

AN EMPIRICAL STUDY OF FINANCING DECISION RATIOS AND FIRM PERFORMANCE IN NIGERIA'S INDUSTRIAL SECTOR

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Abstract

The crux of this study is to evaluate the impact of financing decision ratios on the financial performance of listed industrial goods companies in Nigeria. The study aligned with the ex post facto research design. Data was collected from the thirteen (13) listed industrial goods companies on the Nigerian Exchange Group. All the companies were considered as the population of the study. Data was collected from the annual financial statements of the companies for a period of ten (10) years from 2014 to 2023. One hundred and thirty observations were made and, on those observations, the Generalized Method of Moment (GMM) technique was applied for the analysis of data. The study measured financial performance using the return on assets (ROA) while different measures were used to measure the independent and control variables. The study found that the impacts of total debt to total assets and dividend to total debt are significant on return on assets. It was also seen that firm size, firm age, and leverage also play a significant role as control variables. From the findings, the study concluded that focusing closely on the dynamics and interplay of debt financing and the proportion of dividend paid in the face of existing debt structure significantly help out the firms make the right financing decisions as the success of companies mostly depends on the combination of capital obtained and dividend decisions. This percentage decides the level of return on assets. From the findings and conclusion, the study recommended that the management of industrial goods firms should balance the quality of the financial structure through rational financing decisions because appropriate debt capacity and rational dividend payments offer the best advantage to the companies through maximizing return on assets.

Keywords: Financing Decisions, Total Debts, Dividend Payout Ratio, Return on Assets

Introduction

The global financial crisis resulted in significant detrimental effects on numerous economies around the world. The impact was particularly pronounced in nations that relied on exports and foreign investment as drivers of their economic growth. Similarly, the Nigerian economy and its financial system was not immune to the prevailing global recession, which manifested as a distinct financial crisis. In addition to the aforementioned crisis and obstacles, there were concurrent opportunities that facilitated enhancements in the businesses' systems, flexibility, and competitiveness (Akaji et al., 2021; Ohaka et al., 2020). Financial decisions have consistently been a fundamental component of a firm's organisational framework throughout its existence and will continue to do so in perpetuity. Indeed, the financial dimension exerts a comparable influence on both the current operations and future prospects of a corporation. The financial dimension provides the organisation with the means to achieve its objectives and anticipated financial gains (Chandra, 2020). Financing decisions pertain to the allocation of assets derived from debt and invested capital.

Furthermore, financing decisions constitute one of the most vital decisions for a corporation's chief financial officer. This decision-making involves an efficient mixing of different available financing sources (debt vs.

equity) to minimize the weighted average cost of capital (WACC). Minimizing the WACC can increase economic returns, eventually positively affecting firm performance. Constructing optimal financing decisions leads also to momentum in the development of firms. Moreover, the financing decision of a firm is considered a critical and strategic decision that has historically been observed to be puzzling (Kumar et al., 2017). Therefore, financing decisions dynamically and potentially affect a firm's financial performance and are an essential and inextricable part of the stockholders' goal of wealth maximization.

The importance of incorporating financing decisions is first highlighted by the pioneering work of Modigliani and Miller (1958). The study argues that firm value is not affected by the combination of financing structure (irrelevant proposition); asset allocation (investment decisions) is the main determinant of firm value. Moreover, the financing decisions foster the firm in maximizing its output from the input given in the form of debt or equity. Many of the financial decisions favor the fact that a company must carry on its operations with a combination of debt and Equity (Hanousek & Shamshur, 2022). After the global financial crisis, the financial stability reports and decisions helped the firms make moves that were significant in improving the total assets of the form supported by debt. That was the way used by firms to get out of that global crisis. The debt ratio of a firm shows the associated risk to it.

Hence, if a wrong financing decision is made, it can cause major financial instability which may lead the firm toward destructive operations.

The relationship between financing decisions and firm performance is one that has received substantial attention in financial literature. There are several reasons that make financing structure important, one of which is because the level of firm debt has increased significantly over the past few periods and requires an explanation of the impact of the level of debt on firm performance. A company can maintain the mixture of debt and equity, but the problem is whether the proportion of debt and equity has the benefits greater than the costs. This is a problem that must be answered because different financial sources have different cost and benefit structures; the same thing happens with various types of debt instruments (Khan, 2012; Amjed, 2011).

In contrast, if those financial decisions are taken with significant consideration, they might result in a high level of performance and profitability (Olokoyo, 2013, Abu-Rub, 2012). There is no doubt that several studies have empirically examined the relationship between financing decisions and a firm's performance. In the previous studies, the relationship between financing decisions and firm accounting-based performance has not been focused (Brondoni, 2020). Most of the studies that have been done on this topic are conducted in highly developed and well-settled countries whereas the researchers of underdeveloped countries have not gotten a chance to research the same factors in their firms in the same way (Uremadu & Onyekachi, 2018). The developed countries have the necessary resources for authentic research on the impacts of financial decisions on accounting-based performance (Abubakar & Management, 2015). The researchers have not fully discovered yet how the financial decisions ultimately impact a firm's performance that the managers or higher authorities take. Hence, there is no possibility shortly that the researchers will be able to identify how much the financial decisions impacts the accounting-based performance of a firm.

Therefore, it is against this backdrop that this study was conducted to address the research gap to know if there is a causality between financing decision ratios on financial performance of listed industrial goods firms listed on the Nigerian Exchange Group (NGX).

The study relied on the following hypotheses;

HO₁: Total debt to total assets has no significant effect on financial performance of listed industrial goods companies in Nigeria

HO₂: Dividend payout ratio to total debts has no significant effect on financial performance of listed industrial goods companies in Nigeria

Literature Review

Conceptual Framework Financing Decision

Financing decision can be defined as the mixing of financial sources to finance the firms' operations. Financial sources can include the debt and equity that can be used by the firms.

To maximize the firm's intrinsic value, the cost of the capital structure must be reduced to the lowest level. When reaching this point, means the optimum capital structure is achieved. The optimum capital structure may be defined by Parmasivan and Subramanian (2009) as the capital structure or combination of debt and equity that leads to the maximum value of the firm. Optimum capital structure is the capital structure at which the Weighted Average Cost of Capital (WACC) is minimum and thereby the value of the firm is maximums.

Deciding a suitable financing decision is an important decision of financial management because it is closely related to the value of the firm. Capital structure is the permanent financing of the company represented primarily by long-term debt and equity. Asaf (2004) states that the "Optimal financing decision means having the right balance of debt and equity financing in the business". Debt financing decisions for most corporations involve balancing a series of trade-offs involving cost, liquidity, choice of maturity, and the basis and frequency of interest rate resets. Because the value of a firm equals the present value of its future cash flows as in the equation, it follows that the value of the firm is maximized when the cost of capital is minimized. In other words, the present value of future cash flows is at its highest when the discount rate (the cost of capital) is at its lowest.

Total Debt to Total Assets

Total-debt-to-total-assets is a leverage ratio that defines how much debt a company owns compared to its assets. Using this metric, analysts and other stakeholders can compare one company's leverage with that of other companies in the same industry. This information can reflect how financially stable a company is. The higher the ratio, the higher the degree of leverage and, consequently, the higher the risk of investing in that company. The income generated through the assets is profoundly affected by total debt to total asset. Return accounts debts of a company on assets (Abubakar & Management, 2015). It has been seen by different researchers that the relations that exist between the return on the assets and the total debt that is due by the side of the company (Abubakar & Management, 2015; Adesina et al., 2015). Return on asset equals the net profit divided by the total assets. ROA shows the profitable a firm as compared to its total assets. Managers, investors, or analysts are kept aware by return on asset. It tells them whether a company's management is effectively utilizing its assets and producing earnings or not.

Dividend payout to Total Debt

According to Rodoni et al. (2002) said that the Dividend Payout Ratio is the amount of dividend per share divided by the amount of income per share per year. Dividend per share (DPR) is the amount of dividend per share. The next ratio used in this study is the Dividend Payout Ratio. Dividends are profits that are obtained by shareholders on funds that have been invested in a company that has gone public. Dividends are compensation received by shareholders, in addition to capital gains (Mamduh, 2014). There are several types of dividends, namely cash dividends and non-cash dividends. Cash dividends themselves consist of stock dividends and stock splits. Dividend policy is a policy that refers to the company's decision to go public to pay dividends to investors or to retain them in the form of retained earnings.

The Dividend Payout Ratio is a decision made by a company regarding dividends, to determine whether profits will be shared with shareholders or choose to retain profits to rotate its assets. Investors hope to get a return on the investment they make (Brondoni, 2020) In order for the company to fulfill this desire, the company must be able to provide welfare to investors. This can be done by giving investors profits in the form of dividends or capital gains. One of the policies that must be taken by the company's management is to decide whether the profits earned during one period will be shared entirely or will be distributed as dividends and some will be kept as retained earnings. If the company decides to share company profits as dividends, it will reduce the company's opportunity to obtain internal capital. Therefore, dividends are one of the most important policies in the company, because they involve shareholders who in fact are the source of capital for the company. Investors in investing their funds into stock instruments certainly want a high return. Return from shares can be obtained from capital gains or from dividends (Widiastuti, 2018).

Financial Performance

The objectives of profit-seeking enterprises include maximizing shareholders' wealth, survival and growth. The supporters of financial performance as means of measuring enterprise performance argue that these objectives are necessary because they form the main objectives of enterprises. The objective to maximize wealth is usually expanded into three sub-objectives: to make profit; to continue surviving – surviving is the ultimate measure of success of a business. Without survival then there will be no fulfillment of other objectives. In order to survive in a dynamic, vibrant and competitive economic environment in the longrun an enterprise must be financially successful, maintain growth and other development improvements. Therefore, financial performance is a process of measuring the results of an enterprise's policies and operations in monetary terms (Erasmus, 2008).

Financial performance of an enterprise is a sign of success. Growth of an enterprise can be identified in a number of ways including profitability, revenue or sales, and return on investment, return on assets, cash flow, market share, number of employees and number of products. All these are driven by financial performance of an enterprise. Therefore, financial performance is the ultimate goal of medium-sized and large enterprises in Kenya. All the strategies designed and activities performed thereof are meant to realize this objective, better financial performance. Therefore, financial performance can be defined as the ability of an enterprise to make or get profits (Saidi, 2004) or it is the enterprise's ability to achieve planned estimates as measured against expected outputs (Gleason & Barnum, 1982).

It can also be defined as the enterprise's ability to achieve objectives by using resources in an efficient and effective manner (Daft, 1995) and, Soliha and Taswan (2002), argued that financial performance is net profit margin that can be achieved by an enterprise while conducting its activities. All enterprises have financial performance measures as part of their performance evaluation indicators, although there is debate as to the relative importance of financial and non-financial indicators. Webster (2012) defined financial performance as what is accomplished. The following major ratios were used in measuring financial performance of enterprises: return on asset (ROA), return on equity (ROE), gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE) and return on investment (ROI) in determining the relationship between capital structure and selected corporate performance proxies. San and Heng (2011) used return on capital, return on assets, return on equity, earnings per share, operating margin, and net margin as measures of financial performance. Therefore, performance of an enterprise is the results of activities of an organization over a given period.

Lumpkin and Dess (1996) argued that it is necessary to recognize the multidimensional nature of the performance construct. In the view of Zahra (1993), financial and non-financial measures should be used in assessing organizational performance. Literature shows that a quantity of measures of an enterprise's financial performance include measures such as return on assets, return on equity and gross margin (Majumdar & Chhibber, 1999; Abor, 2005; Ebaid, 2009; and Gleason, et al, 2000) whereas financial leverage is measured by the following ratios: current liabilities to total assets, long-term liabilities to total assets and total liabilities to total assets (Abor, 2005 & 2007 and Ebaid, 2007). However, the concept of financial performance is still controversial in finance due to its multi-dimensional meaning.

Empirical Review

Sunaryo et al. (2023) determined the effect of debt-to-equity ratio on stock returns, dividend policy on stock performance in Manufacturing Companies Food Sub Sector and Beverages Listed on the Indonesia Stock Exchange Period 2017-2020. This research was conducted using quantitative methods. There were 30 companies in this research and 18 companies were taken as a sample using purposive sampling method. Data analysis using SPSS version 25. Based on the partial results of the study, it shows that the debt-to-equity ratio variable has no effect on stock returns. While the dividend policy variable has an influence on stock returns. Meanwhile, based on the simultaneous results, the debt-to-equity ratio and dividend payout ratio simultaneously affect stock returns.

Putri and Kufepaksi (2023) examined the effect of the dividend payout ratio (DPR) variable, firm size, debt to equity ratio (DER) on the glamour stock performance in manufacturing sector companies for the 2010-2020 period. The type of data used in this study is quantitative data. This research method is in the form of causal-comparative with data testing technique based on descriptive statistical tests, classical assumption tests, multiple linear regression tests and hypothesis testing. The sampling technique uses the saturated sampling technique method in non-probability sampling and produces 27 companies as research samples. Based on the analysis of this study it is found that the dividend payout ratio (DPR) has a positive effect on the return of glamor stock as evidenced by the results of the regression test of 0.098 and the t test of 0.006. This study although, recent was conducted in a different economic and manufacturing sector as such its findings cannot be used for effective decision in the Nigerian economy due to sectorial peculiarities.

Rotimi et al (2022) investigated the effect of financing decisions on the firm value of listed ICT firms in Nigeria. Annual panel data was obtained from audited annual reports of the companies from 2009 to 2020. The data were analysed via the regression method and the results showed that long-term debt, assets maturity, firm growth and firm age have significantly positive effects on the value of listed ICT firms at a 5% significant level. The study concluded that corporate financing decision has a significant effect on the firm value of companies in the Information Communication and Technology sector in Nigeria.

Shikumo et al. (2020) assessed the effect of Long-term debt on the financial growth of nonfinancial firms listed at Nairobi Securities Exchange. Financial firms were excluded because of their specific sector characteristics and stringent regulatory framework. The study is guided by Trade-Off Theory and Theory of Growth of the Firm. Explanatory research design was adopted. The population of the study comprised of 45 non-financial firms listed at the NSE for a period of ten years from 2008 to 2017. The study conducted both descriptive statistics analysis and panel data analysis. The result indicates that long term debt explains 21.6% and 5.16% of variation in financial growth as measured by growth in earnings per share and growth in market capitalization respectively. Long term debt positively and significantly influences financial growth measured using both growth in earnings per share and growth in market capitalization.

Olaifa (2018) determined the effect of financial decisions on the performance of commercial banks in Nigeria using four performance indices. Both primary and secondary data were used. 20 commercial banks that operated during 2000-2013 period constitute the sampling frame. In analysing the data, Panel regression model was used to examine the effect of financial decisions on the performance of commercial banks in Nigeria. The results show that net loans to deposit a finance decision had significant impacts on Return on Asset (ROA) and Return on Capital Employed (ROCE). Likewise, Capital Labour Ratio and Capital Earning to Labour Employed both investment decisions were positively significant on Return on Asset (ROA). Also, Earnings per share a dividend decision was only significant on profits.

However, liquidity decision was not significant to any of the performance indices.

Theoretical Framework

The study is guided by Trade-Off Theory and Theory of Growth of the Firm.

Trade-Off Theory

Trade-Off Theory postulated by Myers (1984) emphasizes a balance between tax-saving arising from debt, decrease in agent cost and financial distress (Shahar et al., 2015). Myers (1984) finds that the benefit of the tax shield is offset by the costs of financial distress, and agency cost. In other hard, the optimal level of leverage is achieved by balancing the benefits from interest payments and costs of issuing debt (Jahanzeb et al., 2014). The balance between tax-saving arising from debt, decrease in agent cost, and financial distress has a significant effect on the financial growth. Sheikh and Wang (2010) argue that the trade-off theory is expected to choose a target financial structure that maximizes financial growth by minimizing the costs of prevailing market imperfections. The trade-off theory is also referred to as taxbased theories and bankruptcy costs. It assumed each source of money has its own cost and return. These are associated with the firm's earning capacity and its business as well as insolvency risks (Awan & Amin, 2014). Therefore, a firm with more tax advantage will issue more debt to

finance business operations, and the cost of financial distress as well as, benefit from tax-shield is balanced (Chen, 2014). The purpose of the theory is to explain the fact that firms are mainly financed partly with debt, and partly with equity. It stipulates that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-bankruptcy costs. The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases so that a firm that is optimizing its overall value will concentrate on the trade-off when choosing how much equity and debt to use for financing.

Theory of Growth of the Firm

The theory was propagated by Penrose (1959). Penrose argued that firms had no determinant to long run or optimum size, but only a constraint on current period growth rates (Penrose, 1959). According to the theory, financial means for expansion could be found through retained earnings, borrowing, and new issues of stock shares. Retained earnings are one of the most important sources to finance new projects in emerging economies where capital markets are not well developed. However, firms in the start-up period, when initial investments have not matured yet or whose investment projects are substantially larger than their current earnings, will not have enough financial means from retained earnings and will face a constraint in their growth project. Firms in this situation may seek external sources of financing; however, the extent of borrowing could be limited by internal factors like high debt-equity ratios that would expose both borrower and lender to increased risk. In other cases, financing of growth projects may be limited by shallow financial markets. Rajan and Zingales (1998) found that industrial sectors with a great need for external finance grow substantially less in countries without well-developed financial markets. This theory is relevant to this study since it informs the dependent variable which is financial growth. The current studies which have used this theory of firm's growth are; Diaz Hermelo (2007) who conducted a study on the determinants of firm's growth: an empirical examination and Pervan and Višić (2012) who conducted a study on the influence of firm size on its business success.

Research Methodology

This study adopted ex post facto research design. The population of the study consisted of the 13 industrial goods companies quoted on the Nigerian Exchange Group (NXG) as at 31st December, 2022. Because the companies were few and had all the data required for the study, the entire 13 companies were used for the study. Data was collected from the annual financial statements of the companies for a period of ten (10) years from 2014 to 2023 culminating into 130 financial year observations. This study uses the generalized method of the moment or the GMM technique to know about the impacts of financing decisions ratios on firm financial performance. This method gives the advantage of the solution to heteroscedasticity; it also removes autocorrelation (Husain & Javed, 2020). Also, it avoids the existence of any potential endogeneity (Leary & Roberts, 2014). The study employed the return on assets and the factor of return on equity, which will indicate the firms' performance. In this study, the financing decisions have been involved by two indicators, which are total debt to total assets and dividend payout ratio to total debts. The study controlled for firm size, firm age and leverage. The explicit model is presented below:

$$ROA_{it} = \beta_0 + \beta_1 ROA_{it-1} + \beta_2 TDTA_{it} + \beta_3 FSA_{it} + \beta_4 FAT + \beta_5 LVG_{it} + \varepsilon_{it} \dots \dots \dots (i)$$

$$ROA_{it} = \beta_0 + \beta_1 ROA_{it-1} + \beta_2 DPRTD_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \beta_5 LVG_{it} + \varepsilon_{it} \dots \dots \dots (ii)$$

Where:

ROA= Return on Assets, TDTA= total debt to total assets, DPRTD= Dividend payout ratio to total debt, FS=Firm Size, FA=Firm Age, LVG=Leverage, i= Cross Sectional Properties, t= Time Series properties, ε = Error Component

Table 1: Measurement of Variables

Variables	Measures	Sources
Return Assets	Net profit / Total assets	Odusanya et al. (2018)
Total debt to total assets (TDTA)	Total debt / Total assets	Daud et al. (2016)
Dividend payout ratio to total debts (DPRTD)	Dividend Paid / Total Debts	Ghayas and Akhter (2018)
Firm Size	Natural logarithm of turnover	Ghayas and Akhter (2018)
Firm Age	Natural logarithm of the number of years since the establishment of the firm	Ameen and Shahzadi (2017)
Leverage	% of total debts % of total assets	Ghayas and Akhter (2018); Ameen and Shahzadi divided (2017)

Source: Researcher's Compilation, 2024

Results and Discussions

Table 2: Descriptive Statistics

Variable	Mean	Median	Max	Min	Std. Dev.	Observations
ROA	-0.0244	0.0028	0.3607	-1.9530	0.1750	130
TDTA	0.3538	0.3073	3.6603	0.0040	0.3376	130
DPRTD	0.3812	0.1693	2.4402	0.9673	0.4672	130
FS	14.3026	16.0850	20.4358	8.0770	5.3868	130
FA	32.9550	27.0000	98.0000	12.0000	17.3719	130
LVG	0.9241	0.4305	16.3002	3.0822	2.1853	130

Researcher's computation using STATA 16, 2024

Above is the table of descriptive statistics, which is showing the data that was collected from the 13 industrial goods companies quoted on the Nigerian Exchange Group (NXG) over the period of ten years. It can be seen that the data lie in between the valid maximum and minimum value range. Moreover, the standard deviation values are low and show that the data is least skewed. Specifically, the ROA displayed a negative value of -0.0244 with a very high difference in the SD which shows a high degree of discrepancies the return on assets of companies covered for the study. This is substantiated by the maximum value of 0.3607 and minimum of -1.9530. The result displayed a mean total debt ratio value of 0.3538 and a minimum and maximum values of 3.6603 and 0.0040

respectively which insinuates an overall significant difference in the total debts of the companies. This is validated by the value of the SD which stands at 0.3376. The study also, provided evidence which suggests that dividend payout ratio among the companies vary significantly as indicated by the maximum and minimum values of 2.4402 and 0.9673 respectively. For the control variables, the result shows that FS shows a mean value of 14.3026 and an SD value of 5.3868 which show that some firm have higher assets values than others. The average listing age of the companies is 32 years and with the SD showing 17.3719. Finally, the study provided evidence which suggest that the maximum leverage stands at 16.3002 and the minimum 3.0822.

Table 3: Correlation Matrix

Correlation Statistics	ROA	TDTA	DPRTD	FS	FA	LVG
ROA	1.0000					
TDTA	-0.1693	1.0000				
DPRTD	-0.1847	0.0968	1.0000			
FS	0.2447	0.0948	0.0673	1.0000		
FA	0.0438	-0.0291	-0.0592	0.2726	1.0000	
LVG	-0.2259	0.3315	0.2381	-0.0923	-0.0214	1.0000

Source: Researcher's Compilation using STATA 16, 2024

The result of the correlation matrix in table 3 showed that total debt to total assets, dividend payout ratio to total debts and leverage has negative relationship with return on assets. Conversely, firm size and firm age has a positive relationship with return on assets. Also, all correlation among the independent variables falls below 80% which is within the acceptable threshold as posited by Gujarati (2004).

Table 4: Diagnostics Tests

Test	Method	Model 1	Model 2
Heteroscedasticity Value	MWBP/CW χ^2 -	6.38**/ 5.484**	4.39**/ 4.02**
Autocorrelation	Wooldridge F-	7.48*	5.574* statistic
CD dependence Statistic	Pesaran Test	3.38*	2.388*
Multicollinearity	Mean VIF	1.93	2.94

*Indicates Significance level 0.05 and ** Indicates Significance level 0.01

Source: Researcher's Compilation using STATA 16, 2024

In above Table 4, it can be seen that there is absence of multicollinearity in all of the two models because the mean VIF is less than 10 for all the models. However, there is presence of autocorrelation and heteroscedasticity in all the models. Thus, GMM is a tool to remove or control for heteroscedasticity, autocorrelation, or potential

endogenous problems (Javed et al., 2020). Hence, the presence of these anomalies does not pose any threat to the viability of the results of this study.

Table 5: GMM Result

Dependent Variable=ROA		Model 1	Model 2
TDTA	-0.0738*	-	
DPRTD	-	0.2422**	
FS	0.0084*		0.0070*
FA	-0.0030		-0.0003
LVG	-0.012**		-0.0203**
R2	0.4064**		0.6724**
Arellano-Bond test for AR (1) (Pr W z)		0.0367	0.0271
Arellano-Bond test for AR (2) (Pr W z)			
0.1388			
0.3977			
Sargan test of overid restrictions		0.9367	0.1355

*Indicates Significance level 0.05 and ** Indicates Significance level 0.01 **Source: Researcher's Compilation using STATA 16, 2024**

The result of the GMM test produced an R^2 of 0.4064 and 0.6724 for model one and two respectively. From the values of the R-Squared, TDTA shows the lowest explanatory power on ROA while DPRTD has the highest explanatory power of 67%. Cumulatively, it can be said that 40.64% of changes in the ROA of industrial goods companies in Nigeria is determined by changes in the debt composition of the companies. The Sargan test of override restrictions showed p-values greater than 0.05 (5%) for all two models indicating the validity of the instruments.

Based on the individual explanatory variables, it can be seen that the impacts of TDTA on ROA is significant and negative, so ROA will decrease by 7.3% with every 1% increase in TDTA while holding DPRTD constant. However, given the significant value of the outcome, the study rejects the hypothesis that TDTA has a non-significant effect on ROA of industrial goods companies in Nigeria. This finding collaborates with the previous study of Morellec et al. (2014).

Accordingly, the impact of DPRTD on ROA is significant and positive so that ROA will decrease by 24.22% with every 1% increase in DPRTD while holding LDTA constant. This significant impact provides the statistical evidence which implies that DPRTD has a significant effect on ROA. Therefore, we fail to accept the second hypothesis. This finding is in tandem with that of Adesina et al. (2015).

For the control variables, the result showed that there is no impact of FA on ROA, and there is a significant and positive impact of FS, whereas the impact of leverage is negative and significant.

Conclusion and Recommendations

To evaluate the impact of financing decision ratios on the financial performance of listed industrial goods companies in Nigeria, the study collected data from the 13 listed industrial goods companies on the Nigerian

Exchange Group. Since the population is small and data was readily available, all the companies were considered for the purpose of data collection. Data was collected from the annual financial statements of these companies for a period of ten years from 2014 to 2023. One hundred and thirty observations were made and, on those observations, the generalized method of moment (GMM) technique was applied for the analysis of data. Different measures were used to measure the variables. The study concluded that the impacts of total debt to total assets and dividend payout ratio are significant on returns on assets. It was also seen that firm size, firm age, and leverage also play a significant role as control variables. Thus, it is a theoretical addition for defining the factors empirically that impacts the return on assets that previous studies have not properly addressed.

Furthermore, focusing closely on the impact of total debt and dividend payout, significantly help out the firms to make the right financing decisions. Practically, the success of companies mostly depends on the combination of equity and debt as well as the distribution of returns to investors. These percentages decide the level of return on assets.

From the findings and conclusions, the following recommendations were made:

i. That the management of industrial goods firms should balance the quality of the financial structure through rational decisions as the appropriate debt capacity that offers the best advantage to the companies through maximizing return on assets. ii. That management should annually when necessary and when profit is made make dividend payment to shareholders a priority as dividend payment send out the right signal to the market stimulating the need for potential investors to invest into and existing investors remain in the company.

References

- Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed institutions in Ghana. *The Journal of Risk Finance*. 6 (5), 438-445.
- Abubakar A. (2021). Financial leverage and financial performance of oil and gas companies in Nigeria. *Turkey Journal of Computer and Mathematics Education*, 12(3), 4170–4180.
- Abubakar, A. E., & Management (2015). Relationship between financial leverage and financial performance of deposit money banks in Nigeria 3(10), 759–778.
- Abu-Rub, N. (2012). Capital structure and firm performance: evidence from Palestine stock exchange. *Journal of Money Investment and Bank*, 23(1), 109–117.
- Adesina, J. B., Nwidobie, B. M., & Adesina, O. O. (2015). Capital structure and financial performance in Nigeria. *International Journal of Business and Social Research*, 5(2), 21–31.
- Akaji, O. Nwadior, E. O. & Agubata, N. (2021). Effect of debt financing on firms performance in Nigeria. *Journal of Accounting and Financial Management*, 7(3), 60-73.

- Amjed, S. (2011). Impact of Financial Structure on Firm's Performance: A Study of Pakistan's Chemical Sector. Society of Interdisciplinary Business Research (SIBR) 2011 Conference on Interdisciplinary Business Research
- Asaf, S. (2004), Executive Corporate Finance: The business of enhancing shareholder value. London: Prentice Hall.
- Awan, A. G., & Amin, M. S. (2014). Determinants of capital structure. European Journal of Accounting Auditing and Finance Research, 2(9), 22-41.
- Brondoni, S. M. (2020). Shareowners, stakeholders & the global oversize economy. The Coca-Cola company case. Sympathetic Emergency Issues in Management, 3(1), 16–27.
- Chandra, P. (2020). Fundamentals of financial management. McGraw-Hill Education, London
- Chen J. J. (2014). Determinants of Capital Structure of Chinese-listed Companies", Journal of Business Research, 57, 1341 – 1351.
- Chen, J. (2009). Determinants of capital structure of Chinese-Listed companies. Journal of Business Research, 57(12), 1341 - 1351
- Ebaid, I. (2009). The impact of capital-structure choice on firm performance: empirical evidence from Egypt. The Journal of Risk Finance, 10, (5), 477-487.
- Erasmus, R. (2008). Capital structure and firm performance: Evidence from Malaysian listed companies. Procedia-Social and Behavioral Sciences, 65, 156-166.
- Gleason K. C., Mathur, L. K. & Mathur, I. (2000), "the Interrelationship between Culture, Capital Structure and Performance: Evidence from Europeans Retailers", Journal of Business Research, 50, 185 -191.
- Gleason, J. M., & Barnum, D. T. (1982). Towards valid measures of public sector productivity: performance indicators in urban transit. Journal of management science, 28(4), 379-386.
- Gujirati, D. N. (2004). Basic econometrics (Fourth edition). McGraw-Hill.
- Hanousek, A., & Shamshur, K. N. (2022). Financial Structure and the Profitability of Manufacturing Companies in Nigeria. Journal of Accounting, Finance and Auditing Studies, 2(3), 56-68.

- Husain, U., Javed, S. (2020). Stock price movement and volatility in muscat security market (MSM). International Journal of Research Granthaalayah 7(4), 68–84.
- Jahanzeb, A. Saif-Ur-Rehman, Norkhairul, H., Bajuri, M., & Aiyoub, A. (2014). Trade-Off Theory, Pecking Order Theory and Market Timing Theory: A Comprehensive Review of Capital Structure Theories. International Journal of Management and Commerce Innovations, 1, 11-18.
- Javed, S., Husain, U., Ali, S. (2020). Relevancy of investment decisions and consumption with asset pricing: GMM and CCAPM model approach. International Journal of Management, 11(8), 10–17. <https://doi.org/10.34218/IJM.11.8.2020.002>
- Khan, A. G. (2012). The relationship of capital structure decisions with firm performance: A study of the engineering sector of Pakistan. International Journal of Accounting and Financial Reporting, 2(1), 245-262.
- Kumar, M., & Woo. L. (2010). Impact of Capital Structure on Firms' Financial Performance: Evidence from Ghana, Research Journal of Finance and Accounting, 3, 9-19.
- Leary, M. T. & Roberts, M. R, (2014). Do peer firms affect corporate financial policy? Journal of Finance 69(1), 139–178.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and linking it to Performance. Academy of Management Review, 21(54), 135-172.
- Majumdar, S. K., & Chhibber, P. (1999). Capital Structure and Performance: Evidence from a Transition Economy on an aspect of Corporate Governance. Public Choice, 98, 287-305.
- Modigliani, F. & Miller, M. (1958). The Cost of Capital, Operation Finance and Theory of Investment. American Economic Review, 48(23), 261-297.
- Morellec, E., Nikolov, B., Zucchi, F. (2014). Competition, cash holdings, and financing decisions. Swiss Finance Institute Research Paper, (13–72).
- Myers, S. C. (1977). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics. 13 (2), 187-221.

- Ohaka, J. Edori, D S. and Ekwezor, U. C. (2020). Debt financing and firms' financial performance in Nigeria. *Account and Financial Management Journal*, 5(2), 21062113
- Olaifa, M. U. (2018). Effect of financial decisions on the performance of commercial banks in Nigeria using four performance indices. *International Journal of Economics, Commerce and Management*, 3(4), 1-13.
- Olokoyo, F. M. (2012). Capital Structure and Corporate Performance of Nigerian Quoted Firms: a Panel Data Approach. Doctoral Thesis: Covenant University, Nigeria.
- Parmasivan, C. & Subramanian, T. (2009). *Financial Management*. New Delhi: New Age International.
- Penrose, E. T. (1959). *The theory of the growth of the firm*. New York: Sharpe.
- Rajan, R. & L. Zingales, (1995). What Do We Know About Capital Structure? Some Evidence from International Data. *Journal of Finance*, 50, 1421 – 1460.
- Rotimi, O. A., Olusola, F. S., & Aderemi, A. K. (2022). Effect of financing decisions on the firm value of listed ICT firms in Nigeria. *Journal of Accounting, Finance and Auditing Studies*, 2(3), 56-68.
- Saidi, M. (2004). Capital structure and firm performance: An analysis of manufacturing firms in Turkey. *Eurasian Journal of Business and Management*, 3(4), 13-22.
- San, O. T. & Heng, T. B. (2011). Capital Structure and Corporate Performance of Malaysian Construction Sector. *International Journal of Humanities and Social Science*, 1, (2), 28-36.
- Shahar, V. O., & Kusa, G. B. (2015). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-249.
- Sheikh, N. A., & Wang, Z. (2010). Financing behavior of textile firms in Pakistan. *International Journal of Innovation, Management and Technology*, 1(2), 130.
- Shikumo, A., Kiru, K., & Koima, J., K. (2020). Effect of Long-term debt on the financial growth of non-financial firms listed at Nairobi Securities Exchange. *Scholars Journal of Economics, Business and Management*, 5(3), 1-23.
- Soliha, I. & Taswan, M. O. (2002). The effect of capital structure on profitability of energy American firms. *International Journal of Business and Management Invention*, 3(12).

- Sun, J., Ding, L., Guo, J. M., & Li, Y. (2016). Ownership, capital structure and financing decision: evidence from the UK. *Br Account Rev*, 48(4), 448–463.
- Uremadu, S. O. & Onyekachi, O. (2018). The impact of capital structure on corporate performance in Nigeria: A quantitative study of consumer goods sector. *Current Investigations in Agriculture and Current Research*, 5(4), 697 – 705
- Višić, J. (2012). Influence of firm size on its business success. *Croatian operational research review*, 3, 213-223.
- Webster, P. (2012). Market orientation and other potential influences on performance in small and medium-sized manufacturing firms. *Journal of small business management*, 38(1), 48-67.
- Zahra, S. A. (1993). The implication of board of directors' composition for corporate strategy and performance. *International Journal of Management*, 5(2) 19-40.