“Capital structure and profitability: the case of Nigerian deposit money banks”

AUTHORS	Adegbola Olubukola Otekunrin https://orcid.org/0000-0001-8971-6985 Tony Ikechukwu Nwanji https://orcid.org/0000-0002-0325-4239 Damilola Eluyela http://orcid.org/0000-0002-3080-6385 https://publons.com/researcher/B-1038-2017/ Johnson Kolawole Olowookere http://orcid.org/0000-0003-3062-3156 Damilola Gabriel Fagboro http://orcid.org/0000-0002-3080-6385

ARTICLE INFO	Adegbola Olubukola Otekunrin, Tony Ikechukwu Nwanji, Damilola Eluyela, Johnson Kolawole Olowookere and Damilola Gabriel Fagboro (2020). Capital structure and profitability: the case of Nigerian deposit money banks. *Banks and Bank Systems*, *15*(4), 221-228. doi:10.21511/bbs.15(4).2020.18
DOI	http://dx.doi.org/10.21511/bbs.15(4).2020.18
RELEASED ON	Monday, 28 December 2020
RECEIVED ON	Saturday, 11 July 2020
ACCEPTED ON	Thursday, 03 December 2020

JOURNAL	"Banks and Bank Systems"
ISSN PRINT	1816-7403
ISSN ONLINE	1991-7074
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”

NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
33	0	2

BUSINESS PERSPECTIVES

LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Adegbola Olubukola Otekunrin (Nigeria), **Tony Ikechukwu Nwanji** (Nigeria), **Damilola Eluyela** (Nigeria), **Johnson Kolawole Olowookere** (Nigeria), **Damilola Gabriel Fagboro** (Nigeria)

CAPITAL STRUCTURE AND PROFITABILITY: THE CASE OF NIGERIAN DEPOSIT MONEY BANKS

Abstract

This paper aimed to empirically examine the extent to which capital structure impacts the profitability of Nigerian Deposit Money Banks considering the profitability of eight Nigerian Deposit Money Banks from 2003 to 2018 (16 years). A descriptive research design was adopted for this study, and data were analyzed using regression. The study used secondary data obtained from published annual reports of selected Nigerian Deposit Money Banks on the Nigerian Stock Exchange (NSE) for four years (2003–2018). The study concluded that the indicators used to measure capital structure (debt-equity ratio and leverage ratio) and profitability (returns on equity) had a negative relationship. This means that the use of debts mixed with equity (debt-equity ratio and leverage ratio) in improper proportion as financing methods can negatively affect profitability. Hence, there is a need to identify the optimal mix of capital structure (debts mixed with equity) that maximizes profitability, as well as firm and shareholder value with minimum agency costs as suggested by the trade-off theory and agency theory, respectively. The alternative is to give preference to retained earnings (internal source of finance) as funding source.

Keywords agency theory, debt, equity, leverage ratio, return on equity

JEL Classification G21, G32, M41

Received on: 11th of July, 2020
Accepted on: 3rd of December, 2020
Published on: 28th of December, 2020

Adegbola Olubukola Otekunrin, Ph.D., Senior Lecturer, Department of Accounting and Finance, College of Business and Social Sciences, Landmark University, Nigeria. (Corresponding author)

Tony Ikechukwu Nwanji, Ph.D., Associate Professor, Department of Accounting and Finance, College of Business and Social Sciences, Landmark University, Nigeria.

Damilola Eluyela, Ph.D., Lecturer, Department of Accounting and Finance, College of Business and Social Sciences, Landmark University, Nigeria.

Johnson Kolawole Olowookere, Ph.D., Senior Lecturer, Department of Accounting, Faculty of Management Sciences, Osun State University, Nigeria.

Damilola Gabriel Fagboro, Ph.D., Senior Lecturer, Department of Accounting, Faculty of Management Sciences, University of Lagos, Nigeria.

Conflict of interest statement:
Author(s) reported no conflict of interest

INTRODUCTION

The diverse methods of financing a firm are what is referred to as capital structure (CS); that is, the connection between obligation and value. Researchers generally believe that organizations should adopt the best combination of debt and equity (DE). Some firms do not design their CS; instead, they create them from money-related choices taken by the managers without appropriate planning and control (Pandey, 2004; Otekunrin et al., 2018). Organizations that do not appropriately design their CS will find it hard to raise funds to back their activities (Otekunrin, Olowookere et al., 2019). The factors affecting the corporate organizations' CS are both internal and external. Misappropriation of finance can severely affect the business enterprise's performance and survival. This has been proved as a primary cause of business failure. Researchers generally believe that organizations should adopt the best combination of debt and equity. Financial structure influences the capital price of a company and, therefore, profitability (Uwuigbe & Olayinka, 2012). The decision on financing the operation of a firm is crucial and critical as managers often encounter problems in finding the best DE ratio. This study empirically examines the extent to which the DE financing (CS) has affected the profitability of companies, and conducts research exploring eight Nigerian Deposit Money Banks from 2003 to 2018 (16 years)to improve the analysis.

1. LITERATURE REVIEW

1.1. Capital structure

Miller and Modigliani pioneered the issue of CS in 1958, arguing that CS was unrelated in determining a company's value and future performance. CS has to do with the sources in which a company receives the essential long-term capital. CS research attempts to clarify the combination of securities and financing sources used by companies to fund asset (Myers, 2001). Singh and Hamid (1992) used data in their research on the biggest firms in developing countries and revealed that companies in developing nations used debt financing to fund their activities than those in developed countries. Generally, CS is designed to serve equity investors' interest. This includes equity, preferential capital, retained earnings, and borrowed funds like debentures, bonds, and loans from shareholders. The primary financing class of every organization are DE (Joshua, 2017). The CS is characterized as a mixture of DE used by the firm in its operation and a mixture of various securities (Abor, 2005). To this end, these variables were adapted to carry out this study to measure the CS (DE ratio and Leverage ratio) of Nigerian Deposit Money Banks to find out the relationship between CS and profitability (proxy by ROE).

1.2. Profitability

The performance of a business can be evaluated based on its level of profitability(Pandey, 2004).The amount of debt indicates the growing requirement for exterior resources by the company and, consequently, the amount of profit that the company will use to settle the principal debt and the accumulated interest on them (Myers, 2001). Hence, the importance of profitability and the use of shareholders fund or equity fund cannot be overemphasized. This is because the company will not have to pay interest to any exterior resources provider for using the company funds (i.e., shareholders fund or equity fund) to finance its operating activities. A company or organization's fundamental CS will affect its profit-earning capacity (Reddy, 2012) and profit maximization is a required prerequisite for any firm that wants to sustain its going concern status, to the delight of its investors, administrators and promoters. It is for this reason that this study has selected the profitability spectrum to measure companies' performance. Many measures are used to evaluate a business: profitability, liquidity, turnover ratio and other essential measurements. The profitability also can be measured using different financial ratios such as return on investment (ROI), ROE, cash ratio, return on assets and other ratios. This study decided to use ROE as a proxy and performance indicator for the profitability variable. This is because ROE is the portion of the profit for the accounting period that belongs to the real owner of the company (i.e. the ordinary shareholders).

1.3. Theoretical review

Theories that were explored to pinpoint the extent to which the CS has influenced the performance of firms in this study are now considered.

1.3.1. Capital structure irrelevancy theory

Capital structure is a mixture of DE and decision on which blend of DE will maximize the profit of the firm, as the firm and shareholder value is a significant problem encountered by a company's economic executives (Kochhar, 1997). Four theories were used to clarify the CS choices. The theory suggests that the company's value has a propensity to be independent of the company's debt and is primarily influenced by the presence of several favorable, net present value project investments. Modigliani and Miller (1958) opined that investors have the same business-related economic data as managers that can be called "systematic computing", but in fact, it is more convenient to think that managers are likely to have asymmetrical data (Teker et al., 2009). Modigliani and Miller's (1963, p. 439) study indicates:"*…firms are unresponsive concerning the method of funding (that is the mix of both debt and equity are good a well) in cases where taxes are not charged, Value Added Tax by way of corporate taxes, firms should be financed with nearly all debt; however, the M&M model assumes many factors that can imply that a precise balance of debt and financing is but for a given firm. If we want to draw a decision of* MM analysis*, this can be done by giving the following two summarized results of the same, the only benefit of debt financing (relative to equity financing) is the reduction in corporate income taxes due to the tax-deductibility of debt interest, there are no shortcomings of debt financing relative to equity funding*". Based

http://dx.doi.org/10.21511/bbs.15(4).2020.18

on the fact that this theory is based on the relevancy of a mixture of DE only when taxes are charged, it is not adopted in this study.

1.3.2. Trade-off theory (TOT)

This theory developed by Modigliani and Miller (1965) explained that a favorable level of financial structure could be achieved using debt financing profits and costs. The theory argues that financial distress taxes and costs determine the capital composition of DE of a company. Payment of interest has advantages, as any amount paid as interest on the debt will be eliminated from profit before arriving at taxable income. Hence companies are inspired to include debt in financing their activities. TOT also considered bankruptcy cost and presumed marginal cost and benefit of tax rebate equal at optimal debt level about bankruptcy caused by leverage. Consequently, there is a favorable connection between the corporate tax shield and the value of the firm (Stiglitz, 1969). Also, discarding the hypothesis of no agency costs gives theoretical subsistence of an optimal CS.

Agency costs arise and affect finance (capital structure), due to shareholders' interest conflicting with management' interest. The conflict of interest is the consequent of separation of ownership of the firm (the principal, i.e. shareholders who are the owner of the firm but they do not control daily activities and decisions of the firm) and control of firm' activities that is in care of a manager (the agent employed by the shareholder to decide on their behalf on daily activities of a firm) (Jensen & Meckling, 1976). Bankruptcy gives room to conflicts of interest between creditors and shareholders. This is because creditors have priority over shareholders if the company runs bankrupt. TOT presumed that at minimum agency costs, the debt ratio is at an optimal level (Brennan & Schwartz, 1984; Jensen, 1986; Jensen &Meckling, 1976; Kane et al., 1984). It is for this reason TOT is adopted in this study. Researchers divided the concepts of trade-off into two primary groups (static trade-off theory and dynamic trade-off theory), but this study is not focusing on these divisions.

1.3.3. Pecking order theory (POT)

Pecking order theory is based on the assumption that there are three sources of financing, which is in form funds generated from operations (retained profit), debt issue and equity issue. The theory is based on the fact that the companies should finance themselves first on their internally generated cash, then on the debt issue and lastly on the equity issue. The theory makes this lead to the fact of asymmetric information meaning that an investor cannot have the same information with the managers because the managers work in the company and can have information about all the investment and project showing the actual values of the firm. The theory also states that there is a signaling effect that because of the information the managers have, he can undervalue the stock, so it is always preferable to issue debt than equity. In contrast to the trade-off theory, the pecking order theory insists that there is no optimal amount of debt and it's always preferable that the companies should finance themselves from retained earnings. Moreover, it argues that the D/E ratio shows the internal financing capability, as well as new investment opportunities of firms. Profitable firms that have fewer investment opportunities will have a low D/E ratio. In comparison, firms with more investment opportunities but restricted internal funding will have a high D/E ratio.

1.3.4. Agency theory

Agency theory is concerned with the relationship between shareholders and agents, usually the company's managers. In this theory, shareholders are the actual owners of the company, and the job of the agent is limited to making sure that the shareholders' values are fully maximized. Agency costs arise and affect finance (CS) due to shareholders' interest conflicting with management' interest (Eluyela et al., 2019). The conflict of interest is the consequence of the separation of ownership of the firm (the principal, i.e. shareholders who are the owner of the firm but they do not control daily activities and decisions of the firm) and control of firm' activities that is in care of a manager (the agent employed by the shareholder to decide on their behalf on the daily activities of a firm) (Jensen & Meckling, 1976). Bankruptcy gives room to conflicts of interest between creditors and shareholders. This is because creditors have priority over shareholders if the company runs bankrupt. Trade-off theory (TOT) presumed that at minimum agency costs, the debt the ratio is at an

optimal level (Brennan & Schwartz, 1984; Jensen, 1986; Jensen & Meckling, 1976; Kane et al., 1984). It is for this reason that agency theory is adopted in this study.

2. HYPOTHESES DEVELOPMENT

Based on the literature review, empirical evidences and to fill the gap in knowledge this study empirically examines how capital structure influences profitability. For example, extant studies in this area display mixed results. Studies found that profitability was positively related to the capital structure (Deping & Yongsheng, 2011; Masulis, 1983; Jordan et al., 1998; Frank & Goyal, 2003; Simerly & Li, 2000) and some extant studies found that profitability was negatively related to the capital structure (Rao et al., 2007; Chakraborty, 2010; Majumdar & Chhibber, 2004), while some extant studies found no association between the dependent variable (profitability) and the independent variable (capital structure) (Amah & Chimara, 2016). The mixed results have been the source of encouragement for continuous research on the subject matter. Hence, the following hypotheses in their null form are developed:

H_1: *Debt/Equity ratio (capital structure) and ROE (profitability) are not significantly related.*

H2: *Leverage ratio (capital structure) and ROE (profitability) are not significantly related.*

3. METHODOLOGY

This study examined the influence of capital structure on the profitability of companies; eight Nigerian Deposit Money Banks were considered from 2003 to 2018 in line with Otekunrin et al. (2018) using descriptive research design. The financial data of these companies have been extracted from the database of the Nigeria Stock Exchange (NSE). All the 17(100%) Nigerian Deposit Money Banks on NSE form the population of the study out of which eight (47%) Nigerian Deposit Money Banks on NSE were randomly selected based on the availability of companies' annual reports from 2003 to 2018. The sample size of 47% is supported by Law (2012) that presumed that 30% of the population could fairly represent the population.

3.1. Model specification

This examination dictates a simple regression model. This model is designed to explore the association between the corporate capital structure and profitability. A direct condition has been received by Koech (2013) to look at the connection between these two. Capital market instruments and benefit are the two builds included. In this manner, the regression equation was figured as:

$$ROE = \beta_0 + \beta_1 DE + \beta_2 LR + l_j, \quad (1)$$

where *ROE* = Equity return used as a profitability measure, *DE* = *D*/*E* Ratio = [Total Debts / (EQUITY FUND)]·100%, *LR*= Leverage Ratio = [(LTD+ PREF. SHR) / (EQUITY FUND)]·100%, and l_j = Random error.

4. RESULTS AND DISCUSSION

4.1. Descriptive statistics

ROE measures profitability, while the Leverage Ratio and the Debt to Equity Ratio estimate CS, a variable that estimates benefit. Table 1 shows the investigation using descriptive analysis of ROE, Leverage Ratio (LR) and D/E Ratio (DE).

Table 1. Descriptive statistics of variables for the empirical model

Source: Researcher's computations.

Variable	ROE	DE	LR
Mean	1,673.134	–2.482362	25.01894
Median	12.03000	0.210000	30.53000
Maximum	329,637.0	16.22000	89.17000
Minimum	–775.9400	–582.2800	–344.1200
Std. dev	23,366.39	41.33100	48.61653
Skewness	13.99975	–13.97666	–4.916713
Kurtosis	196.9971	196.5737	32.78063
Jarque-Bera	318,556.3	317174.2	8,155.534
Probability	0.000000	0.000000	0.000000
Sum	332,953.6	–493.9900	4,978.770
Sum Sq. dev	1.08E+11	338,233.8	467,986.3
Observations	128	128	128

http://dx.doi.org/10.21511/bbs.15(4).2020.18

ROE was used to measure profitability. The positive kurtosis demonstrates that the factors were emphatically slanted to one side. All factors were typically dispersed, dependent on the Jarque-Bera measurement. The estimations of Jarque-Bera are huge, and their relating probabilities have uncovered that the relapse factors are regularly circulated. The mean estimation of *DE* is –2.482362, and the mean esteem is 0.210000, while the standard deviation is high after some time. The base esteem is –582.2800, while 16.22000 is the highest esteem. The mean *LR* esteem is 25.01894, and the mean esteem is 30.53000, while the *LR* standard deviation is 48.61653, which suggests a high standard deviation over time. The base esteem is –344.1200 and 89.17000 is the highest esteem.

4.2. Regression analysis

Regression Analysis using the generalized method of moments (GMM) was used in this section to study the impact of capital structure on the profitability of eight Nigerian Deposit Money Banks from 2003 to 2018.

Table 2. Regression analysis results for the empirical model

Source: Researcher's computations.

Variable	Coefficient	Std. error	t-statistic	Prob.
	2,613,162	6,061,640	4.310982	0.0000
DE	–5,650,692	1,304,318	–433.2295	0.0000
LR	–6,364,176	1,108,857	–1.728424	0.0029
R-squared	0.798958			
Adjusted R-squared	0.775548			
F-statistic	93,970.97		–	
Prob. (F-statistic)	0.000000			
Durbin-Watson stat	1.897022			

Note: ROE signifies return on equity, DE signifies the debt-equity ratio, and PR signifies the leverage ratio.

Table 2 demonstrates that there is a negative relationship between *DE* (for example, intermediary for CS) and *ROE* (for example, intermediary for benefit) of recorded organizations in Nigeria with t-Statistic of –433.2295 and p-value 0.0000. This does not correlate the examination's apriori desire, as it does not indicate the significant positive connection between *DE* and *ROE*. It demonstrates that the lower the company's *DE*, the higher the company's *ROE*, and the other way around. The R-squared, 0.798958 assurance coefficient is high. The 1.897022 measurements from Durbin-Watson are under two, but higher than the R-square. The F-measurements were additionally 93,970.97, and the probability (F-statistic) was 0.00000.

As Table 2 shows, where the estimation of the coefficient is –5,650,692, the t-measurement is –433.2295 with an estimation of 0.000. The outcomes show a noteworthy negative relationship between *DE* and Profitability (proxied by *ROE*) for eight Nigerian Deposit Money Banks from 2003 to 2018. The noteworthy negative relationship between Debt to Equity Ratio and Profitability (ROE) is also consistent with the conclusion drawn by Salim and Yadar (2012), who revealed a negative relationship between DE and productivity. In this way, this null hypothesis is rejected:

H_1: *Debt/Equity ratio (capital structure) and ROE (profitability) are not significantly related.*

The *LR* results demonstrate that the Leverage ratio and *ROE* are negatively related as appeared by the negative coefficient of –6,364,176 and the t-statistic estimation of –1.728424 and the p-estimation of 0.0029 individually. This is similar to Al-Najjar and Taylor's (2008) results.

Therefore, the null hypothesis is rejected:

H_2: *Leverage ratio (capital structure) and ROE (profitability) are not significantly related.*

CONCLUSION

Many organizations believe that the combination of debt and equity (capital structure) is the best measure to adopt as it influences their overall performance. The study concluded that the indicators used to

measure capital structure (debt-equity ratio and leverage ratio) and profitability (ROE) had a negative relationship. This implies that use of debt and mixed equity (debt-equity ratio and leverage ratio) as financing methods will negatively affect the profitability of the organization. Hence, there is a need to identify the optimal mix of capital structure that maximizes profitability, as well as firm' and shareholder' value with minimum agency costs as suggested by trade-off theory and agency theory, respectively. An alternative is to give preference to retained earnings (internal source of finance) as a source of funding when the firm needs money, and if there is not enough money, the firm can issue debt, and the least preferred source of funding is to issue new equity as supported by the pecking order theory.

AUTHOR CONTRIBUTIONS

Conceptualization: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Data curation: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Formal analysis: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Funding acquisition: Otekunrin Adegbola Olubukola, Nwanji Tony Ikechukwu, Eluyela, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Investigation: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Methodology: Otekunrin Adegbola Olubukola, Fagboro Damilola Gabriel.
Project administration: Otekunrin Adegbola Olubukola, Nwanji Tony Ikechukwu, Eluyela Damilola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Resources: Otekunrin Adegbola Olubukola, Nwanji Tony Ikechukwu, Eluyela Damilola, Fagboro Damilola Gabriel.
Software: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Supervision: Otekunrin Adegbola Olubukola, Fagboro Damilola Gabriel.
Validation: Otekunrin Adegbola Olubukola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel.
Visualization: Olowookere Johnson Kolawole.
Writing – original draft: Fagboro Damilola Gabriel.
Writing – review & editing: Otekunrin Adegbola Olubukola, Nwanji Tony Ikechukwu, Eluyela Damilola, Olowookere Johnson Kolawole, Fagboro Damilola Gabriel

ACKNOWLEDGMENT

All researchers and non-researchers that contributed to this paper are highly appreciated.

REFERENCES

1. Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *Journal of Risk Finance, 6*(5), 438-445.https://doi.org/10.1108/15265940510633505
2. Al-Najjar, B., & Taylor, P. (2008). The Relationship between Capital Structure and Ownership Structure: New Evidence from Jordanian Panel Data. *Managerial Finance Journal, 34*(12), 19-933. Retrieved from https://ssrn.com/abstract=1285780
3. Amah, K. O., & Chimara, K. N. (2016). Capital Structure Composition and Financial Performance of Firms in the Brewery Industry: Evidence from Nigeria. *Research Journal of Finance and Accounting, 7(16)*, 7-15. Retrieved from https://www.iiste.org/Journals/index.php/RJFA/article/view/32740
4. Brennan, M. J., & Schwartz, E. S. (1984). Optimal financial policy and firm valuation. *Journal of Finance, 39*(1), 593-607. https://doi.org/10.1111/j.1540-6261.1984.tb03647.x
5. Chakraborty, I. (2010). Capital structure in an emerging stock market: The case of India. *Research in International Business and Finance, 24*(3), 295-314. https://doi.org/10.1016/j.ribaf.2010.02.001

http://dx.doi.org/10.21511/bbs.15(4).2020.18

6. Deping, C., & Yongsheng, C. (2011). The relationship research between the corporate performance, ownership concentration and equity balance degree: empirical studies of small and medium-sized enterprise from 2007 to 2009. *Journal of Accounting Research, 1,* 38-43.

7. Eluyela, D. F., Olajide, D., Tolase, O. A., Okere, W., Ogabi, M., & Kafidipe, A. (2019). Impact of gender dichotomy on dividend payout policy in listed Nigerian financial services firm. *Cogent business and management, 6*(1), 1-10. https://doi.org/10.1080/23311975.2019.1687270

8. Frank, M. Z., & Goyal, V. K (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics, 67*(2), 217-248. https://doi.org/10.1016/S0304-405X(02)00252-0

9. Jensen, M. (1986). Agency cost of free cash flow, corporate finance and takeovers. *American Economic Review, 76*(2), 323-329. Retrieved from https://www.jstor.org/stable/1818789

10. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

11. Jordan, J., Lowe, J., & Taylor, P. (1998). Strategy and Financial Policy in U.K. Small Firms. *Journal of Business Finance and Accounting, 25*(1-2), 1-27. https://doi.org/10.1111/1468-5957.00176

12. Joshua, Y. A. (2017). *Entrepreneurial Finance for MSMEs: A Managerial Approach for Developing Markets.* Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-34021-0

13. Kane, A., Marcus, A. J., & McDonald, R. L. (1984). How Big is the Tax Advantage to Debt? *The Journal of Finance, 39*(3), 841-853. https://doi.org/10.1111/j.1540-6261.1984.tb03678.x

14. Kochhar, R. (1997). Strategic Assets, Capital Structure and Firm Performance. *Journal of Financial and Strategic Decisions, 10*(3), 23-36. Retrieved from http://www.financialdecisionsonline.org/archive/pdffiles/v10n3/kochhar.pdf

15. Koech, S. (2013). *The Effect of Capital Structure on Profitability of Financial Firms Listed at Nairobi Stock Exchange. Masters. Kenyatta University* (Master's Thesis). Retrieved from https://ir-library.ku.ac.ke/bitstream/handle/123456789/10143/The%20Effect%20of%20Capital%20Structure%20on%20Profitability%20of%20Financial%20Firms%20Listed%20at%20Nairobi%20Stock%20Exchange.pdf

16. Law, T. (2012) Combining qualitative and quantitative approaches: Some arguments for mixed methods research. *Scandinavian Journal of Educational Research, 56*(2), 155-165. https://doi.org/10.1080/00313831.2011.568674

17. 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. Retrieved from https://link.springer.com/article/10.1023%2FA%3A1018355127454

18. Masulis, R. W. (1983). The Impact of Capital Structure Change on Firm Value: Some Estimates. *Journal of Finance, 38*(1), 107-126. https://doi.org/10.1111/j.1540-6261.1983.tb03629.x

19. Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance, and the Theory of Investment. *American Economic Review, 48*(3), 261-297. Retrieved from http://lib.cufe.edu.cn/upload_files/other/3_20140507105115_01.pdf

20. Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review, 53*(3), 433-443. Retrieved from https://www.jstor.org/stable/1809167

21. Modigliani, F., & Miller, M. H. (1965). The Cost of Capital, Corporation Finance, and the Theory of Investment: Reply. *The American Economic Review, 55,* 524-527.

22. Myers, S. (2001). Capital structure. *Journal of Economic Perspective, 15*(2), 81-102. https://doi.org/10.1257/jep.15.2.81

23. Otekunrin, A. O., Nwanji, T. I., & Obasaju, B. O. (2018). Capital Structure and Profitability of Selected Agriculture and Agro-Allied Firms on Nigerian Stock Exchange: Post International Financial Reporting Standard Analysis. *International Journal of Civil Engineering and Technology, 9*(12), 1615-1625. Retrieved from http://eprints.lmu.edu.ng/2492/

24. Otekunrin, A. O., Olowookere, J. K., Agba, D. Z., Fakile, S. A., Eluyela, D. F., Ajiboye, B. O., & Adama, I. J. (2019). Capital Structure and its determinants: Case of quoted firms in Agriculture and agro-allied sector of the Nigerian economy. *Journal of Engineering and Applied Sciences, 14*(24), 9667-9676. http://dx.doi.org/10.36478/jeasci.2019.9667.9676

25. Pandey, I. (2004). *Capital structure and the firm characteristics: Evidence from an emerging market* (IIMA Working Papers No. WP2001-10-04). Indian Institute of Management. Retrieved from https://econpapers.repec.org/paper/iimiimawp/wp01757.htm

26. Rao, N. V., Al-Yahyaee, K. H. M. & Syed, L. A. M. (2007). Capital structure and financial performance: evidence from Oman. *Indian Journal of Economics and Business, 7,* 1-14.

27. Reddy, D. R., & Kameswari, P. (2004). Working capital management practices in pharma industry: A case study of Cipla Limited. *Management Accountant,* 638-644.

28. Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia Social and Behavioral Sciences, 65,* 156-166. https://doi.org/10.1016/j.sbspro.2012.11.105

29. Simerly, R. L., & Li, M. (2000). Environmental Dynamism, Capital Structure and Performance: A Theoretical Integration and an Empirical Test. *Strategic Management Journal, 21*(1), 31-49. https://doi.org/10.1002/(SICI)1097-0266(200001)21:1<31::AID-SMJ76>3.0.CO;2-T

30. Singh, A., & Hamid, J. (1992). *Corporate Financial Structures in Developing Countries* (IFC Technical Paper No.1). Washington D.C., IFC. Retrieved from https://digitallibrary.un.org/record/109013

31. Stiglitz, J. (1969). The Effects of Income, Wealth, and Capital Gains Taxation on Risk-Taking. *The Quarterly Journal of Economics8, 83*(2), 263-283. https://doi.org/10.2307/1883083

32. Teker, D., Tasseven, O., & Tukel, A. (2009). Determinants of Capital Structure for Turkish Firms: A Panel Data Analysis. *International Research Journal of Finance and Economics, 29,* 179-187. Retrieved from https://www.yumpu.com/en/document/read/5195378/determinants-of-capital-structure-for-turkish-firms-a-panel-data-

33. Uwuigbe, U., & Uadiale, O. M. (2012). An Empirical Examination of the Relationship between Capital Structure and the Financial Performance of Firms in Nigeria. *EuroEconomica, 31*(1), 57-65. Retrieved from https://ideas.repec.org/a/dug/journl/y2012i1p57-65.html

http://dx.doi.org/10.21511/bbs.15(4).2020.18