EFFECT OF MANDATORY IFRS ADOPTION ON VALUE RELEVANCE AND PRO-CYCLICALITY OF DEPOSIT MONEY BANKS IN NIGERIA

BY

Jumai Ajuma MURTALA
P16/ADAC/8172

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

DEPARTMENT OF ACCOUNTING,
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MARCH, 2019

Declaration

I hereby declare that this Dissertation titled **"Effect of Mandatory IFRS Adoption on Value Relevance and Pro-Cyclicality of Deposit Money Banks in Nigeria"** written under the supervision of Dr. M. H. Sabari and Dr. A. M. Hamman is performed by me. All information from various sources have been duly and humbly acknowledged in the text and a list of references provided in the bibliography.

Jumai Ajuma MURTALA _____ _____

Signature Date

Certification

This Dissertationtitled **"Effect of mandatory IFRS adoption on value relevance and pro-cyclicality of Deposit Money Banks in Nigeria"** by **Jumai Ajuma Murtala** meets the requirements governing the award of the Degree of Master of Science (M.Sc.), Accounting and Finance of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

Dr. M.H. Sabari Chairman, Supervisory Committee	_____ Signature	_____ Date
Dr. A.M. Hamman Member, Supervisory Committee	_____ Signature	_____ Date
Dr. M.H. Sabari Head of Department	_____ Signature	_____ Date
Prof. S.Z. Abubakar Dean, School of Postgraduate Studies	_____ Signature	_____ Date

Dedication

I hereby dedicate this M.Sc. Dissertation to my parents, my husband and children, and other members of the family for their continual support and encouragement.

Acknowledgements

My profound praises and thanks are foremost due to Almighty Allah, the supreme Lord, the Most High, the Most Gracious and the Most Merciful. May the peace and blessings of Allah be upon the noble Prophet Muhammad, his household, his companions, and all those that follow his guidance.In the course of this study, many people have contributed in many ways to make it successful. It is not possible to mention them all by their names. I however, wish to acknowledge the following for their outstanding contributions.

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Abstract

Accounting manipulations in the banking industry has brought about the debate on the need for better accounting standards that are internationally comparable and can ensure transparency in financial reporting so as to reflect the true picture of the performances of banks and thus reform global economies. This study examines the effect of mandatory IFRS adoption that started in Nigeria in year 2012, on the value relevance of financial reports and pro-cyclicality of 14 selected deposit money banks in Nigeria. The study formulates three hypotheses and applies correlational design, using panel data set to analyze the relationship between value relevance and IFRS, and the relationship between pro-cyclicality and IFRS. The study utilized secondary data extracted from the financial statements of the banks and the World Bank database over the period 2006 through 2016. The result of the fixed effect GLS provides evidence that both the value relevance of earnings and book value improved after IFRS was mandatorily adopted by the selected DMBs, and the result of the random effect GLS for pro-cyclicality provides evidence that the lending behavior of the selected banks did not become more pro-cyclical after IFRS adoption. The study concludes that adequate information do actually boost investors' confidence in the financial reporting of DMBs after mandatory adoption of IFRS. Based on the findings, the study recommends among others that there is need for the managers of Deposit Money Banks in Nigeria to further implement monetary policies that aims at enhancing investors' confidence in their reported earnings and book value.

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Descriptive Statistics

Correlation Matrix

Ordinary Least Square Result

Random Effect Regression Result

Hausman Specification Test Result

Multicollinearity Test

Heteroskedasticity Test

Breusch/Panganlangrangian Multiplier Test

ABBREVIATIONS AND ACRONYMS

CBN	Central Bank of Nigeria
DMBs	Deposit Money Banks
EU	European Union
IFRS	International Financial Reporting Standard
IAS	International Accounting Standard
IASB	International Accounting Standard Board
LLP	Loan Loss Provision
OLS	Ordinary Least Square
US	United States

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

International Financial Reporting Standards (IFRS) has been the focus of many financial accounting studies in recent times. The global convergence to the use of a common set of international accounting standards in business entities to improve financial disclosure has redirected researches towards analyzing the value relevance of financial reports and the change of the standard for the recognition and measurement of loan loss provision which has received considerable attention and debate worldwide, especially in developed economies.

Financial reporting is the record of the business economic activities which aims at making available accounting information to investors, analyst and stakeholders for investment decisions. Prior to 2012, Nigerian banks used Nigerian Generally Accepted Accounting Principles (GAAP) in preparing their financial reports. Value relevance of financial reporting is fundamental as accounting information shows the financial health of the business entity that affects their investment efficiency. The key objective of empirical research on value relevance is to examine the statistical relationship between financial report variables and market variables. Investors, analyst and other users of financial statements rely on a variety of information including earnings, products and data in the economy.

However, fraudulent accounting manipulation threatens the credibility and reliability of financial reporting which affect investors' confidence in accounting numbers. Global financial crisis like that of Enron Corporation in 2001, the largest corporate failures in history that led to the dissolution of Author Anderson audit and accountancy partnerships

in the world have put accounting practices and the profession under inspection, as these scandals has made the reliability and effectiveness of accounting standards questionable. Such trend of major accounting scandals also showed its ugly face in Nigeria with the falsification of the financial reports in 2006 by Cadbury Nigeria Plc and in the banking sector, the liquidation of 26 banks in 1997 despite the efforts of the Central Bank of Nigeria (CBN) in enhancing the financial disclosure of Deposit Money Banks (DMBs) by issuing prudential guidelines for supervision and specific directives. It is based on this premise thatthe World Bank (2006) opines that Nigerian banks financial reporting is very poor and some banks are known to falsify their accounts. In addition to the foregoing, Ashamu and Abiola (2012), state that the 2007 economic crisis on the banking industry of Nigeria has caused depression of the country's capital market, decreased the quality of some part of the credit given by banks for trading in the capital market. All of the aforementioned events as well as the post consolidation banking crisis of 2009 in Nigeria further increased investment riskiness in the minds of stakeholders and has increased the call for improving financial disclosures.

Whereas, Banks provide financing in economies across the globe as part of their operational activities by giving credit to customers hence, helping in the allocation of resources and Thus act as catalyst to economic growth. However, banks are faced with credit risk arising from default from customers in paying interest on loan as well as the principal. Due to this, credit risk management is crucial to banks because loan defaults could affect their solvency and lead to liquidation. Consequently, Banks are therefore required by law to make Loan Loss provisions (LLP) to cover for loan defaults. The Statement of Accounting Standard (SAS), specifically SAS 10 under Nigerian GAAP, provides that Nigerian deposit money banks recognize and measure reported LLP using expected loss approach, using historical cost accounting. This approach is forward

looking and gives bank managers the discretion to make loan loss provisions based on the expectation that borrowers will default.

It is however argued that the expected loss models allow bank managers to use their discretion to manipulate banks LLP, by increasing their LLPs in good years when profits are high so as to cover up for bad years when profits are low, making stakeholders believe the banks are doing well compared to their competitors. Olusanya (2010), in Ndubuisi (2016) intercontinental bank plc,Oceanic bank plc and Afribank Plc in 2006, were accused of manipulating their financial reports on LLP. Their LLPs in audited reports were different from those reported by the CBN. That of intercontinental bank reads 36billion as against 278.2billion reported by the CBN which may suggest that local GAAP is not transparent enough to provide in details information only known to managers.

More so, The fact thatNigeria's economy is also becoming more sophisticated and the wide use of International Financial Reporting Standard (IFRS) by other countries across the globe and noteworthy is the fact that, as stated by Ocansey and Enahoro (2014) foreign donors require that financial reports be prepared in conformity with International Financial Reporting Standard (IFRS) before receiving grants which further trigger the need for unified accounting that conformsto international standards in order to reform the global economy.

It is therefore not surprising when Nigeria mandatorily adopted IFRS by the International Accounting Standard Board (IASB) in the year 2012, whose process started in year 2010, joining other countries around the globe to benefit from the use of a single set of international accounting standards. The adoption of IFRS by Nigeria is expected to

reduce the problems associated with the use of Nigerian GAAP by mitigating the trend of fraud and enhancing the reliability of accounting in banks.

IFRS advocate the incurred loan loss model for LLP provided under IAS 39, using fair value accounting for all derivative instruments. Fair value accounting is argued to be an improvement of the historical cost accounting. IAS 39 is a backward looking standard that sets restrictions on the discretionary LLP by managers and only allows the recognition of loan losses when there is objective evidence that they actually occur and considers only identifiable losses at balance sheet date. Ernst and young (2006) emphasized the LLP (impairment) rules provided by IAS 39, stating that the amount to be set aside as provisions for loan loss depends on the state of the economy and are not to be made except when they actually occur.

However, the incurred loss model under IAS 39 is argued to be pro-cyclical. Banks are supposed to increase their LLPs in an expansion so as to cover for loan defaults and reduce LLP in a recession, but because during an economic expansion the Loan portfolio of banks increases as the competition between banks for lending customers' increases, businesses flourish with high profits,and the Gross Domestic Product (GDP) of the country is high, banks therefore expects that very few loans will default, thus monitoring efforts and LLPs are reduced.

Conversely, in a recession banks prefers to increase LLPs and reduce lending to customers as business losses are high and GDP of the country is low. Nonetheless, lending risk builds upduring the expansion period but only becomes evident in a recession when the quality of their loan portfolio reduces. Increasing LLPs in a recession and reducing loans to credit worthy customers for investments that may have been otherwise productive leads to credit crisis that worsens and delays a recovery from the recession that

affect the financial stability of the entire economy. This means that the restriction set by IFRS on discretionary loan loss provision leading to delay in recognizing LLP makes banks vulnerable to pro-cyclical behavior, by increasing LLP in a recession which directly affects a banks profit and retained earnings that are part of their capital, thus weakens their capital and if their LLPs are not enough to cover loan losses, they are forced to diminish their capital.

Regulators therefore claim that this model for LLP has increase the crisis during economic recession. Gerhardt andFarkas (2006) state that regulators argue that even though fees and risk are incorporated in interest rates charged to borrowers, the recognition of losses is postponed until the borrower actually defaults. As a result, higher earnings are reported during economic expansion and lower earnings in period of economic recession. Furthermore, The World Bank (2010) opine that during the global financial crisis, IAS 39, as currently implemented have shown overstatement of interest on income inperiods before the occurrence of the loss event and provisions that were insufficient to absorb actual losses that emerged during the crisis, leading to pro-cyclical bank earnings.In addition to this, Larson and street (2004) argue that IFRS under IAS 39 have a complex nature making it complicated and difficult to apply in the recognition and measurement of financial instruments.

In relation to the foregoing, IFRS has been extensively criticized for its pro-cyclical effect on the loan loss provisioning behavior of banks influenced by the state of the economy which affects financial stability and worsens economic situation. This has called for a counter cyclical provisioning accounting standard that would be forward looking. IASB and Financial Accounting Standard Board would replace IAS 39 completely with IFRS 9 effective from January 1, 2018. IFRS 9 is an expected loan loss provision model which

guides banks to estimate expected credit losses by considering past events, current economic conditions and reasonable forecasts (IAS Plus, 2013a)

The regulatory change in accounting standards especially LLP, as presently measured under IAS 39 has raised a lot of questions about the impacts of IFRS on the credibility and relevance of financial statements. It is therefore desirable to carry out a study in this area so as to establish whether or not the supposed relationship between IFRS and value relevance as well as that of pro-cyclicality holds true for the Nigerian banking industry.

1.2 Statement of the Problem

Prior empirical studies in Nigeria did not focus on the pro-cyclical effects of banks LLP as a result of adopting IFRS. Rather, they focus on the effect of IFRS on earnings management, timely loss recognition and value relevance. Dearth of studies in this area on the pro-cyclical behavior of banks shows that there is a gapin literature to be filled. Therefore, this study tries to fill the gap by including pro-cyclicality. The problem that has also prompted carrying out the study is the unanswered question of whether or not the value relevance of financial reportshas improved with the adoption of IFRS by Banks, claimed to be to pro-cyclicality, using Nigerian data.

1.3 Research Questions

Based on the problems of the study the research questions are as follows:

1. To what extent is the effect of IFRS moderated value relevance of earnings on share price of DMBs in Nigeria?
2. What is the effect of IFRS moderated value relevance of book value on share price of DMBs in Nigeria?
3. Do IFRS moderated pro-cyclicality have effect on the loan loss provision of DMBs?

1.4 Objectives of the Study

The main aim of the study is to evaluate the effect of compulsory change of accounting standards in Nigeria on the value relevance of banks financial reports and the pro-cyclical effect of the change in the recognition and measurement of the main operating accrual item of banks as currently implemented under IAS 39 by Deposit Money Banks in Nigeria. In view of this, the study will have the following specific objectives

1. To investigate the effect of IFRS moderated value relevance of earnings on share price of DMBs in Nigeria.
2. To examine theeffect of IFRS moderated value relevance of book value on share price of DMBs in Nigeria.
3. To assess the effect of IFRS moderated pro-cyclicality on the loan loss provision of DMBs.

1.5 Research Hypotheses

In line with the objectives of the study, the research hypotheses have been written in null form. The research hypotheses are thus;

HO_1: Mandatory IFRS adoption does not have a significant effect on the value relevance of banks earnings.

HO_2: Mandatory IFRS adoption does not have a significant effect on the value relevance of banks book value.

HO_3: Mandatory IFRS adoption does not have a significant influence on banks pro-cyclical behavior on discretionary loan loss provision.

1.6 Scope of the Study

The study is limited to the effect of Mandatory IFRS on the value relevance of financial reports and pro-cyclicality of deposit Money Banks in Nigeria. The dependent variables

are value relevance (of earnings and book value) and Pro-cyclicality. Value relevance is represented by share price per share (SHP), pro-cyclicality is represented by loan loss provision (LLP), and the independent variable International Financial Reporting Standard is represented by a dummy variable, IFRS.

The study covers a period of 11years, from 2006– 2016. This period is chosen because IFRS was fully and compulsorily adopted by the Deposit Money Banks in Nigeria in the year 2012 and in order to beable to examine the effect of mandatory IFRS on the two empirically testable dependent variables, the period is suitable.Importantly also, the 2007 to 2009 global recession is covered in the time period chosen; the result of the study willtherefore also reflect the impact of the global recession on the two dependent variables in relation with the listed Deposit Money Banks in Nigeria.

1.7 Significance of the Study

There is a rich body of literature on the impact of IFRS on value relevance but most studies did not separate banks from other entities making the results very ambiguous. The study therefore extends and contributes to the existing literature that analyzes the value relevance of earnings and book value of financial reports of banks, using Nigerian domain.

The study will be an invaluable tool for students, academics and individuals that want to know more about IFRS, value relevance and pro-cyclicality of Nigerian banks. Also to the best of the researcher's knowledge, the study is the first in Nigeria to extend its investigation to pro-cyclicality through loan loss provision, using listed Deposit Money Banks data. The study will therefore be significant to the general Nigerian public as it will provide quantitative evidence of the relationship of IFRS and pro-cyclicality, as well as provide answer to the factor that has given rise to further change from IAS 39 to IFRS 9.

More so, the study will be equally of benefit to shareholders, potential investors and financial analyst as it will give them an insight of the quality of financial reports and guide their judgments on investment and performance of the DMBs in Nigeria.

Lastly, the study is presently one of the top issues in the Nigerian banking industry, as their adoption of IFRS is relatively new. Therefore, the results of the study will be of significant relevance to the federal government, Federal Reporting Council of Nigeria (FRCN), Central Bank of Nigeria, other regulating bodies of banks in Nigeria and the DMBs themselves by proffering better ways to regulate banks such that the financial stability of banks can be ensured.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews prior literature on the study area to enhance a better understanding of the study. Literatures that are empirical as well as those that are theoretical have been reviewed in this chapter so as to dwell into what other researchers have opined and perceived about the study and to thereafter review the gaps that needs to be filled. In view of the above, this chapter explains the concepts of IFRS and Generally Acceptable Accounting Principles and International Financial Reporting Standard, adoption process of IFRS in Nigeria, bank loan loss provisioning, value relevance and pro-cyclicality, differences between IFRS and Nigerian GAAP, theoretical framework and lastly, the summary of the chapter.

2.2 Background to Nigerian GAAP and IFRS

Companies including banks in Nigeria have been applying accounting standards issued by the Nigerian Accounting Board, now Federal Reporting Council of Nigeria, (FRCN). The accounting standards issued by FRCN represent Nigerian GAAP. GAAP means Generally Accepted Accounting Principles. Ikpefan and Akande (2012) describe GAAP as the framework that regulates accounting and financial reporting which comprises of accounting standard, companies law, and stock market regulations and so on. Both private and public organizations are required to apply GAAP in financial reporting. The Nigerian GAAP is based on historical costconcept, where assets are valued at their original cost rather than their present market cost, (fair Value).

The Nigerian banking industry is governed by the Central Bank of Nigeria, Nigerian Deposit Insurance corporation (NDIC) and laws like the banking and other financial institutions act (BOFIA 1991) and accounting standards like accounting for banks and

non-financial institutions (SAS No 10 and 15) and the international accounting standard on financial statements of banks and similar financial institutions (IAS No 30), (Dandago and Rufai2014). Effective from May 1st 2010, the CBN issued a prudential guideline for Deposit Money Banks which was done to strengthen them

In the year 2005, the European Union required listed companies to prepare their consolidated financial reports in conformity with International Financial Reporting Standard, (IFRS) and this marked the start of global convergence to IFRS in financial reporting. IFRS are standards issued by the International Accounting Standard Board (IASB), which was formally known as International Accounting Standard Committee (IASC). The defunct IASC was established in the year 1973 by professional accountancy bodies in Australia, Germany, United States of America, Canada, France, Japan, Mexico, Netherlands, United Kingdom, and Ireland. The IASC have been issuing international accounting standards since 1973 until 2000, when it was renamed IASB and it adopted standards issued by the defunct IASC. IFRS as described by Jacob and Madu (2009) is a single set of high quality and globally accepted standards of accounting that can ensure comparability around the world. And the push by International institutions fostering the use of IFRS including the World Bank, the International Monetary Fund (IMF), the G8, the G7 finance ministers and Central Bank governors, International Organization of Securities Commission (IOSCO), the United Nations (UN), Basel Committee on Banking Supervision and the Organization for Economic Co-operation and Development (OECD), in Nigeria, NASB now FRC, Nigerian stock Exchange, Central Bank and the government readiness to adopt IFRS in Nigeria further intensifies the need for the adoption of IFRS, Odia and Ogiedu (2013).

One of the main objectives of IASB is to issue standards that will allow the convergence of national accounting standards across the globe to a uniform set of international accounting standards which will make sure high quality, comparable and transparent financial information is achievable, (Ocansey & Enahoro,2014).

Accounting standards are guidelines for preparing financial statements by entities, which are produced and issued by accounting standard bodies. Jamal and Sunder (2008) opine that standards have two functions; serving as a minimum quality requirement or serving a coordination function.IFRS statements issued by IASB, according to Deliotte (2011), are; IFRS 1 – First time adoption of IFRS, IFRS 2 – Share based payment, IFRS 3 – Business combinations, IFRS 4 – Insurance contracts, IFRS 5 – Non-current assets held for sale and discontinued operations, IFRS 6 – Exploration for evaluation of minerals resources, IFRS 7 – Financial instruments: disclosures, IFRS 8 – Operating segments, IFRS 9 – Financial instruments, IFRS 10 – Consolidated financial statements, IFRS 11 – Joint arrangements, IFRS 12 – Disclosure of interest in other entities, IFRS 13 – Fair value measurements.Other standards issued by the IASB are international accounting standards (IAS) by the defunct IASC.

With the adoption of IFRS, the structure of financial statements changes, as stated by Bewaji (2012) and the changes are;

1) Profit and loss account is called income statement under IFRS, wherein,
    i) Dividends are charged directly to reserves. This is based on the dividends paid during the year depending on the profit that was made during the year. Also, earnings per share for both continuing operations and continuing plus discontinued operations will be shown.

ii) Operating cost and profits for continuity operations will only be shown except for profits for the year and retained profit, which gives the total profits. This is because operating cost and any discontinued items will be combined for discontinued activities in profit after tax. Also, net profit shows the amount if it is attributable to minority interest and shareholders of the company.

2) Balance sheet under IFRS names fixed assets as non-current assets. Total assets, in addition includes finance lease receivables, deferred tax assets available for sale investment which is classified as non-current assets.

3) Cash flows is split into three headings;

i) Net cash from operating activities, Net cash from operating activities previously related to operating profit under GAAP, but is related to pre-tax profit under IFRS.

ii) Net cash used in investing activities, previously related to operating profit but now relates to profit after interest and tax. Investment, income and interest payable were previously under the heading, returns on investment and servicing of finance.

iii) Net cash used in financing activities, Capital expenditure and acquisitions and disposal are now shown as net cash from investing activities.

2.3 The Need and Implication of IFRS Adoption

Many researchers have been stressing the need for the adoption of IFRS by entities in developed countries across the globe and developing countries like Nigeria is not left out. Wallace (1988) states that companies in Nigeria financial reporting practices are deficient as they lack necessary information that will enable users make informed decision. Ocansey and Enahoro (2014) also states that the Nigerian GAAP has deficiency of some

standards in areas of accounting for government grants and disclosure of government assistance, borrowing cost, intangible assets, impairment of assets, non-current assets held for sale and share based payments.

Proponents of IFRS suggests that the adoption of a high quality set of international accounting standards helps to foster trade and foreign direct investments since the improvement of disclosure in turn helps foster financial transparency and comparability, thus it reduces information asymmetries and unfamiliarity among agents in different countries. More so Bewaji (2012) state that Nigerian GAAP are partly based on old international accounting standard, some of which have been amended or withdrawn by IASB, they also do not cover all aspects of financial reporting encountered by preparers of financial statements, some are not sufficiently comprehensive enough as to form a basis for preparing high quality financial statement and hence, there is urgent need for convergence of our national GAAP to IFRS. IFRS are standards issued by International Accounting Standard Board, IASB (an account standard setter based in London) used by companies across the globe in preparing financial reports.

Cai and Wong (2010) argue that IFRS can help eliminate the need for restatement of financial reports normally done to facilitate investors comparison between financial statements prepared with the use of local GAAP of countries and eliminate accounting diversities among countries. However, controversy surrounds the relationship between IFRS adoption and accounting quality. Researches on IFRS have compared accounting quality under local GAAP and IFRS around the world. Such as Daske and Gebhardt (2006), and Bartov, Goldberg and Kim (2005). Proponents of IFRS posits that there is the urgent need for public firms to apply a single set of high quality accounting standards in preparing financial statements for better functioning global capital market. They further

argue that applying IFRS in financial statements ensures better accounting quality than local GAAP. Abdul Adziz (2012) posit that IFRS might help reduce firm cost of capital, increase efficiency of the market, and reduce the cost of assessing financial information across companies by investors since firm's financial statements are comparable worldwide. While critique of IFRS like Barth, Landsman and Lang (2007) argue that there is no evidence that is conclusive enough to show that IFRS have contributed to the improvement in accounting quality. Ball, Robin and Wu (2003) also argue that IFRS may lead to low quality accounting information depending on the incentive of the preparer of the accounts. Ayuba (2012) assert that a global and widely accepted accounting standards is unlikely to help achieve the goals of comparability and consistency of financial reporting bearing in mind the nature and economic situation of the country and posit that the companies in Nigeria should be given the liberty to choose whether or not to use IFRS or local GAAP rather than being obliged to use IFRS that is designed to suit the need of developed countries.

2.4 Adoption Process of IFRS in Nigeria

The CBN in 2010 commenced partial adoption of mandatory IFRS in the Nigerian banking industry. This was done to enhance market discipline and reduce uncertainties which limit the risk of unwarranted contagion. In order to achieve full adoption of IFRS, Nigerian Accounting Standard Board (NASB) inaugurated a roadmap committee of parties concerned on its adoption. Members of the committee includes NASB, federal ministry of finance, Nigeria Deposit Insurance Commission (NDIC), Securities Exchange Commission (SEC), National Insurance Commission(NAICOM), National Pension Commission (PENCOM), Federal Inland Revenue Service (FIRS) and institute of Chartered Accountants of Nigeria (ICAN), Deliotte (2012). The minister, Federal

Ministry of Commerce and Industry outlined the adoption process of IFRS in Nigeriaas follows;

In Jan 1, year 2012, publicly listed entities and significant public interest entitieswere to compulsorily prepare their financial statements based on the provisions of IFRS. Year 2010 was the transition date for IFRS adoption process, Awareness was created, assessment, legislative changes, training, planning/impact analysis and transition adjustments was done. This means that any entitythat started preparing for transition, needed to have converted its closing balances at December 2010 to IFRS based figures which became the opening balance as at January 1, 2011 for IFRS, this became be the opening balance as at 1 January, 2012 and was the first full IFRS financial statement.Jan 1, 2013, all other public interest entities were required to mandatorily adopt IFRS. In Jan 1, 2014, small and medium sized entities in Nigeriarequired to also mandatorily adopt IFRS for SMEs.

2.5 Differences between IFRS and Nigerian GAAP

The requirements and guidelines in preparing accounts based on IFRS and Nigerian GAAPare particularly different except in some areas. These differences are outlined thus in the appendix 1, from page 72 – 79.

2.5.1 Historical Cost Accounting versus Fair Value Accounting

The historical cost accounting is one of the methods for valuing financial assets, and it measures the original cost of assets. The expected loss model of providing for loan losses under Nigerian GAAP, use the historical cost accounting for recognizing and measuring financial instruments. Under the historical cost of accounting, actual price paid for an asset is what is recorded in the balance sheet until the asset is liquidated. Nobes (1997) state that the historical price of an asset is either the price of the asset at the time of

purchase or the value of the asset after being reduced by obsolescence, depreciation or depletion. Historical cost accounting is very easy to understand because it is based on a price that is fixed and always known by the firm. However, the historical cost accounting is argued to cause uncertainties about the true value of assets as it does not consider the present market value of assets and as such lacks transparency. It beyond the scope of the study to further discuss the benefits and disadvantages of the historical cost accounting.

Fair value accounting is yet another method of valuing financial assets; it aims at reporting the most recent value of assets of firms. The incurred loss model used fair value for recognizing and measuring loan loss provision under IFRS, IAS 39. The Financial Accounting Standard Board (FASB) describe fair value accounting as the price at which knowledgeable and willing parties will exchange assets and liabilities. It expected that when a firm uses the fair value accounting in its financial reports, the value of assets will change from time to time. Geibhardht, Riechardt and Wittenbrink (2004) opine that applying fair value in banks financial instrument could show their economic activities. Furthermore, fair value which aims at reflecting present values of assets and liabilities, is believed to make earnings more informative. Thus, fair value accounting is expected to be better than the historical cost in transparency by showing the true value of assets. It is based on this premise that the IASB believe that application of fair value in financial instruments is a necessity in eradicating financial crisis.

However, the fair value is criticized for causing banks to overstate fair value of loans to manipulate the market valuation of their risk and performance, Nissim (2003). Similarly, Khan (2010) opines that during recessions, fair value accounting increases banks' systematic risk. Ball (2006), also suggest that fair value may also cause income volatility due to estimation error and subjective judgement especially when the market faces illiquidity.

2.6 Conceptualization of Variables

2.6.1 Value Relevance

The concept of value relevance concerns the use of financial statements by investors to measure equity and the value of companies. Collins, Magdew and Weiss (1997) defined value relevance as the ability of accounting information in the financial statements to summarize firm value. A high quality financial statement should therefore be able to foster an effective capital market wherein stocks are traded and stocks returns based on market prices are reflected in the financial statement. The concept of value relevance emerged with the works of Ball and Brown (1968) and Beaver (1968). Beaver (1968) defined value relevance empirical research as the use of return or price data to assess components of value that influences returns or price on the market value of stocks.

The core issue in value relevance is the usefulness of accounting numbers. Barth, Beaver and Landsman (2000) opine that an accounting amount will be value relevant if it reflects information that is relevant in valuing a firm by investors and it is reliable as to reflect in share prices. This means that, market value relevance shows that there is a relationship between financial information reflected in the financial statement and share prices or returns, and as such investors believe that relevant information is one that can influence their equity investment decision. Similarly, Agostino, Drago and Silipo (2006) posit that an item communicates information that investors use in valuing the firms and when it is measured reliably enough as to reflect the share prices. This means that accounting is value relevant if it predicts significant relation to share prices or returns.Kam (1990) outlines three directions in assessing whether accounting numbers is useful. The first direction focuses on financial reports and examineswhether adequate information is

disclosed,the second direction is to examine the influence on peoples decision making. And lastly, the third direction, which is to determine the correlation between stock prices and accounting numbers especially earnings. This direction is the most commonly used method of the three methods in empirical value relevance research, such studies includes the studies of Francis and Schipper (1999) and Aboody, Hughes and Liu (2002).

2.6.2 Value Relevance of Earnings

Earnings is considered as very important and key value relevant measures for firm valuedespite the fact that there are other value relevant information in firms' financial statement. Arguably, the Financial Accounting Standard Board, FASB statement No. 1 states that the main focus of financial reporting is information about firms' earnings as well as its components.Ball and Brown (1968) state the importance of earnings in the income statement in their empirical research as well as Kam (1999) who claim that income statement is the most important financial statement as it presents the results of operations of a company. Similarly, Penman (2010) opine that earnings is the core accounting number in the income statement.

There are two regression models for empirical value relevance of earnings that are mostly used by researchers; return regression and price regression. The return variable use return received as the dependent variable then earnings and change in earnings act as the independent variable, some other researchers use the return regression in addition to price regression where abnormal stock return act as the dependent variable and unexpected earnings act as the independent variable. While the price regression uses stock price as the dependent variable and earnings as the independent variable.

2.6.3 Value Relevance of Book Value

Book value is also considered a very important value relevant variable for firm value. Penman (2010) opines that book value is the "bottom line" in the balance sheet, Holthausen and Watts (2001) also refer to valuation model having balance sheet component as balance sheet model where in the market value of equity equals to market value of asset minus market value of liabilities. Researchers normally use price regression model to examine the value relevance of book value, were in stock price represent the dependent variable and book value as the independent variable. Some other researchers like Francis and Schipper (1999) use market value as the dependent variable while liabilities and assets are independent variable.

However, some researchers opine that simply using a model for regressing value relevance of book value only is inaccurate, neither is regressing the value relevance of earnings to examine actual value of a firm accurate. It is based on this premise that Ou and Sepe (2002) opine that the use of a simple earnings capitalization model by researchers to analyze the value relevance of firms is not all encompassing without including book value as book value is considered to be a value relevant variable. Empirical studies such asOhlson (1995) provide evidence that supports the argument of Ou and Sepe (2002). Therefore, a lot studies based on the relationship between earnings, book value and market values of firms valuation has been carried out since the work of Ohlson (1995). This research considers the price level regression model of Ohlson (1995) that combines the use of share price as the dependent variable and earnings (earnings per share) and book value as the independent variables.

2.7 Bank Loan Loss Provision

Banks assets and liabilities consist basically in financial instruments, because they majorly engage in lending activities and as such, loan is their main source of credit risk.

Peterson (2017) state that managing this risk is crucial to banks' existence in that they are prone to loan defaults which could lead to their being insolvent and on the other hand, if banks avoid giving loans, their economic growth could be hindered. Therefore, it is legally binding for banks to set aside some estimated amounts known as loan loss provision to cover for the default or loss of outstanding loans to customers. It therefore means that loan loss provision is a shield protecting banks against loan losses that could affect their solvency and in the long run force them to liquidate.

Loan loss provision is divided into discretionary and non-discretionary part. Discretionary loan loss provision is determined by bank managers based on expected future default by customers, under local GAAP, while the non-discretionary loan loss provision is based on objectively analyzing economic picture of the bank. Koch and MacDonald (2010) state that GAAP requires that a bank's loan loss provisions should be adequate enough to cover already known and inherent risk in the loan portfolio.

In Nigeria, SAS 10 – accounting for banks and non-banking financial institutions deals with income and loss recognition on loans and advances. It is based on the previous prudential guideline of the CBN. It generally prescribes longer periods and lower percentages in recognizing and measuring provisions for non-performing specialized loans. The difference also includes requirement for general provisions for performing loans, collateral adjustments for loans classified as loss and treatment of re-structural agriculture. As regards measurement of loan loss provisions in particular, SAS/CBN prudential guideline specifies the amount of provision required based on impairment classification of the loan; 25%, 50%, 75% or 100% of the accrued amount with provisions for adjustment, (Price water House Cooper, 2011).

In contrast, IFRS is based on fair value accounting where assets are valued at their market value rather than historical cost accounting. IAS 30, IAS 32, IAS 39 and IFRS 7 are peculiar to banks. According to Delliotte (2012),IAS 39 outlines the requirements for the recognition and measurement of financial instruments (assets, liabilities and equity) as well as some contracts to buy or sell non-financial items. Assets and liabilities within the scope of IAS 39 that are common includes cash, demand and time deposit, commercial paper, derivatives including swaps, options, right and warrant, accounts, notes, and loan payable and receivable which necessitates loan loss provisioning.Loan loss provision under IAS 39 is based on incurred loss framework, this means that banks are not permitted to set aside provisions based on perceived default of loans, rather on objective evidence that loans will default.

Under IFRS, loan loss provision is divided into individual provisions and collective provisions. The amount of impairment loss is valued as the difference between assets carrying amount and the value estimated cash flows discounted at the asset's original effective interest rate. Information in loan loss under IFRS requires that banks provide detailed information. Moison (2007) state that the information includes the way in which the provisions and losses on uncollectable loans are determined and mutations in the course of provisions during the accounting period covered by the financial statements, (Oosterbosch, 2009). This means additions are write-offs of, also the aggregate or total amount of provisions at balance date. However, Ernst and young (2006) opine that measuring loan loss provision under IFRS is too subjective and difficult to interpret and apply.IFRS 9 which is based on expected loss framework is an attempt to reduce the criticism of loan loss provisions of IAS 39. But IFRS 9 is not yet in use. The CBN revised its prudential guideline which differs from SAS 10. The revised prudential guideline is on recognition and measurement of loans, establishment of loan loss allowances, credit risk

disclosure and related matters. Paragraph 12.4 of the revised prudential guidelines for Deposit Money Banks in Nigeria stipulates that banks would be required to make provisions for loans as prescribed in the relevant IFRS standards when IFRS is adopted. However, banks would be required to comply with the following;

a) Provisions for loans recognized in the profit and loss account should be based on the requirements of IFRS. However, the IFRS provision should be compared with provisions determined under prudential guidelines and the expected impact or changes in general should be treated thus;

i) Prudential provisions greater than IFRS provisions, then the excess provision resulting should be transferred from the general reserve account to a regulatory risk reserve and

ii) Prudential provisions less than IFRS provisions: IFRS determined provisions are charged to the statement of comprehensive income. The cumulative balance in the regulatory risk reserve is thereafter reserved to the general reserve account.

b) Non-distributive reserve should be classified Tier-1 as part of the core capital. (Access Bank, 2013)

2. 8 Pro-Cyclicality and Banks Loan Loss Provision

Pro-cyclicality is a word associated with business cycle. Business cycle also known as economic cycle or trade cycle refers to the period change from an expansion to a recession. In business cycle theory and finance, a business cycle is the period of time containing a single expansion and recession in sequence. This means that the economy fluctuates over time between being in a state of rapid growth and periods of decline in growth. Edward (2011) definepro-cyclicality as any economic quantity that is positively correlated with the state of the economy. Accordingly, economic quantities like price of

stock, loss, profit, loan and earnings amongst others are correlated with the state of the economy. Edward (2011) further explains that any economic quantity that increases in times of economic expansion and reduces in times of recession is termed pro-cyclical. Conversely, any economic quantity that reduces in times of economic expansion and increases in times of recession is termed counter cyclical. Skala (2015) states that Pro-cyclicality refers toany economic quantity that fluctuates with the fluctuations of the business cycle and tends to make the fluctuation of the businesscycle worstas well as intensify financial instability.Financial stability Board (2009) also define pro-cyclicality as the dynamic interaction between the financial and real sectors of the economy.This means that pro-cyclicality concerns the relationship between banks or financial institutions and non-financial institutions as well as households. Basically, this explains how the lending activities of banks, influenced by the condition of the economy, have effect on non-financial institutions and household. This is especially true as loan loss accounting is considered in the business cycle relative to banks manager lending behavior.

Horvath, Mero and Zsamboki (2002) describe pro-cyclicality behavior of banks. They state that in periods of economic recession, due to the information asymmetry, obtaining loans is difficult for even projects that would have otherwise been profitable. Thus banks behavior contributes to further deepening of an economic recession by not giving out loans for investing in profitable projects. In times of economic boom, the situation changes as loans can be more easily assessable by customers thus threatening financial stability of banks. This means that Banks reduce loans to customers in times of economic doom through loan loss provision thereby increasing its effect on the economy such as low profitability and low investment butincrease loans to customers in times of economic boom through their discretionary use of loan loss provision thereby increasing its effect

on the economy such as high profits and investment, but leads to financial instability of the banks.

In a broader view, Abdu Adziz (2012) explains that Pro-cyclicality of loan loss provisionconcerns the timing of loan loss provision (backward or forward looking model)over the economic cycle and its related effect on the lending behavior of banks and financial stability.Different accounting models for the recognition and measurement of loan loss provision reveals considerable differences within accounting regimes. The expected loss model and incurred loss model of loan loss provision are both designed to recognize and measure loan loss provision, but the timing of the provision models during periods of expansion and recession have evidently shown difference in the lending behavior of banks as well as avoiding financial instability and economic crisis through the discretionary use of loan loss provision.

It is argued that the expected loss model allows for the recognition of loan losses through the business cycle and as is counter cyclical, which means that due to the fact that it is forward looking and allows managers to recognize losses before they occur, therefore using this model makes it possible for the managers to make more provisions for losses in an expansion period and less provision in a recession. Conversely, the incurred loss model which is backward lookingdoes not allow for the recognition of loan losses until they occur therefore this model is argued to make it impossible for bank managers to make more provisions for losses in an expansion when credit risk build up due to the restrictions set on managers that causes delay in the recognition of losses and lessprovisions for losses in a recession when losses are high, thus it is argued that the incurred loss model is pro-cyclical.

The information asymmetry between managers and the market leaves the market with no choice other than to rely on reported bank earnings. Therefore, bank managers either increase their loan loss provisions during economic boom or reduce their loan loss provisions during economic recession because bank operations become more risky during this period and more pro-cyclical, as during economic expansion, increased competition for market share in loans by banks leads to lower borrowing standards by for example, reducing the interest on loan so that borrowers of outstanding loans can repay the current interest as well as the loan obligation. As a result of this subtle credit policy, managers can boost the earnings of the bank. But when the economic boom turns sour, just like it was experienced in all sectors globally, banks are prone to tightening their credit policy. Katenova (2013) explain that economic conditions for studies such as this are measured by Gross Domestic product (GDP), which is a macroeconomic indicator that reflects the market value of all finished goods and services that are made purposely for consumption, produced per year in all sectors of the economy in the state for consumption, exports and savings, regardless of the nationality of the factors of production used. Hence, empirically pro-cyclicality is measured as the relationship between LLP and GDP. A negative coefficient between LLP and GDP implies that banks increase their LLP in a recession (Bikker and Metzemaker, 2005).

Skala (2015) explains pro-cyclicality as part of income smoothing through the business cycle.Empirical researches analyze the pro-cyclicality of banks using income smoothing models but replacing earnings before income tax (EBIT) with GDP such as Leaven and Majnoni (2003), Bikker and Metzemaker (2005) and Abdu Adziz (2012). Prior studies use two avenues for income smoothing which are; the choice of accounting methods and the management of accruals (Loan loss provision). However, Ducharme, Malatestal and

Sefcilel (2000) opines that using accrual models are most preferred because it helps capture subtle income smoothing allegedly used to prevent public detection.

Using accrual approach, income smoothing by managers can be detected by using total accrual approach or discretionary accrual approach. Prior studies on earnings management through accruals like the studies of Healy (1985) and De Angelo (1986) use total accrual as proxy for income smoothing. But a critical and sensitive set back of the total accrual approach is that, the discretionary and non-discretionary components of accruals cannot be differentiated. Disintegrating total accruals to discretionary components and non-discretionary component is necessary because it is discretionary accruals that change as a result managers accounting decisions and interventions into financial reporting which are of interest in studying earnings management while non-discretionary accrual change as a result of change in a firm's underlying performance subject to firm's condition and sales growth and thus cannot be influenced by managers. It is therefore pertinent to develop a model that helps differentiates the non-discretionary and discretionary components of total accrual so as to clearly determine the extent of earnings management.

Discretionary accrual models are used to determine the extent of earnings management, separating discretionary accruals from total accruals by subtracting non-discretionary accruals from total accruals. The most popular discretionary accrual models are the Jones (1991) model and the modified Jones model by Dechow, Sloan and Sweeney (1995) that disintegrates total accruals into discretionary and non-discretionary accruals. The Jones (1991) model attempts to control the effects of fluctuations in economic circumstances of entities on their non-discretionary accruals. The Jones model proposes that the revenue from sales proxies for current economic event which generated current non-discretionary accrual associated with depreciation expense. The model therefore assumes that sales

revenue is assumed to be unmanaged and the changes in current liabilities and assets are highly related with the changes in revenue from sales, using a three stage approach to decompose total accruals in discretionary and non-discretionary components. However, the Jones (1991) model has a draw back and limitation as it ignores the potential managerial manipulation of revenues. Dechow et al (1995) propose a modified and improved version of the standard Jones (1991) model which was developed to eliminate the supposed tendency of erroneous measurements of discretionary accruals when managers use their discretion to manage earnings.

Another very popular discretionary accrual model is the model of Chang, Shen and Fang (2008). This discretionary accrual model is peculiar to banks and uses a two stage model that separate discretionary accrual and non-discretionary accruals from total accrual and allows regressing discretionary accrual with several other explanatory variables. The Chang et al (2008) model has the advantage of providing a more reliable estimate of discretionary accruals.

2.9 Review of Empirical Studies

The impact of IFRS and pro-cyclicality on earnings management and value relevance based on the findings of prior studies are reviewed thus

2.9.1 GAAP Vs IFRS

Okaro and Okafor (2013) investigate the loan loss provisioning based on IFRS and Nigeria prudential Guidelines. The study was for the period 2012, the data is on first time annual report of four Nigerian deposit money banks. Simple percentages and tables were used to ascertain the association between the figures thrown out by the two provisioning models. The findings show evidence that the prudential guidelines provisions are more

aggressive and higher in all cases than IFRS provision indicating that Nigerian prudential guideline models more conservative than that of IFRS.

Lobo and Zhou (2001) examine the impact of disclosure quality on US companies and finds out that companies that disclose more information in their financial statements show more accounting quality than companies with less disclosure accounts and use of alternative methods which serve as incentive to them. Also Barth, Landsman and Lang (2006) argue that accounting quality could be improved with the application of IFRS. Measuring accounting quality as earnings management, timely loss recognition and value relevance and comparing international firms that voluntarily adopted IFRS and those that use local GAAP, they find that firms that voluntarily adopted IFRS show less earnings management, more timely loss recognition and more value relevance as indicated by the higher R square. This they interpret as evidence of higher accounting quality. They therefore conclude that accounting quality could be improved by eliminating the use of accounting standards that allow alternative accounting methods that do not reflect the actual performance of firms and are therefore used by managers to manipulate accounts.

Christensen, Lee and Walker (2008) investigate the impact of incentives on the quality of disclosure changes around the IFRS adoption by German firms. They find that firms that resist IFRS have closer relationship with banks and inside shareholders which could suggest that such firms lack incentives to adopt IFRS. The findings further reveal that accounting standards are dominated by incentives in determining accounting quality. Beke (2011) examine the benefits of international accounting standards and their contribution to harmonization in global business practice. The study find that a single set of international accounting standards will increase the liquidity of the market, reduce the cost of capital, lower transaction cost of investors and help facilitate international capital formation, and hence cross boarder investments will be ensured.

In an extensive empirical study, HungandSubramanyam (2007) investigate a sample of 80 German firms that voluntarily adopted IFRS over the period 1998 – 2002. This sample of firms provides two sets of accounts; based on German GAAP and IFRS during the same period. The study employed Price Levels model and provide evidence showing that total assets and book value of equity as well as changes in book value and net income are higher under IFRS than that prepared using German GAAP. After controlling for self-bias, the study also finds that book value of equity and net income under IFRS is more value relevant than that of German GAAP.

Barth, Landsman and Lang (2008), compare the accounting quality of IAS firms and non-US firms using local GAAP and the results show that IAS firms have higher accounting quality, than those of non-US firms using local GAAP. Similarly, Qu, Fong and Oliver (2012) study the 2007 IFRS convergence from Chinese GAAP to find out whether accounting quality has improved after IFRS adoption. The study sample 309 listed Chinese companies and use multiple regression analysis. Findings in the study show that accounting quality improved in the post IFRS. Renders and Gaeremyncks (2007) suggest that IFRS adoption leads to increased disclosure and reduced accounting choices resulting in a loss of private benefits for company insiders. Also, prior studies show that IFRS, with its introduction of fair value concept makes accounting more transparent. IFRS requires a unique method for the recognition of a class of operations with more detailed financial information. Ole, Justin, and Tony (2006) investigate 38 companies using IFRS majorly in Europe and concluded that IFRS adoption improve the quality of financial information reported and helps in protecting minority shareholders, contributes to foreign investment flows which therefore increases the economic growth of the country

While critiques of IFRS such as Eccher and Healey (2003) who examine 83 Chinese firms that are required to prepare accounts based on IFRS and Chinese GAAP. The result show that IFRS is less closely associated with returns than earnings under Chinese GAAP. Still in the Asian continent, Dan Hu (2004) report that IFRS is less value relevant than Chinese GAAP, after sampling 252 firm years and analyzing a price levels regression. Barth, Landsman, Lang and Williams (2007) compare accounting quality metrics IAS firms to those of US firms, in order to investigate whether US GAAP based accounting statements are associated with less earnings management and IAS firms exhibit more earnings management. The result show that earnings management is less exhibited by US firms relative to IAS firms.

Ramannan and Sletten (2009) use a sample of 102 non-European Union countries to study the variations in the decision to adopt IFRS. Their study provide evidence that powerful countries are less likely to adopt IFRS, indicating that more powerful countries are not willing to surrender the authority of standard setting to IASB. The study, further reveal that there is the likely hood of IFRS adoption to first increase and later decrease in the quality of countries governance institutions. However, there was no evidence that levels of expected changes in foreign trade and investment flows in a country affect its adoption decision. Another argument about IFRS improving accounting quality is based on whether firms adopt IFRS voluntarily or mandatorily. Daske, Hail, Leuz and Verdi (2007) examine the economic consequences of voluntary IFRS adoption around the world. They focus on the heterogeneity in the consequences of IFRS adoption, classifying firms into label and serious adopter. Findings show that serious adopters experience significantly stronger effects on the cost of capital and market liquidity than label adopters.

Bartov, Goldberg and Kim (2005), investigate German companies that voluntarily adopted IFRS. The study provide evidence of IFRS based financial reporting as being less than that of US-GAAP but the IFRS based earnings is more value relevant than that of US-GAAP. Similarly, Barth, Landsman and Lang (2008) find that firms that adopted IFRS voluntarily show less earnings management, more timely loss recognition and more value relevant financial statements than those applying domestic GAAP. In addition, Gassen and Sellhorn (2006) examine German firms in the period 1998-2004 in order to determine drivers of voluntary IFRS adoption and find that firm size and dispersion of ownership are determinants of voluntary IFRS adoption.

Jeanjean and Stolowy (2008) provide evidence that firms in countries that mandatorily adopted IFRS still engaged in earnings management activities. They investigate firms in Australia, France and UK in the period 2000-2006 and find out that earnings management in France firms increased after adopting IFRS. In the same vein, Chen, Tang, Jian and Lin (2010) investigate 15 EU countries in the years 2000-2007 period, comparing accounting quality of firms before and after mandatory adoption of IFRS. They find that accounting quality of firms significantly improved after mandatory adoption of IFRS.

Ezeani and Olaide (2012) study the impact of IFRS adoption on financial reporting systems in Nigerian universities that mandatorily adopted IFRS, Sampling 160 senior accountants and internal auditors and using survey design. The study concludes that the curricular of Nigerian institutions should be reviewed to incorporate IFRS so that accountants and auditors will be acquitted with IFRS guidelines and standards. Also, Akman (2011) investigate whether the differences in financial disclosure due to culture, have declined after the adoption of IFRS. Sampling 498, firm-year observations from 6 countries the result show that the use of a single set of international standards does not

completely eliminate the impact of culture on financial disclosure. The position of the study is a set of common, transparent and high quality accounting standards (IFRS) are the most significant factors in improving the quality of financial reporting.

2.9.2 IFRS and Value Relevance

A growing body of literature on value relevance after IFRS adoption shows mixed results, while some show that value relevance improved after IFRS adoption, others show that value relevance declined after IFRS adoption. Bao and Chow (1999) investigate Chinese firms to analyze the value relevance of earnings and book value under IAS and Chinese based accounting standards. The result of the study reveal that the earnings and book value reported under IAS is more value relevant than those reported under Chinese accounting standards.

Bartov (2005) analyses the value relevance of book value for German firms after adopting international accounting standards in preparing financial reports. The results of the study reveal that book value of accounting numbers increased after adopting IAS but not that of earnings. Similarly, Bartov, Goldberg and Kim (2005) also investigate 417 listed German companies within the period 1998 – 2000. They analyze value relevance of earnings under German GAAP, US GAAP and IFRS using Returns model. The results show that the German GAAP is less value relevant than the US GAAP and IFRS in its ability to explain returns. The study further control for self-bias, and find a slight difference in the value relevance of IFRS and USnational GAAP earnings.

Barth, Jagolinzer, Armstrong and Riedl (2008) examine the European stock market reaction to the events associated with the implementation of IFRS in Europe and finds a more positive reaction for firms having lower quality before the adoption of IFRS, which is more pronounced in banks, and with a higher before adoption information asymmetry,

consistent with investors expecting net information quality benefits of IFRS implementation. The findings further suggest that investors in European firms perceived net benefits associated with IFRS adoption.

In addition, Callao, Jane and Lainez (2007) study IBEX-35 companies obliged to prepare consolidated financial information under IFRS, as legislative changes to converge local GAAP to international standards is taking place. The study focus on the effects of IFRS, specifically it focuses on the comparability and relevance of financial reporting in Spain. The findings show evidence that local GAAP comparability worsened, indicating that local comparability is affected if both local GAAP and IFRS is applied in the same country at the same point in time. The study further reveal the value relevance of financial reporting to local stock market operators did not improve after implementing IFRS.

Contrarily, Eccher and Healey (2003) investigate Chinese firms to find out if IAS improves the value relevance of the selected firms. The findings of the study indicate that accounting data based on Chinese standards are more value relevant than those of IAS. Lin and Chen (2005) investigate the book value and earnings of Chinese firms investing in stock A for domestic investors, and the findings of the study indicate the Chinese GAAP accounting numbers more value relevant than IFRS. Ames (2013) study the effects of IFRS adoption on accounting quality in South Africa listed times. The study hypothesizes that earnings quality and value relevance will increase post IFRS adoption. The result reveals that earnings quality is not of relevance to major balance sheet components changes. Ames conclude that the study findings may be attributed to lack of enforcement by regulators and a lack of training to those preparing the financial statements.

Morais and Curto (2008) sample 30 Portuguese listed firms and find out that with the adoption of IFRS, value relevance decreased. In support of this Qu, Fong and Oliver (2012) study the 2007 IFRS convergence from Chinese GAAP to find out whether accounting quality has improved for investors in the A-share market of China, after IFRS adoption. The study sample 309listed Chinese companies, using multiple regression analysis, the study analyzes investor reactions to financial information in the pre and post IFRS convergence. Findings in the study show that investors reliance on the income statement information for investment decisions becomes greater in the post IFRS.

Contrarily, Schiebel (2006) investigate value relevance, comparing financial data based on IFRS and German GAAP. The study sample 24 German companies for the period 2000 – 2004 and find out that IFRS based financial statement is less value relevant than German GAAP based financial statement. In addition to the empirical evidence on value relevance after IFRS adoption, Bolibok (2014) in an extensive study, investigate the impact of IFRS on the value relevance of accounting data announced by listed banks on Warsaw Stock Exchange, over a period of 14years. Analysis for the study was based on the Ohlson (1995) residual income valuation model. The empirical evidence show that value relevance of book values of equity and residual incomes of banks are statistically insignificant after adopting IFRS.

Okunbor and Arowoshegbe (2014) examine the stakeholder perception of the adoption of IFRS in Nigeria. It attempts to establish whether the adoption of IFRS in Nigeria has enhanced the value of financial reporting. They use survey design and data from questionnaire were analyzed using Analysis of variance (ANOVA). The findings reveal that no significant difference in the perception of stakeholders about the implementation of IFRS on the value of financial reports, the study therefore recommends that relevant

authorities should ensure that organizations comply with established standards when preparing accounting statements

Yermack (1999) examine the relationship between board size and market value. Using Tobin's Q, he analyzed the data of 452 US industrial companies for the period 1984 to 1991. The regression analyses show an inverse relationship between board size and market value. In addition to the empirical studies on value relevance, Thies and Sturrock (1989) study 100 US manufacturing firms to investigate the ability of inflation accounting adjusted accounting data in predicting bond ratings based on historical cost accounting. Results from the empirical study show that historical cost accounting predicts bond ratings just like inflation adjusted accounting.

Also Gordon (2001) examine the value relevance of historical cost, replacement cost and price level cost accounting. Adopting the model of Easton and Harris (2011), the results of the analysis show that replacement cost adjustments are more relevant than historical cost and price level measures. Also, price level adjustments were found to be more value relevant than historical cost. In addition, Friday (2003) use Edwards and Bell (1961) and Ohlson (1995) model to examine the relationship between the market value of public Mexican firms and related accounting information disclosures adjusted for changing prices. The results of the study indicate that accounting disclosures that are adjusted for changing prices have a significant relationship with market value as it explains a large chunk of the cross sectionalchanges in the market value of equity of Mexican firms. Still on value relevance empirical studies, Anandarajan, Francis, Hasan and John (2011) for the period 1993 – 2004 conduct a study on banks in 38 countries. The results show that value relevance of earnings and book values of equity is affected by disclosure

requirement. They further find that value relevance is higher when the legal environment is friendlier to investors and the local environment is more focused on private sector.

2.9.3 IFRS, Pro-cyclicality and Loan Loss provision

Critics of incurred loss approach as provided in IAS 39 maintains that this approach prevents banks from reporting known losses, even though this loss are loan portfolios. The impairment rule delays the recognition of losses for expected loan default, thus reporting higher earnings. Also, it has been established in prior literature that pro-cyclicality could cause risk to the financial stability of the economy. Chan-lau (2008) suggests that it may further be increased due to uniform accounting standards used globally. Several studies have focused on pro-cyclicality through loan losses. Such studies includes Bernake and Lown (1991),Berger and Udell (1994), Hancock and Wilcox (1994), Hancock, Laing and Wilcox (1995), Shrieves and Dahl (1995), Peek and Rosengren (1995),Wagster (1999), Berger, Kyle andScalise (2001).

Consistent with this, is the study of Borio, Furfine and Lowe (2001) who use a sample of 10 developed countries over the period of 1980 – 1999. Their result show evidence that proves that economic boom is accompanied by significant increases in the ratio of private sector loan to gross domestic product (GDP), while economic recession is characterized by low loan to GDP.

Katenova (2013) attempt to establish the type of relationship that exist between the assets and bank capital, using economic indicators GDP and GNP. Data gotten from the National statistics agency of the republic of Kazakhstan and World Bank were collected for the empirical study. The study covered observations starting from January 2004 and ending in December 2012, having 108 observations. The results provide evidence of positive relationship among banks performance and GDP.

Bouvatier and Lepetit (2008) over the period 1992-2001, analyze the impact of discretionary and non-discretionary parts of loan provisions on the lending activities of European banks. The findings provide evidence that the non- discretionary part of loan loss provision do not have a significant relationship with loan fluctuations. The study further reveal that the discretion loan loss provisions have a significant relationship with business cycle and hence, Bouvatier and Lepetit (2008) support the use of dynamic provision as it reduces the pro-cyclicality.

Beatty and Liao (2011) investigate banks in the US to find whether the incurred loss model of loan loss provisions has significant impact on the pro-cyclicality of lending for the period 1993-2009. The findings of the study provide evidence of a strong relationship between lending and risky capital ratio during recessions, confirming the capital crunch theory after the implementation of Basel Risk Based Regulation of 1988 and the Federal Depository Insurance Cooperation Improvement Act of 1991. The results further show evidence that supports several other previous literatures on the ability of incurred loss to encourage less lending than banks that use expected loss during recessions.

Abdul Adziz (2012) explore the impact of loan loss provision as provided by LAS 39, on the pro-cyclicality of lending behavior of banks. Using a sample of commercial banks in the Asian pacific during the period of 1995 to 2009, Abdul Adziz (2012) hypothesize that pro-cyclicality will increase. The econometric model analyzed show no evidence to support the suggestion that IAS 39 amplifies or increases pro-cyclicality of banks loan loss provisioning among adopters of IFRS.

Skala (2015) analyze cyclicality of loan loss provision in central European banks. The results of the study show strong evidence that banks loan loss provisions are pro-cyclical in relation to business cycle. The study however did not compare periods before and after

IFRS adoption neither did it separate the discretional and non-discretional parts of LLP in its analysis.

2.9.4 IFRS and Pro-cyclicality

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2.9.5 Banks Pro-cyclicality and Loan Loss Provision

Several studies have focused on pro-cyclicality through loan losses. Such studies include Bernake and Lown (1991),Berger and Udell (1994), Hancock and Wilcox (1994), Hancock, Laing and Wilcox (1995), Shrieves and Dahl (1995), Peek and Rosengren (1995),Wagster (1999), Berger, Kyle and Scalise (2001).Bouvatier and Lepetit (2008) over the period 1992-2001, analyze the impact of discretionary and non-discretionary parts of loan provisions on the lending activities of European banks. The findings provide evidence that the non- discretionary part of loan loss provision do not have a significant relationship with loan fluctuations. The study further reveal that the discretion loan loss provisions have a significant relationship with business cycle and hence, Bouvatier and Lepetit (2008) support the use of dynamic provision as it reduces the pro-cyclicality. Beatty and Liao (2011) investigate banks in the US to find whether the incurred loss model of loan loss provisions has significant impact on the pro-cyclicality of lending for the period 1993-2009. The findings of the study provide evidence of a strong relationship between lending and risky capital ratio during recessions, confirming the capital crunch theory after the implementation of Basel Risk Based Regulation of 1988 and the Federal Depository Insurance Cooperation Improvement Act of 1991. The results further show evidence that supports several other previous literatures on the ability of incurred loss to encourage less lending than banks that use expected loss during recessions.

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From the fore going it can be seen that the findings on the relationship between the value relevance and IFRS as well as pro-cyclicality and IFRS produce mixed results which could be attributable to factors such as preparers' incentives, legal system, financial systems, ownership concentration and other feature of the economy that has effect on financial reporting outcomes, as such the findings of studies around the globe varies from country to country. No study has combined pro-cyclicality and value relevance in this study area using Nigerian data. More importantly, almost all the studies reviewed are foreign and measured discretional accruals using total accrual models which did not separate discretional from non-discretional accruals making it impossible to be able to identify the discretional accruals used by bank managers to manipulate their account. This study used the Chang et al, (2008) discretional accrual model that has the advantage of separating discretional and Non-discretional accrual approach. Therefore, this study has filled these gaps.

2.10 Theoretical Framework

So many theories of corporate finance have been used to underpin prior studies, such theories include Efficient Market Hypothesis, portfolio theory, and Option pricing theory. The theoretical framework for the study is the signal theory and agency theory because they best underpin the focus of the study. The signal theory is a theory that assumes that

accounting figures are a communication tool for signaling trends in the market in .as much as they are able to provide help to investors by making them appreciate the real value of firms. Spence (1973) developed the signaling theory to clarify the information asymmetry in the labour market. Value relevance is also based on the signal theory. Investors use the financial statements reported by banks to determine their performance.

The investors particularly focus on the stock rates. Beaver (1989) opine that in the financial statements, the investors pay more attention to earnings per share than any other figure. Therefore, high earnings per share signals to investors that the banks are doing well and low earnings per share signals to investors that the banks are not doing well. This claim is also supported by Verrechia (1983) stating that business units signal some information to investors due to information asymmetry problem toshow that they are better and more progressive than others so as to gain favorable reputation and attract investments.Pro-cyclicality is based on the signal theory, it is done through loan loss provision, whereby banks managers make lower provisions in good years to increase lending but increase provisions in bad years when LLPs are highly pro-cyclical so as to reduce loan. Thus, this signals good news to investors that the banks can take care of their loan defaults as evidenced by their earnings power in the form of LLP.

The agency theory is a theory that explains the information gap between managers and investors. Managers have information that are not known to investors. The investors therefore rely on the information published on the financial reports of banks. Value relevance as related to the agency theory is stressed by Dontoh and Ronen (1993) who posit that the information asymmetry may guide to stock prices reaction on reported financial statements. Pro-cyclicality involves manipulating the accounts of companies through LLP so as achieve managers target loan portfolio. The information asymmetry

between investors and managers makes pro-cyclicality to be a tool for managers to communicate to investors, private information about the banks and to manipulate the financial numbers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter clearly and precisely describes the manner in which the study is carried out. A detailed analysis of the methodology used to test value relevance and pro-cyclicality will have explained in this chapter. The chapter will also include descriptions of the study's research design, population and sampling design, sources of data collection, model specification, variables measurement, and summary.

3.2 Research Design

The study uses correlational design. This is so because of the nature of the study, having to find the relationship between variables. The study combines balanced panel data set and time series data. Other studies that combine panel data and time series include the studies of Ran (2011), Skala (2015), and Abdul Adziz (2012).

3.3 Population and Sampling Design

The population of the study includes all Deposit Money Banks listed on the Nigerian Stock Exchange as at 2016 and were 14 in number. The sample size of the study is all the 14 banks. The selected banks publish adequate information on loan loss provision as well as show evidence of IFRS adoption.

3.4 Sources of Data Collection

The source of data for the study is secondary and the instruments used is documentation. Published financial statements of the selected banks, coupled with the World banks' data base are analyzed. In the annual reports of the selected banks, data on earnings per share, total assets, price of stock, book value of shares, LLP, among others. And information on

the annual growth of Nigeria's real Gross Domestic Product (GDP)and inflation are extracted from the World banks'data base.

3.5 Techniques of Data Analysis

The statistical tool employed for the analysis is STATA software version 13 and Microsoft excel. STATA was employed to estimate the effect of mandatory IFRS adoptionon the value relevance of financial reports and pro-cyclicality of listed DMBs in Nigeria. In line with Gujarati and Porter (2009) justifying the usage of multiple regression technique as adequate, the study use multiple regression for the panel data set. First, the study analyzed the data using Ordinary Least Square (OLS) method of estimation but if the data failed to meet the assumptions of OLS then the data was exposed to Generalized Least Square (GLS) method of estimation where fixed and random effect was estimated. The data of the study is analyzed using descriptive statistics where minimum, maximum, mean, standard deviation, skewness and kurtosis values are revealed.

3.6 Model Specification

The study's dependent variables value relevance and pro-cyclicality, while the independent variable is IFRS. The choice of the variables is considered appropriate as it is in line with the objective of the study and it is closely related to the reasons the federal government and the CBN desires IFRS adoption in Nigeria.

To test the first and second hypotheses, the study adopt the Olhson (1995) model on value relevance of earnings and book value, and modifies it by including IFRS as an independent variable as well as an interaction of Earnings with IFRS, and Book value with IFRS to show the relationship between IFRS, earnings and book value. Themodel is thus;

$$SHP=\alpha o+\beta 1EPS+\beta 2BVP+\beta 4IFRS+\beta 3EPS\times IFRS+\beta 4B\times IFRS+\varepsilon \quad (i)$$

Where;

SHP = Share price per share at the end of the year.

EPS = Earnings per share.

BVP = Book value per share.

IFRS = Dummy variable for IFRS compliance

EPS x IFRS = interaction between Earnings per share and IFRS compliance.

BVP x IFRS = interaction between Book value per share and IFRS compliance.

ε= Error term.

B1 – B4are parameters of the model to be estimated

To test the third hypothesis, the study use a two stage model for testing accrual characterized by separating the accruals into discretionary and non-discretionary parts, modeling the non-discretionary in the first stage. The residual from the first stage which represents the discretionary part is then used in the second stage as the dependent variable to regress other macroeconomic variables to establish the relationship between IFRS and pro-cyclicality. Therefore, the study adopts the discretionary accrual model of Chang, et al (2008). The model is thus;

$$LLPt-1/TAt-1=\alpha o+\beta 1\,LCOi/TAt-1+\beta 2\,BBALi/TAt-1+\varepsilon \quad \text{(ii)}$$

Where;

LLP = loan loss provision for banks

LCO = Loan charge-offs for banks

TA = Total assets as proxy for bank size.

BBAL = Beginning balance of loan loss allowance for banks.

ε = Residual as proxy for earnings management.

α0 = intercept

B1 and B2 are parameters of the model to be estimated.

To establish the link between pro-cyclicality and IFRS adoption, the second stage of the model is further modified to include an interaction term of GDP growth and IFRS. The model is thus;

$$LLP = \alpha o + \beta IGDP + \beta 2LGT + \beta 3IFL + \beta 4IFRS + \beta 5GDP \times IFRS + \varepsilon \text{(iii)}$$

Where;

LLP= loan loss provision (discretionary)

GDP =Annual growth of a country's Gross Domestic Product

LGT = Loan growth rate

IFL = annual inflation rate

IFRS = Dummy variable for IFRS compliance

GDP×IFRS = interaction term between pro-cyclical behavior and IFRS compliance

α0 = intercept

ε = error term

3.7 Variable Measurement

As aforementioned, the dependent variables are value relevance and pro-cyclicality. To test the first and second hypotheses, the dependent variable, value relevance represented by SHP, and the explanatory variables earnings and book value are used to examine the relationship between share price and earnings, and share price and book value and the dummy variable IFRS is used to see the effect of IFRS on the value relevance of earnings and book value. A positive link between share price and earnings per share will show that earnings per share reported in financial statements have positive influence on value relevance in explaining banks share prices. While a negative link will show that earnings have a negative effect on value relevance in explaining banks stock prices. A positive link between book value and share price will show that book value have a positive influence

on value relevance in explaining the share prices, while a negative link will show that book value have a negative influence on value relevance in explaining banks share prices. The interaction between IFRS and earnings per share, (EPS×IFRS) should show evidence of improved the value relevance of earnings after mandatory IFRS adoption or otherwise, and the interaction between IFRS and book value (BVP×IFRS) should show evidence of improved value relevance of book value after mandatory IFRS adoption or otherwise. The study expects a negative coefficient for earnings, book value per share, IFRS and the interaction terms between earnings per share, book value per share and IFRS

To test the third hypothesis, the adopted discretionary model by Chang, et al (2008) is measured as it is. Also, pro-cyclicality represented by LLP as the dependent variable and GDP growth controls for external environment risk factors that influence the levels of banks provision. The study used GDP growth because in line with Katenova (2013), annual growth of a country's real per capita income (GDP) is considered the best variable for this type of economic activity. This is so because GDP growth provides information on the pro-cyclicality of LLP. Loan growth analyses the pro-cyclicality of loan loss provision in a greater depth and it is used to measure risk default as in Biker and Metzemaker (2005), Abdul Adzis (2012) and Skala (2015). To test whether there is pro-cyclicality influenced by IFRS adoption, the interaction term GDP×IFRS is used. Inflation, IFL also controls for external risk factors that influences provision levels. The higher the loan growth, the higher the probability of loan default by the DMBs' customers. Also, the higher the value of LLP, the higher the presence of pro-cyclicality through LLP by banks. This is so because the relationship between GDP growth and LLP should provide an evidence of pro-cyclicalityof the sampled banks within the period of the study. A positive link between LLP and GDP growth would confirm that provisions are not pro-cyclical, while a negative link will indicate that provisions are pro-cyclical

within the period of the study. The interaction between IFRS and GDP growth should provide evidence of the pro-cyclical behavior of banks influenced by IFRS adoption. A positive link between IFRS and GDP growth implies that theLLP of banks is not pro-cyclical after IFRS adoption. But a negative link between them is the reverse. The study expects a positive sign for LLP, a positive sign for LGT, a negative sign for GDP, GDP × IFRS and inflation. The aforementioned variables are measured thus;

Table 1: Variable Measurement

VARIABLES	ACRONYM	MEASUREMENT	SOURCE
Value relevance	SHP	Price of stock at the end of the year	Bolibok (2014), Chang et al, (2008)
Earnings per share	EPS	Amount earned per share	Collins, Magdew and Weiss (1997)
Book value per share	BVP	Total assets – total liability scaled by number of ordinary shares	Author's measurement
Loan loss provision	LLP	Sum of ending balance of loan loss allowance and loan charge offs, minus beginning balance of loan loss allowance scaled by total asset.	Chang et al, (2008)
Bank size	TA	Natural log of total assets	Akemteng and Nzongang (2006), Mirzae (2012),
Growth of Gross Domestic Product (GDP growth)	GDP	As measured by world bank	World bank data base (2017)
International Financial Reporting Standard	IFRS	Dummy variable for IFRS compliance using 0 for the period before IFRS adoption and 1 for period after IFRS adoption.	Author's measurement
Inflation	IFL	Annual inflation rate	Skala (2015)
Loan growth	LGT	Present total loan minus previous total loan scaled by present total loan	Abdul Adzis (2012) and skala(2015).

Source; compiled by the author, 2017.

3.8 Justification for Technique Adopted

The study used correlational design so as to find the relationship between the dependent and independent variables. Also the study adopted a panel data and time series regression

model because panel data provides information about the changes in the sample over time and time series provides information about the macro economic variables; GDP growth which helps in showing the relationship of LLP, banks' lending behavior and financial stability. Panel data also gives more variability, less collinearity among variables, more degrees of freedom and more efficiency of variables in a particular statistical model.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents, analyses and interprets the data used in this study. The results are presented using tables, showing frequency distributions, means, standard deviations, skewness and kurtosis. The analysis was carried out using Ordinary Least Square (OLS). The study conducted a number of robustness tests such as VIF and heteroskedasticity tests. These were done in order to avoid drawing conclusions on spurious results. The chapter begins with descriptive statistics and then inferential statistics. The models estimations and the inferences drawn from the tests of the research hypotheses are done in this chapter. The chapter ends with discussion of findings and policy implications of the findings.

4.2 Descriptive Statistics

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

Table 4.1: Descriptive Statistics of the value relevance variables

Variable	Obs	Mean	Std.dev	Min	Max	Swilk
SHP	154	9.005325	8.850068	.01	46.09	0.00000
EPS	154	.9050649	1 .729497	-12.66	8.3	0.00000
BVP	154	8.182338	5.35857	.11	25.99	0.00004
IFRS	154	.4545455	.499554 2	0	1	0.99988
BVPIFRS	154	4.234351	5.821468	0	22.44	0.00000
EPSIFRS	154	.562013	1.111274	-2.99	4.67	0.00000

Source: STATA 13 Output, (2019)

Table 4.1 above reports the descriptive statistics of share price, earnings, book value of the selected ten Deposit Money Banks in Nigeria and IFRS over the period of 11 years from 2006 to 2016. Table 4.1 shows that share price was an average value of 9.005325

which indicates that most of the DMBs in Nigeria, on average, valued their share price at ₦9.005325 over the period of the study. The minimum of 1 kobo (.01) and a maximum of ₦46.09 of share price of the selected DMBs indicate that the lowest amount valued as share price was 1 kobo and the highest value for share was ₦46.09.

The standard deviation recorded for share price was 8.850068 which indicate that the mean value for share price was the true mean for the banks as the standard deviation recorded a low value than its respective mean. That is, the share price deviates from the mean from both sides by 8.850068, implying that there is a narrow dispersion of the data from the mean, while Swilk of share price is 0.0000.

The output of table 4.1 also shows that the earnings of the selected DMBs in Nigeria havea minimum and maximum value of -12.66 and 8.3. On average, the selected DMBs in Nigeria have earnings of ₦.9050649 which indicates that on average most of the banks' shares earns shareholders ₦.9050649 which is adequate. The standard deviation of 1.729497 indicates that there was moderate dispersion of earnings among the selected listed DMBs in Nigeria. This can be attested considering the value shown by the standard deviation. The Swilk of earnings of the selected DMBs in Nigeria is 0.0000.

Table 4.1 indicate that the book value of the selected DMBs in Nigeria have an average value of ₦8.182338 with standard deviation of 5.35857. The minimum and maximum of book value of the selected DMBs in Nigeria are ₦.11 and ₦25.99 respectively. The maximum and minimum values within the selected DMBs in Nigeria indicate that there is moderate dispersion of book valueamong the selected listed DBMs. The Swilk of book value of the selected DMBs in Nigeria is 0.00004

The results from table 4.1 also show that the minimum and maximum values of the IFRS of the selected DMBs in Nigeria are 0 and 1 respectively. The maximum value implies

that majority of DMBs in Nigeria relatively comply with IFRS guidelines after mandatory adoption. The mean value of .4545455 further proves that relatively most of the banks prepare their financial statements in compliance with the guideline of IFRS provisionsand with astandard deviation of .4995542. The value of the standard deviation implies that there is no wide dispersion from themean value, while the Swilk is 0.99988.

BVPIFRS as indicated in table 4.1 show a minimum and maximum value of 0 and 22.44 respectively. This minimum value implies that BVP is low after mandatory IFRS adoption. The mean value stands at 4.234351 and the standard deviation of 5.821468 indicates that there is no wide dispersion from the mean value and Swilk value is 0.0000.

EPSIFRS as also indicated in table 4.1 show a minimum and maximum value of -2.99 and 4.67respectively. The minimum value indicates that EPS is also low after mandatory IFRS adoption by the selected DMBs in Nigeria. The standard deviation of 1.111274 indicates a wide dispersion the mean value, and Swilk value is 0.0000.

Table 4.2: Descriptive Statistics of pro-cyclicality variable

Variable	Obs	Mean	Std.dev	Min	Max	Swilk
LLP	154	.2113786	.2379987	.0215	1.25	0.00000
GDP	154	3.272727	1.528179	0	5.4	0.00004
LGT	154	32.28364	48.87879	-56.91	338.25	0.00000
IFL	154	9.600909	2.843262	4.2	13.7	0.00032
IFRS	154	.4545455	.4995542	0	1	0.99988
GDPIFRS	154	1.072727	1.549542	0	4.2	0.00004

Source: STATA 13 Output, (2019)

Table 4.2 above depicts descriptive statistics of pro-cyclicality variables of the 14 selected Deposit Money Banks in Nigeria and IFRS adoption over the period of 11 years from 2006 to 2016. Discretionary accruals (LLP) have an average value of .2114 this means that on average the LLP of banks were low during the period of study, the minimum and maximum are .0215 and 1.25depicts that the provision the selected banks made during the period of the study was low. The standard deviation for LLP is .2379

which indicates that the changes of LLP from the mean of the selected DMBs in Nigeria does not reflect the true value of the mean as the standard deviation was higher than the mean and the Swilk is 0.0000.

Similarly, table 4.2 shows that GDP growth of the selected DMBs in Nigeria have an average value of 3.2727 indicating that the GDP growth of Nigeria was relatively high and the standard deviation of 1.5281 further indicates that the mean of GDP growth was well represented as it is lower than the mean. The minimum was 0 and the maximum value is 5.4 indicating that the lowest GDP growth experienced by the Nigerian economy was 0% and the highest GDP growth was 5.4% whichindicates that GDP growth was relatively high within the period of study and the Swilk is 0.00004.

Loan growth in table 4.2 indicates a mean of 32.2836 suggests that on the average the selected DMBs concentrate on giving loan to customer. The standard deviation stands at 48.8787 implying that there is wide dispersion from the mean. The minimum value for loan growth is -56.91 and the maximum is 338.25 which indicate that percentage of loan given by majority of the selected DBMs grew from 56.91% to 338.25% which also implies that the banks gave loan adequately to customers within the period of study while the Swilk is 0.0000.

The results from table 4.2 also show that the mean value of inflation, IFL is 9.6009, while the standard deviation is 2.8432. The value of the standard deviation indicates that the dispersion from the mean is wide. The minimum and maximum values of the inflation are 4.2 and 13.7 respectively. This implies that the changes in the inflation rate in Nigeria ranges from 4.2% and 13.7%, while Swilk is 0.00032.

IFRS adoption from table 4.2 depicts that the selected Deposit Money Banks (DMBs) in Nigeria has a minimum and maximum value of 0 and 1. The maximum value of 1

indicates that majority the selected DMBs in Nigeriarelatively prepare their financial reports in compliance with the guideline provided under IFRS since its mandatory adoption. On average, the selected DMBs in Nigeria have IFRS of .4545 which further indicates that majority of the banks prepare their financial reports in line with IFRS guideline since its adoption and standard deviation of .49955 which is higher than the mean indicates that there is a wide deviation from the mean, while the Swilk is 0.9998.

The interaction term of GDPIFRS from table 4.2 depicts that the selected DBMs in Nigeria has a minimum of 0 and a maximum of 4.2 which indicates that pro-cyclicality was very low after the adoption of IFRS in the period of study. The mean is 1.0727 while the standard deviation is 1.5495 showing that there is a slight deviation from the mean and the Swilk is 0.00004.

4.3 Correlation Matrix

Correlation matrix was computed so as to determine the degree of relationship between the dependent variables and the independent variables of the value relevance model and pro-cyclicality model.

Table 4.3: Correlation Matrix for Value Relevance

Variable	SHP	EPS	BVP	IFRS	BVPIFRS	EPSIFRS
SHP	1.0000					
EPS	0.3933	1.0000				
BVP	0.4051	0.3336	1.0000			
IFRS	-0.1709	0.1755	0.1937	1.0000		
BVPIFRS	0.0548	0.3392	0.5470	0.7994	1.0000	
EPSIFRS	0.2747	0.5416	0.4441	0.5558	0.7540	1.0000

Source: STATA Output, (2019)

The Table 4.3 shows the correlation matrix for value relevance of earnings and book value. The relationship between share price and earnings is 0.3933 which is positive and within the region of the acceptable correlation. The relationship between book valueand

shareprice is positive at 0.4015 which is also within the accepted region of correlation.The relationship between share price and IFRS is negative at -0.1709 which is within the accepted region of correlation. The relationship between share priceand the interaction between book value per share and IFRS is positive with a value of 0.0548 which is within the accepted region of correlation. Also, the relationship between share priceand the interaction between earnings per share and IFRS is positive with a value of 0.2747 which is within the accepted region of correlation. Earnings and book value hasa positive relationship with a value of 0.3336 which within the accepted region of correlation.Also, book value per share and IFRS has a positiverelationship with a value of 0.1937 which is within the accepted region of correlation. The relationship between earnings and the interaction between earningsand IFRS is positive with a high value of 0.5416 which shows that there is multicollinearity and should be subjected to VIF test. Therelationship between book value and the interaction between book value and IFRS is also high with a value of 0.5470 which further show that there is multicollinearity between the variables and should be subjected to VIF test.

Table 4.4: Correlation Matrix For Pro-cyclicality

Variable	LLP	GDP	LGT	IFL	IFRS	GDPIFRS
LLP	1.0000					
GDP	0.3486	1.0000				
LGT	-0.0678	0.1039	1.0000			
IFL	-0.2756	-0.1820	0.0148	1.0000		
IFRS	-0.4107	-0.5470	- 0.2373	- 0.0383	1.0000	
GDPIFRS	-0.3245	0.1090	- 0.1169	- 0.0862	0.7608	1.0000

Source: STATA Output, (2019)

Table4.4 indicates the correlation matrix of the variables in the pro-cyclicality model. The result indicates that multicollinearity is not a problem as the highest correlation is around 54% between IFRS and the interaction of GDP growth and IFRS. The result also indicates that LLPcorrelated positively with GDP growth with a value of 0.3486. LLP and loan growth also hasa negativevalue of -0.0678 which is within the accepted region of

correlation.LLP has a negative relationship with inflation with a value of-0.2756.LLP has a negative relationship with IFRS with a value of -0.4107 which is within the accepted region of correlation. GDP growth andloan growth 0.1039 has a positive relationship which is within the accepted region of correlation. Also, GDP growth and inflation has a negative value of -0.1820 which is within the accepted region of correlation. GDP growth and IFRS has a negative value of -0.5470 which is with the accepted region of correlation. Loan growth and inflation 0.0148 has a positive relationship which is within the accepted region of correlation. Loan growth and IFRS is negative with a value of -0.2373 which is within the accepted region of correlation, loan growth and the interaction of GDP growth and IFRS has a negative value of -0.1169 which is also within the accepted region of correlation. Inflation and IFRS has a negative relationship with a value of-0.0383 which is within the accepted region of correlation, Inflation and the interaction between GDP growth and IFRS is negative with a value of -0.0862 which is within the accepted region of correlation. IFRS and the interactionterm of GDP growth and IFRS has a positive relationship with a value of 0.7608 which is within the accepted region of correlation.

4.4 Robustness Tests

In order to improve the validity of all statistical inferences for the study, necessary tests were conducted. The tests conducted by the researcher include; multicollinearity test, heterokedasticity test, hausman specification test and Langrange multiplier test.

i. Multicollinearity Test

Multicollinearity refers to a high correlation of two or more independent variables in a multiple regression model (Gujarati, 1988). Variance Inflation Factor (VIF) can be employed to assess multicollinearity problem. This test was conducted to check whether

there was a high correlation among the independent variables which may mislead the result of the study. After the data for achieving the first and second objective were analyzed using Ordinary Least Square Method of estimation and result obtained, the researcher did some test to improve the inferences of the data therefore, heteroskedasticity test was conducted and the result indicates the presence of heteroskedasticity in the data set. So the result was subjected to Generalized Least Square method of estimation where Fixed Effect and Random Effect were run. After analyzing the data using GLS, Hausmanspecification test was conducted in order to choose between fixed effect model and random effect model. In addition, Breusch and pagan Lagrangian multiplier Test was conducted in order to choose between Random Effect Model and Ordinary Least Square Model. The result of the test is in favour of fixed Effect GLSMethod of estimation.

The same procedure was followed for analyzing the data for achieving the third objective of the study but after running the heteroskedasticity test, the result indicates the absence of heterodasticity in the data set. The result is in favour of random Effect GLS Method of estimation after other tests were done as above.

In an attempt to prove and substantiate the absence of multicollinearity among the independent variables, the study conducted test using Vector Inflation Factor and Tolerance Value. Table 4.5 and 4.6 presents the result of the test.

Table 4.5: Vector Inflation Factor and Tolerance value for value relevance

Variable	VIF	1/VIF
BVPIFRS	6.74	0.148305
IFRS	3.67	0.27266
EPSIFRS	2.97	0.337153
BVP	1.90	0.526271
EPS	1.49	0.670912
Mean VIF	3.35	

Source: STATA 13 output, 2019

From table 4.5., it is observed that the result reveals that the variables of the study do not pose multicollinearity problem. As suggested by Gujarati & Porter (2009), it is evident from the values of VIF being less than 10 and tolerance values being greater than 0.10 as a rule of thumb. This is in agreement with the assumption of classical regression model which states that there should not be multicollinearity problem among the independent variables included in the model.

Table 4.6:Vector Inflation Factor and Tolerance value for pro-cyclicality

Variable	VIF	1/VIF
IFRS	10.8	0.99219
GDPIFRS	6.69	0.149482
GDP	4.20	0.238149
LGT	1.11	0.902260
IFL	1.10	0.910837
Mean VIF	4.63	

Source: STATA 13 Output, 2019

As observed from table 4.6, the result reveals that the variables of pro-cyclicalitydo not pose multicollinearity problem. Though the values of VIF is more than 10, Robert (2007) state that VIF values that greatly exceeds the rules of 4 or 10 can be confidently used to draw conclusions from regression analyses. Also, from table4.6, the tolerance value is greater than 0.10 as a rule of thumb.

ii. Heteroskedasticity Test

Heteroskedasticity occurs in a situation where the error terms of the model have no constant variances. This problem needs to be addressed so that wrong estimations for the coefficients and sometimes making significant variables appear to be statistically insignificant will be avoided(Gujarati, 1988). In this study, Breusch-pagan/ cook-wersberg test for Heteroskedasticity was conducted for value relevance variables and the result reveals the chi-square value of 18.61 which was significant at even 1% level of significance. Both the chi-square and the p. value indicatethe presence of Heteroskedasticityso the fixed effect GLS was reported. However, the result for pro-

cyclicality reveals the absence of heteroskedascity so the random effect GLS was reported.

4.5 Presentation and Interpretationof Regression Results

This section presents and analyses the regression results of the dependent variable for value relevance represented byshare price and the independent variables; Earnings and Book value, and the interaction effect of IFRS on earnings, and book value. Also, the second dependent variable LLP for pro-cyclicality and the independent variable IFRS, then the interaction between Pro-cyclicality and IFRS are presented. The result is presented in table 4.6 and 4.7 below:

$SHP = \alpha o + \beta 1\ EPS + \beta 2BVP + \beta 3(EPS \times IFRS) + \beta 4(BVP \times IFRS) + \varepsilon$

Table 4.7: Summary of Regression Result for value relevance

Variable	Coefficient	T. statistics	P. values
Const	9.202896	6.44	0.000
EPS	.5679905	1.54	0.126
BVP	.1135378	0.66	0.508
IFRS	-1.031007	-0.51	0.612
BVPIFRS	-.4984561	-2.11	0.037
EPSIFRS	1.670128	1.94	0.054
R^2	0.5457		
F-statistics			3.86
Prob(sig)			0.0027

Source: Researcher's Compilation, using STATA 13 (2019).

The summary of regression as shown in table 4.6 reveals that the independent variables of the value relevance model explained 54% of the variations in the price of shares of the selected Deposit Money Banks in Nigeria. The remaining 46% were explained by other factors that affect the price of stock of Deposit Money Banks in Nigeria which are not captured in the model of the present study. Thus the independent variables collectively, are good explanatory variables of the effect of IFRS on value relevance of earnings and book value of Deposit Money Banks in Nigeria. The results in table 4.6 also revealed that the model of the study is fitted as

evident by the value of F-statistic of 3.86 and is significant at 1% level of significance. This implies that the researcher has 99% confidence in the ability of the model to explain the dependent variable of the study.

The above table also shows that earnings have a positive coefficient of 0.126 and a t-value of 1.54 which is insignificant. This signifies that earnings do not have effect on share price of stock of selected banks within the of the study. This further implies that for every increase in earnings, the price of shares does not increase. This means that investors' economic decisions are not influenced by the earnings reported by selected banks within the period of the study, which also means that earnings isnot value relevant within the period of study.Book value has a positive coefficient of 0.508 and a t-value of 0.66 which is insignificant. This implies that for every increase in book value, share price does not increase. This further explains that investors' economic decisions are not influenced by the reported book value of the selected banks within the period of the study, which also means that book value is not value relevant within the period of study.IFRS have a positive coefficient of 0.612 and a t- value of -0.51 which is insignificant. This implies that IFRS have no influence on share price of stock of the selected banks.One of the main variables of concern, the interaction effect of IFRS and earningshas a positive coefficient of 0.054 and t-value of 1.94, significant at 5%. This indicates that an increase in the multiple effect of IFRS and earnings results toan increase in the share price.This implies that value relevance of earnings improved significantly after mandatory IFRS adoption.The second main variable of concern, the interaction term of IFRS on book value positively influence share price with a coefficient of -2.11 and the t-value of -1.92 significant at 5%. This implies thatfor every increase in the multiple effect of IFRS and book value, there is a increase in share price. This further implies that the value relevance of book value improvedsignificantly after mandatory IFRS adoption by DMBs in Nigeria.

As regards pro-cyclicality, the model and summary of regression table is presented below.

$$LLP = \alpha o + \beta IGDP + \beta 2LGT + \beta 3IFL + \beta 4IFRS + \beta 5GDP \times IFRS + \varepsilon$$

Table 4.8: Summary of Regression Result for pro-cyclicality

Variable	Coefficient	Z. statistic	P.value
Const	.3211506	3.21	0.001
GDP	.0524916	3.35	0.001
LGT	-.0005606	-2.18	0.030
IFL	-.0204788	-4.76	0.000
IFRS	.014672	0.20	0.843
GDPIFRS	.0593057	-3.04	0.0002
R	0.3079		
F. statistics			125.72
Prob. (sig)			0.0000

Source: Researcher's Compilation, using STATA 13 (2019)

The data was estimated using fixed effect GLS because the data set does not contain heteroskedasticity. It was revealed in table 4.7 the independent variables of the study (GDP growth, IFRS, inflation, and loan growth) explained 30% of the variations in the LLP of Deposit Money Banks in Nigeria. The remaining 70% were explained by other factors that affect the LLP of Deposit Money Banks in Nigeria which are not captured in the model of the present study. Thus the independent variables collectively, are good explanatory variables of the effect of IFRS adoption on pro-cyclicality of Deposit Money Banks in Nigeria. The results from table 4.7 also revealed that the model of the pro-cyclicality variables is fitted as evident by the value of f-statistic of 125.72 which is significant at 1% level of significance. This implies that the researcher has 99% confidence in the ability of the model to explain the dependent variable of the study.

GDP growth has a positive coefficient of 0.001 and a z-value of 3.35, statistically significant at 1%. This means that for every increase in GDP growth, LLP increases. This implies that LLP is not pro-cyclical within the period of the study.Loan growth depicts a positive and significant at 5% with coefficient of 0.030 and a z-value of -2.18. This implies that loan growth has a positive effect on LLP. This means that for every increase

in loan growth, the LLP of the selected banks will increase by the coefficient value, this further suggest that the selected banks are very prudent and doing well with their credit risk mismanagement within the period of study and the result indicates that the selected banks are not pro-cyclical within the period of the study.Inflation have a positive coefficient of 0.000 and z-value of -4.76 statistically significant at 1%, this means that inflation influenced the loan loss provision level of the selected banks within the period of study. IFRS have a positive coefficient of 0.843 and a z-value of 0.20 which is insignificant, this implies that the level of LLP is not influenced by mandatory IFRS adoption. The interaction term between GDP and IFRS which is the main variable of concern, have a positive coefficient of 0.002 and a z-value of -3.04 significant at 1%. This implies that the joint effect of GDP growth and IFRS have a positive and significant effect on LLP. This means that for every increase in the joint effect of GDP and IFRS, there is significant increase in LLP. This thereforeindicates that there is no evidence to prove that the selected banks becamemore pro-cyclical aftermandatorily adopting IFRS.

4.6 Hypotheses Testing

- **Criterion:**

The decision rule, either to reject or fail to reject the null hypotheses, is based on the significances at either 1% or 5% of the t-statistics which are represented by the p- values against each variable of the study.

Hypothesis 1: IFRS adoption does not have a significant effect on the value relevance of earnings.

The first hypothesis of the study assumes that IFRS adoption does not have a significant influence the value relevance of earnings. This means that the study expects that the result will indicate that IFRS adoption did not improve the value relevance of earnings of the

selected listed DBMs. The result of table 4.6 shows that the effect of mandatory IFRS adoption on earnings is positive statisticallysignificant. This implies that the statistical evidence given in the regression result shows that value relevance of earning significantly improvedafter mandatory IFRS adoption. Thisis contradictingto the findings of Lev and Zarowin (1999), and Maquardt and Wiedman (2004) butsimilar the findings of Escaffre and Sefsef (2012) that finds that earnings is more value relevant in the European markets with IFRS, the study thereforerejects the null hypothesis.

Hypothesis 2: IFRS adoption does not have a significant effect onthe value relevance of book value.

The effect of IFRSadoption on book value, also positively influence the share price and significant statistically. This implies that book value improved after IFRS adoption. The above clearly indicates that the finding of the studysupports the evidence that book value improves after IFRS adoption. This contradicts to the findings of Eccher and Healy (2003) and Lin and Chen (2005) but similar to the findings of Bao and Chow (1999) and Bartov (2005). Therefore, the study rejects the null hypothesis.

Hypothesis 3: IFRS adoption does not have a significant influence on the effect of banks pro-cyclical behavior on LLP.

From the hypothesisabove, the study assumes that IFRS does not have significant effect on the banks pro-cyclical behavior. The regression result reveal that the multiple effect of GDP growth and IFRS have a positive effect on LLP which indicates that the lending behavior of banks did not become more pro-cyclical through LLP after IFRS adoption. This finding opposes the findings of Laeven and Majnoni (2001),Leaven and Majnoni (2003), and Skala (2015),but supports the findings of Fonseca and Gonzalez (2008) and Abdu Adziz (2012). Based on the above, the study fails toreject the null hypothesis.

4.7 Major findings of the study

i. Earnings have been found to have improved significantly after the mandatory adoption of IFRS by the DMBs in Nigeria.

ii. Book valuehas also been found to have improved after mandatory adoption of IFRS by the selected DMBs in Nigeria.

iii. The mandatory adoption of IFRS by the DMBs in Nigeria hasnot made the selected banks more pro-cyclical in their lending behavior through LLP.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The researcher had intended to establish the relationship between IFRS, pro-cyclicality and accounting quality of Deposit Money Banks in Nigeria.

5.2 Summary

The objective of the study was to establish the relationship between mandatory IFRS adoption value relevance of financial reporting and pro-cyclicality of Deposit Money Banks in Nigeria. Prior studies relevant to the study were thoroughly reviewed and adopted models were regressed to find the relationship between the dependent variables and the independent variables. Secondary Data was also collected from the financial statements of the 14 selected listed DBMs in Nigeria and annual reports of CBN and multiple regression analysis was used in the data analysis.

All the results interpretation and conclusions drawn in this study are done using ordinary least square method of estimation. The result of the analysis finds that the two value relevance variables improved after mandatory IFRS adoption and the joint effect of the pro-cyclicality variables GDP and IFRS, influenced the level of LLP positively in the selected DMBs after mandatory IFRS adoption. From the findings of correlation coefficient, the study revealed that there was strong relationship between share priceof Deposit Money Banks in Nigeria and the independent variables, earnings per share, book value and IFRS adoption. Also there is strong relationship between LLP and the independent variables; GDP growth, IFRS, loan growth and inflation.

From the findings on the regression result of value relevance model as well as that of pro-cyclicality, the study found that there was a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance value was less than 5%. The study found that earnings, book value and IFRS significantly influence share price of Deposit Money Banks in Nigeria. Likewise, the study found that GDP growth, loan growth and inflation significantly influence LLP within the period of study.

The study further revealed that the value relevance of earnings and book value improved after mandatory IFRS adoption by DBMs in Nigeria and the banks did not become more pro-cyclical.

5.3 Conclusion

The level of compliance to IFRS by the DMBs is high this has made the banks to publish accounting information that is adequate enough to enhance investors' confidence in the performance and financial health of the listed DMBs in Nigeria. This could also assist banks regulators in knowing the true and fair view of a bank's economic condition that could lead to making relevant policies with a mix of fiscal and monetary policies aimed atfurther improving investors' confidence in reported earnings and book value. The study reports that the banks are not pro-cyclical and no impending risk of being pro-cyclical as suggested by the influence of loan growth on LLP, therefore adopting international standards that works well for foreign countries that are well developed, may also help in curbing to the problems associated with trying to improve the quality of financial statements in a developing nation like Nigeria.

5.4 Limitations of the Study

The study limited itself to evaluating the relationship between IFRS, value relevance and pro-cyclicality of listed DMBs in Nigeria. As such, other financial institutions like insurance companies and microfinance banks were not sampled in the study. Therefore, the findings and recommendations are only applicable to listed DMBs in Nigeria. Also, the study was limited to secondary data of listed DMBs in Nigeria. This data was used as obtained and the researcher had no means of independently verifying the validity of the data which was assumed to be accurate for the purpose of the study. The study findings are therefore partly subject to the validity of the secondary data used.

IFRS adoption was implemented in the Deposit Money Banks in 2012, as such the study suffers from a short time period for IFRS adoption. Therefore, the empirical result may not provide efficient support for the actual effect of IFRS implementation.

5.5 Suggestion for Further Research

This study examinedvalue relevance of earnings and book value, the researcher therefore suggests that further studies in this area should make use of other variables suchas earnings volatility and timeliness. This study also investigated the effect of IFRS adoption on pro-cyclicality of listed DMBs in Nigeria and is believed to have contributed to knowledge and given rise to the need for further research. Additionally, pro-cyclicality of capital rather than pro-cyclicality of LLP should be used in further studies. The researcher also suggests that similar studies should be performed in the study area using Insurance Companies and Micro Finance Institutions domain in Nigeria. Lastly, the researcher suggests that in performing studies in this area, primary data of the listed DMBs in Nigeria should be sourced and utilized.

5.6 Recommendations for Policy Implication

In line with the findings and the conclusions of the study, the study recommends the following among others:

i. That there is need for the managers of Deposit Money Banks in Nigeria to further implement monetary policies that aims at enhancing investors' confidence in their reported earnings and book value.
ii. Regulatory authorities should further fashion out strict sanctions for non-compliance to IFRS disclosure requirements which should serve as deterrent for future intentions by the banks to falsify information and these sanctions should be adequately and promptly imposed accordingly.
iii. National regulators of DMBs in Nigeria should further closely monitor these banks as to ensure that these banks do not become more pro-cyclical, taking into consideration the economic state of the nation and ensuring that provisions reflect realistic recovery expectations and payment.

References

Abdul Adziz, A.C (2012). The impact of international financial reporting standards (IFRS) on Bank loan provisioning and Bank Earnings volatility. Massey University Manawatu Campus, New Zealand.

Aboody, D, Hughes, J., & Liu, J. (20020. Measuring value relevance in a (possibly) inefficient market. *Journal of Accounting Research 40(40: 965-986.*

Access Bank (2013). *Statement of Prudential Adjustments*. Annual Reports and Accounts. Pp119.

Ahmed, A.S, Takeda, C. & S. Thomas (1999). Bank loan loss provisions: A Re-examination of capital management and signaling effects, *Journal of Accounting and Economics*, Vol. 28, PP.1 – 25.

Ames, D. (2013). IFRS Adoption and Accounting Quality: The Case of South Africa. *Journal of Applied Economics and Business Research, JAEBR*, Vol. 3(3), Pp154-65.

Ashamu, S.O., & Abiola J. (2012). The impact global financial crisis on banking sector in Nigeria. British Journal of Arts and Social Sciences.Vol.4, No.2.

Atemnkeng, T. J & Joseph, N. (2006). Market structure and profitability performance in the banking industry of CFA countries: The case of commercial banks in Cameroon.http://www.jsdafrica.com/Jsda/Summer_2006/PDF/ARC_Market Structure ProfitabilityPerformace.pdf

Ayuba, A. (2012). A proposed rule roadmap for the adoption of International Financial Reporting Standards (IFRS) in Nigeria. A Research Based Perspective on FGN, NASB and SEC. *American Journal of Economics, Special Issue.* Pp 41-45.

Ball, R. (2006). International Financial Reporting Standards (IFRS): Pros and Cons for Investors. Accounting and Business Research International Accounting Policy forum,5 – 27.

Ball, R.A. & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of accounting research*, 6 (2), 159 – 178. http://dx.doi.org.

Ball, R.A., Robin, A. & Wu, J. (2003), Incentives Versus Standards: Properties of Accounting Income in Four East Asian Countries. *Journal of Accounting and Economics,* Vol. 36, pp 238 – 270.

Bao, B.H. & Chow, L. (1999). The usefulness of earnings and book value for equity valuation in emerging valuation in emerging capital markets, evidence from listed companies in the people's republic of China. *Journal of international financial management and accounting*, 10 (2), 85-104. http://dx.doi.org//10.1111/1467 - 646x. 00045

Barth M.E, Jagolinzer A.D, Armstrong C.S and Riedl E.J (2008): Market reaction to the adoption of IFRS in Europe, Standard University.

Barth M.E., Beaver W.H and Landsman, W.R. (2000). The relevance of the value relevance literature for financial accounting standard setting: another view, JAE Rochester Conference, April 2000.

Barth, M. E., Landsman, W.R., Lang, M. & William, C. (2007) Accounting Quality International Accounting standards and US, GAAP, working paper, University of North Carolina pp. 1 -85.

Barth, M.E., Landsman, W.R. &Lang, M.H. (2008) International Accounting standards and accounting quality *Journal of Accounting Research* Vol. 46 (3), 407-498.

Barth, M.E.., Landsman, W.R., & Lang, M.H. (2008). International accounting standards and accounting quality. *Journal of accounting research*, 46(3), 467 – 498.

Bartov, E, S. Goldberg, & Kim, M. (2005). Comparative value relevance Among German, U.S and International accounting standards: A German stock market Perspective, *Journal of Accounting, Auditing and Finance*. 20 (2), Pp95-119.

Beatty, A. &Liao S. (2011), Do delays in expected loss recognition asset bank willingness to lend? *Journal of Accounting and Economics* 52, 1-20.

Beaver, W.H. (1968). Financial Reporting and Accounting Revolution. Prentice hall, upper saddle river, NJ

Beke.J. (2011). How can International Accounting Standards Support Business Management? *International Journal of Management and Business Research.*Vol.1, No.

Berger A. N &Udell, G. F (2003), the institutional memory hypothesis and the pro-cyclicality of bank behavior BIS, working paper No. 125.

Berger, A and Udell, G. (2004), the Institutional Memory Hypothesis and the Pro-cyclicality of Bank Lending behavior, *Journal of financial intermediation.*

Berger, A., Kyle, M. &Scalise, M. (2001). Did Us Bank Supervisors get together during the credit Crunch? Did they get easier during the banking boom? Did it matter to bank lending? In F. Mishkin, Ed. Providential supervision: What works and what Doesn't. University of Chicago press, Pp 301 – 349.

Berger, A.N &Udell, G.F (1994). Did Risk – based Capital Allocate Bank credit and cause a "Credit Crunch" in the United States? *Journal of money, credit and banking*, Vol. 26, No.3, Pp. 585 – 628.

Berneke, B. &Lown, C. (1991), The Credit Crunch Brookings, Papers on Economic Activity, Vol. 2, Pp 205-239.

Bewaji, O. (2012) International Financial Reporting Standards: Implications for the Nigerian Accountants. The institute of Chartered Accountants of Nigeria, ceremony for new members.

Bikker, J. & Hu, H: (2002). Cyclical patterns in profits, provisioning and lending or banks DNR start Report, No. 86.

Bikker, J.A., & P.A.J. Metzemakers (2005), Bank provisioning behavior and pro-cyclicality, *Journal of international Financial Markets, Institutions and Money*, 15(2), 141-57.

Bolibok P. (2014). The impact of IFRS on the Value Relevance of Accounting Data of Banks listed on the Warsaw Stock Exchange. Copernican Journal of Finance and Accounting. 3(1), 33 – 43. http: //dx.doi.org/10./2775/CJFA.2014.003.

Borio, C., Further, C. &Lowe, P. (2001). Pro-cyclicality of the financial system and financial stability: Issues and policy options, BIS working paper.

Bouvatier, V., &Lepetit, L. (2008). Banks Pro-cyclical behavior: does Provisioning Matter? *Journal of International Financial Markets, Institutions and Money.* 18, 513 – 526. 10.1016/J.intfin.2007.07.004.

Bova, F., (2007). The Determinants of Consequences of Higher Accounting Quality following IFRS adoption in emerging markets: Inferences from Kenya.

Cai, F. & Wong, H. (2010). The effect of IFRS Adoption on Global Market integration, international Business Economics and Statistics, daily research. DOI:10.19030?iber. v910.636.

Calloa, S., Jarne, J.I &Lainez, J.A (2007). Adoption of IFRS in Spain: Effect on the Comparability and Relevance of Financial Reporting. *Journal of International.*

Chang RD, Shen WH, Fang CJ (2008). Discretionary Loan Loss Provisions and Earnings Management for the Banking industry. Intern. Bus. Econ. Res. J. Vol. 7, pp. (9-20).

Chen, H., Tang, Q., Jian, Y. and Lin, Z. (2010). The Role of International Financial Reporting Standards in Accounting Quality: Evidence from the European Union. *Journal of International Financial Management and Accounting.*21:3 2010. 220 – 278.

Chritensen, H.B., Lee, E. & Walker, M. (2008). Incentives or Standards: What Determines accounting Quality Changes around the IFRS Adoption? SSRN.

Collins, D.W., Maydew, E.L., & Weiss, I.S (1997. Changes in the Value relevance of earnings and book values over the past forty years. *Journal of Accounting & Economics* 24 (10: 39.

Dandago, K.I and Rufai, A.S. (2014).Information Technology and Accounting Information System in the Nigerian Banking Industry.Asian Economic and financial Review. 4(5): 655 – 670.

Daske, H. & Gerbhardt, G. (2006). International Financial Reporting Standards and Experts'Perception of Disclosure Quality.Abascus, 42 (3 – 4), 461 498.

Daske, H. Hail, L. Leuz, C & Verdi, R. (2007). Adopting a label.Hetenogeinity in the economic consequences of IFRS adoption.

De Angelo, L. (1986). Accounting Numbers as Market Valuation Substitutes: A Study of Management Buyouts of Public stockholders, the Account Review, July, 400-420.

Dechow, P.M, R.G Sloan & A.P Sweeney.(1995). Detecting Earnings Management, The Review, 70, 193-225.

Dontoh, A. & Ronsen, J. (1993). Information content of accounting announcements. The Account of Rev. vol. 68 (4): Pp 857-869.

DuCharme, L.L, P.H. Malatestal & S,ESefcile (2000), Earnings Management: IPO valuation and Subject Performance, working paper, university of Washington.

Easton, P.D. & Harris, T.S. (1991).Earnings as an Explanatory Variable for Returns. *Journal of Accounting Research.*19 – 36.

Eccher, E. & Healy, P. (2003). The role of international accounting standards in transitional economies. A study of the people's Republic China. Manuscript, Harvard University.

Edward, H. (2011) What is pro-cyclical? Credit Writedowns. Available online, http://creditwritedowns.com, 2011/07.

Elbannan, M., (2011). Accounting and Stock Market Effects of International Accounting Standard Adoption in an Emerging Economy.Review of Quantitative Finance and Accounting. 36:2, 207 – 245.

Ernst & young. (2006). The impact of IFRS on European banks-2005 reporting; Ernst & Young.

Escaffre L. &Sefsaf R. (2011). Comparing the Value Relevance of Earnings and Book Value in IFRS and GAAP Standards.Bankers, Markets and Investors. 114, 4 – 18.

Ezeani, N &Oladele, R. (2012).Adoption of International Financial Reporting Standards (IFRS) to Enhance Financial Reporting in Nigeria Universities.*Arabian Journal of Business and Management Review.* (OMAN Chapter), Vol.2, No.3.

Feltham, G.A., &Ohlson, J.A (1995). Valuation and clean surplus accounting for operating and financial activities. Contemporary Accounting Research, 11(spring): 689-731.

Financial Stability Forum (2009),Pro-cyclicality in the financial system, 2 April 2009. Retrieved from http// www.financial stability board.org/publications/0904a.pdf.

Fonseca, A., Gonzalez (2008), cross- country determinants of bank income smoothing by managing loan-loss provisions of banking and finance. Vol.32, p.217-218.

Francis, J., &Schipper, K. (1999). Have financial statements lost their relevance? Journal of accounting research 37(2): 319-352.

Gassen, J & Sellhorn, T.C. (2006), Applying IFRS in Germany. Determinants and Consequences, Betriebswirtsch of Liche Forchung and Praxis, 58 C (4).

Gebhardt, G. & Farkas, Z.N. (2010).The effects of IFRS adoption on the financial reporting quality of European banks. Marie Curie Research Training Network.INTACCT.

Geibhardt, G. Richardt, R & Witten Brink, L. (2004), accounting for an instrument in the banking industry conclusion from a simulation model. European accounting review, 12(2), 341-371.

Gujarati, D.N (1988) Basic econometrics, 2nd edition, Mc Graw Hill book company, New York.

Gujarati, D.N. & Porter, D.C. (2009). Basic econometrics, 4th edition. Mc Graw Hill: New York.

Hancock, D. & Willcox J.A. G (1994), Bank Capital and the Credit Crunch. The roles of risk weighted and Unweight Capital regulations. AREUEA 22:59-94.

Hancock, D. Laing, A. & Wilcox, J.A. (1995). Bank Balance Sheet Shocks and Aggregate Shocks Dynamic Effects on bank Capital and Lending *Journal of Banking and Finance*, vol. 19, pp 661-77.

Hassan, I. & Hunter W.C (1999). Income Smoothing n the Depository Institution; an Empirical Investigation, Advances in Quantitative Analysis of Finance and Accounting, Vol. 7, pp.1-16.

Healey PM (1985). The effect of bonus schemes on accounting decisions. J. Account. Econ. Vol.7, (pp. 85-107).

Healy, P.M.., &Wahlen, J.M (1999).A Review of the Earnings Management Literature and its Implications for Standard Setting. Accounting Horizons, Vol. 13 (4), Pp 365 – 383.

Holthausen, W.T., & Watts, R.L. (2001). The relevance of the value relevance literature for financial accounting standard setting. Journal of accounting standard setting. Journal of accounting & economics 31(1-3): 3-75.

Horvath, E., Mero, O. &Zsamboki, B.C. (2002), Studies on the Pro-Cyclical Behavior of Banks National Bank of Hungary, Occasional Papers, 2002.

Hung, M. &Subramanyan, K. (2007).Financial Statement Effects of Adopting International Accounting Standards: The case of Germany. Review of Accounting studies. Vol. 12, Pp 623-657.

Hung, M. & Subramanyam (2004),FinancialStatements Effects of Adopting International Accounting Standards. The case of Germany University of Southern California, unpublished working paper.

IASB (2001).Framework for the Preparation and Presentation of Financial Statements. Retrieved fromhttp://www.sba.pdx.edu/faculty/kathy/kracess/winter%202010%20381

IASBPlus 92013a, March 7). IASB proposes new impairment model. Available from <http//www.iasplus.com>. (30 May 2014) IASB%20conceptualframework.pdf.

Ikpefan, O.A, &Akande, A.O. (2012) International Financial Reporting Standard (IFRS): Benefits, Obstacles and Intrigues for implementation in Nigeria.

Jacob, R.A &Madu, C.N. (2009). International Financial Reporting Standards: an indicator of High Quality? *International Journal of Quality Reliability Management.* Vol. 26(7), pg712- 722.Doi: 10.1108/02656710910975778.

Jeanjean, T. &Stolowy, H., (2008). Do Accounting Standards Matter? An Exploratory Analysis of Earnings Management before and after IFRS adoption. *Journal of Accounting and Public and Public Policy*.Vol. 27 (6), Pp480-494.

Jones, J. (1991). Earnings Management during IMF Relief Investigations, *Journal of Accounting Research,* 29, 193-228. Doi: 10.2307/2491047, http://www.Jstor.org/pss/2491047

Kam, V., (1990). Accounting theory (second edition). New York: Wiley.

Katenova, M. (2013).Pro-cyclicalityand Bank capital in Kazakhstan. *World Journal of Social Sciences*, Vol. 3, No 6, Pp 164 – 174.

Khan, U. (2010). Does fair value accounting contribute to systematic risk in the banking industry? SSRN E-library.

Koch, T.W., & MacDonald, S.S. (2010). Bank management (seventh ed.). USA; South-western cengage learning.

Larsen, R.K. & Sheel, D.L (2004). Converge with IFRS in an expanding Europe: progress and obstacles identified by large accounting firms 'survey. *Journal of international accounting, Auditing and taxation*, 13(2), 89-119

Leaven, L &,Majnoni, G. (2003) loan loss provisioning and economic slowdowns: too much, too late? *Journal of Financial intermediation,* 12(2), p. 178-197.

Lev, B. &Zarowin p. (1999). The boundaries of financial reporting and how to extend them. *Journal of accounting research*.

Marquardt, C.a., &Wiedman, C.I. (2004) The effect of earnings management on the value relevance of accounting information.*Journal of Business Finance Accounting*26: 297-332.

Mirzaei, A. (2012). The Effect of Market Power on Stability and Performance of Islamic and Conventional Banks. Islamic Economic Studies, 18, (1&2): 45-81.

Ndubuisi,O. (2016). Dynamics of accounting theory and practice: Accounting issues of Loan Loss Provision and measurement of Financial instruments of Nigerian quoted banks.

Nssim, D (2003). Reliability of Banks fair value disclosures for loans. Review of quantitative finance and accounting, 20,355-384

Ocansey, E. &Enahoro, J. (2014). Comparative Study of the International Financial Reporting Standard Implementation in Ghana and Nigeria. *European ScientificJournal*, Vol. 10, No.13. ISSN: 1857 – 7881 (print).

Odia, J.O & Ogiedu, K.O. (2013).IFRS Adoption; Issues, Challenges and Lessons for Nigeria and other Adopters.Mediterrian *Journal of Social Sciences*, Vol.4, No.3.

Ohlson, J (1995) Earnings, Book Value, and Divided in Equity Valuation. Contemporary Accounting Research, 11. Pp 661 – 687.

Okaro S.C &Okafor G.O (2003) fair value and loan loss provisioning early evidence from Nigeria Banking Industry.*Research Journal Banking Industry*.*Research Journal of Finance and Accounting*.

Okunbor, J.A & Arowoshegbe, A.O (2014) Stakeholders Perception of the Implementation of International Financial Reporting Standards (IFRS) in Nigeria. Accounting and Finance Research.Vol.3. No.1.

Ole, K., Justin, J. & Tony, K. (2006). Empirical Evidence on Jurisdictions that adopt IFRS. *Journal of International Accounting Research*, Vol.5, No.2. pp. 1 – 20.

Oosterboch, R.V., (2009), Earnings Management in the Banking Industry: The Consequences of IFRS implementation on discretionary use of loan loss provisions.

Ou, J.A., &Sepe, J.F. (2002). Analyst earnings forecast and the roles of earnings and Book value in equity valuation. *Journal of Business Finance and Accounting*, 29 (3), 287.

Peek, J. &Rosengren, E. (1995). Bank regulation and Credit Crunch, Journal of banking and Finance, Pp 692

Penman, S. (2002). The Quality of Financial Statements: Perspective from the Recent Stock Market Bubble. Working Paper, Columbia University.

Penman, S.H. (2010). Financial forecasting, risk and valuation: accounting for the future, Abacus 46 (September 2010), 211 – 228.

Peterson, K.O. (2017). Bank loan loss provisions Research: A review. Essex Business School, University of Essex, United Kingdom. Available online https://mpra.ub.uni-muenchen.de/76808/ MPRA paper No. 76808.

PricewaterHouseCooper (2011).Prudential Guidelines: Differences BetweenSAS 10 and the Revised Prudential Guidelines. Retrieved from www.PwC.com/ng.

PricewaterHouseCooper (2011).Similarities and Differences: IFRS and Nigerian GAAP available on line @ www.pwc.com/ng, Retrieved 10th August, 2014.

Qu, W. Fong, M., & Oliver, J. (2012). Does IFRS convergence improve quality of accounting information.Evidence from the Chinese Stock Market.Corporate Ownership and Control, vol. 9.

Ramanna, K. & Sletten, E. (2009). Why do Countries adopt International Financial Reporting Standards? Working Paper)9-102.

Ran, H. (2011).The Impact of IFRS on Value Relevance of Insurance Accounting. Amsterdam Business School, University Van Amsterdam.

Renders, A & Gaeremynck, A (2007).The impact of legal and voluntary investor Protection on the fairly adoption of international financial reporting standards (IFRS). De – economics (001306X), Vol. 155, pp49-72.

Robert, M.O (2007). A caution regarding rules of thumb for variance inflation factors. Department of sociology, university of Oregon, Eugene, 97408, USA. Email; bobrien@uoregon.edu. Quality and quantity (2007) 41:673 – 690. DOI 10,1007/s11135 – 006 – 9018 – 6.

Schiebel, A. (2006). Value Relevance of German GAAP and IFRS Consolidated Financial Reporting: An Empirical Analysis on the Frankfurt Stock Exchange. Available at SSRN: http://SSRN.com/abstract=916103.

Schipper, K. (1989), Commentary on Earnings Management. Accounting Horizons, Vol. 3, pp 91 – 102.

Shrieves, R.E., & Dahl, D. (1995), Regulation, recession and bank lending behavior. The 1990 Credit Crunch, *Journal of Financial Services Research*, Vol. 9, pp 5-30.

Skala, D. (2015). Saving for a Rainy Day?Income Smoothing & Pro-cyclicality of Loan Loss Provision in Central European Banks. International Finance. 18:1, 2015: pp, 25-46. DOI: 10.1111/1468-2362.2058.

Spence, M. (1973). Job market signaling, *Quarterly Journal of Economics*, 87 (3) pp 355-374

Verrecchia, R. (2001). Essays on disclosure. *Journal of Accounting and Economics*, 32(1/3), Pp. 97-186. http://dx.doi.org/10.1016/SO165-4101(01)00025-8

Wagster, J.D. (1999). The basel accord of 1988 and the international credit crunch of 1989 – 1992, *Journal of financial services research*, 15: 123 – 143.

Wallace, R.S.O. (1988).Corporate Financial Reporting in NigeriaAccountingandBusiness Research, 18(72). 352 – 362.

World Bank (2006).Bank Disclosure Index. Global assessment of bank disclosure practices. Retrieved from http:// www.World Bank.Org.

Appendices

Appendix I: Differences between IFRS and Nigerian GAAP

AREA	IFRS/IAS	NIGERIAN GAAP
	General requirements	
Historical cost	Primary basis, with certain items carried at revalued amounts or fair value.	Uses historical cost, except for certain asset classes that may be re-measured.
Fair presentation Override	In rare cases, entities should override the standards where essential to give a fair presentation.	Exemption exists, but not based on fair presentation. Companies Act allows departure from accountingprinciples if there are special reasonsfor doing so.
First-time adoption	Guidance is given on how to apply IFRS for the first time, including guidance on accounting policies, exemptions andexceptions	This is not relevant as companies are obliged to comply with Nigerian GAAP from inception
	Financial statements	
Components of financial Statements	• Statement of financial position; • Income statement; • Statement of changes in equity; • Statement of cash flows; • Accounting policies; and • Explanatory notes.	• Balance sheet; • Profit or loss account (income statement); • Statement of cash flows; • Accounting policies; • Explanatory notes; • Value added statement; and • Five-year financial statementsummary.
Exceptional items	Not defined. Certain items or transactionsmay require separate disclosure.	Defines the term and identifies thatthey should be separately disclosed.
Extraordinary items	Prohibited.	Defines the term and require separatedisclosure on the face of the income statement.
	Changes in policies	
Correction of material Errors	Comparatives are restated and the re-stated opening balance sheet for theearliest period presented is included.	No restatement of comparatives. Adjustments made in opening retained earnings

AREA	IFRS/IAS	NIGERIAN GAAP
Changes in accounting Estimates	Reported in the income statement in thecurrent period and the effect on futureperiodsis disclosed, if applicable.	Similar to IFRS.
Definition of a subsidiary	Based on voting control or power to govern.	Comparable to IFRS.
Special purpose entities ("SPEs")	Consolidate where the substance of therelationship indicates control.	No guidance on SPEs and in practicetheyare not consolidated.
Non-consolidation of Subsidiaries	Not applicable - all subsidiaries must beconsolidated.	Exemptions to consolidation exist.
Definition of associate	Based on significant influence: presumed if 20% or more voting rights.	Similar to IFRS. Differences ariseinpractice.
Presentation of associate results	Use equity method. Show share of post-tax result. In standalone financial statements measured at cost or fairvalue.	Comparable to IFRS.
Presentation of jointly controlled entities	Both the proportional consolidation and equity method are permitted.	Comparable to IFRS.
	Business combinations	
Date of acquisition	The date at which the acquirer obtainscontrol over the acquired entity.	Normally based on legal date of control.
Consideration	Amount of cash or cash equivalents paid or the fair value of any assets transferred or liabilities incurred and any equity instruments issued.	Similar to that of IFRS.
Share based Consideration	Recorded at their fair value.	Similar to that of IFRS.
Contingent Consideration	Fair valued at date of acquisition andclassified as a liability or equity. Financial liabilities are fair valued at each reporting date with gains or losses being taken to profit or loss.	Comparable to IFRS. No guidance on the calculation of fair value.

Acquisition related costs	Expensed in the periods incurred.	similar to that of IFRS.
AREA	**IFRS/IAS**	**NIGERIAN GAAP**
Recognition and measurement of identifiable assets and liabilities acquired	The identifiable assets and liabilities ofthe acquired entity are fair valued onacquisition date.	Comparable to that of IFRS. No guidance onthe calculation of fair value.
Subsequent adjustmentsto assets and liabilities	12 month "measurement period"where fair values can be finalized and comparative periods adjusted.	Comparable to that of IFRS.
Non-controlling interests and previously held interests	State at either the full fair value method or the proportional share.	Stated at proportional share.
Bargain purchases	Negative goodwill is recognized in profit or loss.	Negative goodwill is recognized in profit or loss.
	Revenue recognition	
Revenue recognition	Provides recognition criteria for sales ofgoods, rendering of services and other revenue transactions.	Limited guidance available on revenuerecognition. Generally the accrual basis is applied to revenue contracts.
Construction contracts	Revenue and profit on long-term contracts accounted for using the percentage of completion method. Completed contract method prohibited.	Allows the percentage-of-completion and completed-contract approaches Depending on the circumstances.
Multiple – element Arrangements	The revenue recognition criteria should be applied separately to each element of the contract. The consideration received should be applied to each element of thecontract.	Identifies that certain contracts shouldbe split into their elements. Provides very little guidance for applying theconcept.
	Employee benefits	
Defined benefit plans	Projected unit credit method is used to determine benefit obligation and record plan assets at fair value.	No prescribed method to measure the defined benefit obligation. Limited guidance on measuring the plan assets.
Share-based payments	Expense incurred as a result of share compensations are recognized in theincome statement. Corresponding amount is recorded either as a liability or an increase in equity depending on whether the transaction is determined to be cash-or-equity-settled.	No guidance exists on share-based payments

AREA	IFRS/IAS	NIGERIAN GAAP
Long-term benefits and Disability	Similar to defined benefit plan, except that actuarial gains and losses and past service costs are recognized in profit or loss.	Calculated in the same manner as defined benefit plans.
Termination benefits	Termination benefits arising from redundancies are accounted for similarly to restructuring provisions.	Comparable to that of IFRS.
	Assets	
Property, plant and Equipment	Use historical costs or revalued amounts. Component approach must be Applied in determining depreciation for property, plant and equipment. Annual reassessment of useful lives and residual values.	Use historical costs or revalued amounts. No review of useful lives and residual values.
Acquired intangible Assets	Capitalise if recognition criteria are met; intangible assets may have indefinite useful life or are amortised over useful life.	Guidance only exists for research and development costs.
Internally generated intangible assets	Expense research costs as they are incurred. Capitalize and amortize development costs only if stringent recognition criteria are met.	Similar to that of IFRS. No guidance exists for identifiability.
Inventories	Carried at lower of cost and net realizable value. Use FIFO or weighted average method to determine cost. LIFO is prohibited.	Similar to that of IFRS
Capitalization of borrowing costs	Borrowing costs must be capitalized.	It is implied that borrowing costs should be capitalized. Not always done in practice. Generally only specific borrowings are capitalized.
Investment property	Measure at depreciated cost less accumulated depreciation or fair value and recognize changes in fair value in the income statement.	Measure at depreciated cost less accumulated amortization or fair value and recognize changes in fair value inequity.

Impairment of nonfinancial Assets	If impairment is indicated, write down assets to higher of the fair value less cost to sell and the value in use based on discounted cash flows. Reversals of losses permitted in certain circumstances, except for goodwill.	Impairments should be recognized when the carrying amount of PPE exceeds its recoverable amount. Very limited guidance available.
AREA	**IFRS/IAS**	**NIGERIAN GAAP**
Non-current assets held for sale or disposal group	Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.	No guidance exists.
Leases – classification	Leases are classified as finance leases if substantially all risks and rewards of ownership transferred to a lessee. Substance rather than legal form is important.	Leases are classified into operating and finance leases, but based on rulesrather than principles.
Lessor accounting	Record amounts due under finance leases as a receivable (financial asset).Allocate gross earnings to give constant rate of return based on net investment method.	Similar to that of IFRS.
Lessee accounting	Record finance leases as assets and obligations for future rentals. Apportion rental payments to give a constant interest rate on outstanding obligation. Operating lease rentals are charged on straight-line method.	Similar to that of IFRS.
	Liabilities	
Provisions – general	Record the provisions related to present obligations from past events if outflow of resources is probable and can be reliably estimated. Where the effect of the time value of money is material, the amount of a provision shall be the present value of the obligation.	Similar to IFRS, however Nigerian GAAP does not specify the use of a pre-tax discount rate.

Provisions – Restructuring	Recognize restructuring provisions of detailed formal plan announced or implementation effectively begun.	Similar to that of IFRS.
Contingencies	Disclose unrecognized possible losses and probable gains.	Similar to that of IFRS.
	Income taxes	
Deferred income taxes general approach	Use full provision (liability) method driven by balance sheet temporary differences. Deferred tax assets are recognized if recovery is probable.	Based on the income statement method.
Deferred income taxes – Exceptions	Non-deductible goodwill and temporary differences on initial recognition of assets and liabilities that do not impact on accounting or taxable profit.	exceptions exist, but deferred tax is only raised for temporary differencesand snot permanent differences.
AREA	**IFRS/IAS**	**NIGERIAN GAAP**
	Financial assets	
Classification and measurement of financial assets	Financial assets are classified atamortized cost or fair value.To be classified at amortized cost, theymust meet certain criteria.Investments in equity instruments canbe designated as fair value through othercomprehensive income. All other fairvalue instruments are fair value through profit or loss.	Financial assets are not defined.Certain financial assets are identifiedas investments. Others are accountedfor based on general practice. Financial assets that are investments are classified as short-term or longterminvestments.Short-term investments are carried atthe lower of cost or market value. Long-term investments are carriedat cost or revalued amount, with revaluations going through equity. Exceptions and further guidance exist for banking and non-banking financial institutions.
Derecognition	Derecognize financial assets based on risks and rewards first; control issecondary test.	There is no general guidance. Guidance exists for financialinstitutions.
	Financial liabilities	
Financial liabilities	Classify capital instruments	No guidance.

Classification	depending on substance of the issuer's obligations,as either liability or equity.	
Derecognition	Derecognize liabilities when extinguished. The difference between the carrying amount and the amount paid is recognized in the income statement.	No guidance. In practice derecognitionoccurs on extinguishment.
Convertible instruments	Account for convertible instruments on asplit basis, allocating proceeds betweenequity and debt.	No guidance.
	Equity instruments	
Treasury shares	The full amount paid show as deductionfrom equity.	No guidance.
	Derivatives and hedging	
Measurement of financial instruments and hedging activities	Measure derivatives and hedgeinstruments at fair value; recognize changes in fair value in income statementexcept for effective cash flow hedges,where the changes are deferred in equityuntil effect of the underlying transaction isrecognized in the income statement.	No guidance on the measurement of financial instrument and hedging activities
AREA	**IFRS/IAS**	**NIGERIAN GAAP**
Embedded derivatives	Embedded derivatives separated from the host contract unless the wholeinstrument is measured at fair value or the economic characteristics, and risks of the embedded derivative are the same as those of the host contract.	No guidance on embedded derivatives.
Functional currency – Definition	Functional currency is the currency of the primary economic environment in which an entity operates. Identification is based on primary and secondary indicators.	No concept of functional currency. All entities report using Naira.
Foreign currency translation of transactions and monetary items	Translate transactions at rate on date of transaction; monetary assets/liabilities at balance sheet rate; non-monetary itemsat historical rate.	Similar to IFRS. Except that there is an option to defer foreign exchange gains and loss on long term monetary items.

Consolidation of foreign Subsidiaries	Use closing rate for balance sheets;average rate for the period for incomestatements. Take exchange differences toequity. Include in gain or loss on disposalof a subsidiary.	Similar to IFRS.
Earnings per share – Diluted	Use weighted average potential dilutive shares as denominator for diluted EPS.	Similar to IFRS.
Disclosure of risks arising from financial instruments	Entity shall disclose information enabling users of financial statements to evaluate the nature and extent of risks arising from financial instruments to which the entity is exposed	No guidance, except for additional risk management disclosures required of banks by the banking regulator.
Related party transactions – definition	Determine by level of direct or indirect control, joint control and significant influence of one party over another or common control of both parties.	No guidance exists. Nigerian Company law require disclosures in annual financial statements of dealings with officials of the company.

Source: PricewaterHouseCoopers (2011).

Appendix II

Model 1

```
. *(14 variables, 154 observations pasted into data editor)

. summarize shp eps bvp ifrs bvpifrs epsifrs
```

Variable	Obs	Mean	Std. Dev.	Min	Max
shp	154	9.005325	8.850068	.01	46.09
eps	154	.9050649	1.729497	-12.66	8.3
bvp	154	8.182338	5.35857	.11	25.99
ifrs	154	.4545455	.4995542	0	1
bvpifrs	154	4.234351	5.821468	0	22.44
epsifrs	154	.562013	1.111274	-2.99	4.67

```
. swilk shp eps bvp ifrs bvpifrs epsifrs
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
shp	154	0.83267	19.915	6.791	0.00000
eps	154	0.73428	31.623	7.841	0.00000
bvp	154	0.95169	5.750	3.971	0.00004
ifrs	154	0.99834	0.198	-3.676	0.99988
bvpifrs	154	0.89047	13.035	5.829	0.00000
epsifrs	154	0.87321	15.090	6.161	0.00000

```
. correlate shp eps bvp ifrs bvpifrs epsifrs
(obs=154)
```

	shp	eps	bvp	ifrs	bvpifrs	epsifrs
shp	1.0000					
eps	0.3933	1.0000				
bvp	0.4051	0.3336	1.0000			
ifrs	-0.1709	0.1755	0.1937	1.0000		
bvpifrs	0.0548	0.3392	0.5470	0.7994	1.0000	
epsifrs	0.2747	0.5416	0.4441	0.5558	0.7540	1.0000

```
. regress shp eps bvp ifrs bvpifrs epsifrs
```

Source	SS	df	MS	Number of obs =	154
Model	4341.98053	5	868.396105	F(5, 148) =	16.82
Residual	7641.54727	148	51.6320762	Prob > F =	0.0000
				R-squared =	0.3623
Total	11983.5278	153	78.3237111	Adj R-squared =	0.3408
				Root MSE =	7.1855

shp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
eps	1.143884	.4100733	2.79	0.006	.3335294	1.954239
bvp	.6513628	.1494378	4.36	0.000	.3560553	.9466703
ifrs	-3.995308	2.226976	-1.79	0.075	-8.396086	.4054703
bvpifrs	-.4746744	.2591213	-1.83	0.069	-.9867298	.0373809
epsifrs	2.701747	.9002835	3.00	0.003	.9226767	4.480817
_cons	4.947935	1.332003	3.71	0.000	2.315734	7.580136

```
. vif
```

Variable	VIF	1/VIF
bvpifrs	6.74	0.148305
ifrs	3.67	0.272666
epsifrs	2.97	0.337153
bvp	1.90	0.526271
eps	1.49	0.670912
Mean VIF	3.35	

```
. hettest

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

         chi2(1)      =    18.61
         Prob > chi2  =   0.0000


. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2006 to 2016
                delta:  1 year
```

```
. xtreg shp eps bvp ifrs bvpifrs epsifrs, fe

Fixed-effects (within) regression               Number of obs      =       154
Group variable: id                              Number of groups   =        14

R-sq:  within  = 0.1250                         Obs per group: min =        11
       between = 0.5457                                        avg =      11.0
       overall = 0.1952                                        max =        11

                                                F(5,135)           =      3.86
corr(u_i, Xb)  = 0.2669                         Prob > F           =    0.0027

------------------------------------------------------------------------------
         shp |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |    .5679905    .368496     1.54   0.126    -.1607812    1.296762
         bvp |    .1135378   .1710769     0.66   0.508    -.2247997    .4518752
        ifrs |   -1.031007   2.028735    -0.51   0.612    -5.043221    2.981207
     bvpifrs |   -.4984561   .2362357    -2.11   0.037    -.9656576   -.0312546
     epsifrs |    1.670128   .8601552     1.94   0.054     -.030994    3.371251
       _cons |    9.202896   1.428453     6.44   0.000     6.377855    12.02794
-------------+----------------------------------------------------------------
     sigma_u |  5.7540789
     sigma_e |  6.2342482
         rho |  .46001109   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(13, 135) =     4.74                 Prob > F = 0.0000

. est store fixed

. xtreg shp eps bvp ifrs bvpifrs epsifrs, re

Random-effects GLS regression                   Number of obs      =       154
Group variable: id                              Number of groups   =        14

R-sq:  within  = 0.0864                         Obs per group: min =        11
       between = 0.8465                                        avg =      11.0
       overall = 0.3618                                        max =        11

                                                Wald chi2(5)       =     63.45
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         shp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         eps |   1.034229   .3999862     2.59   0.010     .2502707    1.818188
         bvp |   .5924409   .1513786     3.91   0.000     .2957444    .8891375
        ifrs |  -3.607369   2.172368    -1.66   0.097    -7.865132    .6503951
     bvpifrs |  -.4676315   .2536987    -1.84   0.065    -.9648719    .0296089
     epsifrs |    2.48781   .8927869     2.79   0.005     .7379803    4.237641
       _cons |   5.443375   1.380277     3.94   0.000     2.738082    8.148668
-------------+----------------------------------------------------------------
     sigma_u |  1.2128348
     sigma_e |  6.2342482
         rho |  .03646714   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store random
```

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
eps	.5679905	1.034229	-.4662386	.
bvp	.1135378	.5924409	-.4789032	.0796984
ifrs	-1.031007	-3.607369	2.576362	.
bvpifrs	-.4984561	-.4676315	-.0308247	.
epsifrs	1.670128	2.48781	-.8176822	.

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

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 148.06
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)

```
. xttest0
```

Breusch and Pagan Lagrangian multiplier test for random effects

shp[id,t] = Xb + u[id] + e[id,t]

Estimated results:

	Var	sd = sqrt(Var)
shp	78.32371	8.850068
e	38.86585	6.234248
u	1.470968	1.212835

Test: Var(u) = 0
chibar2(01) = 11.19
Prob > chibar2 = 0.0004

APPENDIX III. Model 2

```
. summarize llp gdp lgt ifl ifrs gdpifrs
```

Variable	Obs	Mean	Std. Dev.	Min	Max
llp	154	.2113786	.2379987	.0215	1.25
gdp	154	3.272727	1.528179	0	5.4
lgt	154	32.28364	48.87879	-56.91	338.25
ifl	154	9.600909	2.843262	4.2	13.7
ifrs	154	.4545455	.4995542	0	1
gdpifrs	154	1.072727	1.549584	0	4.2

```
. swilk llp gdp lgt ifl ifrs gdpifrs
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
llp	154	0.71343	34.105	8.012	0.00000
gdp	154	0.95198	5.715	3.957	0.00004
lgt	154	0.72008	33.313	7.959	0.00000
ifl	154	0.96216	4.504	3.416	0.00032
ifrs	154	0.99834	0.198	-3.676	0.99988
gdpifrs	154	0.95238	5.668	3.938	0.00004

```
. correlate llp gdp lgt ifl ifrs gdpifrs
(obs=154)
```

	llp	gdp	lgt	ifl	ifrs	gdpifrs
llp	1.0000					
gdp	0.3486	1.0000				
lgt	-0.0678	0.1039	1.0000			
ifl	-0.2756	-0.1820	0.0148	1.0000		
ifrs	-0.4107	-0.5470	-0.2373	-0.0383	1.0000	
gdpifrs	-0.3245	0.0109	-0.1169	-0.0862	0.7608	1.0000

```
. reg llp gdp lgt ifl ifrs gdpifrs
```

Source	SS	df	MS
Model	2.67274291	5	.534548583
Residual	5.99369547	148	.040497942
Total	8.66643839	153	.056643388

```
Number of obs =     154
F(  5,   148) =   13.20
Prob > F      =  0.0000
R-squared     =  0.3084
Adj R-squared =  0.2850
Root MSE      =  .20124
```

llp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gdp	.0511387	.0218159	2.34	0.020	.0080279	.0942495
lgt	-.0006787	.0003504	-1.94	0.055	-.0013711	.0000138
ifl	-.020556	.0059956	-3.43	0.001	-.0324041	-.0087079
ifrs	.0051745	.1033928	0.05	0.960	-.1991422	.2094913
gdpifrs	-.0574096	.0271557	-2.11	0.036	-.1110726	-.0037466
_cons	.3225147	.1236478	2.61	0.010	.0781716	.5668578

```
. vif
```

Variable	VIF	1/VIF
ifrs	10.08	0.099219
gdpifrs	6.69	0.149482
gdp	4.20	0.238149
lgt	1.11	0.902260
ifl	1.10	0.910837
Mean VIF	4.63	

```
. vif
```

Variable	VIF	1/VIF
ifrs	10.08	0.099219
gdpifrs	6.69	0.149482
gdp	4.20	0.238149
lgt	1.11	0.902260
ifl	1.10	0.910837
Mean VIF	4.63	

```
. hettest

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

         chi2(1)      =    62.45
         Prob > chi2  =   0.0000

. xtreg llp gdp lgt ifl ifrs gdpifrs, fe

Fixed-effects (within) regression               Number of obs      =       154
Group variable: id                              Number of groups   =        14

R-sq:  within  = 0.4808                         Obs per group: min =        11
       between = 0.0487                                        avg =      11.0
       overall = 0.3078                                        max =        11

                                                F(5,135)           =     25.00
corr(u_i, Xb)  = 0.0081                         Prob > F           =    0.0000
```

llp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gdp	.0526187	.0156944	3.35	0.001	.0215801	.0836573
lgt	-.0005495	.0002587	-2.12	0.036	-.0010611	-.0000378
ifl	-.0204716	.0043094	-4.75	0.000	-.0289942	-.0119489
ifrs	.0155645	.0744637	0.21	0.835	-.1317017	.1628308
gdpifrs	-.0594839	.0195407	-3.04	0.003	-.0981295	-.0208384
_cons	.310192	.0890484	3.48	0.001	.1340817	.4863023
sigma_u	.14900551					
sigma_e	.14463805					
rho	.51487002	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(13, 135) =    11.65             Prob > F = 0.0000
```

```
. est store fixed

. xtreg llp gdp lgt ifl ifrs gdpifrs, re

Random-effects GLS regression                   Number of obs      =       154
Group variable: id                              Number of groups   =        14

R-sq:  within  = 0.4808                         Obs per group: min =        11
       between = 0.0487                                        avg =      11.0
       overall = 0.3079                                        max =        11

                                                Wald chi2(5)       =    125.72
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         llp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         gdp |   .0524916   .0156618     3.35   0.001      .021795    .0831881
         lgt |  -.0005606   .0002576    -2.18   0.030    -.0010655   -.0000557
         ifl |  -.0204788   .0043008    -4.76   0.000    -.0289082   -.0120494
        ifrs |    .014672    .074302     0.20   0.843    -.1309573    .1603012
    gdpifrs |  -.0593057   .0194997    -3.04   0.002    -.0975245   -.0210869
       _cons |   .3112506    .097028     3.21   0.001     .1210793     .501422
-------------+----------------------------------------------------------------
     sigma_u |  .14612838
     sigma_e |  .14463805
         rho |  .50512536   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store random

. hausman fixed random

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |    fixed       random       Difference          S.E.
-------------+------------------------------------------------------------
         gdp |   .0526187    .0524916       .0001271        .0010108
         lgt |  -.0005495   -.0005606       .0000111        .0000238
         ifl |  -.0204716   -.0204788       7.25e-06        .0002724
        ifrs |   .0155645     .014672       .0008926        .0049044
    gdpifrs |  -.0594839   -.0593057      -.0001782         .001265
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        0.22
                Prob>chi2 =      0.9989
```

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        llp[id,t] = Xb + u[id] + e[id,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+-----------------------------
                 llp |   .0566434       .2379987
                   e |   .0209202       .1446381
                   u |   .0213535       .1461284

        Test:   Var(u) = 0
                            chibar2(01) =   177.94
                         Prob > chibar2 =   0.0000
```