Derivative Risk Information Disclosure Effect on Financial Reporting Quality Evidence from Listed Deposit Money Banks in Nigeria

ABSTRACT

This study investigates the impact of financial derivative risk information disclosure on the quality of financial reporting in a sample of Nigerian deposit money banks. Data from the annual financial reports of twelve Nigerian listed commercial banks were collected over a ten-year period, from 2012 to 2021. While derivative assets served as the proxy for the independent variable, Jones Discretionary Accrual was employed to measure reporting quality and cash flow to asset ratio was employed as control variable. The hypothesis was tested using Pooled Ordinary Least Square regression analysis technique whose result indicate that disclosure of financial derivative risk information leads to an increase in discretionary accrual value, thereby undermining the quality of financial reports. As a result of this finding, the study concludes that disclosing financial derivative risk information has a negative impact on the quality of financial reports issued by Nigerian deposit money banks. It therefore recommends that policymakers work with regulatory bodies and standard-setting organizations to establish standardized disclosure practices for derivative instruments among Nigerian deposit money banks.

Keywords; Financial Derivative Risk, Financial Reporting Quality, Jones Discretionary Accrual

1.0 Introduction

In today's globalized business landscape, competition related to investment and funding has become increasingly complex. To stay ahead, companies must be able to attract and retain investors by offering profitable investment opportunities. One way to achieve this is by constantly creating value within the company. As Kagan (2020) notes, the value of a company is a crucial consideration of its success, as it instils market confidence in both its current performance and its future prospects. In recent years, alternative financial instruments have emerged in response to the changing investment and funding landscape. Derivatives are one such instrument that has seen significant growth in popularity. Onyeka, Nnado, and Iroegbu (2018) state that derivatives are financial agreements that derive their value from underlying assets. While derivatives are typically associated with a specific asset class, they can also be based on multiple underlying securities from different asset classes. This complexity introduces significant risks, especially when derivatives are integrated into new investment vehicles involving debt and equities (Valdivia-Velarde, 2012). Despite the inherent risks, derivatives have gained widespread popularity for managing risk, particularly within the financial sector. Zhang (2009) emphasizes the usage of derivatives as a risk mitigation strategy by management in several industrialized countries' financial institutions. Further, revealing financial derivatives information can improve the quality of financial reporting, instilling greater confidence in the company's performance (Bartram, Brown, & Conrad, 2011). Although, the development of alternative financial instruments like derivatives has added complexity to the investment and funding landscape and

have offered the potential for significant profits, they can also be highly risky, especially when embedded in new investment vehicles. Nevertheless, derivatives have become an important tool for managing risk, particularly within financial institutions. By disclosing information about financial derivatives, companies can further enhance the quality of their financial reports and instil confidence in their current and future performance.

Financial reporting's main goal is to give useful financial data on economic entities so that decisions may be made in an efficient manner. Details regarding a company's operations and anticipated cash flows are included in this report, which mostly relates to financial issues. Equity investors heavily rely on this information, as emphasized by Osirim and Moses (2019), Agbogun and Taiwo (2020), and Uwuigbe et al. (2018). Financial reporting involves the organized arrangement of accounting data by management to meet the diverse needs of various users, including regulators, government bodies, customers, suppliers, management, and both current and potential investors. A precise and high-quality financial report serves as a powerful tool for conducting financial analysis, feasibility assessments, and interpretation. According to Halilbegovic and Mekic (2017), the disclosure of information regarding financial derivative instruments contributes to the generation of high-quality financial reports. When making choices about investments, credit, and resource allocation, capital providers and other stakeholders are positively impacted by this transparency. To generate value and reduce unanticipated negative effects that might have been neglected in business circumstances, it is essential to have a thorough understanding of how revealing financial derivative information relates to the quality of financial reporting. Derivatives are instruments that financial institutions can use to control the risks involved with off-balance sheet transactions as well as to speculate on changes in currency exchange rates, interest rates, and commodity prices. This advantage serves as a catalyst for banks to optimize their business strategies and enhance the effectiveness of their risk management practices. It is of utmost importance to quantify these advantages to maintain value creation.

The issue of disclosing information about derivative instruments employed by finance companies to manage financial risks is a highly debated topic in financial economics. This debate stems from the bankruptcies and near collapses that occurred in the 1990s and 2000s, which were partially caused by derivatives (Osirim & Moses, 2019; Agbogun & Taiwo, 2020). For instance, Enron's collapse was attributed to its use of energy derivatives, Barings Bank lost £927 million in a futures contract, and Metallgesellschaft AG suffered over $1 billion in future hedge losses (Julius & James, 2021). More recently, Mitchells and Butlers' hedging failure of £391 million resulted in a loss of £274 million, eroding shareholders' value by 30% and wiping out the company's total profit from the previous two years (Julius & James, 2021). Various empirical studies have demonstrated insufficient reporting of derivative usage in companies under different regulatory regimes in the US and the UK (Barbosa et al., 2020; Bocken et al., 2019; Fonseca et al., 2020; Migliorelli, 2021; Oprean-Stan et al., 2020). To increase the level of information given in annual reports, calls to harmonize reporting methods by switching from local generally accepted accounting principles (GAAPs) to international financial reporting standards (IFRSs) are growing. Even though there have been numerous studies on the quality of financial reporting undertaken globally (Chanzu & Gekara, 2014), no study of a comparable nature has particularly looked at the impact of releasing information regarding financial derivative risks on the quality of financial reporting in Nigeria. Previous studies have explored corporate governance and firm attributes that determine financial reporting quality in Nigeria (Echobu, Okika, & Mailafia, 2017; Kwanbo, 2020; Miko & Kamardin, 2015; Olowokure, Tanko & Nyor, 2016; Seiyaibo & Okoye,

2020), but none have investigated the impact of disclosing financial derivative risk information. Therefore, this study aims to provide empirical evidence on the relationship between financial derivative risk information disclosure and financial reporting quality of listed banks in Nigeria, among other objectives.

To achieve the objective of this study, section two is included to provide the literature review and hypothesis development which is closely followed by a presentation of the theoretical framework and a review of empirical literature. The third section outlines the methodology employed in this study, while the fourth and fifth sections focus on the discussion of findings and conclude with recommendations for policymakers.

Literature Review and Hypotheses Development

Financial Derivative Disclosure

Financial instruments known as financial derivatives are those whose value is based on the price and performance of another asset. According to McDonald (2013) and the International Monetary Fund (IMF), these instruments are used in financial markets to exchange certain financial risks in the form of contracts. They can be associated with various financial instruments, indicators, or commodities. The value of these derivatives predominantly relies on the performance of the underlying asset, which can include equity (such as stocks or stock indices), fixed-income instruments (including treasury bonds or notes), commodities (like gold, silver, crude oil, wheat, rice, etc.), interest rates (such as LIBOR - London Interbank Offered Rate, EURIBOR - Euro Interbank Offered Rate, NIBOR - Nigerian Interbank Offered Rate), foreign currency, and other financial instruments. Financial derivatives are a method used by financial institutions and businesses to protect themselves from a variety of risks, such as commodity risks, foreign exchange risks, and interest rate risks. Hedging involves adopting a position that counterbalances the exposure to actual risks. For instance, when a company relies on short-term loans with variable interest rates or issues commercial paper that matures, it becomes exposed to the risk of interest rate fluctuations. In such cases, the company may adopt hedging strategies by entering into transactions that would counterbalance potential losses if interest rates increase, resulting in a nearly equivalent gain. To mitigate the impact of varying interest rates, companies can make use of financial instruments such as forwards, futures, and options. Foreign exchange futures contracts can be utilized to hedge against foreign exchange risks. One commonly employed derivative instrument for managing interest rate risks is an interest rate swap. In these swaps, the underlying principal amounts are not changed; instead, fixed interest payments are switched for floating rate payments, or vice versa. Institutions can efficiently manage interest rate risk while holding onto significant longer-term assets by using derivatives like interest rate swaps and interest rate caps.

Financial Reporting Quality (FRQ)

Different authors offer varying definitions of financial reporting quality. While a widely accepted definition is lacking, the general concept pertains to the dependability and efficacy of accounting information in conveying its intended message. Pounder (2013) emphasizes that the value of financial reporting is often tied to its quality. Accounting quality, which includes the degree to which accounting information is free from errors, misstatements, and unethical accounting and managerial practices, is thought to be extremely advantageous for users of

financial reports. According to Briddle, Gilles, and Verdi (2009), the accuracy with which financial reports convey details about a company's anticipated cash flows to equity investors is a measure of financial reporting quality. Elbannan (2021) defines reporting quality as the extent to which a company's financial report successfully communicates its underlying economic state and performance throughout the measuring period. Tang Chen and Zhijun (2008), on the other hand, describe financial reporting quality as the degree to which financial statements convey true and unbiased information about the underlying performance and financial condition.

The definition of financial reporting quality varies among authors, but the core idea remains consistent: it refers to the reliability and effectiveness of accounting information in conveying its intended message. Pounder (2013) emphasizes that the value of financial reporting is closely tied to its quality. Accounting quality is extremely advantageous to various readers of financial reports since it refers to the extent to which accounting information is devoid of errors, misstatements, and unethical accounting and managerial activities. According to FASB, financial reporting serves a variety of goals, including providing fair financial and non-financial information that aids in the effective functioning of capital markets, resource allocation, and economic decision-making. The legal system, funding sources, tax system features, the engagement of accounting professionals, economic progress, and accounting literacy are all factors that affect the quality of financial reporting. Qualitative standards for financial reporting must be met to reach a specific degree of quality. Following the objective and qualitative qualities of financial reporting information provides good quality because the IASB and FASB have set these standards in their conceptual frameworks. The accuracy and usefulness of the accounting system depend on the quality of the financial reporting.

Derivative Risk Disclosure and Financial Reporting Quality

The term "financial reporting quality" is defined differently by different writers, but the core idea is the same: it refers to the dependability and efficiency of accounting information in communicating its intended message. Pounder (2013) emphasizes the link between the value and the quality of financial reporting. Accounting quality provides significant benefits to diverse users of financial reports by ensuring that accounting information is devoid of errors, misstatements, and unethical accounting and managerial practices. According to FASB, financial reporting serves a variety of functions, such as providing fair financial and non-financial information that supports the effective operation of capital markets, resource allocation, and economic decision-making. The legal system, finance sources, tax system characteristics, accounting professional involvement, economic progress, and accounting literacy are all elements that influence financial reporting quality. Achieving a certain level of quality in financial reporting necessitates the fulfillment of qualitative criteria. The IASB and FASB have established these criteria in their conceptual frameworks, and adherence to the objective and qualitative characteristics of financial reporting information ensures a high level of quality.

Financial reporting quality is indispensable for the effective operation and usefulness of the accounting system. Breeden and Viswanathan (1990) propose that effective risk management results in more stable cash flows, which holds significant value for shareholders. Similarly, Crosby and Briggs (1993) argue that stability in cash flows, along with the reduction of discount rates, is a means by which firms can enhance shareholder value. In recent times, companies have

become increasingly aware of the use of derivatives for both risk management and speculation. As a result, this awareness is gradually being reflected in financial statements, with regulatory bodies now requiring greater disclosure in financial reporting, as pointed out by Graham and Rogers (2002). The awareness of derivatives has particularly grown since the global financial crisis of 2008-09, which had a profound and enduring impact on the global economy, with numerous countries still undergoing recovery efforts. Consequently, scholars have dedicated significant research to examining the role of derivatives in the crisis and identifying strategies to prevent the recurrence of similar situations in the future. This study aims to investigate the influence of disclosing financial derivative risks on the quality of financial reporting, with the expectation that such disclosure will have a discernible negative impact on financial reporting quality.

Theoretical Framework

Information Asymmetry Theory

One relevant theory that can help explain the theoretical nexus between financial derivative risk disclosure and financial reporting quality is the information asymmetry theory. This theory posits that in financial markets, information is not equally available to all market participants (Karunaratne & Rajapakse (2015). As a result, some market participants have an information advantage over others, which can lead to inefficiencies in financial markets. In the context of financial derivative risk disclosure and financial reporting quality, the information asymmetry theory suggests that firms that disclose complete and accurate information about their derivative risks can reduce information asymmetry and enhance market efficiency (Kwon, 2018). By disclosing relevant and timely information about their derivative risks, firms can reduce the uncertainty and risk associated with their financial performance and risk exposure thereby help investors and analysts make more informed investment decisions, which can enhance the efficiency of financial markets. Moreover, the information asymmetry theory suggests that the completeness and accuracy of financial information disclosed by firms can affect the cost of capital and the valuation of firms (Gay, Lin, & Smith, 2011). When firms disclose complete and accurate information about their derivative risks, investors can better assess the risk and return of the firm, which can lead to lower cost of capital and higher firm valuation. Conversely, incomplete or inaccurate information can lead to mispricing and misallocation of capital, which can lead to lower firm valuation and higher cost of capital. Therefore, the information asymmetry theory provides a theoretical basis for the importance of financial derivative risk disclosure in enhancing financial reporting quality and improving market efficiency.

Empirical Review

Osayi, Kasimu, and Nkwonta (2018) conducted a study to investigate financial market derivatives impact on performance of listed deposit money banks in Nigeria. Profit after tax rato was employed as a metric for firm financial performance, while Derivative Liabilities, Derivative Assets and Derivative Trading Income, were employed as indicators of market derivatives. The study covered a five-year period (2010-2014) and utilized ordinary least square regression analysis technique to establish the relationship between the variables. The results demonstrate a

positive correlation between derivative financial assets and the performance of deposit money banks in Nigeria.

Mungai and Wafula (2021) conducted a study to assess the influence of financial risk hedging practices on the value of non-financial firms listed in Kenya. The researchers employed a combination of secondary data extracted from published annual reports of non-financial listed firms for the period of 2015-2019, as well as primary data collected through well-designed questionnaires administered to Chief Financial Officers (CFOs) to identify the strategies implemented by these firms. According to the study's findings, both market risk hedging and credit risk hedging procedures had a positive significant influence on business value. Further, the findings revealed that liquidity risk hedging and financial risk hedging strategies have a positive significant impact on the value of Kenya's listed non-financial enterprises.

Yang et al. (2022) investigates how financial derivatives effect firm value by evaluating the characteristics of managers in Shanghai A-share listed firms from 2011 to 2020. Using a moderating effects model, the study demonstrates that financial derivatives have a significant positive impact on the enterprise value of Chinese listed companies, with a specific focus on greater influence of exchange rate derivatives. Moreover, the research highlights that the effectiveness of financial derivatives is more pronounced when there is a higher proportion of managers who possess share ownership and financial backgrounds. These findings have important implications for companies' risk management decisions, particularly in the context of the COVID-19 pandemic.

Eragbhe and Omokhudu (2018) conducted a study to evaluate the value relevance of financial derivative instruments in Nigerian banks listed on the stock exchange during the period of 2012 to 2015. The research utilized a modified version of the Ohlson model, incorporating financial derivative assets and liabilities as variables. Panel regression analysis was employed to account for heterogeneity in the data sample which revealed that there is no statistically significant relationship between derivative assets and share prices of listed commercial banks in Nigeria. The analysis further suggests that, except for earnings per share and firm size, derivative assets, derivative liabilities, and book value per share did not demonstrate substantial relevance to firm value.

Adedamola and Shittu (2020) conducted a study to explore the influence of financial derivatives on the profitability of eight selected deposit money banks in Nigeria. The research collected data from the annual financial reports of the selected banks for the period of 2012 to 2017. Panel regression analysis technique with loan and advances to customers as controlling variable was employed to investigate the relationship between the dependent variable, profitability, and the independent variables, derivative assets and derivative liabilities. The findings indicate that derivative assets have a positive significant impact on profitability, whereas financial derivative liabilities show an insignificant effect.

3.0 Methodology and Data

This study adopts an ex-post facto research design, primarily driven by the reliance on historical data. The population under investigation consists of all commercial banks listed on the Nigerian Exchange Group. The study specifically focuses on commercial banks involved in accepting

deposits and providing loans. According to the Nigeran Stock Exchange Factbook (2021), there were a total of 14 listed commercial banks during the period of interest (2012 to 2021). The sampling technique employed is purposive, which ensures availability and accessibility of relevant data for analysis and 12 banks met the study criteria. The ordinary least square regression analysis technique is chosen as it allows for the examination of cause-and-effect relationships between independent and dependent variables. It measures the extent to which a set of variables can predict a specific outcome. Further, the data is assessed to ensure it meets the ordinary least square regression assumptions, including normality, absence of multicollinearity, and homoscedasticity, in order to enhance the reliability of the conclusions drawn. The model is expressed in an econometric form, capturing the relationship between the variables under investigation.

Financial Derivative Model

$$FRQT_{it} = \beta_0 + \beta_1 DFRD_{it} + \beta_2 CFOA_{it} + \mu_{it}$$

Where:

FRQT	=	Financial Reporting Quality
DFRD	=	Derivative Risk Disclosure
CFOA	=	Cashflow
β_0	=	Constant
β_1- β_5	=	Slope Coefficient
μ	=	Stochastic disturbance
i	=	i^{th} banks
t	=	time period

4.0 Empirical Results and Discussion

The study provides some basic statistic information for both the explanatory and dependent variables of interest. Each variable is described based on the mean, standard deviation, maximum and minimum. Table 1 displays the descriptive statistics result of the study.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
josa	120	-.0535	.0980709	-.37	.25
dfrd	120	.3333333	.4733811	0	1
cfoa	120	.0248333	.0799263	-.17	.23

Source: Authors' Computation

The result from the descriptive statistics shows that the mean value of financial reporting quality in terms of Jones Discretionary Accrual (JOSA) is -0.05 corresponding to a standard deviation of 0.10 during the period under investigation. In general, the lower the value the better the financial reporting quality since financial reporting quality has been documented to have an inverse relationship with the Jones Discretionary Accrual Model. The result also revealed that the independent variable of derivative information disclosure (DFRD) has a mean value of 0.33 with a standard deviation of 0.47 during the period under review.

Discussion of Result

Specifically, to test the formulated hypotheses of this study, pool ordinary least square regression analysis technique is employed. The test for heteroscedasticity reveals the absence of heteroskedasticity and the result is presented and discussed.

Table 2 Pool Ordinary Least Square Regression Analysis Results

VARIABLES	Derivative Risk Disclosure	Cash Flow to Asset	Constant
Coef.	0.009	-1.138	-0.028
z_ Stat	(5.99)	(-20.38)	(-6.02)
Prob_ t	{0.000} ***	{0.000}	{0.000}
Wald chi^2 = 20.03, Prob. > Chi^2= 0.0002			

F-Statistics: {270.94 (0.0000)}; R-Squared: 0.8224; Mean VIF: 1.36; Hettest: {0.10 (0.7472)}

Note: () and {} contains t-statistics and the respective probabilities
Where: * represent 1% level of statistical significance**

Authors' Computation

The table show the R-squared value of 0.8224 which indicate that about 82% of the systematic variations in the financial reporting quality measured in terms of Jones Discretionary Accrual of listed banks in Nigeria is jointly explained by the independent variable and control variable employed in the model. Further, the F-statistic value of 155.49 and the associated p-value of 0.0000 shows that the specified model is statistically significant at 1% level suggesting that the regression model is valid and can be used for statistical inference. However, the study conducts multicollinearity and heteroscedasticity tests to further ascertain the validity of the regression estimates. Specifically, as indicated in the table 2, a mean VIF value of 1.83 indicates the absence of multicollinearity while the test for heteroscedasticity indicates a homoscedastic model which appear to be statistically appropriate for interpretation and policy recommendation.

Specifically, the results reveal that derivative risk information disclosure {0.009 (0.000)} has a significant positive effect on financial reporting quality of listed commercial banks in Nigeria. Increases in the values of discretionary accrual (employed in measuring financial reporting quality) connotes poor financial reporting quality. Therefore, the null hypothesis is rejected. This finding is consistent with similar outcome of Smith et al. (2020) who concluded that firms which use derivative in risk management show more growth opportunities and more convex tax function compared to that of non-users and thus decreases financial reporting quality. However, this outcome negates that of Geczy et al. (1997). This result is seen to align with those of Ayturk, Gurbuz, and Yanik, (2016) who noted that derivatives are complex financial instruments, and disclosing information about them may be challenging for firms, investors, and analysts. The complexity of derivatives may make it difficult for investors to assess their value and risk, leading to misinterpretation and errors in financial reporting. Also, this outcome is suggestive of incomplete derivative risks information disclosure which could be misleading, or difficult to understand, and becomes un useful to investors and analysts in assessing the firm's risk exposure hence lowering financial reporting quality (Phua, Lok, & Doddy 2018). Further, in the event where commercial banks engage derivatives for risk management purposes (hedging against market risks), which is a common practice among listed banks in Nigeria such practices may help reduce risk exposure but could also lead to increased complexity in financial reporting, as well as difficulties in measuring and disclosing the impact of derivative instruments on financial performance hence result in lower financial reporting quality.

5.0 Conclusion and Recommendation

This study examines the effect of financial derivative risk disclosure on financial reporting quality in Nigeria by employing samples from banks that are listed on the floor of the Nigerian Exchange Group using annual data that covers the period 2012 to 2021. Specifically, the study concludes that financial derivative risk information disclosure leads to poor reporting quality. Generally, this study appluads the International Financial Reporting Standard for the provison of IFRS 7 which requires that listed firms discloses information relating to financial derivative usage. However, based on the findings of this study, it is recommended that policymakers could work with regulatory bodies and standard-setting organizations to develop standardized disclosure practices for derivative instruments. Standardization would improve comparability and consistency of information across firms, making it easier for investors and analysts to evaluate and compare risks associated with derivative instruments. Also, policymakers could encourage or require training and education for investors and analysts on the complexities of derivative instruments and their disclosure to help them better understand the information disclosed by firms and make more informed investment decisions. Policymakers might do a lot more to bolster enforcement mechanisms to ensure that firms follow disclosure rules and disclose comprehensive and accurate information about derivative risks. This will help to improve financial reporting quality and boost investor trust in financial markets.

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