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Effect of Asset Quality on Non-Interest Income of Deposit Money Banks in Nigeria.

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Abstract

In recent years, Deposit Money Banks in Nigeria have intensified efforts towards improving their level of earnings while at the same time reducing reliance on interest income generated from granting of loans and advances being the highest source of revenue income for continuing sustainability. However, most of the studies on net interest incomes/margins are based on developed countries data and banks specific variables. The study examined the effects of assets quality on non-interest income performance of ten largest (10) banks quoted in Nigeria Stock Exchange using secondary data sourced from the annual reports of these banks, Central Bank of Nigeria Annual Accounts and Statistics for twelve (12) years (2007 – 2018). Data collected for the study were subjected to pre-tests and analysed using summary statistics, correlation, unit root tests, co-integration test, descriptive and inferential statistics. The study findings revealed that assets quality had significant effect on the non-interest income of deposit money banks in Nigeria non-interest income ($Adj.R^2 = 0.212$, $F (9, 96) = 3.548$, $p < 0.05$). The study concluded that asset quality affected the non-interest income of deposit money banks in Nigeria and banks can perform better in terms of earning non-fee-based income instead of depending mainly on interest on loans and investment alone to sustain assets quality, preservation, and growth.

Keywords: Assets quality, loan loss provision, non-interest income and non-performing loans.

1. Introduction

In banking operations globally, provision of credit remains the primary business of every bank and for this; credit quality is considered a primary indicator of financial soundness and health of banks (Boahene, Dasah & Agyei, 2012). However, Coyle (2014) asserted that poor credit administration will expose financial institutions to credit risks which can occur when a borrower defaults in honouring debt obligations on the due date or at maturity. Soludo, (2004) posited that Nigerian banking system was characterized by poor loan quality of up to 21% of shareholders' funds compared with 1 to 2% in Europe and America; due to overtrading as these banks abandoned the true function of banking to focus on quick profit ventures such as trading in foreign exchange and tilting their funding support in favour of import-export trade instead of financing manufacturing; reliance on unstable public sector funds for their deposit base.

Further, business conditions are often unpredictable and can lead to changes in the borrower's financial position which also affects their ability to repay loans at the date of maturity and thus making bank to face the risk of losing part or the entire loan including the interest receivable on such loans. This negatively affects the interest income accruing from such loans, reduces bank performance and also reduces its' capabilities to meet its' financial obligations as they fall due. As these conditions remain unchecked, the liquidity of the bank is also threatened (Bhunia, 2012). Similarly, Aruwa and Musa (2014) opined that banking risk increases when credit principles are violated and sound banking practices require that bank management put in place standards for appraising and approving individual credit application to ensure that loans granted are repaid. However, due to poor quality of credit appraisal caused by loopholes and violation in risk assessment and control techniques, bad

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and doubtful debts still claim a bulk charge on bank performance causing many banks to witness institutionalized distress and some, total unexpected collapse.

A major fall-out of the 2005 recapitalisation and consolidation of banks through mergers and acquisition led to the fusion of 25 out of the eighty-nine (89) banks that were in operation before the reform date. The exercise led to a phenomenal increase in the operating fundamentals of banks in the immediate post-consolidation period but this initial success was not sustained as barely three years post-consolidation as the banking sector relapsed into severe deterioration in asset quality, rising level of non-performing loans, erosion of capital base and liquidity stress. This led to the intervention of the Central Bank of Nigeria in 2009 to conduct a special diagnostic examination of deposit money banks. The result of this exercise revealed that post-recapitalization and consolidation period showed massive capital inflow into the system and many banks got unduly exposed to high-risk investments and margin lending to speculative equity share traders (Okoye, Amahalu, Obi,; & Nweze, (2016).

Research Objective: Assess the effect of assets quality on non-interest incomes (NII) of deposit money banks in Nigeria

Research Question: What is the effect of assets quality on non-interest income (NII) loans in Deposit Money Banks in Nigeria?

$H_{hypothesis}$ – Assets quality have no significant effect on non-interest income (NII) in Deposit Money Banks in Nigeria

1.1 Statement of the Problem

Deposit money banks are often confronted with the problem of how to choose and identify the optimum point or the level at which it can maintain its assets to optimize and achieve set objectives (Ajibike & Aremu, 2015). Therefore, the issue of poor assets quality has gained increasing attention in the academia for some decades now hinging on the theory of asymmetric information which tells us that it may be difficult to distinguish good borrowers from bad ones which may result into an adverse selection and moral hazards problems as deteriorating asset quality have become a permanent characteristic of banking institutions in Nigeria. Thus, Badar and Yasmin (2013) stated that an increase in loan loss provision (LLP) diminishes income and any mismatch of maturities between asset and liability can create liquidity risk for the banks and also worsen banks' overall credit rating including its image. Similarly, deposits in banks are compensated by higher margins from the creation of credits but if such assets do not generate any income, banks' ability to repay the deposited amount on due date would be a problem. Therefore, banks with such assets could become weak and such weak banks will lose the confidence of the customers (Rawlin *et al* .2012). Deposit money banks are often confronted with the problem of how to choose and identify the optimum point or the level at which it can maintain its assets to optimize and achieve set objectives (Ajibike & Aremu, 2015). In addition, the issue of poor assets quality has gained increasing attention in the academia for some decades now hinging on the theory of asymmetric information which tells us that it may be difficult to distinguish good borrowers from bad ones. This may result into an adverse selection and moral hazards problems as

deteriorating asset quality have become a permanent characteristic of banking institutions in Nigeria. However, this may not be unconnected with poor credit appraisal system, insider abuses, and an unstable macroeconomic environment (Auronen 2003). Iwedi and Onuegbu, (2014) reported that the banking industry had been hit by low asset quality as a result of poor economic and financial conditions in the country following the great financial recession of 2008 and the negative oil price shock. Also, the financial stability report of the CBN showed that banking industry non-performing assets (NPAs) moved from 11.7 per cent to 12.8 per cent at the end of 2016 to N2.1 trillion at the end of December 2016 from N1.67 trillion in June 2016. This is above 5% threshold requirements for non-performing assets approved by the CBN and which would normally attract regulatory sanctions or penalties (CBN,2016).

Objective: To assess the effect of assets quality on non-interest incomes (NII) of deposit money banks in Nigeria;

Research Question: What is the effect of assets quality on non-interest income (NII) loans in deposit money banks in Nigeria?

Study Hypothesis: Assets quality has no significant effect on non-interest income (NII) in deposit money banks in Nigeria.

1.2 Hypothesis Development

Among such works are the scholarly works of Abata (2014); Lucky and Nwosi (2015) that studied assets quality and performance of fifteen (15) selected commercial banks quoted on the Nigeria Stock Exchange which investigated the effects of asset quality on the performance of deposit money banks in Nigeria using the estimation of the ordinary least square (OLS) technique. The CBN established the Asset Management Corporation of Nigeria (AMCON) in 2010 to buy off trillions of toxic assets to stave off a major collapse of the Nigeria banks. Having succeeded in buying off about 95% of the non-performing loans, the corporation has achieved the primary purpose for which it was established and however, with a caveat not to buy new non-performing loans (CBN, 2010). However, the challenges of Nigerian banks have been the mismatch of assets and liabilities; hence banking sector crisis over the years has been blamed on the poor quality of assets even within few years of concluding consolidation (Akani & Lucky, 2014). Likewise, Kenton (2018) asserted that non-interest income is an income which bank derived primarily from fees including deposit and transaction fees, insufficient funds (NSF) fees, annual fees, monthly account service charges, dormant account fees, cheque book and deposit slip fees. As noted by Saksonova (2014), posited that net interest margin/income is the most appropriate method to evaluate the effectiveness and stability of banks' operations as it better to use net interest margin/income (NII) than the return on assets (ROA) and returns on equity (ROE) to evaluate how successfully a bank manages its interest-bearing assets. However, most of the studies on net interest income (NII) are based on developed countries data and banks specific variables. Thus, it is therefore imperative to study how net interest income affects the performance of deposit money banks in emerging countries.

2.0 Review of Literature
2.1 Asset Quality

Asset quality is an indicator of risk measure. Conceptually in the banking industry, asset quality refers to the review or an evaluation, which assesses the credit risk associated with any particular assets that normally require the payments of interest like investment and loans portfolios. Ombaba (2013) defined asset quality as the general risk attached to various assets held by a financial institution. It is commonly used by a financial institution to determine how many of their assets are at financial risk and how much allowance for potential losses they must make. Also, Abata, (2014) posited that asset quality is an aspect of bank management which entails the evaluation of firm assets in order to facilitate the measurement of the level and size of credit risk associated with its operation. Asset quality is micro-prudential determinants of deposit money banks (DMBs) soundness and profitability. It relates to the left-hand side of a bank balance sheet and focused on the quality of loans which provides earnings for a bank.

Banks are financial institution whose business involves the management of assets and liabilities. Unlike other business organizations such as the manufacturing firms that stock tangible goods as inventory, the stock of the banking industry is money; this means that banks trade on money. By its nature banks face number of challenges within internal and the external business environment, the nucleus of banks operations is fraught with risks which include credit risk, market risk, interest rate risk, default risk, operational risk, exchange rate risk (Aruwa & Musa, 2014). The most common assets of banks requiring a strict determination of asset quality are loans and advances. Increasing loan quality will increase the return on investment (ROI) and reduce the costs of failure, but at the same time, it will be attained at a cost that requires banks' attention to manage (Khalid, 2012). The support of asset quality is an essential feature of the bank (Gulia 2014). Asset quality of the bank is one of the main issues whenever research on banks is conducted (Chisti 2012). How efficient and effective are the bank management in monitoring and controlling credit risk can also have an effect on the kind of credit rating given. Srovonos, (2018) opined that asset quality indicators can provide useful complementary information including measures for non-performing assets or for the coverage of distressed assets by provisions and/or collateral. In some jurisdictions (India and Indonesia, in particular) use both capital metrics and asset quality measures as intervention triggers, with the former also combining the non-performing asset measure with a return on asset measure. However, how accurately these measures are reported essentially depends upon the thoroughness and rigour of the problem bank's asset classifications, valuations and provisioning practices, hence, troubled banks usually have incentives to use unrealistic valuations based on optimistic assumptions. Debelle (2015) posits that asset quality ratios of banks is relevant due to its role in ensuring the safety and soundness of the banking system as shown due to the collapse of many renowned world financial institutions in 2007-2009 and the recent market turmoil which had exposed to significant risk management weaknesses in banking institutions. Similarly, Ngalawa (2014), posited that an important parameter that can be used to measure the strength of a bank or its performance is the quality of its assets and the main reason for measuring asset quality is to find out the component of non-performing assets as a percentage of total assets. Some of the ratios used to measure asset quality include total investments to total assets; and an asset to capital employed, and net non-performing assets to total assets (Ngalawa, 2014). Onoh (2002) was of the view that the quality of assets should constitute a major determinant of a bank capital adequacy and not the ratio of capital funds or shareholder's funds to deposit liabilities and should also determine the degree of solvency or insolvency of a Bank. He further asserted that the quality of assets held in a bank's portfolio is one of the indices for assessing the earning capacity of a bank and its relative liquidity position such that a low ratio indicates high-quality bank's assets portfolio while a high ratio indicates low-quality asset portfolio. Loan-Loss Ratio (LLA) = Classified Loans and Advances (CLA)/ Total Portfolio (TP).

Solomon (2012) stated that as an indicator of risk measure, the assets quality ratio (AQR) measures the level and size of the credit risk associated with the business operations and risk management practices of banks. AQR shows not only the quality of loans, which provide earnings for banks but also the quality of banks' assets, solvency level, as well as the capacity of banks to absorb losses. It can also be measured as the ratio of the non-performing loans to the total loans or as the ratio of the loan loss provisions to the total loans of banks. Iwedi and Onuegbu (2014) asserted that the banking industry had been hit by low-quality loan assets as a result of poor economic and financial conditions in the country following the global financial recession of 2008 and the negative oil price shock. According to Sangmi and Nazir, (2010), loan portfolio quality has a direct bearing on bank profitability as the highest risk facing a bank is the losses that usually arise from non-performing loans. Thus, non-performing loan ratios are the best proxies for asset quality; hence it is the major concern of all commercial banks to keep the amount of non-performing loans at a low level. Thus, low non-performing loans to total loans ratio show good health of the portfolio a bank as the lower the ratio, the better the commercial banks financial performance. Similarly, Afrinvest (2017) stated that in the banking sector, the key risk factor was weak asset quality, which drove NPLs and provisioning charges higher across the industry's tiers, resulting in weaker margins and pressure on capital adequacy ratio (CAR) positions and was also responsible for the reluctance of banks to extend new credit facilities and financial results so far have been broadly positive, having been driven by non-interest income through foreign exchange trading income, revaluation gains and improvement in E-business income.

In Nigeria, Banks and Other Financial Institution Act (BOFIA), 2004 as amended regulates banks operations which stipulate lending thresh-holds to reduce the incidence of non-performing loans while ensuring high level of assets quality, for instance, section 18 prohibits any personal interest in any loans and advances to bank staff or their relations or cronies without a declaration of the nature of such interest while section 20 restrict loans and advance to the rate 20 per cent of shareholders fund to a single obligor (Akani & Lucky, 2014). Furthermore, in the last 25 years, regulations are put in to effect by national and international institutions in order to determine standard of asset quality due to its relevance to bank performance. In

1995 the United States Federal Reserve Board introduced 'Standards for safety and soundness' stipulates regular reporting obligation on asset quality for a board of directors of banks in order to evaluate the risks on a diminution of asset quality and to form asset quality supervision systems by financial institutions in order to define problems that may arise with regards to asset quality (Eze & Ogbulu, 2016). Similarly, the categorization of asset quality dates back to 1985/86 when RBI introduced Health Code System (HCS) in banks for critically evaluating the performance of individual loans whereby banks assets were classified into eight categories such as; satisfactory, irregular, sick-viable advances, sick-non viable advances, advances recalled, a suit filed advances, decreed debts, and bad and doubtful debts (Rajeev & Mahesh (2010); Rana, (2010). Also, Beck, Randa and Trandafir (2010) posit that asset quality is an important aspect of the evaluation of a bank's performance under the Reserve Bank of India guidelines, the advances of a bank are to be disclosed in a classified manner as; standard, sub-standard and doubtful and loss asset; while Lafuente (2012) opined that poor asset quality in the form of non-performing loan can seriously damage a bank's financial position having an adverse effect on its operation. Sontakke and Tiwari, (2013) stated that banking sectors failures are a result of inefficient management, low capital adequacy and poor assets quality such as non-performing loans have become the single largest cause of irritation of the banking sectors. Further IMF (2000) reported that the reliability of capital ratios depends on the reliability of asset quality indicators as risks to the solvency of financial institutions often derive from impairment of assets, so it is important to monitor indicators of asset quality such as the current state of credit portfolios and macroeconomic indicators that indirectly impact asset quality are those items that take into account credit risk assumed off-balance-sheet via guarantees, contingent lending arrangements, and derivatives (IMF, 2000). Thus, Novian (2015) stated that significant negative effects of poor asset quality indicate the extent which bank assets is not supported by credit quality. Poor credit quality will likely increase the risk low earnings, especially if the credit is not properly appraised or not comply with prudential guidelines.

2.2 Non-Interest Income

According to Khrawish, (2011) non-interest income is defined as revenue banks earn from banking transactions outside their traditional lending activities or any income that a bank earns from activities other than its core intermediation business of taking deposits and creating loans while Chen, Huang, and Zhang, (2015) defined non-interest income as the revenue derived mostly from fees and other activities outside the core activity of lending. Unlike interest income, non-interest income is usually stable and largely unaffected by economic, financial and liquidity market cycles; it is usually not controlled by law or regulation. Similarly, Haryani (2010), posited that net interest income (NII) is derived from interest income less interest expense. The greater this ratio, the increased interest income on productive assets managed by the bank is likely a bank in problem condition is getting smaller. Furthermore, Ighomwenghian, (2016) explained that non-Interest income (NII) has boosted commercial banks profitability as they diversify their revenue income drive

into fee income and non-fee income such as credit-related fees and commission, account maintenance charges, corporate finance/advisory fees, commission on foreign exchange deals, trading income, e-business and digital banking income and transaction banking income. Besides, Augie (2017) posited that advances in information and communications technology (e-business and digital banking), new intermediation technologies for processes like loan securitization and credit scoring and growth and expansion of financial instruments and markets for high yield bonds, commercial paper, and cash swaps have all impacted on the levels and types of non-interest income in commercial banks.

Furthermore, Kenton (2018) reiterated that the degree to which banks rely on non-interest fees to generate revenue is a function of the economic environment and local regulations wherein some banks rely heavily on fees from e-business and digital banking; others rely on general transaction banking fees. Also, Hahm (2008) recognised that non-interest income is particularly important in business banking relationships; it has become a strategic line-item on the income statement and is now strategic to bank's financial performance because of lower margins from traditional lending activities and increased rate of credit asset impairment, hence banks now seek to efficiently grow non-interest income sources by implementing programs that focus on growing and strengthening customer relationships. Chaibi and Ftiti (2015); Ghosh (2015); Louis *et al*. (2012) asserted that the proportion of non-interest income as a part of the total income of banks shows income diversification opportunities high for non-interest income which indicates that banks can emphasis an optimum loan portfolio that allows for a reduced proportion of bad loans. Meanwhile, the non-interest income has been widely used as a proxy for diversification however, some researchers have alternately used bank size as its proxy, hence, it is trivial to conclude that banks can increase their interest income (and perhaps the absolute net interest result) by an increase of their lending volume because it is by far more difficult to accurately assess the degree of prudential behaviour (Salas & Saurina, 2002). Moreover, net interest margin is negatively related to non-interest income, non-performing loans, total assets and exchange rates and volatility in exchange rates in the Turkish banking sector (Yuksel & Zengi, 2017).

2.3 Empirical Review

Abata (2014) examined assets quality and bank performance of six largest banks quoted in Nigeria Stock Exchange using secondary data sourced from the annual reports of the commercial banks for fifteen years (1999 – 2013). The findings revealed that assets quality has a statistically relationship and influence on bank performance. Also Kolapo (2012), found that an increase in a non-performing loan, increase in loan loss provision and an increase in total loan and advances have a significant impact on the quality of assets Nigerian banks. Beck, Demirguc-Kunt, and Levine (2006) examined the inter-linkage between bank concentration and banking system fragility where they have established that higher bank concentration is associated with lower profitability. Ezeoha (2011) discovered that there is deterioration in asset quality and increased credit crisis between 2004 and 2008 was

exacerbated by the viability of bank to optimally use their huge asset capacity to enhance their earnings profiles. This implies that excess liquidity syndrome and relatively huge capital bases fuelled reckless lending by banks portfolio ironically helped to mitigate the level of non-performing loans within the studied period.

Kargi (2011) found in a study of Nigeria banks from 2004 to 2008 that there is a significant relationship between banks performance and credit risk management and he found that loans and advances and non-performing loans are major variables that determine asset quality of a bank. The finding reveals that the loan to deposit ratio, solvency ratio and credit growth has no significant effect on NPLs. However, ROA and ROE has a negative significant effect whereas inflation and lending rate has a positive significant effect on NPLs.

Meanwhile, Khalid (2012) found that a bad asset ratio is negatively associated with banking operating performance after controlling for the effect of operating scale, traditional banking business concentration and the idle fund ratio. The result further supports the hypotheses that the higher the quality of the loan processing activities before loan approval, the lower the non-valued-added activities that are required to process problematic loans, and thus the higher the banking operating performance will be. However Lucky and Nwosi (2015) in their findings from the regression result proved that percentage of non-performing loans to total loans and percentage of non-performing loans to total customers' deposit has a positive relationship with return on investment while percentage of loan loss provision to total loans and percentage of loan loss provision to total asset has a negative relationship with return on investment of the commercial banks.

3.0 Methodology

Table 1: Variable Description, Measurement and data source

Variables	Description	Measurement	Source
Assets Quality (AQ)	Non-performing Loan/Gross Loans	Total loans and advances to total asset	Audited financial statements of banks, Fitch rating & stock exchange fact book.
Non-interest Income (NII)	Fee based income & spread between interest on loans and interest on deposits by DMBs.	Net interest Income/Total Asset	Audited financial statements of banks, Fitch rating & NSE fact book.

Source: Researchers' Computation 2021.
A priori Expectation

In alignment with the study's hypotheses formulated, it is expected assets quality will influence the non-interest income performance of deposit money bank in Nigeria.

$NII_{it}= \beta_0 + \beta_1 AQ_{it}+e_{it}$	$\beta_{1-5} > 0$ (i.e., positive)

Operationalisation of variable
The Dependent Variable Y = Net Interest Income
y = Non-Interest Income (NII)
The Independent Variable X= **Asset Quality**
x = Asset Quality (AQ)
$_Y$= Net Interest Income (NII)
NII= f (AQ)

$NII_{it}=\beta_0 + \beta_1 AQ +e_i$

4.0 Effect of Assets Quality on Non-Interest Incomes (NII) of Deposit Money Banks in Nigeria

Study Hypothesis – Assets quality have no significant effect on non-interest income (NII) in Deposit Money Banks in Nigeria

Table 2. Study Hypothesis: Assets Quality on Non-Interest Income

Method	fixed effect regression with driscoll-kraay Standard Errors			
Variables	Coeff	Std. Err.	t-stat	Prob
CC	4.39	1.65	2.65	0.022
RR	0.02	0.01	1.63	0.131
SR	-0.14	0.10	-1.32	0.214
AQ	-0.09	0.13	-0.69	0.505
PLR	0.12	0.15	081	0.437
Constant	52.62	10.25	5.13	000
R-squared = 0.0456, $F_{(5, 11)} = 6.88$; Prob > F = 0.00				
Hausman Test: $Chi^2_{(3)} = 15.92$ Prob> $chi^2 = 0.00$				
Testparm Test: $F_{(11, 94)} = 3.77$; Prob > F = 0.00				
Modified Wald Test: $Chi^2(10) = 168.92$, Prob> $chi^2 = 0.00$				
Wooldridge Test: : $F_{(1, 9)} = 15.417$; Prob > F = 0.00				
Pesaran CD: 3.33 (Prob = 0.00)				

Dependent Variable: Non-Interest Income (NII) Significance @ 5% @10%

4.1 Interpretation
The Hausman result showed that fixed effects model is the best estimate considering the probability value of 0.00 which is less than 0.05 significant levels; also, the testparm test confirmed the result of Hausman that fixed effect existence with a significant ρ-value of 0.01. Modified Wald Test revealed that there is heteroskedascity problem in the model looking at the ρ-value of 0.00 being significant as the null hypothesis specifies that the model is homogeneous; there was serial correction shown under the Wooldridge test with the ρ-value of 0.00 which is significant and negates the null hypothesis which states that no serial auto correlation, while the model also has cross-sectional dependence test considering its ρ-value of 0.00;

thus fixed effect regression with driscoll-kraay Standard Errors was conducted to correct the errors.

The probabilities and the signs of the t-statistics as presented in Table 1. showed that credit creation (CC) having t-stat of 2.65, which is positive and ρ-value of 0.022, which is less than chosen significant level of 5%, means that CC has significant positive effect on Non-Interest Income (NII). Also, reserve requirements with t-statistics of 1.63; being positive and ρ-value of 0.131, which is greater than chosen significant level of 5%, implies that RR has insignificant positive effect on NII. Likewise, statutory reserve with t-statistics of -1.32 being negative and ρ-value of 0.214, which is greater than chosen significant level of 5%, indicates that SR positively but insignificantly influences NII. Considering the t-statistics and ρ-values of asset quality (AQ) with negative value of -0.69 and ρ-value of 0.505 means that AQ negatively but insignificantly influence NII. Also, prime lending rate with t-statistics of 0.81, which is positive and ρ-value of 0.437, which is greater than chosen significant level of 5%, evidenced that PLR has insignificant positive effect on NII. Interpreting the coefficients of the independent variables: CC; RR; SR; AQ; and PLR (4.39; 0.02; -0.14; -0.09; and 0.12) implies that a naira increase in CC and RR would yield to N4.39billion and N0.02billion increase in Non-Interest Income (NII); while a naira increase in SR would result to N0.14billion decrease in Non-Interest Income (NII). For AQ, an increase in AQ would lead to N0.09billion decrease in Non-Interest Income (NII) while a percentage increase in PLR would yield N0.12billion increase in Non-Interest Income (NII).

Following the ρ-value of F-statistics of 0.0483, which is significant because it is less than the chosen significant level of 5%, it is evidenced that Regulatory requirements significantly effects on Non-Interest Income. The value of adjusted R-squared of 0.01 explains the power of the explanatory variables. It simply means that a variation in the combined powers of the explanatory variables (CC, RR, SR, AQ, and PLR) would lead to 1% variation in the explained variable, that is, Non-Interest Income (NII), while the remaining 99% changes that could occur in NII resulted from other factors that are not captured in this model.

Following the ρ-value of F-statistics of 0.00, which is significant because it is less than the chosen significant level of 5%, it evidenced that Regulatory requirements has significant effects on Non-Interest Income (NII). The value of adjusted R-squared of 0.0456 explains the power of the explanatory variables. It simply means that a variation in the combined powers of the explanatory variables (CC, RR, SR, AQ, and PLR) would lead to 4.56% variation in the explained variable, that is, Non-Interest Income (NII), while the remaining 95.44% changes that could occur in NII resulted from other factors that are not captured in this model.

4.2 Decision
Therefore, the null hypothesis (H_{01}) which states that assets quality do not significantly affect Non-Interest Income (NII) of selected deposit money banks in Nigeria is hereby rejected while the study accepted the alternate hypothesis that assets quality significantly affect Non-Interest Income (NII) of selected deposit money banks in Nigeria.

4.3 Discussion
The results have simply shown that deposit money banks have to intensify efforts towards improving level of their earnings on non-fees-based income to reduce reliance on interest income being the highest source of revenue income for its sustainability. Kenton (2018) asserted that non-interest income is an income which bank derived primarily from fees including deposit and transaction fees, insufficient funds (NSF) fees, annual fees, monthly account service charges, dormant/ inactivity fees, check and deposit slip fees. As noted by Saksonova (2014), net interest margin is the most appropriate criterion to evaluate the effectiveness and stability of banks' operations. Most of the studies on net interest margins are based on developed countries data and banks specific variables and the study agreed with alternative hypothesis 1. Thus, the significance of this result was supported in literature that emphasised the nature of banking which thrives on money trading and income generation potentials. The result reinforces and signified a gap that banks can do better in term of income generation to sustain assets preservation and growth. Lis *et al* (2000*)* have found that the GDP growth, bank size and capital hurt non-performing loans while loan growth, collateral, net interest income, debt-equity, market power and the regulatory regime had a positive impact on non-performing assets.

5.0 Summary of Findings
The study result shows an overall statistical insignificance with p = 0.000 (p>0.05) which implies that assets quality is insignificant in determining non-interest income of selected deposit money banks in Nigeria. The result suggests that banks should pay more attention to assets quality in order to improve their non-interest income. Therefore, the null hypothesis (H_{01}) which states that regulatory requirement dimensions have no significant effect on non-interest income (NII) in Deposit Money Banks in Nigeria was rejected. Therefore, empirical findings revealed that assets quality has significant effect on non-interest income of deposit money banks in Nigeria. Banks can perform better in terms of earning non-fee-based income instead of depending mainly on interest on loans and investment alone to sustain assets, quality, preservation, and growth.

5.1 Conclusion
The study found that net interest income is the most appropriate criterion to evaluate the effectiveness and stability of banks' operations in terms of earnings. Therefore, banks are now diversifying their income base to non-fee-based income in order to reduce reliance on income from interest on loan which is susceptible to fluctuations due to loan defaults they usually experienced.

5.2 Recommendation
The result of the study has shown that deposit money banks have to intensify efforts towards improving level of their earnings on non-fees-based transactions as a source of income to shift their reliance on interest income being the highest source of revenue income for its sustainability. It therefore recommended that banks should diversify into more customer-friendly financial products to further enhance the quality of their services by creating avenues that can earn more fees from non-interest-based functions to reduce their over-reliance on earnings from interest on

loans and to generally improve the earnings growth and performance of deposit money banks in Nigeria.

5.3 Implication of findings
Deposit money banks that engage in speculative and margins lending is doing that at its own risk as it can further jeopardise the quality of its risk assets. The approvals of insider related loans should be strictly based on commercial justification and treated on the basis of normal advances considerations at arm's length to minimize incidents of problem loans.

References
1. Abata, M. A., (2014). Assets Quality and Bank Performance: A Study of Commercial Banks in Nigeria. Research Journal of Finance and Accounting, 5 (18), 39 – 44.
2. Afrinvest Securities Limited (2017). Fitch affirms Nigerian banks' profitability. The
3. Guardian Business News, Lagos
4. Ajibike,J. O.; &, Aremu, O. S. (2015). The impact of liquidity on Nigerian bank performance. A dynamic panel approaches. Journal of African Macroeconomic Review 5(2).
5. Akani, H.W.; &, Lucky, A.L. (2014). Money supply and aggregate stock prices in Nigeria: An analysis of cointegration and causality tests. Research Journal of Finance, 2(10), 1 – 24.
6. Aruwa, S. A. &, Musa, A. O. (2014). Risk Components and the Financial Performance of
7. Deposits Money Banks in Nigeria. International Journal of Social Sciences and Entrepreneurship, 1(11). 1-8.
8. Augie, B., (2017). Banks' interest income spikes on improved loan book, higher yields. Retrieved January 7, 2019, https: //www.businessday online.com
9. Auronen, L. (2003). Asymmetric Information. Theory and Applications. Paper presented in the Seminar of strategy and International Business as Helsinki University of Technology, May 21st 2003.
10. Badar, M., & Yasmin, A. (2013). Impact of macroeconomic forces on non-performing loans.
11. An empirical study of commercial banks in Pakistan. Journal of Transactions on Business and Economics.1 (10).
12. Beck, R, Randa, W. &, Trandafir, P. (2010). Profitability management in commercial banks. An Exploratory Study.
13. Bhunia, A. (2012). A Trend Analysis of Liquidity Management Efficiency in Selected Private Sector Indian Steel Industry. International Journal of Research in Commerce and Management, 1(5).
14. Boahene, H. S., Dasah, J., &, Agyei, S. K., (2012). Credit risk and profitability of selected banks in Ghana. Research Journal of Finance and Accounting, 3(7), 6-14.
15. Central Bank of Nigeria, (201O). Annual report for the year ended 31 December, 2010. CBN Publications, Abuja.
16. Central Bank of Nigeria, (2016). Understanding monetary policy and financial concepts. www.Central bank. go.ke/
17. Chaibi, H, &, Zied F. (2015). Credit risk determinants. Evidence from a cross-country study. Research in International Business and Finance 33 1–16. [CrossRef]
18. Chen, C., Huang, Y. &, Zhang, T. (2015). Non-interest income, trading, and bank risk. (Unpublished master's thesis) University of Dayton, Ohio, United States of America.
19. Chisti, K.A. (2012). The impact of asset quality on profitability of private banks in India. Journal of African Macroeconomic Review 2(1), 126-146.
20. Coyle, B. (2014). Framework for credit risk management.Chartered Institute of Bankers, United Kingdom.
21. Debelle, G. (2015). Bank asset quality key after global financial Crisis, retrieved from https://www.acifma.com/./BIS.
22. Eze, G. P., & Ogbulu, O. M. (2016). Asset quality management and the performance of deposit money banks in Nigeria. A Co-integration and Variance Decomposition Analysis. International Journal of Economics and Financial Research, 2(3), 41-54.
23. Ezeohua, A.E., (2011). Banking consolidation, credit crisis and assets quality in a fragile banking system.Some evidence from Nigerian data. Journal of financial regulation and compliance, 19 (1), 33 - 44.
24. Ghosh, A. (2015). Banking-industry specific and regional economic determinants of non-performing loans.Evidence from United States. Journal of Financial Stability 20.93–104. [CrossRef]
25. Gulia, Y. (2014). Financial performance of private banks in India. Global Journal for Research Analysis, 3(1) 1-14.
26. Hahm, J. H. (2008). Non-interest income of commercial banks. Evidence from OECD Countries. Journal of International Economic Studies, 12 (1), 3-32.
27. Haryani I. (2010). Manajemen Keuangan Teori dan Pengukuran Tingkat Efisiensi Bank, 17. No 28.
28. Ho T. S. Y., and A. Saunders, (1981). The determinant of bank interest margin: Theory and empirical evidence, The Journal of Financial and Quantitative Analysis, 16(4) 561-600.
29. Ighomwenghian, K. (2016). When Non-Interest Income Boosts Earnings. Retrieved November 11, 2018, from Invest Data. http //invest data. com. Ng/ STANBIC-IBTC.
30. International Monetary Fund. (2000). World Ecomomic Reveiew. www.worldbank.org
31. Iwedi, M., & Onuegbu, O. (2014). Credit risk and performance of selected deposit money banks in Nigeria. An empirical investigation. European Journal of Humanities and Social Sciences, 31,
32. Kargi, H. S. (2011). Credit risk and the performance of Nigerian banks (Master's thesis). Ahmadu Bello University, Kaduna, Nigeria.
33. Kenton, W. (2018). Non-interest income.Investing and financial analysis https:// www. investopedia.com/ terms/n/non-interest-income.asp.
34. Khalid, A.C. (2012). The impacts of assets quality on profitability of private banks in India.Journal of African Microeconomic Review 2 (1), 1 – 22.
35. Khrawish, H. A. (2011). Determinants of commercial banks performance. Evidence from Jordan. International Research Journal of Finance and Economics, 81, 148-159.

36. Kolapo, T.F. Ayeni, R.K., & Oke, M.O. (2012). Credit risk and commercial banks' performances in Nigeria.A panel model approach.Australian journal of business and management research, 2, 31-38

37. Lafunte, E. (2012). Monitoring Bank Performance in the Presence of Risk Mirceaepure. Working Papers Barcelona, Spain.

38. Louzis, D. P., Anjelos T. V, &, Vasilios L. M. (2012). Macroeconomic and bank-specific determinants of non-performing loans in Greece. A comparative study of mortgage, business and consumer loan portfolios. Journal of Banking and Finance 36.1012–27.

39. Lis, S.F., De Pages, J.M., &, Saurina,J., (2000).Credit growth, problem loans and credit risk provisioning in Spain. Banco de España Servicio de Estudios, Documento de Trabajo no. 0018.

40. Lucky, A.L. &, Nwosi, A.A., (2015). Asset quality and profitability of commercial banks. Evidence from Nigeria. Research Journal of Finance and Accounting, 6(18), 26-34.

41. Ngalawa, H. (2014). Performance of South African banking sector since 1994.Journal of Applied Business.on at: https//www research gate. net/ publication/286065675.

42. Novian, Hardi. (2015). Pengaruh BOPO, CAR, LAR Dan Firm Size Terhadap Kinerja Keuangan

43. Perbankan Yang Terdaftar Di Bursa Efek Indonesia (Bei) Periode (2010-2012). Jurusan Akuntansi Fakultas Ekonomi Universitas Maritim Raja Ali Haji.

44. Ombaba K.B.M., (2013). Assessing the factors contributing to non-performance Loans in Kenyan Banks, European Journal of Business and Management, 5(32), 13-20.

45. Okoye, P.V., Amahalu, N.N., Obi. & Nweze, C.L. (2016). Cash flow statement and liquidity. Empirical evidence from quoted Banks in Nigeria. Proceedings of Faculty of Management Sciences, International Conference, Nnamdi Azikiwe University, Nigeria, 705-718.

46. Onoh, J. k., (2002). Money and Banking in Nigeria.Longman Publishers, Lagos.

47. Rajeev, M., &, Mahesh, H. P. (2010). Banking sector reforms and NPA. A study of Indian commercial banks.The Institute for Social & Economic Change-Working Paper 252. Retrieved fromhttp://www.isec.ac.in/WP%20252%20

48. Rawlin R, M.; Shwetha M., S. &, Pradeep B. L. (2012). Modeling the NPA of midsized
   a. Indian nationalized bank as function of advances. European Journal of Business and Management, 4(5).

49. Salas, V. & Saurina, J. (2002). Credit risk in two institutional regimes. Spanish commercial

50. and savings banks. The Journal of Financial Services Research, 22. .3 203-16.

51. Saksonova S. (2014). The Role of Net Interest Margin in Improving Banks' Asset Structure

52. and Assessing the Stability and Efficiency of their Operations. 10th International Strategic Management Conference; 132–141. Elsevier Ltd. Doi.10.1016/j.sbspr ..09.017.

53. Sangmi & Nazir. (2010).Analysing financial performance of commercial banks in India. Application of CAMEL Model.Pakistan. Journal of

54. Soludo C.C. (2004) Consolidating the Nigerian Banking Industry to meet the Development Challenges of the 21st Century. Address by the CBN Governor to the Bankers Committee. CBN, Abuja.

55. Sontakke, R. &, Tiwari, C. (2013). Trend analysis of non-performing asset in scheduled
   a. commercial banks in India. International Journal of Application or Innovation in Engineering &Management (IJAIEM); ISSN 2319 – 4847

56. Solomon, O. (2012). Credit risk management as a tool for bank survival. www. independent. academia.edu

57. Svoronos J.P. (2018). Early intervention regimes for weak banks Financial Stability Institute. FSI Insights on policy implementation. 6. Bank for International Settlements.

58. Yuksel S., & Zengi S. (2017). Influencing factors of net interest margin in Turkish banking sector. International Journal of Economics and Financial Issues 7(1). 178-191.

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