

Treasury Management Practices, Financial Performance and Sustainability in Banking Sector

This study investigated the impact of treasury management practices on financial performance of the banking sector in Nigeria. Treasury management has become a crucial component of the financial performance and sustainable growth of banks. Consequently, difficulties with treasury management practices have an immediate impact on the banking industry and financial system as a whole, which can have an indirect effect on the economic growth and development of the nation. The study used secondary data extracted from annual reports of quoted deposit money banks (DMBs) in Nigeria. Panel data analysis was utilized. Descriptive statistics, correlation matrix and ordinary least square (OLS) were employed. The explanatory variables were bank deposit liabilities and earning assets whereas return on assets (ROA) and return on equity (ROE) were used as proxies for bank financial performance. The DMBs' data was evaluated using appropriate statistical methods. According to the findings of the study treasury management practices influence the financial performance and sustainability of Nigerian DMBs. Given the highly competitive nature of the industry and the demands for financial performance, the study concluded that there is a need for a strong, effective and efficient treasury management strategy that will maximise returns, increase the value of the company's shares and maximise shareholder wealth.

Keywords: treasury management practices, financial performance, deposit money banks, sustainability and growth.

Šiame tyrime buvo nagrinėjamas išdo valdymo praktikų poveikis Nigerijos bankų sektoriaus finansiniams rezultatams. Išdo valdymas tapo labai svarbia bankų finansinės veiklos ir tvaraus augimo dalimi. Drauge sunkumai, susiję su taikomomis išdo valdymo praktikomis, daro tiesioginę įtaką bankų sektoriui ir visai finansų sistemai, o tai gali netiesiogiai paveikti šalies ekonomikos augimą ir vystymąsi. Tyrime buvo naudojami antriniai duomenys, gauti iš Nigerijoje veikiančių kotiruojamų depozitinių bankų (angl. DMB) metinių ataskaitų. Taikyta *panelinių* duomenų analizė. Taip pat taikyta aprašomoji statistika, korelacių matrica ir mažiausių kvadratų metodas (angl. OLS). Banko depozitiniai įsipareigojimai ir pajamų srautą kuriantis turtas buvo pasitelkti kaip aiškinamieji kintamieji, o turto grąža (angl. ROA) ir nuosavo kapitalo grąža (angl. ROE) buvo naudojami kaip bankų finansinės veiklos rodikliai. DMB duomenys buvo vertinami taikant atitinkamus statistinius metodus. Remiantis tyrimo išvadomis, išdo valdymo praktikos daro įtaką Nigerijos DMB finansiniams rezultatams ir tvarumui. Atsižvelgiant į didelę sektoriaus konkurenciją ir finansinės veiklos reikalavimus, tyrime padaryta išvada, kad reikia stiprios ir veiksmingos išdo valdymo strategijos, kuri maksimizuotų grąžą, didintų įmonės akcijų vertę ir akcininkų turtą.

Raktiniai žodžiai: išdo valdymo praktikos, finansiniai veiklos rezultatai, depozitiniai bankai, tvarumas ir augimas.

Introduction

Banking institutions function as financial intermediaries by transferring capital from savers to investors to support essential business and development projects for economic growth and development (Dietrich, Hauck, 2020). An efficient banking system is required for effective financial intermediation, which leads to sustainable private sector investment and the fostering of entrepreneurship (Annor, Obeng, 2017). Effective treasury management practices encompass the efficient management of liabilities and investments that are vital to the existence of banks. Consequently, deficiencies in the internal controls of deposit money banks, particularly in currency risk management, can have a substantial impact on the financial and operational viability of banks, ultimately leading to the uncertainty of the country's whole financial system (Aladwan, 2015).

Treasury management has become a significant component of the financial performance, sustainability, and growth of banks. Consequently, challenges in treasury management practices have an immediate impact on the banking industry and financial systems in general; this can indirectly hurt the economic system of the nation (Gizaw, Kebede, Selvaraj, 2015). The business of forward-thinking treasurers who comprehend the treasury function is developing from overseer of previous cash activities to a more enlarged and strategic approach to bank liquidity. Understanding the function of treasury management in the financial performance of deposit money banks is vital not only for the economic stability

of the nation but also for the survival of the banking industry (Tamunosiki, Giami, Obari, 2017).

As a result of the complexity and dynamism of the Nigerian economy, there is growing concern regarding the financial performance of deposit money banks (Peter et al., 2020). The banking industry in Nigeria has undergone tremendous reforms and transformations over the past few decades, as well as the development of new financial technology, resulting in the sector's phenomenal growth, increased competitiveness, and increased demands on bank financial performance and sustainability (Alshatti, 2015). Increased competition is partially attributable to new domestic and international entrants into the market and the adoption of Nigerian banking laws. Banks are profit-driven institutions that must provide shareholders with an acceptable rate of return (Ajao, Oseyomon, 2019). Therefore, there is a need to improve the quality of service in order to differentiate their offerings in the market. Corporate governance has never been more important than it is today since banks, like other businesses, are structured such that firm ownership and control are separated (Bassey, Moses, 2015).

Indicators of bank performance have been negatively impacted, and variables of bank performance such as bank deposits, bank loans, and operating expenses have been affected. The erosion of public confidence has impacted the mobilization of bank deposits and the provision of loans to customers (Philip, 2018). The negative impact of macroeconomic variables such as the exchange rate, interest rate, and inflation rate exacerbates the issue. In spite of the purported benefits of

treasury risk management practices, little is known regarding the extent to which various treasury management systems are utilized in Nigeria and their impact on the financial performance of deposit money banks. In Nigeria, the treasury management practices of deposit-money banks have much to be desired (Adeusi, Dada, 2017).

Moreover, banks are exposed to other treasury risks, such as credit risk, which typically results in non-performing loans. Massive buildup of non-performing loans, which accounts for a large portion of the total assets of solvent banks, especially during moments of systemic crises, is frequently cited as the leading cause of bank failure (Juliet, 2021). In the banking business, weak treasury risk management, corporate governance standards, the tax credit administration procedure, and the absence of non-adherence to credit risk management practices are indicators of non-performing loans. The ineffectiveness of the majority of deposit money banks in Nigeria is attributable, in part, to their failure to effectively manage their credit risk through their loan portfolios, whereas those who did so have reaped substantial rewards (Agbeja, Adelakun, Olufemi, 2015).

Customers' delayed payments pose a problem for most deposit money banks about credit repayment (Edem, 2017). Profitability in the banking industry would be severely harmed by this. Insider misuse compromised effective credit risk procedures, overtrading, ineptitude, complacency, and inadequate supervision are just some of the corporate governance shortcomings that have led to the non-performing loans portfolio and

negative bank profit (Owolabi, Obida, 2012). It has been noticed that treasury management has a major effect on the success and viability of banking institutions and the functioning of the national economy (Ibe, 2013).

The aim of the research is to examine the influence of treasury management practices on the financial performance of DMBs while the research objectives are twofold: (i) to examine the influence of deposit liabilities on the financial performance of DMBs, and (ii) to investigate the influence of earning assets on the financial performance of DMBs. **The research questions** are: (i) do deposit liabilities influence financial performance of DMBs? and (ii) does earning assets influence the financial performance of DMBs?

Literature review

Treasury management practices (TMPs) specify how an organization will manage and regulate its treasury management activities in order to achieve its treasury management goals and objectives (Affinito, 2012). Treasury jurisdiction supervises the day-to-day administration of the company's working capital, providing a daily projection of cash receipts, expenditures, and predicted closing balances (Adam, Quansah, Kawor, 2017). Cash and liquidity are seen as essential measures of a company's financial health and a crucial mechanism for releasing cash for growth and investments (Adam et al., 2017). Treasury risk management includes credit risk, liquidity risk, interest rate risk, exchange rate risk, market risk, refinancing risk, operational risk

(fraud, mistake, and corruption), and legal and regulatory risk (Dahiyat, 2016).

Liquidity management and monitoring, cash management, managing short-term demands and surpluses, managing financial risks, and managing partnerships with financial institutions are all part of treasury management (Bai, Krishnamurthy, Weymuller, 2018). When it comes to foreign exchange transactions and anticipating market interest rate movements, both of which could put a bank at risk if exchange rates suddenly worsened, a bank's treasury management division is a highly specialized area responsible for developing risk management strategies and implementing hedging techniques (DeAngelo, Stulz, 2015). A bank's treasury department offers cutting-edge services in order to better manage the day-to-day financial planning and operations of the bank, to cater to the unique investment and risk coverage needs of the bank's corporate and institutional clients, and to safeguard the bank's assets through the implementation of various fraud prevention products (Zainal, Nassir, Yahya, 2014).

The treasury risk management (TRM) policy integrates the investment and liability policies. The goal of the treasury risk management policy is to describe authorized policies and procedures for all treasury activity to be conducted by the treasury manager, formalizing such policies and procedures so that treasury risks can be managed prudently (Gizaw et al., 2015). The treasury risk management policy also sets the framework for all of the bank's deposit, borrowing, and investment activities, as well as the major duties and operating boundaries

within which borrowing, investment, and risk management activities are to be conducted. This policy addresses treasury activities, which encompasses liabilities management (bank deposit and borrowing activity) and investments (loans and advances and financial assets) (Txomin et al., 2011).

The treasurer determines the ideal level of cash and cash equivalents that businesses should maintain to meet their financial obligations. Managing a company's cash flow and all connected components, such as payables, receivables, interest rates, and foreign exchange rates, requires a well-established treasury management system (TMS), which involves the construction and supervision of numerous procedures and rules (Ismail, 2016).

Cash management is an element of the treasury manager's responsibilities, and it comprises taking on a number of obligations relating to the control of the monetary flow of banks and liquidity positions (Ibe, 2013). To help the bank achieve its ultimate goal of maximizing its market value, this division has become a profit centre and an integral part of corporate strategy focused on maximizing short-term profitability through surpluses in liquidity and cost reductions in the management of treasury deficits (Saksonova, 2014). Effective treasury management is linked to both liquidity and profitability (Chatterjee, Dutta, 2016).

Several theories can be utilized to explain the progression of treasury management practices in order to achieve financial performance and sustainability for a business. Firms create goal leverage ratios in accordance with trade-off and

pecking order models, and the financial structure steadily approaches the objective (Baumol, 1952). The ultimate objective is to determine the optimal amount of cash on hand. W. J. Baumol (1952) used the following assumptions in his model: businesses are able to precisely forecast their cash requirements receive and pay regular cash inflows and outflows, and the opportunity cost of holding cash is known and stable over time. The corporation incurs the same transaction costs and opportunity expenses when converting securities to cash as when it holds cash on hand. Every transaction involves both fixed and variable costs (Craig, Fecht, Tümer-Alkan, 2015).

Commercial loans and Shift-ability theories can also be used to illustrate how treasury management advancement might improve the financial performance of banks. Banks are supposed to only lend money to firms for short periods of time that are self-liquidating and productive if they adhere to the commercial loan theory or the real bills notion (Lartey, Antwi, Boadi, 2013). The theory holds that the central bank should only lend to commercial banks on the collateral of short-term self-liquidating productive loans. Bank reserves are expected to rise or fall by re-discounting approved loans. Rediscounting invoices with central banks can help banks build up reserves as their businesses grow and trade requirements rise (Andreou, Philip, Robejsek, 2016). The shift-ability hypothesis states that if commercial banks have a substantial quantity of assets that can be transferred to other banks in exchange for cash without incurring large losses, then they do not need to consider maturities when making asset

transfer choices. For an asset to be tradable, it must be instantaneously transferable without capital loss when liquidity is necessary (Alshatti, 2015). If a bank requires immediate cash, it can sell short-term marketable financial assets. The shift-ability concept stipulates that all banks must have assets that can be transferred to the central bank, the lender of last resort.

In order to prove a causal economic relationship, empirical research has been prompted by theoretical discussions on the influence of treasury management on bank financial performance. Multiple research efforts have focused on different types of treasury management. I. A. Peter et al. (2020) studied cash management and bank financial performance in Nigeria. Secondary data, including selected DMBs' annual reports and financial statements, were used for this analysis. Financing cash to total assets and bank age have a significant effect on DMBs' financial performance, while operating cash to total assets, investing, and bank size have a little effect. The study concludes that cash positions must be managed since they magnify other risks. It also highlights the use of cash and reserves by Nigerian banks.

F. B. Owusu and A. L. Alhassan (2020) investigate the relationship between profit and asset-liability management (ALM) structure of 27 Ghanaian banks from 2007 to 2015. The results corroborate the basic hypothesis of the SCA model and give evidence that profitability in Ghana is correlated with balance sheet items. During the study period, it also provides evidence that local banks had a greater rate of return on assets than foreign banks. In addition, banks with

high profits were found to have a greater rate of return on assets and a higher rate of cost on liabilities than banks with low profits. These findings provide valuable information to bank management by identifying the assets that generate the highest return on bank profitability.

U. Philip (2018) conducted an empirical study on the effect of money market instruments on Nigeria's inflation rate. The study analyzed data using ordinary least squares (OLS) and the e-view statistical package. The findings of the study indicate that money market instruments account for a statistically substantial portion of the variance in the Nigerian inflation rate. The research found that money market tools are effective at containing inflation and that the market should be properly organized and managed in order to accomplish monetary policy's price stability goal.

U. Uwalomwa, O. R. Uwuiigbe, and B. Oyewo (2015) study the impact of credit management on the performance of listed banks in Nigeria from 2007 to 2011. The purpose of this research was to investigate the connection between bad debt, secured and unsecured loans, and bank performance in Nigeria. Both descriptive statistics and econometric analysis employing Panel linear regression methodology were incorporated into the study. Banks in Nigeria were found to suffer greatly from high levels of non-performing loans and bad debts. The research found that bank management should design good lending policies, suitable credit administration procedure, and an effective and efficient equipment to monitor lending function within pre-determined parameters.

U. O. Juliet (2020) investigates how the management of a bank's holdings in the market has affected the profitability of listed Nigerian Deposit Money Banks (DMBs). The research, which was based on ex post facto portfolio and shift-ability theories, was conducted in retrospect. The information was gathered from the financial institutions' annual reports during the time frame in question. The linear regression method was used to evaluate the study's data. The empirical data suggests a significant positive relationship between credit risk management, liquidity risk management, and performance in Nigerian deposit money banks. The results of the research confirm that effective portfolio management boosts the economic success of Nigeria's deposit money institutions.

The research gap that still exists in spite of these previous research efforts is the influence of treasury management practices on financial performance and sustainability in deposit money banks (DMBs). This study therefore linked treasury management practices to financial performance of deposit money banks which most of the previous studies failed. This study will contribute to knowledge and as well use by banking institutions considering the effect of treasury management practices on bank financial performance.

Methodology

The Nigerian banking system is stratified into deposit money banks, merchant banks, development banks, mortgage banks and micro finance banks. The preference for deposit money banks is

that they constitute the major and largest insured banking institutions measured by their size in terms of total liabilities and assets.

This study employs panel data from DMBs listed on the Nigerian Stock Exchange (NSE) to undertake an empirical investigation. The information came from the DMBs' audited financial statements for the period 2001–2021. To provide adequate, accurate, and dependable data over time, secondary sources were utilized. Descriptive analysis and econometric methods were also used to investigate the nexus between explanatory and regressive variables. The study employed summary of statistics in conjunction with the e-views statistical package to perform a descriptive analysis of the many factors at play in this investigation. The OLS approach was utilized in conjunction with a multivariate regression analysis.

The following models (regression equations) were employed to examine the relationships between explanatory and dependent variables in their linear form with the treasury management practices as the explanatory variable. Deposit liabilities and earning assets are the explanatory variables employed. The preference for the variables is in consideration of their explicit influence on return on investments. Return on assets (ROA) and return on equity (ROE) derived from return on investments (ROI) are two powerful variables chosen and used as the proxies of dependent variables because of their superiority to measure financial performance of a firm.

The four models that reflect the function treasury management practices on bank financial performance are as follows,

$$ROA_{it} = f(DEP_{it} + CSR_{it} + LOA_{it} + FXT_{it} + TRB_{it} + COP_{it} + BAC_{it} + BIE_{it} + EXR_{it} + ITR_{it} + IFR_{it}) \quad (1)$$

$$ROE_{it} = f(DEP_{it} + CSR_{it} + LOA_{it} + FXT_{it} + TRB_{it} + COP_{it} + BAC_{it} + BIE_{it} + EXR_{it} + ITR_{it} + IFR_{it}) \quad (2)$$

$$\text{Performance Variable} = \beta_0 + \beta_1 \text{(Treasury Management Practices)} \quad (3)$$

Where:

ROA = Return on Assets, ROE = Return on equity, DEP = Deposit liabilities, CSR = Cash Reserve Ratio, LOA = Loan and Advances, FXT = Foreign Exchange Transactions, TRB = Treasury Bills, COP = Commercial Papers, BAC = Banker's Acceptances, BIE = Bills of Exchange, EXR = Exchange Rate, ITR = Interest Rate, IFR = Inflation Rate, β_0 = Regression intercept, β_1 = Parameters.

The multiple regression linear form is specified below:

$$ROA_{it} = \beta_0 + \beta_1 DEP_{it} + \beta_2 CSR_{it} + \beta_3 LOA_{it} + \beta_4 FXT_{it} + \beta_5 TRB_{it} + \beta_6 COP_{it} + \beta_7 BAC_{it} + \beta_8 BIE_{it} + \beta_9 EXR_{it} + \beta_{10} ITR_{it} + \beta_{11} IFR_{it} \quad (4)$$

$$ROE_{it} = \beta_0 + \beta_1 DEP_{it} + \beta_2 CSR_{it} + \beta_3 LOA_{it} + \beta_4 FXT_{it} + \beta_5 TRB_{it} + \beta_6 COP_{it} + \beta_7 BAC_{it} + \beta_8 BIE_{it} + \beta_9 EXR_{it} + \beta_{10} ITR_{it} + \beta_{11} IFR_{it} \quad (5)$$

Data analysis and discussion of results

In econometrics and statistics, the Hausman test is critical in panel data analysis utilising fixed effects and random effects models. This test shows whether the random effects model is more consistent and efficient than the fixed effects

Model 1

Table 1. Hausman Test

Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.000	10.000	0.0045

Source: the author's calculation using e-views.

model. The chi-squared statistic in this Hausman test is 5.000 with 10 degrees of freedom, and the p-value is 0.0045. The null hypothesis is that the random effects model is consistent and efficient, whereas the alternative hypothesis holds that the fixed effects model is superior. With a p-value of 0.0045, which is less than 0.05, it strongly supports the rejection of the

null hypothesis in favour of the alternative. Based on these findings, the fixed effects model outperforms the random effects model in this research.

Based on the random effect results presented in Table 2, the overall coefficient of determination of adjusted R^2 which is the explanatory power of the model is 0.643. This implies that within

Table 2. Multiple regression for Model 1

Fixed Effect			
Variable	Coefficient	t-Stat	Prob.
C	0.255	1.062	0.291
DEP	0.032	2.933	0.004
CSR	-0.096	-2.619	0.010
LOA	0.019	2.098	0.038
FXT	-0.017	-0.781	0.436
TRB	0.647	3.672	0.000
COP	-0.044	-1.125	0.263
BAC	0.027	0.895	0.373
BIE	0.022	1.278	0.204
ITR	0.001	0.314	0.754
EXR	0.001	-0.837	0.405
IFR	0.001	0.508	0.613
R^2		0.643	
Adjusted R^2		0.566	
F-stat		8.404	
Prob		0.000	
DW stat		2.711	

Source: the author's calculation using e-views.

the model context, Deposit (DEP), Cash Reserve (CSR), Loan and advances (LOA), Foreign Exchange Transactions (FXT), Treasury bills (TRB), Commercial Papers, (COP), Banker's Acceptances (BAC), Bills of Exchange (BIE), Exchange rate (EXR), Interest rate (ITR) and Inflation Rate (IFR) are responsible for 64.3% variations in return on asset (ROA) while the remaining 35.7% is explained by other factors that can impact on the dependent variable outside the model.

$$ROA_{it} = 0.255 + 0.032DEP_{it} - 0.096 CSR_{it} + 0.019LOA_{it} - 0.017FXT_{it} + 0.647TRB_{it} - 0.044COP_{it} + 0.027BAC_{it} + 0.022 BIE_{it} + 0.001EXR_{it} + 0.001 ITR_{it} + 0.001 IFR_{it} + \Sigma_{it}$$

The coefficient of Deposit (DEP), Loan and advances (LOA), Treasury bill (TRB), Banker's Acceptances (BAC), Bill of Exchange (BIE), Exchange rate (EXR), Interest rate (ITR) assumes a positive value. This implies that a unit change in Deposit (DEP), Foreign Exchange Transactions (FXT), Treasury bill (TRB), Banker's Acceptances (BAC), Bill of Exchange (BIE), Interest rate (ITR) Exchange rate (EXR) increases ROA by 0.032, 0.019, 0.647, 0.027, 0.022, 0.001, 0.001 and 0.001 respectively.

The coefficient of Cash Reserve (CSR), Foreign Exchange Transactions (FXT), Commercial Papers (COP) assumes a

negative value. This implies that a unit change in Cash Reserve (CSR), Loan and advance (LOA), Commercial Paper, (COP) and Inflation Rate (IFR) decreases ROA by 0.096, 0.017 and 0.044 respectively while when the explanatory variables is zero return on equity (ROA) is 0.255.

The reliability of this finding is further supported by an F-statistic of 8.404, while the Durbin-Watson statistic of 2.711 clearly suggests that there is no influence of serial correlation among the research variables. With a probability value of 0.000, it is sufficient to indicate that Deposit (DEP), Cash Reserve (CSR), Loan and advances (LOA), Foreign Exchange Transactions (FXT), Treasury bills (TRB), Commercial Papers (COP), Banker's Acceptances (BAC), Bills of Exchange (BIE), Exchange rate (EXR), Interest rate (ITR) and Inflation Rate (IFR) have significant impact on return on asset (ROA).

The findings from the Hausman test presented in Table 3, concerning Model 2, are vital in assessing the appropriate model specifications, particularly in the context of panel data analysis. The test aims to determine the suitability of the random effects model in comparison to the fixed effects model. In this instance, the chi-square statistic is calculated at 6.878 with 10 degrees of freedom, resulting in a probability (p-value) of 0.767. The null hypothesis in the Hausman test

Model 2

Table 3. Hausman Test

Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.878	10.000	0.767

Source: the author's calculation using e-views.

assumes that the random effects model is consistent and efficient, while the alternative hypothesis suggests that the fixed effects model might be more suitable. However, the relatively high p-value of 0.767 indicates insufficient evidence to reject the null hypothesis. The higher p-value implies that there isn't strong statistical support favoring the fixed effects model over the random effects model. Thus, these results suggest that, for this particular analysis, the random effects model appears adequate and efficient.

Based on the random effect results presented in Table 4, the overall coefficient of determination of adjusted R² which is the explanatory power of the model is 0.599. This implies that within the model context, Deposit (DEP), Cash Reserve

(CSR), Loan and Advances (LOA), Foreign Exchange Transactions (FXT), Treasury Bills (TRB), Commercial Papers, (COP), Banker's Acceptances (BAC), Bills of Exchange (BIE), Exchange Rate (EXR), Interest Rate (ITR) and Inflation Rate (IFR) are responsible for 59.9% variations in return on equity (ROE) while the remaining 40.1% is explained by other factors that can impact on the dependent variable outside the model.

$$ROE_{it} = -1.059 + 0.041DEP_{it} + 0.086CSR_{it} - 1.541LOA_{it} + 0.005FXT_{it} + 0.0190TRB_{it} + 0.098COP_{it} + 0.073BAC_{it} + 0.198BIE_{it} + 0.016ITR_{it} + 0.001EXR_{it} - 0.012IFR_{it} + \Sigma_{it}$$

The coefficient of Deposit (DEP), Cash Reserve (CSR), Foreign Exchange

Table 4. Multiple regression for Model 2

Random Effect			
Variable	Coefficient	t-Stat	Prob.
C	-1.059	-1.804	0.074
DEP	0.041	1.001	0.319
CSR	0.086	0.670	0.504
LOA	-1.541	-12.967	0.000
FXT	0.005	0.173	0.863
TRB	0.190	2.181	0.031
COP	0.098	0.666	0.507
BAC	0.073	1.557	0.122
BIE	0.198	3.400	0.001
ITR	0.016	0.614	0.541
EXR	0.001	-0.650	0.517
IFR	-0.012	-1.146	0.254
R ²	0.599		
Adjusted R ²	0.562		
F-stat	16.298		
Prob	0.000		
DW Stat	1.695		

Source: the author's calculation using e-views.

Transactions (FXT), Treasury bill (TRB), Commercial Paper (COP), Banker's Acceptances (BAC), Bills of Exchange (BIE), Interest rate (ITR) Exchange rate (EXR) assumes a positive value. This implies that a unit change in Deposit (DEP), Foreign Exchange Transactions (FXT), Treasury bills (TRB), Banker's Acceptances (BAC), Bills of Exchange (BIE), Exchange rate (EXR), Interest rate (ITR) increases ROE by 0.041, 0.086, 0.005, 0.190, 0.098, 0.073, 0.198, 0.16, and 0.001 respectively.

The coefficient of Loan and advances (LOA) and Inflation Rate (IFR) assumes a negative value. This implies that a unit change Loan and advances (LOA) and Inflation Rate (IFR) decreases ROE by 1.541 and 0.012 respectively while when the explanatory variables is zero return on equity (ROE) is -1.059.

The reliability of this finding is further supported by an F-statistic of 16.298, while the Durbin-Watson statistic of 1.695 clearly suggests that there is no influence of serial correlation among the research variables. With a probability value of 0.000, it is sufficient to indicate that Deposit (DEP), Cash Reserve (CSR), Loan and advances (LOA), Foreign Exchange Transactions (FXT), Treasury bills (TRB), Commercial Paper (COP), Banker's Acceptances (BAC), Bills of Exchange (BIE), Exchange rate (EXR), Interest rate (ITR) and Inflation Rate (IFR) have significant impact on return on equity (ROE).

Conclusion and recommendations

The study examined the effect of treasury management practices on financial

performance and sustainability in the banking sector for the period 2001–2021. The relevant data used were obtained from the annual reports of listed DMBs listed on the Nigerian Stock Exchange (NSE). The study used secondary data. The data was analysed using Ordinary Least Square (OLS) regression technique. The result of the finding shows that treasury management practices have positive significant relationship with return on assets (ROA) and return on equity (ROE). The implication of this is that improvement in treasury management practices will improve bank financial performance and sustainability. Based on the finding, it may be concluded that treasury management practices have significant influence on financial performance and sustainability of DMBs. Treasury management is essential for managing funds in the banking industry. Considering the role of banks in accepting deposits from the public and granting loans demonstrates the importance of managing these activities efficiently for the financial performance and sustainability of banks. There is a need to build a strong, efficient, and effective treasury management strategy that maximizes return and increases shareholder value in light of the industry's high level of competition and financial performance criteria. The following suggestions are made based on the results. Bank management should play a significant role in achieving strategic objectives by promoting superior treasury management practices and objectively assessing the suitability of existing variables for effective management. Banks should ensure that their current assets constantly exceed their current liabilities, so that

servicing their short-term obligations does not cause any difficulties. Treasury management, loan recovery, and foreign exchange management are systems that must be developed by all deposit-taking banks. Through the use of risk control limits, exposure to foreign exchange risk must be managed and minimized. Regular assessments and evaluations of the bank's investment portfolio are required to minimize excess liquidity that could have a detrimental influence on revenue generation. Following the completion of each deposit, borrowing, investment, interest rate risk management, and cash management transaction, all related records must be preserved and immediately updated. Prospective borrowers should be thoroughly evaluated by credit risk management. The incidence of non-performing bank loans, which has a significant impact on the profitability of banks, must be reduced through improved loan portfolio management. The management should improve their efforts at work, conduct routine customer

checks, and develop a methodical plan for recovering debts and loans. It is recommended that regulatory organizations routinely examine the capital adequacy criterion so that it does not become a tool that threatens the profitability and survival of banks. The Central Bank of Nigeria (CBN) regulatory approach should guarantee that banks have adequate capital and liquidity. The monetary authority should manage financial stress by developing policies that control the reaction to liquidity pressures by a readiness to lend against adequate collateral and at a penalty rate to banking institutions experiencing financing liquidity issues. The regulatory authorities should also pay more attention to the compliance of deposit money banks with the relevant provisions of the Banks and Other Financial Institutions Act (BOFIA) 1999 and the prudential guidelines issued from time to time by the Central Bank of Nigeria.

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IŽDO VALDYMO PRAKTIKOS, FINANSINĖS VEIKLOS REZULTATAI IR TVARUMAS BANKŲ SEKTORIJE

S a n t r a u k a

Tyrime nagrinėjamas išdo valdymo praktikų poveikis bankų sektoriaus finansinės veiklos rezultatams ir tvarumui. Išdo valdymas tapo neatsiejama banko finansinės veiklos, tvarumo ir augimo dalimi, todėl išdo valdymo sunkumai daro tiesioginę įtaką bankų sektoriui ir visai finansų sistemai, o tai gali netiesiogiai paveikti šalies ekonomikos augimą ir tvarų vystymąsi.

Tyrime buvo naudojami antriniai duomenys. Jie gauti iš 2011–2021 m. Nigerijos vertybinių popierių biržoje kotiruojamų depozitinių bankų metinių audituotų ataskaitų. Taikyta *panelinių* duomenų analizė. Hipotezėms patikrinti taikyti aprašomosios statistikos, koreliacijos matricos ir mažiausių kvadratų regresijos analizės metodai, tokie kaip fiksuoto ir atsitiktinio poveikio metodai. Vertinimui taikyti šie metodai: T testas, tikimybių testas, F testas, Hausmano testas ir Durbino–Vatsonio statistika. Aiškinamiesiems kintamiesiems nustatyti buvo naudojami bankų depozitiniai įsipareigojimai, paskolos ir avansai, išdo vekseliai, komerciniai vekseliai, bankų akceptai ir vekseliai, o priklausomiems kintamiesiems nustatyti – turto grąža ir nuosavo kapitalo grąža.

Depozitinių įsipareigojimų, paskolų ir avansų, išdo vekselių, bankų akceptų, vekselių, palūkanų normos ir infliacijos koeficientas yra teigiamas ir teigiamai susijęs su turto grąža (angl. ROA).

Grynųjų pinigų atsargų, paskolų ir avansų, komercinių vertybinių popierių ir infliacijos normos koeficientas yra neigiamai susijęs su nuosavo kapitalo grąža (angl. ROE). Tačiau 0,0000 tikimybės reikšmės pakanka, kad būtų galima teigti, jog visi kintamieji daro reikšmingą poveikį turto grąžai.

Depozitinių įsipareigojimų, valiutos keitimo sandorių, išdo vekselių, bankų akceptų, komercinių vekselių ir palūkanų normos koeficientas yra teigiamas ir teigiamai susijęs su turto grąža. Grynųjų pinigų atsargų, paskolų ir avansų, komercinių vekselių ir infliacijos normos koeficientas yra neigiamai susijęs su nuosavo kapitalo grąža. Tačiau 0,0000 tikimybės reikšmės pakanka teigti, kad visi kintamieji daro reikšmingą poveikį nuosavo kapitalo grąžai.

Tyrimo rezultatai atskleidžia, kad išdo valdymo praktika turi teigiamą reikšmingą ryšį su depozitinių bankų turto grąža ir nuosavo kapitalo grąža. Remiantis gautais duomenimis, galima daryti išvadą, kad išdo valdymo praktikos daro reikšmingą įtaką Nigerijos depozitinių bankų finansiniams rezultatams ir tvarumui. Atsižvelgiant į didelę sektoriaus konkurenciją ir finansiniams rezultatams keliamus reikalavimus, tyrime padaryta išvada, kad reikia stiprios ir veiksmingos išdo valdymo strategijos, kuri maksimizuotų grąžą, didintų įmonės akcijų vertę ir akcininkų turtą.