

# Systematic Risk Management And Corporate Profitability: The Study of Deposit Money Bank in Nigeria

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DOI: [10.22178/pos.121-24](https://doi.org/10.22178/pos.121-24)

JEL Classification: J01

Received 20.07.2025

Accepted 29.08.2025

Published online 31.08.2025

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**Abstract.** This study examined the relationship between systematic risk management and corporate profitability of Nigerian deposit money banks from 2014 to 2019. Using an ex-post-facto and longitudinal research design, secondary data from five selected banks were analysed through multiple regression analysis, with Return on Assets (ROA) as the dependent variable and Degree of Operating Leverage (DOL), Degree of Financial Leverage (DFL), and Capital Adequacy Ratio (CAR) as independent variables. The results revealed that systematic risk management variables explained 7.04% of the variation in bank profitability ( $R^2 = 0.070418$ ), with both DOL and DFL showing negative but significant relationships with ROA at 5% confidence level (p-values of 0.3052 and 0.1199, respectively). At the same time, CAR demonstrated an insignificant negative relationship (p-value = 0.6130). The study concludes that a negative but significant relationship exists between systematic risk management and bank performance, emphasising the need for prudent risk management practices to enhance profitability and protect stakeholder interests in the Nigerian banking sector.

**Keywords:** Systematic risk management; Corporate profitability; Deposit money banks; Operating leverage; Financial leverage.

## INTRODUCTION

The history of human society is marked by exposure to various risks and the efforts undertaken by humanity to mitigate them [1]. Risk management has always been a focal point for finance enthusiasts since the Industrial Revolution [2]. Risk management affects the decision-making process and, consequently, corporate governance as well. Recent financial crises highlight the need for effective risk management strategies in deposit money banks. Economic failure is hardly a new phenomenon, but the rapidity with which organisations get into trouble in recent years is a notable development.

The goal of financial management has been to increase shareholders' returns [3], a long-held objective of bank management. The objective often comes at the cost of growing risk. The relationship between risk and return is well established: the higher the risk, the higher the expected return [4–6]. Banks face various risks, including interest rate risk, market risk, credit risk, off-balance-sheet risk, technology and operation-

al risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk [7]. The bank's motivation for risk management stems from those risks that can lead to bank failure or poor performance. Issues of risk management in the banking sector have a greater impact not only on the bank but also on economic growth and sustainable development.

In the process of doing business, the firm will inevitably face unexpected and often unpleasant surprises that threaten to undercut or, even worse, destroy the company. That is the essence of risk, and how a firm responds to it will determine whether it will survive and succeed or not. Risk management is a concept that has been utilised since the earliest days of humankind; it is an evolving concept. The corporate insurance industry laid the groundwork for risk management. Risk has long been studied, especially in recent years, and remains one of those concepts that lacks a universally accepted definition. Every scholar has a different approach to risk. Authors [8] define risk as a condition in which there exists an exposure to adversity, or a condition in

which there exists a possibility of deviation from a desired outcome that is expected or hoped for.

Research findings presented by scholars in Finance and related fields have indicated a trend towards a more cautious approach in risk management by firms over time, especially in financial institutions and other corporate business organisations. Managing systematic risk at an optimal level is essential to maintain satisfactory performance by money deposit banks [9]. There are various types of risk, including business risk, Credit risk, liquidity risk, reputational risk, and financial risk, such as default risk, which are associated with business organisations [10]. Unsystematic risk is a type of risk that depends on internal business factors and can be minimised through mechanisms or by designing an effective portfolio. It can be hedged or mitigated, but it cannot be diversified entirely away. In fact, systematic risk can be viewed as diversifiable risk [9].

Corporate profitability is one of the primary concerns for any firm and its managers. A firm requires long-term survival only through maximisation of its profit and looks further for its sustainability. Corporate profitability can basically be defined as the degree to which an organisation can effectively utilise its available funds and assets and convert them into profits. The profitability of corporate ventures enables organisations to withstand adverse shocks better and contribute to the stability of the business environment. The profitability of an organisation is affected by numerous factors. These factors include elements internal to each organisation and several important external forces that shape earnings performance [11]. Economists and financial analysts appraise the importance of corporate profitability at both the micro and macro levels of the economy. At the micro-level, profit is the essential prerequisite of a competitive enterprise and the cheapest source of funds.

Generally, banks and other financial institutions are exposed to a high level of risk due to the nature of their business. Systematic risk is one of the key risks faced by financial institutions today, as it impacts their effective performance. Similarly, banks are also faced with liquidity and economic risk in connection. Prior studies have examined the relationship between systematic risk management and corporate profitability [12, 13]. Similarly, existing studies in Nigeria have focused on healthcare authors [14–16], excluding the financial institution sector, which is also signifi-

cant to the Nigerian economy; this renders the findings of studies from other sectors largely inapplicable due to differences in regulation and business environments, including risk and uncertainty.

With its ability as a debtor to its depositors, creditors may be unwilling to renew or extend new credit without adequate risk management functions, making it unlikely that the bank will succeed in achieving its long-term strategy. Hence, the need for effective systematic risk management cannot be overstated, as firms' financial performance directly impacts the stability of their countries' economic systems in today's global capitalist economy. The factors affecting firm profitability deserve special attention [13]. Since profitability is a significant tenet of most corporate entities, this study seeks to investigate its relative importance in analysing corporate growth and survival. Many factors can impact the profitability of firms; however, for the sake of specificity, we seek to understand how systematic risk management affects corporate profitability.

Despite the variety of studies in this area, to the best of our knowledge, none have been conducted in the current Nigerian banking sector. Therefore, having identified these problems, this study seeks to fill this gap. The primary objective of this study is to investigate the nature of the relationship between systematic risk management and the corporate profitability of deposit money banks in Nigeria. To achieve the main objective, the following sub-objectives are investigated: to determine the impact of the degree of Operating Leverage on the return on assets of deposit money banks in Nigeria; to examine the effect of degree of Financial Leverage on the return on assets of deposit money banks in Nigeria; and to evaluate the impact of capital adequacy ratio on return on assets of deposit money banks in Nigeria. The focus of this study is on the relationship between systematic risk management and banks' profitability in Nigeria, with systematic risk management measured using Degree of Financial Leverage (DFL), Degree of Operating Leverage (DOL), and capital adequacy ratio (CAR) as independent variables and profitability measured by return on assets as the dependent variable.

#### *Research Questions*

What impact does the degree of Operating Leverage have on the return on assets of deposit money banks in Nigeria?

How does the degree of Financial Leverage affect the return on assets of deposit money banks in Nigeria?

How does the Capital adequacy ratio affect the return on assets of deposit money banks in Nigeria?

### *Research Hypotheses*

Ho<sub>1</sub>: The Degree of Operating Leverage does not have a significant impact on the return on assets of deposit money banks in Nigeria

Ho<sub>2</sub>: Degree of Financial Leverage does not affect the return on equity of deposit money banks in Nigeria

Ho<sub>3</sub>: Capital adequacy ratio does not significantly affect the return on assets of money deposit banks in Nigeria.

### **Literature review**

*The Concept of Systematic Risk Management.* Experts often define risk as the probability or threat of damage, injury, liability, loss, or other negative occurrences that external or internal vulnerabilities may cause and that preemptive action may prevent. It is also said to be the likelihood of something happening and the degree of loss which arises from a situation or activity. Losses can be direct or indirect. The probability of an event occurring will impact the achievement of objectives [17]. Furthermore, risk is defined as something that may have an impact on the accomplishment of the goals, encompassing both opportunities and threats [18]. Risks are complex, and since one single activity can involve several risks, the author [19] asserts that risks contain risks. Risks are generally classified into systematic and unsystematic risk. While the former refers to risks that affect the entire economy or every sector of the economy, it is considered a non-diversifiable risk; however, the latter is a diversifiable risk, and thus does not affect the entire industry or economy. Systematic risk, also known as market risk, is the risk that affects the market as a whole of a specific asset class or a portfolio invested in that asset class, encompassing unknown events that occur as a result of everyday life.

*Systematic Risk Management.* Author [20] defined risk management (RM) in his book, Principles of Risk Management and Insurance, as a process by which the identification and assessment of loss

exposures faced by an entity, as well as the adoption of best possible techniques and strategies to deal with these risk exposures, are undertaken. According to the authors [21], systematic risk management is the process by which a bank controls its financial losses and exposures. Moreover, in the business dictionary, financial risk management may be defined as the forecasting and evaluation of financial risk in conjunction with the identification of procedures to minimise or avoid risk. In the words of Finance, systematic risk management is seen as the practice of identifying, anticipating, envisioning, and analysing risks, and then taking defensive steps to curb them. Furthermore, according to authors [22], systematic risk management refers to the integration of activities aimed at minimising the adverse effects attributed to uncertainty about potential losses. Risk management is also identified as a systematic process used to identify and evaluate the level of pure loss exposure faced by a firm or individual, which will develop the basis for selecting and integrating the relevant techniques necessary to address the identified levels of exposure.

*Dimensions of Systematic Risk Management.* Operating leverage refers to the impact of fixed costs on the variability of earnings before interest and taxes (EBIT). In other words, it is the responsiveness of the firm's EBIT to fluctuations in sales. The greater the firm's degree of operating leverage, the more its profits will vary with a given percentage change in sales. Thus, operating leverage is definitely an attribute of business risk that impacts the company. Financial leverage refers to the additional variability in earnings that results from the use of debt. A significant change in asset structure and economic structure can alter the variable/fixed cost composition and interest expense, resulting in changes in operating leverage and financial leverage. The greater the degree of financial leverage, the greater the fluctuations (positive or negative) in earnings per share. The capital adequacy ratio refers to a bank's capital in relation to its liabilities and risk-weighted assets. It sets standards for banks by assessing a bank's ability to meet its liabilities and manage credit and operational risks. A bank that has a good CAR has enough capital to absorb potential losses. Thus, it has less risk of becoming insolvent and losing depositors' money.

*Concept of Corporate Profitability.* A bank's performance is relative to the profitability of the banking industry. A bank's performance is meas-

ured based on its return on assets, return on equity, return on investment, earnings per share, and other key economic indicators. Profitability is said to be the yardstick for evaluating what task has been done and to what extent. Analysts define bank profitability as the degree to which they can assess a bank's operations and activities, measuring it by the bank's return on equity and return on assets. Author [23] explained Return on Equity (ROE) as an Indicator of profitability determined by dividing net income for the past 12 months by common stockholder equity (adjusted for stock splits). The next traditional accounting measure considered for the study to understand shareholder value creation was ROA. ROA is an indicator that measures a company's profitability in relation to its total assets. ROA, as determined by the DuPont analysis, is a financial metric that indicates the capital intensity of the company [24].

*Relationship between Systematic Risk Management and Corporate Profitability.* Increasing shareholders' returns and epitomising bank performance are primary objectives of bank management. The objective often comes at the cost of growing risk. A bank faces various risks, including interest risk, market risk, credit risk, off-balance sheet risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk [7], which can be categorised into systematic and unsystematic risks. The bank's motivation for risk management stems from those risks that can lead to underperformance. Issues of risk management in the banking sector have a greater impact not only on the bank but also on economic growth [7]. Authors [25] conclude that some empirical evidence suggests that past return shocks originating from the banking sector have a significant impact not only on the volatilities of foreign exchange and aggregate stock markets, but also on their prices, indicating that banks can be a substantial source of contagion during crises. Banks that better implement risk management may have some advantages: it aligns with their obligation to follow rules, enhances their reputation, and increases opportunities to attract a broader range of customers, thereby expanding their portfolio of financial resources; it also increases their efficiency and profitability.

*Theoretical Framework.* This study is grounded in the Bank Risk Management Theory developed by authors [26], which was used to examine why risk management is necessary and outlines some

of the theoretical underpinnings of contemporary bank risk management, with an emphasis on market and credit risks. This theory suggests that credit and market risks have a direct or indirect impact on the bank's survival. As applied to this study, this theory posits that the researcher expects the independent variables – credit risk indicators – to influence or explain the dependent variable, which is bank profitability. Without adequate and efficient credit risk management, bank profitability, liquidity, and solvency are unthinkable [26]. Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many banks are now using earnings at risk (EAR) and value at risk (VAR) models to manage their interest rate and market risk exposures.

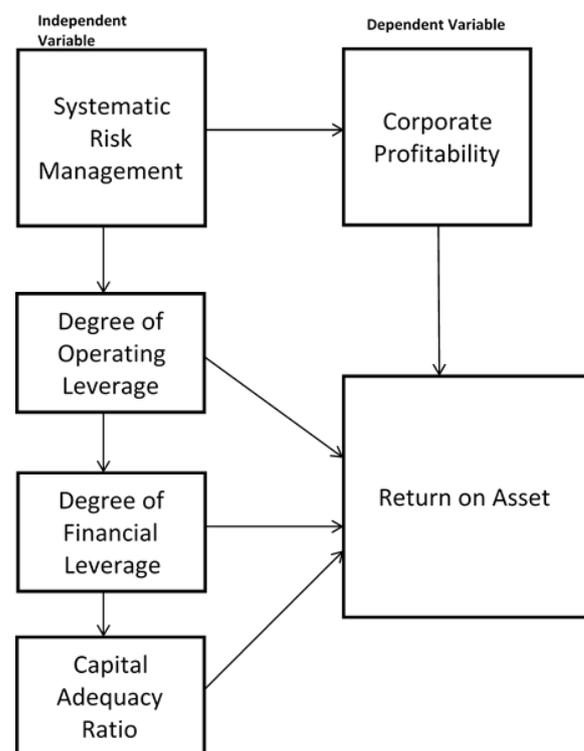


Figure 1 – Conceptual Framework

## METHOD

The research design adopted in this study is an ex-post-facto and longitudinal approach, which is particularly applicable in the management and social sciences. The data used for this research were obtained from secondary sources, covering six years (2014-2019), and include financial statements and annual reports of the banks under investigation, as well as the CBN Annual Bulletin. The determinants of profitability used in this study are primarily the return on assets (ROA) of deposit money banks under investiga-

tion. On the other hand, systematic risk, measured by the degree of operating leverage (DOL), degree of financial leverage (DFL), and Capital adequacy ratio (CAR), was also used as a determinant in the study. Statistical techniques, such as percentages and multiple regression, were used in EViews 10. Multiple regression analyses were used to examine the relationship between the dependent variable and the independent variables.

**Model Specification.** The researchers modified the author [27] model and combined degrees of operating and financial leverage to examine how economic performance relates to multiple regressors, including systematic risk. The study, therefore, established a simple model to direct our analysis. This model is as follows:

Perf f (Degree of operating & Financial leverage) (1)

$$ROA = \beta_0 + \beta_1 DOL + \beta_2 DFL + \beta_3 CAR + \mu \quad (2)$$

where ROA = Returns on assets; DOL – Degree of Operating Leverage:  $DOL = \frac{S - VC}{S - VC - FC}$ ; DFL Degree of Financial Leverage:  $DFL = \frac{EBIT}{EBIT - Interest\ Expense}$  or  $EBIT/EBT$ ; CAR – Capital Adequacy Ratio:  $CAR = \frac{(Tier\ 1\ Capital + Tier\ 2\ Capital)}{Risk\ -Weighted\ Assets}$ ;  $\mu$  – is the error term;  $\beta_0$  is the intercept of the regression;  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are the coefficients of the regression.

## RESULTS AND DISCUSSION

Table 1 – Data Presentation

Company	Crssid	Year	ROA	CAR	DFL	DOL
First Bank1	1	2009	0.021	5.72	7.67	0.21
	1	2010	0.014	9.31	7.61	0.33
	1	2011	0.019	6.12	7.5	0.2
	1	2012	0.003	4.41	4.65	0.16
	1	2013	0.018	3.33	3.35	0.19
	1	2014	0.0197	2.68	2.51	1.86
	1	2015	0.008	1.82	1.93	2.17
	1	2016	0.028	1.46	1.9	2.05
	1	2017	0.034	1.37	1.46	1.97
	1	2018	0.034	1.29	1.69	1.83
Gtbank 2	2	2009	0.05	6.04	2.63	0.93
	2	2009	0.023	7.89	4.03	6.06
	2	2010	0.034	6.6	1.37	4.7
	2	2011	0.0297	5.01	1.58	6.39
	2	2012	0.053	16.02	1.56	11.21
	2	2013	0.045	22.58	1.65	4.69
	2	2014	0.044	12.18	1.57	1.17
	2	2015	0.041	6.4	1.32	1.51
	2	2016	0.049	4.52	1.32	1.61
	2	2017	0.057	1.8	0.25	1.57
2	2018	0.062	1.36	0.69	1.74	

Company	Crssid	Year	ROA	CAR	DFL	DOL
Wema Bank 3	3	2019	0.057	1.32	0.34	3.23
	3	2009	-0.11	1.32	0.25	4.07
	3	2010	0.08	1.77	0.14	1.43
	3	2011	-0.037	7.52	2.06	1.25
	3	2012	0.02	6.93	2.28	0.34
	3	2013	0.005	6.15	2.18	0.41
	3	2014	0.006	7.99	3.14	0.33
	3	2015	0.006	4.63	1.82	0.29
	3	2016	0.006	3.84	1.1	0.3
	3	2017	0.006	2.61	1.32	1.87
Zenith Bank 4	4	2018	0.007	2.06	-1.55	2.13
	4	2019	0.007	2.28	0.31	1.93
	4	2009	0.012	2.18	0.07	1.78
	4	2010	0.019	3.14	0.1	1.74
	4	2011	0.017	1.82	0.07	0.83
	4	2012	0.039	2.04	0.06	1.11
	4	2013	0.029	3.67	0.07	-2.44
	4	2014	0.027	5.41	1.6	0.05
	4	2015	0.026	9.34	1.71	0.43
	4	2016	0.028	4.04	1.7	0.43
Uba 5	5	2017	0.033	7.33	1.71	0.32
	5	2018	0.033	10.15	0.43	0.25
	5	2019	0.033	8.06	0.43	0.69
	5	2009	0.009	5.9	0.32	2.48
	5	2010	0.0015	6.13	0.25	2.93
	5	2011	0.0098	3.23	0.69	3.04
	5	2012	0.025	3.33	2.48	3.29
	5	2013	0.021	2.86	2.93	3.25
	5	2014	0.017	2.46	3.04	1.38
	5	2015	0.021	2.37	3.29	1.71
	5	2016	0.019	2.73	3.25	-2.39
	5	2017	0.014	16.02	1.38	0.06
	5	2018	0.011	22.58	1.71	1.03
	5	2019	0.015	12.18	-2.39	0.06

From Table 2 above, it was observed that the mean values of return on assets (ROA), Capital adequacy ratio (CAR), Degree of Financial Leverage (DFL), and Degree of Operating Leverage (DOL) were 0.022221, 0.560834, 1.670377, and 1.732264, respectively. The standard deviation shows that ROA, CAR, DFL, and DOL vary slightly from their means, with respective values of 0.026553, 0.684196, 1.8819434, and 2.128767 below their average values.

Table 2 – Descriptive Statistics

	ROA	CAR	DFL	DOL
Mean	0.022221	0.560834	1.670377	1.732264
Median	0.021000	0.316900	1.570000	1.510000
Maximum	0.080000	2.586900	7.670000	11.21000
Minimum	-0.110000	0.000700	-2.390000	-2.440000
Std. Dev.	0.026553	0.684196	1.881934	2.128767
Skewness	-2.193866	1.689151	1.482257	1.850036
Kurtosis	13.33071	4.846567	6.560216	9.318161
Jarque-Bera	278.1964	32.73355	47.39852	118.3881
Probability	0.000000	0.000000	0.000000	0.000000
Sum	1.177700	29.72420	88.53000	91.81000
Sum Sq. Dev.	0.036664	24.34249	184.1672	235.6457
Observations	53	53	53	53

Furthermore, the skewness values of ROA (-2.193866), CAR (1.689151), DFL (1.482257), and DOL (1.850036) indicate that all variables were positively skewed, except for ROA. The Jarque-Bera test suggests that the researchers considered all the variables to be normally distributed, as their p-values were less than the 10% level.

Correlation is a statistical tool that describes the degree of linear association between two or more variables. From Table 3, a positive association exist between ROAf (Return on Assets) and DOL (Degree of Operating Leverage). In contrast, a negative correlation is observed between ROA (Return on Assets), CAR (Capital adequacy ratio) and DFL (Degree of Financial Leverage)

Table 3 – Correlation Table

Covariance Analysis: Ordinary				
Date: 07/25/21 Time: 03:21				
Sample: 2009 2019				
Included observations: 53				
Balanced sample (listwise missing value deletion)				
Covariance				
Correlation	ROA	CAR	DFL	DOL
ROA	0.000692			
	1.000000			
CAR	-0.000845	0.459292		
	-0.047382	1.000000		
DFL	-0.000881	-0.290543	3.474853	
	-0.017969	-0.229984	1.000000	
DOL	0.002707	0.039903	-0.317139	4.446146
	0.048805	0.027924	-0.080684	1.000000

The researchers conducted the following diagnostic tests to ensure the reliability of the estimated results: Unit Root Tests, Multicollinearity Tests, Normality Tests, and CUSUM tests.

*Unit Root Test.* Stationarity implies that the mean, variance and covariance are constant across different periods. The existence of unit roots can lead to serious issues, such as spurious regressions and errant behaviour variables, due to invalid econometric assumptions for the analysis. This study tested for the stationarity of all variables used by applying two different panel unit root tests: the Im, Pesaran, and Shin test and the Levin, Lin & Chu test. According to Table 4 below, all variables were stationary at levels, indicating that they were integrated of order zero, i.e., I(0).

Table 4 – Unit Root Test Results

Variables	Im,Pesaran & Shin Test	Remarks	Levin, Lin & Chu Test	Remarks
ROA	-2.2374***	I(0)	-2.3748**	I(0)
CAR	-3.7482**	I(0)	-8.5473***	I(0)

Variables	Im,Pesaran & Shin Test	Remarks	Levin, Lin & Chu Test	Remarks
DFL	-2.0293***	I(0)	-4.8736***	I(0)
DOL	-4.7363**	I(0)	-4.0234**	I(0)

Hausman Test. The researchers conducted the Hausman specification test to determine whether the fixed-effects or random-effects model best fits the study [29]. They apply the fixed-effects model to control for omitted variables that remain constant over time but vary across observations, and they use the random-effects model when some omitted variables stay constant across observations but change over time. According to Table 6 below, the Hausman specification test, with a p-value of 0.2325, suggests that the random effects model is appropriate; therefore, we fail to reject the null hypothesis.

H0: Random effect model is appropriate.

H1: Fixed effect model is appropriate.

Table 5 – Hausman's Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
Cross-section random	0.000000	3	1.0000	
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
CAR	-0.004871	-0.004611	-0.000004	NA
DFL	-0.001763	-0.001605	0.000001	0.8465
DOL	-0.003229	-0.002831	0.000000	0.4043

*Normality Test.* The Jarque-Bera test is a statistical procedure used to determine whether a sample or a group of data fits a standard normal distribution. The Jarque-Bera normality test (86.82067) with a probability value of 0.00000 indicates that the model residuals follow a normal distribution.

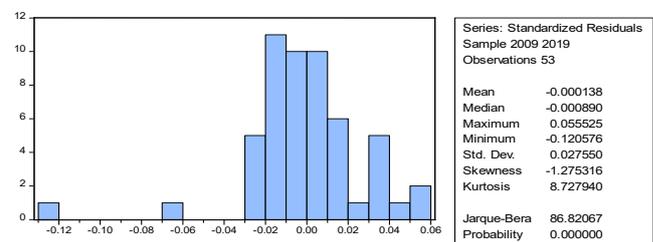


Table 6 – Panel Least Squares Estimation

Dependent Variable: ROA	
Method: Panel EGLS (Cross-section random effects)	
Date: 07/25/21 Time: 03:42	
Sample: 2009 2019	
Periods included: 11	
Cross-sections included: 5	
Total panel (unbalanced) observations: 53	

Swamy and Arora estimator of component variances				
White cross-section standard errors & covariance (d.f. corrected)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032530	0.007459	4.361457	0.0001
CAR	-0.004611	0.009058	-0.509062	0.6130
DFL	-0.001605	0.001014	-1.583007	0.1199
DOL	-0.002831	0.002732	-1.036085	0.3052
Effects Specification				
			S.D.	Rho
Cross-section random			0.024474	0.5475
Idiosyncratic random			0.022252	0.4525
Weighted Statistics				
R <sup>2</sup>	0.070418	Mean dependent var		0.005985
Adjusted R <sup>2</sup>	0.013505	S.D. dependent var		0.022058
S.E. of regression	0.021904	Sum squared resid		0.023509
F-statistic	1.237289	Durbin-Watson stat		2.498813
Prob(F-statistic)	0.306278			
Unweighted Statistics				
R <sup>2</sup>	-0.076527	Mean dependent var		0.022221
Sum squared resid	0.039470	Durbin-Watson stat		1.488339

According to Table 6, the coefficient of determinant ( $R^2$ ) of 0.070418 suggests that about 7.04% of the variation in dependent variable; Return on Assets (ROA) is explained by the independent variables (Capital Adequacy Ratio, Degree of Financial and Operating leverage) The 92.96% variance in Return on Assets (ROA) is presented by other factors not captured in this research. Additionally, the standard error of 0.021904 indicates that, on average, 0.021% of the changes in the dependent variable, Return on Assets (ROA), will not be explained by the independent variables.

Additionally, the F-statistic of 1.237289, with a p-value of 0.306278, suggests that the model is not significant at a 5% level. The Durbin-Watson statistic of 2.498813 indicates the absence of autocorrelation in the model.

*Test of Hypotheses.* In accepting or rejecting our null hypothesis, the p-values of the t-statistic were used. The study employed a 10% level of significance, as p-values exceeding 0.10 were considered statistically insignificant.

H01: The Degree of Operating Leverage does not have a significant impact on the return on assets of deposit money banks in Nigeria. According to the results of this study, the degree of Operating Leverage has a negative and significant effect on return on assets, with a p-value of 0.3052 at a 5%

confidence interval. Hence, we reject the null hypothesis.

H02: Degree of Financial Leverage does not affect the return on equity of deposit money banks in Nigeria. Based on the findings of this study, the Degree of Financial Leverage is negative and significant with respect to the return on assets, with a p-value of 0.1199, which is important at the 5% level. Hence, we reject the null hypothesis.

H03: Capital adequacy ratio does not significantly affect the return on assets of money deposit banks in Nigeria. As shown in Table 7 above, the Capital Adequacy Ratio is negative and insignificant with respect to return on assets, since its p-value of 0.6130 lies above the 5% level. Hence, we fail to reject the null hypothesis.

The test of Hypothesis One shows an inverse relationship between the return on assets and the degree of operating leverage. However, the relationship is significant at the 5% level because the p-value is less than 0.05. The researchers found that the degree of financial leverage is substantial at 5%, as the probability value exceeds 0.05. They also observed that the capital adequacy ratio is insignificant at a 5% confidence level because the probability value is greater than 0.05.

This finding is at variance with the results of authors [30], who reported a positive relationship. The inverse relationship is genuine of the Nigerian banking system during the period under study, when most loans and advances were concentrated in the stock market to create what is known as margin loans. (This is the art of granting loans to stock brokers to purchase shares using the shares as security for the loan.) Unfortunately, most of these loans were lost as a result of the global financial crisis, when foreign portfolio investors had to divest their funds.

## CONCLUSIONS

This study investigated the relationship between systematic risk management and corporate profitability of selected money deposit banks in Nigeria. Based on statistical evidence, it is concluded that there is a negative yet significant relationship between systematic risk management (in terms of degree of operating leverage and degree of financial leverage) and bank performance (in terms of profitability). Thus, it is of crucial importance that banks practice prudent risk management and operate within an acceptable level of safety to ensure enhanced profitability (ROA)

and protect investors' interests and depositors' funds—better risk management results in better bank performance. The study also reveals that banks with good or sound credit risk management policies have lower loan default ratios (i.e., fewer bad loans) and higher interest income (improved profitability). The study also reveals that banks with higher profit potentials can better absorb credit losses when they arise and therefore record better performances. Based on the result from the research hypotheses, banks should review policies already put in place for

the management and measurement of systematic risk from time to time to ensure its effectiveness, assess and continuously monitor counterparty and portfolio to know when loan is becoming nonperforming, put more efforts to the credit risk management especially to control the nonperforming loan by extensively evaluating their credit customer 's capacity to pay promptly both the principal and the interest before extending the facility, and the Central Bank of Nigeria should ensure strict adherence of all the banks to her stipulated credit risk management policies.

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