts	
Para 78 (c)	32	Inventories are disaggregated into classifications such as merchandise, production supplies, materials, work in progress and finished goods	
Para 78 (d)	33	Provisions are disaggregated into provisions for employee benefits and other items	
Para 78 (e)	34	Equity capital and reserves are disaggregated into various classes, such as paid-in capital, share premium and reserves	
Para 79 (a) (i – vii)		<i>An entity should disclose the following, either in the statement of financial position or the statement of changes in equity, or in the notes for each class of share capital:</i>	
Para 79 (a) i	35	The number of shares authorised	
Para 79 (a) ii	36	The number of shares issued and fully paid, and issued but not fully paid	
Para 79 (a) iii	37	Par value per share, or that the shares have no par value	

Para 79 (a) iv	38	A reconciliation of the number of shares outstanding at the beginning and at the end of the period	
Para 79 (a) v	39	The rights, preferences and restrictions attaching to that class including restrictions on the distribution of dividends and the repayment of capital	
Para 79 (a) vi	40	Shares in the entity held by the entity or by its subsidiaries or associates	
Para 79 (a) vii	41	Shares reserved for issue under options and contracts for the sale of shares, including terms and amounts	
Para 79 (b)	42	A description of the nature and purpose of each reserve within equity	
Para 80	43	If an entity has reclassified a puttable financial instrument classified as an equity instrument, or an instrument that imposes on the entity an obligation to deliver to another party a pro-rata share of the net assets of the entity only on liquidation and is classified as an equity instrument between financial liabilities and equity, it should disclose the amount reclassified into and out of each category (financial liabilities or equity), and the timing and reason for that reclassification.	
Para 83		<i>An entity should disclose the following items in the statement of comprehensive income as allocations for the period:</i>	
Para 83 (a) i	44	Profit or loss for the period attributable to non-controlling interests	
Para 83 (a) ii	45	Profit or loss for the period attributable to owners of the parent	
Para 83 (b) i	46	Total comprehensive income for the period attributable to non-controlling interests	
Para 83 (b) ii	47	Total comprehensive income for the period attributable to owners of the parent	
Para 87	48	An entity should not present any items of income or expense as extraordinary items, in the statement of comprehensive income or the separate income statement (if presented), or in the notes.	
Para 90	49	An entity should disclose the amount of income tax relating to each component of other comprehensive income, including reclassification adjustments, either in the statement of comprehensive income or in the notes	
Para 92	50	An entity should disclose reclassification adjustments relating to components of other comprehensive income	
Para 99	51	An entity should present an analysis of expenses recognised in profit or loss using a classification based on either their nature or their function within the entity, whichever provides information that is reliable and more relevant.	
Para 106	52	For each component of equity, an entity should present, either in the statement of changes in equity or in the notes, an analysis of other comprehensive income by item	
Para 107	53	An entity should present, either in the statement of changes in equity or in the notes, the amount of dividends recognised as distributions to owners during the period, and the related amount of dividends per share.	
Para 112 (a)	54	The notes should present information about the basis of preparation of the financial statements and the specific accounting policies used	
Para 112 (b)	55	The notes should disclose the information required by IFRSs that is not presented elsewhere in the financial statements	
Para 112 (c)	56	The notes should provide information that is not presented elsewhere in the financial statements, but is relevant to an understanding of any of them.	
Para 113	57	An entity should cross-reference each item in the statements of financial position and of comprehensive income, in the separate income statement (if presented), and in the statements of changes in equity and of cash flows to any related information in the notes	

Para 117 (a)	58	An entity should disclose significant accounting policies concerning the measurement basis (or bases) used in preparing the financial statements	
Para 117 (b)	59	An entity should disclose significant accounting policies about the other accounting policies used that are relevant to an understanding of the financial statements	
Para 125	60	An entity should disclose information about the assumptions it makes about the future, and other major sources of estimation uncertainty at the end of the reporting period, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year	
Para 125 (a-b)		<i>In respect of those assets and liabilities in Para 125, the notes should include details of:</i>	
Para 125 (a)	61	Their nature	
Para 125 (b)	62	Their carrying amount as at the end of the reporting period	
Para 134 (a-e)		<i>An entity should disclose information that enables users of its financial statements to evaluate the entity's objectives, policies and processes for managing capital through disclosure of;</i>	
Para 134 (a) i	63	Qualitative information about its objectives, policies and processes for managing capital, including a description of what it manages as capital	
Para 134 (a) ii	64	When an entity is subject to externally imposed capital requirements, the nature of those requirements and how those requirements are incorporated into the management of capital	
Para 134 (a) iii	65	How it is meeting its objectives for managing capital.	
Para 134 (b)	66	Summary of quantitative data about what it manages as capital	
Para 134 (c)	67	Any changes in Para. 134 (a) & (b) from the previous period.	
Para 134 (d)	68	Whether during the period it complied with any externally imposed capital requirements to which it is subject.	
Para 134 (e)	69	When the entity has not complied with such externally imposed capital requirements, the consequences of such non-compliance should be disclosed	
Para 137 (a)	70	An entity should disclose in the notes, the amount of dividends proposed or declared before the financial statements were authorised for issue but not recognised as a distribution to owners during the period, and the related amount per share	
Para 137 (b)	71	An entity should disclose in the notes, the amount of any cumulative preference dividends not recognised.	
Para 138 (a-d)		<i>An entity should disclose the following, if not disclosed elsewhere in information published with the financial statements:</i>	
Para 138 (a)	72	The domicile of the entity	
Para 138 (b)	73	The legal form of the entity	
Para 138 (c)	74	The country of incorporation	
Para 138 (d)	75	The address of its registered office (or principal place of business)	
Para 138 (b)	76	Description of the nature of the entity's operations and its principal activities	
Para 138 (c)	77	The name of the parent and the ultimate parent of the group	
Para 138 (d)	78	If it is a limited life entity, information regarding the length of its life	
<b>Total Score for Compliance with IAS 1 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 2</b>		<b>Inventories</b>	
Para 36 (a-h)		<i>The financial statements of an entity should disclose</i>	
Para 36 (a)	1	The accounting policies adopted in measuring inventories, including the cost formula used	
Para 36 (b)	2	The total carrying amount of inventories and the carrying amount in classifications, appropriate to the entity	
Para 36 (c)	3	The carrying amount of inventories carried at fair value less costs to sell	
Para 36 (d)	4	The amount of inventories recognised as an expense during the period	
Para 36 (e)	5	The amount of any write-down of inventories recognised as an expense in the period	
Para 36 (f)	6	The amount of any reversal of any write-down that is recognised as a reduction in the amount of inventories recognised as expense in the period	
Para 36 (g)	7	The circumstances or events that led to the reversal of a write-down of inventories	
Para 36 (h)	8	The carrying amount of inventories pledged as security for liabilities	
<b>Total Score for Compliance with IAS 2 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 7</b>		<b>Cash Flows Statement</b>	
Para 10	1	The statement of cash flows should report cash flows during the period classified by operating, investing and financing activities	
Para 18 (a-b)	2	An entity should report cash flows from operating activities using either the direct method, whereby major classes of gross cash receipts and gross cash payments are disclosed or indirect method, whereby profit or loss is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows	
Para 21	3	An entity should report separately major classes of gross cash receipts and gross cash payments arising from investing and financing activities	
Para 25	4	Cash flows arising from transactions in a foreign currency should be recorded in an entity's functional currency by applying to the foreign currency amount the exchange rate between the functional currency and the foreign currency at the date of the cash flow	
Para 26	5	The cash flows of a foreign subsidiary should be translated at the exchange rates between the functional currency and the foreign currency at the dates of the cash flows	
Para 28	6	The effect of exchange rate changes on cash and cash equivalents held or due in a foreign currency is reported in the statement of cash flows and this amount is presented separately from cash flows from operating, investing and financing activities and includes the differences, if any, had those cash flows been reported at end of period exchange rates	
Para 31	7	Cash flows from interest received and paid should be disclosed separately	
Para 31	8	Cash flows from dividends received and paid should be disclosed separately	
Para 35	9	Cash flows arising from taxes on income should be separately disclosed and classified as cash flows from operating activities unless they can be specifically	

		identified with financing and investing activities.	
Para 39	10	The aggregate cash flows arising from obtaining or losing control of subsidiaries or other businesses should be presented separately and classified as investing activities	
Para 40 (a-d)		<i>An entity should disclose, in aggregate, in respect of both obtaining and losing control of subsidiaries or other businesses during the period each of the following</i>	
Para 40 (a)	11	The total consideration paid or received	
Para 40 (b)	12	The portion of the consideration consisting of cash and cash equivalents	
Para (c)	13	The amount of cash and cash equivalents in the subsidiaries or other businesses over which control is obtained or lost	
Para (d)	14	The amount of the assets and liabilities other than cash or cash equivalents in the subsidiaries or other businesses over which control is obtained or lost, summarised by each major category	
Para 43	15	Investing and financing transactions that do not require the use of cash or cash equivalents should be excluded from a statement of cash flows.	
Para 45	16	An entity should disclose the components of cash and cash equivalents	
Para 45	17	An entity should present a reconciliation of the amounts in its statement of cash flows with the equivalent items reported in the statement of financial position	
Para 48	18	An entity should disclose, together with a commentary by management, the amount of significant cash and cash equivalent balances held by the entity that are not available for use by the group.	
<b>Total Score for Compliance with IAS 7 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 8</b>		<b>Accounting Policies, Changes in Accounting Estimates and Errors</b>	
Para 28 (a-h)		<i>When initial application of an IFRS has an effect on the current period or any prior period or on future periods, an entity should disclose the following in its financial statement:</i>	
Para 28 (a)	1	The title of the IFRS	
Para 28 (b)	2	That the change in accounting policy is made in accordance with its transitional provisions	
Para 28 (c)	3	The nature of the change in accounting policy	
Para 28 (d)	4	A description of the transitional provisions	
Para 28 (e)	5	The transitional provisions that might have an effect on future periods	
Para 28 (f)	6	The amount of the adjustment for each financial statement line item affected and basic and diluted earnings per share for the current period and each prior period presented	
Para 28 (g)	7	The amount of the adjustment relating to periods before those presented	
Para 28 (h)	8	If retrospective application required is impracticable for a particular prior period, or for periods before those presented, the circumstances that led to the existence of that condition and a description of how and from when the change in accounting policy has been applied should be disclosed. <i>Financial statements of subsequent periods need not repeat these disclosures.</i>	
Para 29 (a-e)		<i>An entity should disclose the following when a voluntary change in accounting policy has an effect on the current period or any prior period, would have an effect on that period except that it is impracticable to determine the amount of the adjustment, or might have an effect on future periods:</i>	
Para 29 (a)	9	The nature of the change in accounting policy	

Para 29 (b)	10	The reasons why applying the new accounting policy provides reliable and more relevant information	
Para 29 (c)	11	For the current period and each prior period presented, to the extent practicable, the amount of the adjustment for each financial statement line item affected and if IAS 33 applies to the entity, for basic and diluted earnings per share	
Para 29 (d)	12	The amount of the adjustment relating to periods before those presented, to the extent practicable	
Para 29 (e)	13	If retrospective application is impracticable for a particular prior period, or for periods before those presented, the circumstances that led to the existence of that condition and a description of how and from when the change in accounting policy has been applied	
Para 30 (a)	14	When an entity has not applied a new IFRS that has been issued but is not yet effective, the entity should disclose the fact	
Para 30 (b)	15	When an entity has not applied a new IFRS that has been issued but is not yet effective, the entity should disclose reasonably estimable information relevant to assessing the possible impact that application of the new IFRS will have on the entity's financial statements in the period of initial application	
Para 39	16	An entity should disclose the nature and amount of a change in an accounting estimate that has an effect in the current period or is expected to have an effect in future periods	
Para 40	17	If the amount of the effect in future periods is not disclosed because estimating it is impracticable, an entity should disclose that fact	
Para 49 (a-d)		<i>An entity should disclose the following in correcting prior period errors:</i>	
Para 49 (a)	18	The nature of the prior period error	
Para 49 (b)	19	The amount of the correction for each financial statement line item affected and basic and diluted earnings per share for each prior period presented	
Para 49 (c)	20	The amount of the correction at the beginning of the earliest prior period presented	
Para 49 (d)	21	If retrospective restatement is impracticable for a particular prior period, the circumstances that led to the existence of that condition and a description of how and from when the error has been corrected. <i>Financial statements of subsequent periods need not repeat these disclosures.</i>	
<b>Total Score for Compliance with IAS 8 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 10</b>		<b>Event After Balance Sheet Date</b>	
Para 13	1	If dividend are declared after balance sheet date but before the financial statements are authorized for issue, the entity should disclose such dividends in the notes to the financial statement	
Para 17	2	An entity should disclose the date when financial statements were authorised for issue	
Para 17	3	An entity should disclose the body who gave the authorisation of issuing the financial statements	
Para 17	4	An entity should disclose if the entity's owners or others have the power to amend the financial statement after issue	
Para 19	5	If an entity receives information after the reporting period about conditions that existed at the end of the reporting period, it should update disclosures that relate to those conditions, in the light of the new information	
Para 21 (a)	6	An entity should disclose the nature of event when non-adjusting event occur after the balance sheet date	

Para 21 (b)	7	An entity should disclose an estimate of its financial effect or a statement that such an estimate cannot be made when non-adjustment event occur after the balance sheet date	
<b>Total Score for Compliance with IAS 10 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 11</b>		<b>Construction Contract</b>	
Para 39 (a-c)		<i>An entity should disclose:</i>	
Para 39 (a)	1	The amount of contract revenue recognised as revenue in the period	
Para 39 (b)	2	The methods used to determine the contract revenue recognised in the period	
Para 39 (c)	3	The methods used to determine the stage of completion of contracts in progress	
Para 40 (a-c)		<i>An entity should disclose each of the following for contracts in progress at the end of the reporting period:</i>	
Para 40 (a)	4	The aggregate amount of costs incurred and recognised profits (less recognised losses) to date	
Par 40 (b)	5	The amount of advances received	
Para 40 (c)	6	The amount of retentions	
Para 42 (a-b)		<i>An entity should present:</i>	
Para 42 (a)	7	The gross amount due from customers for contract work as an asset	
Para 42 (b)	8	The gross amount due to customers for contract work as a liability	
<b>Total Score for Compliance with IAS 11 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 12</b>		<b>Income Taxes</b>	
Para 79	1	The major components of tax expense (income) should be disclosed separately	
Para 81 (a-k)		<i>The following should also be disclosed separately:</i>	
Para 81 (a)	2	The aggregate current and deferred tax relating to items that are charged or credited directly to equity	
Para 81 (b)	3	The amount of income tax relating to each component of other comprehensive income	
Para 81 (c)	4	An explanation of the relationship between tax expense (income) and accounting profit in either or both numerical reconciliation between tax expense (income) and the product of accounting profit multiplied by the applicable tax rate(s), disclosing also the basis on which the applicable tax rate(s) is (are) computed OR numerical reconciliation between the average effective tax rate and the applicable tax rate, disclosing also the basis on which the applicable tax rate is computed	
Para 81 (d)	5	An explanation of changes in the applicable tax rate(s) compared to the previous accounting period	
Para 81 (e)	6	The amount of deductible temporary differences, unused tax losses, and unused tax credits for which no deferred tax asset is recognised in the statement of financial position	
Para 81 (f)	7	The aggregate amount of temporary differences associated with investments in subsidiaries, branches and associates and interests in joint ventures, for which deferred tax liabilities have not been recognised	



Para 81 (g)		<i>In respect of each type of temporary difference, and in respect of each type of unused tax losses and unused tax credits the following should be disclosed:</i>	
Para 81 (g) i	8	The amount of the deferred tax assets and liabilities recognised in the statement of financial position for each period presented	
Para 81 (g) ii	9	The amount of the deferred tax income or expense recognised in profit or loss, if this is not apparent from the changes in the amounts recognised in the statement of financial position	
Para 81 (h) i	10	In respect of discontinued operations, the tax expense relating to gain or loss on discontinuance	
Para 81 (h) ii	11	In respect of discontinued operations, the tax expense relating to profit or loss from the ordinary activities of the discontinued operation for the period, together with the corresponding amounts for each prior period presented	
Para 81 (j)	12	The amount of change, if a business combination in which the entity is the acquirer causes a change in the amount recognised for its pre-acquisition deferred tax	
Para 81 (k)	13	A description of the event or change in circumstances that caused the deferred tax benefits to be recognised.	
Para 82 (a-b)		<i>An entity should disclose the amount of a deferred tax asset and the nature of the evidence supporting its recognition</i>	
Para 82 (a)	14	When the utilisation of the deferred tax asset is dependent on future taxable profits in excess of the profits arising from the reversal of existing taxable temporary differences	
Para 82 (b)	15	When the entity has suffered a loss in either the current or preceding period in the tax jurisdiction to which the deferred tax asset relates	
Para 82A	16	An entity should disclose the nature of the potential income tax consequences that would result from the payment of dividends to its shareholders.	
Para 82A	17	The entity should disclose the amounts of the potential income tax consequences practicably determinable and whether there are any potential income tax consequences not practicably determinable	
Para 87	18	An entity should disclose the aggregate amount of the underlying temporary differences but does not require disclosure of the deferred tax liabilities	
<b>Total Score for Compliance with IAS 12 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 16</b>		<b>Property, Plant and Equipment</b>	
Para 73 (a-e)		<i>The financial statements should disclose, for each class of property, plant and equipment (PPE):</i>	
Para 73 (a)	1	The measurement bases used for determining the gross carrying amount	
Para 73 (b)	2	The depreciation methods used	
Para 73 (c)	3	The useful lives or the depreciation rates used	
Para 73 (d)	4	The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period	
Para 73 (e)	5	A reconciliation of the carrying amount at the beginning and end of the period showing any additions; disposals; acquisitions through business combinations; increases or decreases resulting from revaluations and from impairment losses recognised or reversed in other comprehensive income; impairment losses recognised in profit or loss; impairment losses reversed in profit or loss; depreciation; the net exchange differences arising on the translation of the financial statements of a foreign entity; other changes	

Para 74 (a-d)		<i>The financial statements should also disclose:</i>	
Para 74 (a)	6	The existence and amounts of restrictions on title, and PPE pledged as security for liabilities	
Para 74 (b)	7	The amount of expenditures recognised in the carrying amount of an item of PPE in the course of its construction	
Para 74 (c)	8	The amount of contractual commitments for the acquisition of PPE	
Para 74 (d)	9	If it is not disclosed separately in the statement of comprehensive income, the amount of compensation from third parties for items of property, plant and equipment that were impaired, lost or given up that is included in profit or loss	
Para 77 (a-f)		<i>If items of PPE are stated at revalued amounts, the entity should disclose:</i>	
Para 77 (a)	10	The effective date of the revaluation	
Para 77 (b)	11	Whether an independent valuer was involved	
Para 77 (c)	12	The methods and significant assumptions applied in estimating the items' fair values	
Para 77 (d)	13	The extent to which the items' fair values were determined directly by reference to observable prices in an active market or recent market transactions on arm's length terms or were estimated using other valuation techniques	
Para 77 (e)	14	For each revalued class of PPE, the carrying amount that would have been recognised had the assets been carried under the cost model	
Para 77 (f)	15	The revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders	
<b>Total Score for Compliance with IAS 16 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 17</b>		<b>Lease</b>	
Para 31 (a-e)		<i>An entity that is Lessee in a Finance Lease should disclose the following:</i>	
Para 31 (a)	1	The net carrying amount at the end of the reporting period for each class of asset	
Para 31 (b)	2	A reconciliation between the total of future minimum lease payments at the end of the reporting period, and their present value	
Para 31 (b)	3	The total of future minimum lease payments at the end of the reporting period, and their present value not later than one year, later than one year and not later than five years, and later than five years	
Para 31 (c)	4	Contingent rents recognised as an expense in the period	
Para 31 (d)	5	The total of future minimum sublease payments expected to be received under non-cancellable subleases at the end of the reporting period	
Para 31 (e)	6	A general description of the lessee's material leasing arrangements including, the basis on which contingent rent payable is determined, the existence and terms of renewal or purchase options and escalation clauses, and restrictions imposed by lease arrangements, such as those concerning dividends, additional debt, and further leasing	
Para 35 (a-d)		<i>An entity that is Lessee in an Operating Lease should disclose the following:</i>	
Para 35 (a)	7	The total of future minimum lease payments under non-cancellable operating leases for not later than one year, later than one year and not later than five years, and later than five years	
Para 35 (b)	8	The total of future minimum sublease payments expected to be received under non-cancellable subleases at the end of the reporting period	
Para 35 (c)	9	Lease and sublease payments recognised as an expense in the period, with separate amounts for minimum lease payments, contingent rents, and sublease payments	

Para 35 (d)	10	A general description of the lessee's significant leasing arrangements including the basis on which contingent rent payable is determined, the existence and terms of renewal or purchase options and escalation clauses, and restrictions imposed by lease arrangements, such as those concerning dividends, additional debt and further leasing	
Para 47 (a-f)		<i>An entity that is Lessor in a <b>Finance Lease</b> should disclose the following:</i>	
Para 47 (a)	11	Reconciliation between the gross investment in the lease at the end of the reporting period, and the present value of minimum lease payments receivable at the end of the reporting period.	
Para 47 (a)	12	Gross investment in the lease and the present value of minimum lease payments receivable at the end of the reporting period not later than one year, later than one year and not later than five years, and later than five years	
Para 47 (b)	13	Unearned finance income	
Para 47 (c)	14	The unguaranteed residual values accruing to the benefit of the lessor	
Para 47 (d)	15	The accumulated allowance for uncollectible minimum lease payments receivable	
Para 47 (e)	16	Contingent rents recognised as income in the period	
Para 47 (f)	17	A general description of the lessor's material leasing arrangements	
Para 56 (a-c)		<i>An entity that is Lessor in an <b>Operating Lease</b> should disclose the following:</i>	
Para 56 (a)	18	The future minimum lease payments under non-cancellable operating leases in the aggregate and for period not later than one year, later than one year and not later than five years and later than five years	
Para 56 (b)	19	Total contingent rents recognised as income in the period	
Para 56 (c)	20	A general description of the lessor's leasing arrangements	
<b>Total Score for Compliance with IAS 17 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 18</b>		<b>Revenue</b>	
Para 35 (a-c)		<i>An entity should disclose:</i>	
Para 35 (a)	1	The accounting policies adopted for the recognition of revenue, including the methods adopted to determine the stage of completion of transactions involving the rendering of services	
Para 35 (b) i	2	The amount of significant revenue recognised during the period arising from the sale of goods	
Para 35 (b) ii	3	The amount of significant revenue recognised during the period arising from rendering of services	
Para 35 (b) iii	4	The amount of significant revenue recognised during the period arising from interest	
Para 35 (b) iv	5	The amount of significant revenue recognised during the period arising from royalties	
Para 35 (b) v	6	The amount of significant revenue recognised during the period arising from dividends	
Para 35 (c)	7	The amount of revenue arising from exchanges of goods or services included in each significant category of revenue.	
<b>Total Score for Compliance with IAS 18 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 19</b>		<b>Employee Benefits</b>	
Para 46	1	An entity should disclose the amount recognised as an expense for defined contribution plans.	
Para 47	2	An entity should disclose information about contributions to defined contribution plans for key management personnel	
Para 120	3	An entity should disclose information that enables users of financial statements to evaluate the nature of its defined benefit plans and the financial effects of changes in those plans during the period	
Para 120A		<i>An entity should disclose the following information about defined benefit plans</i>	
Para 120A (a)	4	The entity's accounting policy for recognising actuarial gains and losses	
Para 120A (b)	5	A general description of the type of plan	
Para 120A (c)	6	Reconciliation of opening and closing balances of the present value of the defined benefit obligation	
Para 120A (d)	7	Analysis of the defined benefit obligation into amounts arising from plans that are wholly unfunded and amounts arising from plans that are wholly/partly funded	
Para 120A (e)	8	Reconciliation of the opening and closing balances of the fair value of plan assets and of the opening and closing balances of any reimbursement right recognised as an asset	
Para 120A (f)	9	Reconciliation of the present value of the defined benefit obligation in (c) and the fair value of the plan assets in (e) to the assets and liabilities recognised in the statement of financial position	
Para 120A (g)	10	Total expense recognised in profit or loss for current service cost, interest cost, expected return on plan assets, expected return on any reimbursement right recognised as an asset, actuarial gains and losses, past service cost, the effect of any curtailment or settlement.	
Para 120A (h & i)	11	Total amount recognised in other comprehensive income for actuarial gains and losses	
Para 120A (j)	12	The percentage or amount that each major category constitutes of the fair value of the total plan assets	
Para 120A (k)	13	The amounts included in the fair value of plan assets	
Para 120A (l)	14	Narrative description of the basis used to determine the overall expected rate of return on assets, including the effect of the major categories of plan assets	
Para 120A (m)	15	The actual return on plan assets, as well as the actual return on any reimbursement right recognised as an asset	
Para 120A (n)	16	The principal actuarial assumptions used as at the end of the reporting period	
Para 120A (o)	17	The effect of an increase and decrease of one percentage point in the assumed medical cost trend rates	
Para 120A (p)	18	The amounts for the current annual period and previous four annual periods of the present value of the defined benefit obligation, the fair value of the plan assets and the surplus or deficit in the plan, and the experience adjustments	
Para 120A (q)	19	The employer's best estimate, as soon as it can reasonably be determined, of contributions expected to be paid to the plan during the annual period beginning after the reporting period	
Para 22	20	When an entity has more than one defined benefit plan, disclosures should be made in total, separately for each plan, or in such groupings as are considered to be the most useful	
<b>Total Score for Compliance with IAS 19 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 21</b>		<b>The Effect of Changes in Foreign Exchange Rate</b>	
Para 52 (a-b)		<i>An entity should disclose:</i>	
Para 52 (a)	1	The amount of exchange differences recognised in profit or loss	
Para 52 (b)	2	Net exchange differences recognised in other comprehensive income and accumulated in a separate component of equity, and a reconciliation of the amount of such exchange differences at the beginning and end of the period	
Para 53	3	The fact about difference between presentation currency and functional currency should be stated, together with disclosure of the functional currency and the reason for using a different presentation currency	
Para 54	4	When there is a change in the functional currency of either the reporting entity or a significant foreign operation, that fact and the reason for the change in functional currency should be disclosed	
Para 55	5	When an entity presents its financial statements in a currency that is different from its functional currency, it should describe the financial statements as complying with IFRSs only if they comply with all the requirements of IFRSs	
Para 57	6	When an entity displays its financial statements or other financial information in a currency that is different from either its functional currency or its presentation currency and the requirements of Para. 55 are not met, it should clearly identify the information as supplementary information to distinguish it from the information that complies with IFRSs, disclose the currency in which the supplementary information is displayed, and disclose the entity's functional currency and the method of translation used to determine the supplementary information	
<b>Total Score for Compliance with IAS 21 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 23</b>		<b>Borrowing Costs</b>	
Para 26 (a-b)		<i>An entity should disclose:</i>	
Para 26 (a)	1	The amount of borrowing costs capitalised during the period	
Para 26 (b)	2	The capitalisation rate used to determine the amount of borrowing costs eligible for capitalisation	
<b>Total Score for Compliance with IAS 23 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 24</b>		<b>Related Party Disclosure</b>	
Para 13	1	Relationships between a parent and its subsidiaries should be disclosed irrespective of whether there have been transactions between them	
Para 13	2	If neither the entity's parent nor the ultimate controlling party produces consolidated financial statements available for public use, the name of the next most senior parent that does so should also be disclosed	
Para 13	3	An entity should disclose the name of its parent and, if different, the ultimate controlling party	
Para 17 (a-e)		<i>An entity should disclose key management personnel compensation in total and for each of the following categories;</i>	

Para 17 (a)	4	Short-term employee benefits	
Para 17 (b)	5	Post-employment benefits	
Para 17 (c)	6	Other long-term benefits	
Para 17 (d)	7	Termination benefits	
Para 17 (e)	8	Share-based payment	
Para 18		<i>For entity with related party transactions during the periods covered by the financial statements, it should disclose:</i>	
Para 18 (a & b)	9	The amount of the transactions/ outstanding balances	
Para 18 (c)	10	Provisions for doubtful debts related to the amount of outstanding balances	
Para 18 (d)	11	The expense recognised during the period in respect of bad or doubtful debts due from related parties	
<b>Total Score for Compliance with IAS 24 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 26</b>		<b>Accounting and Reporting by Retirement Benefit Plans</b>	
Para 34 (a-c)		<i>The financial statements of a retirement benefit plan, whether defined benefit or defined contribution, should disclose the following information:</i>	
Para 34 (a)	1	Statement of changes in net assets available for benefits	
Para 34 (b)	2	Summary of significant accounting policies	
Para 34 (c)	3	Description of the plan and the effect of any changes in the plan during the period	
<b>Total Score for Compliance with IAS 26 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 27</b>		<b>Consolidated and Separate Financial Statement</b>	
Para 41 (a-f)		<i>The following disclosures should be made in consolidated financial statements:</i>	
Para 41 (a)	1	The nature of the relationship between the parent and a subsidiary when the parent does not own, directly or indirectly through subsidiaries, more than half of the voting power	
Para 41 (b)	2	The reasons why the ownership, directly or indirectly through subsidiaries, of more than half of the voting or potential voting power of an investee does not constitute control	
Para 41 (c)	3	The end of the reporting period of the financial statements of a subsidiary when such financial statements are used to prepare consolidated financial statements and are as of a date or for a period that is different from that of the parent's financial statements, and the reason for using a different date or period	
Para 41 (d)	4	The nature and extent of any significant restrictions on the ability of subsidiaries to transfer funds to the parent in the form of cash dividends or to repay loans or advances	
Para 41 (e)	5	A schedule that shows the effects of any changes in a parent's ownership interest in a subsidiary that do not result in a loss of control on the equity attributable to owners of the parent	
Para 41 (f)	6	When control of a subsidiary is lost, the parent should disclose the portion of gain or loss attributable to recognising any investment retained in the former subsidiary at its fair value at the date when control is lost, and the line item(s) in the statement of	

		comprehensive income in which the gain or loss is recognised.	
Para 42 (a-c)		<i>When separate financial statements are prepared for a parent that elects not to prepare consolidated financial statements, those separate financial statements should disclose:</i>	
Para 42 (a)	7	The fact that the financial statements are separate financial statements	
Para 42 (a)	8	That the exemption from consolidation has been used	
Para 42 (a)	9	The name and country of incorporation or residence of the entity whose consolidated financial statements that comply with IFRSs have been produced for public use	
Para 42 (a)	10	The address where those consolidated financial statements are obtainable	
Para 42 (b)	11	A list of significant investments in subsidiaries, jointly controlled entities and associates, including the name, country of incorporation or residence, proportion of ownership interest and, if different, proportion of voting power held	
Para 42 (c)	12	A description of the method used to account for the investments listed under Para 42(b)	
Para 43 (a-c)		<i>When a parent (other than a parent covered by paragraph 42), venturer with an interest in a jointly controlled entity or an investor in an associate prepares separate financial statements, those separate financial statements should disclose:</i>	
Para 43 (a)	13	The fact that the statements are separate financial statements and the reasons why those statements are prepared if not required by law	
Para 43 (b)	14	A list of significant investments in subsidiaries, jointly controlled entities and associates, including the name, country of incorporation or residence, proportion of ownership interest and, if different, proportion of voting power held	
Para 43 (c)	15	A description of the method used to account for the investments listed under Para. (b)	
<b>Total Score for Compliance with IAS 27 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 28</b>		<b>Investment in Associate</b>	
Para 37 (a-i)		<i>The following disclosures should be made:</i>	
Para 37 (a)	1	The fair value of investments in associates for which there are published price quotations	
Para 37 (b)	2	Summarised financial information of associates, including the aggregated amounts of assets, liabilities, revenues and profit or loss	
Para 37 (c)	3	The reasons why the presumption that an investor does not have significant influence is overcome if the investor holds, directly or indirectly through subsidiaries, less than 20 per cent of the voting or potential voting power of the investee but concludes that it has significant influence	
Para 37 (d)	4	The reasons why the presumption that an investor has significant influence is overcome if the investor holds, directly or indirectly through subsidiaries, 20 per cent or more of the voting or potential voting power of the investee but concludes that it does not have significant influence	
Para 37 (e)	5	The end of the reporting period of the financial statements of an associate, when such financial statements are used in applying the equity method and are as of a date or for a period that is different from that of the investor, and the reason for using a different date or different period	

Para 37 (f)	6	The nature and extent of any significant restrictions (e.g. resulting from borrowing arrangements or regulatory requirements) on the ability of associates to transfer funds to the investor in the form of cash dividends, or repayment of loans or advances	
Para 37 (g)	7	The unrecognised share of losses of an associate, both for the period and cumulatively, if an investor has discontinued recognition of its share of losses of an associate	
Para 37 (h)	8	The fact that an associate is not accounted for using the equity method	
Para 37 (i)	9	Summarised financial information of associates, either individually or in groups, that are not accounted for using the equity method, including the amounts of total assets, total liabilities, revenues and profit or loss	
Para 38 (i)	10	Investments in associates accounted for using the equity method should be classified as non-current assets.	
Para 38 (ii)	11	The investor's share of the profit or loss of such associates, and the carrying amount of those investments, should be separately disclosed	
Para 38 (iii)	12	The investor's share of any discontinued operations of such associates should also be separately disclosed	
Para 39	13	The investor's share of changes recognised in other comprehensive income by the associate should be recognised by the investor in other comprehensive income	
Para 40 (a-b)		<i>The entity's investor should disclose:</i>	
Para 40 (a)	14	Its share of the contingent liabilities of an associate incurred jointly with other investors	
Para 40 (b)	15	Those contingent liabilities that arise because the investor is severally liable for all or part of the liabilities of the associate	
<b>Total Score for Compliance with IAS 28 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 31</b>		<b>Interest in Joint Ventures</b>	
Para 54 (a-c)		<i>A venturer (entity) should disclose the aggregate amount of the following contingent liabilities, unless the probability of loss is remote, separately from the amount of other contingent liabilities</i>	
Para 54 (a)	1	Any contingent liabilities that the venturer has incurred in relation to its interests in joint ventures and its share in each of the contingent liabilities that have been incurred jointly with other venturers	
Para 54 (b)	2	Its share of the contingent liabilities of the joint ventures themselves for which it is contingently liable	
Para 54 (c)	3	Those contingent liabilities that arise because the venturer is contingently liable for the liabilities of the other venturers of a joint venture	
Para 55 (a-b)		<i>A venturer (entity) should disclose the aggregate amount of the following commitments in respect of its interests in joint ventures separately from other commitments</i>	
Para 55 (a)	4	Any capital commitments of the venturer in relation to its interests in joint ventures and its share in the capital commitments that have been incurred jointly with other venturers	
Para 55 (b)	5	Its share of the capital commitments of the joint ventures themselves	
Para 56 (i)	6	A venturer should disclose a listing and description of interests in significant joint ventures	
Para 56 (ii)	7	The proportion of ownership interest held in jointly controlled entities	



Para 56 (iii)	8	A venturer that recognises its interests in jointly controlled entities using the line-by-line reporting format for proportionate consolidation or the equity method shall disclose the aggregate amounts of each of current assets, long-term assets, current liabilities, long-term liabilities, income and expenses related to its interests in joint ventures	
Para 57	9	A venturer should disclose the method it uses to recognise its interests in jointly controlled entities	
<b>Total Score for Compliance with IAS 31 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 33</b>		<b>Earnings Per Share</b>	
Para 66	1	The entity should present in the statement of comprehensive income basic and diluted earnings per share for profit or loss from continuing operations attributable to the ordinary equity holders of the parent entity	
Para 66	2	The entity should present in the statement of comprehensive income basic and diluted earnings per share for profit or loss for the period attributable to the ordinary equity holders of the parent entity	
Para 66	3	The entity should present basic and diluted earnings per share with equal prominence for all periods presented	
Para 68	4	An entity that reports a discontinued operation should disclose the basic and diluted amounts per share for the discontinued operation either in the statement of comprehensive income or in the notes	
Para 69	5	An entity should present basic and diluted earnings per share, even if the amounts are negative (i.e. a loss per share)	
Para 70 (a-d)		<i>An entity should disclose the following:</i>	
Para 70 (a)	6	The amounts used as the numerators in calculating basic and diluted earnings per share, and a reconciliation of those amounts to profit or loss attributable to the parent entity for the period	
Para 70 (b)	7	The weighted average number of ordinary shares used as the denominator in calculating basic and diluted earnings per share, and a reconciliation of these denominators to each other	
Para 70 (c)	8	Instruments (including contingently issuable shares) that could potentially dilute basic earnings per share in the future, but were not included in the calculation of diluted earnings per share because they are ant-dilutive for the period(s) presented	
Para 70 (d)	9	A description of ordinary share transactions or potential ordinary share transactions, that occur after the reporting period and that would have changed significantly the number of ordinary shares or potential ordinary shares outstanding at the end of the period if those transactions had occurred before the end of the reporting period	
Para 72	10	Financial instruments and other contracts generating potential ordinary shares should be disclosed	
<b>Total Score for Compliance with IAS 33 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 36</b>		<b>Impairment of Assets</b>	
Para 126 (a-d)		<i>An entity should disclose the following for each class of assets:</i>	

Para 126 (a)	1	The amount of impairment losses recognised in profit or loss during the period and the line item(s) of the statement of comprehensive income in which those impairment losses are included	
Para 126 (b)	2	The amount of reversals of impairment losses recognised in profit or loss during the period and the line item(s) of the statement of comprehensive income in which those impairment losses are reversed	
Para 126 (c)	3	The amount of impairment losses on revalued assets recognised in other comprehensive income during the period	
Para 126 (d)	4	The amount of reversals of impairment losses on revalued assets recognised in other comprehensive income during the period	
Para 129 (a-b)		<i>An entity that reports segment information should disclose the following for each reportable segment:</i>	
Para 129 (a)	5	The amount of impairment losses recognised in profit or loss and in other comprehensive income during the period	
Para 129 (b)	6	The amount of reversals of impairment losses recognised in profit or loss and in other comprehensive income during the period	
Para 130 (a-g)		<i>An entity should disclose the following for each material impairment loss recognised or reversed during the period for an individual asset, including goodwill, or a cash-generating unit:</i>	
Para 130 (a)	7	The events and circumstances that led to the recognition or reversal of the impairment loss	
Para 130 (b)	8	The amount of the impairment loss recognised or reversed	
Para 130 (c) i	9	The nature of Individual asset	
Para 130 (d) i	10	Description of the cash-generating unit	
Para 130 (e)	11	Whether the recoverable amount of the asset (cash-generating unit) is its fair value less costs to sell or its value in use	
Para 130 (f)	12	If recoverable amount is fair value less costs to sell, the basis used to determine fair value less costs to sell	
Para 130 (g)	13	If recoverable amount is value in use, the discount rate(s) used in the current estimate and previous estimate (if any) of value in use	
Para 131 (a-b)		<i>An entity should disclose these information for aggregate impairment losses and reversals recognised during the period but no information is disclosed:</i>	
Para 131 (a)	14	The main classes of assets affected by impairment losses and the main classes of assets affected by reversals of impairment losses	
Para 131 (b)	15	The main events and circumstances that led to the recognition of these impairment losses and reversals of impairment losses	
Para 133	16	If any portion of the goodwill acquired in a business combination during the period has not been allocated to a cash-generating unit (group of units) at the end of the reporting period, the amount of the unallocated goodwill should be disclosed together with the reasons why that amount remains unallocated	
Para 134	17	An entity should disclose each cash-generating unit (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives.	
Para 134 (a)	18	The carrying amount of goodwill allocated to the unit (group of units)	
Para 134 (b)	19	The carrying amount of intangible assets with indefinite useful lives allocated to the unit (group of units)	
Para 134 (c)	20	The basis on which the unit's (group of units') recoverable amount has been determined (i.e. value in use or fair value less costs to sell)	

Para 135	21	If some or all of the carrying amount of goodwill or intangible assets with indefinite useful lives is allocated across multiple cash-generating units (groups of units), and the amount so allocated to each unit (group of units) is not significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, that fact should be disclosed	
<b>Total Score for Compliance with IAS 36 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 37</b>		<b>Provision, Contingent Liabilities and Contingent Assets</b>	
Para 84 (a-e)		<i>For each class of provision, an entity should disclose:</i>	
Para 84 (a)	1	The carrying amount at the beginning and end of the period	
Para 84 (b)	2	Additional provisions made in the period, including increases to existing provisions	
Para 84 (c)	3	Amounts used (i.e. incurred and charged against the provision) during the period	
Para 84 (d)	4	Unused amounts reversed during the period	
Para 84 (e)	5	The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate	
Para 85 (a-c)		<i>An entity should disclose the following for each class of provision:</i>	
Para 85 (a)	6	A brief description of the nature of the obligation and the expected timing of any resulting outflows of economic benefits	
Para 85 (b)	7	An indication of the uncertainties about the amount or timing of those outflows	
Para 85 (c)	8	The amount of any expected reimbursement, stating the amount of any asset that has been recognised for that expected reimbursement	
Para 86 (a-c) / Para 91		<i>Unless the possibility of any outflow in settlement is remote, an entity should disclose for each class of contingent liability at the end of the reporting period:</i>	
Para 86	9	A brief description of the nature of the contingent liability	
Para 86 (a) / Para 91	10	An estimate of its financial effect. If it is not practicable to do so, the fact should be disclosed	
Para 86 (b) / Para 91	11	An indication of the uncertainties relating to the amount or timing of any outflow. If it is not practicable to do so, the fact should be disclosed	
Para 86 (c) / Para 91	12	The possibility of any reimbursement. If it is not practicable to do so, the fact should be disclosed	
Para 89 / 91	13	Where an inflow of economic benefits is probable, an entity should disclose a brief description of the nature of the contingent assets at the end of the reporting period, and, where practicable, an estimate of their financial effect. If it is not practicable to do so, the fact should be disclosed	
<b>Total Score for Compliance with IAS 37 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 38</b>		<b>Intangible Assets</b>	
Para 118 (a-e)		<i>For each class of intangible assets, distinguishing between internally generated intangible assets and other intangible assets an entity should disclose:</i>	
Para 118 (a)	1	Whether the useful lives are indefinite or finite	
Para 118 (a)	2	If finite, the useful lives or the amortisation rates used	
Para 118 (b)	3	The amortisation methods used for intangible assets with finite useful lives	

Para 118 (c)	4	The gross carrying amount and any accumulated amortisation (aggregated with accumulated impairment losses) at the beginning and end of the period	
Para 118 (d)	5	The line item(s) of the statement of comprehensive income in which any amortisation of intangible assets is included	
Para 118 (e)	6	A reconciliation of the carrying amount at the beginning and end of the period	
Para 121	7	An entity should disclose the nature and amount of a change in an accounting estimate that has a material effect in the current period or is expected to have a material effect in subsequent periods	
Para 122 (a-b)		<i>An entity should disclose:</i>	
Para 122 (a)	8	For an intangible asset assessed as having an indefinite useful life, the carrying amount of that asset	
Para 122 (a)	9	The reasons supporting the assessment of an indefinite useful life and description of the factor(s) that played a significant role in determining that the asset has an indefinite useful life	
Para 122 (b)	10	A description, the carrying amount and remaining amortisation period of any individual intangible asset that is material to the entity's financial statements	
Para 124 (a-c)		<i>For intangible assets that are accounted for at revalued amounts, an entity should disclose the following:</i>	
Para 124 (a)	11	By class of intangible assets, the effective date of the revaluation, the carrying amount of revalued intangible assets, and the carrying amount that would have been recognised had the revalued class of intangible assets been measured after recognition using the cost model	
Para 124 (b)	12	The amount of the revaluation surplus that relates to intangible assets at the beginning and end of the period, indicating the changes during the period and any restrictions on the distribution of the balance to shareholders	
Para 124 (c)	13	The methods and significant assumptions applied in estimating the assets' fair values	
Para 126	14	An entity should disclose the aggregate amount of research and development expenditure recognised as an expense during the period	
<b>Total Score for Compliance with IAS 38 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 40</b>		<b>Investment in Property</b>	
Para 75 (a-h)		<i>An entity should disclose:</i>	
Para 75 (a)	1	Whether it applies the fair value model or the cost model	
Para 75 (b)	2	If it applies the fair value model, whether, and in what circumstances, property interests held under operating leases are classified and accounted for as investment property	
Para 75 (c)	3	The criteria it uses to distinguish investment property from owner-occupied property and from property held for sale in the ordinary course of business	
Para 75 (d)	4	The methods and significant assumptions applied in determining the fair value of investment property, including a statement whether the determination of fair value was supported by market evidence or was more heavily based on other factors (which the entity shall disclose) because of the nature of the property and lack of comparable market data	

Para 75 (e)	5	The extent to which the fair value of investment property (as measured or disclosed in the financial statements) is based on a valuation by an independent valuer who holds a recognised and relevant professional qualification and has recent experience in the location and category of the investment property being valued. If there has been no such valuation, that fact shall be disclosed	
Para 75 (f)	6	The amounts recognised in profit or loss for rental income from investment property, direct operating expenses (including repairs and maintenance) arising from investment property that generated rental income during the period, and direct operating expenses (including repairs and maintenance) arising from investment property that did not generate rental income during the period	
Para 75 (g)	7	The existence and amounts of restrictions on the realisability of investment property or the remittance of income and proceeds of disposal	
Para 75 (h)	8	Contractual obligations to purchase, construct or develop investment property or for repairs, maintenance or enhancements	
Para 76	9	An entity that applies the fair value model should disclose reconciliation between the carrying amounts of investment property at the beginning and end of the period	
Para 78		<i>An entity shall disclose:</i>	
Para 78(c)	10	A description of the investment property	
Para 78 (b)	11	An explanation of why fair value cannot be determined reliably	
Para 78 (c)	12	The range of estimates within which fair value is highly likely to lie	
Para 78 (d)		<i>On disposal of investment property not carried at fair value</i>	
Para 78 (d) i	13	The fact that the entity has disposed off investment property not carried at fair value	
Para 78 (d) ii	14	The carrying amount of that investment property at the time of sale	
Para 78 (d) iii	15	The amount of gain or loss recognised	
Para 79 (a-e)		<i>An entity that applies the cost model should disclose</i>	
Para 79 (a)	16	The depreciation methods used	
Para 79 (b)	17	The useful lives or the depreciation rates used	
Para 79 (c)	18	The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period	
Para 79 (d)	19	A reconciliation of the carrying amount of investment property at the beginning and end of the period	
Para 79 (e)	20	The fair value of investment property. If the entity cannot determine the fair value of the investment property reliably, it shall disclose a description of the investment property, an explanation of why fair value cannot be determined reliably, and if possible, the range of estimates within which fair value is highly likely to lie	
<b>Total Score for Compliance with IAS 40 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IAS 41</b>		<b>Agriculture</b>	
Para 40	1	An entity should disclose the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell of biological assets	
Para 41	2	An entity should provide a description of each group of biological assets	
Para 46		<i>An entity should describe:</i>	
Para 46 (a)	3	The nature of its activities involving each group of biological assets	

Para 46 (b)	4	Non-financial measures or estimates of the physical quantities of each group of the entity's biological assets at the end of the period, and output of agricultural produce during the period	
Para 47	5	An entity should disclose the methods and significant assumptions applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets	
Para 48	6	An entity should disclose the fair value less costs to sell of agricultural produce harvested during the period, determined at the point of harvest	
Para 49 (a-c)		<i>An entity should disclose:</i>	
Para 49 (a)	7	The existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities	
Para 49 (b)	8	The amount of commitments for the development or acquisition of biological assets	
Para 49 (c)	9	Financial risk management strategies related to agricultural activity	
Para 50	10	An entity should present a reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period	
Para 54 (a-f)		<i>An entity that measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses at the end of the period should disclose for such biological assets:</i>	
Para 54 (a)	11	A description of the biological assets	
Para 54 (b)	12	An explanation of why fair value cannot be measured reliably	
Para 54 (c)	13	The range of estimates within which fair value is highly likely to lie	
Para 54 (d)	14	The depreciation method used	
Para 54 (e)	15	The useful lives or the depreciation rates used	
Para 54 (f)	16	The gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period	
Para 55	17	An entity that measures biological assets at their cost less any accumulated depreciation and any accumulated impairment losses should disclose any gain or loss recognised on disposal of such biological assets and reconciliation required with amounts related to such biological assets separately	
Para 55 (a-c)	18	The reconciliation should include impairment losses, reversals of impairment losses, and depreciation amounts included in profit or loss related to those biological assets	
Para 56 (a-c)	19	An entity should disclose the fair value of biological assets previously measured at their cost less any accumulated depreciation and any accumulated impairment losses that has become reliably measurable during the current period a description of the biological assets, an explanation of why fair value has become reliably measurable, and the effect of the change.	
Para 57 (a-c)		<i>An entity should disclose these related agricultural activity covered by this Standard:</i>	
Para 57 (a)	20	The nature and extent of government grants recognised in the financial statements	
Para 57 (b)	21	Unfulfilled conditions and other contingencies attaching to government grants	
Para 57 (c)	22	Significant decreases expected in the level of government grants	
<b>Total Score for Compliance with IAS 41 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 1</b>		<b>First Time Adoption of IFRS</b>	

Para 14	1	An entity's estimates in accordance with IFRSs at the date of transition to IFRSs should be consistent with estimates made for the same date in accordance with previous GAAP (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error	
Para 22 (a-b)		<i>In any financial statements containing historical summaries or comparative information in accordance with previous GAAP, an entity should:</i>	
Para 22 (a)	2	Label the previous GAAP information prominently as not being prepared in accordance with IFRSs	
Para 22 (b)	3	Disclose the nature of the main adjustments that would make it comply with IFRSs	
Para 23	4	An entity should explain how the transition from previous GAAP to IFRSs affected its reported financial position, financial performance and cash flows	
Para 30		<i>If an entity uses fair value in its opening IFRS statement of financial position as deemed cost for an item of property, plant and equipment, an investment property or an intangible asset, the entity's first IFRS financial statements should disclose, for each line item in the opening IFRS statement of financial position:</i>	
Para 30 (a)	5	The aggregate of those fair values	
Para 30 (b)	6	The aggregate adjustment to the carrying amounts reported under previous GAAP	
<b>Total Score for Compliance with IFRS 1 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 2</b>		<b>Share-based Payment</b>	
Para 44	1	An entity should disclose information that enables users of the financial statements to understand the nature and extent of share-based payment arrangements that existed during the period	
Para 45 (a-d)		<i>An entity should disclose at least the following:</i>	
Para 45 (a)	2	A description of each type of share-based payment arrangement that existed at any time during the period, including the general terms, conditions of each arrangement, and the method of settlement	
Para 45 (b)	3	The number and weighted average exercise prices of share options for each of the following groups of options for outstanding at the beginning of the period, granted during the period, forfeited during the period, exercised during the period, expired during the period, outstanding at the end of the period, and exercisable at the end of the period	
Para 45 (c)	4	For share options exercised during the period, the weighted average share price at the date of exercise	
Para 45 (d)	5	For share options outstanding at the end of the period, the range of exercise prices and weighted average remaining contractual life.	
Para 46	6	An entity should disclose information that enables users of the financial statements to understand how the fair value of the goods or services received, or the fair value of the equity instruments granted, during the period was determined	
Para 47 (a-c)		<i>If the entity has measured the fair value of goods or services received as consideration for equity instruments of the entity indirectly, by reference to the fair value of the equity instruments granted, the entity should disclose the following:</i>	
Para 47 (a)	7	For share options granted during the period, the weighted average fair value of those options at the measurement date and information on how that fair value was measured	
Para 47 (b)	8	For other equity instruments granted during the period (i.e. other than share options), the number and weighted average fair value of those equity instruments at the measurement date, and information on how that fair value was measured	

Para 47 (c)	9	For share-based payment arrangements that were modified during the period, the entity should disclose explanation of those modifications, incremental fair value granted, and how incremental fair value granted was measured	
Para 48	10	If the entity has measured directly the fair value of goods or services received during the period, the entity should disclose how that fair value was determined (e.g. whether fair value was measured at a market price for those goods or services)	
Para 50	11	An entity should disclose information that enables users of the financial statements to understand the effect of share-based payment transactions on the entity's profit or loss for the period and on its financial position	
Para 51 (a-b)		<i>The entity should disclose the following:</i>	
Para 51 (a) i	12	The total expense recognised for the period arising from share-based payment transactions in which the goods or services received did not qualify for recognition as assets	
Para 51 (a) ii	13	Separate disclosure of that portion of the total expense that arises from transactions accounted for as equity-settled share-based payment transactions	
Para 51 (b) i	14	The total carrying amount at the end of the period for liabilities arising from share-based payment transactions	
Para 51 (b) ii	15	The total intrinsic value at the end of the period of liabilities for which the counterparty's right to cash or other assets had vested by the end of the period (e.g. vested share appreciation rights)	
<b>Total Score for Compliance with IFRS 2 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 4</b>		<b>Insurance Contracts</b>	
Para 37 (a-e)		<i>An entity (insurer) should disclose:</i>	
Para 37 (a)	1	Its accounting policies for insurance contracts and related assets, liabilities, income and expense	
Para 37 (b)	2	The recognised assets, liabilities, income and expense (and, if it presents its statement of cash flows using the direct method, cash flows) arising from insurance contracts	
Para 37 (c)	3	The process used to determine the assumptions that have the greatest effect on the measurement of the recognised amounts described in (b)	
Para 37 (d)	4	The effect of changes in assumptions used to measure insurance assets and insurance liabilities, showing separately the effect of each change that has a material effect on the financial statements	
Para 37 (e)	5	Reconciliations of changes in insurance liabilities, reinsurance assets and, if any, related deferred acquisition costs	
Para 38	6	An insurer should disclose information that enables users of its financial statements to evaluate the nature and extent of risks arising from insurance contracts	
Para 39		<i>An entity (insurer) should disclose:</i>	
Para 39 (a)	7	Its objectives, policies and processes for managing risks arising from insurance contracts and the methods used to manage those risks	
Para 39 (c)	8	Information about insurance risk (both before and after risk mitigation by reinsurance)	
Para 39 (d)	9	Information about credit risk, liquidity risk and market risk	
Para 39 (e)	10	Information about exposures to market risk arising from embedded derivatives contained in a host insurance contract if the insurer is not required to, and does not, measure the embedded derivatives at fair value	
Para 39A (a-b)	11	An insurer should disclose either (a) or (b) as follows:	



		(a) a sensitivity analysis that shows how profit or loss and equity would have been affected if changes in the relevant risk variable that were reasonably possible at the end of the reporting period had occurred; the methods and assumptions used in preparing the sensitivity analysis; and any changes from the previous period in the methods and assumptions used (b) qualitative information about sensitivity, and information about those terms and conditions of insurance contracts that have a material effect on the amount, timing and uncertainty of the insurer's future cash flows	
<b>Total Score for Compliance with IFRS 4 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 5</b>		<b>Non-current Assets Held for Sale and Discontinued Operations</b>	
Para 30	1	An entity should present and disclose information that enables users of the financial statements to evaluate the financial effects of discontinued operations and disposals of non-current assets (or disposal groups)	
Para 33 (a-d)		<i>An entity should disclose:</i>	
Para 33 (a)	2	A single amount in the statement of comprehensive income comprising the total of the post-tax profit or loss of discontinued operations and the post-tax gain or loss recognised on the measurement to fair value less costs to sell or on the disposal of the assets or disposal group(s) constituting the discontinued operation	
Para 33 (b)	3	An analysis of the single amount in Para 33 (a) by showing the revenue, expenses and pre-tax profit or loss of discontinued operations, the related income tax expense, the gain or loss recognised on the measurement to fair value less costs to sell or on the disposal of the assets or disposal group(s) constituting the discontinued operation	
Para 33 (c)	4	The net cash flows attributable to the operating, investing and financing activities of discontinued operations	
Para 33 (d)	5	The amount of income from continuing operations and from discontinued operations attributable to owners of the parent	
Para 34	6	An entity should re-present the disclosures in Para. 33(a-d) for prior periods presented in the financial statements so that the disclosures relate to all operations that have been discontinued by the end of the reporting period for the latest period presented	
Para 35	7	The nature and amount of adjustments in the current period to amounts previously presented in discontinued operations that are directly related to the disposal of a discontinued operation in a prior period should be classified separately in discontinued operations and disclosed	
Para 38	8	An entity should present a non-current asset classified as held for sale and the assets of a disposal group classified as held for sale separately from other assets in the statement of financial position	
Para 38	9	The liabilities of a disposal group classified as held for sale should be presented separately from other liabilities in the statement of financial position	
Para 38	10	Assets and liabilities classified as held for sale should not be offset and presented as a single amount	
Para 38	11	The major classes of assets and liabilities classified as held for sale should be separately disclosed either in the statement of financial position or in the notes	
Para 38	12	An entity should present separately any cumulative income or expense recognised in other comprehensive income relating to a non-current asset (or disposal group) classified as held for sale	

Para 41 (a-c)		<i>An entity should disclose the following information in the notes in the period in which a non-current asset (or disposal group) has been either classified as held for sale or sold:</i>	
Para (a)	13	A description of the non-current asset (or disposal group)	
Para (b)	14	A description of the facts and circumstances of the sale, or leading to the expected disposal, and the expected manner and timing of that disposal	
Para (c)	15	The gain or loss recognised in the statement of comprehensive income	
<b>Total Score for Compliance with IFRS 5 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 6</b>		<b>Exploration for and Evaluation of Mineral Resources</b>	
Para 23	1	An entity should disclose information that identifies and explains the amounts recognised in its financial statements arising from the exploration for and evaluation of mineral resources	
Para 24 (a-b)		<i>An entity should disclose:</i>	
Para 24 (a)	2	Its accounting policies for exploration and evaluation expenditures including the recognition of exploration and evaluation assets	
Para 24 (b)	3	The amounts of assets, liabilities, income and expense and operating and investing cash flows arising from the exploration for and evaluation of mineral resources	
Para 25	4	An entity should treat exploration and evaluation assets as a separate class of assets	
<b>Total Score for Compliance with IFRS 6 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 7</b>		<b>Financial Instruments: Disclosures</b>	
Para 7	1	An entity should disclose information that enables users of its financial statements to evaluate the significance of financial instruments for its financial position and performance	
Para 11 (c)	2	An entity should disclose a detailed description of the methodology or methodologies used to determine whether presenting the effects of changes in a liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss	
Para 12B	3	An entity should disclose if, in the current or previous reporting periods, it has reclassified any financial assets	
		<i>For each such event, an entity should disclose:</i>	
Para 12B (a)	4	The date of reclassification	
Para 12B (b)	5	A detailed explanation of the change in business model and a qualitative description of its effect on the entity's financial statements	
Para 12B (c)	6	The amount reclassified into and out of each category	
Para 14		<i>An entity should disclose:</i>	
Para 14 (a)	7	The carrying amount of financial assets it has pledged as collateral for liabilities or contingent liabilities, including amounts that have been reclassified	
Para 14 (b)	8	The terms and conditions relating to its pledge	
Para 20		<i>An entity should disclose the following items of income, expense, gains or losses either in the statement of comprehensive income or in the notes:</i>	
Para 20 (a) i	9	Net gains or losses on financial assets or financial liabilities measured at fair value	

		through profit or loss	
Para 20 (a) v	10	Net gains or net losses on financial liabilities measured at amortised cost	
Para 20 (a) vi	11	Net gains or net losses on financial assets measured at amortised cost	
Para 20 (a) vii	12	Net gains or net losses on financial assets measured at fair value through other comprehensive income	
Para 20 (b)	13	Total interest income and total interest expense (calculated using the effective interest method) for financial assets that are measured at amortised cost or financial liabilities not at fair value through profit or loss	
Para 20 (c) i	14	Fee income and expense (other than amounts included in determining the effective interest rate) arising from financial assets measured at amortised cost or financial liabilities that are not at fair value through profit or loss	
Para 20 (c) ii	15	Fee income and expense (other than amounts included in determining the effective interest rate) arising from trust and other fiduciary activities that result in the holding or investing of assets on behalf of individuals, trusts, retirement benefit plans, and other institutions	
Para 20 (d)	16	Interest income on impaired financial assets accrued	
Para 20 (e)	17	The amount of any impairment loss for each class of financial asset	
Para 20A	18	An entity should disclose an analysis of the gain or loss recognised in the statement of comprehensive income arising from the derecognition of financial assets measured at amortised cost, showing separately gains and losses arising from derecognition of those financial assets	
Para 22		<i>An entity should disclose the following separately for each type of hedge:</i>	
Para 22 (a)	19	A description of each type of hedge	
Para 22 (b)	20	A description of the financial instruments designated as hedging instruments and their fair values at the end of the reporting period	
Para 22 (c)	21	The nature of the risks being hedged	
Para 23		<i>For cash flow hedges, an entity should disclose:</i>	
Para 23 (a)	22	The periods when the cash flows are expected to occur and when they are expected to affect profit or loss	
Para 23 (b)	23	A description of any forecast transaction for which hedge accounting had previously been used, but which is no longer expected to occur	
Para 23 (c)	24	The amount that was recognised in other comprehensive income during the period	
Para 23 (d)	25	The amount that was reclassified from equity to profit or loss for the period, showing the amount included in each line item in the statement of comprehensive income	
Para 23 (e)	26	The amount that was removed from equity during the period and included in the initial cost or other carrying amount of a non-financial asset or non-financial liability whose acquisition or incurrence was a hedged highly probable forecast transaction	
Para 24		<i>An entity should disclose separately:</i>	
Para 24 (a) i	27	On the hedging instrument, gain or losses in fair value hedges	
Para 24 (a) ii	28	On the hedged item attributable to the hedged risk, gain or losses in fair value hedges	
Para 24 (b)	29	The ineffectiveness recognised in profit or loss that arises from cash flow hedges	
Para 24 (c)	30	The ineffectiveness recognised in profit or loss that arises from hedges of net investments in foreign operations	
Para 26	31	In disclosing fair values, an entity should group financial assets and financial liabilities into classes, but should offset them only to the extent that their carrying amounts are offset in the statement of financial position	
Para 33 (a-c)		<i>Qualitative disclosures - For each type of risk arising from financial instruments, an entity should disclose:</i>	

Para 33 (a)	32	The exposures to risk and how they arise	
Para 33 (b)	33	Its objectives, policies and processes for managing the risk and the methods used to measure the risk	
Para 33 (c)	34	Any changes in (a) or (b) from the previous period	
Para 34		<i>Quantitative disclosures - For each type of risk arising from financial instruments, an entity should disclose:</i>	
Para 34 (a)	35	Summary quantitative data about its exposure to that risk at the end of the reporting period be based on the information provided internally to key management personnel of the entity	
Para 35	36	When the quantitative data disclosed as at the end of the reporting period are unrepresentative of an entity's exposure to risk during the period, an entity should provide further information that is representative	
Para 36 (a-c)		<i>Credit risk - An entity should disclose by class of financial instrument:</i>	
Para 36 (a)	37	The amount that best represents its maximum exposure to credit risk at the end of the reporting period without taking account of any collateral held or other credit enhancements (e.g. netting agreements that do not qualify for offset). This disclosure is not required for financial instruments whose carrying amount best represents the maximum exposure to credit risk	
Para 36 (b)	38	A description of collateral held as security and of other credit enhancements, and their financial effect (e.g. a quantification of the extent to which collateral and other credit enhancements mitigate credit risk) in respect of the amount that best represents the maximum exposure to credit	
Para 36 (c)	39	Information about the credit quality of financial assets that are neither past due nor impaired	
Para 37 (a-b)		<i>An entity should disclose by class of financial asset:</i>	
Para 37 (a)	40	An analysis of the age of financial assets that are past due as at the end of the reporting period but not impaired	
Para 37 (b)	41	An analysis of financial assets that are individually determined to be impaired as at the end of the reporting period, including the factors the entity considered in determining that they are impaired	
Para 38 (a-b)		<i>When an entity obtains financial or non-financial assets during the period by taking possession of collateral it holds as security or calling on other credit enhancements (e.g. guarantees), an entity should disclose for such assets held at the reporting date:</i>	
Para 38 (a)	42	The nature and carrying amount of the assets	
Para 38 (b)	43	When the assets are not readily convertible into cash, its policies for disposing of such assets or for using them in its operations	
Para 39 (a-c)		<i>In relation to liquidity risk, an entity should disclose:</i>	
Para 39 (a)	44	A maturity analysis for non-derivative financial liabilities (including issued financial guarantee contracts) that shows the remaining contractual maturities	
Para 39 (b)	45	A maturity analysis for derivative financial liabilities	
Para 39 (c)	46	A description of how it manages the liquidity risk inherent in (a) and (b)	
Para 40 (a-c)		<i>Market risk - Sensitivity analysis. An entity should disclose either Para 40 OR Para 41:</i>	
Para 40 (a)	47	A sensitivity analysis for each type of market risk to which the entity is exposed at the end of the reporting period, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date	
Para 40 (b)	48	The methods and assumptions used in preparing the sensitivity analysis	
Para 40 (c)	49	Changes from the previous period in the methods and assumptions used, and the reasons for such changes	

Para 41 (a-b)	50	If an entity prepares a sensitivity analysis, such as value-at-risk, that reflects interdependencies between risk variables (e.g. interest rates and exchange rates) and uses it to manage financial risks, it may use that sensitivity analysis in place of the analysis specified in Para. 40 but should disclose an explanation of the method used in preparing such a sensitivity analysis, and of the main parameters and assumptions underlying the data provided and an explanation of the objective of the method used and of limitations that may result in the information not fully reflecting the fair value of the assets and liabilities involved	
		<i>Other market risk disclosures</i>	
Para 42	51	When the sensitivity analyses disclosed in Para. 40 or 41 are unrepresentative of a risk inherent in a financial instrument, the entity should disclose that fact and the reason it believes the sensitivity analyses are unrepresentative	
<b>Total Score for Compliance with IFRS 7 Requirements</b>			

<b>IFRS/IAS and Paragraphs</b>	<b>Item No.</b>	<b>Disclosure Requirements</b>	
<b>IFRS 8</b>		<b>Operating Segments</b>	
Para 21 (b-c)		<i>An entity should disclose the following for each period for which a statement of comprehensive income is presented:</i>	
Para 21 (b)	1	Information about reported segment profit or loss, including specified revenues and expenses included in reported segment profit or loss, segment assets, segment liabilities and the basis of measurement	
Para 21 (c)	2	Reconciliations of the totals of segment revenues, reported segment profit or loss, segment assets, segment liabilities and other material segment items to corresponding entity amounts	
Para 21 (c)	3	Reconciliations of the amounts in the statement of financial position for reportable segments to the amounts in the entity's statement of financial position are required for each date at which a statement of financial position is presented	
Para 22 (a-b)		<i>An entity should disclose the following general information:</i>	
Para 22 (a)	4	Factors used to identify the entity's reportable segments, including the basis of organisation (for example, whether management has chosen to organise the entity around differences in products and services, geographical areas, regulatory environments, or a combination of factors and whether operating segments have been aggregated)	
Para 22 (b)	5	Types of products and services from which each reportable segment derives its revenues	
Para 23	6	An entity should report a measure of profit or loss for each reportable segment	
Para 23	7	An entity should report a measure of total assets and liabilities for each reportable segment if such amounts are regularly provided to the chief operating decision maker	
Para 23 (a-i)		<i>An entity should also disclose the following about each reportable segment if the specified amounts are included in the measure of segment profit or loss reviewed by the chief operating decision maker, or are otherwise regularly provided to the chief operating decision maker, even if not included in that measure of segment profit or loss:</i>	
Para 23 (a)	8	Revenues from external customers	
Para 23 (b)	9	Revenues from transactions with other operating segments of the same entity	
Para 23 (c)	10	Interest revenue	
Para 23 (d)	11	Interest expense	
Para 23 (e)	12	Depreciation and amortisation	

Para 23 (f)	13	Material items of income and expense	
Para 23 (g)	14	The entity's interest in the profit or loss of associates and joint ventures accounted for by the equity method	
Para 23 (h)	15	Income tax expense or income	
Para 23 (i)	16	Material non-cash items other than depreciation and amortisation	
Para 24 (a)	17	The amount of investment in associates and joint ventures accounted for by the equity method	
Para 24 (b)	18	The amounts of additions to non-current assets other than financial instruments, deferred tax assets, post-employment benefit assets and rights arising under insurance contracts	
Para 27	19	An entity should provide an explanation of the measurements of segment profit or loss, segment assets and segment liabilities for each reportable segment	
Para 34	20	An entity should provide information about the extent of its reliance on its major customers	
<b>Total Score for Compliance with IFRS 8 Requirements</b>			

**\*Scoring Procedure:** '1' if complied with the requirement, '0' otherwise and N/A if not applicable. The word 'should' was used in place of 'shall' as contained in each standard.

\*\* The official IASB volume for 2011 which include amendments made by IFRSs issued up to 31 December 2010, but exclude all amendments to standards with effective date starting from 1 January 2013 till date and partly in line with instrument used in prior related studies like Alfaraih (2009) and Tsalavoutas (2009).

**Appendix V: Yearly Cross-Sectional Mean Scores of the Variables**

<b>Variable</b>	<b><i>N</i></b>	<b>SPm</b>	<b>SPj</b>	<b>EPS</b>	<b>BVPS</b>	<b>CFOPS</b>
<b>2008</b>	69	1464	1765	111	420	110
<b>2009</b>	69	1639	1843	31	567	56
<b>2010</b>	69	1628	1593	99	672	140
<b>2011</b>	69	1224	1211	55	639	208
<b>2012</b>	69	1847	1957	120	773	206
<b>2013</b>	69	2242	2511	122	784	214
<b>2014</b>	69	2024	2045	89	861	40
<b>2015</b>	69	1847	1864	103	893	134

## Appendix VI: Descriptive Analyses of the Transformed Data Showing Normality Results

### Panel A: Combined Period (2008 – 2015)

	<b>lnBVPS</b>	<b>lnCFOPS</b>	<b>lnEPS</b>	<b>lnSPJune</b>	<b>lnSPMarch</b>
<b>Mean</b>	6.481213	5.406399	5.788172	6.174384	6.151866
<b>Median</b>	6.481581	5.410399	5.832665	6.140000	6.130000
<b>Maximum</b>	9.051636	9.689836	7.531230	10.14000	10.29000
<b>Minimum</b>	0.000000	0.000000	0.000000	3.910000	3.910000
<b>Std. Dev.</b>	0.561366	0.091940	0.692608	0.473313	0.504472
<b>Skewness</b>	-0.129965	-0.042220	-0.012675	0.140140	0.204062
<b>Kurtosis</b>	2.985559	3.481840	2.521208	2.597543	3.138637
<b>Jarque-Bera Probability</b>	1.558771 0.458688	5.503906 0.063803	5.287338 0.071100	5.532148 0.062908	4.273059 0.118064
<b>Sum</b>	3577.630	2984.332	3195.071	3408.260	3395.830
<b>Sum Sq. Dev.</b>	415.4567	559.8374	167.4660	1479.359	1438.911
<b>Observations</b>	552	552	552	552	552

### Panel B: Pre-IFRS Period (2008 – 2011)

	<b>lnBVPS</b>	<b>lnCFOPS</b>	<b>lnEPS</b>	<b>lnSPj</b>	<b>lnSPm</b>
<b>Mean</b>	6.362612	5.385299	5.745261	6.195224	6.191157
<b>Median</b>	6.340000	5.345000	5.750000	6.200000	6.210000
<b>Maximum</b>	8.930000	9.690000	7.530000	10.14000	9.980000
<b>Minimum</b>	0.000000	0.000000	0.000000	3.910000	3.910000
<b>Std. Dev.</b>	0.542264	0.091082	0.681639	0.452800	0.499285
<b>Skewness</b>	-0.331919	0.137754	-0.003838	0.000610	0.196463
<b>Kurtosis</b>	3.289428	3.549774	2.581854	2.742465	3.327325
<b>Jarque-Bera Probability</b>	6.031170 0.049017	4.348805 0.113676	2.011406 0.365787	0.762744 0.682924	3.007621 0.222281
<b>Sum</b>	1756.081	1486.343	1585.692	1709.882	1708.759
<b>Sum Sq. Dev.</b>	220.1656	284.7147	103.4983	657.8111	632.5795
<b>Observations</b>	276	276	276	276	276



**Panel C: Post-IFRS Period (2012 – 2015)**

	<b>lnBVPS</b>	<b>lnCFOPS</b>	<b>lnEPS</b>	<b>lnSPj</b>	<b>lnSPm</b>
<b>Mean</b>	6.503918	5.356866	5.512985	6.153545	6.112575
<b>Median</b>	6.514817	5.349962	5.534973	6.130000	6.103481
<b>Maximum</b>	9.040000	8.470000	7.470000	10.09000	10.29000
<b>Minimum</b>	0.000000	0.000000	0.000000	3.910000	3.910000
<b>Std. Dev.</b>	0.577123	0.091387	0.644389	0.493081	0.509539
<b>Skewness</b>	0.007267	-0.219968	0.289450	0.266058	0.217538
<b>Kurtosis</b>	2.637353	3.261902	3.139877	2.500995	2.968970
<b>Jarque-Bera Probability</b>	1.514827 0.468878	3.014558 0.221512	4.078932 0.130098	5.679773 0.057893	2.187930 0.334886
<b>Sum</b>	1795.081	1478.495	1521.584	1698.378	1687.071
<b>Sum Sq. Dev.</b>	245.3328	325.3132	137.6154	821.3147	805.5037
<b>Observations</b>	276	276	276	276	276

## Appendix VII: Yearly Multiple and Simple Regression Analyses of the Accounting Information

### Panel A: June Models only

$$\text{Model A}_2: \ln SP_{jt} = \beta_i + \beta_1 \ln EPS_{jt} + \beta_2 \ln BVPS_{jt} + \beta_3 \ln CFOPS_{jt} + \varepsilon_{jt}$$

$$\text{Model B}_2: \ln SP_{jt} = a_i + a_2 \ln EPS_{jt} + \varepsilon_{jt}$$

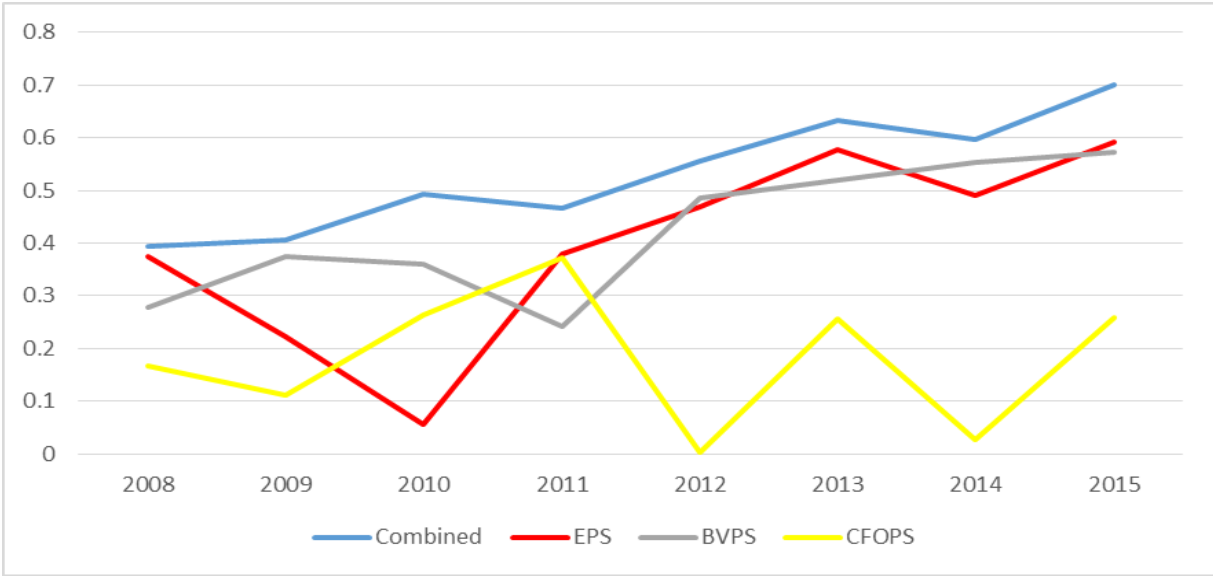
$$\text{Model C}_2: \ln SP_{jt} = b_i + b_2 \ln BVPS_{jt} + \varepsilon_{jt}$$

$$\text{Model D}_2: \ln SP_{jt} = c_i + c_2 \ln CFOPS_{jt} + \varepsilon_{jt}$$

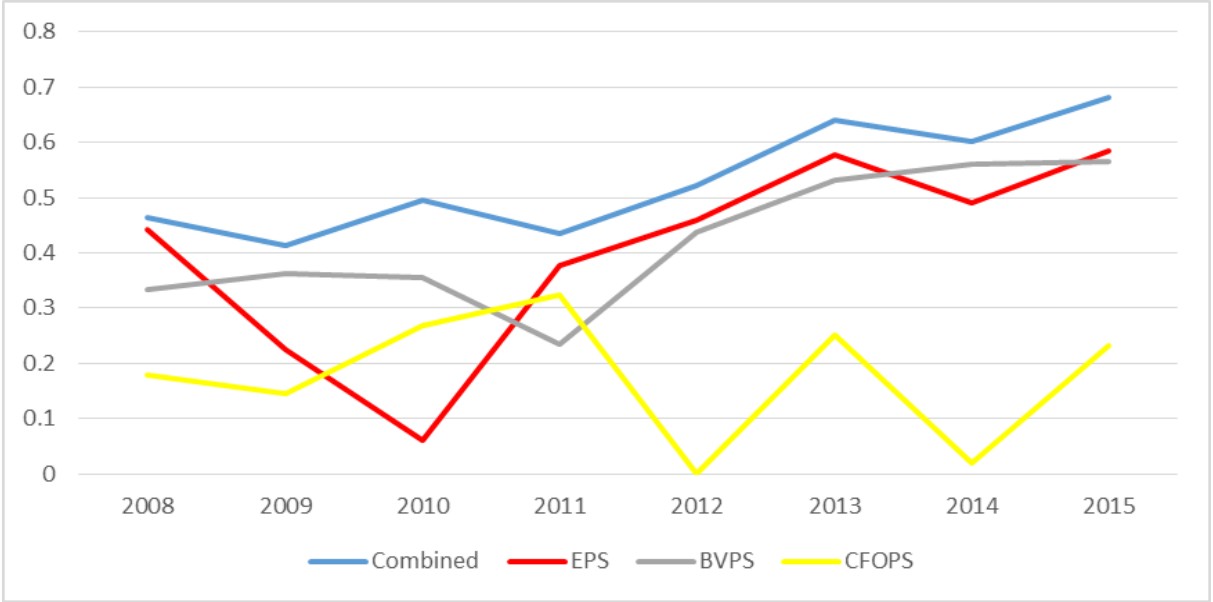
	Model A <sub>2</sub>					Model B <sub>2</sub>		Model C <sub>2</sub>		Model D <sub>2</sub>	
	$\beta_1$	$\beta_2$	$\beta_3$	Adj. R <sup>2</sup>	F-Stat	a <sub>2</sub>	Adj. R <sup>2</sup>	b <sub>2</sub>	Adj. R <sup>2</sup>	c <sub>2</sub>	Adj. R <sup>2</sup>
	1.3071*	0.377469	0.282657			1.9453**		.216**		0.6931**	
<b>2008</b>	(1.9971)	(1.1169)	(1.6968)	0.463	19.986	(3.2430)	0.443	(3.0517)	0.333	(3.0750)	0.178
	0.46335	0.8523**	0.3334			1.4472**		1.1034**		0.6899**	
<b>2009</b>	(1.545)	(3.1506)	(1.7508)	0.413	16.457	(2.9955)	0.225	(4.0588)	0.362	(2.7178)	0.145
	0.26160	0.826891	0.682543			0.509838		1.0695**		0.9578**	
<b>2010</b>	(2.594)	(3.7012)	(3.7487)	0.497	22.692	(0.9703)	0.060	(4.6926)	0.356	(4.6348)	0.268
	0.9820*	0.227235	0.48974*			1.8616**		0.70870*		0.9175**	
<b>2011</b>	(2.633)	(0.6626)	(2.2186)	0.436	17.973	(4.9340)	0.378	(2.0860)	0.234	(4.0023)	0.323
	1.612**	0.68536*	0.116741			2.5027**		1.3178**		0.184313	
<b>2012</b>	(2.991)	(2.1688)	(1.1026)	0.522	25.045	(6.3856)	0.460	(5.8973)	0.438	(0.7252)	0.001
	1.755**	0.8050**	0.127349			2.8934**		1.6392**		0.9037**	
<b>2013</b>	(3.629)	(2.9576)	(0.8156)	0.640	40.058	(7.5705)	0.579	(10.146)	0.531	(3.1717)	0.251
	1.27889	1.0790**	-0.1335*			2.4818**		1.6041**		0.267382	
<b>2014</b>	(1.931)	(3.3325)	(-2.0805)	0.603	34.345	(5.3115)	0.490	(12.509)	0.560	(1.0330)	0.020
	1.413**	0.7676**	0.34850*			2.664956		1.5262**		0.8957**	
<b>2015</b>	(3.284)	(3.4453)	(2.3402)	0.682	48.219	(9.2817)	0.585	(12.959)	0.566	(3.0018)	0.232

\*, \*\* indicate significance at 0.05 and 0.01 level respectively. The regression estimations are based on Newey-West HAC standard errors and covariance.

**Panel B: Chart of the Adjusted R<sup>2</sup> for the Eight-year Period for March only**



**Panel C: Chart of the Adjusted R<sup>2</sup> for the Eight-year Period for June only**



### Appendix VIII: Regression Results for Low Cindex Scores Sub-sample

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**Model 7c2:**  $\ln SP_{mit} = a_{it} + a_1 \ln EPS_{it} + a_2 \ln BVPS_{it} + a_3 \ln CFOPS_{it} + \varepsilon_{it}$

**Model 7d2:**  $\ln SP_{mit} = b_{it} + b_1 \ln EPS_{it} + \varepsilon_{it}$

**Model 7e2:**  $\ln SP_{mit} = c_{it} + c_1 \ln BVPS_{it} + \varepsilon_{it}$

**Model 7f2:**  $\ln SP_{mit} = d_{it} + d_1 \ln CFOPS_{it} + \varepsilon_{it}$

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Variables	Model 7c2	Model 7d2	Model 7e2	Model 7f2
<b>Intercept</b>	-1.367874 (-0.71128)	2.039818** (17.819)	1.617658** (8.164)	-2.0247 (-0.9502)
<b>lnEPS</b>	0.198811** (2.886)	0.285146** (4.374)		
<b>lnBVPS</b>	0.230056** (2.704)		0.357212** (4.562)	
<b>lnCFOPS</b>	0.879808 (1.52663)			1.33456* (2.122)
<b>R<sup>2</sup></b>	0.347135	0.257956	0.269449	0.142281
<b>Adj. R<sup>2</sup></b>	0.324549	0.249701	0.261306	0.132891
<b>F-stat.</b>	10.94196	19.1338	20.8100	4.5030
<b>P-value</b>	0.000003	0.0000	0.0000	0.0363
<b>Durbin-Watson</b>	2.093982			
<b>N</b>	104			

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\*, \*\* indicate significance at 0.05 and 0.01 levels respectively (2-tailed); t-statistic in parentheses.

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**Appendix IX: Multivariate Regression of Moderating Effect of Large and Small Firm-Size Subsamples**

**Large Firm-size Model:**  $\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \beta_4 CindexScore_{it} + \epsilon_{it}$

Variables	Coefficient	Std Error	t-Statistic	P-value
Intercept	-1.687886	1.743502	-0.968101	0.3348
lnEPS	0.983486	0.208463	4.717804	0.0000
lnBVPS	0.464943	0.179871	2.584864	0.0109
lnCFOPS	0.058279	0.037370	1.559522	0.1213
CindexScore	-0.835729	1.446290	-0.577843	0.5644
R-squared	0.533774			
Adjusted R-squared	0.513116			
F-statistic	16.15700			
S.E. of regression	0.476279			
Prob. (F-statistic)	0.000000			
Durbin-Watson	1.771426			

**Small Firm-size Model:**  $\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \beta_4 CindexScore_{it} + \epsilon_{it}$

Variables	Coefficient	Std Error	t-Statistic	P-value
Intercept	4.293393	1.029964	4.168488	0.0001
lnEPS	0.457811	0.144468	3.168950	0.0019
lnBVPS	0.012015	0.133270	0.090157	0.9283
lnCFOPS	0.000960	0.048246	0.019902	0.9842
CindexScore	-1.801177	0.596916	-3.017471	0.0031
R-squared	0.333020			
Adjusted R-squared	0.306137			
S.E. of regression	0.289540			
F-statistic	4.948087			
Prob. (F-statistic)	0.000961			
Durbin-Watson	1.933219			

**Appendix X: Multivariate Regression of Moderating Effect of Financial and Non-financial Industry Category Subsamples**

**Financial Industry Model:**  $\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \beta_4 CindexScore_{it} + \epsilon_{it}$

<b>Variables</b>	<b>Coefficient</b>	<b>Std Error</b>	<b>t-Statistic</b>	<b>P-value</b>
<b>Intercept</b>	-4.987890	1.825870	-2.731788	0.0076
<b>lnEPS</b>	2.110621	0.286175	7.375279	0.0000
<b>lnBVPS</b>	0.215498	0.219375	0.982328	0.3287
<b>lnCFOPS</b>	0.060141	0.033322	1.804829	0.0746
<b>CindexScore</b>	3.610443	1.245218	2.899447	0.0047
<b>R-squared</b>	0.557421			
<b>Adjusted R-squared</b>	0.527877			
<b>S.E. of regression</b>	0.319151			
<b>F-statistic</b>	12.09796			
<b>Prob. (F-statistic)</b>	0.000000			
<b>Durbin-Watson</b>	1.821237			

**Non-financial Industry Model:**  $\ln SP_{mit} = \beta_{it} + \beta_1 \ln EPS_{it} + \beta_2 \ln BVPS_{it} + \beta_3 \ln CFOPS_{it} + \beta_4 CindexScore_{it} + \epsilon_{it}$

<b>Variables</b>	<b>Coefficient</b>	<b>Std Error</b>	<b>t-Statistic</b>	<b>P-value</b>
<b>Intercept</b>	0.746392	1.064402	0.701232	0.4841
<b>lnEPS</b>	0.598005	0.143634	4.163389	0.0000
<b>lnBVPS</b>	0.396853	0.128685	3.083908	0.0024
<b>lnCFOPS</b>	0.031435	0.036769	0.854951	0.3938
<b>CindexScore</b>	-0.706604	0.761444	-0.927980	0.3547
<b>R-squared</b>	0.424590			
<b>Adjusted R-squared</b>	0.406452			
<b>S.E. of regression</b>	0.427024			
<b>F-statistic</b>	12.38212			
<b>Prob. (F-statistic)</b>	0.000000			
<b>Durbin-Watson</b>	1.713274			

**Appendix XI: Yearly Cross-sectional Regression Output of Value Relevance of Extent of Compliance with IFRS Mandatory Disclosure Demands**

<b>Years</b>	<b>Variable</b>	<b>Reg. Coeff.</b>	<b>Std. Error</b>	<b>t-Stat.</b>	<b>P-value.</b>	<b>R<sup>2</sup></b>	<b>Adj. R<sup>2</sup></b>	<b>F-Stat.</b>	<b>P-value</b>
<b>2012</b>	<b>Intercept</b>	0.8021	2.4058	0.3334	0.7399	0.161	0.147	4.253	0.0276
	<b>CindexScore</b>	6.2421	2.7705	2.2531	0.0276				
<b>2013</b>	<b>Intercept</b>	-0.5349	3.1413	-0.1703	0.8653	0.147	0.133	3.229	0.0327
	<b>CindexScore</b>	7.4871	3.43101	2.1821	0.0327				
<b>2014</b>	<b>Intercept</b>	-1.0845	3.1650	-0.3427	0.7330	0.142	0.127	2.843	0.0252
	<b>CindexScore</b>	7.7705	3.3911	2.2915	0.0252				
<b>2015</b>	<b>Intercept</b>	-1.4998	3.0631	-0.4897	0.6260	0.134	0.119	2.300	0.0185
	<b>CindexScore</b>	7.8388	3.2433	2.4169	0.0185				

*t*-Stat is based on HAC (Newy-West) standard errors & covariance estimation.