

# Effect of Financial Risk on Shareholders Asset Value of Listed Deposit Money Banks in Nigeria

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## Abstract

This study examined the effect of financial risk on shareholders' asset value of listed deposit money banks in Nigeria from 2011-2020. The specific objectives of the study were to examine the effect of credit risk, the effect of liquidity risk, the effect of leverage risk and the effect of market risk were on the shareholders' asset value of listed deposit money banks in Nigeria. The study adopted ex-post facto research design while the data were generated from the audited annual financial reports of the twelve (12) listed deposit money banks in Nigeria. The data for the study were analyzed using panel data with ordinary least square regression analysis. The study found that leverage risk had significant effect on Tobin's Q, Also, liquidity risk had a significant effect on Tobin's Q, while credit risk and market risk had no significant effect on Tobin's Q. The study recommends that the CBN should enact a policy that will force banks to utilize their funds by giving out credit and penalize banks that do not meet the threshold. Also, it recommends that the management of the deposit money banks should not aim to have high liquidity because they are being penalized by holding too much cash idle. However, the management of deposit money banks should employ more debt financing since financing with debt has no tax duties accrued to borrowed funds. Also, the management of Deposit Money Banks should bring in debt financing policy with less interest rate since financing with debt has no tax duties accrued as this will enhance their shareholders' asset values. Finally, management of Deposit Money Banks should increase the cost of collateral as this will reduce the market risk and increase the gross profit of Banks and enhance their shareholders' asset values.

**Keywords:** Financial Risk, Credit Risk, Liquidity Risk, Leverage Risk, Market Risk, Shareholders' Asset Value, Tobin's Q.

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## 1. Introduction

Global concerns about financial risk have been increasing as firms of all kinds and sizes are looking to develop robust financial risk management frameworks that satisfy compliance demands, contribute to better decision making, and enhance value. After the 2007 – 2008 financial crisis, creditors were defaulting on their obligations and this resulted in liquidity crisis globally. Basel committee came up with a new rule to guide banks globally. Basel III prescribed certain basic benchmark that acts as minimum threshold and countries are expected to introduce a set of reforms designed to improve regulations, supervision and risk management with the banking sector using the Basel benchmark. The aim is to improve the banking sector's ability to deal with financial stress, improve risk management, and promote transparency (Adams, 2020).

Financial risk encompasses the recognition of threat, financial ambiguity and mistakes originating from poor strategies, misfortunes and natural adversities. Most businesses have had their financing and investment decision tested. The decisions on how best to allocate capital to maximize shareholder's value is fundamental to the success of the firm. Investment decision is mainly concerned with what specific investment to undertake. Since there is no guarantee of a return for most investments, the investment must meet certain criteria and it must be financed appropriately in order to maximize the firm's value, after considering the amount of risk (Bordeleau & Graham, 2019).

Shareholders value involves the returns beyond investor expectations or where the return on the invested capital is greater than the company's capital cost. Given the foregoing, financial risk occurs as a result of uncertainties of loans defaults (credit risks), liquidity management, leverage risk and changes in foreign currency rates (that is, market risks). Thus, decisions involving banking activities, therefore, have an element of financial risk that affects the overall shareholder's value (Oladele, 2018).

However, the Central Bank of Nigeria's (CBN) also has made several attempts to ensure efforts at providing prudential guidelines to guide Deposit Money Banks to improve their shareholders' returns and values. These prudential guidelines have introduced new modifications in advancing loans to reduce credit risk. The question is having these guidelines issued by the CBN affected shareholders value? or do they have any effect on shareholders' value? In light of this development and to address the existing gap in the area, the study examines the effect of financial risk on shareholders' asset value of listed deposit money banks in Nigeria. Therefore, this study examines the effect of financial risk on shareholders' asset value of listed Deposit Money Banks in Nigeria using panel regression model and subjecting the residual residuals to post estimation tests for robustness checks.

In order to achieve the specific objectives of the study, the following null hypotheses were postulated:

**H<sub>01</sub>:** Credit risk has no significant effect on the shareholders' asset value of listed deposit money banks in Nigeria.

**H<sub>02</sub>:** Liquidity risk has no significant effect on the shareholders' asset value of listed deposit money banks in Nigeria.

**H<sub>03</sub>:** Leverage risk has no significant effect on the shareholders' asset value of listed deposit money banks in Nigeria.

**H<sub>04</sub>:** Market risk has no significant effect on the shareholders' asset value of listed deposit money banks in Nigeria.

## 2. Literature Review

### Concept of Financial Risk

Jean and Mark (2018) defined financial risk as the added variability of net returns to owner equity that results from the financial obligation associated with debt (or capital lease) financing. This definition posits that financial risk occurs due to uncertainties of loans defaults, liquidity management, interest rate volatility, and foreign currency rates.

According to Blach (2010), financial risk is defined as any fluctuation in the cash flows, financial results, and the company's value due to the influence of different factors; mainly market ones, such as interest rates, exchange rates, commodity and stock prices. According to this definition financial risk is responsible for any changes in the financial condition of the company. Waitherero et al (2019) opined financial risk as the likelihood that the organisation will fail to meet its financial commitments as and when they fall due. This term describes the amount of risk an organization takes on when it has financial commitments that must be paid as and at when they are due. Dimitropoulos (2018) noted that financial risk comprises liquidity risk, credit risk, and market risk, all of which contribute to the unpredictability of a firm's financial positions.

### Credit Risk

Coyle (2019) defined credit risk as the exposure faced by banks when a borrower (customer) defaults in honouring debt obligations on the due date or at maturity. It is the possibility of losing the outstanding loan partially or totally due to credit events. This definition posits that when a customer fails to honour his debt obligations by the due date or upon maturity, credit risk is the exposure faced by banks. In the event of a credit event, the possibility exists to relinquish the outstanding loan in part or whole. Similarly, Credit risk, according to Adams (2020), refers to the risk that a borrower will default on any debt by failing to make required payments. He explained that the credit risk is primarily to the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs. The loss may be complete or partial and can arise in many circumstances.

### Liquidity Risk

Liquidity risk is the quickness and certainty with which an asset can be converted into cash/ income whenever the asset holder desires. According to Drehmann and Nikolaou (2018) a bank may be unable to meet its short-term financial demands when required. This is referred to as liquidity risk. It normally happens when the firm is unable to convert its short-term assets or security to liquid cash without incurring capital or income loss in the course. Ismail (2019) defined liquidity risk as the risk of being unable either to meet their obligations to depositors or to fund increases in assets as they fall due without incurring unacceptable costs or losses. This view by Ismail (2019) emphasis the existence of an existing loan balance that could be lost or jeopardized in the event of a credit event, inability to pay a due obligation, repudiation, or credit rating change means that your company's financial situation could worsen.

### Leverage Risk

The degree of financial leverage measures the proportion of earnings before interest and taxes in relation to earnings before taxes, showing the amount of debt to be repaid by a corporation. The degree of financial leverage (DFL) is simply a measure of the degree of financial risk, so the higher the ratio, the more volatile the company is considered to be, since it relies so heavily on debt and any changes in the economic environment or interest rates that have an extremely negative impact on the growth of the company. A company is classified as leveraged if, simply because of the debt component of the tax shield, it is financed in part by debt. Debt, however, carries a fixed cost, ensuring that the amount of financial leverage will also increase if the company increases its debt (Gatsi et al., 2017).

### Market Risk

Market risk consists of three lower risks according to the classification of banking risks introduced by the foreign

economists Koch and MacDonald (2016): stock price risk, interest rate risk and foreign exchange risk. There is also a form of market risk, according to Worzala (2018), where banks consider financial instruments exposed to volatility in market prices as collateral for loans. In the day-to-day market, price fluctuations or uncertainties increase and decrease. This type of risk applies mainly to both stocks and options and tends to perform well (increasing) in the bull market and poorly (decreasing) in the bear market. In general, the more volatile the market is, the more likely it is to increase or decrease investment.

#### Concept of Shareholders Value

Shareholders are present in a business where their business is able to generate returns beyond investor expectations or where the return on the invested capital is greater than the company's capital cost (Hartomo, 2018). According to Oladele (2018), shareholder value formation occurs when a company produces more income for shareholders than it can create for itself. This definition implies that the production of value involves much more than just controlling the performance of companies; instead, the management team should be actively involved in the process of generating value.

## 2.2 Empirical Review

### Credit Risk and Shareholders Value

The effect of credit risk on the profitability of commercial banks in Sweden was analysed by Ara, Bakaeva and Sun (2019). The objective of the analysis was to clarify the impact of credit risk on the profitability of four commercial banks in Sweden. Secondary data was obtained and analysed from annual bank reports. The results showed that, in all four banks, credit risk had an impact on profitability. Furthermore, the results showed that the application of Base II improved the negative impact of NPLR on ROE. There was no justification for adopting only four banks. More so, the theoretical framework was found missing in the body of the study.

In contrast, the relationship between credit risk performance and financial health in selected Nigerian commercial banking sectors was analysed by Onalapo (2019). For a total of 14 years after the consolidation programme (2004 to 2018), data collections were mainly secondary. The study hypothesised that credit risk quality, bank performance and operational efficiency have a negative relationship. The pairwise causality of Granger indicated that the Nigerian Commercial Banking sector would not sustain the exposure of deposits and the production effect. Also, although the author showed evidence of related empirical literature, the author did not clearly show how this work is different from other studies. Besides, the policy recommendations made are too general.

An empirical investigation on the effect of credit risk on bank performance in Nigeria over the 21-year period (1997-2017) was conducted by Marshal and Onyekachi (2018). The analysis considered five banking firms selected from the twenty existing deposit money banks in Nigeria for the period under review. They used judgmental sampling techniques. Data was collected in the analysis from the banks' annual reports and statements. Data consisted of time-series and cross-section data pooled into a data collection panel and measured using regression techniques for panel data. The outcome has shown that LogNPL and LogROA (Bank Output Ratio) have a positive relationship. Their analysis found that the research banks in their loan portfolio had a very low level of non-performing loans, and, as such, this does not comply with our apriori requirements. Their findings also showed that the ratio of loans and advances to total deposits (LogLA) to banks' production (LogROA) has a positive relationship. As a result, the increase in loans and advances boosts banks' profitability through interest income from loans and advances. The major weakness of the study is that it relied on judgemental sampling, which does not give an objective representation of the population.

### Liquidity Risk and Shareholders Value

Bordeleau, et al (2019) analysed the effect of liquidity on the profitability of 55 US banks and 10 Canadian banks between 1997 and 2018. To assess the impact of liquidity on bank profitability, the study employed quantitative methods. The study results revealed that there is a non-linear relationship that increases the profitability of banks holding some liquid assets, but there is a point above which holding additional liquid assets reduces banks' profitability, which is all the same. The analysis results offered some evidence that the relationship between liquid assets and profitability was contingent on the business model of the bank and the likelihood of funding market difficulties. The non-linear model of estimation requires that a pre-estimation test for non-linearity exists amongst the variables before it could be adopted. That was not the case in this study.

Similarly, using the financial crisis of 2008/2009, Bordeleau and Graham (2019) analysed the impact of liquidity risk on the profitability of banks in Canada between 2008 and 2018. The study adopted a descriptive survey template and a regression methodology. The paper found evidence that banks' profitability holding such liquid assets has increased, based on a panel of Canadian and American banks from 2008 to the end of 2018. The study found that commercial banks have two main priorities in handling their portfolios that can conflict. In the event that their cash is under threat, the first is the protection of liquid assets and the second is the ability to earn

a high return on their assets to maximise earnings. The use of OLS is not sufficient and robust for policy making. More so, the findings made from the study were not based on empirical reviews.

The effect of liquidity risk on banks' profitability based on their size has been examined by Virginie (2015). The data used was gathered from the Dijk desk 's bank reach, a typical financial database from the period 2005 to 2012. The report included the annual financial data of 1,270 European banks. The 346 commercial banks, 487 cooperative banks and 835 savings banks were classified into three banks. Bank money, liquidity risk and credit risk were among the independent variables. The findings were that the liquidity risk had a favourable performance relationship that was important for small banks. This meant that small banks, on average, had less demand deposits than large banks, whereas large banks had greater access than small banks to external funds. This study was focused on developed economies in Europe, while the current study will focus on Nigeria.

#### Leverage Risk and Shareholders Value

Hakim and Kasenda (2018) investigated on leverage risk and Financial Performance: Evidence from Nigerian Food Production Firms. Ex po factor research design was adopted and data for the study were obtained from 2009-2014 annual reports and account of food production firms in Nigeria. The proxies as used in the research were: Debt to equity ratio as the independent variable while the proxies for the dependent variables were: Return on Assets (ROA), Return on Equity (ROE) and Earnings Per Share (EPS). Ex-post facto research design was adopted. Paired sample t-test was applied for the test of the three hypotheses formulated. Results from the research showed that Financial Leverage has no significant impact on Earnings per share of food production firms in Nigeria and also that Financial Leverage has effect on Return on Equity of manufacturing firms in Nigeria. Another finding showed that financial leverage has effect on Return on assets of manufacturing companies in Nigeria. The study also showed that debt-equity ratio has an impact on Return on Equity of these companies in Nigeria. Another finding was that debt-equity ratio has effect on Return on assets of these companies.

Muhammad (2018) investigated the impact of Financial Leverage on Firm Performance in Fuel and Energy Sector, Pakistan. Proxies for the independent variables as used in the research were: Debt ratio, Debt-equity ratio and Equity ratio while the proxies for the dependent variables were: Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), Return on Capital Employed, Earning Per Share (EPS). This research made use of quantitative research design. Results from the research showed that debt ratio and equity ratio has positive but insignificant impact on firm performance when it is measured by return on assets. The debt to equity ratio shows negative and significant relationships with firm performance. Return on equity shows positive and significant relationships with debt ratio and equity ratio. Equity ratio has negative and insignificant relationship with firm performance.

Nanteza (2017) carried out a research on the effect of financial leverage on the financial performance of Kenyan Energy and Petroleum Firms listed on the Nairobi Stock Exchange. The proxy for financial leverage as used in the research is Debt to Equity ratio while the proxies for the financial performance were: Return on Assets (ROA), Dividend Payout ratio (DPR) and Liquidity Management. Correlation and regression analysis were used to establish the effect of financial leverage on financial performance of selected firms. Result from the study showed that there was a strong negative relationship between financial leverage and the profitability of selected firms. However, the study was conducted in Kenya which results might be different from studies in Nigeria.

#### Market Risk and Shareholders Value

A study on the practice of strategic market risk management among non-financial, non-listed Danish medium-size companies engaged in international activities was published by Hansen (2019). The study adopted the matrix of Pearson correlation and descriptive analysis of data estimation. The study showed that financial output was positively correlated with foreign exchange risk. A significant positive connection to success was the size of the company. The use of correlation analysis is not sufficient for a robust study such as this. The author could have adopted a more rigorous approach such as GMM. Also, the study failed to specify the scope of the study.

The relationship between market risk and the size of the bank was examined by Wong, Wong and Leung (2019). From 2005 to 2018, the study used a set of community data on the equity prices of 14 Chinese banks listed. Empirical results suggest that the renminbi's appreciation is likely to harm Chinese banks' production and, thus, on share prices, with a more pronounced impact on larger banks. The findings indicate that a decline in stock prices means a higher probability of default.

The effect of market risk on the bank index and the return on bank shares were investigated by Aykut (2016). There were 49 banks for this purpose, of which 32 were deposits, 13 were growth and investment banks, and 4 were equity banks. Descriptive statistics were carried out for the variables. The regression results showed that interest rate risk had a statistically negative and significant effect on bank profitability volatility. The effect of foreign exchange risk on the volatility of bank returns was considerable. This outcome supports the fact that,

until the end of 2014, the Turkish banking system had a strong short-term role and, after that point, a small and long-term role. No evidence of post estimation test in the analysis.

### 2.3 Theoretical Framework

#### Portfolio Theory

Portfolio Theory was propounded by Markowitz (1952), which is concerned with risk and return. The investor is concerned only with the expected values of securities and the interest in the portfolio's expected value. To maximise the expected value of a portfolio, one need only invest in one security (the security with maximum expected return). Thus, action based on expected return only must be rejected as descriptive of actual or rational investment behaviour. It seemed obvious that investors are concerned with risk and return, and these should be measured for the portfolio as a whole. Therefore, the portfolio theory is about to maximise the benefits of investments considering risk and return. Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many banks now use earnings at risk (EAR) and value at risk (VAR) models to manage their interest rate and market risk exposures. Unfortunately, even though financial risk remains the largest risk facing most banks, the practice of MPT to credit risk has lagged (Margrabe, 2007). Under the portfolio theory, traditionally, banks have taken an asset-by-asset approach to financial risk. While each bank's method varies, in general, this approach involves periodically evaluating the credit quality of loans and other credit exposures, applying a financial risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses (Gakure et al., 2012).

However, portfolio theory is about maximising the benefits of investments considering risk and return. This theory explains that banks have successfully applied portfolio theory to risk by applying earnings at risk and value at risk models to manage their interest rate and market risk exposures. Therefore, the portfolio theory will be used to underpin this study.

### 3. Methodology

The study was carried out using an ex-post facto research design. The population consist of the fourteen (14) listed DMBs in the Nigerian Exchange Group (NGX). With the convenience sampling technique, the sample size of this study is made up of twelve (12) DMBs that have been consistently listed on the Nigerian Stock Exchange and have published their financial report for the period under review, which are Access Bank Plc, Fidelity Bank Plc, First Bank of Nigeria Plc, First City Monument Bank Plc, Guaranty Trust Bank Plc, Stanbic IBTC Bank, Sterling Bank Plc, UBA Plc, Unity Bank Plc, Union Bank, Wema Bank Plc, and Zenith Bank Plc. Ecobank was listed as Eco Transnational incorporated and the data was quoted in dollars and Jaiz bank was listed in 2018, hence was exempted from the sampled banks for the period of this study due to unbalanced data sets.

The study used secondary panel data from the DMBs annual financial statements for 10 years (2011 – 2020). Descriptive statistics was used to summaries the basic characteristics of the results. The statistics included average, median, minimum and maximum. The study also used correlation analysis for multicollinearity and interaction between dependent and independent variables. Panel regression technique was used for this study given its superiority over pure cross section or pure time series. Hausmann test was carried out to decide which model is most appropriate between fixed or random effects model.

The panel regression model that captures the effect of financial risk on shareholders' value in Nigeria is stated below:

$$TOQ_{it} = \beta_0 + \beta_1 CRR_{it} + \beta_2 LIR_{it} + \beta_3 MAR_{it} + \beta_4 LER_{it} + \varepsilon_{it}$$

Where,

TOQ – Tobin Q

CRR – Credit risk

LIR – Liquidity risk

MAR- Market risk

LER- Leverage risk

$\beta_0$  - constant term

$\beta_1, \beta_2, \beta_3, \beta_4$  beta coefficients

$\varepsilon$  - error term

### 4. Results And Discussions

The study examined effect of financial risk on shareholders' asset value of listed deposit money banks in Nigeria with financial risk as the independent variable and shareholders' value as the dependent variable. Credit risk, liquidity risk leverage risk and market risk were employed as proxies for the independent variable and Tobin's Q as proxy for the dependent variable. The data were presented in appendix I.

Table 1: Descriptive Statistics

	TOBIN_Q	CREDIT RISK	LEVERAGE RISK	LIQUIDITY RISK	MARKET RISK
MEAN	0.855242	-6.613775	90.33886	15.33344	59.18128
MEDIAN	0.800750	-1.507700	86.70845	14.85370	59.01580
MAXIMUM	2.550800	2.042400	254.7496	34.32490	83.67220
MINIMUM	0.632200	-494.0192	76.24650	0.579000	28.19310
STD. DEV.	0.247763	44.98261	22.18008	6.674006	11.09860
SKEWNESS	4.477109	-10.73379	5.639162	0.137692	-0.058435
KURTOSIS	26.56761	116.8076	36.16376	2.750554	2.510594
JARQUE-BERA PROBABILITY	3178.051	67065.09	6135.177	0.690299	1.265883
OBSERVATION	120	120	120	120	120

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 Source: E-Views 11, 2021

The table 1 revealed the data used in the study with Tobin's Q, credit risk, leverage risk, liquidity risk and market risk having a mean value of 0.855242, -6.613775, 90.33886, 15.33344, 59.18128 respectfully. The deviation from the mean (standard deviation) was 0.247763, 44.98261, 22.18008, 6.674006, 11.09860; this means that was normally distributed because the standard deviation value was lower than the mean value.

Table 2: Correlation Matrix

	TOBIN_Q	CREDIT RISK	LEVERAGE RISK	LIQUIDITY RISK	MARKET RISK
TOBIN_Q	1	-0.63547	0.87805	-0.43451	0.00761
CREDIT RISK	-0.63547	1	-0.68731	0.174604	-0.00486
LEVERAGE RISK	0.87805	-0.687319	1	-0.21819	-0.19726
LIQUIDITY RISK	-0.43451	0.174604	-0.21819	1	0.01991
MARKET RISK	0.00761	-0.00486	-0.19726	0.019916	1

Source: E-Views 11, 2021

Table 2 explained the correlation of financial risk measures and shareholders' asset value of listed deposit money banks in Nigeria where the Tobin's Q was correlated with credit risk to the value of -0.63 which signifies there is no correlation since the value is negative, While the Tobin's Q were correlated with leverage risk to the value of 0.87 which signifies there is higher correlation since the value is close to 1. Also, Tobin's Q was correlated with liquidity risk to the value of -0.43 which signifies there is no correlation since the value is negative. Tobin's Q was correlated with market risk to the value of 0.007 which signifies there is positive correlation since the value is positive.

Table 3: Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.526064	4	0.1106

Source: E-Views 11, 2021

The result of the Hausman test in the table 4 indicates that the fixed effect regression model is the most appropriate model to analyse the data of the study. With the probability of 0.1106, the random effect was rejected. Therefore, the fixed effect estimator was used to run the regression.

Table 4: Panel Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.172044	0.084108	2.045504	0.0433
CREDIT_RISK	-8.510005	0.000186	-0.456600	0.6489
LEVERAGE_RISK	0.009484	0.000461	20.58573	0.0000
LIQUIDITY_RISK	-0.010534	0.001174	-8.969035	0.0000
MARKET_RISK	-0.000214	0.000918	-0.232501	0.8166

  

Effects Specification				
Cross-section random effects (variables)				
R-squared	0.943395	Mean dependent var	0.855242	
Adjusted R-squared	0.935231	S.D. dependent var	0.247763	
S.E. of regression	0.063055	Akaike info criterion	2.566056	
Sum squared resid	0.413496	Schwarz criterion	2.194390	
Log likelihood	169.9633	Hannan-Quinn criter.	2.415121	
F-statistic	115.5540	Durbin-Watson stat	1.634161	
Prob(F-statistic)	0.000000			

Source: E-Views 11, 2021

Credit risk had insignificant effect on Tobin's Q because the p-value was 0.6489 which was greater than the 0.05 significant level, indicating that increase in credit risk will not have a noticeable increase on Tobin's Q with coefficient of -8.510005 and t-value of -0.456600. Also, leverage risk had a positive significant effect on Tobin's Q because the p-value was 0.0000 which was less than the 5% significant level, indicating that increase in leverage risk will automatically increase Tobin's Q by 0.0094, with t-value of 20.58573.

But, liquidity had a negative significant effect on Tobin's Q because the p-value was 0.000 which was less than the 5% significant level, indicating that increase in liquidity risk will automatically decrease Tobin's Q by -0.010, with t-value of -8.969035. While, market risk had a negative insignificant effect on Tobin's Q because the p-value was 0.8166 which was greater than the 5% significant level, indicating that increase in market risk will not have a noticeable increase the Tobin's Q with coefficient of -0.000214 and t-value of 0.8166.

The coefficient of determination (R<sup>2</sup>) is 94.3% which means that financial risk variables used in the study explained variation on shareholders' value using Tobin's Q to the extent of 94%, while the remaining variation of 6% was explained by other variables not captured in the model. The model is fit with F-statistics of 115.5540 and Prob of 0.0000. Durbin Watson value was above the acceptance threesome of 1.634161, this indicates that, there is no autocorrelation among the variables.

#### 4.2 Discussion of Findings

Based on the findings, credit risk had insignificant effect on shareholders' value which signifies that increase in credit risk will not have a noticeable increase on shareholders' value of listed deposit banks in Nigeria. This work is in support with the findings of Ara, Bakaeva and Sun (2019) and Kolapo (2018); therefore, the null hypothesis was accepted.

Liquidity risk had a negative significant effect on Tobin's Q which signifies that increase in liquidity risk will have a decrease on shareholders' value of listed deposit money banks in Nigeria. This finding is in relation to the findings of Bordeleau, Crawford and Graham (2019), Koziol and Lawrence (2018) and Virginie (2015), stating that bank inability to meet its obligations which incurred including the inability to manage unexpected reductions or changes that might occur on market conditions and affect the ability to liquidate assets rapidly and with the least possible losses in their financial performance. Therefore, the null hypothesis was rejected.

Leverage risk had a significant effect on Tobin's Q at 5% significant level, indicating that increase in leverage risk will automatically increase Tobin's Q of listed deposit money banks in Nigeria. However, the implication of this finding indicates that firms will prefer their capital structure to include retained earnings, debt and equity by adhering to the hierarchy of financing sources after due consideration of the implications. This therefore is in line with the pecking order theory that opines that the cost of financing increases as a result of information asymmetry. Therefore, firms will have to prioritize their source of financing. Research works such as: Gatsi, Gadzo and Akoto (2017), Atif and Aamir (2016), all support the findings of this study.

Moreover, market risk has insignificant effect on shareholders' value which signifies that increase in market risk will not lead to an increase in shareholders' asset value of listed deposit money banks in Nigeria. This

finding is in line with the findings of Hansen (2019), Aykut (2016) and Nimalathan and Pratheepkanth (2017). Therefore, the null hypothesis was accepted.

Thus, based on the study, financial risk has a significant effect on shareholders' asset value of listed deposit money banks in Nigeria. The findings of this study support the Stakeholder Theory which signifies that the financial risks can affect all the stakeholders who are legitimate claimants of the firm's returns. Stakeholder theory underpins the study by identifying the interested parties affected when the financial risks either benefit the company or deprive the company's value.

## 5. Conclusion and Recommendations

This research examined effect of financial risk on shareholders' asset value of listed deposit money banks in Nigeria for a period of 10 years (2011 – 2020). The study observed that credit risk and market risk had no significant effect on shareholders' value of listed deposit money banks in Nigeria. The study also found out that liquidity risk and leverage risk had a significant effect on shareholders' asset value of listed deposit money banks in Nigeria. Based on the findings and conclusions from this study, the following recommendations are as follows;

- i. The Central Bank of Nigeria should enact a policy that will force banks to utilize their funds by giving out more credit by increasing their loan to deposit ratio from 65% to 70%.
- ii. The Deposit Money Banks in Nigeria should adopt an optimal liquidity in order to enhance the performance of the bank. Therefore, the management of the deposit money banks should not aim at having high liquidity because they are being penalized by holding too much idle cash.
- iii. The management of Deposit Money Banks should bring in debt financing policy with less interest rate since financing with debt has no tax duties accrued as this will enhance their shareholders' asset values.
- iv. Again, management of Deposit Money Banks should increase the cost of collateral as this will reduce the market risk and increase the gross profit of Banks and enhance their shareholders' asset values.

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