EFFECT OF FINANCING MIX ON THE CORPORATE PROFITABILITY OF SELECTED FIRMS IN THE BREWERY INDUSTRY IN NIGERIA (2006 – 2015).

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Abstract:

The study examined the effect of corporate financing mix on profitability of firms in the Nigerian brewery sector. The corporate financing indices used for the study are: equity capital, debt capital and retained earnings. The data were analyzed using multiple regression technique. From the analysis, it was found that equity capital and retained earnings affect profit after tax positively but in an insignificant manner. Meanwhile, debt capital has negative and significant influence on profit after tax of firms in the Nigerian brewery industry. In this regard, it is recommended that firms in the Nigerian brewery industry should reduce their borrowing since it has an adverse effect on profitability and increase the owner's capital and earnings reserved, for this will enable them reach their goal of profit maximization.

Keywords: Financing mix, Brewery, Industry and Nigeria.

Background of the Study:

One of the major objectives of a firm is to maximize the wealth of owners or shareholders of the firm. Goyal (2013), submitted that in order to achieve this objective firm's management should take rational financing decisions regarding optimal capital structure which in turn would minimize its cost of capital.

Capital structure is one of the most puzzling issues in corporate finance literature (Brounen and Eichholtz (2001). Capital structure refers to several alternatives that could be adopted by a firm to get the necessary funds for its investing activities in a way that is consistent with its priorities. Most of the efforts of the financial decision making process is centered on the determination of the optimal capital structure; where the cost of capital is minimized and firms' value is maximized. Financing mix is the combination of debt and equity that make up total capital of firms. Capital structure decision is the vital one since the profitability of an enterprise is directly affected by such decision. Hence, proper care and attention need to be given while determining capital structure decision. According to Niresh (2012) the statement of affairs of an enterprise, shows the overall position of the enterprise regarding all kinds of assets, and liabilities.

According to Pandey (2009), the term capital structure of an enterprise is actually a combination of equity shares, preference shares, long-term debts and retained earnings. It is expected that a company should plan its capital structure to maximize the use of funds and to be able to adapt more easily to the changing conditions.

Sanand Heng (2011), posit that Modigliani-Miller (MM) theorem is the broadly accepted capital structure theory because it is the first theory on capital structure which has been used by many researchers. Drobetz, Fix (2003), state that capital structure is one of the most important and effective parameters on the valuation and direction of economic enterprises in the capital markets. They went further to submit that

current changing and evolving environment causes rating companies in terms of credit to depend partly on their capital structure and strategic planning, requiring them to select effective resources to achieve the wealth maximization goal of shareholders.

The capital structure a firm opts for is only a choice between debts, equity and retained earnings in financing long term investments. There are two main benefits of debt for a company. The first one is the tax shield: interest payments usually are not taxable, hence the debt can increase the value of the firm. According to Jensen (1986) managers use free cash flows of the company to invest in projects, to pay dividends, or to hold on cash balance. But if the firm is not committed to some fixed payments such as interest expenses, managers could have incentives to "waste" excess free cash flows. That is why, in order to discipline managers, shareholders attract debt. Hovakimian, Opler, and Titman(2002), submitted that The amount of debt a firm uses for finance depend on the interest on debt, corporate income taxes, personal income taxes, costs of financial distress, and covenant restrictions in other financing agreements, and other market imperfections. The lower the rate of interest on long term debts, the higher the desire of a firm to opt for it; but higher leverage increases the risk of financial distress. In the extreme, a firm may find it unable to meet its service obligations, and forced into bankruptcy by disappointed creditors. Which according to Flannery and Rangan (2004), normally leads to substantial legal and administrative expenses and in addition,costs implicit in selling assets at distress prices. If not forced into bankruptcy, high leverage can make the firm's stock less attractive to investors as the probability of financial distress increases. Consequently, the firm will be in difficulty of raising further funds quickly on favourable terms; lenders will require higher interest rate; trade creditors will transact business with the firm on more stringent terms in addition to competitors' aggressiveness to exploit the firm's perceived financial weaknesses. Barine (2012), posit that in respect to any company, there is an optimal capital structure that is determined by the trade-off between the net tax advantage of additional corporate leverage and the costs associated with increased likelihood of financial distress, which he said is also influenced by reduced marketability of corporate debt that is a function of its corporate tax shields, investment tax shields, bankruptcy costs, cost of finance and agency cost. He further submitted that increasing the proportion of debt in a firm's capital structure, increases the firm value up to a point. Beyond that point, further increases in leverage increases the average company cost of capital and decreases the total market value of the firm.

It is natural for owners and managers of a firm, to be interested in the firm's financial soundness, because owners make investment with expectation of at least some reasonable returns, if not high returns. On the other hand managers naturally show interest in improving firms operating efficiency. Essentially the operating efficiency of the firm and reasonable rate of return on owner's capital ultimately depend on the profit earned by it. According to Raddy (2012) the structural composition of a company is capital which has an impact on its profit earning capacity. For a company to maintain a high level of profit earning, it needs to operate at an optimal capital structure.

An optimal capital structure, according to Myers (2001) is the minimum weighted average cost of capital that maximizes the value of the firm. Following the stand of San and Heng (2011), that it is difficult for financial managers to exactly determine the optimal capital structure, a firm has to issue various securities in countless mixtures so as to come up with combinations that can maximize her overall value.

Statement of the Problem:

The inability of management and shareholders to identify if corporate financing mix has any relationship or effect on financial performance leads to poor performance of brewery firms. The ongoing discussion on the makeup of capital structure and firm value which has remained inconclusive needed to be resolved. Titman and Wessels (1988) Kester (1986) Rajan and Zingales (1995) found a negative relationship between profitability and leverage, some observed positive relationship between profitability and debt levels. Whereas Taub (1975), Abor (2005)

Makunyi (2011) studied on the relationship between working capital investment policy and profitability of manufacturing firms in Kenya and concluded that no relationship exists between the working capital investment policy and profitability. Mose (2011) in his study of the relationship between capital structure and financial performance of microfinance institutions in Kenya found that outreach and portfolio size had a positive effect on financial performance of MFIs in Kenya.

Objective of the Study:

The general objective of this study was to examine the effect of corporate financing mix on profitability of brewery firms listed in the Nigeria stock exchange. In order to achieve the above stated objective, the following specific objective will guide the study:

1. To determine the effect of debt capital on profit after tax of firms in the Nigerian brewery industry.
2. To evaluate the effect of equity capital on profit after tax of firms in the Nigerian brewery industry.
3. To examine the effect of retained earnings on profit after tax of firms in the Nigerian brewery industry.

Debt Capital (DC) as corporate financing indicator:

Debt is one of the two main ways companies can raise capital in the capital markets. It is a method of financing in which a company receives a loan and gives its promise to repay the loan. Debt capital can be difficult to obtain, but for many companies, it provides funding at lower rates than equity financing, especially in periods of historically low interest rates. Another perk to debt financing is the interest on debt is tax deductible (www.investopedia.com).

According to Champion (1999) and Leibeste in (1966), companies can use more debt to enhance their financial performance because of debt's capability to cause managers to improve productivity to avoid bankruptcy. The point here is that, debt must be repaid while dividend payment is not obligatory and can even be postponed if the firm is financially hard up. David. Hutchison and Raymond, (2000) examined the causal relationship between the return on equity and financial leverage in the U. S. banking industry. For the periods 1983 – 1989 and 1996 – 2002 they found a negative connection between bank capital and equity profitability except for the best performing banks. The amount of debt a firm uses for finance depend on the interest on debt, corporate income taxes, withholding taxes, personal income taxes, costs of financial distress, and covenant restrictions in other financing agreements, and other market imperfections (Hovakimian, Opler, and Titman (2002). They went further to stress that the lower the rate of interest on long term debts, the higher will be the desire of a firm to opt for it; but higher leverage increases the risk of financial distress. In the extreme, a firm may find itself unable to meet its service obligations, and forced into bankruptcy by disappointed creditors. This normally leads to substantial legal and administrative

expenses and in addition, costs implicit in selling assets at distress prices. Flannery and Rangan (2004) supported the above claims by stating that if a firm is not forced into bankruptcy, high leverage can make the firm's stock less attractive to investors as the probability of financial distress increases.

By implication, the firm will be in difficulty of raising further funds quickly on favorable terms; lenders will require higher interest rate; trade creditors will transact business with the firm on more stringent terms in addition to competitors' aggressiveness to exploit the firm's perceived financial weaknesses. Barine (2012), posited that in respect to any company, there is an optimal capital structure that is determined by the trade-off between the net tax advantage of additional corporate leverage and the costs associated with increased likelihood of financial distress, which he said is also influenced by reduced marketability of corporate debt that is a function of its corporate tax shields, investment tax shields, bankruptcy costs, cost of finance and agency cost. He further submitted that increasing the proportion of debt in a firm's capital structure, increases the firm value up to a point. Beyond that point, further increases in leverage increases the average company cost of capital and decrease the total market value of the firm. Firms lie at different points on this trade–off line.

Equity Capital (EC) as corporate financing indicator:

According to businessjargons.com, Equity Capital refers to that portion of the organization's capital, which is raised in exchange for the share of ownership in the company. These shares are called the equity shares. Cambridge dictionary defined equity capital as that portion of a firm's capital that a company gets from selling shares ratherthan borrowing money.

Several previous studies examine the impact of high equity capital on bank performance. Barth, Caprio and Levine (2004), argue that more stringent capital regulation reduces the amount of non-performing loans, and thus affects positively on firms. Cosimano and Hakura (2011) argued that one percent increase in equity-to-assets ratio causes one percent decrease in total outstanding loans for banks. Common equity capital is the most effective loss-absorption financial instrument. However, higher equity capital requirements can also have social costs if, for example, banks meet the new ratios by granting less credit and/or charging higher interest rates. The social costs of higher equity capital during transition come from the possibility that banks contract the volume of credit to reduce the absolute requirements of additional equity, instead of increasing the volume of equity (Holmstrom and Tirole (1997). Using bank as an instance, Myers (1984), if banks adjust their equity capital ratios towards a target, the regulatory action should take into account the speed of the adjustment towards this target. On the other, if equity capital only depends on earnings retentions, regulation can alleviate the flow costs by setting a transition period according to the banks' potential to generate yearly earnings. Under the Modigliani and Miller (1958) world of perfect capital markets, the economic value of banks should be independent of their financial structure so that higher equity capital ratios do not have an effect on the cost of capital to the banks and consequently to their interest rates. However, in a more realistic world with taxes, bankruptcy, and agency costs, the capital structure does affect the economic value of the banks and, consequently, their interest rates.

Retained Earnings (RE) as corporate financing indicator:

Retained earnings refer to the percentage of net earnings not paid out as dividends, but retained by the company to be reinvested in its core business, or to pay debt. It is recorded under shareholders' equity on the balance sheet (www.investopedia.com). Ravi (2013), stated that a company's dividend policy is its long term financial strategy with regards to deciding how much earnings to pay out as against retaining them for

investment in the company. This according to him leads to division of profits between dividend payment to shareholders and reinvestment in the company. There is no transaction and bankruptcy costs associated with retained profits, Altman(1993).Thus, retained earnings constitute a major source of finance for companies. Payment of earnings as dividend is associated with agency cost and an opportunity for existing shareholders is lost to reinvest their earnings for growth of the company. William Droms (1990) says that investors benefit more from reinvested earnings than dividends in the long-run. As ensured by Harkav (1953), Plough back of corporate profits gives rise to appreciation in the value of corporate securities. Earnings retained are the most important sources of financing growth of a firm. The level of internal funds conveys information about growth prospects of companies, Gilchrist and Himmelberg (1995). Ravi (2013) posits that during the years where the firms were with growth rates more than the average, the retained earnings played a significant role in their financing pattern. James Bates and Henderson (1967) identify that internal finance has always been one of the most important sources of funds for small business enterprises. However, public companies are able to replace this source by a greater degree of external financing, whilst small firms do not have such opportunities. For many small concerns, growth is possible only if it could be financed largely from earnings retained in the business. What proportion of earnings to put by, depends very much on individual circumstances like desire to expand, speed of growth desired, ownership considerations and market prospects etc. Small firms save more out of their income than do large companies in the long-run. Rate of savings is determined mainly by level of profits and dividends paid in the preceding year.

Pecking Order Theory:

Myers & Majluf (1984) who propounded pecking Order Theory advocate that a firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. They conclude for a negative association between leverage and profitability because high profitable firms will be able to generate more capitals through retained earnings and then have less leverage. The study anchors on pecking order theory.

Equity Capital and Profitability:

Raheman (2007) scrutinize the link between capital structure and profitability. The data from the94 non-financial firms for a phase of 6 years (1999-2004) was put in use. They employ the regression and correlation analysis and made known that equity and firm's size has positive, while leverage (Debt) has negative effect on the profitability of organizations.

Nirajini & Priya (2013) studied the Capital structure and financial performance during 2006 to 2010 (05 years) financial year of listed trading companies in Sri Lanka. For the purpose of this study, the data was extracted from the annual reports of sample companies. Correlation and multiple regression analysis were used for analysis. The results revealed a positive relationship between capital structure and financial performance. And also capital structure is significantly impact on financial performance of the firm showed that debt asset ratio, debt equity ratio and long term debt correlated with gross profit margin (GPM), net profit margin (NPM), Return on Capital Employed (ROCE), Return on Asset (ROA) & Return on Equity (ROE) at significant level of 0.05 and 0.1.

Olokoyo (2012) carried out a study in capital structure and corporate performance of Nigeria quoted firms. A panel data approach using a total of 101 quoted firms from 2003 to 2007. It was found out that a firm's

leverage has a significant negative impact in firms accounting performance measure (ROA). An interesting finding is that any leverage measures have a positive and highly significant relationship with the market performance measure (Tobin's Q). It was established that the maturity structure of debt affect the performance of firms significantly and size of the firm has a significant positive effect on the performance of firms in Nigeria.

San & Heng (2011) study the relationship between capital structure and performance of Malaysian construction industry in the financial crises of 2007-2008 that study badly affected the economies of Malaysia. They demonstrate a weak relationship exists between leverage and performance measured by return on assets and return in equity of Malaysian construction industry.

Umar, Tanveer, Aslam, & Sajid, (2012), examine the impact that capital structure have on financial performance on the data of 100 top firms in Pakistan for 4 years (2006-2009). The outcome displayed that capital structure (CLTA, LTLTA, & TLTA) inversely affect the profitability (EBIT, EPS & ROA).Whereas positive link was revealed between ROE and LTDTA. In the empirical study of (Patel & Bhatt, 2013) the negative association between profitability and debts were unveiled while the linkage was positive in between equity and profitability. Measures of financial performance such as ROE and ROA had negatively affected by their capital structure to a large extent Mwangi et al. (2014).

Tian Zeitun (2007) investigated the effect of capital structure on corporate performance of companies' in Jordan using a panel data sample representing 68 companies during the period 1989 to 2003. The study used panel data models to estimate different measures of corporate performance such as the return in asset (ROA) return on equity (ROE) earnings before interest and tax plus deprecation to total asset (PROF) as account performance's measurement and Tobin's Q. market value of equity to book value of equity (MBVR), price earnings (PIE) ratio and market value of equity plus book value of liabilities divided by book value of equity (MBVE) as market performance's measurements. The study also analyzed the variable using descriptive statistics and correlation matrix. The result shows that a firm's capital structure has a significant negative impact on the firm's performance using both the accounting and market measurement.

Amdemikael (2012) also assessed the factors that affect bank profitability in Ethiopia covering the period of 2000-2011. Mixed research approach (data obtained through the structured document reviews and in-depth interviews) were applied. The analysis also managed through the multiple linear regressions model, OLS. The dependent variable was ROA as a single measure of profitability and it was measured as net profit before tax divided by total assets. The independent variables includes; equity-to-total asset ratio (the inverse of the leverage ratio), Operational efficiency, Income diversification, Liquidity risk, Asset Quality, Real GDP growth and Inflation. The result indicated that capital strength is one of the main determinants of profitability of banks in Ethiopia.

Debt Capital and Profitability:

Abor (2005) seeks to investigate the relationship between capital structure and profitability of listed firms on the Ghana Stock Exchange and find a significantly positive relation between the ratio of short-term debt to total assets and ROE and negative relationship between the ratio of long-term debt to total assets and ROE.

Salawu (2007) carried out an empirical analysis of capital structure of 50 selected non-financial quoted companies of Nigeria between the period 1990 and 2004. The study investigates the main determinants of capital structure of the selected quoted firms in Nigeria. The study employs two different analytical techniques namely the descriptive statistics and the inferential statistics (panel data econometrics techniques) in analyzing secondary data obtained from annual reports of the selected companies and reports of the Nigeria stock exchange. The result show that debt financing for listed companies in Nigeria for the period studied corresponds mainly to a short term debt native. Leverage is found to be negatively correlated with profitability. The size of the firm is however found to be positively correlated with total debts which according to the author, suggest that large firms can better support higher debt ratios than small firms.

Tayyaba, (2013) scrutinize the leverage and their association with profitability of firms. Regression and correlation coefficient method was used on the data of 25 companies in the oil and gas sector of India. The outcome of this investigation is striking as it reveals that financial leverage has a positive effect on both ROE and ROA. The finding also claims that on accounting and market based measure, firms with high leverage have less risk.

Sheikh and Wang, (2010) examine the financing behaviour of textile firm's in Pakistan. Regression model analysis was employed to analyze the data for 75 listed textile firms in the duration of 2002-2007. The outcome disclose that amount of debt in capital structure negatively affect the profitability. Increase in the amount of debt in the capital structure of firms decrease the profitability as a repercussion Ahmad (2014) Memon et al. (2012).

Gill, Amarjit, Nahum, Neil, (2011) seeks to extend Abor's (2005) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 – 2007 was selected. The correlations and regression analyses were used to estimate the functions relating to profitability (measured by return on equity) with measures of capital structure. Empirical results show a positive relationship between short-term debt to total assets and profitability and between total debt to total assets and profitability in the service industry.

Peterson & Rajan (1994) found a significantly positive association between profitability and debt ratiosin a study designed to investigate the relationship between debt ratios and profitability.

Lalith, P.S (1999) investigated the capital structure of Srilankan companies and found that the use of long-term debt is relatively low in Srilankan companies. The mean leverage in Sri Lanka is estimated as 13.5%, long term debt to equity ratio is 24% while the total debt to equity ratio is 104.1%. This evidence suggested that the use of debt financing in Sri Lanka is significantly low in comparison to G7 markets.

Rafiq, Iqbal, & Atiq, (2008), evaluate the Determinants of Capital Structure in the Chemical sector of Pakistan. Data of 26 firms was used over the term of 12 years (1993-2004). The outcome, after applying the panel regression analysis communicate that profitability has a negative linkage with the leverage, whereas positive association was unveiled between leverage and size, tangibility, growth and income variation. The link between growth, profitability and leverage was negative while link between size, tangibility and leverage was uncovered positive in the listed firms of Pakistan, Shah & Khan (2007)**.**

Gill & Mathur, (2011) inspect the factors that affect the leverage of firms. The data used were retrieved from the 166 firms listed at the Toronto stock exchange in the span of 2008 to 2012. The end result made known that leverage has positive impact on firm in the service sector while negatively associated with the firms in the manufacturing sector. The outcome of an investigation in India by Goyal, (2013) discloses the positive association between short term debt and profitability while negative link was discovered between profitability and long term debt. A critical examination in the engineering sector of Pakistan made known that ROA and ROE negatively affected by debts of all levels whereas the performance of firms evaluated in term of Tobin's Q has positive link with LTDTA Khan (2012).

Retained Earnings and Profitability:

Dhrymes and Kurz (1967) put forward that firms with high debt –equity ratio display a smaller payout ratio indicating that firms operating with high debt capital would try to reduce the debt and their investment requirements will be financed largely by reinvested profits. Smaller firms retain a higher proportion of their profits than larger firms because smaller firms could not afford to incur heavy cost in going into capital markets to raise their finance.

Turnovosky (1967) support that retained earnings are determined as remainder of profits, after dividends are paid out; it is changes in profits than current level which determine how much should be retained by a firm; funds for investment are not very strong in determining the amount of profit retentions by firms. He concludes that retained earnings are determined residually and investment decisions are to play a minor role in allocation of profits.

James Bates and Henderson (1967) identify that internal finance has always been one of the most important sources of funds for small business enterprises. However, public companies are able to replace this source by a greater degree of external financing, whilst small firms do not have such opportunities. For many small concerns, growth is possible only if it could be financed largely from earnings retained in the business. What proportion of earnings to put by, depends very much on individual circumstances like desire to expand, speed of growth desired, ownership considerations and market prospects etc. Small firms save more out of their income than do large companies in the long-run. Rate of savings is determined mainly by level of profits and dividends paid in the preceding year.

Rao and Rao (1970) examine the relation between saving and size of a firm. Results of ordinary least squire show a close resemblance to Bates and Henderson's result. They have further added that marginal propensity to save is higher for small firms than large firms. Average reaction coefficient obtained for large cotton textile firms leads that size of a firm has little bearing on the speed of adjustment as such.

Bhole (1980) finds that capital structure of companies does not get affected by increasing the rate of dividend; Indian companies do not practice unusually high plough back rates. He has rejected the suggestion that companies should be discouraged from retaining profit to pave way to growth in capital market in India by establishing that capital markets in countries like the USA were highly developed though companies in such countries had retention rates more than what Indian companies had in that period. According to him the best way to improve return on shares is to improve efficiency and profitability.

Feldstein and Fleming (1971) assess the effect of taxation policy on saving behavior of U.K firms relating to the period 1954-67. They find the existence of considerable positive influence of tax on retained earnings.

Bhatia (1979) investigates how retained corporate earnings affect stock holders' saving decisions. Results indicated that retained earnings have no significant effect on consumer expenditures. His results do not support the hypothesis that in making spending decisions, retained earnings are treated as a component of income, or their influence is separate from and stronger than the impact of total accrued gains.

BrajKishor (1980) establishes that internal sources of finance constitute the most important source of financing assets need of selected companies. According to his study, average annual retentions have recorded a consistently rising trend and payout ratio remains uniquely constant for nearly all the years. Thus, given a stable payout policy, fluctuations in profitability largely determine the amount of internal funds. Lagged dividend is the strongest variable negatively influencing retained earnings. Profit after tax has emerged as the next important variable positively influencing retention. Expansion requirements are identified as the least significant variable influencing the retention of profits.

Mahakud (2005) analyses the trend and determinants of retained earnings. Trend in retained earnings is examined on public limited companies, private limited companies and foreign companies in India. On the other hand, determinants of retained earnings are studied by using panel data pertaining to 500 companies listed in S &P CN X 500 Index. Result of the computation of retention ratio and regression equations indicate that corporate retained earnings in India has not increased much and but remained at a low level throughout the period of study. Profit after tax, investment opportunities, availability of external funds, cost of borrowing, dividend policy and shareholding patterns are major determinants of retained earnings.

Inessa Love, (2011) examined corporate saving behavior of industrial companies in Egypt. The focus is on two measures of savings -Financial Savings and Physical Savings. Investment of retained earnings in physical assets such as plant, equipment, etc., is regarded as physical savings. Financial savings represent investment in financial assets like cash holdings, marketable securities etc. Regression results determining the association between the variables and financial savings, explain that firms that exhibit more volatility (measured as standard deviation of sales) have accumulated more financial savings suggesting that firms that have more uncertainty about future cash flows have saved more. With respect to debt levels, there is no significant relationship between debt and financial savings. Firms that are paying higher interest on debt in the previous year have made more financial savings in the current year. A very little or no effect of cash flows on financial savings are found. Growth of firms, as represented by the rate of sales growth, does not show any significant association with internal savings in physical assets. Effect of interest rate and net income are positive and significant. Exporting firms have used more external finance to invest in physical assets. Small firms are more constrained in access to finance and they use less physical savings.

Ramesh Jangili and Sharadkumar, (2011) empirically tested the determinants of private corporate sector savings in India. Results of panel regression model show that corporate tax rate, cost of borrowings, depreciation rate and inventory to sales are negatively associated with retained earnings, whereas profit after tax, external sources of funds, capital formation, interest burden, and value of production are positively associated. It is also observed that corporate tax rate, availability of external funds, cost of borrowings and inventory to sales ratio are found to be the most significant determinants for large firms. Corporate tax rate and value of production rate are significant for small-sized firms.

Methodology:

Research Design:

The study adopted ex-post facto research design whereby already existing data from annual reports and accounts published in the FACT Books, CBN statistical bulletin and National Bureau of statistics 2006-2015. The study used four firms which include Nigerian Breweries Plc, Guinness Nigeria Plc, Champion Breweries Plc and International Breweries Plc. The reason for the choice is based on firms with consistent vibrant and active stock turnover and available data for the period of study. The study employed multiple regression analysis.

The Models are specified as follows:

1. $PAT_t = \beta_o + \beta_1 EC_t + \varepsilon_t$ - - - - [Equation (1)]
2. $PAT_t = \beta_o + \beta_1 DC_t + \varepsilon_t$ - - - - [Equation (2)]
3. $PAT_t = \beta_o + \beta_1 RE_t + \varepsilon_t$ - - - - [Equation (3)]

Where,

PAT Profit after Tax

EC Equity Capital

DC Debt Capital

RE Retained Earning/Stock Turnover

ε Error Term

β_o = Coefficient (constant) to be estimated

β_1 = Parameter of the independent variable to be estimated

t = Time

For the purpose of this study, composite multiple regression (prediction) model is statistically formulated as;

$\text{Log}(PAT_{ti}) = \beta_o + \beta_1 \log(EC_t) + \beta_2 \log(DC_t) + \beta_3 \log(RE_t)$ - - - [Equation (4)]

Where,

PAT Profit after Tax

EC Debtors' Collection Period

DC Creditors' Payment Period

RE Stock Turnover

ε Error Term

β_o = Coefficient (constant) to be estimated

$\beta_i - \beta_6$ = Parameters of the independent variables to be estimated

t = Current period

The variables are classified into dependent which is represented by profit after tax while the independent variables are Equity Capital, Debt Capital and retained earnings.

Test of Hypotheses using Multiple Regression Technique

1. Ho Equity Capital does not significantly affect profit after tax of firms in Nigerian Brewery Industry.
2. Ho Debt Capital does not significantly affect profit after tax of firms in Nigerian Brewery Industry.
3. Ho Retained Earnings does not significantly affect profit after tax of firms in Nigerian brewery Industry.

Descriptive Statistics of the Variables

	LOGPAT	LOGEC	LOGDC	LOGRE
Mean	7.288980	8.476656	9.160401	7.600577
Median	8.567456	8.021652	9.215990	9.551740
Maximum	8.700357	8.620240	10.27379	9.842921
Minimum	7.609890	8.451740	9.739572	0.000000
Std. Dev.	0.211336	0.076455	0.163958	4.021652
Skewness	0.565678	0.176878	-1.865654	-1.356478
Kurtosis	1.839890	1.543455	5.488282	3.209697
Jarque-Bera	0.814905	0.796579	8.816399	3.626543
Probability	0.665343	0.598489	0.015787	0.134750
Sum	80.74296	86.99894	99.16040	67.00577
Sum Sq. Dev.	1.449890	0.065564	0.241939	132.5453
Observations	10	10	10	10

Source: E View 9.0 Statistical Software Computation:

This indicates that LOGPAT and LOGEC, have skewness coefficient less than one. However, LOGDC and LOGRE have skewness coefficient that lies above one with a long left tail indicated by the negative sign as against the long right tail of other variables under study. The implication is that the time series data for LOGPAT and LOGEC are distributed normally around the mean while that of the LOGDC and LOGRE are not normally distributed. The kurtosis coefficient which shows that LOGDC and LOGRE have coefficients substantially above 3 further supports that the distribution of LOGDC and LOGRE has a flat distribution (Plattykurtic). Judging by Jarque-Bera coefficients, it also indicates that only LOGTDEBT have significant probability value while LOGRE has relatively significant value which further confirms the status of the time series data in terms of normality of distribution.

Dependent Variable: LOGPAT

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGEC	3.678672	1.838930	2.246005	0.0689
LOGDC	-1.765744	0.568134	-2.858790	0.0255
LOGRE	0.045657	0.022545	0.867787	0.3223
C	-34.26765	12.33316	-4.187262	0.0069

R-squared	0.916228	Mean dependent var	9.174296
Adjusted R-squared	0.809211	S.D. dependent var	0.399277
S.E. of regression	0.656595	Akaike info criterion	-0.343554
Sum squared reside	0.120195	Schwarz criterion	-0.576678
Log likelihood	8.918789	Hannan-Quinn criter.	-0.749311
F-statistic	12.76676	Durbin-Watson stat	3.345656
Prob(F-statistic)	0.007758		

Source: EView 9.0 Statistical Software Computation

Interpretation of Regression Coefficient Result:

This indicates that a one naira change in LOGEC and LOGRE will increase PAT by 3.678672and 0.045657 respectively. While a naira/percentage change in LOGDC will result in a decrease of1.765744in PAT in Nigeria brewery sector. In summary, PAT is influenced positively by LOGEC and LOGRE in varied proportions, while it is affected negatively by LOGDC. The extent of effect of LOGDC on PAT is negative and significant while that of equity capital and retained earnings are positive and insignificant. This is in consonance with the *a priori* expectations of the researcher.

Interpretation of Durbin Watson- Statistic:

The Durbin-Watson statistic is 3.345656 which is higher than 2. In this case, the Durbin Watson statistic is between 2 and 4 which indicate the absence of serial correlation and a negative correlation in the time series data extracted from the annual report and accounts of firms in Nigerian brewery industry.

Coefficient of Determination (R^2):

The Adjusted R-squared is 0.809211. The adjusted R^2 reveals that about 81% of the variations in PAT could be explained by LOGEC, LOGDC and LOGRE while about 19%ss could be explained by other factors capable of influencing PAT, the stochastic disturbances and the unexplained variables in Nigerian brewery sector.

Decision Rule:

Reject Ho when p-value is less than a-value of 0.05 (i.e. 5% level of significance and 95% confidence level).

Decisions:

1. **Ho (i): P-value of 0.0689is higher than a-value of 0.05, Ho is thereby accepted**
   This implies that Equity Capital (EC) does not significantly affects Profit after Tax of firms in Nigeria Brewery sector.
2. **Ho (ii): P-value of 0.0255is less than a-value of 0.05, Ho is thereby rejected**
   This implies that Debt Capital significantly affects Profit after Tax of firms in Nigeria Brewery sector.
3. **Ho (iii): P-value of 0.3223 is more than a-value of 0.05, Ho is thereby accepted**
   This implies that Retained Earnings (RE) does not significantly affects Profit after Tax of firms in Nigeria Brewery sector.

Hypothesis one states that Equity Capital does not significantly affect profit after tax of firms in Nigeria brewery sector. The P-Value of 0.0689 for EC is more than the a-value of 0.05; H_0 is therefore accepted. This implies that the effect of EC on PAT of firms in Nigeria brewery sector is insignificant.

This is supported by the findings of Raheman (2007), Nirajini & Priya (2013). The finding contradicts the negative effect equity capital (capital structure) on quoted Jordan firms as revealed by Tian Zeitun (2007). This could be attributed to the disparity in economic situation of Jordan and Nigeria. In the case of hypothesis 2 which states that Debt Capital does not significantly affect profit after tax of brewery firms in Nigeria, the P-Value of 0.0255 being less than the a-value of 0.05 implies that Profit after tax is influenced negatively and significantly by Debt Capital in Nigerian brewery sector. This is in tandem with the findings of Sheikh & Wang, (2010), Rafiq, Iqbal, &Atiq, (2008), Gill & Mathur, (2011). While it is contradictory to the findings of Olokoyo (2012), Gill, Amarjit, Nahum, Neil, (2011) and Peterson & Rajan (1994) This disparity can be traced back to the period under study and the political and economic situation in those countries. Finally, the third hypothesis which states that Retained Earnings does not significantly affect profit after tax of firms in Nigerian brewery sector with P-Value of 0.3223 higher than a-value of 0.05 indicates that Profit after tax is influenced positively by Retained Earnings in Nigerian Brewery Sector.

It is therefore the recommendation of this study that:

1. Equity capital should be one of the corporate financing mix because it will increase profitability of the firm and consequently, wealth of the shareholders. Shareholders funding of the business activities should be increased so as to reduce borrowings.

2. Firms should anchor more on trade payables as against borrowing from banks and other financial institutions.
3. Firms should utilize their retained earnings effectively as much as possible.

References:

1. Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The Journal of Risk Finance, 6(5)*: 438-445.
2. Amdemikael, A. (2012). Factors affecting profitability: an empirical study on Ethiopian banking industry. *Addis Ababa University, Accounting & Finance*.
3. Barine, M. N. (2012). Capital structure determinants of quoted firms in Nigeria and lessons for corporate financing decisions. *Journal of Finance and Investment Analysis*, *1(2)*: 61-81

4. Barth, J.R., Caprio, G. and Levine, R. (2004). Bank regulation and supervision: what works best? *Journal of Financial Intermediation, Vol. 13, No. 2, pp.205–248.*
5. Bhatia, Kul B. (1979).Corporate taxation, retained earnings, and capital formation. *Journal of Public Economics, Vol. 11,* pp. 123-134.
6. Bhole, L.M. (1980).Deductibility of interest cost, retention of profits and development of stock market. *Economic and Political Weekly*, *Jul.*, pp. 1237-1240.
7. BrajKishor (1980). Corporate internal finance: a study of overall trends and retentions. *Vikalpa, Vol.5, No.3*, pp.185-207.
8. Dhrymes, P. and M. Kurz, (1967).Investment, dividends and external finance behaviour of firms in Ferber, Red, *Determinants of Investment Behaviour, New York, vol., 3(5)*. P. 22
9. Drobetz, W., & Fix, R. (2003). What are the determinants of the capital structure? Some evidence for Switzerland. *Working Paper,* 88.
10. Feldstein, M. S., and Flemming J. S. (1971). Tax policy and corporate saving and investment behaviour in Britain. *Review of Economic Studies 38, no. 116*: pp. 415-34.
11. Flannery, M. & Rangan, K. (2004). Partial adjustment toward target capital structures. *Working paper, University of Florida.*
12. Gilchrist, S. & Himmelberg, C. P.,(1995). Evidence on the role of cash flow for investment. *Journal of Monetary Economics, Elsevier, vol. 36(3)*, pages 541-572.
13. Gill, Amarjit, Nahum Biger, Neil Mathur, (2011). The effect of capital structure on profitability: evidence from the United State. *International Journal of Management, Vol. 28, No. 4, Part 1*, pp. 3-15.
14. Hovakimian, A., Opler, T. & Titman, S. (2002). The capital structure choice: new evidence for a dynamic trade-off model. *Journal of Applied Corporate Finance*, *(Spring 2002)*, *15(1).*
15. Jensen, M., & Meckling, W., (1976). Theory of the firm: managerial behaviour, agency costs and capital structure. *Journal of Financial Economics*, *3*: 11- 25.
16. Mahakud, J. (2005).Corporate retained earnings in india: trends and determinants. *The Asia Journal of Applied Finance, Vol. 11*, pp. 59-72.
17. Makunyi, S. K. (2011). The relationship between working capital investment policy and profitability of manufacturing firms in Kenya. *MBA project University of Nairobi.*
18. Modigliani, F. & Miller, M., (1958). The cost of capital, corporation finance and theory of investment. *American Economic Review, 48*: 261-297.
19. Modigliani, F. & Miller, M., (1963). Corporate income taxes and the cost of capital: a correction, *The American Economic Review, 53*: 433-443.
20. Mohammadzadeh, M., Rahimi, F., Rahimi, F., Aarabi, S.M., & Salamzadeha, J. (2013).The effect of capital structure on the profitability of pharmaceutical companies: the case of Iran. *Iranian Journal of Pharmaceutical Research*. Summer; *12(3)*:573–577.
21. Mose, O. K. (2011). The relationship between capital structure and financial performance of microfinance institutions in Kenya. *MBA project University of Nairobi.*
22. Myers, S., & Majluf, N., (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13: 187–221.
23. Okwo, I. M., Ugwunta, D. O. and Agu, S. U. (2012). An examination of the factors that determine the profitability of the Nigerian beer brewery firms. *Asian Economic and Financial Review 2(7):*741-750.
24. Olokoyo F. O. (2012). Capital structure and corporate performance of Nigeria Quoted Firms. A Panel Data approach. *Published PhD thesis of Covenant University Ota Ogun State Nigeria.*

25. Oscar H. (1953). The relation between retained earnings and common stock prices for large, listed corporations. *The Journal of Finance, Vol. VIII, No.3*, pp. 283-297.
26. Pandey, I.M. (2009). Financial management: capital structure planning and policy(pp.332, 333).
27. Rafiq, M., Iqbal, A., & Atiq, M. (2008). The determinants of capital structure of the chemical industry in Pakistan. *The Lahore Journal of Economics,* 139-158.
28. Rajan R. & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of Finance*, 50(5):1421- 1460.
29. Rao, V. G. and K. S. H. Rao (1970).Saving behaviour of small cotton textile firms in India*, Indian Journal of Economics.* pp. 1961-64
30. Reddy, K.K. (2012). Capital structure and its impact on profitability in select software companies in south India. *Indian Journal of Applied Research,* 2(3): 108-110
31. 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.
32. Sargant, P. Florence (1959). Size of company and other factors in dividend policy. *Journal of the Royal Statistical Society, Vol. 122,* pp. 77-98.
33. Taub, A. J. (1975). Determinants of the firm's capital structure, *Review of Economics and Statistics*, 57: 410-416.
34. Tian G. G. and R. Zeitun (2007) Capital structure and corporate performance Evidence from Jordan Australasian. *Accounting Business and Finance Journal Vol1.* pp 40-61
35. Turnovsky, Stephen J (1967). The allocation of corporate profits between dividends and retained earnings*. The Review of Economics and Statistics, Vol. 49*, pp. 583-589.
36. Umar, M., Tanveer, Z., Aslam, S., & Sajid, M. (2012). Impact of capital structure on firm's financial performance: evidence from Pakistan. *Research Journal of Finance and Accounting, 3* (9), 1-12.
37. Velnampy, T. & Niresh, J. A. (2012). The relationship between capital structure and profitability. *Global Journal of Management and Business Research*, *12(13)*: 67-74
38. Williom G. D. (1987). Asset allocation for individual investors', (editor), (Homewood, Illinois. *Dow Jones Irwin/Institute for Chartered Financial Analysts, 1987*.