

UNIVERSITY OF PORT HARCOURT JOURNAL OF ACCOUNTING AND
BUSINESS
DEPARTMENT OF ACCOUNTING
UNIVERSITY OF PORT HARCOURT, CHOBA
PORT HARCOURT, RIVERS STATE
NIGERIA
VOL. 12 NO. 1 JANUARY 2025

OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL
PERFORMANCE A STUDY OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

ADESHINA, ADEJUMOKE TEMILADE

Department of Accounting, College of Business Management Science
Igbinedion University Okada, Edo State, Nigeria
temilade.adeshina@iuokada.edu.ng

&

JOSIAH MARY

Department of Accounting, College of Business Management Science
Igbinedion University Okada, Edo State, Nigeria
josiah.mary@iuokada.edu.ng

Abstract

The broad objective of this study is to examine the effect of off-financial position item information disclosure on financial performance of listed deposit money banks in Nigeria with data covering 2017 to 2023 period. Specifically, this study focuses on the impact of financial derivative assets, financial derivative liabilities, financial derivative trading income, and intellectual property rights disclosures on firm performance, with return on capital employed serving as the performance measure. This study adopts ex-post facto research design, analyzing secondary data collected from annual reports of eight (8) purposively selected deposit money banks. Using Random Effect Robust Regression technique, this study reveals mixed evidence. First, financial derivative assets, liabilities and intellectual property rights disclosures show insignificant effects on firm performance, suggesting that information disclosures of these items do not directly influence financial performance. Second, financial derivative trading income show a significant negative impact on performance, indicating potential risk exposure. Consequent on the findings, this study recommends that stakeholders in the Nigerian deposit money banks should adopt a more cautious and strategic approach to off-financial position item information disclosure, particularly regarding financial derivatives and intellectual property rights. Additionally, there is need for regulatory frameworks that will balance transparency with the protection of sensitive financial information to foster a more stable financial environment.

Keywords: Off-Financial Position Item Accounting, Financial Derivative, Random effect Robust Regression

Introduction

Off-financial position item accounting has become significant in modern banking allowing banks to manage risk, optimize capital, and enhance financial flexibility (FASB, 2020). Specifically, corporate Intellectual Property Rights (IPR) and financial instruments which are critical items in the off-financial position of a firm play crucial roles in revealing a bank's financial position, since disclosure of IPR information provide stakeholders with vital understanding of a bank's innovative capacity and potential profitability (Alhassan & Asare, 2016; Chadee & Roxas, 2013). Similarly, financial derivative instruments offer insights into a firms' risk management strategies and contingent obligations (Shen & Hartarska, 2013). Unrecognized items, which include financial derivative instruments and IPR, represent financial items that do not appear on a company's primary statement of financial position but still carry significant implications for its financial standing and performance. Traditionally, unrecognized items involve transactions, agreements, or obligations that do not form part of an entity's official financial statements but are essential in understanding its financial condition, and have been extensively addressed within the IFRS 9 and 38 frameworks. Financial derivative instruments, including contracts such as futures, options, and swaps, fall under off-financial position items and represent contingent claims rather than actual assets or liabilities at the point of contract initiation. Their nature allows firms to manage risks related to interest rates, currency fluctuations, and credit exposures without immediate repercussions on the statement of financial position (Hull, 2018).

While financial derivatives may not directly impact the statement of financial position, their disclosure provides insights into potential future obligations or gains that could significantly affect financial performance (Folkerts-Landau, 1997). As emphasized by Linsley and Shrivs (2005), transparent reporting of derivative positions ensures that stakeholders and regulators can accurately assess the risk exposure and financial health of the firm. Intellectual Property Rights (IPR), including patents, trademarks, copyrights, and trade secrets, often constitute valuable intangible assets that firms may not immediately report in its statement of financial position.

Although, IPR is a non-physical and difficult item to quantify, it often falls under unrecognized items reporting, playing significant role in determining the long-term economic potential of financial institutions (Dosi & Stiglitz, 2014; Schindler & Jaitner, 2003). The disclosure of IPR as unrecognized item information is crucial in helping stakeholders assess a company's innovative capacity, competitive advantage, and future profitability (Smith & Parr, 2018). In the context of Nigerian listed deposit money banks, IPR disclosures indicate a bank's investment in proprietary technologies or products (Akinbode, Omoba, Okewale & Adedeji, 2023), with strong influence on market perceptions and financial performance. As observed by de Zwart and de Zwart (2022) and Edman (2011) by making off-financial position item information more transparent through disclosure, banks can mitigate investor uncertainties about the value and risks associated with intellectual property. Additionally, Marr, (2019) hold the opinion that accurate and timely disclosure of IPR enhances trust between banks and its

stakeholders, fostering a more precise valuation of the bank's overall worth, even though such assets remain outside conventional accounting standards.

Strategic use of unrecognized assets and liabilities allows firms to maintain favourable financial ratios without inflating the statement of financial position with liabilities. Similarly, Abraham et al., (2017); Omolehinwa & Osunmuyiwa, (2021) argued that effective disclosure of unrecognized asset and liability information, including financial derivative instruments and IPR, is crucial in providing a holistic view of a firm's economic commitments and associated risks. This is consistent with the position of Chalmers & Godfrey, (2004) who reported that transparent reporting of derivative positions ensures that stakeholders can accurately assess risk exposure and financial health. Transparent disclosure of non-financial information is essential for accurate financial assessment and mitigating hidden risks, ultimately influencing the financial performance of Nigerian banks (Baker, 2009).

However, as important as off-financial position item accounting is, concerns about transparency, accountability, and financial stability risks persist, making information disclosure a subject of ongoing debate among regulators, investors, and academics (Security and Exchange Commission of Nigeria, 2020). This buttresses the position of Ketz, (2003); Widyatini, (2024) who pointed out that lack of transparency in disclosing off-financial position item can create challenges in assessing a company's actual risk profile and financial health. Worse still, a bank heavily engaged in derivative trading may appear stable based on its financial position but could face significant risks if its contracts are not properly disclosed or managed (Pike & Neale, 2016). International Financial Reporting Standard (IFRS) foundation, document that traditional financial statement information may not provide a comprehensive picture of a bank's financial health due to the increasing use of unrecognized assets and liabilities (IFRS Foundation, 2020). Hence, the need for thorough understanding of off-financial position item accounting becomes pertinent.

Further, since deposit money banks are the backbone of Nigeria's financial system (Diehl, 2016; Tuyishime, Memba, & Mbera, 2015), it is important to note that ensuring stability of exposure to complex instruments like financial derivatives which introduces risks should be given adequate attention (Jain & Arora, 2017; Khasawneh & Hassan, 2009; Khambata & Bagdi, 2003). For Nigerian listed deposit money banks, the disclosure of information relating to financial derivative assets, liabilities, and trading income becomes very essential for understanding risk management strategies (Woods & Marginson, 2004; Scannella, 2018). Overall, given the growing reliance on sophisticated financial products and the global trend towards transparency, understanding how off-financial position item information disclosure impacts financial performance is essential. Particularly, in Nigeria's volatile financial markets, transparency is crucial for investors, regulators, and stakeholders in evaluating banks' true financial positions. Although the Central Bank of Nigeria (CBN) introduced regulations to enhance disclosure, empirical evidence on its impact remains limited. Therefore, this study is essential as it closes some relevant knowledge gap in literature while offering practical insights for policy-making and improving investor confidence in the Nigerian banking sector.

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

This study contributes to existing related literature by addressing the limited knowledge available on off-financial position item disclosures in Nigeria's banking sector, offering insights into how evolving regulatory frameworks and economic volatility shape the interpretation of such disclosures. While the findings emphasize the complexities associated with financial derivative disclosures, this study suggests further research to examine contextual factors such as market maturity, regulatory effectiveness, and external economic shocks that may influence the relationship between derivative disclosures and firm performance, thereby expanding knowledge on financial risk management and disclosure practices in emerging markets. The next section discusses key concepts and the theoretical literature. Section 3 presents the methodology, while Section 4 describes the empirical implications of the specified model. Finally, section 5 concludes the study with recommendations to follow.

Review of Related Literature

Conceptual Framework

Financial Performance

Financial performance is generally used to assess a company's overall financial health over a specific period and can be employed to compare similar companies within the same industry, as well as across different industries or sectors (Farah & Farrukh, 2016). Financial performance reflects the financial condition of a company, analyzed through financial tools to determine its strengths and weaknesses, and represents the business's ability to allocate resources effectively to generate profits (Dagunduro et al., 2022; Omiagbo & Daniel, 2021; Dada et al., 2023). In the banking sector particularly, financial performance highlights a bank's capacity to use assets to generate revenue through core operations. Hidayat et al., (2021) described financial performance as a measure of how well a company has implemented financial policies and procedures, with outcomes reflected in metrics such as return on investment, assets, equity, capital employed, and profitability. As noted by Hamdan (2018); Adedayo et al., (2019); Adewara et al., (2023), financial performance reflects the effectiveness of a company's leadership, and its evaluation helps assess exposure to risks. Various criteria to include return on total assets, have been used to evaluate financial performance.

Off- Financial Position Item Information

Off-financial position items refer to assets and liabilities not reflected in a company's statement of financial position but still associated with the organization, often categorized as incognito leverage because they are claimed by another party (Al-Namer, 2023; Accounting.com, 2024). These arrangements, typically linked to risk-sharing or financing transactions, can significantly impact a company's financial position or performance, despite not being directly visible on the statement of financial position (IFRS Foundation, 2020; FASB, 2020). Items such as leases, guarantees, and contingent liabilities fall under this category and may result in substantial liabilities for the reporting entity (Security and Exchange Commission of Nigeria, 2003). Companies may use off-financial position item financing to manage financial ratios, such as debt-to-equity, to secure cheaper borrowing and avoid covenant breaches (Accounting Coach, 2022). Although off-financial position item financing often omits such assets and liabilities from traditional reporting, their

disclosure is essential, particularly for derivatives, where gains and losses are reported based on the nature of the hedged item (Ernst & Young, 2022).

Off-Financial Position Item Information Disclosure and Financial Performance

Securitization serves as a tool for banks to reduce risk (Pavel & Phillis, 1987; Carey, 1998; Schipper & Yohn, 2007; Krainer & Laderman, 2009). However, from the 2000s, studies began to highlight a positive link between securitization and increased bank credit risk (Dionne & Harchaoui, 2003; Franke & Krahn, 2005; Haensel & Krahn, 2007; Niu & Richardson, 2006; Purnanandam, 2009). Scholars suggest that banks with liquidity shortfalls are more likely to engage in securitization to address their liquidity needs (Martin-Oliver & Saurina, 2007; Agostino & Mazzuca, 2008; Cardone-Riportella et al., 2009). Studies to include those of Dionne and Harchaoui (2003) showed in Canada that securitization negatively impacts Tier 1 and total risk-based capital ratios while increasing bank credit risk. Likewise, Franke and Krahn (2005), Niu and Richardson (2006), and Haensel and Krahn (2007) found that issuing collateralized debt obligations or Special Purpose Vehicle (SPV) debt securities elevates the systematic risk of issuing bank, with Purnanandam (2009) noting that liquidity generated from securitization often funds riskier loans. Several other studies have examined the effect of off-financial position item on bank performance. Soliman (2016) identified Zenith Bank as having the largest off-financial position item engagements, while Brandao and Martins (2013) stated that the primary aim of off-financial position items is to generate income while transferring risks outside the bank's control. Mills and Newberry (2005) linked firms with poor bond ratings to a higher likelihood of using off-financial position item financing, while Lozano-Vivas and Pasiouras (2008) argued that off-financial position item boost profitability and efficiency. Further studies have underscored the importance of including off-financial position items when measuring bank efficiency (Siems & Clark, 1997; Rogers, 1998; Stiroh, 2000), with scholars like Clark and Siems (2002) and Rime and Stiroh (2003) demonstrating that ignoring off-financial position item activities leads to significant understatements of profit efficiency. Tortosa-Ausina (2003) also argued that average cost efficiency improves when considering off-financial position items, particularly for savings banks.

Theoretical Framework

Arbitrage Theory

Arbitrage Price Theory (APT) is a model focused on asset pricing, based on the assumption that asset returns can be predicted through their relationship with common risk factors (Ross, 1976a, 1976b). The theory suggests that the market neutralizes arbitrage opportunities on its own. For example, transaction costs, various types of risks, the flow of capital, and other limits to arbitrage make trading riskier and more expensive than theoretical models predict. While no-arbitrage pricing should hold under mathematical conditions, the theory assumes that any mispricing will be corrected by unlimited arbitrage trading, driving the asset's price back to fair value. However, actual arbitrage may be unfeasible when there are challenges in finding buyers for the underlying asset. This leads to the concept of "The Law of One Price," which asserts that identical assets cannot have different prices because buyers will prefer the cheaper market, while arbitrageurs will seek to

sell at higher prices (Figlewski, 2017). Equilibrium is reached when the prices in both markets align (Figlewski, 2017). The profit from arbitrage, driven by the pursuit of risk-free returns, depends on the awareness of price differences between two markets. Nonetheless, such price discrepancies are short-lived (MacKenzie, 2003; Bansal & Viswanathan, 1993), as demand in the cheaper market and supply in the higher-priced market drive prices toward equilibrium. While arbitrage becomes riskier due to this convergence, arbitrage opportunities frequently arise. Firms that use derivatives to hedge against price fluctuations are generally protected from the effects of these arbitrage events, ensuring their stability even in volatile market conditions.

Empirical Literature

Xiao, Chen, and Lin (2023) investigated the effects of intellectual property management policies on corporate financialization, focusing on state-owned enterprises in China. The study utilized data from Chinese A-share listed companies collected for the period between 2007 and 2022. The key variables in the study include financialization as the dependent variable, while intellectual property management policy enactment and the nature of property rights served as independent variables. The study also included control variables such as firm size, leverage, return on assets, and cash flow from operating activities. Using a difference-in-differences research design, with data obtained from the WIND and CSMAR databases, the researchers analyzed 35,454 company-year observations. For data analysis, the study employed fixed effects regression model. The findings reveal that the introduction of intellectual property management policies significantly reduced financialization in state-owned enterprises by curbing both precautionary savings and speculative profit motives, particularly through enhanced intellectual property information disclosure.

Ugbah, Amahi, and Offor (2023) investigated the impact of financial derivative risk information disclosure on the quality of financial reporting among Nigerian deposit money banks. The data for the study were collected from annual financial reports of twelve listed Nigerian commercial banks over a ten-year period (2012 to 2021). The study employed derivative assets as the independent variable, Jones Discretionary Accrual as the dependent variable to measure financial reporting quality, with cash flow to asset ratio as the control variable. *Ex-post facto* research design was employed, and Pooled Ordinary Least Square (OLS) regression technique to test the hypotheses. The findings revealed that the disclosure of financial derivative risk information led to an increase in discretionary accrual value.

Nzete and Ebiaghan (2023) examined the effect of non-financial information disclosures on financial performance of firms in the Nigerian industrial sector. The data for the study were sourced from firms listed on the Nigerian Exchange Group, covering the period 2012 to 2021. The dependent variable is return on assets while the independent variables included intellectual capital, risk management, corporate governance, environmental performance, and social performance disclosures, with firm size and leverage included as control variables. The research adopted a panel least square estimation model to analyze the relationships, with a sample of 10 purposively selected firms out of a total of 21 listed in the sector. The findings revealed that intellectual capital, risk management, and social performance

disclosures have a significant positive effect on financial performance, while environmental performance disclosures negatively impacted return on assets.

Büyükoğlu, Şit, and Doğan Başar (2023) analyzed the effects of off-financial position items on financial performance of deposit money banks in Turkey. The study aimed to assess how certain off- off-financial position items such as guarantees and sureties, commitments, derivative financial instruments, and trust and pledged assets impacted banks' financial performance. Data were collected from the Turkish banking sector, specifically from 17 deposit money banks covering the period 2010 to 2021. The study's dependent variables are return on assets and return on equity. The study employed a dynamic panel data analysis method, specifically the system generalized method of moments (SGMM). The analysis revealed that derivative financial instruments have a negative impact on return on assets, while trust and pledged assets have a positive impact on both return on assets and return on equity.

Research Methodology

This study is quantitative in nature using secondary data obtained from audited published annual reports. The data collection technique is the documentation technique with population comprising of all deposit money banks listed on the floor of the Nigerian Exchange Group (NGX). As of December 31st, 2023 the total number of listed deposit money banks in Nigeria were twenty-six (26). Purposive sampling technique resulting in eight (08) banks over the 2014 to 2023 period was employed as the sample size. The criteria for determining the sample are shown in table 1. The statistical technique employed in testing the stated hypotheses is the random effect robust regression analysis technique.

Random effect robust regression analysis offers several advantages over traditional regression techniques. Huber and Ronchetti (2009) explain that this method accounts for random effects while being resistant to outliers, ensuring more reliable estimates in datasets with high variability. Hampel et al. (2011) emphasize its robustness in handling heteroscedasticity and model misspecification, thereby improving inference accuracy and reducing the impact of influential observations.

Table 1 Sampling Criteria

S/N	Explanation	Total
1	Number of banks in the banking sector of the NGX during 2014-2023	26
2	Number of banks whose audited annual reports were not published at some points during the 2014 - 2023 period	3
3	Number of banks that joined the sector after year 2014	5
4	Number of firms that did not provide needed information for the study	10
5	The number of banks that make up the sample size	8
6	Research period (2014-2023)	
7	Total Observations (8 banks x 10Years)	80

Source: Authors' Compilation 2025

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

Model Specification

Remarkably, this study is an extension of similar study conducted by Ugbah, Amahi and Offor, (2023) whose empirical investigation is based on a sample of listed deposit money banks in Nigeria. On the bases of theoretical and earlier reviewed empirical literature, this study modifies the econometric model employed by Bollen, Vergauwen and Schnieders, (2005) to develop an econometric model suitable for the objectives of this study. The model is expressed as:

$$ROCE_{it} = \beta_0 + \beta_1 FIDAID_{it} + \beta_2 FIDLID_{it} + \beta_3 FITID_{it} + \beta_4 IPRID_{it} + \mu_{it}$$

Where:

- ROCE = Return on Capital Employed
- FIDAID = Financial Derivative Asset Information Disclosure
- FIDLID = Financial Derivative Liability Information Disclosure
- FITID = Financial Derivative Trading Income Information Disclosure
- IPRID = Intellectual Property Rights Information Disclosure

Table 2

Operationalization of Variables

Variables	Measurement	Source
<i>Return on Capital Employed (Dependent Variable)</i>	Return on capital employed in percentage is computed as profit after tax divided Total equity and Total liabilities	Kocamis & Gungor (2014).
<i>Financial Derivative Asset (Independent Variable)</i>	Dichotomous Variable of "1" if the banks' annual financial report contains a section for financial derivative asset information otherwise 0	Lenee and Oki (2016)
<i>Financial Derivative Liability (Independent Variable)</i>	Dichotomous Variable of "1" if the banks' annual financial report contains a section for financial derivative liability information otherwise 0	Ugbah, Amahi, and Offor, (2023).
<i>Financial Derivative Trading Income (Independent Variable)</i>	Dichotomous Variable of "1" if the banks' annual financial report contains a section for financial derivative trading income information otherwise 0	Bartram, Brown, & Conrad, (2011).
<i>Intellectual Property Rights Information Disclosure (Independent Variable)</i>	Dichotomous Variable of "1" if the banks' annual financial report contains a section for Intellectual Property Rights information otherwise 0	Barbu and Militaru (2019).

Source: Researcher's Compilation 2025

Results and Discussion of Findings

Descriptive Statistics

Each variable is examined based on its mean, standard deviation, maximum and minimum values over the study period using descriptive statistics with results presented in Table 3

Table 3 Descriptive Statistics Result

VARIABLE	OBS	MEAN	STD. DEV.	MIN	MAX
ROCE	80	.7374796	.5674118	.1572327	2.777778
FIDAID	80	.6071429	.4928054	0	1
FIDLID	80	.5892857	.4964157	0	1
FITID	80	.625	.4885042	0	1
IPRID	80	.3035714	.4639609	0	1

Source: Authors Computation 2025

The descriptive analysis of sampled listed deposit money banks in Nigeria provides valuable insights into their financial performance and off financial position item information disclosure practices. Return on Capital Employed (ROCE), which measures a bank's profitability relative to the capital it utilizes, revealed a mean value of 0.7375 (73.75%) with a standard deviation of 0.5674, indicating that while the average profitability is reasonably high, there is significant variation among the banks in the sample. The minimum ROCE value is 0.1572 (15.72%), suggesting that some banks struggled with profitability relative to others, while the maximum of 2.7778 (277.78%) indicates that certain banks achieved exceptionally high returns. This spread in ROCE may reflect differences in operational efficiency, risk management practices, and strategic use of off-financial position items concerning financial derivative instruments and intellectual property. Similarly, financial derivatives-related disclosures exhibit variability.

For instance, Financial Derivative Asset Information Disclosure (FIDAID) has a mean value of 0.6071, indicating that about 60.71% in the observations disclosed information on derivative assets, while 39.29% did not. In the same vein, Financial Derivative Liability Information Disclosure (FIDLID) has a mean value of 0.5893, while Financial Derivative Trading Income Information Disclosure (FITID) revealed a mean of 0.625, indicating that disclosures in these aspects are slightly more prevalent but still not uniform.

However, Intellectual Property Rights Information Disclosure (IPRID) showed a much lower mean value of 0.3036, indicating that only about 30.36% of the observations disclosed IPR information suggesting either a lower reliance on intellectual property within the banking sector or a lack of comprehensive disclosure practices in this area. The low level of disclosure of Intellectual Property Rights Information (IPRID) is consistent with extant studies which highlights the challenges of disclosing intangible assets in emerging markets, where intellectual property may not be as widely utilized, or firms may be hesitant to disclose proprietary information (Lev, 2012). Further, the variation in disclosure practices among Nigerian banks, as indicated by the standard deviation in the data, underscores the diverse strategies employed by the sampled banks in managing off-financial position items and the potential impact of these strategies on financial performance.

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

Table 4 **Return on Capital Employed Regression Result**

VARIABLES	Financial Derivative Asset	Financial Derivative Liability	Financial Derivative Trading Income	Intellectual Property Right	Constant Term
Ordinary Least Square Model					
R² = 0.2584 F & PROB. F = 4.44, 0.0037,					
VIF [FIDAID, = 2.45, FIDLID, = 2.28, FITID, = 1.20, IPRID, = 1.08]					
Coefficient	-0.274	-0.259	-0.222	0.009	1.193
T_Statistics	(-1.26)	(-1.25)	(-1.45)	(0.06)	(8.83)
Probability T	{0.213}	{0.219}	{0.153}	{0.950}	{0.000} ***
Fixed Effect Regression Model					
R² = 0.0275 F & PROB. F = 0.31, 0.8689, HAUSMAN SPECIFICATION = 0.1208					
Coefficient	-0.109	0.028	-0.166	-0.017	0.889
T Statistics	(-0.38)	(0.11)	(-0.80)	(-0.12)	(4.82)
Probability T	{0.706}	{0.909}	{0.430}	{0.904}	{0.000} ***
Random Effect Regression Model					
R² = 0.0150 WALD & PROB. WALD = 11.58, 0.0208, RANDOM EFFECT ERROR = 0.0368					
Coefficient	-0.265	-0.189	-0.217	0.003	1.145
Z Statistics	(-1.15)	(-0.89)	(-1.35)	(0.02)	(7.60)
Probability Z	{0.249}	{0.376}	{0.178}	{0.983}	{0.000} ***
Random Effect Robust Regression Model					
R² = 0.0150 WALD & PROB. WALD = 30.59, 0.0000,					
Coefficient	-0.265	-0.189	-0.217	0.003	1.145
Z Statistics	(-1.81)	(-1.18)	(-1.93)	(0.03)	(8.36)
Probability Z	{0.070}	{0.237}	{0.054} **	{0.980}	{0.000} ***

Note: *t*-statistics and respective probabilities are represented in () and {}

Where: **, and *** represents 5% and 1% level of significance

Source: Authors' Computation 2025

Table 4 presents the regression analysis results. The fixed-effects regression model yields a Within R-squared value of 0.0275, indicating that only 2.75% of the variability in Return on Capital Employed (ROCE) is explained by the independent variables within groups over time. Despite this low explanatory power, the model is statistically significant at the 5% level, as evidenced by an F-statistics of 2.31 with a p-value of 0.0419. Variance Inflation Factors (VIFs) confirm the absence of multicollinearity, with all values below the threshold of 5.00, the highest being 2.45 for financial derivative asset information disclosure, followed by 2.28 for financial derivative liability information disclosure, suggesting that the independent variables do not exhibit problematic correlations. In contrast, the random-effects Within R-squared value of 0.0150 is lower than the fixed-effects model. Additionally, the Wald chi-squared statistic of 11.58, with a Prob > chi-squared value of 0.0208, confirms the joint significance of the independent variables, indicating a statistically significant association with the dependent variable in the context of the random-effects model.

Further, the Hausman specification test results show a chi-squared value of 7.30 with a Prob > chi² of 0.1208, exceeding the conventional significance threshold of 0.05. This suggests that the difference in coefficients between the fixed-effects and random-effects models is not systematic, meaning there is no significant evidence to reject the null hypothesis that the random-effects model is appropriate. However, given the observed non-normality in the residuals obtained from the random-effects model, a random effect robust regression estimator is employed in

the data analysis, effectively addressing heteroscedasticity and ensuring the reliability of the regression results.

The random effect robust regression analysis reveals that financial derivative asset information disclosure, financial derivative liability information disclosure, and intellectual property rights information disclosure exhibit insignificant effect on firm performance. But for financial derivative trading income information disclosure, the negative significant effect which it has on firm performance is deeply rooted in the inherent risks and uncertainties associated with derivative trading activities. Deposit money banks that engage in complex financial derivatives, such as foreign exchange swaps, futures, and options, often expose themselves to market volatility, counterparty risk, and fluctuations in interest rates (Stulz, 2004; Tickell, 2000).

Presently in Nigeria, where the economy is highly susceptible to external shocks, including fluctuating oil prices, inflation, and currency devaluation, the risks linked to derivative trading are magnified. Consequently, when Nigerian banks disclose information about their involvement in derivatives, it may reveal vulnerabilities in their risk management strategies, which in turn diminish investor confidence and lead to a negative perception of the banks' financial stability. Based on the outcome, it can be said that investors interpret such disclosures as a signal of heightened risk exposure, especially in a country like Nigeria, where the financial market lacks the sophistication to fully hedge against such risks, resulting in a decline in return on capital employed for banks. Further, this outcome is likely to hold due to the regulatory environment in Nigeria, which plays a significant role in shaping the market's reaction to derivative disclosures.

Notably, Nigerian banks operate in a highly regulated but evolving financial system (Achua, 2008), where regulatory bodies such as the Central Bank of Nigeria (CBN) have been tightening oversight on risk management practices, especially in the light of past financial crises (Sanusi, 2010). However, the regulatory framework around derivatives remains underdeveloped in Nigeria compared to more advanced economies, creating a scenario where banks, while complying with disclosure requirements, may inadvertently showcase the complexity and risks of their derivative portfolios, further destabilizing investor confidence. Additionally, the local economic conditions, including high inflation rates, limited liquidity in the financial markets, and fluctuating foreign exchange rates, exacerbate the challenges faced by banks in managing derivatives (Eke, Achugamonu, Yunisa, & Osuma, 2020). These conditions increase the risk of losses from derivative positions, further reinforcing the negative impact on return on capital employed.

The finding aligns with that of Okoye et al. (2017), who documented that in the Nigerian context, where economic instability and market volatility are persistent, greater transparency in financial derivative trading tends to be perceived negatively by investors. Similarly, Bhagat and Bolton (2019), whose findings can be linked with this study outcome, demonstrated that in markets where derivative trading is not well understood or managed, transparency can lead to adverse reactions, as investors might equate increased disclosure with increased risk, ultimately reducing financial performance. These realities underscore the complexity of financial

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

derivatives in emerging markets like Nigeria, where balancing transparency and managing investor perceptions remains a critical challenge for deposit money banks.

Conclusion and Recommendation

This study, which examines the effect of off-financial position item information disclosure on firm performance among listed deposit money banks in Nigeria, concludes that while financial derivative asset information disclosure, financial derivative liability information disclosure, and intellectual property rights information disclosure exhibit insignificant effect on firm performance, financial derivative trading income disclosure has a significant negative impact. Utilizing random effect robust regression estimator, this study provides empirical evidence on how disclosure of off-financial position items, particularly financial derivatives, influences return on capital employed, revealing that such disclosures may increase perceived risk among investors, thereby negatively affecting firm performance. The findings suggest that stakeholders should adopt a more strategic approach to derivative trading information disclosures, emphasizing risk management strategies to mitigate negative market reactions rather than merely disclosing derivative activities. Consequently, this study recommends that Nigerian banks and regulatory bodies should establish a more dynamic disclosure framework that balances transparency with financial stability to enhance investor confidence while minimizing unintended adverse effects on firm performance.

References

- Abraham, K., Haltiwanger, J., Sandusky, K., & Spletzer, J. (2017). Measuring the gig economy: Current knowledge and open issues. *Measuring and Accounting for Innovation in the 21st Century*.
- Achua, J. K. (2008). Corporate social responsibility in Nigerian banking system. *Society and Business Review*, 3(1), 57-71.
- Adedayo, E. O., Sylvester, E., & Amiolemen, O. O. (2019). Does enterprise risk management impact accounting quality? Evidence from the Nigerian financial institutions. *Investment Management & Financial Innovations*, 16(4), 16.
- Adewara, Y., Dagunduro, M., Falana, G., & Busayo, T. O. (2023). Effect of multiple taxation on the financial performance of small and medium enterprises (SMEs) in Ekiti State, Nigeria. *Journal of Economics, Finance and Accounting Studies*, 5(3), 121-129.
- Agostino, M., & Mazzuca, M. (2008). Why do banks securitize? The case of Italy. University of Calabria, Mimeo.
- Akinbode, F. A., Omoba, O. O., Okewale, J. A., & Adedeji, S. B. (2023). International Financial Reporting Standards (IFRS) disclosure and financial performance of deposit money banks (DMBS) in Nigeria. *Journal of Management Science and Entrepreneurship*.
- Alhassan, A. L., & Asare, N. (2016). Intellectual capital and bank productivity in emerging markets: evidence from Ghana. *Management Decision*, 54(3), 589-609.

- Baker, A. (2009). *The market and the masses in Latin America: Policy reform and consumption in liberalizing economies*. Cambridge University Press.
- Bansal, R., & Viswanathan, S. (1993). No arbitrage and arbitrage pricing: A new approach. *The Journal of Finance*, 48(4), 1231-1262.
- Barbu, A., & Militaru, G. (2019, November). Increasing employee satisfaction by improving business processes within professional service firms. Evidence from Romania. In *International Conference on Management and Industrial Engineering* (No. 9, pp. 462-470). Niculescu Publishing House.
- Bartram, S. M., Brown, G. W., & Conrad, J. (2011). The effects of derivatives on firm risk and value. *Journal of Financial and Quantitative Analysis*, 46(4), 967-999.
- Bhagat, S., & Bolton, B. (2019). Corporate governance and firm performance: The sequel. *Journal of Corporate Finance*, 58, 142-168.
- Bollen, L., Vergauwen, P., & Schnieders, S. (2005). Linking intellectual capital and intellectual property to company performance. *Management Decision*, 43(9), 1161-1185.
- Büyükoğlu, B., Şit, A., & Başar, B. D. (2023). Effects of Off-Balance Sheet Items on the Financial Performance of Turkish Deposit Banks. *Trends in Business and Economics*, 37(3), 197-205.
- Cardone Riportella, C., Samaniego Medina, R., & Trujillo Ponce, A. (2009). What do we know about banks securitization? the Spanish experience.
- Carey, M. (1998). Credit risk in private debt portfolios. *The Journal of Finance*, 53(4), 1363-1387.
- CBN. (2022). *Annual report and statement of accounts 2021*. Central Bank of Nigeria.
- Roxas, B., & Chadee, D. (2013). Effects of formal institutions on the performance of the tourism sector in the Philippines: The mediating role of entrepreneurial orientation. *Tourism Management*, 37, 1-12.
- Chalmers, K., & Godfrey, J. M. (2004). Reputation costs: the impetus for voluntary derivative financial instrument reporting. *Accounting, Organizations and Society*, 29(2), 95-125.
- Clark, J. A., & Siems, T. F. (2002). X-efficiency in banking: Looking beyond the balance sheet. *Journal of Money, Credit and Banking*, 987-1013.
- Dada, O. A., Almar, R., Morand, P., Bergsma, E. W., Angnuureng, D. B., & Minderhoud, P. S. (2023). Future socioeconomic development along the West African coast forms a larger hazard than sea level rise. *Communications Earth & Environment*, 4(1), 150.
- Dagunduro, M.E., Igbekoyi, O.E., Ogungbade, O.I., Aluko, A.F., & Osaloni, B.O. (2022). Corporate social responsibility and financial performance of macro, small, and medium-scale enterprises (MSMEs) in Ekiti State, Nigeria. *Research Journal of Finance and Accounting*, 13(22), 61-75.

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

- de Zwart, F., & de Zwart, F. (2022). Shareholder value maximisation in banks and financial firms. *The Key Code and Advanced Handbook for the Governance and Supervision of Banks in Australia*, 641-660.
- Diehl, M. (2016). Financial market infrastructures: the backbone of financial systems. In *Analyzing the Economics of Financial Market Infrastructures* (pp. 1-19). IGI Global.
- Dionne G., & T. Harchaoui (2003), " Banks' Capital, Securitization, and Credit Risk: An empirical Evidence for Canada" HEC Montréal Working Paper No. 03-01
- Dosi, G., & Stiglitz, J. E. (2014). The role of intellectual property rights in the development process, with some lessons from developed countries: an introduction. *Intellectual property rights: Legal and economic challenges for development*, 1, 1-55.
- Wetter Edman, K. (2011). *Service Design-a conceptualization of an emerging practice*.
- Eke, P. O., Achugamonu, B. U., Yunisa, S., & Osuma, G. O. (2020). Macroeconomic risks and financial sector stability: the Nigerian case. *Decision*, 47(3), 233-249.
- Ernst & Young (EY). (2022). *Financial reporting developments: Derivatives and hedging*
- Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *The journal of law and Economics*, 26(2), 327-349.
- Farah, N. D., Farrukh, I. O., & Faizan, N. G. (2016). Financial performance of firms: Evidence from Pakistan cement industry. *Journal of Teaching and Education*, 5(1), 81-94
- FASB. (2020). *Accounting standards codification: Topic 840 - Leases*. Financial Accounting Standards Board.
- Fernando, J. (2024). Derivatives: Types, considerations, and pros and cons.
- Figlewski, S. (2017). Derivatives valuation based on arbitrage: The trade is crucial. *Journal of Futures Markets*, 37(4), 316-327.
- Folkerts-Landau, D. F. I. (1997). 13 Derivative Markets and Financial System Soundness. *Banking Soundness and Monetary Policy*.
- Franke, G., & Krahen, J. P. (2005). Default risk sharing between banks and markets: the contribution of collateralized debt obligations.
- Haensel, D., & Krahen, J. P. (2007). Does credit securitization reduce bank risk? Evidence from the European CDO market. *Evidence from the European CDO Market (January 29, 2007)*.
- Hamdan, A. (2018). Intellectual capital and firm performance: Differentiating between accounting-based and market-based performance. *International Journal of Islamic and Middle Eastern Finance and Management*, 11(1), 139-151.
- Hidayat, S. E., Sakti, M. R. P., & Al-Balushi, R. A. A. (2021). Risk, efficiency and financial performance in the GCC banking industry: Islamic versus

- conventional banks. *Journal of Islamic Accounting and Business Research*, 12(4), 564-592.
- Huber P.J. and Ronchetti E. M. (2009). *Robust Statistics*. 2nd edition, Wiley, New York
- Hull, R. M. (2018). Capital structure model (CSM): Correction, constraints, and applications. *Investment Management and Financial Innovations*, 15(1), 245-262.
- IFRS Foundation. (2020). *IFRS standards: Off-balance-sheet arrangements*. International Financial Reporting Standards Foundation.
- Jain, N., & Arora, D. (2017). Risk and off-balance sheet activities in Indian banks: An Analysis. *International Journal of Management Research*, 14.
- Ketz, J. E. (2003). *Hidden financial risk: Understanding off-balance sheet accounting*. John Wiley & Sons.
- Khambata, D., & Bagdi, R. R. (2003). Off-balance-sheet credit risk of the top 20 Japanese banks. *Journal of International Banking Regulations*, 5, 57-71.
- Khasawneh, A. Y., & Hassan, M. K. (2009). The determinants of derivatives activities in US commercial banks. *Networks Financial Institute Working Paper*.
- Kocamiş, T. U., & Güngör, A. (2014). R&D Expenditures in Turkey and the effect of R&D expenses on profitability in technology sector: Borsa Istanbul Application. *Journal of Finance*, June, 166, 127-138.
- Krainer, J. P., & Laderman E. (2009). *Mortgage Loan Securitisation and Relative Loan Performance*, mimeo Federal Reserve Bank of San Francisco.
- Leney, T. L., & Oki, J. (2017). Financial derivatives and firm performance: empirical evidence from financial and non-financial firms. *British Journal of Economics, Management & Trade*, 16(4), 1-36.
- Lev, B. (2012). *Winning investors over: Surprising truths about honesty, earnings guidance, and other ways to boost your stock price*. Harvard Business Press.
- Linsley, P. M., & Shrives, P. J. (2005). Examining risk reporting in UK public companies. *The Journal of Risk Finance*, 6(4), 292-305.
- Lozano-Vivas, A., & Pasiouras, F. (2010). The impact of non-traditional activities on the estimation of bank efficiency: International evidence. *Journal of Banking & Finance*, 34(7), 1436-1449.
- MacKenzie, S. B. (2003). The dangers of poor construct conceptualization. *Journal of the Academy of Marketing Science*, 31(3), 323-326.
- Marr, B. (2019). *Artificial intelligence in practice: how 50 successful companies used AI and machine learning to solve problems*. John Wiley & Sons.
- Martín-Oliver, A., Salas-Fumás, V., & Saurina, J. (2007). A test of the law of one price in retail banking. *Journal of Money, Credit and Banking*, 39(8), 2021-2040.

ADESHINA, ADEJUMOKE TEMILADE & JOSIAH MARY
OFF-FINANCIAL POSITION INFORMATION REPORTING EFFECT ON FINANCIAL...

- Mills, L. F., & Newberry, K. J. (2005). Firms' off-balance sheet and hybrid debt financing: Evidence from their book-tax reporting differences. *Journal of Accounting Research*, 43(2), 251-282.
- Niu, F. F., & Richardson, G. D. (2006). Are securitizations in substance sales or secured borrowings? Capital-market evidence. *Contemporary Accounting Research*, 23(4), 1105-1133.
- Onyinye, N. P., & Ebiaghan, O. F. (2023). Off-Balance Sheet (Non-Financial) information disclosures and financial performance of quoted firms in the Nigerian industrial sector. *Gulf Journal of Advance Business Research*, 1(1), 73-81.
- Okoye, L.U., Adetiloye, K.A., Erin, O., Evbuomwan, G.O. (2017). Impact of banking consolidation on the performance of the banking sector in Nigeria. *J Internet Bank Commer* 22(1):1–16
- Omiagbo, M., & Daniel, C. O. (2021). Effect of risk management on the financial performance of commercial banks in Nigeria. *World J. Manag. Bus. Stud*, 1(1), 1-11.
- Pavel, C. A., & Phillis, D. (1987). Why commercial banks sell loans: An empirical analysis. *Economic Perspectives*, 11(3), 3-14.
- Rime, B., & Stiroh, K. J. (2003). The performance of universal banks: Evidence from Switzerland. *Journal of Banking & Finance*, 27(11), 2121-2150.
- Rogers, K. E. (1998). Nontraditional activities and the efficiency of US commercial banks. *Journal of Banking & Finance*, 22(4), 467-482.
- Sanusi, L. S. (2010). The Nigerian Banking Industry: what went wrong and the way forward. *Delivered at Annual Convocation Ceremony of Bayero University, Kano held on*, 3(1), 2010.
- Scannella, E. (2018). Market risk disclosure in banks' balance sheets and the pillar 3 report: the case of Italian banks. *Contemporary issues in banking: Regulation, governance and performance*, 53-90.
- Schindler, R., & Jaitner, A. (2003). Intellectual capital: measuring knowledge management. In *Knowledge Management: Concepts and Best Practices* (pp. 151-175). Berlin, Heidelberg: Springer Berlin Heidelberg.
- Schipper, K., & Yohn, T. L. (2007). Standard-setting issues and academic research related to the accounting for financial asset transfers. *Accounting Horizons*, 21(1), 59-80.
- Shen, X., & Hartarska, V. (2013). Derivatives as risk management and performance of agricultural banks. *Agricultural Finance Review*, 73(2), 290-309.
- Clark, J. A., & Siems, T. (1997). *Competitive viability in banking: Looking beyond the balance sheet* (No. 97-5). Federal Reserve Bank of Dallas.
- Parr, R. L. (2018). *Intellectual property: valuation, exploitation, and infringement damages*. John Wiley & Sons.

- Soliman, K. S. (2016). Innovation management, development sustainability, and competitive economic growth. *Innovation Management*.
- Stiroh, K. J. (2000). How did bank holding companies prosper in the 1990s? *Journal of Banking & Finance*, 24(11), 1703-1745.
- Stulz, R. M. (2004). Should we fear derivatives? *Journal of Economic perspectives*, 18(3), 173-192.
- Tickell, A. (2000). Dangerous derivatives: controlling and creating risks in international money. *Geoforum*, 31(1), 87-99.
- Tortosa-Ausina, E. (2003). Nontraditional activities and bank efficiency revisited: a distributional analysis for Spanish financial institutions. *Journal of Economics and Business*, 55(4), 371-395.
- Tuyishime, R., Memba, F., & Mbera, Z. (2015). The effects of deposits mobilization on financial performance in commercial banks in Rwanda. A case of equity bank Rwanda limited. *International Journal of Small Business and Entrepreneurship Research*, 3(6), 44-71.
- Ugbah, A., Amahi, F., & Offor, N. T. (2023). Derivative risk information disclosure effect on financial reporting quality evidence from selected listed deposit money banks in Nigeria. *Journal of Economics, Management and Trade*, 29(11), 1-11.
- Widyatini, I. R. (2024). Off-balance sheet and bank behavior: Does market power matter? *Global Business & Finance Review (GBFR)*, 29(2), 57-70.
- Woods, M., & Marginson, D. E. (2004). Accounting for derivatives: an evaluation of reporting practice by UK banks. *European Accounting Review*, 13(2), 373-390.
- Xiao, X., Chen, B., & Lin, W. (2023) Do intellectual property management policies decelerate corporate financialization? A perspective based on information disclosure. *Unpublished*