Debt Financing and Firm Financial Performance: Evidence from Non-Financial Sector of Nigeria

Adamu Yahaya[1], Jamilu Abdulkadir[2] and Ahmed Balarabe Musa[3]

[1]Department of Business Management, Faculty of Management Sciences, Federal University Dutsin-Ma, Katsina State, Nigeria.
ayahaya2@fudutsinma.edu.ng

[2]Distance Learning Centre, Ahmadu Bello University, 1045, Zaria, Nigeria,
jameelabdulqadir@gmail.com

[3]Department of General Studies, School of Liberal Studies, Nuhu Bamalli Polytechnic, Zaria-Nigeria
cozing005@gmail.com

ABSTRACT

Obtaining an optimal mix of debt and equity that will significantly improve firm performance has been challenging. This study seeks to examine the effect of debt financing on the financial performance of firms in the non-financial sector of Nigeria. A total of 74 listed firms were drawn for the period of 9 years, between 2012 and 2020. The study employed two-step system generalized method of moment (GMM) as the method of analysis. The findings of the study indicated that long-term debt and short-term debt reveal a significant and negative association with the performance of firms. Moreover, firm size was found to be significantly positive in influencing firm performance. The study recommends the stakeholders in the industry to keep low debt composition in the capital structure due to its negative influence on the firms' performance. Moreover, the firms should place more emphasis on equity financing source due to its reliability and affordability.

KEYWORDS*:* Short-Term Debt, Long-Term Debt, System GMM, Non-financial Sector, Nigeria

1. Introduction

Developing economies are faced with difficulty in sourcing funds for business financing and a less advanced capital market. There is also the issue of less effective statutory provisions and regulations that concern information disclosure, accounting requirements, absence or inefficient securities trading (De young, Distinguin, & Tarazi, 2018).This challenge paved way for managers to control debt financing to their advantage against the shareholders. Therefore, a study that look in to the issue of Debt Financing and its effect on Firm Performance will enhance stakeholders knowledge of that specific

field (Pham & Nguyen, 2020). The sources of finance for any kind of business rely on the relative ease at which various types of funds are available. This in return is influence by the cyclical fluctuation, Firm's Asset Attributes, the Season, Size, Rate of Growth, its expected continuity and profits stability of operations and any other aspect of its activities, which determine its position as a potential borrower. Moreover, these determinants influence its peculiar policy, resulting in management decision to preferred financing source in place of the other (Harelimana, 2018). The value of the Firm could be enhanced through a sound capital structure decision. Firms should be able to make an optimal mix of equity and debt composition of capital in order to achieve increase in firm's value. The value of the firm increases with a decrease in cost of capital, following a well-organized capital structure (Damodaran, 2001). The risk and return of shareholders is affected by capital structure decision that is seen the most pivotal decision of the management (Pandey & Sahu, 2019). Firms are faced with financial related issues particularly optimal utilization of funds in the event of their failure to make a proper plan of their capital structure. Debt is relatively cheaper source of funds because it is tax deductible and could raise the earnings and dividend per share of the firm (Adesina, Nwidobie, & A, 2015). Financial expert hold the believe that more loan taking could increase leverage due to increase in interest costs and firm performance decrease (Chowdhury & Chowdhury, 2010). The level of firms taking up debt should be based on its ability to pay off to avoid taking excessive debt. Firms should operate always operate within the optimal capital structure that balance the bankruptcy cost and tax savings benefit, knowing that sustaining high leverage result in absolute decrease in firm's value and a rise in cost of capital (Aziz & Abbas, 2019). The continue increase in debt component of firm's capital structure posed potential danger to lack of reliability associated with debt financing. The study is motivated due to recent failures of firms which are largely attributed to high debt profile; hence the study seeks to examine the influence of both debt and equity financing on the firm financial performance of non-financial sector in Nigeria.

2. Theoretical Framework &Literature Review

The section provides the theoretical framework and the literature review on the effect of debt financing on firms performance.

2.1 Theoretical Framework

Modigliani and Miller, (1958) argued that firm value is not affected by capital structure in perfect capital markets. However, this argument has been contested by a number of theoretical works suggesting the existence of a relationship between debt and firm performance. Therefore, they improved their previous work by claiming that the gain of debt coming from the tax shield generates a positive association between firm's profitability and debt (Jaros & Bartosova, 2015).

The arguments by the tradeoff theory hold that benefits of tax savings and financial distress should be tradeoff by the firms to have an optimal capital structure which leads to firm value maximization (Cecchetti & Krause, 2001). Agency theory claims that in order to maximize firm performance, the optimal capital structure should minimize total agency costs, which result from the conflict of interest between different agents. Accordingly, this theory defines two types of conflicts of interest, shareholder–manager conflict and shareholder–debt holder conflict, leading to opposite perspectives on the relationship between debt financing and firm performance (Jensen & Meckling, 1976).

The conflict between shareholders and managers occurs when managers follow their personal objectives and waste firm resources rather than maximizing shareholders' returns. Since debt financing implies interest payment obligations, free cash flow at the disposal of managers decreases. As a result, managers' pressure to invest in profitable projects and generate enough cash flow to satisfy these obligations increases (Jensen, 1986). As a result, debt financing increases firm performance. On the other hand, leverage increases shareholder–debt holder conflict arising from incentives of shareholders to invest sub optimally at the expense of debt holders (Jensen & Meckling, 1976). Therefore, leverage can have a negative effect on a firm's performance.

2.2 Debt Financing and Firms Performance

Debt financing could be seen as a form of loans that are obtained from banks, firms or other financial institutions so as to facilitate business operations. The repayment of the loan principal together with interest expenses is made at a later period before the maturity of the debts (Cheong, Kwak, & Tang, 2015). On the other hand, financial performance is the extent to which financial objectives has been achieved. It is the act of estimating the outcome of company's activities and policies in monetary terms. It is used in the measurement of the firm's entire financial health over a particular period and is also used in the comparison of like companies across the sector or to compare sectors or industries in totality (Meigs, 1978).

A lot of studies evaluate the association between firm profitability and debt, with a divergent and mixed result. Ezeoha, (2008) found that business profitability is affected by debt-taking negatively, confirming the pecking order theory. Internal funding sources are most preferred among firms compared to external sources (Myers & Majluf, 1984). Shares and debentures are both forms of external financing for a separate entity. In the former case, the firm owes debentures holders' interest. In the latter case, the firm accrues dividends for its shareholders. The firm directors' must choose the financing source that is more appealing and cost effective. A positive association between profita bility and debt is found by (Margaritis & Psillaki, 2010). On the other hand, Podpiera and Weill, (2008) opine that debt financing can negatively and positively influence firm's

profitability because of divergent prevalent economic conditions, industrial antecedents and other macroeconomic factors. Many researchers reveal relationship between debt financing and financial performance (Habib, Khan, & Wazir, 2016; Margaritis & Psillaki, 2010).

Conversely, several scholars reveal a negative association between profits and debt (Habib et al., 2016; Margaritis & Psillaki, 2010). Habib et al., (2016) examine non-financial firms' performance in Pakistan. The study revealed a variation in Pakistan economic policies from one sector to another with respect to tax relief and interest rate. For instance, the interest rate for exporters may be reduced by the government and the government settles the difference. A multiple regression analysis is used to examine 64 listed Egyptian firm's performance between 1997-2005 by (Ebid, 2009). The findings indicated that total debt and short-term debt negatively associated with firms' performance with respect to their return on assets (ROA). However, the findings revealed absence of any significant association between long term and short term debt and performance with respect (ROE) and net interest margin (NIM).

Salim and Yadav, (2012) used the regression technique to evaluate the association between firm profitability and capital structure, using a total of 237 sampled Malaysian listed firms over the period of 1995-2011. The results showed that short and long term debts are negatively correlated with the company profitability with respect to their ROE, ROA and EPS. A study by Sheikh and Wang, (2011) analyzed the effect of capital structure on the profitability of 240 listed non- financial Pakistan firms between 2004 to 2009. Various techniques comprising of random effect, fixed effect and pooled OLS were used. The findings from the study showed that both the short-term and long-term debts are negatively associated with ROA. Davydov, (2016) in his study of BRICS countries found a positive effect of debt financing. He fails to put in to consideration contingency and situational factors that could affect the debt usage effectiveness. In their analysis of non-financial firms in China, Li and Cui, (2003) reveal a high debt to asset ratio, high ratio of return on equity and high ratio of annual sales to total assets.

Moreover, a study by Nazir and Saita (2013) indicate an inverse effect of leverage measured by long term, short-term, contractual and total debt ratios on the entire and administrative expense ratio. An empirical study on the perspective of Indian firms affirm the negative impact of debt by agency cost, as measured by operating expenses to sales ratio (Rakesh & Lakshmi 2013). Moreover, a study by Brewer and Featherstone (2017) indicate that a rise in debt level negatively affect the efficiency of Kansas Farms. There is a research gap in this type of study on the Nigerian non-financial sector, hence the need to conduct the research so as to bridge the gap.

More recent and relevant studies on the relationship between performance of companies or agency cost and debt financing include the work of Vătavu, (2015), Russell, Briggeman, and Featherstone, (2017), Pandey and Sahu, (2019) and so on. Following an

intense review of the literatures, a careful observation revealed a substantial number of contributions from scholars on the association between debt financing and its effects on agency cost and performance of firms. Javed, Younas, and Imran, (2014) found a mixed result after analysing various performance ratio to find the effect of debt. The result indicated that no significant effect on all proxies of profitability. The result show a positive effect of debt financing on return on asset (ROA) and a negative influence on return on equity (ROE). Zeitun and Saleh (2015) evaluate the relationship between firm financial performance and Gulf Cooperation Council (GCC) firms' debt financing during the recession and financial crisis of 2008. The outcome indicates a negative, significant influence of financial associated problems. Mun, Jang and Shawn, (2017) in their study of equity and debt financing among restaurant-business firms' behaviour based on the financial limitations and debt maturity. The result indicate that firms within food business focus more on equity financing compared to debt due to optimal equity and debt ratio and other financial limitations. Aziz and Abbas, (2019) in their recent study on the debt-profit association in the non-financial listed firms found an inverse and significant relationship between performance and debt. Based on the above empirical findings, the following hypotheses are developed;

H_1: There is a significant negative relationship between short-term debt and financial performance of non-financial sector in Nigeria.

H_2: There is a significant negative relationship between long-term debt and financial performance of non-financial sector in Nigeria.

H_3: There is a significant relationship between firm size and financial performance of non- financial sector in Nigeria.

3. Data and Methodology

This section; deals with the design employed by the study and the methods and procedures used in conducting the study. It also deals with the population, sample size and sampling techniques employed by the study. Similarly, the sources from which data for the study were collected and the methods that were used in analysing the data so collected.

3.1 Data for the Study

The study used a panel data consisting of a total of 74 listed non-financial firms over 9 years, making a total of 666 observations. The study is conducted in the most recent financial period, between the periods of 2012 to 2020. The sample of the study was obtained through convenience sampling based on data availability of the firms within the period. The equity data of the individual firms were obtained through Thomson Reuters data stream and their respective financial report. Macro-economic data were obtained from World Bank open data source.

3.1 Variable Description

The variable in the study are classified into independent variable, control variables, macro-economic variable and dependent variable. The main independent variables are Short- Term Debt (STD)

and Long-Term Debt (LTD). The control variables are Firm Size (FS), Sales Growth (SG) & Tangibility (TNG), while the macro-economic variables included in the study are Inflation (INF) and Gross Domestic Product (GDP). The dependent variables include Return on Asset (ROA) and Earnings Per Share (EPS). Below table contain a detailed description of the variables and their respective measurement.

Table I. Variable Description

Variable Name	**Notation**	**Measurement**
Independent Variable		
Short-Term Debt	STD	Short-Term Debt Divided by Total Assets
Long-Term Debt	LTD	Long-Term Debt divided by Total Assets
Firm Size	FS	Log of Total Assets
Sales Growth	SG	Sales Growth
Tangibility	TNG	Net Fixed Asset divided by Total Asset
Macroeconomic Variable		
Inflation	INF	Annual Consumer Price Index in Percentage
Gross Domestic Product	GDP	GDP Growth Rate in Percentage
Dependent Variable		
Return on Asset	ROA	Net Profit After Tax by Total Assets
Earnings Per Share	EPS	Net Income by Total Number of Outstanding Shares of its Common Stocks

Source: Compiled by the author, based on the literature, 2021

3.3 Model Specification and Estimation Technique

The study aims to examine the effect of short-term debt and long-term debt on the financial performance of non-financial sector firms in Nigeria. The study intends to use short-term debt and long-term debt as the main independent variable of interest on two dependent variable proxy of firms' performance; return on asset (ROA) and earning per share (EPS). Other control variables and macroeconomic variables are employed in the model. the model was developed based on the work of (Aziz & Abbas, 2019). The nature of the dependent variable; performance which is persistent, a dynamic estimator; system generalized method of moment is employed as the technique of analysis. The system GMM has a lot of advantages as an estimation technique. The system GMM has an instrument that addresses the problems of endogeneity and provides parameters that give consistent estimates. The system GMM is less biased and addresses problems posed by OLS and fixed effect estimates. The estimates under the system GMM are more consistent and efficient.

$$PER = PER_{ijt-1} + \beta_0 + \beta_1 STD_{ijt} + \beta_2 LTD_{ijt} + \beta_3 FS_{ijt} + \beta_4 SG_{ijt} + \beta_5 TNG_{ijt} + \beta_6 INF_{jt} + \beta_7 GDP_{jt} + \eta_i + \lambda_t + \varepsilon_{ijt} \quad 1.$$

$$ROA = ROA_{ijt-1} + \beta_0 + \beta_1 STD_{ijt} + \beta_2 LTD_{ijt} + \beta_3 FS_{ijt} + \beta_4 SG_{ijt} + \beta_5 TNG_{ijt} + \beta_6 INF_{jt} + \beta_7 GDP_{jt} + \eta_i + \lambda_t + \varepsilon_{ijt} \quad 2.$$

$$EPS = EPS_{ijt-1} + \beta_0 + \beta_1 STD_{ijt} + \beta_2 LTD_{ijt} + \beta_3 FS_{ijt} + \beta_4 SG_{ijt} + \beta_5 TNG_{ijt} + \beta_6 INF_{jt} + \beta_7 GDP_{jt} + \eta_i + \lambda_t + \varepsilon_{ijt}$$

4. Result and Discussion

The results of the various tests conducted in the study and the findings of the study resulting from the test of the hypotheses are all presented and discussed in this section.

4.1 Descriptive Statistics

The study has a total of 666 years observation, covering 9 years, from 2012-2020. The two dependent variables employed in the study are return on asset (ROA) and earning per share (EPS). ROA has a mean value of 33.3508 and a standard deviation of 6.0313 while EPS has a mean value of 62.2947 with a standard deviation of 9.4291. The main independent variables are STD and LTD has a mean value of 12.3044 and 25.2018 and a standard deviation of 3.0361 and 4.1401 respectively. Other control variables that include FS, SG and TNG have mean values of 16.6913, 1.5808 and 45.5668 respectively. The macro-economic variables maintain mean values of 10.3291 and 3.1398 for inflation and gross domestic product respectively.

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	666	33.3508	6.0313	4.6601	117.11
EPS	666	62.2947	9.4291	7.724	158.59
STD	666	12.3044	3.036	-16.239	126.553
LTD	666	25.2018	4.1410	-22.060	302.51
FS	666	16.6913	1.5501	11.5906	21.3980
SG	666	1.5808	1.7640	-11.1301	11.34
TNG	666	45.5668	7.2262	3.2101	108.3
INF	666	10.3291	3.9658	3.2371	16.5235
GDP	666	3.1398	2.4647	1.6168	6.67133

Source: STATA 15 Result

4.2 Correlatinal Matrix

The highest co-efficient in the matrix is -0.6872 between inflation and GDP. This clearly indicates an absence of multicollinearity problem. Relationship between the two dependent variables ROA and EPS is low and positive. ROA maintains a strong negative and positive relation ship with - 0.5018 for LTD and 0.5867 for TNG respectively. Other variables maintain a weak relations hip with ROA. On the other hand, all the variables maintain a negative relationship with EPS with the exception of FS which maintain a positive association with 0.0425.

Table III. Correlation Matrix

	ROA	EPS	STD	LTD	FS	SG	TNG	INF	GDP
ROA	1								
EPS	0.0027	1							
STD	0.0183	-0.0121	1						
LTD	-0.5018	-0.0805	-0.0222	1					
FS	-0.0191	0.0425	-0.0207	0.0604	1				
SG	-0.0150	-0.0037	0.0502	-0.0517	-0.1272	1			
TNG	0.5867	-0.0063	0.0102	-0.2275	0.0114	0.0013	1		
INF	-0.0096	-0.0055	0.0185	-0.0382	-0.0053	-0.0019	-0.0292	1	
GDP	0.0509	-0.0071	0.0172	-0.0122	-0.0444	-0.0015	0.0579	-0.6872	1

Source: STATA 15 Result

4.1 Multicollinearity Test

There is an absence of a multicollinearity problem among the variables in the data analyzed. This is confirmed by the result obtained from the multicollinearity test, where the mean VIF is less than 10. Moreover, the variance inflation factor (VIF) and the tolerance value, revealed a value of less than 5 and greater than 0.10 respectively.

Table IV. Multicollinearity Test

Variable	VIF	1/VIF
GDP	1.91	0.52225
INF	1.91	0.523518
LTD	1.07	0.938795
TNG	1.06	0.944363
FS	1.02	0.976041
SG	1.02	0.979408
STD	1.01	0.99499
Mean VIF	1.29	

Source: STATA 15 Result

4.2 Regression Result

The results of all the regressions conducted in the study are presented in this section.

4.2.1 First Regression Result

This regression aims to test the influence of short-term debt and long-term debt on the return on asset of non-financial firms in Nigeria. The lagged dependents are all significant at 1% in the models. This indicates the appropriateness in using the dynamic estimator. The inference is based on the two-step system generalized method of moment. The short-term debt is significant at 1 percent and negatively associated with ROA. This implies that an increase in the rate of STD decreases the ROA of the firms, this is consistent with (Aziz & Abbas, 2019; Yazdanfar & Öhman, 2015). Long-term debt is also significant at 1% and negatively related with ROA. This shows a decrease in ROA with an increase in the rate of LTD, this is in line with (Nazir, Azam, & Khalid, 2021). The results for the control variables indicate that firm size has a significant and positive relationship with the ROA of the firms. This implies that an increase in the total asset in the firms, positively affect the performance of the firms in terms of their ROA, this

is consistent with (Pham & Nguyen, 2020). The sales growth maintains a significant positive association with ROA of the firms. This indicates that an increase in the sales level of the firms positively affect performance, this confirmed the finding of (Sener, Akben-Selcuk, & Didin-Sonmez, 2021).

percent. This indicates an increase in the firm performance with an increase in the tangibility rate. For the macroeconomic variables; inflation is not significant in the model, while gross domestic product is significant at 5 percent and positively associated with the performance of firms in Nigeria,

Table V. Regression Result 1

VARIABLES	ROA			
	One-step Differenced GMM	One-step System GMM	Two-step Differenced GMM	Two-system System GMM
ROA_{ijt-1}	0.153***	0.136***	0.339***	0.305***
	(0.0299)	(0.0126)	(0.0245)	(0.0175)
STD_{ijt}	-0.0510	-0.0174	-0.0878*	-0.0812***
	(0.0465)	(0.0187)	(0.0524)	(0.0268)
LTD_{ijt}	-0.294***	-0.264***	-0.109***	-0.114***
	(0.0399)	(0.0337)	(0.0336)	(0.0108)
FS_{ijt}	10.28***	7.667***	5.373***	4.232***
	(2.055)	(1.221)	(1.870)	(0.585)
SG_{ijt}	-1.475**	-0.672*	0.196	0.468**
	(0.709)	(0.392)	(0.743)	(0.227)
TNG_{ijt}	0.890***	0.905***	0.833***	0.856***
	(0.0237)	(0.0140)	(0.0235)	(0.0133)
INF_{jt}	0.0650	0.0290	0.0609	0.0499
	(0.143)	(0.0589)	(0.160)	(0.0499)
GDP_{jt}	0.122	0.131*	0.161	0.168**
	(0.243)	(0.0785)	(0.272)	(0.0715)
Constant	170.1***	123.9***	77.86**	59.48***
	(35.39)	(21.64)	(32.50)	(9.697)
Observations	518	518	592	592
Number of firm	74	74	74	74
Diagnostic Test				
Mean VIF	1.29			
No. of Instrument	36	43	36	43
AR(1): *P*-Value	0.0238	0.04591	0.3480	0.5421
AR(2): *P*-Value	0.4520	0.2790	0.8909	0.2116
Sargan test: *P*-Value	0.1034	0.4103	0.3066	0.7454

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The post estimation test indicates absence of multicollinearity and first order and second order autocorrelation problem. The instrument used is confirmed to be valid based on the Sargan test result.

4.2.2 Second Regression Result

This regression examines the effect of short-term debt and long-term debt on the earning per share of non-financial firms in Nigeria. The lagged dependent is significant which indicate the suitability in using the dynamic technique in the study. The two-step system GMM is used for inference due to its robustness in addressing endogeneity bias and providing consistent estimates. The main variables of interest; the short-term debt and the long-term debt are both significant at 1 percent and negatively associated with earning per share of non-financial firms in Nigeria. This indicates a decrease in the firms' performance in the event of an increase in the debts rate, this is consistent with (Aziz & Abbas, 2019; Nazir et al., 2021).

The results for the control variables indicate that; firm size is significant and positively relates with the performance of the firms'. An increase in the size of the assets, positively influence firms' performance, this is consistent with (Pham & Nguyen, 2020). Sales growth is significant and positively associated with EPS of the firms. An increase in the level of sales of the firms', result to an increase in the performance of the firms, this confirmed the findings of (Sener et al., 2021). Tangibility is significant and negatively associated with the performance of the firms. An increase in the level of tangibility negatively influenced the performance of the firm, this is in line with the findings of (Nazir et al., 2021).

The macroeconomic variables are both significant. Inflation is significant at 1 percent and positively influences the performance of the firms. An increase in inflation returns as a revenue to the firms, this is consistent with (Derbali, 2021). Gross domestic product is significant and positively relates with the performance of the firms. This implies that an increase in the general level of production in the country increase returns in terms profits to firms, this is similar with the finding of (Saif-Alyousfi & Saha, 2021).

Table VI. Regression Result 2

VARIABLES	EPS			
	One-step Differenced GMM	One-step System GMM	Two-step Differenced GMM	Two-step System GMM
EPS_{ijt-1}	0.512***	0.495***	0.899***	0.888***
	(0.0565)	(0.0100)	(0.0270)	(0.00458)
STD_{ijt}	-0.384*	-0.239***	-0.518**	-0.506***
	(0.184)	(0.0895)	(0.213)	(0.0763)
LTD_{ijt}	-0.440**	-0.224***	-0.381***	-0.190***
	(0.174)	(0.0614)	(0.103)	(0.0341)
FS_{ijt}	19.90**	19.04***	11.16	9.691***
	(8.035)	(1.475)	(7.585)	(0.901)

SG_{ijt}	4.581	4.859***	8.102***	7.844***
	(2.793)	(0.387)	(2.929)	(0.343)
TNG_{ijt}	-0.0652	-0.0903**	-0.152	-0.194***
	(0.102)	(0.0433)	(0.118)	(0.0526)
INF_{jt}	0.829	0.597***	1.790**	1.481***
	(0.621)	(0.100)	(0.707)	(0.0928)
GDP_{jt}	0.565	0.330*	1.580	1.164***
	(1.051)	(0.188)	(1.210)	(0.207)
Constant	303.7**	294.6***	192.4	160.3***
	(137.7)	(27.20)	(132.2)	(16.72)
Observations	518	518	592	592
Number of firm	74	74	74	74
Diagnostic Test				
Mean VIF	1.29			
No. of Instrument	36	43	36	43
AR(1): *P*-Value	0.0470	0.0024	0.1450	0.1388
AR(2): *P*-Value	0.2104	0.1291	0.9160	0.6299
Sargan test: *P*-Value	0.1012	0.3102	0.1054	0.2240

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The post estimation test indicates absence of multicollinearity and first order and second order autocorrelation problem. The instrument used is confirmed to be valid based on the Sargan test result

4.3 Discussion of Main Findings and Hypotheses Testing

The study examines the effect of debt financing on the performance of non-financial firms in Nigeria. The short-term debt is significant and negatively correlate with the performance of firms in the non-financial sector. So also, the long-term debt is significant and negatively correlate with the performance of firms' in the non-financial sector. Moreover, the result of the firm size revealed a significant relationship with the two proxy of performance. From the foregoing result, all the formulated hypotheses are supported by the study findings.

5.0 Conclusion and Recommendations

This study examined the effect of debt financing on non-financial firms in Nigeria. The study covers 9 years from 2012 to 2020. A total of 74 firms constitute the sample of the study. The study main finding indicates that both short and long-term debts have negative and significant influence on firm performance. Moreover, the study found a significant positive relationship between firm size and firm performance. The study among others makes the following recommendations; the firms in Nigeria should keep a minimal level of debt due to its negative effect on performance. Moreover, the firms should place more emphasis on equity financing source due to its reliability and affordability and lastly, the firms should maintain an optimal capital level because high debt level may expose the firms to insolvency risk.

REFERENCE

Aziz, S. & Abbas, U. (2019). Effect of Debt Financing on Firm Performance: A study of Non-Financial Sector of Pakistan. *Open Journal of Economics and Commerce*, *2*(1), 8–15.[Place & name of Publishers missing]

Brewer, B. & Featherstone, A. M. (2017). Agency cost of debt: Evidence from Kansas farm operations. *Agricultural Finance Review*, *77*(1), 111–124.[Place & name of Publishers missing]

Cecchetti, S. & Krause, S. (2001). Financial Structure,Macroeconomic Stability and Monetary Policy. *National Bureau of Economic Research*, *No. W8354* (January). [Place & name of Publishers missing]

Cheong, J., Kwak, D. W. & Tang, K. K. (2015). Heterogeneous effects of preferential trade agreements: How does partner similarity matter? *World Development*, *66*, 222–236. https:// doi. org/ 10.1016/j.world.2014.08.021

Chowdhury, A. & Chowdhury, S. P. (2010). Impact of capital structure on firm's value: Evidence from Bangladesh. *Business and Economic Horizons*, *3*, 111–122. https:// doi. org/ 10. 152 08/ beh.2010.32

Damodaran, A. (2001). *Corporate Finance: Theory and Practice*, *2nd Edition*.

Davydov, D. (2016). Debt Structure and Corporate Performance in Emerging Markets. *Research in International Business and Finance*, *38*, 299–311. https://doi.org/10.2139/ssrn.2551791

De young, R., Distinguin, I. & Tarazi, A. (2018). The joint regulation of bank liquidity and bank capital. *Journal of Financial Intermediation*, *34*, 32–46.https://doi.org/10.1016/j.jfi. 2018.01.006

Derbali, A. (2021). Determinants of the performance of Moroccan banks. *Journal of Business and Socio-Economic Development*. https:/ /doi. org/ 10. 1108/JBSED-01-2021-0003

Ebid, I. . (2009). The impact of capital structure choice on firm performance: empirical evi dence from Egyp. *Journal of Risk Finance*, *10*(5), 477-487.[Place & name of Publishers missing]

Habib, H. J., Khan, F. & Wazir, M. I. (2016). Impact of debt on the profitability of firms: Evidence from non-financial sector of Pakistan. *City University Research Journal*, *6*(1), 70– 80.[Place & name of Publishers missing]

Harelimana, J. B. (2018). Effect of Debt Financing on Business Performance: a Comparative Study Between I&M Bank and Bank of Kigali, Rwanda. *Journal of Harmonized Research in Management*, *4*(1), 36–45. https: // doi. org/ 10. 308 76/johr.4.1.2018.1-12

Jaros, J. & Bartosova, V. (2015). To the Capital Structure Choice: Miller and Modigliani Model. *Procedia Economics and Finance*, *26*(15), 351–358. https://doi.org/10.1016/s2212- 5671(15)00864-3

Javed, T., Younas, W. & Imran, M. (2014). Impact of Capital Structure on Firm Performance: Evidence from Pakistani Firms. *International Journal of Academic Research in Economics and Management Sciences*, *3*(5). https:// doi. org/ 10. 6007/ijarems/v3-i5/1141

Jensen, M. (1986). American Economic Association Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, *76*(2), 323–329.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, *3*(4), 283–303.

https://doi.org/10.1017/CBO9780511817410.023

Margaritis, D. & Psillaki, M. (2010). Capital structure, equity ownership and firm perfor mance. *Journal of Banking and Finance*, *34*(3), 621–632. https://doi.org/ 10. 1016/ j.jbank fin. 2009.08.023

Meigs, W. B. (1978). *Intermediate Accounting* (05 ed.).

Modigliani, F. & Miller, M. . (1958). The American economic. *The America Economic Review*, *48*(3), 261–297.[Place & name of Publishers missing]

Mun, S., Jang, S. & Shawn. (2017). 'Understanding restaurant firms' debt-equity financing". *Interna tional Journal of Contemporary Hospitality Management*, *29*(12), 3006–3022.

Myers, S. C. & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–

221.https://doi.org/10.1016/0304-405X(84) 90023 -0

Nazir, A., Azam, M. & Khalid, M. U. (2021). Debt financing and firm performance: empirical evidence from the Pakistan Stock Exchange. *Asian Journal of Accounting Research*. https:// doi. org/10.1108/AJAR-03-2019-0019

Nazir, S. & Saita, H. K. (2013). Financial leverage and agency cost: An empirical evidence of Pakistan. *International Journal of Innovative and Applied Finance,1*(1), 1–16.[Place & name of Publishers missing]

Pandey, K. D. & Sahu, T. N. (2019). Debt Financing, Agency Cost and Firm Perfor-rmance: Evidence from India. *Vision*, *23*(3), 267–274. https:/ /doi .org /10. 117 7/0 97 2262919859203

Pham, H. S. T. & Nguyen, D. T. (2020). Debt financing and firm performance: The moderating role of board independence. *Jour nal of General Management*, *45*(3), 141–151. https:/ /doi.org/ 10.1177/0306 30 70 19886829

Rakesh, H. M. & Lakshmi, P. (2013). Capital Structure on Agency Costs: Evidence from Indian Public Companies. *Journal of Busine ss and Management*, *15*(1), 50–53. https:// doi. org/ 10. 9790/487x-1515053

Russell, L. A., Briggeman, B. C. & Featherstone, A. M. (2017). Financial leverage and agency costs in agricultural cooperatives. *Agric ultural Finan ce Review*, *77*(2), 312–323. https:// doi. org/ 10. 1108/AFR-09-2016-0074

Saif-Alyousfi, A. Y. H. & Saha, A. (2021). *Determinants of banks' risk-taking behavior, stability and profitability: evidence from GCC countries*. *International Journal of Islamic and Middle Eastern Finance and Management*. https://doi.org/10.1108/M-03-2019-0129

Salim, M. & Yadav, R. (2012). Capital Structure and Firm Performance: Evidence from Malaysian Listed Companies. *Procedia - Social and Beha vioral Sci*, *65*, 156–166. https:// doi. org/ 10. 1016/j.sbspro.2012.11.105

Sener, P., Akben-Selcuk, E. & Didin-Sonmez, F. (2021). Does the institutional framework affect the relationship between debt finan-cing and firm performance in emerging countries?

Applied Economics Letters, *28*(10), 866–871. https://doi.org/10.1080/14851.2020.1784382

Sheikh, N. A. & Wang, Z. (2011). Determinants of capital structure: An empirical study of firms in manufacturing industry of Pakistan. *Managerial Finance*, *37*(2), 117–133. https:// doi.org/10. 1108/03074351111103668

Vătavu, S. (2015). The Impact of Capital Structure on Financial Performance in Romanian Listed Companies. *Procedia Economics and Finance*, *32*(15), 1314–1322. https:/ /doi .org/ 10.1016/s 2212-5671(15)01508-7

Yazdanfar, D. & Öhman, P. (2015). Debt financing and firm performance: an empirical study based on Swedish data. *Journal of Risk Finance*, *16*(1), 102–118. https:/ /doi .org /10.1108/JRF-06-2014-0085

Zeitun, R. & Saleh, A. S. (2015). Dynamic performance, financial leverage and financial crisis: Evidence from GCC countries. *EuroMed Journal of Business*, *10*(2), 147–162. https:// doi.org/10.1108/EMJB-08-2014-2022