

CAPITAL STRUCTURE AND MARKET VALUE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The influence of capital structure on the market value of listed Nigerian deposit money banks (DMBs) was examined by this study. The research design adopted was the longitudinal design. Data on the market value as well as capital structure were derived from secondary sources; annual reports of the sampled banks for the years 2012 to 2020. Purposive sampling technique was utilized in selecting eleven (11) listed DMBs from the total population of 14 listed banks as at 31st December, 2020. The findings revealed that total debt to equity ratio exerts linear negative influence on the market value while the impact of short term debt on the market value was also found to be linear and negative but not significant. The study concluded that long term debt ratio had U-shape relationship with the market value suggesting that long term debt is detrimental to market value but in the long run increases firm's market value. The study recommends that Nigerian DMBs should adjust their capital structure by gradually reducing the debt ratio through higher equity component. In addition, focus should be more on long term debt when borrowing as it brings about increase in market value in the long run.

Keywords:

Capital structure, market value, deposit money banks

Introduction

The heartbeat of the economy of a nation is the financial sector. In this sector, the deposit money banks (DMBs) play a major role by serving as intermediate among other sectors of the economy. The banking sector acts as a pillar for an economy, and holds an essential place in the growth and development of the economy of a nation (Bagh et al., 2017). According to Bhattarai (2018), deposit money banks capitalize profit by generating funds and employing resources in profitable area. Golder et al. (2020) opined that bank gather funds and furnishes other parties with loans for smooth running of their business. As a result of this, a well built capital structure with debt and equity must be maintained, amassed deposit by various gainful accounts and disclose loan from these resources to guarantee liquidity of borrowers. The long term goal of a bank's manager is to increase the value of firm. Increasing the bank's value entails maximizing the shareholders' wealth. Fama and French (2002) stated that the

firm's optimal value can be achieved by applying one of the functions of financial management, allowing one financial resolution to affect more financial resolution as well as influencing the market value of firms. One of the considerable essential resolutions that the bank's management utilizes to realize the main goal mentioned above is capital structure. But, the capital structure of bank disaster was as a result of financial crises that occurred between 2007 and 2009 was in the mind of regulators as well as scholars.

Nevertheless, the perfect capital structure entails equity and debt (Sadiq et al., 2017), guarantee reduction of expenses and expansion of Market's value (Sheikh & Qureshi, 2017). The optimal capital structure of bank had been studied universally by researchers. Bukair (2019) stressed that, debt is cheaper than equity, and this affects the participation of banks in different financial markets. In the light of this, a higher return as well as banks worth is enhanced by debt financing (Sheikh & Qureshi, 2017). The influence of certain elements of banks on capital formation has been examined by some analysts (Bukair, 2019; Harun et al., 2020; Sheikh & Qureshi, 2017). In the Nigerian banking sector, regulation by the Central Bank of Nigeria (CBN) in 2004, stipulated minimum capital requirement of ₦25 Billion for deposit money banks. To attain this, there is need for mixture of equity and debt to reach capital structure at an optimal level (Aremu et al., 2013). Among the current issues the managers of bank are facing is to decide the equity and debt mixture to reach an optimal capital structure level for the business so as to lower the bank's capital cost and therefore enhance the shareholders' return on investment. Also, the numbers of DMBs in Nigeria are reducing due to merger and acquisition by other banks because of their inability to sustain their capital base.

Based on the aforementioned problems and to further add to the existing literatures, the influence of capital structure on the market value of listed Nigerian DMBs was examined by this study. Also, these questions were posed: To what extent does total debt to equity ratio influence the market value of listed Nigerian DMBs? To what extent does short and long debt to equity ratio influence the market value of listed Nigerian DMBs? In relation to the above question, the study's intents are to: assess the influence of short and long debt to equity ratio on market value and ascertain the influence of total debt to equity ratio on market value of listed Nigerian DMBs on the Nigerian Exchange Group (NGX) from 2012 to 2020.

LITERATURE REVIEW

Market Value

The price at which an asset would be traded in a market that is competitive is referred to as market value (Lin & Wang, 2017). The perception of investor concerning the success of a bank is term market value. The stock prices increase the confidence of investor in the bank. In order to receive higher profit, they are interested in paying more. A good signal that captivates investors in their investment decision is the high stock price (Ifada et al. 2019). A Nobel Prize winner in economics in 1981, a professor from Yale University developed Tobin's Q ratio.

Capital Structure

Khaki and Akin (2020) stated that an inclusive economic growth that brings about sustainable as well as growing business was born out of capital circulation. More capital contribute by shareholders is needed by business with profitable opportunities. Although, banks usually fall back to borrowing funds from several sources to finance long-term and short-term projects. The generated cash flows are reassigned away from the equity applicant; breaking cash stream by assigning cash flow that is relatively safer to debt holders as well as stockholder assigned a riskier stream. This equity and debt financing mixture in the sources of funds of the bank is referred to its capital structure (Gitman & Zutter, 2012). Short debt is a bank's financial obligations that are expected to be paid off within a year, while long debt is any debt that is due after year. If a debt to equity ratio is negative, it means that the bank has more liability than asset. A negative ratio is generally an indicator of bankruptcy.

Theoretical Review

There are several theories that have connection with capital structure management and market value among which comprise: Modigliani and Miller theorem, pecking order, and trade-off theories. However, this work is anchored on trade-off theory, this theory was introduced by Modigliani and Miller in 1963 to furnish an argument that; a target level of debt exists that maximizes the value of bank by considering debt's benefits against the cost of financing debt. The theory proposed that capital structure of bank hang on the tradeoff between the benefit of tax shield using debt as well as its associated consequences in form of financial distress. The insignificant gain from more debt decreases with debt piece increase in the capital structure of bank; the marginal cost is also on the increase. Consequently, for the overall value of bank to be reached, tradeoff is important in selecting the proportion of equity as well as debt that it plans to utilize to finance its operation (Ahmed et al., 2018).

Empirical Review

Ayalew and McMillan (2021) investigated the connection between financing decision, as assessed by profitability, short as well as total-term debt ratios of Ethiopian private banks. The results show that capital structure variables as well as certain bank's traits describe a fundamental role of the contrast in the profitability of banks. Higher profitability assessed by net interest margin as well as ROA tend to be connected with relatively higher credit risks, short and total-term debt ratios and loan to deposit ratios.

Jadah et al. (2021) studied dynamic panel data analysis of financing decision attributes: proof from Iraqi banks. The outcomes reveal that bank profitability, bank age and bank size pose a supreme position in describing the variations in the Iraqi banks long term ratio. Concurrently, only bank profitability, growth, age, and size have a major role in explaining the difference of short term debt.

Adeniyi et al. (2020) considered capital structure and performance of Nigerian deposit money banks. The study utilized earnings per share and profit after tax to measure performance and data of 14 sampled listed Nigerian deposit money banks was analyzed with panel regression technique from 2009 to 2016. The outcome revealed that debt is connected significantly to the probability of Nigerian deposit money banks. It was concluded that shareholders wealth and liquidity influence debt significantly.

Ahmahadin and Oroud (2019) assessed the regulating position of profitability in the connection between financing decision as well as market value in Jordan. The empirical outcomes of the analyses through panel data gave robust proof of an adverse connection between financing decision and market value. The outcomes validated that the influence of capital structure seems to be complex in nature as well as tough to study without controlling profitability interaction as one of the crucial factors. Consequently, examining the relationship effect gives sufficient evidence as well as increase the understanding of the connection between capital structure and market value.

Serwadda (2019) examined the influence of financing decision on bank's performance in Uganda; from 2006 to 2015 considering 20 deposit money banks as sample. The outcomes revealed that a positive connection exist between performance as well as variable of capital structure. It's between net interest margin, total debt as well as long-term debts. Also, a connection that is positive exists among return on asset and total debt as well as return on equity and total debt. Nevertheless, a negative connection exists among return on asset and short term debt. The outcome also showed that bank size has a positive connection with return on equity as well as return on asset.

Uzokwe (2019) examined financing decision and the market value of listed Nigeria firm: A Test of Miller and Modigliani Irrelevant Hypothesis. The objective was to examine the irrelevant hypothesis validity. The Tobins Q value of firm measure was modeled as a function of retained earnings ratio, debt-to-equity ratio and long-term debt to equity ratio. The work revealed that the capital to earnings ratio, debt to equity ratio as well as the long term debt to equity ratio are connected to the market value of listed firms positively and significantly

Nwude and Anyalechi (2018) observed the impact of financing decision on the performance of Nigerian deposit money banks. The impact of financial mix on the bank's performance and the causal connection between debt to equity ratio was examined by the study. Panel regression was utilized to analyze the data obtained. The outcomes showed that debt financing influences return on asset negatively as well as significantly while the debt to equity ratio influence ROE positively and significantly. There exists neither bidirectional nor unidirectional connection between financing decision as well as the bank's performance.

Methodology

The research design this study embraced was the longitudinal design. Data on the market value as well as capital structure of listed Nigerian DMBs was derived from secondary sources through annual reports of the listed banks for a period of nine (9) years; from 2012 to 2020. The study's population comprises 14 listed DMBs on the Nigerian Exchange Group (NGX). Purposive sampling technique was utilized in selecting eleven (11) listed deposit money banks that their data were available at the disposal of the researcher. Linear and Non-Linear Panel Regression, correlation analysis and descriptive statistics were utilized for data analysis. Relevant diagnostics were employed to check the reliability and validity of data. However, this is one of few studies that considered Non-Linear Panel Regression to establish the U shape relationship between criterion and predictors variables.

Measurement of Variables

Table 1 Summary of variables

Variables	Type	Variable Labels	Measurement	Sign
Market Value	Dependent	TOBQ	Total market value of bank + total book value of liabilities/total book value of assets.	
Short debt to equity ratio	Independent	SDER	Short debt divided by the total equity of banks for less than a year.	±
Long debt to equity ratio	Independent	LDER	Long debt divided by total equity of the banks for more than a year.	±
Total debt to equity ratio	Independent	TDER	Banks' total debts divided by total equity.	±
Bank size	Control	BS	Natural log of total bank assets.	±
Bank age	Control	BA	Number of years since bank is listed on the Stock exchange	±
Bank growth	Control	BG	Change in income over time	±

Source: Authors' Collection, 2022

Model Specification

In this study, the model specification is as follows:

$$TOBQ = f(CSM, CV) \dots \dots \dots eq.1$$

Where TOBQ represents market value, CSM is the capital structure management variables, CV is the control variables.

$$CSM = (SDER, LDER, TDER) \dots \dots \dots eq.2$$

$$CV = (BS, BA, BG) \dots \dots \dots eq.3$$

Substituting eq. 2 to eq.3 into eq.1 gives
 $TOBQ = f(SDER, LDER, TDER, BS, BA, BG) \dots \dots \dots eq.4$
 Equation eq. 4 can be expressed in stochastic for as

Model 1

$$TOBQ_{it} = \lambda_0 + \lambda_1 TDER_{it} + \lambda_2 BS_{it} + \lambda_3 BA_{it} + \lambda_4 BG_{it} + \varepsilon_{it} \dots \dots \dots eq.5$$

Model 2

$$TOBQ_{it} = \beta_0 + \beta_1 SDER_{it} + \beta_2 LDER_{it} + \beta_3 BS_{it} + \beta_4 BA_{it} + \beta_5 BG_{it} + \varepsilon_{it} \dots \dots eq.6$$

Where:

$$\varepsilon_{it} = \rho_i + \varepsilon_{it} \dots \dots \dots eq.7$$

Where:

- TQ_{it} = Market value of bank i at time t
- $SDER_{it}$ = Short debt equity ratio of bank i at time t
- $LDER_{it}$ = Long debt equity ratio of bank i at time t
- $TDER_{it}$ = Total debt equity ratio of bank i at time t
- BS_{it} = Bank size i at time t
- BA_{it} = Bank age i at time t
- BG_{it} = Bank growth i at time t
- ε_{it} = Error term that is white noise
- ρ_i = time invariant bank specific effect of bank i.
- λ_0 = Constant term
- β_0 = Constant term
- $\lambda_1 \dots \lambda_4$ = Regression Coefficients
- $\beta_1 \dots \beta_5$ = Regression Coefficients

Results and Discussion

Table 2 Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
TOBQ	99	.996	.294	.121	3.053
TDER	99	6.007	4.207	-27.865	13.307
LDER	99	.63	.404	-.344	2.095
SDER	99	5.377	4.027	-27.521	11.381
BS	99	9.18	.401	8.13	9.886
BG	99	18.603	65.794	-64.904	615.903
BA	99	23.864	13.778	6	50

Source: Authors' Collection, 2022

The outcomes in Table 2 indicate that the average Tobin Q of the banks in the period is 0.996 with minimum of 0.121 as well as maximum of 3.053. The estimated average short term debt ratio, long term debt ratio as well as total debt ratio, are 5.377, 0.63 and 6.007 respectively, while firm size, revenue growth and age of the firm respectively have estimated mean of 9.18, 18.603 per cent and 23.86 years.

Table 3 Estimated Matrix of Correlations

Variables	1	2	3	4	5	6	7
1. TOBQ	1.000						
2. TDER	-0.413	1.000					
3. LDER	-0.436	0.507	1.000				
4. SDER	-0.390	0.997	0.434	1.000			
5. BS	-0.290	0.339	0.049	0.349	1.000		
6. BG	-0.106	0.043	0.070	0.038	0.051	1.000	
7. BA	-0.174	0.190	-0.036	0.202	0.381	-0.079	1.000

Source: Authors' Collection, 2022

The relationship among the variables is also estimated and the outcomes are presented in Table 3. From the outcomes, total, short as well as long term debt ratio are respectively inversely connected with Tobin Q with estimated correlation coefficient of -0.413, -0.390 and -0.436 respectively. In addition, the respective correlation coefficient of -2.90, -0.106 and -0.174 reveal that size of the bank is inversely connected with Tobin Q, revenue growth is inversely related with Tobin Q while age of the bank is also inversely connected with Tobin Q.

Table 4 Diagnostic test results

Test Type	Results	Remarks
Total Debt Model Pesaran Cross Sectional Dependence Test	F = 3.694 Pr = 0.0002	Existence of Cross Sectional Dependence at 1 per cent
Variance Inflation Factor	Mean = 1.157 Highest = 1.287	No multicollinearity problem
Modified Wald test for groupwiseheteroskedasticity	Chi2 = 126.6 Prob> Chi2 = 0.000	Existence of Heteroscedasticity at 1 per cent
Wooldridge test for serial correlation	F stat = 19.101 Prob> Chi2 = 0.0014	Existence of First-order serial correlation
Short and Long Term Debt Model Pesaran Cross Sectional Dependence Test	F = 2.626 Pr = 0.0086	Existence of Cross Sectional Dependence at 1 per cent
Variance Inflation Factor	Mean = 1.247 Highest = 1.441	No multicollinearity problem
Modified Wald test for groupwiseheteroskedasticity	Chi2 = 227.87 Prob> Chi2 = 0.000	Existence of Heteroscedasticity at 1 per cent.
Wooldridge test for serial correlation	F stat = 13.999 Prob> Chi2 = 0.0038	Existence of First-order serial correlation

Source: Authors' Collection, 2022

The study equally conducted diagnostic tests to ensure that basic classical linear regression assumptions are not violated; data were free from error. These tests include the variance inflation factor tests for multicollinearity, Pesaran cross sectional dependence test for endogeneity, modified Wald test for groupwise heteroscedasticity and Wooldridge test for serial correlation in panel data. For the variance inflation factor, the result for model 1 is characterized with maximum VIF of 1.287 while that of model 2 is 1.441. Since, the estimated VIF is less than the threshold of 10, the problem of multicollinearity does not

exist among the explanatory variables of the models used in the study. For the presence of heteroscedasticity, the outcomes of the modified Wald test in the two models suggest the rejection of the null hypothesis of no heteroscedasticity which indicate that model 1 and 2 are characterized with heteroscedasticity problem.

As regards the existence of first order serial correlation, the Wooldridge test p value of 0.0014 in model 1 and that of 0.0038 in model 2 reveal that the null hypothesis of no serial correlation is rejected in model 1 and 2. Hence, model 1 and 2 are characterized with first order serial correlation serial correlation. In addition, the Pesaran cross sectional p value of 0.0002 and 0.0086 indicate the existence of cross sectional dependence in model 1 and 2 which suggest existence of endogeneity problem. While the study controls for heteroscedasticity and serial correlation by running the regression with robust standard error, the problem of exogeneity is controlled for using feasible generalized least square panel regression technique.

Hypothesis testing

Ho₁: There is no association between total debts to equity ratio on market value of listed Nigerian deposit money banks.

Table 5 Linear panel regression results for model 1 (Total Debt on Tobin Q)

Variables	Fixed Effect (1)	FGLS (2)
TDER	0.00470 (0.143)	-0.0248*** (0.000254)
BS	-2.195*** (0.00694)	-0.111 (0.157)
BG	-0.000210* (0.0894)	-0.000412 (0.329)
BA	0.111*** (0.00590)	-0.00134 (0.540)
Constant	18.49*** (0.00548)	2.210*** (0.00142)
Observations	99	99
R-squared	0.647	
Firm Effect	YES	
Hausman p value	0.000	
Number of PID	11	11

Robust p-value in parentheses; * p<0.1, ** p<0.05, and *** p<0.01

Source: Authors' Collection, 2022

The results in the first column of Table 5 are obtained using fixed effect panel regression while that of column 2 are obtained using feasible generalized least square panel regression. From the results in Table 5, total debt to equity ratio exerts positive but insignificant influence on the Tobin Q with an estimated coefficient of 0.00470 and corresponding p value of 0.143 implying that total debt to equity ratio does not matter for market value. The results in the second column obtained from feasible generalized least square however revealed that total debt ratio has negative impact which is significant at 1 per cent on Tobin Q as it records an estimated coefficient of -0.0248 and associated p value of 0.00025. This implies that higher total debt ratio results in lower market value of listed Nigerian DMBs. The outcome further indicates that the null hypothesis should be rejected.

For the control variables, the outcomes of the fixed effect panel regression implies that bank size as well as revenue growth had negative but significant impact on Tobin Q while the impact of age of the firm was found to be positive and significant. For the feasible generalized least square results, it is found that firm size, revenue growth and firm age had negative but insignificant impact on the Tobin Q of listed Nigerian DMBs.

Ho₂: There is no association between short and long debt to equity ratio and market value listed Nigerian deposit money banks.

Table 6 Linear panel regression results for model 2 (Short and Long Debt on Tobin Q)

Variables	Fixed Effect (1)	FGLS (2)
LTDR	-0.111*	-0.278***
	(0.0680)	(0.000156)
STDR	0.00919*	-0.0110
	(0.0506)	(0.142)
BS	-2.016**	-0.139*
	(0.0107)	(0.0621)
BG	-0.000160	-0.000341
	(0.191)	(0.393)
BA	0.106***	-0.00211
	(0.00570)	(0.309)
Constant	17.00***	2.574***
	(0.00885)	(0.000103)
Observations	99	99
R-squared	0.663	
Firm Effect	YES	
Hausman p value	0.000	
Number of PID	11	11

Robust p-value in parentheses; * p<0.1, ** p<0.05, and *** p<0.01

Source: Authors' Collection, 2022

The outcomes obtained from robust fixed effect and feasible generalized least square in respect of model 2 are contained in Table 6. While the outcomes of the fixed effect panel regression are contained in column 1, the results obtained from feasible generalized least square are presented in column 2. From the results in column 1, long term debt with a respective estimated coefficient and p value of -0.111 and 0.0680 indicates that long term debt ratio has negative impact which is significant at 10 per cent on Tobin Q. The results of the feasible generalized least square panel regression in column 2 on the other hand revealed that the influence of long term debt to equity ratio on Tobin Q is negative but significant at 1 per cent level. The implication is that higher long term debt to equity ratio outcomes in lower Tobin Q. The outcome further indicates that the null hypothesis should be rejected.

For the control variables, the results of the fixed panel regression in column 1 indicate that firm size had negative and significant effect on Tobin Q while the impact of revenue growth was negative and insignificant. Also, age of the firm had significant positive impact on Tobin Q. Also, the results revealed the results in column 2 revealed that firm size had negative but significant influence on Tobin Q while the impact of revenue growth and firm age are negative and insignificant.

Table 7 Non-Linear panel regression results for model 1 and 2

VARIABLES	FE (1)	FGLS (2)	FE (3)	FGLS (4)	FE (5)	FGLS (6)
TDER	0.0139** (0.0110)	-0.0288*** (0.000228)				
TDER2	0.000614*** (0.00688)	-0.000404 (0.307)				
SDER			0.0165** (0.0111)	-0.0287*** (0.00106)		
SDER2			0.000686*** (0.00775)	-0.000418 (0.342)		
LDER					-0.338** (0.0132)	-1.033*** (0.000)
LDER2					0.157** (0.0365)	0.454*** (8.36e-08)
BS	-2.390*** (0.00664)	-0.100 (0.203)	-2.380*** (0.00673)	-0.103 (0.199)	-1.831** (0.0183)	-0.0733 (0.265)
BG	-0.000180 (0.121)	-0.000431 (0.305)	-0.000167 (0.140)	-0.000443 (0.298)	-0.000167 (0.178)	-0.000158 (0.658)
BA	0.117*** (0.00746)	-0.00118 (0.590)	0.117*** (0.00729)	-0.00112 (0.612)	0.0959*** (0.00499)	-0.00277 (0.132)
Constant	20.05*** (0.00521)	2.153*** (0.00185)	19.94*** (0.00531)	2.155*** (0.00219)	15.66** (0.0151)	2.152*** (0.000203)
Observations	99	99	99	99	99	99
Firm Effect						
Hausman p val.	0.000		0.000		0.000	
R ²	0.664		0.668		0.674	
No. of PID	11	11	11	11	11	11

Robust p-value in parentheses; * p<0.1, ** p<0.05, and *** p<0.01

Source: Authors' Collection, 2022

The results obtained for the non-linear panel regression are outlined in Table 7. The outcomes obtained for the total debt to equity ratio are presented in column 1 and 2, those obtained for short debt to equity ratio are contained in column 3 and 4 while that of long debt to equity ratio are presented in column 5 as well as 6. The outcomes in column 1 for total debt to equity ratio revealed that the total debt ratio and its square have positive and significant impact. Since they do not alternate, the impact of total ratio on Tobin Q is linear. Also, the results of the feasible generalized least square indicate that the impact of total debt ratio is negative but significant while its square is negative and not significant. Since the estimated coefficients do not alternate in sign, there is no evidence of non-linear impact of total debt to equity ratio on Tobin Q. The outcomes in the column 3 specifies that the coefficient of short debt to equity ratio and its square are significantly positive, implying that the influence of short debt on Tobin Q is linear as well as significantly positive.

On the other hand, the results of the feasible generalized least square indicate that the coefficient of short term debt to equity ratio on Tobin Q is negative but significant while its square had negative and no significant influence on Tobin Q. Consequently, the influence of short term debt to equity ratio on Tobin Q is linear. For the long term debt to equity ratio, the results in column 5 with fixed effect revealed that long term debt ratio coefficient is negative but significant while its square is positive and significant, implying that long term debt to equity ratio had U-shape relationship with Tobin Q. Similar outcomes were

found in column 6 for the results obtained with feasible generalized least square where long term debt to equity ratio had negative but significant impact on Tobin Q, while the impact of its square is positive as well as significant. The inference of the outcomes is that the impact of long term debt ratio on Tobin Q is non-linear as it established a U-shaped relationship. In line with the results, higher long term debt reduces the Tobin Q up to a point before further increase in long term debt to equity ratio leads to higher Tobin Q.

Discussion of Results

The results of the feasible generalized least square which is considered as the baseline method for this study since it controls for not only endogeneity but also serial correlation and heteroscedasticity revealed that total debt to equity ratio impact on Tobin Q is negative but significant. By implication, higher value of total debt to equity ratio exerts negative influence on market value. This suggests that reliance on debt for firm financing is associated with lower firm valuation. This is expected as firms relying on debt mostly when they could not raise fund through equity as a results of low or lack of confidence in the firm by the investors. This result aligns with the submission of previous empirical literature including the study by (Birru, 2016; Ramadan & Ramadan, 2015; Abdel-Jalil, 2014). However, the findings here fail to agree with the results reported by Ayalew and McMillan (2021) and Serwadda (2019) where total debt to equity ratio increases the firm's Tobin Q.

Also, the results found insignificant impact of short term debt on Tobin Q. This implies that short term debt is not a significant driver of market value. This outcome might be linked to the fact that Nigerian banks focus more on long term debt as an alternative to equity financing. This finding aligns with the results obtained by some other studies where the impact of short term debt on firm's value could not be established. On the contrary, the results found here contrasts that of other studies (Adeniyi et al., 2020; Nwude & Anyalechi, 2018; Abdel-Jalir, 2014; Umar et al. 2012) where significant influence of short term debt to equity ratio on market value was established.

Furthermore, the study found evidence of U-shaped relationship between long debts to equity ratio on Tobin Q implying that at lower level of long debt to equity ratio there is a reduction in Tobin Q and market value while higher level of long debt to equity ratio leads to higher Tobin Q and higher firm valuation. This might be explained that when creditors have higher debt in an organization, they deploy extra resources in monitoring the activities of such entities which translate to better performance and improved market value by extension. The results here partly align with the submission of Nawaz et al. (2011) that the low-risk kind of debt is long debt, in that the firm has years to come about with the principal, while interest will be paid for the time being. This is contrary to studies that found only one way connection between long debt ratio as well as Tobin Q (Uzokwe, 2019).

Conclusion and Recommendations

The study assessed the effect of capital structure such as: total debt to equity ratio, short debt to equity ratio and long term to equity ratio on the market value of listed DMBs in Nigeria. The outcomes from the feasible generalized least square panel regression revealed that total debt to equity ratio exerts linear negative but significant influence on market value while the impact of short term debt on market value was also found to be linear and negative and insignificant. It was concluded that long term debt ratio had U-shape relationship with the market value suggesting that long term debt is detrimental to market value but in long run it will bring increase in market value. In line with the findings, it was recommended that Nigerian DMBs should try to adjust their capital structure by gradually reducing the debt ratio through higher equity component. In addition, focus should be more on long term debt when borrowing as it brings about increase in market value over the long run.

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