

**EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF LISTED CONSUMER GOODS
COMPANIES ON NIGERIAN STOCK EXCHANGE**

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ABSTRACT

This paper undertook an empirical test on the effect of capital structure on the financial performance of listed consumer goods companies on the Nigeria Stock Exchange within the period 2016 to 2020. This research is quantitative, and the analytical method applied is multiple linear regression analysis. The results of the t-test hypothesis revealed that capital structure variable has a significant effect on financial performance (return on assets).

Keywords: Capital structure, financial performance, Return on Assets, Nigeria Stock Exchange.

INTRODUCTION

Capital Structure is one of finance theories that has attracted the greatest focus thereby caused a lot of controversies. Capital Structure and leverage affects firms' performance. Since the 1958 work of Modigliani and Muller, which argues that it is only in certain conditions that the choice between debt and equity does not affect the firm' value, the value of a corporation and its costs of capital are unaffected by its capital structure, and the only variables that determines firm value was its future earnings power demonstrated in the company's cash flow, thereby rendering the capital structure decision irrelevant.

The financing decisions of a firm cannot be complete without its operating and investing activities anchored on its capital structure. Capital structure essentially refers to how a firm mixes debt and equity in order to finance itself or in other words, it is concerned about the combination of funds, in the form of debt and equity. The big question now is: does capital structure exist and if it does, how does it affect firm performance? According to Gangeni (2006), the study of capital structure is an attempt to explain the mix of securities and financing sources used by the corporations to finance real investment.

Gitman and Zutter (2012), defines capital structure as the mix of long-term debt and equity maintained by the firm. According to Brigham and Earnhardt (2011), the main purpose of the capital structure is to comprise of the optimal mix of debt and equity. A firm's capital structure decision includes its choice of a target capital structure, the average maturity of its debts, and the specific types of firms must make the decisions (Capital Structure) that are designed to maximize the firm's intrinsic value.

The consumer goods companies are those companies whose production is tied to the stock price of the consumer goods industry, and producing for the community needs. While the stock price of the consumer goods industry stood at 150 million USD as at the time of this research, the market value of the selected consumer goods companies within the corresponding period is valued at 25,977 million, USD translating to 56.65%. According to Murtaldlo, *et al* (2014), the capital structure and asset turnover have a significant effect on financial performance, and the asset structure has no effect on financial performance. Liaquat, *et al* (2017), in their results posited that there is a significant negative effect of capital structure on return on asset (ROA) even as it affects the oil and energy companies/sector in Nigeria. However, in the empirical works of Mwangi and Birundu (2015), it states that there is no significant relationship between capital structure and return on asset (ROA) in the small and medium enterprises (SMEs) in Nigeria. According to Mujariyah (2016), Capital structure as measured by DER has no significant effect on financial performance if measured against ROA. However, Omagwa and Gladys (2017), posited that asset structure has a significant statistical effect on financial performance.

This study is set to empirically test the effect of capital structure on the financial performance of consumer goods companies that are listed on the Nigeria Stock Exchange in 2016 to 2020.

REVIEW OF RELATED LITERATURE

Effect of Capital Structure on Financial Performance (H_1)

Liaquat, *et al* (2017), and Igbal (2016), states that capital structure influences financial performance. Capital structure refers to how firm investment is financed using either equity or debt or proportionate mix of both (Sarlija and Hanc, 2012; Ghasemi and Ab-Razak, 2016; 2017; Vy and Nguyet, 2017; Olusuyi and Felix, 2017; Burksaitiene and Draugele, 2011). Regression Analysis

to measure performance, use the variables commonly used in the literature, namely, ROA (Zulkafli and Samad 2007). ROA ratio and the operating efficiency ratio. ROA reflects the deployment of bank assets to yield its income (Weisbach, 1998). The results of the study that profitability and liquidity respond to the capital structure depend on the position of the economic business cycle. Financial managers are advised to keep abreast of economic trends in Nigeria, the decision to adopt debt financing (Osaretin, et al, 2019). While research in the Norwegian country, Capital Structure has a positive impact on performance. Based on the findings, the variable, capital structure can improve industrial performance (Obilikwu, 2018). The results of this study are a positive relationship between capital and company performance in Vietnam (Vy and Ngyet, 2017). The hypothesis to examine the effect of capital structure (DER) on financial performance (ROA) is: H_1 : Capital structure influences the financial performance of consumer goods companies in the Nigeria Stock Exchange.

Effect of Liquidity on Financial Performance (H_2)

According to CR is a comparison between the amount of current assets and current debt. Hausman (2002), argued that the indication of a good working capital management is the efficiency of working capital as seen from the working capital turnover. That is, how much working capital swirling for a period or a period (Kashmir, 2011). According to Riyanto (2001), working capital is the capital used to finance or refinance daily business or plans to come, where money or funds released was expected to be back in a short time through the sale of goods or production, then money or the funds will be constantly spinning in each period during the life of the company. This ratio shows that the value of current assets (which can be immediately made into money) has many times short-term debt (Munawir, 2002). Demirgunes (2006), states that liquidity affects profitability. The research results of the effect of Liquidity on Financial Performance: Evidence

from Turkish Retail industry is that liquidity affects profitability (Demirgunes, 2016). The liquidity ratio is the company's ability to pay short-term financial obligations on time (Endah, et al., 2017). Iqbal (2016), has the same results in his research that liquidity has a positive correlation with financial performance. Whereas state that the independent variable (CR) has an effect on profitability (ROA) Pramesti, et al., (2016). The results of the study of company size affect performance of a company (Melawati, et al., 2016). Based on the theory, so with the large number of troubled financing. Of course, can lead to loss of opportunity to earn income from financing provided to affect earnings and gain a negative impact on ROA (Yusuf ans Surjaatmadja, 2018). Variables significantly affect the profitability of capital structure (Marfuah and Nurlaela, 2017). With the research in the Norwegian country, capital structure has a positive impact on performance. He found that higher volatility in the Indian market was associated with greater liquidity in the market. Even after adjusting for the impact of trading activities, volatility was found to show a statistically significant impact on liquidity (Cheriyana and Lazar, 2019). The hypothesis to test the effect of liquidity (CR) on financial performance (ROA) is H_2 : Liquidity affects the financial performance of consumer goods companies in the Nigeria Stock Exchange.

Effect of Asset Turnover on Financial Performance (H_3)

According to Pramesti, et al., (2016), asset turnover (total asset turn over) is the ratio that measures how all assets owned by a company in supporting company's sales. Then Sitanggang (2013), states that asset turnover has significant effect on profitability. The results of the model feasibility analysis model have a positive effect on profitability (ROA). Murtaadlo, et al., (2014). The result of the study suggests that the effect of capital structure significantly impact financial performance (Al-Ani, 2014). The hypothesis to test the effect of asset turnover on financial performance is as

follows: **H₃**: The growth of the company influences dividend policy on agricultural companies on the Nigeria Stock Exchange.

Table 1: Operational definition of variables

Variables	Definitions	Indicators
Financial Performance (Y)	Financial performance is a description of every economic outcome that a company can achieve at a certain period of through company activities to generate profits	Return on asset = $\frac{Net\ profit}{Total\ assets}$
Capital Structure (X_1)	Capital Structure is permanent financing consisting of long-term debt, preferred stock, and share capital	DER= $\frac{Total\ debt}{Total\ Equities}$
Liquidity (X_2)	Liquidity ratio is a ratio that measures a company's ability to meet its short-term obligations on time.	CR = $\frac{Current\ assets}{Current\ liabilities}$
Asset Turnover	Asset rotation is a ratio that describes asset turnover measured by sales volume	Total asset turnover = $\frac{Sales}{Total\ Asset}$

Source: Brigham, (2006) .

Methodology

The population in this study is all consumer goods companies listed on the Nigeria Stock Exchange for the period 2016 to 2020 research period. The sample is determined by the purpose sampling method with the criteria: Consumable industrial sector companies listed on the Nigeria Stock Exchange in 2016 to 2020, consumer goods companies listed on the Nigeria Stock Exchange which have financial reporting periods ending December 31, during the 2016 to 2020 research period. Consumable goods companies listed on the Nigeria Stock Exchange those have positive earnings during the 2016 to 2020 research period.

A total of fifteen (15) consumer goods companies only met the above criteria hence we obtained a total volume of eighty four (84) data. Our adopted independent variable in this study is capital structure (DER), and the dependent variable is financial performance (ROA). A classic assumption test of the Multicollinearity test, Autocorrelation, Heteroscedasticity, and normality tests were all conducted to be sure that the model used in this study passed the prerequisite tests for testing the hypotheses. A hypothesis testing is done using multiple linear regression analysis using SPSS 24 application.

Results and Conclusion

Descriptive statistics was used in this study to provide a characteristic description of the observed variables (Ghozali, 2017). Descriptive statistics provide an over view of statistical data regarding minimum, maximum, mean and standard deviations. The results of the statistical analysis are presented in Table 2 below, and which shows that financial performance measured by ROA has the lowest value of 0.02 and the highest value of 0.432, the average value is 0.103 > 0.107 standard deviation which means that the distribution of the ROA value is good. Capital Structure as measured by the DER has the lowest value of 0.074 and the highest value of 3.029, the average value is 0.795, and the standard deviation value is 0.584.

The mean value of 0.795 > 0.584 standard deviation means that the distribution of DER values is good. Liquidity measured by the CR has the lowest value of 0.514 and the highest value of 10.254, the average value is 2.790, and the standard deviation value is 1.920. Asset turnover as measured by total asset turnover (TATO) has the lowest value of 0.204 and the highest value of 2.886, the average value is 1.279, and the standard deviation value is 0.555. The mean value is 1.279 > 0.555 standard deviation which means that the distribution of TATO values is good.

Table 2: Descriptive statistic test results

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	84	.002	.432	.13030	.107080
DER	84	.074	3.029	.79531	.584748
CR	84	.514	10.254	2.79018	1.920533
TATO	84	.204	2.886	1.27986	.555290
Valide N (listwise)	84				

Source: Author's data processed in 2020.

Table 3: Multicollinearity test results

Model		Unstandardized coefficients		Coefficients		1	Sig.	Collinearity Statistics
		β	Std Error	Beta	Tolerance			
1	(Constant)	-.101	.054	-	-1.868	.066	-	-
	DER	.076	.027	.413	2.779	.007	.415	2.408
	CR	.029	.008	.524	3.857	.000	.496	2.015
	TATO	.073	.021	.379	3.551	.001	.807	1.240

Source: Current Ratio data processed in 2020 = Dependent variable (ROA)

Table 4: Autocorrelation test results

			Model Summary		
Model	R	R square	Adjusted Square	R	Std. Error of the estimate
1	.525	.278	.239		.093409
					Durbin-watson
					2.226

Source: Author's processed data 2020 with the predictors TATO, CR, and DER

Table 5: Model feasibility test results (F-Test)

Model	Sum of squares	Df	Mean square	F	Sig
1 Regression	.262	4	.066	7.518	.000
Residual	.689	79	.009		
Total	.952	83			

Source: Author's Data processed 2020

Table 6: Partial regression coefficient test (t-Test)

Model	Unstandardized coefficients		Standardized coefficients	T	Sig
	B	Std. Err	Beta		
1 (Constant)	-.101	.054		-1.868	.066
DER	.076	.027	.413	2.779	.007
CR	.029	.008	.524	3.857	.000
TATO	.073	.021	.379	3.551	.001

Source: Author's data processed 2020

Table 7: Determination of coefficient test results (R^2).

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.544	.296	.184	.107110

Source: Author's Data processed 2020.

Assumption of the Test

The assumption of the testing is meant to produce a good regression model. To avoid errors in testing classical assumptions, the number of samples used must be free from the classical assumption test. To avoid errors in testing classical assumptions, the number of samples used must be free of bias (Ghozali, 2011). The classic assumption test results in this study are as based on Table 3 above. It is known that the results of Multcolinearity tests indicating that the whole

independent variable has a tolerance value > 0.10 and VIF value of < 10 . Thus, it can be stated that the regression model in this study is free from the symptoms of Multicollinearity. Model summary results are presented in Table 4.

Test Of Hypotheses

The multiple linear regression analysis is used in to test the hypotheses formulated in this study.

$$\text{ROA} = -1.01 + 0.076\text{DER} + 0.029\text{CR} + 0.073 \text{TATO} + e$$

Feasibility results of the model (F-Test). Multiple Regression Coefficient Test (t-Test), and Determination Coefficient (R^2) are presented in Table 5, Table 6 and Table 7. The model Feasibility Test Results are shown in Table 5 as follows:

The results of the model feasibility test (F-test) presented in Table 5 can be seen that the value of $F_{(cal)}$ 7.518 is greater than $F_{(Table)}$ 2.487 and the significant level of 0.000 is smaller than 0.050. This indicates that the Capital Structure (DER), Liquidity (CR), and Asset Turnover (TATO) simultaneously influence financial performance (ROA). The r test results are shown in Table 6 as follows:

Based on the results of multiple linear regression tests, a regression equation is formed:

$$\text{ROA} = -1.01 + 0.076\text{DER} + 0.029\text{CR} - + 0.073 \text{TATO} + e.$$

The Model Regression Coefficient Test (t-Test) is based on Table 6. Results of hypothesis (H_1) on capital structure is against financial performance. The results of the analysis (H_1) Capital Structure (DER) have a value of $t_{(cal)} >$ from $t_{(Table)}$ which is $2.779 > 1.990$ with a significant value of 0.007. This significant value is smaller than the confidence level of $0.007 < 0.050$. This means that

the capital structure (DER) has a significant effect on financial performance (ROA). Hypothesis (H_1) is accepted. The results of this study support the results of research conducted by Murtadlo, et al., (2014), Nainggolan and Pratiwi (2017). Pramesti, et al., (2016), Liaqat, et al., (2017), and Iqbal (2016), states that the capital structure influences financial performance. Results of hypothesis (H_2), liquidity on financial performance analysis results, that is, (H_2) Liquidity (CR) has a value of $t_{(cal)} > t_{(table)}$, which is $3.857 > 1.990$ with a significant value of 0.000; significant value $0.000 < 0.050$. This indicates that liquidity (CR) has a significant effect on financial performance (ROA). Hypothesis (H_2) is accepted. Liquidity is the company's ability to fund the company's operations and fulfill its short-term obligations. The results showed that liquidity as measured by the CR has an influence on the size of ROA. This study supports the research results of Iqbal (2016), and Demirgunes (2016), which states that liquidity measured by the CR has an effect on financial performance. Results of hypothesis (H_3), is on the effect of Asset turnover on financial performance. Results of hypothesis analysis (H_3), Asset rotation has a value of $t_{(cal)} > t_{(table)}$, that is ($3.551 < 1.990$) with the value of sig. $0.01 < 0.05$. This indicates that asset turnover (TATO) has a significant effect on financial performance (ROA). So the results of the hypothesis (H_3) are accepted. This shows that if asset turnover measured by total asset turnover (TATO) is higher, then the higher the level of financial performance of the company because the company in utilizing the assets it has the operational activities of the company has been efficient, resulting in an increase in the level of profitability/improvement in company performance. The results of this study supports the results of research by Murtadlo, et al., (2014) and Pramesti, et al., (2016), which states that asset turnover measured by total asset turnover (TATO) influences financial performance.

Determination of Coefficient Test Results (R^2)

The determination of coefficient test results (R^2) in Table 7 shows that the adjusted R square value is 0.184. This means that 18.4% of the dependent variable in this study can be explained by independent variables namely profitability (ROA), liquidity (CR), and DER, and asset turnover (TATO), while the remaining 82.6% is explained by other variables outside the research model.

Conclusion and recommendations

The study aims to determine the effect of Capital Structure (DER), Liquidity (CR), and Asset Turnover (TATO) on financial performance (ROA) in the consumer goods companies listed on the Nigeria Stock Exchange in 2016 to 2020. Based on the results of the analysis, it can be concluded that Capital Structure (DER), Liquidity (CR), and asset Turnover (TATO) being the control variables in this study, simultaneously influence the financial performance (ROA). Hypothesis results (H_1), Capital Structure (DER) has a significant effect on financial performance as measured by (ROA). The results of the hypothesis results (H_2), Liquidity (CR) have a significant effect on financial performance (ROA). Hypothesis results (H_3), asset Turnover (TATO) have a significant effect on financial performance (ROA).

The study recommended for advanced research in future because, this study encountered several limitations including limitation to consumer goods companies' Annual Reports on the Nigeria Stock Exchange. Furthermore, a research is supposed to cover all companies listed on the Nigeria Stock Exchange, but this study uses only three independent variables, namely capital structure, Liquidity, and asset turnover. Further research should use more variables, considering the fact that the independent variables used in this study only focused on financial factors.

References

- A-Ani, M. K. (2014). Effects of assets structure on the financial performance: Evidence from sultanate of Oman. *Journal of US-China Public Administration* 11 (2), 170-179.
- Brigham, E.F, Houston, J.F (2006). Basics of Financial Management. Translator: All Akbar Yulianto. 10th ed. Vol.1. Jakarta: Salemba Empat.
- Brigham, E.F; Ehrhardt, M.C. (2011). Financial Management: Theory and Practice, 13th ed. Mason: South-Western Cengage Learning.
- Burksaitiene, D; Draugele, L., (2018). Capital structure impact on liquidity management. *International Journal of Economics, Business and Management Research* 2 (1), 110-127.
- Cheriyani, N.K; Daniel, I. (2019). Relationship between Liquidity, Volatility and Trading Activity: An Intraday Analysis of Indian Stock Market. *International Journal of Economics and Financial Issues*. 9(1), 17-22.
- Demirgunes, K., (2016). The effect of liquidity on financial performance: Evidence from Turkish retail industry: *International Journal of Economics and Finance*. 8(4). 63-79.
- Earnhardt, W; Nurlaela, S; Titisari, K. H. (2017). The effect of liquidity ratio, productivity ratio, profitability ratio, and solvability ratio on sukuk ranking. *Accounting and Tax Journal*. 18(1), 130-139.
- Gangeni, C. (2006). The Relationship between capital structure and the financial performance of the Firm. Master Thesis: University of Pretoria, South Africa.
- Ghasmi, M; Ab-Razak, N. H. (2016). The impact of liquidity on the capital structure: Evidence from Malaysia. *International Journal of Economics and Finance*. 8(10): 130-139.
- Ghozali, I. (2011). Application of Multivariate Analysis with SPSS 19. 5th ed. Semarang: Publisher of Diponegoro University.
- Gitman, L.J; Zuther, C.J. (2012). Principles of Managerial Finance. 13th ed. Boston: Prentice Hall
- Hausman, S. (2002). Financial Management: Theory and Application (Short Term Decisions). Yogyakarta: BPPE.
- Iqbal, M. (2016). Effect of liquidity and capital structure on financial performance: Evidence from banking sector. *International Journal for Innovative Research in Multidisciplinary Field*. 2(7). 1-9.
- Liaqat, I; Saddique, S; Bagh, T; Khan, M.A; Naseer, M.M; Khan, M.A. (2017). Capital structure as driving force of financial performance: Case of energy and fuel sector of Pakistan. *International Journal of Accounting and Financial Reporting*. 7(1), 86-100.

- Marfuah, S.A; Nurlaela, S. (2017). Effect of company size, asset growth, profitability, and sales growth on the capital structure of the cosmetics and household company on the Indonesia Stock Exchange. *Accounting and Tax Journal*. 18(1), 16-30.
- Melawati, M; Nurlaela, S; Wahyuningsih, E. M. (2016). The effect of good corporate governance, corporate social responsibility, and company size on company performance. Surakarta: IENACO University Muhammadiyah of Surakarta.
- Mujariyah, M. (2016). The influence of capital structure on financial performance (study on BUMN owned banks registered on Indonesia Stock Exchange in 2008 -2014. *Junal online. Mahasiswa Fakultas Hmu Sosial dan Hmu Politik*. 3(1), 1-15.
- Murtadlo, A.A; Immam, Y; Wahono, B. (2014). Effect of capital structure, wealth structure and asset turnover on financial performance (case study in real estate companies listed on the IDX), *Journal of Economics and Management*. 12(1), 1-10.
- Mwangi, M; Birundu, E.M.(2015). The effect of capital structure on financial performance of small and medium enterprises in Thika sub-county, Kenya. *International Journal of Humanities and Social Science*. 15(11), 151-155.
- Gladys, M; Omagwa, J. (2017). Asset structure and financial performance: A case of the Nairobi Securities Exchange. *Research Journal of Finance and Accounting*. 8(4), 192-200.
- Nainggolan, H.L; Pratiwi, P.S. (Analysis of factors affecting corporate financial performance. *Media Economics and Management*. 32(1), 80-96.
- Obilikwu, J. (2008). The impact of capital, concentration, size and liquidity on banking industry performance in Nigeria. *International Journal of Economics and Financial issues*. 8(4), 54-60.
- Olusuyi, A.E; Felix, A.E. (2017). The effect of capital structure on the financial performance of manufacturing firms in Nigeria (2008-2014). *Journal of Accounting and Financial Management*. 3(3), 37-48.
- Osaretin, L.O; Sodik, A.O; Fredrick, I. (2009). Capital structure and the profitability-liquidity trade-off. *International Journal of Economics and Financial issues*. 9(3), 48-64.
- Pramesti, D; Wijayanti, A; Nurlaela, S. (2016). Effect of Liquidity Ratio, Leverage, Activity and Firm size on the Profitability of Companies in the Automotive and Component Sub-Sector in the Indonesia Stock Exchange. Vol. 3. Surakarta: IENCO University Muhammadiyah of Surakarta.: 1(1), 1-17.
- Rahmiyatun, F; Nainggolan, K (2016). Effect of asset, capital turnover, and funding on profitability of Pharmaceutical companies. *Ecodemica*. 14(12) 156-166.
- Riyanto, B. (2001). Basics of Corporate Spending. 4th ed. Yogyakarta: BPFY Yogyakarta.
- Sarlija, N; Ilarc, M. (2012). The impact of liquidity on the capital structure: A case study of Croatian firms. *Business Systems Research*. 3(3),30-36.

- Sitanggang, J. (2013). *Manajemen Keuangan Perusahaan Lanjutan*. 1st ed. Jakarta: Mitra Wacana Media.
- Vy, L.T.P; Nguyet, P.T.B. (2017). Capital structure and firm performance: Empirical evidence from a small transition country. *Research in International Business and Finance*. 42(17), 710-726.
- Weisbach, M. (1998). Outside directors and CEO turnover. *Journal of Financial Economics*. 20(10), 431-460.
- Yusuf, M; Surjaatmadja, S. (2018). Analysis of financial performance on profitability with non-performance financing as variable moderation. *International Journal of Economics and Financial Issues*. 8(4),126-132.
- Zulkafli, A.H; Samad, E.A (2007). Corporate governance and performance of banking firms: Evidence from Asian emerging markets. *Advances in Financial Economics*. 12(4), 49-74.