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Mandatory IFRS Adoption and Real Earnings Management of Deposit Money Banks in Nigeria

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Abstract

Real earnings management can be influenced by change in financial reporting framework, such as mandatory IFRS adoption. This study examines the effect of mandatory IFRS adoption on real earnings management of Deposit Money Banks (DMBs) in Nigeria using difference-in-difference (D-in-D) design.Panel data regression analysis based on the D-in-D model is used in analysing the data collected fromsecondary sources. The findings of this study based on the difference-in-differences approach are thatthere is no significant effect of mandatory IFRS adoption on real earnings management of DMBs in Nigeria, although, there is an increase in the real earnings management after the mandatory adoption.The difference in the real earnings management of mandatory adopting banks in the post-mandatory IFRS adoption period compared to pre-mandatory IFRS adoption period is not significant.The study recommends thatto reduce accrual-based and real earnings management after mandatory adoption of IFRS by mandatory adopting banks, Financial Reporting Council of Nigeria (FRC) should increase legal enforcement of IFRS, backed by Section 64 of the FRC of Nigeria Act 2011 as it is obvious by the findings of this study that management of DMBs still engage in manipulating earnings through discretionary accruals and abnormal real costs.

Keywords: Mandatory IFRS Adoption, Real Earnings Management, Quality of Financial Reporting, Difference-in-Differences
JEL Codes: M4, M42, M48

Introduction

A number of business failures were experienced globally in the recent past. These businesses were mostly companies that were quoted on stock exchanges and regulated by the relevant statutory authorities. A few cases were the failures of Enron and WorldCom in the United States of America, Parmalat in Italy, and Allied Irish Bank (AIB) and National Irish Bank (NIB) in the Ireland since 2001(Ebert & Griffin, 2009). In Nigeria, the cases of Cadbury (Nigeria) Plc overstating its accounts of 2002 to 2005, and failed banks of 1994 and 2008/2009 are examples. Different factors were responsible for these corporate failures but the prominent amongst them were bad corporate governance framework and inadequate institutional framework, which includes inadequate framework for financial reporting (Dibra, 2016; Moxey & Berendt, 2008).

More often, regulations and reform in financial reporting are implemented after well-publicised corporate scandal (Haslam & Chow, 2016). For instance, the number of corporate scandals that took place in the United States between 2000 and 2001 through creative accounting practices eroded trust in financial reports, thereby giving way for the promulgation of Sarbanes-Oxley Act in 2002 with the main aim of restoring the integrity of financial reporting (Cohen, Dey, & Lys, 2008). The global financial crisis of 2007/2008 has shown how incredibly weak the checks and balances in the public capital markets can be, leading to several financial reporting regulations by International Accounting Standards Board (Hoogervorst, 2012). Another reason for financial reporting reform is the globalisation of contemporary financial markets where cross-border listing takes place.Hoogervorst(2012) affirms that one of the main reasons for the IFRS adoption by different countries – developed and emerging, is the global interconnectivity of modern financial markets.

In Nigeria, the banking reform championed by the Nigerian apex bank, Central Bank of Nigeria (CBN) in the mid-2009 included accounting reform in a policy statement. The reform issues were that all banks and their subsidiaries must change and adopt common financial year end for the year 2009 and beyond to enhance comparability (Central Bank of Nigeria, 2009), and all banks should adopt IFRS by the end of 2010 (Alford, 2010). This was followed by the announcement in 2010 of the Roadmap to the Adoption of IFRS in Nigeria.

The main objective of IASB is to develop a globally acceptable set of financial reporting standards, which is of high quality called IFRS. The expectation here is that the adoption of IFRS should enhance the quality of financial reporting by reducing earnings management (Barth, Landsman, & Lang, 2008). The anticipated outcome of financial reporting reform, especially the adoption of IFRS by different countries – developed and emerging has sparked-off different researchon the effect of the adoption of IFRS on the desired outcome, basically earnings management.

This study focuses on the Nigerian situation, therefore, the review of Nigerian empiricalstudies on the effect of IFRS adoption on earnings management(Adzis, 2012; Dang, Zubairu, & Ame, 2018; Hassan, 2015; Iyoha, 2011; Nnadi, n.d.; Nnadi & Nwobu, 2016; Onalo, Lizam, & Kaseri, 2014; Onalo, Lizam, Kaseri, & Innocent, 2014; Ozili, 2015; Tanko, 2012)reveals some gaps. Firstly, most of the studies on earnings management focus on accrual-based earnings management (absolute discretionary accruals) as a metric for earnings management. Whereas several metrics for earnings management exist, such as real earnings management, income smoothing,small positive earnings, accrual ratio, loan loss provision, managing earnings towards a target, etc. However, all the metrics with the exception of real earnings management are accrual-based that have been examined in previous studies in Nigeria. It is established by prior studies on earnings management that before the adoption of IFRS, accrual-based earnings management increases and same decreases after IFRS adoption. Whereas real earnings management decreases preceding the adoption of IFRS and increases after the adoption of IFRS (Doukakis, 2014; Halabi, 2016; Halabi & Zakaria, 2016). Secondly, most of the Nigerian studies consider only the quoted Deposit Money Banks (DMBs). Whereas all banks are considered as public interest entities by virtue of the provision of Section 77 of the Financial Reporting Council of Nigeria (FRC) Act 2011. Lastly, the review reveals the non-use of difference-in-differences (D-in-D) research design. Current studies on the effects of IFRS adoption on real earnings management around the world adopt the use of D-in-D research design (Chen, Ng, & Tsang, 2015; Doukakis, 2014; Hong, Hung, & Lobo, 2014; Li & Yang, 2016), because of its ability to test the effect of pre- and post-IFRS adoption on real earnings management of different treatment and non-treatment (control) groups. Therefore, the use of D-in-D research design for a Nigerian study will bridge the gap in existing empirical literature in Nigeria as reviewed. However, to fill the gaps in the existing empirical literature, this study intends to examine whether mandatory adoption of IFRS has any effect on real earnings management of deposit money banks in Nigeriausing difference-in-differences design. To the best of this study's review, there is an inadequacy of literature within the real earnings management research in Nigeria. This study follows the study of Dang et al.(2018), which focuses on the effect of mandatory IFRS adoption on accrual-based earnings management in the Nigerian deposit money banks using difference-in-differences design. In the light of the above research problem, one objective and hypothesis have been developed to give direction to this study. The objective of this study is to examine the effect of mandatory IFRS adoption on real earnings management of DMBs in Nigeria and the hypothesis of the study is stated as follows:

H_0: Mandatory IFRS adoption has no significant effecton real earnings management of DMBs in Nigeria.

This study is specifically important to regulatory authorities, both primary and secondary regulators. The peculiarities in this study, that is the utilization of the difference-in-differences design, financial and non-financial data as control variables, and using real earnings management based on Roychowdhury(2006) model made this study important to push the frontier of knowledge.The remaining part of this paper comprises of literature review, methodology, results and discussions, and conclusion and recommendations. Some of these sections have subsections for clearer perspective of this study.

Literature Review

Conceptual Framework

Financial reporting standards, otherwise known as accounting standards, are a set of accounting theories that creates a framework, which ensures accounting practice complies with the requirement of conformity and uniformity(Glautier, Underdown, & Morris, 2011; Godfrey, Hodgson, Tarca, Hamilton, & Holmes, 2010; Hendriksen, 1982; Russell, 2006). Simply put, accounting standards are rules or principles that govern the manner in which specific business transactions of incorporated companies are recorded and reported to the public in corporate financial statements. Accounting standards establish and maintain a common language for communicating financial information. These standards are used by management/directors in preparing financial reports in compliance with section 335 of CAMA 2004.

In Nigeria, financial reporting standards were called Statement of Accounting Practices (SASs) prior to 2011 but are now called Financial Reporting Standards (FRSs), made up of IFRS, International Standards on Auditing (ISA), International Public Sector Accounting Standards (IPSAS), etc. The Financial Reporting Council of Nigeria (FRC) Act 2011, Section 77 defines Financial Reporting

Standards (FRS) as "accounting, auditing, actuarial and valuation standards issued by the Council under this Act." It was stated in the Report of the Committee on Roadmap to the Adoption of IFRS in Nigeria that Nigeria starts the transition process from Nigerian Generally Accepted Accounting Principles (NGAAP) to IFRS by the year 2010 with legislative changes, awareness, training, impact analysis and transition adjustments for Significant and Public Entities (SPEs). In 2011, it was expected that IFRS opening Statement of Financial Position would have been prepared by SPEs before finally preparing the first set of IFRS financial reporting by SPEs in 2012. These processes involving the SPEs are categorized by the report as Phase 1 of the roadmap (Deloitte Global Services Limited, 2013). However, DMBs are part of the SPEs and were therefore expected to mandatorily adopt to IFRS fully by 2012. The mandatory position of the IFRS adoption by 2012 was backed by the promulgation of FRC of Nigeria Act 2011.

Biddle, Hilary, and Verdi(2009) refer to quality of financial reporting as the accuracy and precision to which financial reporting delivers information about the anticipated cash flows to stock investors on the company's operations. IASB(2010) defines financial reporting quality as the attributes that meet the objectives of financial reporting and in addition meet the qualitative characteristics of financial reporting as stated in the conceptual framework. According to Mainoma and Adejola(2010), the financial reports must "present fairly" of a company's financial position, financial performance and cash flows, which is also termed as the faithful representation of the financial reports.Faithful representation is one of the fundamental qualitative characteristics as stated in IFRS Framework. However, distortion of faithful representation of financial reports that leads to lack of credibility of financial reporting is termed as earnings management.

Healy and Wahlen(1999) assert that"Earnings management occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." Earnings can be managed through discretionary accruals (accrual-based earnings management) or through deviations from normal business activities (real earnings management). For the purpose of this study, the focus will be on real earnings management.

Real earnings management is a situation where companies could choose to manage earnings through movingaway from the normal business activities regardless of the fact that this may affect the future economic performance of the company negatively(Roychowdhury, 2006).Deviations from normal business activities can be divided into two – first, deviations from operating and investing activities, such as altering research and development costs (R&D), reducing prices to boost sales volume, increasing inventory to lower the cost of goods sold which influence earnings, and altering selling, general and administrative costs(Roychowdhury, 2006). Secondly, deviations from financing activities, which include granting stock options where earnings are below targets as compensation, engaging in debt-to-equity swap, etc.

Investors and users are interested in a high financial reporting quality information, and this quality is ascertained from having a high quality of earnings that is known as one of the most important indicators of the capital market efficiency (Herath & Albarqi, 2017). IFRS adoption contributes to the improvement of financial reporting quality if it reduces earnings management practices. Păşcan(2015) affirms this position and reiterates that the relationship between the adoption of IFRS and earnings management is explained by Barth et al.(2008). Stating that the adoption of IFRS eliminates certain financial reporting options, thereby bringing down management discretion, decreasing the degree of earnings management practices that are opportunistic in nature and thus improving financial reporting quality.

Empircal Review

Cai, Rahman, and Courtenay (2008) examine the effect of IFRS adoption on earnings management using regression analysis. The findings show a decrease in earnings management under IFRS in countries adopting IFRS and that strong enforcement countries have less earnings management. This is not unconnected with the mandatory IFRS adoption in those strong enforcement countries.

Ta (2014) analyses the effects of IFRS adoption on earnings persistence, earnings predictability, persistence of earnings components, cash flow predictability, accruals quality, value relevance, earnings smoothness, conservatism, and timeliness using difference-in-differences design. The study finds that earnings quality has been impacted positively by the adoption of IFRS in Canada. On the contrary, Doukakis (2014) finds that mandatory adoption of IFRS has no substantial effect on both real earnings management and accrual-based earnings management after investigating the effect of mandatory IFRS adoption on both real earnings management and accrual-based earnings management using difference-in-differences design. However, there are differences in conclusions reached by these two studies on difference-in-differences design, therefore, there is a need to confirm the effect of mandatory IFRS adoption on both accrual-based and real earnings management, considering Nigerian DMBs data. Most of the studies on earnings management focus more on the accrual-based earnings management with only a few extending to real earnings management (Cohen et al., 2008; Doukakis, 2014; Halabi, 2016; Halabi & Zakaria, 2016).

Halabi (2016) seeks to investigate how country-specific factors shape accounting quality on both accruals and real earnings management under IFRS within 23 countries between 2007 and 2010, the global financial crisis period using regression analysis. The results among others indicate that overstating earnings through accruals is less pronounced in economies with powerful investor protection, strict enforcement, and wide capital markets, and that managing earnings upward utilizing actual actions is greater in such countries under the IFRS. Further, the results show that companies engage in both types of earnings management at the same time. In a similar study, Halabi and Zakaria (2016) examine whether country-specific factors affect earnings quality using both accruals and real earnings management as proxies in 23 economies mandatorily using IFRS between 2007 to 2011 using regression analysis. The study finds that companies engage in both accruals earnings management and real earnings management as shown in earlier study. They also find that accrual-based earnings management is substantially and indirectly associated to financial reporting standards enforcement, strong investor protection, and strong capital market, while real earnings management is directly and substantially associated to the same aforementioned factors. Both studies show that accrual-based earnings management reduces after IFRS adoption and real earnings management increases after IFRS adoption. Cohen et al. (2008) have similar conclusion, considering the effect of promulgation of Sarbanes Oxley Act (SOX) 2002 on earnings management in the United States.

Cohen et al. (2008) investigate the occurrence of both accrual-based and real earnings management practices in pre- and post-Sarbanes Oxley Act (SOX) enactment. The study documents that there has been a steady increase in accrual-based earnings management practices in the period preceding the enactment of SOX in 2002, then a substantial reduction in the accrual-based earnings management after the enactment of SOX. Conversely, there has been a reduction in real earnings management practices in the period preceding SOX enactment and substantial improvement of the real earnings practices post SOX enactment, suggesting that occurrences of earnings management by companies changed from accrual-based earnings management to real earnings management after the enactment of SOX. The four foreign studies reviewed above show similar findings, that is accrual-based earnings management increases and real earnings management decreases before tightening of financial reporting framework, such as IFRS and SOX. Alternatively, accrual-based earnings management declines and real earnings management increases after the adoption of IFRS or promulgation of SOX. Therefore, there is a need to confirm these results using the Nigerian case.

Nigerian studies on the effects of IFRS adoption on earnings management are very scanty and all the studies focus on accrual-based earnings management(Dang et al., 2018; Hassan, 2015; Iyoha, 2011; Nnadi & Nwobu, 2016; Nyor, 2012; Onalo, Lizam, & Kaseri, 2014; Onalo, Lizam, Kaseri, et al., 2014; Ozili, 2015; Tanko, 2012), therefore, there is the need to enrich the Nigerian empirical literature in order to push the frontier of knowledge in this area.

From the foregoing,majority of the studies on IFRS adoption and earnings management have focused more on accrual-based earnings management and a few studies have been carried out on the effect of IFRS adoption on real earnings management but ended up with different conclusions. Most of the studies used the Roychowdhury model to determine the real earnings management as suggested in some studies (Cohen et al., 2008; Cohen & Zarowin, 2010; Doukakis, 2014; Halabi, 2016; Halabi & Zakaria, 2016). These studies try to ascertain the substituted effect of IFRS adoption or change in financial reporting reform on both accrual-based earnings management and real earnings management. Dang et al.(2018) find no significant effect of mandatory IFRS adoption on accrual-based earnings management in the Nigerian deposit money banks using difference-in-differences design. Similarly, this current study, using similar data intends to examine the effect of mandatory IFRS adoption on real earnings management in the Nigerian deposit money banks using the D-in-D design. However, it is expected that after the adoption of IFRS or any financial reporting reform, accrual-based earnings management reduces and real earnings management increases, as the reverse outcome is expected prior to the IFRS adoption or financial reporting reform. Contrary to expectation, Dang et al.(2018) show insignificant increase in accrual-based earnings management of mandatory adopting banks in Nigeria after the mandatory IFRS adoption. However, there is the need to test the outcome of the same data on real earnings management based on Roychowdhury model.

Theoretical Framework
There are different assumptions, motivations and philosophies explaining

the adoption of IFRS by countries, encapsulated as theories influencing IFRS adoption by this study. Several theories influence the adoption of IFRS by countries but the one adopted by this study is discussed here,that is the Decision-Usefulness Theory.

Decision-Usefulness Theory was propounded in 1966 by the American Accounting Association (AAA) Committee to Prepare a Statement of Basic Accounting Theory (American Accounting Association. Committee to Prepare a Statement of Basic Accounting Theory, 1966). According to the Committee, decision usefulness of financial reporting information to users is the best postulate to use in choosing a measurement method in financial reporting.Dandago and Hassan(2013) describe Decision-usefulness Theory as an approach usually adopted to satisfy the information requirements of the primary users of the financial reports of the reporting entities, who are investors and creditors. Decision-usefulness Theory tries to build up an empirical and unbiased technique that will aid in the selection of the optimum choices of accounting measurements and disclosures by standard setting bodies. The theory affirms that good financial reporting standards are those that give the right financial reporting information that will aid users make informed decisions.

Methodology

This study uses a control sample of voluntary IFRS adopting banks and utilizes a difference-in-differences (D-in-D) design to examine the effect of mandatory IFRS adoption on real earnings management as utilized by similar studies (Chen et al., 2015; De George, 2013; den Besten et al., 2015; Doukakis, 2014; Florou et al., 2017; Hong et al., 2014; Li & Yang, 2016; Mazboudi, 2012; Ta, 2014). The difference-in-differences (D-in-D) design is a quasi-experimental research design used to understand the effect of a change in the economic environment, such as IFRS adoption for corporate economic players orgovernment policy, such as enactment of statutes (Roberts, 2009).

According to prior studies the D-in-D approach is suitable when testing the effect of a sharp change in financial reporting framework, such as mandatory IFRS adoption (Chen et al., 2015; Doukakis, 2014) or Sarbanes-Oxley Act 2002 in the US (Cohen et al., 2008) on financial reporting quality. This should have two groups of cross sections (control and treatment groups) and two time periods of before the change in financial reporting framework and after the change in financial reporting framework. Applying D-in-D to this study, DMBs will be divided into two groups; treatment group tagged mandatory adopting banks and control group tagged voluntary adopting banks (see Appendix A). Whereas, IFRS adoption periods will constitute 2009 to 2011 as pre-mandatory IFRS adoption period and 2012 to 2016 as post-mandatory IFRS adoption period (see Appendix A).

The population of this study constitutes all listed and significant public interest entities (PIEs), other public interest entities (OIEs) and small and medium scale enterprises (SMEs) that are enumerated in the Roadmap to IFRS Adoption in Nigeria to transit and adopt to IFRS within 2010 to 2014. However, the research sample of this study consists of the companies under the significant PIEs group. DMBs are significant PIEs because they are mostly quoted on the floor of the Nigerian Stock Exchange (NSE) and are all regulated by CBN. Therefore, they were all expected to fully mandatorily adopt IFRS by 2012 reporting year. The sample is arrived at after applying purposive sampling technique (Kothari, 2004). Considering data availability requirement, the study arrives at the final test sample size of 128 bank-year observations (16 Banks and 8 years sample period). This is made up of 48 observations in the pre-mandatory IFRS adoption period and 80 observations in the post-mandatory IFRS adoption period. The type of data for this study will be panel data on deposit money banks for the sample period of 2009-2016. These data are financial reporting data obtained from secondary sources, which are published internal and external documents on DMBs financial reporting system. The internally published documents are annual report and accounts of DMBs and other related information from the banks. The external documents include NSE Fact Book. The reputation and recognitions of both internal and external secondary sources (organizations) enhance the reliability and suitability of the data obtained for this study.

Real earnings management metric is less prevalent in the accounting literature until recently. It is defined as managerial actions not consistent with normal business practices undertaken with a view to manipulate earnings (Roychowdhury, 2006). Some of the examples of real earnings management activities include managerial discretionary expenses and activities, such as R&D, share repurchases, sale of profitable assets, sales price reductions, interest rates reductions in banks, derivative hedging, debt-equity swaps and securitization (Zang, 2012).

Following prior studies (Cohen et al., 2008; Cohen & Zarowin, 2010; Doukakis, 2014; Halabi, 2016; Halabi & Zakaria, 2016; Roychowdhury, 2006; Zang, 2012; Zhao, Chen, Zhang, & Davis, 2012), this study adopts Roychowdhury 3 models of real earnings management, namely production costs or costs of revenue for service industry, cash flow from operations and discretionary expenses (Roychowdhury, 2006). The aggregate of the three models as specified below make up total real earnings management after ascertaining the abnormal cost of revenue, cash flow from operations and discretionary expenses.

$$RC_{it}/Assets_{it-1} = a_0 + \beta_1\ 1/Assets_{it-1} + \beta_2\ Rev_{it}/Assets_{it-1} + \beta_3\ \Delta Rev_{it}/Assets_{it-1} + \beta_4\ \Delta Rev_{it-1}/Assets_{it-1} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots....1$$

$$CFO_{it}/Assets_{it-1} = a_0 + \beta_1\ 1/Assets_{it-1} + \beta_2\ Rev_{it}/Assets_{it-1} + \beta_3\ \Delta Rev_{it}/Assets_{it-1} + \varepsilon_{it} \quad .2$$

$$DISX_{it}/Assets_{it-1} = a_0 + \beta_1\ 1/Assets_{it-1} + \beta_2\ Rev_{it-1}/Assets_{it-1} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots..3$$

Where RCit = costs of revenue, defined as the sum of interest expense and the change in loans and advances from year t-1 to year t; CFOit = cash flows from operations taken from the statement of cash flows; DISXit = discretionary expenses defined as selling, general and administrative expenses for year t. All other variables are as previously defined. The abnormal costs of revenue (*ABN_RC*), abnormal cash flows from operations (*ABN_CFO*), and abnormal discretionary expenses (*ABN_DISX*) expected to capture real earnings management are computed as the difference between the actual values and the normal levels predicted by equations (1), (2), and (3).

$REAL_{it}$ represents real earnings management for bank i in year t in the model specified in equation 4. The first variable of interest of this study is MANDATORY, a dichotomous variable that takes the value of 1 for banks that did not apply IFRS until compliance became mandatory in 2012. The second variable of interest is POST, a dichotomous variable that equals 1 for observations from 2012. Lastly, the most important variable of interest that is expected to capture any incremental change in financial reporting quality for mandatory IFRS adopting banks is MANDATORY*POST, which is the interaction term in the models.

However, prior studies (Huifa Chen & Lin, 2010; Cohen et al., 2008; Cohen & Zarowin, 2010; den Besten et al., 2015; Doukakis, 2014; Halabi, 2016; Halabi & Zakaria, 2016) document that real earnings management is affected by factors such as return on equity (ROE), revenue (REV), deposit liabilities (DEP), non-performing loans (NPL), bank size (SIZE), leverage (LEV), interest coverage (COV), big 4 auditing firms (BIG4), going concern statement, (GOING), foreign direct investment (FDI) and economic growth (ECO). These factors are the financial and non-financial control variables, which are firm-level and country-level attributes to be included in the model. The model to be tested for the hypothesis stated earlier is specified here based on the D-in-D design. These model is specified in equation 3 and the variables are defined in Appendix B

$$REAL_{it}=\beta_0 + \beta_1 MANDATORY_{it} + \beta_2 POST_{it} + \beta_3 MANDATORY_{it} * POST_{it} + \beta_4 ROE_{it} + \beta_5 REV_{it} + \beta_6 DEP_{it} + \beta_7 LLP_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \beta_{10} COV_{it} + \beta_{11} BIG4_{it} + \beta_{12} GOING_{it} + \beta_{13} FDI_{it} + \beta_{14} ECO_{it} + \varepsilon_{it} \quad \text{..................}(4)$$

Result

Table 1 presents the descriptive statistics of the model variables and their statistical differences between pre-mandatory IFRS adoption period and post-mandatory IFRS adoption period. Panel A in table 1 presents the descriptive statistics of voluntary adopting banks, being the control group of the D-in-D design. In panel A in table 1, the means of the dependent variable, real earnings management is not significantly different across the pre-mandatory IFRS adoption period and post-mandatory IFRS adoption period.

Table 1: Descriptive Statistics

Panel A: Descriptive Statistics of Voluntary Adopting Banks

	Pre-Mandatory Adoption			Post-Mandatory Adoption			Group Difference		
Variable	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Mean Diff	t-statistics	p-value
real	12	0.1651	0.2635	20	0.0474	0.1	0.1177	1.4843	0.1617
roe	12	0.14	0.0768	20	0.2055	0.0956	-0.0655	-2.1273	0.0426
rev	12	0.1892	0.2628	20	0.216	0.1503	-0.0268	-0.3234	0.7508
dep	12	0.9233	0.2034	20	0.9195	0.1549	0.0038	0.0562	0.9558
llp	12	0.9658	0.6032	20	1.4555	2.4366	-0.4897	-0.8561	0.4009
size	12	8.3733	0.2414	20	8.572	0.2508	-0.1987	-2.2208	0.0360
lev	12	0.0358	0.0294	20	0.071	0.0459	-0.0352	-2.6424	0.0130
cov	12	4.405	1.3354	20	3.878	1.2104	0.527	1.1188	0.2756
big4	12	1	0	20	1	0	0	-	-
going	12	0	0	20	0.35	0.4894	-0.35	-3.1986	0.0047
fdi	12	0.1567	0.0098	20	0.226	0.0704	-0.0693	-4.3362	0.0003
eco	12	4.7333	0.0261	20	4.816	0.023	-0.0827	-9.0688	0.0000

Panel B: Descriptive Statistics of Mandatory Adopting Banks

	Pre-Mandatory Adoption			Post-Mandatory Adoption			Group Difference		
Variable	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Mean Diff	t-statistics	p-value
real	36	0.0667	0.2896	60	-0.0884	0.142	0.1551	3.0025	0.0043
roe	36	-0.0028	0.6175	60	0.0445	0.5531	-0.0473	-0.3774	0.7070
rev	36	0.3461	1.775	60	0.1357	0.2458	0.2104	0.7073	0.4840
dep	36	1.0664	0.2478	60	0.9685	0.2194	0.0979	1.9548	0.0548
llp	36	1.2553	2.5805	59	0.8532	1.1627	0.4021	0.8818	0.3827
size	36	7.8822	0.3807	60	7.8335	0.4034	0.0487	0.5936	0.5545
lev	36	0.1125	0.2575	60	0.073	0.0476	0.0395	0.9111	0.3682
cov	36	4.2953	2.3886	59	3.7053	1.4287	0.59	1.3428	0.1853
big4	36	0.9167	0.2803	60	0.9167	0.2787	0	0.0000	1.0000
going	36	0	0	60	0	0	0	-	-
fdi	36	0.1567	0.0096	60	0.226	0.0692	-0.0693	-7.6441	0.0000
eco	36	4.7333	0.0253	60	4.816	0.0226	-0.0827	-16.1133	0.0000

Source: Authors' Computation using STATA (2018)

In panel B of table 1, the dependent variable, real earnings managementpresents a significant difference in their means between the pre-mandatory IFRS adoption period and post-mandatory IFRS adoption period. This means that mandatory IFRS adoption by these bank haschanged the banks real earning management quality of financial reporting when comparing their means.

Table 2 reports the results of the D-in-D regression model for mandatory IFRS adoption and real earnings management in the Nigerian DMBs. The D-in-D regression model in Table 2 is fitted at 0.01 level of significance. The model tests the hypothesis (H_{01}) for this study. In Table 2, the coefficient of MANDATORY*POST is positive and not significant at 0.05 level of significance. This suggests an insignificant increase in real earnings management for mandatory adopting banks from the pre-mandatory IFRS adoption period to post-mandatory IFRS adoption period. Table 2 also shows that there is aninsignificant and positive difference between pre-mandatory adoption period and post-mandatory adoption period for real earnings management with POST p-value of 0.261.

To test the hypothesis (H_0), the p-value of the test variable MANDATORY*POST in Table 2 is utilized. The p-value of the interactive term (MANDATORY*POST) is 0.996 at 0.05 level of significance, therefore, the null hypothesis (H_{01}) is not rejected. Meaning that mandatory IFRS adoption has no significant effect on real earnings management quality of financial reporting of DMBs in Nigeria. The positive direction of the relationship is in line with*a priory* expectation.

Table 2: D-in-D Regression Results

Panel A: D-in-D Regression Model

Random-effects GLS regression			Number of obs		=	127
Group variable: banknum			Number of obs group	=		16
R-sq:	within =	0.3729	Obs per group:		min =	7
	between=	0.7727			avg =	7.9
	overall =	0.4286			max =	8
			Wald chi2 (14)	=		83.99
corr(u_i, X) =	0(assumed)		Prob > chi2	=		0.0000

Real	**Coef.**	**Std. Err.**	**Z**	**P>z**	**[95%**	**Conf. Interval]**
Mandatory	-0.0462	0.0647	-0.71	0.475	-0.1730	0.0806
Post	0.1002	0.0891	1.12	0.261	-0.0745	0.2750
mandatory*post	0.0005	0.0825	0.01	0.996	-0.1613	0.1622
Roe	0.0581	0.0340	1.71	0.087	-0.0084	0.1246
Rev	-0.0463	0.0340	-1.36	0.173	-0.1129	0.0203
Dep	-0.1143	0.0897	-1.27	0.202	-0.2901	0.0615
Llp	0.0167	0.0094	1.77	0.076	-0.0018	0.0352
Size	0.0311	0.0529	0.59	0.557	-0.0727	0.1348
Lev	-0.0368	0.2260	-0.16	0.871	-0.4799	0.4062
Cov	-0.0026	0.0104	-0.25	0.801	-0.0230	0.0177
big4	0.0877	0.0718	1.22	0.222	-0.0531	0.2284
Going	0.0999	0.0867	1.15	0.249	-0.0701	0.2699
Fdi	0.3104	0.3492	0.89	0.374	-0.3739	0.9947
Eco	-3.5306	0.7585	-4.65	0.000	-5.0171	-2.0440
_cons	16.5827	3.5389	4.69	0.000	9.6466	23.5187
sigma_u	0					
sigma_e	0.180015					
Rho	0	(fraction of variance due to u_i)				

Source: Authors' Computation using STATA (2018)

This finding is consistent with the findings of some prior studies (Doukakis, 2014; Halabi, 2016) and inconsistent with the findings of some other prior studies (Cohen et al., 2008; Cohen & Zarowin, 2010; Halabi & Zakaria, 2016). Considering the expected substituted effect of mandatory IFRS adoption on accrual-based earnings management and real earnings management, this study, which follows the study of Dang et al (2018), finds that real earnings management increases after mandatory IFRS adoption but is not significant. This contradicts the expected substituted effect, where, using similar data the findings of Dang et al (2018) also show increase in accrual-based earnings management after the mandatory IFRS adoption in the Nigerian deposit money banks.

Conclusion and Recommendations

It is established in this study that mandatory IFRS adoption has no effect on the real earnings management quality of financial reporting of DMBs in Nigeria. The difference in the real earnings management of mandatory adopting banks in the post-mandatory IFRS adoption period compared to pre-mandatory IFRS adoption period is not significant. The implication of this conclusion is that the mandatory IFRS adoption in 2012 increases real earnings management of mandatory adopting banks relatively to the voluntary adopting banks, but the increase is not statistically significant. It is established in prior literature (Cohen et al., 2008; Halabi, 2016; Halabi & Zakaria, 2016) that accrual-based earnings management decreases after a change in financial reporting framework and real earnings management increases after a change in financial reporting framework, such as mandatory IFRS adoption, Sarbanes-Oxley Act 2002, etc. Ineffective legal enforcement and monitoring by the FRC could be a possible reason for the statistically insignificant results exhibited here. Legal enforcement and monitoring of IFRS adoption is not statistically tested here to incorporate its effect on real earnings management. Mandatory IFRS adoption does not come with enforcement mechanisms and it may not really represent the mandatory adopter' inherent preference, and so that may hinder the incentives to improve financial reporting quality (Ernst and Young, 2006)

To enable the study achieve its significance, the following recommendations arising from the findings and conclusions are provided.

1. To reduce accrual-based and real earnings management after mandatory adoption of IFRS by mandatory adopting banks, FRC should increase legal enforcement of IFRS, backed by Section 64 of the FRC of Nigeria Act 2011 as it is obvious by the findings of this study that management of DMBs still engage in manipulating earnings through discretionary accruals and abnormal real costs.
2. Regulatory authorities, such as FRC and CBN should employ accrual-based earnings management Modified Jones model and the Roychowdhury abnormal models to evaluate the improvement of the mandatory IFRS adoption on accrual-based earnings management and real earnings management respectively. These may improve their monitoring and evaluation mechanisms as required in Sections 52 and 58 of FRC of Nigeria Act 2011 and Sections 32 to 34 of the Banks and Other Financial Institutions Act (BOFIA) 2004.

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Appendix A: Control and Treatment Groups for D-in-D

S/N	Voluntary Adopting Banks (Control Group)	Code	S/N	Mandatory Adopting Banks (Treatment Group)	Code
1	Access Bank Plc	ACCESS	1	Citibank Nigeria Limited	CITIBANK
2	Guaranty Trust Bank Plc	GTB	2	Stanbic IBTC Bank Plc	STANBIC
3	Zenith Bank Plc	ZENITH	3	Sterling Bank Plc	STERLING
4	Ecobank Nigeria Plc	ECOBANK	4	Unity Bank Plc	UNITY
			5	Wema Bank Plc	WEMA
			6	Diamond Bank Plc	DIAMOND
			7	Fidelity Bank Plc	FIDELITY
			8	First City Monument Bank Plc	FCMB
			9	First Bank of Nigeria Ltd	FBN
			10	Skye Bank Plc	SKYE
			11	Union Bank of Nigeria	UBN
			12	United Bank for Africa	UBA

Source: Authors' Compilation (2018)

Appendix B: Definition of Independent Variables

Variable	Code	Definition	Expected IFRS Effect	Source
Test Variables:				
Mandatory Adopting Banks	MANDATORY	1 if bank did not use IFRS until it became mandatory and 0 otherwise	+	(Chen et al., 2015; Doukakis, 2014)
Pre- or Post-Mandatory Adoption Period	POST	1 for observations from 2012 and 0 otherwise	+	(Chen et al., 2015; Doukakis, 2014)

Variable	Code	Definition	Expected IFRS Effect	Source
Interaction Term	MANDATORY *POST	1 for mandatory adopting bank in the post-adoption period and 0 otherwise	+	(Chen et al., 2015; Doukakis, 2014)
		Control Variables:		
Firm-Level Attributes:				
Profitability	ROE	Return on equity	+	(Doukakis, 2014; Sarea & Al Nesuf, 2013)
	REV	Revenue growth, computed as annual % change in gross earnings	+	(Doukakis, 2014; Iyoha, 2011; Mohammed & Lode, 2015)
Liquidity	DEP	Depositors liabilities as a % of current assets	-	(Mohammed & Lode, 2015; Onalo, et al., 2014)
	NPL	Non-performing loan per share	-	(Mohammed & Lode, 2015; Onalo, et al., 2014)
Capital Structure	SIZE	Bank size as natural log of market value of equity	+	(Barth et al., 2008; den Besten et al., 2015; Devalle et al., 2010; Onalo et al., 2014; Tanko, 2012)
	LEV	Leverage as a % of fixed interest capital to total capital	-	(Barth et al., 2008; den Besten et al., 2015; Tanko, 2012)

Variable	Code	Definition	Expected IFRS Effect	Source
	COV	Interest coverage ratio	+	(Halabi, 2016; Halabi & Zakaria, 2016)
Corporate Governance	BIG4	1 if bank is audited by big 4 auditing firm and 0 otherwise	+	(Beest, Braam, & Boelens, 2009; Rad & Embong, 2013; Vrentzou, 2011)
	GOING	1 if bank's financial report has going concern statement and 0 otherwise	+	(Beest et al., 2009; Braam & Beest, 2013; Mbobo & Ekpo, 2016)
Country-Level Attributes:				
Globalisation	FDI	Foreign direct investment as a % RGDP	+	(Okpala, 2012; Saidu & Dauda, 2014)
Economic Growth	ECO	Natural log of RGDP	+	(Alsaqqa & Sawan, 2013; Okpala, 2012)

Source: Authors' compilation (2018)