



**QUALITY OF TRADE RECEIVABLES, CASH HOLDINGS AND FIRM  
VALUE OF DEPOSIT MONEY BANKS IN NIGERIA**

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**KEY WORDS**

*Credit Quality, Cash Holding, Firm value, Loan loss*

**ABSTRACT**

*This study examines the impact of the quality of trade receivables quality and cash holdings on firm value among listed Deposit Money Banks (DMBs) in Nigeria from 2013 to 2023. Using Panel Generalized Least Squares (PGLS) regression, the results show that poor receivables quality (TRCQI) and high cash holdings significantly reduce firm value. Receivables turnover also has a negative effect, suggesting that overly aggressive recovery may harm long-term value. Non-performing loan ratio and loan loss provisions show insignificant effects. The study concludes that efficient receivables management and optimal cash utilization are essential for enhancing firm value. DMBs should improve credit oversight, avoid excessive liquidity, adopt balanced recovery strategies, and enhance transparency to boost investor confidence.*

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**Introduction**

The performance and sustainability of firms in the financial services industry are increasingly evaluated not only through traditional accounting metrics such as profitability and earnings per share but also through market-oriented measures of value such as market capitalization, Tobin's Q, and economic value added (Achema, 2023). Firm value, in this context, reflects the aggregate perception of investors regarding a company's ability to generate future cash flows, manage risk, and deploy resources efficiently (Ross et al., 2012). Therefore, for Deposit Money Banks (DMBs), the ability to maintain and enhance firm value is of paramount importance, particularly in a macroeconomic environment characterized by currency volatility, inflationary pressures, regulatory changes, and persistent credit risk (Olaoye & Fajuyagbe, 2020).

Among the most critical determinants of firm value in the banking sector is quality of credit, which broadly refers to the risk of default inherent in a bank's loan portfolio. Credit quality can be proxied by indicators such as the non-performing loan (NPL) ratio, the loan-to-deposit ratio (LDR), the capital adequacy ratio (CAR), and

notably, trade receivables (REC) relative to total assets (Giesecke, 2004; Jacobson & Schedvin, 2015). High levels of NPLs indicate deteriorating asset quality and require provisioning that adversely affects profitability and shareholder equity. A high LDR may signal aggressive credit expansion and liquidity pressure, while a weak CAR reflects an insufficient capital buffer to absorb credit losses. Each of these factors impacts how markets perceive a bank's solvency, risk profile, and value (Diaconu & Oanea, 2015; Sanusi, 2012).

Trade receivables (REC) constitute a significant portion of banks' credit exposures and an essential element of working capital and liquidity management. In global contexts, non-financial firms in the United States allocate around 11.9% of total assets to receivables, underscoring their role in sustaining sales and managing liquidity (Aktas et al., 2015). At the macro level, trade credit represents over 21% of the U.S. GDP, highlighting its systemic importance (Goncalves, 2016). Within Nigerian DMBs, trade receivables reflected in loans and other credit instruments are vital for revenue generation and financial stability. Their quality, determined by timely collection and low default rates, has profound implications for asset performance and ultimately firm valuation (Jacobson & Schedvin, 2015; Ross et al., 2012).

Complementary to receivables management is the strategic holding of cash. Optimal liquidity provides banks with the flexibility to weather financial distress and capitalize on growth opportunities (Faulkender & Wang, 2006). However, excessive cash retention may signal managerial inefficiency, a lack of viable investment opportunities, or excessive risk aversion traits that may depress investor confidence and firm valuation (Martínez-Sola et al., 2013). The interplay between receivables quality and cash holdings is thus complex: poor credit quality may necessitate larger liquidity buffers, while efficient receivables turnover can enable leaner, more agile cash strategies (Acharya et al., 2012).

The strategic relevance of receivables has intensified in the wake of global financial uncertainties. For instance, Baños-Caballero et al. (2019) highlighted receivables as a tool for stimulating sales and fostering customer loyalty, especially in competitive environments. During the COVID-19 pandemic, constrained access to bank credit led firms to increasingly rely on trade credit as a substitute for formal financing (Carbó-Valverde et al., 2021). In Nigeria, firms particularly in manufacturing and retail have adopted trade receivables more extensively to support sales and preserve customer relationships in a liquidity-challenged economy (Uwuigbe et al., 2022). However, this trend raises concerns over elevated credit risk and liquidity erosion during economic downturns (Okoye et al., 2020).

Additionally, it is generally believed that investment in receivables is affected by firm-specific and macroeconomic factors such as industry characteristics, customer power, and financial constraints (Niskanen & Niskanen, 2023). From a managerial standpoint, optimizing receivables performance is crucial for minimizing bad debts, enhancing liquidity, and sustaining operational efficiency. Technological advances, including digital receivables tracking and automated invoicing systems, have emerged as critical tools for real-time monitoring and efficient collections (PwC, 2021).

While existing studies have explored links between credit risk and profitability (Nwanna & Oguezue, 2017; Asiedu, 2019), there is a notable gap in the literature regarding the combined effect of credit quality of trade receivables measured by a composite index of trade receivables credit quality and specific index of non-performing loan ratio (NPL ratio), receivables turnover, and loan loss provisions and cash holdings on firm value, especially among listed Nigerian DMBs. Prior studies often treat these indicators independently, neglecting how they may interact to jointly shape investor valuation. For example, a high-quality receivables portfolio could reduce the need for conservative cash buffers, while poor credit performance might compel increased liquidity retention. The nuanced dynamics between asset quality and liquidity capacity warrant deeper empirical investigation.

In contrast, the trade-off theory underscores the importance of maintaining adequate liquidity to balance financial flexibility and risk exposure (Kraus & Litzenberger, 1973). The pecking order theory further asserts that firms tend to rely on internal financing, especially cash reserves, to mitigate external financing frictions in uncertain or underdeveloped credit markets (Myers & Majluf, 1984). Despite the theoretical richness of these models, they have rarely been integrated into empirical frameworks that reflect the institutional realities of Nigerian financial markets. Methodologically, much of the existing research is limited by short time frames and cross-sectional designs, which are insufficient to capture the dynamic interactions and structural shifts within the Nigerian banking landscape. In addition to its methodological imperative, the sectorial relevance of this research is amplified by Nigeria's historical susceptibility to banking failures and systemic crises. The 2009 banking crisis and subsequent interventions by the Asset Management Corporation of Nigeria (AMCON) revealed deep-rooted structural vulnerabilities in the sector, including high NPLs, underperforming assets, and insufficient capital buffers (Sanusi, 2012; Eke, Ogunyemi, & Obasi, 2019). These persistent inefficiencies continue to compromise firm value and threaten financial system resilience, underscoring the urgency of exploring effective credit and liquidity management strategies within the sector.

Against this backdrop, this study seeks to empirically examine how the credit quality of trade receivables measured using indicators such as NPL ratio, receivables turnover, and loan loss provisions influences the cash holding behavior of listed DMBs in Nigeria.

## **Literature Review**

### **Firm Value**

Firm value refers to the overall worth of a company as perceived by investors and stakeholders, and it is often used as a comprehensive indicator of a firm's financial health, operational efficiency, and long-term sustainability (Damodaran, 2012; Brigham & Daves, 2019). In the context of deposit money banks (DMBs), firm value encompasses both accounting-based and market-based performance indicators,

capturing the bank's ability to generate sustainable returns, manage risk, and create shareholder wealth (Akani & Onyema, 2017; Ofoegbu & Megbuluba, 2016).

According to financial theory, firm value is traditionally measured through accounting ratios such as return on assets (ROA) and return on equity (ROE), which evaluate a bank's capacity to convert its resources into profits. More recently, market-based measures such as Tobin's Q and market capitalization have gained prominence. Tobin's Q, which represents the ratio of the market value of a bank's assets to their replacement cost, serves as a forward-looking measure reflecting investors' expectations of future profitability and growth (Etim, et al., 2022; Tuoyo et al., 2023).

Internal financial management practices play a pivotal role in shaping firm value, particularly within the context of the banking sector. Conceptually, firm value reflects the collective judgment of investors regarding a firm's capacity to generate sustainable cash flows, manage risk effectively, and maintain financial stability. Credit risk management characterized by low non-performing loan (NPL) ratios and disciplined trade receivables policies functions as a proxy for strong internal governance and effective resource allocation, which positively influence market valuation by reducing perceived risk (Olabisi et al., 2019; Appah, 2023).

Similarly, liquidity optimization enhances a bank's ability to meet its short-term obligations and adapt to financial shocks, reinforcing operational continuity and stakeholder trust (Medo-Uwa, 2019; Virginus, 2020). These practices, when aligned with strategic financial goals, conceptually contribute to enhancing firm value by signaling institutional soundness and management competence. Corporate governance is another critical determinant of firm value. Banks with strong governance frameworks characterized by independent boards, transparent disclosure practices, and prudent oversight tend to command higher market valuations due to reduced perceived risk (Bencharles & Nwankwo, 2021; Oranefo & Ezu, 2023).

### **Credit Quality of Trade Receivables**

Trade receivables credit quality (TRCQ), within the context of the banking sector, refers to the extent to which loans and advances extended to customers are collectible in a timely and complete manner. It serves as a critical indicator of the creditworthiness of a bank's loan portfolio and reflects the institution's asset quality and credit risk exposure. High-quality trade receivables suggest that the bank maintains effective credit appraisal and monitoring systems, while deterioration in credit quality implies heightened credit risk, increased default likelihood, and reduced earnings predictability (Jacobson & Schedvin, 2015; Hill et al., 2015).

$TRQI_1 = \text{Non-Performing Loan (NPL) Ratio} \times \text{Receivables Turnover}$ , capturing the interaction between credit impairment and collection efficiency;  $TRQI_2 = TRQI_1 \times \text{Loan Loss Provision (LLP) Trend}$ , incorporating the bank's provisioning behavior as a signal of expected credit losses;  $TRQI_3 = TRQI_2 \times \text{Profitability Trend} \times \text{Aggressive Loan Growth Rate}$ , integrating performance-based and behavioral dimensions into the quality measure. This formulation aligns with prior studies that emphasize the relevance of composite indicators in measuring credit risk, provisioning adequacy,

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and performance sustainability in the banking sector (Melumad & Nissim, 2009;  
Jacobson & Schedvin, 2015; Olaoye & Fajuyagbe, 2020).

Thus, TRCQ in banks provides a comprehensive measure of credit asset soundness by synthesizing operational credit performance with provisioning behavior and financial outcomes. The TRQI framework offers a dynamic tool for monitoring and forecasting asset quality trends and can guide both managerial decisions and regulatory oversight.

### **Non-Performing Loans Ratio**

Non-Performing Loan Ratio (NPLR) Non-performing loan ratio measures the proportion of loans for which the principal or interest has remained unpaid for 90 days or more. In line with the Central Bank of Nigeria (CBN), a loan is considered non-performing if it exceeds this 90-day threshold, and this metric is critical in evaluating the credit risk and asset quality of banks (CBN, 2020). The NPL ratio reflects the quality of a bank's loan portfolio and is often used in regulatory assessments. Higher NPL ratios indicate increased credit risk and deteriorating asset quality (Oyelade, 2019; IMF, 2020). Empirical findings have shown mixed outcomes on the impact of NPL on financial performance (Doa et al., 2020; Asari & Endric, 2019; Mrindoko et al., 2020).

### **Loan Loss Provisions (LLP)**

Loan loss provisions represent the estimated amount that banks set aside to cover potential losses arising from non-repayment of loans. LLP acts as a cushion against expected credit losses and is directly related to the NPL ratio. Banks typically increase provisions when there is a rise in default risks, thereby impacting reported earnings and financial performance (Isa & Fie, 2013; Mamun, 2004). LLP is influenced by managerial discretion and may be subject to earnings management, although it remains a vital tool for maintaining financial stability (Abdullah et al., 2017; Wood & Skinner, 2018; Zheng et al., 2019). While some studies report a positive relationship between LLP and performance (Ahmad & Tahir, 2019), others show negative associations (Teshome et al., 2018; Alhadab & Alsahawneh, 2016).

### **Receivables Turnover (RT)**

Receivables turnover measures the efficiency of a bank or firm in collecting its outstanding credit sales. It is calculated as net credit sales divided by average trade receivables. A higher receivables turnover ratio indicates more efficient collection processes and better credit quality, while a lower ratio may signify collection issues or deteriorating credit conditions (Goddard, Tavakoli, & Wilson, 2005). RT serves as a complementary measure to ACP and helps evaluate the operational aspect of credit risk management.

### **Cash Holdings**

Cash holdings represent the most liquid form of asset available to a firm and serve as a foundational tool in liquidity management, enabling organizations to meet short-term obligations, support day-to-day operations, and exploit emergent

investment opportunities (Medo-Uwa, 2019; Nnubia et al., 2020). In the context of deposit money banks (DMBs), maintaining optimal cash levels is critical due to the inherently volatile nature of financial markets and the high sensitivity of banks to liquidity risk.

The level of cash holdings is determined by a combination of internal factors such as managerial decision-making, risk tolerance, and operational efficiency and external considerations, including macroeconomic conditions and regulatory frameworks (Virginus, 2020; Ogundipe et al., 2022). Internally, conservative risk management practices are associated with higher levels of precautionary cash reserves, while aggressive strategies that prioritize asset utilization tend to reduce cash balances, thereby increasing exposure to liquidity shocks (Amahalu, 2019; Aduwo & Aduwo, 2023).

### **Trade Receivables**

Externally, regulatory mandates such as statutory liquidity ratios compel banks to maintain minimum cash reserves, while macroeconomic volatility especially during downturns further influences precautionary motives for cash retention (Okoh et al., 2025; Ebiaghan & Jeroh, 2020). This dual influence emphasizes the importance of striking a balance between liquidity adequacy and opportunity cost, as excessive cash holdings may impair profitability due to the foregone returns from alternative investments (Dan, 2020; Nworie et al., 2023).

### **Empirical Review**

Aliyu et al. (2024) examined the effect of credit risk measured by NPL ratio, capital adequacy, and loan loss provisions on the financial performance of listed deposit money banks in Nigeria (2014–2023). Using a correlational design and GLS regression, the study found that NPLs negatively affected financial performance, though significance was not stated. It recommended stricter CBN monitoring to reduce NPLs and concluded that effective credit risk management enhances bank performance and value.

Ngumbau (2023) investigated the effect of loan loss provisions (LLP) on the firm value of listed commercial banks in Kenya over the period 2018–2022. The study employed an explanatory research design and used linear regression analysis to test the relationship. The findings showed that LLP had a positive but statistically insignificant effect on firm value, suggesting that although provisioning may reflect prudent credit risk management, it does not have a direct influence on market-based firm valuation. The study recommended that banks should periodically review their provisioning policies to ensure that they reflect true risk exposure and maintain stakeholder confidence in financial reporting. The study concluded that LLP, while a protective tool, must be balanced to avoid masking financial performance or sending mixed signals to investors.

In a related study, Afolabi et al. (2023) evaluated the effect of credit risk management on profitability and firm value of Nigerian DMBs. Using regression analysis on 15 banks over five years, the study established that effective credit risk

management enhances profitability. While closely linked to liquidity and firm value, the study did not isolate cash holdings as a separate strategic variable.

Focusing on the Nigerian banking sector, Umoru et al. (2023) assessed the determinants of firm value using selected accounting ratios. Drawing data from 30 banks over four years, the study found that profitability, asset quality, and liquidity significantly influence firm value. Although informative, it did not specifically isolate the role of cash holdings or macroeconomic influences

Bencharles and Nwankwo (2021) analyzed the effect of asset quality (NPL ratios) on profitability (ROA) of 12 Nigerian banks (2007–2019) using FGLS regression. Results showed both negative and positive effects of NPL ratios, but none were statistically significant. The study recommended improved NPL monitoring and loan recovery and concluded that asset quality influences profitability but may be moderated by managerial and sectoral factors.

Anetoh et al. (2021) investigated the influence of credit and operational risk on the firm value of listed deposit money banks in Nigeria over the 2010–2019 period, applying Structural Equation Modeling (SEM). RT was included as a component of the credit risk construct. The findings showed that credit risk driven by poor receivables turnover had a significant negative effect on firm value, suggesting that inefficiencies in receivables management reduce earnings and investor confidence. Conversely, operational risk had a significant positive influence, highlighting the role of strong internal controls. The study recommended improving credit appraisal procedures and ensuring receivables are linked to viable loan projects. It concluded that receivables efficiency is vital to sustaining liquidity and optimizing bank valuation

Guldehen (2021) examined the effect of deteriorating trade receivables credit quality (TRCQ) on corporate cash holdings and firm value among U.S.-listed firms. Using a dynamic panel model and the system GMM estimation technique, the study found that worsening receivables quality (proxied by rising average collection period and migration into higher risk buckets) leads to precautionary increases in cash holdings and a concurrent decline in firm value. The study recommended that firms should strengthen credit policy enforcement and regularly monitor customer risk profiles to avoid liquidity traps. It concluded that TRCQ serves as a leading indicator of declining operational efficiency and value erosion.

Abuhommous and Almanaseer (2020) studied the relationship between trade credit, financial credit, and firm value in U.S. non-financial firms. Utilizing fixed-effects panel regression over a ten-year dataset, they found that trade credit positively impacts firm value by enhancing sales and customer retention, while financial credit (bank loans) had a negative effect due to interest burdens. The study recommended leveraging trade credit as a competitive tool and minimizing dependence on costly external financing. It concluded that trade receivables, when effectively managed, can serve as a source of value creation rather than just a liquidity drain.

Medo-Uwa (2019) examined the impact of cash management on the profitability of Deposit Money Banks (DMBs) in Nigeria. Using secondary data from 18 banks over a six-year period, regression analysis revealed that optimal cash

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management enhances profitability by balancing liquidity needs and minimizing idle funds. The study, however, did not consider macroeconomic variables that might influence cash policy effectiveness.

Virginus (2020) explored how firm characteristics moderate the relationship between cash holdings and financial performance among 50 listed Nigerian firms over five years. The findings, based on panel data regression, indicated that firm-specific factors such as size and growth opportunities significantly influenced cash holding decisions and their impact on profitability. However, the cross-sectional nature of the design limited longitudinal insights.

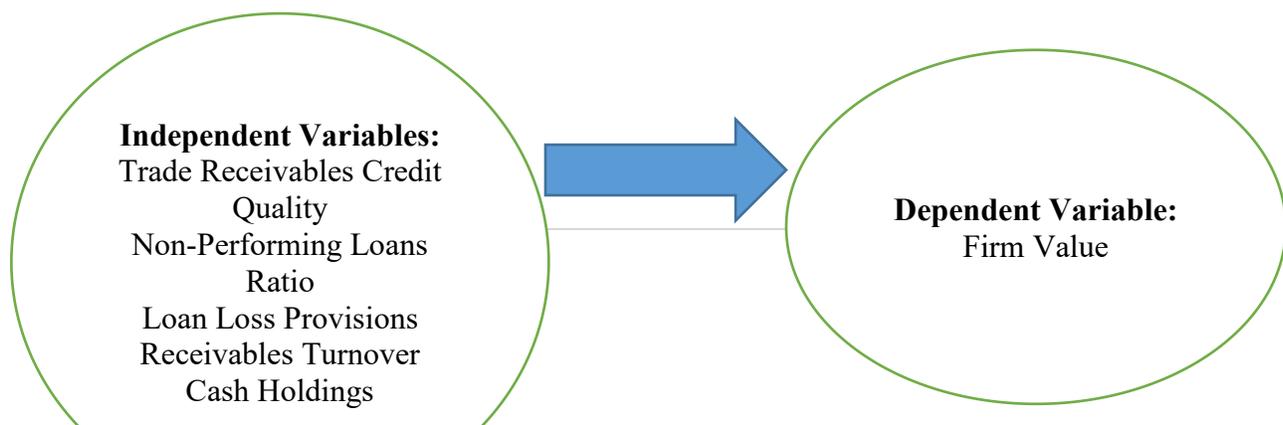
In a broader African context, Nnubia, Ofoegbu, and Nnubia (2020) studied firms from Nigeria, Kenya, and South Africa, using comparative regression analysis on data from 60 firms over five years. The study found that firm-specific factors such as size, profitability, and market volatility strongly influenced cash holding patterns and performance outcomes. While informative, the study's multinational scope may have introduced variability due to differing economic environments.

Amahalu (2019) focused on agricultural firms listed on the Nigerian Exchange, identifying liquidity needs, growth prospects, and market conditions as determinants of cash holdings. Based on regression analysis of 40 firms over four years, the study concluded that cash management significantly affects firm profitability, although its sectoral focus restricted generalizability to other industries.

Internationally, Habib et al. (2021) investigated the relationship between cash holdings and firm value among Chinese manufacturing firms. The study discovered a non-linear relationship, where excessive cash holdings in financially constrained firms negatively affected firm value, while moderate holdings improved value in unconstrained firms. The study further introduced managerial optimism as a moderating variable, finding that overly optimistic managers tend to hold excessive cash, potentially reducing firm value.

Similarly, Hameed and Leah (2024) examined the effect of cash holding on the value of 13 listed Nigerian DMBs from 2012 to 2022. Using ex-post facto design and multiple regression techniques (including fixed and random effects), the study found that profitability and sales growth had significant positive effects on cash holdings, whereas asset growth had no significant influence. The authors recommended that banks focus on leveraging sales growth and profitability to manage cash holdings and enhance firm value, cautioning against excessive asset growth that may not yield proportional value improvement.

### **Conceptual Framework**



## **Research Methodology**

This chapter details the research design and methodology employed in this study, which investigates the influence of credit quality of trade receivables and cash holdings on the firm value of deposit money banks in Nigeria over the period 2013 to 2023. The chapter outlines the research design, population and sampling techniques, data sources, model specification, variable measurement, data analysis procedures using E-views, and issues related to data reliability, validity, and ethics.

## **Research Design**

This study adopts a quantitative research design with a deductive approach to test hypothesis regarding the impact of trade receivables, credit quality and cash holdings on firm value. The design is both descriptive and causal in nature, enabling an investigation into the relationships among variables using secondary data. A time-series analysis over eleven-year period (2013-2023) is conducted, providing a robust framework to capture long-term trends and effects within Nigerian deposit money banks. By utilizing archival data from published financial statement and regulatory reports, the study circumvents the challenges of primary data collection while ensuring that the analysis is grounded in reliable and verifiable records.

The population of this study are all thirteen (13) deposit money banks operating in Nigeria. Given the dynamic nature of the Nigerian banking sector and the need for comprehensive financial data, the focus is on banks that have consistently reported detailed financial information over the designated study period. The listed banks represent a cross-section of the industry, thereby ensuring that the findings can provide insights applicable to the broader sector.

The study relied on secondary data obtained from the published annual reports and financial statements of the thirteen (13) listed Deposit Money Banks (DMBs) in Nigeria. These documents were accessed through the official websites of the respective banks, the Nigerian Exchange Group (NGX) portal, and the Financial Reporting Council of Nigeria (FRCN). Additional relevant data were extracted from the Central Bank of Nigeria (CBN) Statistical Bulletin, particularly for macroeconomic variables and regulatory insights. The data covered a eleven-year period from 2013 to 2023, and included key financial metrics such as non-performing loans (NPL), loan loss provisions (LLP), receivables turnover (RT), total assets, firm value indicators (Tobin's Q, market capitalization), and other control variables. These sources were

chosen for their credibility, accessibility, and consistency, which ensured the reliability and validity of the dataset used in the empirical analysis.

### **3.5 Model Specification**

The empirical model is specified to test the relationship between the credit quality of trade receivables, cash holdings, and firm value. Therefore the model of Melumad and Nissim, (2009) and Adiguzel (2021) is specified as follows:

$$TQi,t = \beta_0 + \beta_1 TQi,t-1 + \beta_2 TRCQI_{i,t} + X_{i,t} \beta_3 + Year\ Dummies + \varepsilon_{i,t} \dots (I)$$

Dependent variable:

TQ= Firm Value measured as Tobins Q that is (Market capitalization + total liabilities + preferred equity + minority interest) / total assets.

Independent variables:

TRCQI= Trade Receivables Credit Quality index and this composite can be derived from three steps. Each step of the TRQI index adds a dimension of credit quality insight.

#### **Step 1: TRQI<sub>1</sub> – Core Credit Quality**

TRQI<sub>1</sub>=NPL Ratio × Receivables Turnover where (NPL Ratio): Proportion of non-performing loans in total credit) and Receivables Turnover: Frequency of loan recovery; lower turnover suggests slower recovery. This measures the combined effect of bad loans and the speed of recovery that is how efficiently and reliably credit is being repaid.

#### **Step 2: TRQI<sub>2</sub> – Credit Risk Sensitivity**

TRQI<sub>2</sub>=TRQI<sub>1</sub>×Loan Loss Provision Trend where (Loan Loss Provision (LLP) Trend represents Increase or decrease in provisioning for potential bad debts).This introduces a forward-looking element, adjusting for management's expectations of future credit losses.

#### **Step 3: TRQI<sub>3</sub> – Financial and Behavioral Overlay**

TRQI<sub>3</sub>=TRQI<sub>2</sub>×ROA Trend×Loan Growth Rate where (ROA Trend): Trend in profitability (Return on Assets), (Loan Growth Rate: Indicates aggressive or conservative lending behavior).This integrates earnings quality and risk appetite to capture whether worsening credit is accompanied by declining profitability and risk-taking.

Therefore, the trade receivables credit quality composite index is

$$TRQI_i = (NPL\ Ratio \times Receivables\ Turnover) \times LLP\ Trend \times ROA\ Trend \times Loan\ Growth$$

A high TRQI could indicate deteriorating credit quality, especially if driven by rising NPLs, falling collections, increasing provisions, declining ROA, or aggressive credit expansion. A low TRQI suggests stable or improving credit quality, effective recovery, and controlled lending.

X= Control variables which include SIZE: ln (total assets), LVRG: Total liabilities / total assets GROWTH: Natural logarithm of (Sales<sub>t</sub> / Sales<sub>t-1</sub>), ROA: Earnings before interest, taxes, depreciation, and amortization / total assets.

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The model of Melumad and Nissim, (2009) and Adiguzel (2021) is adapted and modified for the study and stated in econometric terms as follows:

$$FV = \beta_0 + \beta_1 TRCQI_{it} + \beta_2 NPLR_{it} + \beta_3 LLP_{it} + \beta_4 RT_{it} + \beta_5 CH_{it} + \beta_6 BSIZ_{it} + \beta_7 CAR_{it} + \epsilon_{it} \dots \dots (II)$$

Where:

Dependent variables:

**FV** represents firm value (measured by market capitalization, Tobin's Q, and ROA),

**Independent variables are:**

**TRCQI** denotes the trade receivables credit quality index measured as

### **Step 1: TRQI<sub>1</sub> – Core Credit Quality**

TRQI<sub>1</sub>=NPL Ratio × Receivables Turnover where (NPL Ratio): Proportion of non-performing loans in total credit) and Receivables Turnover: Frequency of loan recovery; lower turnover suggests slower recovery. This measures the combined effect of bad loans and the speed of recovery that is how efficiently and reliably credit is being repaid.

### **Step 2: TRQI<sub>2</sub> – Credit Risk Sensitivity**

TRQI<sub>2</sub>=TRQI<sub>1</sub>×Loan Loss Provision Trend where (Loan Loss Provision (LLP) Trend represents Increase or decrease in provisioning for potential bad debts).This introduces a forward-looking element, adjusting for management's expectations of future credit losses.

### **Step 3: TRQI<sub>3</sub> – Financial and Behavioral Overlay**

TRQI<sub>3</sub>=TRQI<sub>2</sub>×ROA Trend×Loan Growth Rate where (ROA Trend: Trend in profitability (Return on Assets), (Loan Growth Rate: Indicates aggressive or conservative lending behavior).This integrates earnings quality and risk appetite to capture whether worsening credit is accompanied by declining profitability and risk-taking.

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A high TRQI could indicate deteriorating credit quality, especially if driven by rising NPLs, falling collections, increasing provisions, declining ROA, or aggressive credit expansion. A low TRQI suggests stable or improving credit quality, effective recovery, and controlled lending.

NPLR= Non-Performing Loan Ratio measured as Non-Performing loans/Total Loans

LLP=Loan Loss Provisions measured as ratio of loan loss provisions to total loans

RT= Receivables Turnover measured as ration of Total Loans to total Assets

**CH** represents cash holdings measured as cash-to-total-assets ratio.

**Control variables measured as** bank size, Capital Adequacy Ratio

$\epsilon$  is the error term,  $\beta_0 =$  *Intercept*,  $\beta_1$  to  $\beta_7$  are the coefficients

**Method of Data Analysis**

This study adopted a panel generalized regression analysis technique to examine the effect of receivables turnover and credit quality indicators on firm value among listed deposit money banks in Nigeria. The analysis was conducted using EViews statistical software. Descriptive statistics were employed to provide a summary of the dataset, including measures of central tendency and dispersion. To ensure the reliability and validity of the regression estimates, several diagnostic tests were performed. These included tests for multicollinearity (using variance inflation factors), heteroskedasticity (using the Breusch-Pagan/Cook-Weisberg test), and autocorrelation (using the Wooldridge test for autocorrelation in panel data). The results of these diagnostic tests guided the appropriate model specification and adjustments to enhance the robustness of the empirical findings.

## **DATA PRESENTATION, ANALYSES AND INTERPRETATION**

### **Diagnostic Tests of the Regression Model**

To ensure the validity of the regression estimates, diagnostic tests were carried out to examine potential econometric issues. The Variance Inflation Factor (VIF) test was used to detect multicollinearity among the explanatory variables. The results revealed VIF values well below the conventional threshold of 10, indicating that multicollinearity is not a concern and affirming the stability of the coefficient estimates.

Additionally, the Breusch-Godfrey LM test was employed to assess the presence of serial correlation in the residuals, while a heteroskedasticity test was conducted to verify the assumption of constant error variance. These tests are vital for validating the Ordinary Least Squares (OLS) assumptions. The null hypotheses for both tests posit the absence of serial correlation and the presence of homoskedasticity, respectively. The results support the reliability of the regression model, as there is no statistical evidence of autocorrelation or heteroskedasticity.

### **Panel Generalized Least Square Regression**

The Panel Generalized Least Squares (PGLS) regression was employed to address issues of heteroskedasticity and serial correlation detected in the model. PGLS provides efficient and consistent estimates by correcting for these violations of classical OLS assumptions in panel data.

**Table 1 Panel Least Squares Regression Estimates**

<b>Dependent Variable: FV</b>				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<b>C</b>	1.0180	0.0165	61.6160	0.0000
<b>TRCQI</b>	-16.8114	5.4671	-3.0750	0.0026
<b>NPLR</b>	-0.0206	0.0420	-0.4902	0.6248
<b>LLP</b>	0.0591	0.1400	0.4220	0.6738
<b>RT</b>	-0.0097	0.0022	-4.4772	0.0000
<b>CH</b>	-0.0052	0.0018	-2.9444	0.0039
<b>TANG</b>	-0.0145	0.0040	-3.6768	0.0004
<b>FAGE</b>	0.0008	0.0003	2.2226	0.0281

<b>R-squared</b>	0.7032	<b>F-statistic</b>	15.3396
<b>Adjusted R-squared</b>	0.6574	<b>Prob(F-statistic)</b>	0.0000
<b>S.E. of regression</b>	0.0533	Durbin-Watson stat	1.9200

Source: **Researcher's computation (2025)**

#### 4.2.4 Discussion of Result

The Durbin-Watson statistic of 1.9200 suggests the absence of significant autocorrelation in the residuals, thereby confirming the reliability and robustness of the regression estimates. The Panel Generalized Least Squares (PGLS) regression output provides empirical insights into the effects of trade receivables credit quality and cash holdings on firm value (FV) among listed Deposit Money Banks (DMBs) in Nigeria. The model integrates relevant explanatory variables reflecting credit risk, liquidity management, and structural firm characteristics.

The overall model is statistically significant, as indicated by the F-statistic of 15.3396 and its associated p-value of 0.0000. This implies that the explanatory variables jointly exert a statistically significant effect on firm value. The coefficient of determination (R-squared) is 0.7032, and the adjusted R-squared is 0.6574, indicating that approximately 66% to 70% of the variation in firm value is explained by the model. This suggests a strong explanatory power and an appropriate model fit. The intercept term (C) is positive and statistically significant, with a coefficient of 1.0180 ( $t = 61.6160$ ;  $p < 0.01$ ), indicating that, when all explanatory variables are held constant, firm value remains substantially high. This serves as a benchmark for assessing the individual contributions of trade receivables credit quality, cash holdings, and other firm-specific factors.

#### Discussion of Findings

This section discusses the effects of the study's independent variables – trade receivables, credit quality, non-performing loan ratio, loan loss provision, receivables turnover, and cash holdings—on firm value, using relevant empirical literature and theoretical perspectives (Agency Theory and Liquidity Preference Theory). Each finding is presented in statement form.

The study finds that the Trade Receivables Composite Quality Index (TRCQI) has a negative and statistically significant effect on firm value of listed Deposit Money Banks in Nigeria. This result implies that as the quality of trade receivables declines, firm value deteriorates significantly. The finding aligns with Guldehen (2021), who reported that poor-quality receivables lead to higher cash reserves and lower firm valuation. Similarly, Jacobson and Schedvin (2015) found that weak credit quality increases financing costs and destabilizes earnings, ultimately reducing firm value. From the Agency Theory perspective, this outcome may reflect poor monitoring of credit decisions by management, which adversely affects shareholder value. In line with Liquidity Preference Theory, low-quality receivables impair liquidity and cash flow reliability, which investors interpret negatively.

The result shows that the Non-Performing Loan Ratio (NPLR) has a negative and statistically insignificant effect on firm value. This indicates that while an increase in NPLs erodes firm value, the effect is not strong enough to be considered statistically meaningful. This finding corroborates the work of Bencharles and Nwankwo (2021), who also found an insignificant relationship between NPLs and financial performance. It is further supported by Aliyu et al. (2024), who reported that rising NPLs can impair profitability, though the degree of impact may vary across institutions. Conversely, Ngumbau (2023) found a positive relationship in the Kenyan context, possibly due to effective credit risk management structures. Agency Theory provides a lens to interpret these variations, suggesting that ineffective governance and monitoring could lead to misreporting or under-provisioning of bad loans, thus distorting firm value.

The analysis shows that Loan Loss Provision (LLP) has a positive and statistically insignificant effect on firm value. This suggests that provisioning for anticipated credit losses may not significantly impact market valuation, although it signals sound risk management. This outcome is consistent with Ngumbau (2023), who noted that LLPs serve as a form of protection but do not significantly affect value creation. Aliyu et al. (2024) similarly reported an ambiguous effect of LLPs on bank performance. Under Agency Theory, LLPs may reflect managerial discretion in earnings smoothing, which could obscure the true financial health of the firm. From a liquidity perspective, excessive provisioning could tie up funds that might otherwise be used to generate returns, thereby reducing valuation.

The findings indicate that Receivables Turnover (RT) has a negative and statistically significant effect on firm value. This outcome suggests that increased receivables turnover, possibly reflecting aggressive collection or unstable credit practices, negatively affects firm value. This finding aligns with Anetoh et al. (2021), who reported that poor receivables management diminishes firm value. In contrast, Hill et al. (2015) found that efficient receivables turnover improves firm valuation by reducing credit risk. From the Agency Theory viewpoint, the result may indicate that management prioritizes short-term liquidity metrics at the expense of long-term customer relationships and sustainable value. Liquidity Preference Theory further supports this, as overly rapid turnover may signal distress-driven collections rather than healthy credit flows.

The study confirms that Cash Holdings (CH) have a negative and statistically significant effect on firm value. This indicates that higher levels of idle cash are viewed unfavorably by investors, possibly due to concerns about inefficient resource utilization. The finding aligns with Habib et al. (2021), who reported a value-reducing effect of excessive cash, particularly in financially constrained firms. Similarly, Hameed and Leah (2024) emphasized that while profitability may drive cash accumulation, this does not necessarily enhance firm value. Agency Theory explains this result by suggesting that excess cash allows managers to engage in value-destroying projects or avoid distribution to shareholders. Liquidity Preference

Theory supports this by acknowledging that while liquidity is vital, holding excessive cash may reflect a lack of productive investment opportunities.

### **Recommendations**

Enhancing the quality of trade receivables requires the adoption of rigorous credit risk assessment frameworks, the enforcement of stricter credit approval procedures, and the implementation of efficient collection systems. Strengthening receivables management through comprehensive policies and investment in credit-monitoring technologies can reduce default risk and improve asset quality. Moreover, continuous training of credit personnel and adherence to sound credit standards are essential for sustaining receivables performance and fostering long-term financial resilience.

Reducing non-performing loans calls for the intensification of credit monitoring activities and the deployment of proactive risk mitigation strategies. Key actions include improving borrower assessment procedures, utilizing early warning systems for timely identification of credit deterioration, and conducting regular loan portfolio evaluations. Enhancing recovery efforts through legal recourse, asset restructuring, and collaboration with credit bureaus can further improve credit quality and minimize exposure to high-risk customers.

Maintaining robust and forward-looking provisioning practices is vital for safeguarding financial soundness. The use of predictive models to estimate expected credit losses, in accordance with IFRS 9, ensures timely recognition of impairments and strengthens financial reporting credibility. Adopting transparent and consistent provisioning policies, aligned with global risk governance standards, can boost investor confidence and support prudent financial management.

Balancing receivables turnover and customer relationship management is crucial for sustainable credit operations. Avoiding excessively aggressive collection measures helps preserve customer trust and long-term business relationships. Employing strategies such as client segmentation, optimized credit terms, and technology-driven collection processes enhances efficiency while maintaining customer satisfaction. Clear communication and flexible repayment arrangements can further support recovery efforts without eroding goodwill.

Optimizing liquidity requires aligning cash reserves with operational needs and strategic objectives. Rather than maintaining idle cash, resources should be allocated to value-generating activities, including short-term investments, credit extension, and strategic projects. The development of a dynamic liquidity management policy—supported by regular cash flow assessments and integrated investment planning—can improve capital efficiency and demonstrate responsible financial stewardship to stakeholders.

### **References**

Abdulai, R. A., Ogunsanwo, O. F., Adeleke, K. O., & Olowo, S. O. (2020). Effects of corporate governance and credit policies on delinquency management of

- microfinance banks in Nigeria. *International Academic Journal of Economics and Finance*, 3(5), 166–190.
- Abdulateef, Y., Oyindamola, O., & Teryima, S. (2019). The determinants of survival of listed deposit money banks in Nigeria. *NDIC Quarterly*, 34, 12.
- Abuhommous, A. A. A., & Almanaseer, M. (2021). The effect of credit risk management on value of commercial banks listed at Nairobi Securities Exchange. *Journal of Asian Finance, Economics and Business*, 8(3), 1241–1248.
- Achema, F. (2023). Liquidity management and firm value of listed deposit money banks in Nigeria. *IOSR Journal of Business and Management (IOSR-JBM)*, 25(12, Ser. 9), 59–74. <https://doi.org/10.9790/487X-2512095974>
- Achema, F., Nyor, T., & Agbi, E. S. (2022). Assets quality and profitability of listed deposit money banks in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 13(4, Ser. II), 19–29. <https://doi.org/10.9790/5933-1304021929>
- Acharya, V. V., Davydenko, S. A., & Strebulaev, I. A. (2012). Cash holdings and credit risk. *Review of Financial Studies*, 25(12), 3572–3609. <https://doi.org/10.1093/rfs/hhs100>
- Adedeji, L. O. (2021). *Bank specific characteristics and capital structure of listed deposit money banks in Nigeria* [Doctoral dissertation, Kwara State University (Nigeria)].
- Adegbite, T. A. (2024). Receivable and profitability: Analysis of Nigeria manufacturing companies with random effect. *JurnalBisnisStrategi*, 33(2), 133–149.
- Adeleke, A. O. (2022). *MP shocks and credit behavior of other depository corporations in Nigeria* [Doctoral dissertation, Walden University].
- Ademokoya, A. A., Salami, M. O., Isau, H. B., & Ibrahim, H. A. (2020). Credit risk management and profitability of deposit money banks in Nigeria. *Malet Journal of Accounting and Finance*, 2(1), 19–37.
- Adeyinka, A. J., Abiodun, A. J., & Kayode, O. J. (2019). Credit management and performance of deposit money banks in Nigeria. *The Journal of VN Karazin Kharkiv National University. Series: International Relations. Economics. Country Studies. Tourism*, 10, 84–94.
- Adiguzel, G. (2021). Credit quality of trade receivables and its impact on cash holdings and firm value. *International Journal of Business Administration*, 12(2), 88–101. <https://doi.org/10.5430/ijba.v12n2p88>
- Aduwo, O. O., & Aduwo, A. (2023). Working capital management and corporate performance of deposit money banks in Nigeria. *The Journal of Accounting and Management*, 13(2), 54–67.

- Afolabi, A. R., Okunade, S. O., Adeyemi, O. J., & Olaiya, O. J. (2023). How does credit risk management affect profitability of deposit money bank in Nigeria? *International Journal of African Innovation and Multidisciplinary Research*.
- Akani, E. N., & Onyema, E. M. (2017). Nigerian banking sector firm value and performance. *Journal of Banking Research*, 5(2), 45–58.
- Aktas, N., Croci, E., & Petmezas, D. (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30, 98–113. <https://doi.org/10.1016/j.jcorpfin.2014.12.008>
- Alao, M. E., & Ifayemi, O. (2021). Cash flow optimisation strategies and performance of deposit money banks. *NIU Journal of Social Sciences*, 6(4), 189–203.
- Aliyu, F. A., Abdullahi, M., & Gugong, B. K. (2024). Credit risk and financial performance of listed deposit money banks in Nigeria. *UNIZIK Journal of Marketing (UJofM)*, 1(4), 77–89. <https://journals.unizik.edu.ng/ujofm>
- Alhassan, I., & Islam, K. A. (2021). Credit management strategies and financial performance of industrial goods sector in Nigeria. *Indian Journal of Finance and Banking*, 8(1), 59–74.
- Amahalu, N. (2019). Determinants of cash holdings: Evidence from agricultural firms listed on Nigeria stock exchange. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(2), 211–223.
- Amahalu, N. (2020). Effect of financial statement quality on investment decisions of quoted deposit money banks in Nigeria. *International Journal of Management Studies and Social Science Research*, 2(4).
- Anetoh, V. C., Nwadiolor, E. O., Anetoh, J. C., & Okeke, G. N. (2021). Effect of credit and operational risk management on firm value of deposit money banks in Nigeria. *African Journal of Accounting and Financial Research*, 4(1), 14–32. <https://www.abjournals.org>
- Appah, E. (2023). Corporate governance characteristics and firm value of deposit money banks in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 11(2), 84–107.
- Asiedu, M. N. (2019). The effect of credit risk on the performance of commercial banks in Ghana. *International Journal of Economics and Finance*, 11(4), 1–9.
- Atanasova, C. V. (2012). Do firms use trade credit as a competitive tool? Evidence from the United States. *Journal of Finance*, 67(2), 867–886.
- Ayunku, P. E., & Uzochukwu, A. (2020). Credit management and issues of bad debts: An empirical study of listed deposit banks in Nigeria. *Asian Journal of Economics, Business and Accounting*, 14(3), 32–49.

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- Bencharles, K. O., &Nwankwo, C. D. (2021). Credit risk management and deposit money banks stability in Nigeria: Does good corporate governance matter? *Research Journal of Finance and Accounting*, 12(16), 1–14.
- Bañós-Caballero, S., García-Teruel, P. J., &Martínez-Solano, P. (2019). Trade credit and firm value in small and medium-sized enterprises. *Small Business Economics*, (5)2, 645–658.
- Brigham, E. F., &Daves, P. R. (2019). *Intermediate Financial Management* (13th ed.). Cengage Learning.
- Carbó-Valverde, S., Rodríguez-Fernández, F., &Udell, G. F. (2021). Trade credit, the financial crisis, and SME access to finance. *Journal of Money, Credit and Banking*, 53(2–3), 451–483. <https://doi.org/10.1111/jmcb.12766>
- Central Bank of Nigeria (CBN). (2022). *Financial Stability Report*. Abuja: Central Bank of Nigeria.
- Central Bank of Nigeria (CBN). (2018). *Annual Report*. <https://www.cbn.gov.ng/>
- Confidence, J. I., &Igoniderigha, R. (2023). Receivables management and profitability of firms listed in the consumer sector of Nigeria Exchange Group. *Journal of Accounting and Financial Management*, 9(9), 103–113.
- Dabai, U. S. A., Shepnaan, B., Abubakar, H., Haruna, J., &Sambo, H. S. (2023). Account receivable management and financial performance of listed consumer goods firms in Nigeria. *Gusau Journal of Accounting and Finance*, 4(2), 209–226.
- Damodaran, A. (2002). *Investment valuation: Tools and techniques for determining the value of any asset* (2nd ed.). John Wiley & Sons.
- Dan, P. (2020). Account receivable management and corporate performances: An empirical evidence from quoted manufacturing companies in Nigeria. *Inosr Arts and Management*, 6(1), 116–129.
- Dang, D. Y., Akwe, J. A., &Garba, S. B. (2020). Credit relevance after mandatory IFRS adoption in deposit money banks of Nigeria: A difference-in-differences (D-in-D) approach. *Asian Journal of Accounting Research*, 5(1), 47–61.
- Diaconu, P., &Oanea, D. C. (2015). Liquidity and profitability: Empirical analysis on the financial sector in Romania. *Procedia Economics and Finance*, 32, 442–448. [https://doi.org/10.1016/S2212-5671\(15\)01417-1](https://doi.org/10.1016/S2212-5671(15)01417-1)
- Ebiaghan, O., &Jeroh, E. (2020). Deposit insurance fund and the quality of risk assets of Nigerian deposit money banks. *Management Science Letters*, 10(5), 1129–1140.
- Eke, S., Ogunyemi, A., &Obasi, E. (2019). Prudential regulation and bank stability in Nigeria. *CBN Journal of Applied Statistics*, 10(2), 27–52.

- Esther, I. I., Anayochukwu, O. B., Emmanuel, N. C., Akujinma, A. F., & Promise, U. C. (2023). Evaluation of the liquidity management on deposit money banks' performance in Nigeria.
- Etim, O., Etim, E., & (et al.). (2022). *Liquidity management and firm value of listed deposit money banks in Nigeria. Journal of Accounting and Financial Management, 10(8)*, 130–137
- Ezenwafor, J. N., Okegbe, T. O., & Nwoye, U. J. (2021). Commercial banks' cash holdings behaviour in the pre and post economic recession period in Nigeria: X-raying the determinants. *Journal of Global Accounting, 7(1)*.
- Faulkender, M., & Wang, R. (2006). Corporate financial policy and the value of cash. *Journal of Finance, 61(4)*, 1957–1990.
- Giesecke, K. (2004). Credit risk modeling and valuation: An introduction. In *Credit Risk: Models and Management* (Vol. 2, pp. 487–526). London: Risk Books.
- Goncalves, A. (2016). The macroeconomic relevance of trade credit. *Review of Economic Dynamics, 20*, 74–91.
- Habib, M. D., Bhatti, M. I., Khan, M. A., & Azam, Z. (2021). Cash holding and firm value in the presence of managerial optimism. *Journal of Risk and Financial Management, 14(8)*, 356. <https://doi.org/10.3390/jrfm14080356>
- Hameed, R. A., & Musa, L. (2024). Cash holding and value of firm: An empirical study of deposit money banks in Nigeria Stock Exchange. *Minhaj Journal of Economics Organization, 4(1)*, 55–72.
- Harris, M., & Dudley, D. (2018). Sales growth and the use of trade credit. *Journal of Financial Economics, 130(2)*, 371–393.
- Harris, M., & Roark, S. (2017). Cash flow shocks, credit supply, and trade credit. *Journal of Corporate Finance, 45*, 433–450.
- Hill, M. D., Kelly, G. W., & Lockhart, G. B. (2012). Shareholder returns from supply chain management. *Journal of Financial Research, 35(3)*, 473–494.
- Hill, M. D., Kelly, G. W., & Venkiteshwaran, V. (2015). Cash conversion cycle and firm performance. *Financial Review, 50(1)*, 34–57.
- Huang-Meier, W., Lambertides, N., & Steeley, J. M. (2016). Does managerial optimism bias affect the cost of capital? *Journal of Corporate Finance, 36*, 128–149.
- Humphery-Jenner, M., & Powell, R. (2011). Firm cash holdings and performance: Evidence from Australia. *Journal of Corporate Finance, 17(3)*, 587–604.
- Isibor, E., & Giwa-Osagie, S. (2024). Working capital management and financial performance of listed deposit money banks (DMB) in Nigeria. *NIU Journal of Social Sciences, 10(3)*, 27–36.

- Issackow, M. M., Mwambia, F., & Muema, W. (2021). Credit risk assessments and firm value of listed commercial banks in Kenya. *Asian Journal of Economics, Business and Accounting*, 21(12), 68–82.  
<https://doi.org/10.9734/ajeba/2021/v21i1230444>
- Jacobson, T., & Schedvin, E. (2015). Trade credit and the propagation of corporate failure: An empirical analysis. *Econometrica*, 83(4), 1315–1371.
- Jacob, B. J., & Innocent, I. O. (2019). Effect of deposit mobilization and credit financing of commercial banks on capital formation in Nigeria. *International Journal of Small and Medium Enterprises*, 2(1), 47–55.
- Jebran, K., Iqbal, A., Bhat, K. U., Khan, M. A., & Hayat, M. (2019). Determinants of corporate cash holdings in tranquil and turbulent period: evidence from an emerging economy. *Financial Innovation*, 5(3), 1-12.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.
- Jibril, M. (2021). Effect of firms attributes on non-performing loans of listed deposit money banks in Nigeria. *Journal of Corporate Finance Management and Banking System (JCFMBS)*, 2(7), 99-105.
- Keynes, J. M., & Waeger, A. (1936). *The general theory of employment, interest, and money*. Harcourt, Brace.
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *Journal of Finance*, 28(4), 911–92
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *Journal of Finance*, 28(4), 911–922.
- Lindenberg, E. B., & Ross, S. A. (1981). Tobin's q ratio and industrial organization. *Journal of Business*, 54(1), 1–32.
- Maccarthy, M. I. T., & Jibrin, A. A. (2023). Financial assets and performance of deposit money banks in Nigeria. *BW Academic Journal*, 11(1), 11.
- Martínez-Sola, C., García-Teruel, P. J., & Martínez-Solano, P. (2013). Trade credit policy and firm value. *Accounting & Finance*, 53(3), 791–808.
- Medo-Uwa, O. C. (2019). *Impact of cash management on profitability of deposit money banks in Nigeria*.
- Melumad, N. D., & Nissim, D. (2009). Line-item analysis of earnings quality. *Foundations and Trends® in Accounting*, 4(2), 87–170.  
<https://doi.org/10.1561/14000000017>

- Mshelia, A. H., & Polycarp, S. U. (2024). Effect of working capital management on financial performance of listed deposit money banks in Nigeria. *FULafia International Journal of Business and Allied Studies*, 2(1), 37–57.
- Muhammad, J., Dabo, Z., & Andow, H. A. (2023). Moderating effect of institutional ownership structure on the relationship between assets quality and financial performance of listed deposit money banks in Nigeria. *African Banking and Finance Review Journal*, 5(5), 63–74.
- Mohamed, E. K. A., & Shehata, N. F. (2020). Managerial optimism, internal cash flow, and investment decisions: Evidence from emerging markets. *Journal of International Accounting, Auditing and Taxation*, 40, 100317.
- Mohamed, E. K. A., Hussainey, K., & Basuony, M. A. (2014). Managerial behavioral biases and cash flow volatility. *Corporate Ownership & Control*, 12(1), 178–185.
- Mohamed, E. K. A., Shehata, N. F., & El-Masry, A. A. (2020). The moderating effect of internal financing on the relationship between managerial optimism and investment decisions. *Journal of Behavioral and Experimental Finance*, 27, 100358.
- Molina, C. A., & Preve, L. A. (2009). Trade receivables policy of distressed firms and its effect on the costs of financial distress. *Financial Management*, 38(3), 663–686.
- Mustapha, O. A., & Adejuwon, J. A. (2025). Credit management and firm's financial performance of deposit money banks in Nigeria. *African Journal of Accounting and Financial Research*, 8(1), 67–88.  
<https://doi.org/10.52589/AJAFRMJPUZ00X>
- Mustapha, A. A., Salami, S., & Tijjani, M. S. (2023). Firm attributes and shareholder's wealth of listed deposit money banks in Nigeria. *Gusau Journal of Accounting and Finance*, 4(2), 47–66.
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
- Mwangangi, J. N. (2013). *Relationship between trade credit and value of firms listed at the Nairobi Securities Exchange* [Master's thesis, University of Nairobi]. University of Nairobi Repository.
- Ndu, B. C., Ifurueze, M. S., & Amahalu, N. N. (2024). Firm attributes and cash holdings of listed pharmaceutical firms in Nigeria. *Journal of Global Accounting*, 10(3), 273–304.
- Ngumbau, D. M. (2023). *The effect of credit risk management on value of commercial banks listed at Nairobi Securities Exchange* [Master's thesis, University of Nairobi]. University of Nairobi Repository.

- Niskanen, M., & Niskanen, J. (2023). Determinants of trade credit in the post-pandemic period: Evidence from European firms. *Managerial Finance*, 49(2), 212–230. <https://doi.org/10.1108/MF-10-2022-0531>
- Nnubia, I. C., Ofoegbu, G. N., & Nnubia, J. C. (2020). Firm's characteristics and cash holdings: Evidence from Nigeria, South Africa and Kenya. *International Journal of Research and Innovation in Applied Science (IJRIAS)*, 5(9), 101–118.
- Nofsinger, J. R., & Wang, W. (2011). Determinants of start-up firm external financing worldwide. *Journal of Banking & Finance*, 35(9), 2282–2294.
- Nwanna, I. O., & Oguezie, H. I. (2017). Effect of credit risk management on the performance of commercial banks in Nigeria. *International Journal of Social Sciences and Humanities Review*, 7(1), 1–9.
- Nworie, G. O., Moedu, V. O., & Onyali, C. I. (2023). Contribution of current assets management to the financial performance of listed consumer goods firms in Nigeria. *International Journal of Trend in Scientific Research and Development*, 7(1), 77–87.
- Ofoegbu, G., & Megbuluba, C. (2016). Firm value and liquidity in Nigerian banks. *International Journal of Financial Studies*, 4(1), 12–25.
- Ogundipe, S., Cole, A., & Fasola, I. (2022). Effect of regulatory requirements on total assets performance of deposit money banks in Nigeria. *International Journal of Advances in Engineering and Management*, 4(1), 214–224.
- Okoro, E. G. (2016). Liquidity management and performance of deposit money banks in Nigeria. *International Journal of Economics, Commerce and Management*, 4(10), 456–472.
- Okoye, E. I., Modebe, N. J., & Atuma, A. O. (2020). Working capital management and liquidity of Nigerian firms: The trade receivables perspective. *International Journal of Economics and Financial Issues*, 10(3), 167–174. <https://doi.org/10.32479/ijefi.9856>
- Okpala, K. E., Osanebi, C., & Irinyemi, A. (2019). The impact of credit management strategies on liquidity and profitability. *Journal of Behavioural Studies*, 1(1), 1–14.
- Okwoli, A. A., Jim-Suleiman, S. L., & Daboer, G. D. (2022). Effect of recapitalization on asset quality of quoted deposit money banks in Nigeria. *Journal of Accounting*, 11(2).
- Olabisi, J., Oladejo, D. A., Ooworu, O. O., & Abioro, M. A. (2020). Does working capital management affect the profitability of consumer goods manufacturing firms in Nigeria? *Journal of Humanities, Social Sciences and Creative Arts*, 15(2), 16–29.

- Olabisi, J., Oladejo, D. A., Adegoke, J. F., & Abioro, M. A. (2019). Credit management policy and firms' profitability: Evidence from infant manufacturing firms in southwest, Nigeria. *Contemporary Economy Journal*, 4(4), 59–69.
- Olaoye, F. O., & Fajuyagbe, S. B. (2020). Credit risk management and profitability of selected deposit money banks in Nigeria: Panel data approach. *Journal of Accounting and Management*, 10(3), 166–179.  
<https://www.jam.ssau.ro/index.php/jam/article/view/448>
- Ologbenla, P. V. (2018). Working capital management and profitability of listed manufacturing companies in Nigeria. *European Journal of Business and Management*, 10(3), 73–85.
- Osagie, O. I. U. (2016). Firm size, age and operating cash flow: Empirical standpoint on Nigerian banking sector. *International Journal of Advanced Academic Research: Social & Management Sciences*, 2(8), 95–103.
- Owolabi, S. A., & Alu, S. A. (2012). Effective working capital management and profitability: A study of selected quoted manufacturing companies in Nigeria. *Economics and Finance Review*, 2(6), 55–67.
- PricewaterhouseCoopers (PwC). (2021). *Receivables management in a digital age*.  
<https://www.pwc.com>
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2012). *Essentials of corporate finance* (7th ed.). McGraw-Hill Education.
- Sanusi, L. S. (2012). Banking reforms and their impact on the Nigerian economy. *CBN Journal of Applied Statistics*, 3(2), 115–122.
- Stephens, C. P., Hunter, M., & Wood, J. (2007). Managerial over-optimism and the choice between debt and equity. *Accounting & Finance*, 47(3), 501–517.
- Tran, Q. T., Hassan, M. K., & Houston, R. (2020). Managerial optimism, investment behavior, and firm value. *The Quarterly Review of Economics and Finance*, 78, 274–289.
- Tuoyo, A., Ogunlana, T., & Adesina, S. (2023). Debt financing and performance of Nigerian manufacturing firms: A behavioral view. *Journal of Finance and Accounting Research*, 12(5), 111–127
- Uwuigbe, O. R., Okorie, A., Olayemi, O. O., & Otekunrin, A. O. (2022). Credit management and bank performance in emerging economies: Evidence from Nigerian listed banks. *International Journal of Financial Studies*, 10(1), 1–17.
- Yazdanfar, D., & Öhman, P. (2015). The impact of cash conversion cycle on firm profitability: An empirical study based on Swedish data. *International Journal of Managerial Finance*, 11(4), 442–452.