

# CAPITAL STRUCTURE AND FIRMS' VALUE: A STUDY OF SELECTED QUOTE COMPANIES IN NIGERIA

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## Abstract

*The study examines the impact of capital structure on a firm's value in the Nigerian quoted companies using the pooled multiple regression technique. The study used panel data for 10 companies that were conveniently selected from all share index of the Nigerian stock exchange and covers a period of six years from 2013 to 2018. Contrary to irrelevance theory, the study found evidence that debt to equity ratio, debt to capital employed ratio, interest tax shield and interest coverage, all have significant impact on market value per share. However, consistent with Pecking Order theory, the results indicate evidence that debt to equity ratio is negatively and significantly related to market value per share. About 43% of the total variation in Market value per share is significantly explained by the combined influence of all the explanatory variables.*

*Key words: Capital structure, firm value, debt-equity ratio, tax shield, interest coverage*

## Introduction

Capital structure decision is one of the firm's important financial decisions which affect its overall wellbeing. It is important for two main reasons. First, a good decision of capital structure can affect financial growth performance and value of company. Secondly, a bad capital structure decision can lead to financial distress and eventually to bankruptcy (Eriotis, Vasiliou, & Neokosmidi, 2007). Starting from Modigliani-Miller (1958) which forms the basis for modern thinking on capital structure, a number of studies have focused on the relevance of capital structure in explaining the movement of prices of a firm in the stock market. Although, there seems to be agreement that capital structure has significant influences on the firm's market value, many studies have however found no significant relationship between the firm's capital mix and its market value. It has also been argued that the firm's optimal capital structure is the capital mix (the combination of debt and equity) that

maximizes its value in the stock market. Although, the use of debt or financial leverage has some tax benefits, it is also associated with costs. While many authors believe that the firm's optimal capital structure is determined by balancing the advantages of using debt with its associated costs, others have argued that it does not matter whether debt is used or not and what matters is the firm's earning power and business risk.

This study examines the impact of capital structure decisions on a firm's market value in Nigeria. This paper is motivated by the contradicting evidence found by previous studies on whether the inclusion of debt in the firm's capital structure has a significant impact on its market value.

The remainder of this study is organized as follows: Section 2 contains literature review. Section 3 describes methodology used in the analysis. Section four contains data analysis and discussion and section 5 concludes the study.

## Literature Review

### Concept of Firm Value

According to Ehrhard and Bringham (2003), the value of a business based on the going concern expectation is the present value of all the expected future cash flows to be generated by the assets, discounted at the company's weighted average cost of capital (WACC). Rashid and Islam, (2008), stated that for shareholders point of view, the value of firm can be defined as the amount of utility/benefits derived from the shares. Shareholders measure the feasibility of their investment from the share price (Hall and Lowies, 2010), thus, maximizing firm's value also maximizes the wealth of the shareholders. As Salvatore (1989) explained, the primary goal or objective of a firm is to maximize wealth or the value of the firm. Since investor would not pay for less worth investment, they are always tried to assess whatever they are buying (Damodaran, 2011). Investors come to the market with a wide range of investment philosophies. Some invest for short-term profits and other for long-term gains. Some investors are market timers looking to buy before market upturns, while others believe in picking stocks based on growth and future earning potential.

The value of a firm according to Leland and Toft (1991) is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. Modigliani (1980) points out that, the value of a firm is the sum of its debt and equity and this depends only on the income stream generated by its assets. Pandey (2004) opines that the value of a firm is the sum of the values of all its securities. That is, the sum of its equity and debt if it's a leverage firm and the value of only its equity if it is an unleveraged firm. The value of the firm's equity is the discounted value of its shareholders earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity. The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the

value of debt is the discounted value of interest on debt.

### Concept of Capital Structure

Capital structure denotes the way a company finances itself by combining long-term debt, short-term debt and equity capital. It shows how a company finances its overall operations and growth by using different sources of funds. Companies take the combinations, which increase their efficiency, performance and/or profitability and its value. Huang and Vu Thi, (2003) note that a firm has three main sources of financing, also called capital components (at their disposal to fund new investment opportunities. It includes the use of retained earnings (internal equity), issuing new shares (external equity) or borrowing money through debt instruments (debt capital). These sources of financing constitute the capital structure of a firm and also reflect the ownership structure of the firm. Brigham & Daves (2004) stated, absolutely nothing is more important to a new business than raising capital. The way that money is raised can, however, have an enormous impact on the success of a business. How a firm chooses the combination of debt and equity in their capital structure depends on various factors such as the characteristics of the firm (its size, type, age, asset structure, profitability, company growth, company risk and liquidity), the economy, and the perceptions and objectives of the management. Management's first priority as noted by Karadeniz, Kandir, Balçilar, and Onal (2009) is to evaluate the various costs and benefits associated with the use of both debt and equity.

According to Ross, Westerfield, & Jaffe (2005) the aim of managing capital structure is to mix the financial sources in order to maximize the wealth of shareholders and minimize the company's cost of capital. Therefore, one of the financial manager's responsibilities is to manage and decide the optimal capital structure. This decision on capital could be critical because it may affect the company's overall performance and it involves a trade-off between risk and return. A rise in debt

will increase the company's risk and the expected return and high risk means an increase in debt which could lead to a decrease in stock price and an increase in the expected return of stock prices (Brigham and Huston, 2001). Capital structure concerns the composition of the liability of a company, which is the relative to the several financial sources in the composition of the total obligation (Weston and Brigham, 2000). According to Dare and Sola (2010), capital structure is the debt-equity mix of business finance. It is used to represent the proportionate relationship between debt and equity in corporate firms' finances. An optimal capital structure is the best debt/equity ratio of a firm, which minimizes the cost of financing and maximizes the value of the firm. The capital structure of a firm as opined by Dare and Sola (2010) can take any of the following three alternatives: 100% equity: 0% debt, 0% equity: 100% debt or X% equity: Y% debt. From the above, option one is that of a purely equity financed firm. That is a firm that ignores leverage and its benefits in financing its activities. Option two is that of a firm that finances its affairs solely on debt which may not be realistic in the real world situation because hardly will any provider of fund invest in a business without owners. This is what is referred to as "trading on *equity*". That is, it is the equity element that presents in capital structure that motivates the debt providers to give their scarce resources to the business. Option three is that of a firm that combines certain proportion of both equity and debt in its capital structure. It will therefore reap the benefits of combined debt and equity.

### **Debt and Firm Value**

Consistent with agency costs theory, prior literature indicate that debt is value reducing for high growth firms and it is value enhancing for low-growth firms. Jensen (1986) posits that when firms have more internally generated funds than positive net present value projects; debt forces the managers to pay out funds that might otherwise have been invested in negative net present value projects. This over-investment problem can be lessened if managers are forced to pay out excess

funds for servicing debt, therefore enhancing the firm's value. Myers (1993) suggests that, a firm with outstanding debt may have the incentive to reject projects that have positive net present value if the benefits from accepting the project accrue to the bondholders without also increasing shareholders' wealth. This under – investment problem can harm the value of firms, especially for the firms with high levels of future investment opportunities. Building on Jensen's (1986) over-investment discussion and Myer's (1993) under-investment discussion, Stulz (1988) argues that debt can have both positive and negative effect on firm value. Aggarwal and Kyaw (2006) also posit that, debt can have both positive and negative effects on the value of the firm so that the optimal debt structure is determined by balancing the agency costs and other costs of debts as a means of alleviating the under and over-investment problems. Specifically, when firms have surplus cash flows, debt will force managers to pay out funds that might otherwise have been invested in negative net present value projects. However, firms with outstanding debt may have incentives to reject projects that have positive net present value if the benefit from accepting the project accrues to the bondholders without also increasing shareholders' wealth. Therefore, the common message behind the arguments by Jensen (1986), Myers (1993) and Stulz (1988) is that debt can have positive or negative effect on the value of the firm depending on the firm's future investment opportunities.

### **Equity and Firm Value**

Equity unlike long-term debt includes paid-up share capital, share-premium, reserves and surplus or retained earnings. Igben (2004) defines paid-up capital as the portion of the called-up capital which has been paid-up by the shareholders. He also describes reserves as amounts set aside out of profits earned by the company, which are not designed to meet any liability, contingency, commitment or diminution in value of assets known to exist at the balance sheet date. Reserves may be voluntarily created by directors or statutorily required by law. Share

premium is the excess amount derived from the issue of shares at a price that is above its par value. And lastly, retain earnings are profit plough back in to a company in order to create more resources for operations and invariably increase in the value of the firm. This generates our first hypothesis that there is a positive relationship between equity and firm value.

### **Debt to Equity Ratio and Firm Value**

Some previous studies employ debt to equity ratio (DER) as an indicator to measure capital structure and provide justification that DER can increase firm value. Hermuningsih (2013) stated that the capital structure measured by debt to equity ratio has significant positive effect on firm value. The investors are not only focused on profit, but also consider the level of risk which is owned by the company, if investors decide to invest their capital in that company. The level of risk can be reflected in the company's debt to equity ratio, which shows how much equity capital owned by the company can be used to pay company's debt. Kiprop (2014) showed that the capital structure affects the firm value. Kiprop's study confirmed that the trade-off theory prevailed in that the capital structure which will be adopted by an organization will be the balance between taxes and the debt levels used and the risk of bankruptcy

### **Review of some Capital Structure Theories Irrelevance Theory**

The Modigliani and Miller (1958) proposed the capital structure irrelevance theory. According to this theory, a firm's market value is not influenced by its financing decisions or policy. Modigliani and Miller (1958) argue that in a perfect market where there is no transaction cost, no asymmetric information, no bankruptcy risk and no government tax, a firm's market value is a function of its earnings power and/or business risk which is a function of its investment decisions. Thus, the firm value in the stock market is independent of its capital mix or financing decisions and financial leverage has no real impact on the firm's value. The implication of this theory is that a firm whose

objective is to maximize its shareholders' wealth should only rely on its investment decisions and invest in projects that yield positive net present value if it operates in a perfect market.

### **Trade-Off Theory**

According to the trade-off theory developed by Kraus & Litzenberger (1973), debt has both benefits and costs which must be balanced to yield an optimal capital structure. Interest is tax deductible, thus give firms some benefits for using debt. On the other hand, a continuous failure to service debt capital through regular interest payments exposes the firm to financial distress and bankruptcy risk. Thus, there is a trade-off between the tax advantage of debt and the associated bankruptcy risk.

### **Pecking Order Theory**

Pecking Order theory states that due to the presence of asymmetric information between managers and shareholders about the firm, managers arrange the firm's various sources of capital in the order of preference such that retained earnings or reserves comes first, followed fixed rate debts and then, external equity. This theory was first suggested by Donaldson (1961) but was popularized by (Myers and Majluf, 1984). By arranging the firm's sources of capital in a scale of preference, managers give signal to shareholders or investors about the general conditions. The funding order is so arranged that cheaper source is preferred and considered first compared to other sources. Thus, internal financing (retained earnings) is used first because it is relatively cheaper than both debt and external equity. Managers use debt or external equity when internal funding is no longer available and to indicate that the firm expects a steady cash flow to meet its debt obligation. According to Pandey (2004), a negative and significant relationship between debt-equity ratio and firm's performance is an evidence of pecking order theory.

### **Market Timing Theory**

Market timing theory developed by Baker and Wurgler (2002) is based on the assumption that

the management selects the financing decision that is the most cost efficient and most beneficial alternative due to current conditions in the credit and equity market (Huang and Ritter, 2009; Jahanzeb et al., 2013). Thus, theory suggests that when there is a chance for companies to issue equity at higher price, firm is more likely to execute this opportunity. The theory suggests that companies issue new shares when they believe the stock prices are overvalued and repurchase the shares or issuing debt when the stock prices are undervalued or when the market interest rates are low (Graham and Harvey, 2001; Baker and Wurgler, 2002). Consequently, fluctuations in the market have an impact on firms' choice of capital structure.

### **Review of Some Empirical Studies**

Using correlation and Regression analysis, Chowdhury and Chowdhury (2010) consider the effects of capital structure on a firm's value for 77 quoted companies from four different sectors in Bangladesh from January 1994 to December 2003. The sectors are Pharmaceutical and Chemicals, Fuel and Power, Food and Engineering sectors. They find, among other things, that changes in the capital structure composition of a firm are significantly associated with changes in its market value.

Gill and Mathur (2011) examine the determinants of financial leverage of a firm for quoted companies in Canada using regression analysis. The data consist of 166 quoted companies spanning from 2008 to 2010. The result shows that financial leverage of a firm is significantly influenced by profitability, firm size, collateralized assets, growth opportunities, effective tax rate, number of subsidiaries and industry effect.

Ogbulu and Emeni (2012) examine the relationship between a firm's capital structure and its value using the ordinary least square (OLS) regression technique. The study is based on a cross sectional data for 124 randomly selected quoted companies for the year ended 2007. The results show evidence that firm's value is significantly related with debt capital insignificantly related with equity capital.

Fengju, Fard, Maher and Akhteghan (2013) examined the impact of financial leverage on firm's profitability with emphasis on income smoothing using correlation and regression analysis. A panel data consisting of yearly observations of 60 companies for 5 years from 2006 to 2010 were used for the study. The result shows, among other things, that there is a significant relationship between financial leverage and profitability.

Ishaya and Abduljeleel (2014) examined the effects of capital structure on a firm's profitability in Nigeria using the correlation and regression technique. A sample of 70 companies observed for a period of 10 years from 2000 to 2009 is used for the study. The results indicate that debt has a negative and significant impact on profitability while the impact of equity is positive but not significant.

Lawal (2014) seek to determine whether capital structure can significantly influence the value of the firms in the Nigerian banking sector. The data for 15 quoted banks are used covering a period from 2007 to 2012. The results show that both debt and equity are significantly related with firm's value, and can significantly account for about 97% of the changes in firm's value. Thus, capital structure is relevant and significant explanatory factors for the value firms in the Nigerian banking sector.

Using regression and correlation analysis, Mule and Mukras (2015) investigate the influence of financial leverage on a firm's financial performance in Kenya. The study uses annual data for five years from 2007 to 2011. The result suggests strong evidence that financial leverage and firm's performance are negatively and significantly related.

More recently, EL-Maude, Abdul-Rahman and Ahmad (2016) consider the impact of capital structure on financial performance of four quoted companies in the Nigerian cement industry from 2010 to 2014 using correlation and regression techniques. Contrary to irrelevance theory, the

results show evidence that capital structure has explanatory power for firm performance, with the ratio of both long-term debt to total assets and short term debt to total assets having significant effects on both return on equity (ROE) and return on asset (ROA).

## Methodology

### Data

This paper uses panel data to investigate the impact of capital structure on a firm's value. The panel consists of ten quoted companies in the Nigerian stock exchange. The companies are Nigerian Breweries Plc, Nestle Plc, Cadbury Plc, Champion Plc, Unilever Plc, Mobil Plc, Total Plc, Oando Plc, Julius Berger Plc and Transnational Plc covering a period of seven years from 2013 to 2018. The data are all collected from the annual reports and accounts of the selected companies and are analyzed in E-Views.

### Method

This study uses the pooled OLS regression technique to analyze the relationships of interest. The alternative methods usually associated with panel data are fixed effects and random effects regression methods. However, unlike the fixed effects and random effects methods which account for any industry or firm specific effects that may have significant impact on the relationships of interest, the pooled OLS method ignores the heterogeneity in the data and assumes that cross-sectional differences have no significant impact on the estimated relationships. Thus, since the focus of this study is only on the relationships being investigated, our homogenous econometric model is therefore, specified as follows:-

$$MVS_{it} = \alpha + \beta_1 DE\_Ratio_{it} + \beta_2 DCap\_ratio_{it} + \beta_3 IntCov\_Ratio_{it} + \beta_4 Taxshied + \epsilon_{it}$$

where:

$\alpha$  = intercept

$\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  = beta coefficients which capture the individual effects.

$\epsilon_{it}$  = error term which is assumed to be independently and identically distributed.

**MVS** is market value per ordinary share which is used to proxy firm value. It is the stock market price of the firm's each ordinary share.

**DE\_Ratio** is the ratio of non-current liability or long term debt to shareholders' equity.

**DCap\_Ratio** is the ratio of long-term debt to capital employed (Total assets minus current liability or shareholders equity plus long term debt).

**IntCov\_Ratio** is the interest coverage ratio. It is obtained by dividing operating profit (profit before interest and tax (PBIT) by interest expense. It is a measure of the ability of a company to meet its debt obligations

**Taxshied** is the tax benefit of using debt to finance assets. It is obtained by multiplying interest expense by tax rate.

**IntProfit\_Ratio** is the ratio of interest expense to operating profit (PBIT).

## Data Analysis and Discussion

### Results and Discussion

Table 1 presents the pooled multiple regressions results that seek to determine whether the included capital structure variables (DE\_ratio, DCap\_ratio, IntCov and TaxShield) have explanatory power for market value per share. First, the table indicates that although, there may positive autocorrelation in the estimated residuals ( $DW < 1$ ), the pooled regression results are not spurious as DW statistic (0.640133) is greater than the  $R^2$ (0.479540). Granger and Newbold (1974) argue that a lower Durbin statistic relative to  $R^2$  is a good sign that the estimated regression is spurious. The estimated beta coefficients are all highly significant, with their associated p-values being lower than 1% level of significant. This suggests that capital structure decision is relevant and significantly affect the firm's value in the stock market. However, they have different impacts on the firm's value. The coefficient of -0.651330 indicates that market value per share decreases (increases) following an increase (decrease) in the debt to equity ratio. Thus, debt to equity ratio has

a negative impact on the firm's market value per share. On the contrary, the coefficients of 5.728857, 0.694336 and 0.881686 indicate that debt to capital employed ratio, tax shield and interest coverage all have positive impact on the firm's value. An increase in each of them will lead to an increase in the market value per share and

vice versa. The adjusted  $R^2$  of 0.431125 indicates that about 43% of the total variation in MVS are explained by the changes in the explanatory variables. Thus, the estimated model has a moderate fit. The F-statistic also indicates that overall pooled regression is highly significant, with the associated p-value being almost zero.

Variable	Coefficient	Standard Error	t-Statistic	Prob.
C	-7.445267	2.125367	-3.503050	0.0011
DE_RATIO	-0.651171	0.198808	-3.275384	0.0021
DC_RATIO	5.725383	1.781028	3.214651	0.0025
ICR	0.881533	0.207119	4.256174	0.0001
TAXSHIELD	0.694480	0.145899	4.760010	0.0000
R-squared	0.478979		Mean dependent var	4.512976
Adjusted R-squared	0.430512		S.D. dependent var	2.023489
S.E. of regression	1.527015		Akaike info criterion	3.782839
Sum squared resid	100.2663		Schwarz criterion	3.977756
Log likelihood	-85.78813		Hannan-Quinn criter.	3.856498
F-statistic	9.882567		Durbin-Watson (DW)	0.641005
Prob(F-statistic)	0.000009			

**Table 1: Pooled Multiple Regressions Results**

### Conclusion

This paper used pooled multiple regression models to examine the impact of capital structure decisions on a firm's value in some of the Nigerian quoted companies. The study uses 10 companies listed on the Nigerian stock exchange all share index and covers a period of six years from 2013 to 2018. The dependent variable is market value per share while the independent variables are debt to equity ratio, debt to capital employed interest tax shield and interest coverage ratio. The main conclusions are as follows:

Consistent with pecking order theory, there is evidence that debt to equity has a negative and significant relationship with market value per share. An increase in debt to equity ratio is associated with a decrease in market value per share. By contrast, capital employed, interest coverage ratio and interest tax shield are all

positively and significantly related to market value per share. Further, about 43% of the total variation in the firm's market value per share is significantly explained by changes in the explanatory variables. This invalidates the capital structure irrelevance theory of Modigliani and Miller (1958). Hence, capital structure decision is relevant and significantly influences firm's market value in Nigeria. Based on this and the findings of this study, we can conclusively state that: capital structure decisions have various implications and one of them is its effect on the value of the firm which formed the basis of our study.

### References

- Aggarwal, R. & N.A. Kyaw (2006). Leverage, investment opportunities, and firm value: A Global Perspective, *Financial Development*. Vol. 1 No. 2, 1-26.

- Baker, M. & Wurgler, J. (2002). Market timing and capital structure. *Journal of Finance*, 57(1):1–32.
- Brigham, E.F. Daves, P.R. (2004). *Intermediate financial management*. 8th edition. Mason, OH: South- Western College.
- Brigham, E.F. & Houston, J.F. (2001). *Fundamentals of Financial Management*, Eleventh Edition, Southwestern: Thomson Learning Inc.
- Chowdhury, A., & Chowdhury, S.P. (2010). Impact of capital structure on firm's value: Evidence from Bangladesh. *Business and Economic Horizons*, 3(3), 111 -122.
- Damodaran, A. (2011). *The Little Book of Valuation: How to Value a Company, Pick a Stock, and Profit*. New Jersey: John Wiley & Sons Inc.
- Dare, F.D. & Sola, O. (2010). Capital Structure and Corporate Performance in Nigeria Petroleum Industry: Panel Data Analysis. *Journal of Mathematics and Statistics* 6 (2): 168-173.
- Donaldson, G. (1961). *Corporate debt capacity: a study of corporate debt policy and the determination of corporate debt capacity*. Harvard Business School, Boston.
- Ehrhard , M. & Brigham, E. (2003). *Corporate finance - A focused approach*, 1st Edition, Mason, Thomson.
- El-Maude, J. G., Ahmad, A.R. & Ahmad, M.M. (2016). Capital structure and firm performance in the Nigerian cement industry. *Archives of Business Research*, 4(6), 30-44.
- Eriotis, N., Vasiliou, D., & Neokosmidi, Z. (2007). How firm characteristics affect capital structure: An empirical study. *Managerial Finance*, 33(5), 321-331.
- Fengju, X., Fard, R.Y., Maher, L.G., & Akhteghan, N. (2013). The relationship between financial leverage and profitability with an emphasis on income smoothing in Iran's capital market. *European Online Journal of Natural and Social Sciences*, 2(3), 156-164.
- Gill, A., & Mathur, N. (2011). Factors that influence financial leverage of Canadian firms. *Journal of Applied Finance and Banking*, 1(2), 19.
- Graham, J. & Harvey, C. (2001). The theory and practise of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2/3):187–243.
- Hall, J., & Lowies, B. (2010). Financial management techniques used by Residential Property Developers. *ActaStructilia: Journal for the Physical and Development Sciences*, vol. 17, Issue 1, 62-78.
- Hermuningsih, S. (2013). Profitability influence, growth opportunity, capital structure against corporate value in public companies in Indonesia. *Bulletin of Monetary and Banking Economics*.
- Huang, R. & Ritter, J. R. (2009). Testing Theories of Capital Structure and Estimating the Speed of Adjustment.' *Journal of Financial and Quantitative Analysis*, 44(02), 237–271.
- Huang, H. & Vu Thi, T. (2003). The determinants of capital structure in shipping companies: Case studies of Broström and Concordia AB. Unpublished master's thesis, University of Gothenburg, Gothenburg.
- Igben, R.O. (2004). *Financial Accounting made Simple*. vol.1. ROL publishers, Lagos State.
- Ishaya, L.C., & Abduljeleel, B O. (2014). Capital structure and profitability of Nigerian quoted firms: The Agency Cost Theory Perspective. *American International*



- Journal of Social Science*, 3,(1), 139 – 158.
- Jahanzeb, A., Saif-Ur-Rehman, B. N. H., Karami, M., & Ahmadimousaabad, A. (2013). 'Trade-Off Theory, Pecking Order Theory and Market Timing Theory: A Comprehensive Review of Capital Structure Theories.' *International Journal of Management and Commerce Innovations (IJMCI)*, 1(1), 11-18.
- Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, Vol 76, No.2, May, 323-329.
- Karadeniz, T, Kandir, J, R. Balcilar & N Oner. (2009). The effect of business risk on corporate capital structure: Theory and evidence. *Journal of Finance*, 46(5):1693–1715.
- Kiprop, V.K. (2014). Effect of capital structure on value of firm listed in Nairobi Securities Exchange.
- Kraus, A. & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage.' *Journal of Finance*, 28(4), 911–922.
- Lawal, A.1. (2014). Capital structure and the value of the firm: Evidence from the Nigeria banking industry. *Journal of Accounting and Management*, 4, (1), 31 – 41.
- Leland, H.E. & K.Toft. (1991). Optimal Capital Structure, Endogenous Bankruptcy, and the Term Structure of credit spreads, 51.
- Modigliani, F., & Miller, M.H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Modigliani, F. (1980). Financial market; lecture presented for the industrial liaison program, Massau-Chusetts Institute of Technology, Cambridge, MA, unpublished.
- Mule, R.K., & Mukras, M.S. (2015). Financial leverage and performance of listed firms in a frontier market: Panel evidence from Kenya. *European Scientific Journal*, 11(7).
- Myers, S.C., (1993). 'Still searching for optimal capital structure', *Journal of Applied Corporate Finance* 6(1), 4–14. <https://doi.org/10.1111/j.1745-6622.1993.tb00369.x>
- Myers S.C. (1984). "The capital structure puzzle", *Journal of Finance*, Vol. 39, Nr. 3, 575-592.
- Myers, S.C., & Majluf, N.S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187-221.
- Ogbulu, O.M., & Emeni, F.K. (2012). Capital structure and firm value: Empirical evidence from Nigeria. *International Journal of Business and Social Science*, 3(19), 252-261.
- Pandey, I.M. (2004). *Financial Management* 9th Edition, Indian Institute of Management, Ahmedabad. Vikas Publishing. House P.VT. ltd; 289 – 350.
- Rashid, K., & Islam, S.M.N. (2008). *Corporate governance and firm value: Econometric Modeling and Analysis of Emerging and Developed Financial Markets*. Bingley: Emerald Group Publishing Limited.
- Ross, S.A., Westerfield, R.W., & Jaffe, J. (2005). *Corporate finance*, Mc-Graw-Hill, New York, USA.
- Salvatore, D. (1989). *Theory and problems of managerial economics*. McGraw Hill, Inc.
- Stulz, R. (1988). Management control of voting rights: Financing Policies and the Market for Corporate Control, *Journal of Financial Economics* Vol. 20; 25 – 54.