



## **Effect of Capital Structure on Financial Performance of Consumer Goods Firms Listed in the Nairobi Securities Exchange**

**Ogenche M. Ruth, Dr. Thomas Githui & John  
Omurwa**

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# Effect of Capital Structure on Financial Performance of Consumer Goods Firms Listed in the Nairobi Securities Exchange

<sup>1\*</sup>Ogenche M. Ruth <sup>2</sup>Dr. Thomas Githui & <sup>3</sup>John Omurwa

<sup>1</sup>Post graduate student, Catholic University of Eastern Africa

<sup>2</sup>Lecturer, Graduate Business School, Catholic University of Eastern Africa

<sup>3</sup>Lecturer Graduate Business School, Catholic University of Eastern Africa

\*Corresponding email: [ogencheruth@gmail.com](mailto:ogencheruth@gmail.com)

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## Abstract

Capital structure of a firm is a subject of great interest worldwide. The area has received much attention in developed countries compared to their developing counterparts. Research on capital structure has mainly focused on understanding the forces behind corporate financing behaviour of large listed firms. Firms in developed economies operate in close to similar economic environment however this is not the case with developing economies. The main aim of this study was to establish the effect of capital structure on financial performance of consumer goods firms listed on the NSE. The specific objectives of the study were: to establish the effect of debt ratio on financial performance of consumer goods firms listed on the NSE and to determine the effect of firm size (control variable) on financial performance of consumer goods firms listed on the NSE. The study employed panel research design. This study targeted 12 firms listed on the Nairobi Securities Exchange. A census of all the 12 firms listed in Nairobi Securities Exchange was used as a unit of analysis from the year 2012 to 2016. Secondary data extracted from the financial statements was used to compute the relevant ratios. The study employed a dynamic panel data regression model and Eviews software was used for data analysis. The results showed that debt ratio had a negative coefficient of -0.401967 and a t-statistic of -6.006392. The p-value

of 0.0000 suggests that the relationship is statistically significant at 5% significant level since the value is lower than the critical p-value of 0.05. The null hypothesis is debt ratio does not have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. The study adopted the alternative hypothesis that debt ratio have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. The results also indicated that firm size has a positive coefficient of 0.080114 and a t-statistic of 4.085403. The p-value of 0.0002 suggests that the relationship is statistically significant at 5% significant level since the value is lower than the critical p-value of 0.05. The null hypothesis is firm size does not have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. The study adopted the alternative hypothesis that firm size has a statistically significant effect on financial performance of consumer goods firms listed on the NSE. From the findings of the study it was concluded that debt ratio and firm size were found to be important aspects of capital structure influencing financial performance of consumer goods firms listed on the NSE. The study recommends a balance when financing a firm through either debt or equity. The study recommends that NSE listed consumer goods firms with high levels of current assets should consider using more equity to finance their daily operations. The study recommends prudent use of firms' resources to ensure that firms' goals and objectives are attained. This way a firm can increase its revenue base.

**Key words:** *Consumer goods, capital structure, firm size, financial performance*

## 1.0 Introduction

Capital investment decisions are vital at two levels; for the future operability of an individual firm making the investment, and for the economy of the nation as a whole (Samour & Hassan, 2016). At the firm level, capital investment decisions have implications on many aspects of operations, and often exert a crucial impact on survival, profitability and growth (Salim & Yadav, 2012). At the national level, the proper planning and allocation of capital investment are essential for efficient utilization of resources. Poorly placed investment reduces the productivity of labour and materials and sets a lower ceiling on the economy's potential output.

A company's capital structure is arguably one of its most important choices. From a technical perspective, the capital structure is the careful balance between equity and debt that a business uses to finance its assets, day to day operations, and future growth (Nwaolisa & Chijindu, 2016). From a tactical perspective however, it influences everything from the firm's risk profile, how easy it is to get funding, how expensive that funding is, the return its investors and lenders expect, and its degree of insulation from both microeconomic business decisions and macroeconomic downturns (Nassar, 2016). Financing and investment are two major decision areas in a firm. In the financing decision, the manager is concerned with determining the best financing mix or optimal capital structure for the firm (Karani, 2015).

Capital structure decision is the mix of debt and equity that a company uses to finance its business (Damodaran, 2001). Capital structure has been a major issue in financial economics ever since Modigliani and Miller showed in 1958 that given finless markets, homogeneous expectations, the capital structure decision of the firm is irrelevant. The question firms are faced

with is making a decision on the capital structure choice to use. The decision is crucial given that it has an effect on the financial performance of firms. The capital structure of a firm is generally the specific mix of debt and equity the firm uses to finance its operations (Abor, 2005).

The main objective of shareholders in investing in a business is to increase their wealth. Thus the measurement of performance of the business must give an indication of how wealthier the shareholder has become as a result of the investment over a specific time (Kakanda, Bello & Abba, 2016). Measures that indicate a firm's financial performance are grouped into five broad categories: liquidity, solvency, profitability, repayment capacity and financial efficiency (Omukaga, 2017). Those measurements are return on investment (ROI), return on equity (ROE), earning per share (EPS), dividend yield, price earnings ratio, growth in sales, market capitalization (Barbosa & Louri, 2005).

The literature on corporate financial policy, namely capital structure is voluminous and has a hoary tradition, dating back to the seminal Modigliani and Miller (1958) contributions. Two aspects of this literature are noteworthy. First, for the most part, theories of dividend policy differ from theories of capital structure, since, the literature has treated dividend policy and capital structure as two distinct choices, even though there is reason to believe that there are common factors affecting both (Ogebe, Ogebe & Alewi, 2013). Second, the empirical success of these theories has been mixed at best, leaving us with many unanswered questions.

The greatest challenge for management and investors in developing countries is whether there is an optimal capital structure, and if there is, how does the particular capital structure decision be it short-term or long-term, influence financial performance. Abdul (2012) conducted a similar study to determine the relationship between capital structure decisions and the performance of firms in Pakistan. The study concluded that financial leverage has a significant negative relationship with firm performance as measured by return on assets (ROA). The relationship between financial leverage and firm performance as measured by the return on equity (ROE) was negative but not statistically significant. The conclusion was that there is a positive relationship between financial leverage, financial performance, and growth and size of the companies. The finding of the study is consistent with the agency theory (Wamugo, Muathe & Kosimbei, 2014). A study on the effect of capital structure on performance of listed consumer goods companies in Nigeria (Mohammed, Ahmed and Mohammed 2016) found capital structure has a significant impact on firm's performance. The study is also in consensus with Myers and Majluf's (1984) theory, which states there is a positive relationship between long-term debt levels and profitability of a firm.

In Kenya, Kiogora (2000), found a positive relationship between capital structure and value of the firm. In a study done on the manufacturing firms Fredrick (2016) found a negative relation between capital structure and financial performance. In her study, Dorris found a positive relationship between capital structure and financial performance on commercial banks (Dorris 2016).

In a study conducted on firms listed on the Rwanda stock exchange, a positive relation between capital structure and financial performance emerged (Jeannine *et al.*, 2016).

In a study of non-financial firms in the NSE conducted in 2014 by (Wamugo et al., 2014), there was found to be a negative relationship between capital structure and financial performance. In another study by Mburu (2015) on non-financial firms in the NSE, there was found to be a negative relationship between capital structure and financial performance. A study done on financial firms in the NSE in 2015 by (Carol et al., 2015), found a positive relationship between long term debt and equity on financial performance and a negative relationship on short term debt and equity on financial performance. There is need for further research on capital structure in developing countries in order to deepen knowledge. It is then necessary to identify the factors in the Kenyan context with an eye on the different variables and dynamics that shape the capital structure decisions.

## **1.2 Statement of the problem**

According to Modigliani and Miller (1958) argument, there is no optimal capital structure and therefore capital structure decisions are of no value to the firm. This has ever since ignited a lot of contributions from many scholars and to today, no common ground has been reached on the same.

From the aforementioned, capital structure of a firm has been the subject of intense global debate and research. The area has received much attention in developed countries compared to their developing counterparts. In the United States for instance, research on capital structure has mainly focused on understanding the forces behind corporate financing behaviour of large listed firms. While firms in developed economies operate in close to similar economic environment, this is not the case with developing economies.

Developed and developing countries have different determinants of capital structure. Hermanns (2006) categorizes the determinants of capital structure into two; firm specific characteristics (internal) and external factors dictated by the operating environment represented by country specific economic conditions. Some of the external economic factors include macroeconomic conditions such as economic growth, interest rate and inflation. Intrinsic factors include firm size, profitability, financial costs and growth opportunities.

Financial Managers have a responsibility of determining the optimal mix of debt and equity that will ensure maximization of shareholders wealth. Studies on the impact of capital structure on firm performance have mostly been carried out in developed economies on large and listed firms.

Listed firms in Kenya have some common characteristics such as they are professionally managed, bigger in size with very high turnover and asset values as compared to unlisted firms. The same firms have wider options when it comes to raising capital for their operations as compared to unlisted firms and this makes their capital structure significantly different from each other, and consequently exposing them to varying risks and greater scrutiny by investors who have high expectations regarding maximization of their shareholding wealth.

The firms falling under the category of consumer goods firms have a peculiar nature: a hybrid of manufacturing and allied and agricultural firms. This category amalgamates two great sectors that are also key contributors to the Kenyan economy. Such a combination of firms has not been

fully explored under one study, on the basis of capital structure effect on financial performance. It is worth to note though, that separate studies have been conducted on exclusively each category. This particular group of firms produces goods that are consumed on a daily basis, to an extensive Kenyan market. The research is keen to see how the dynamics of the two categories play out in matters financial performance being influenced by capital structure decisions. Studies on the relationship between various financing decisions and financial performance have given varied results over time. The above has ignited a desire to establish the effect of capital structure on financial performance of consumer goods firms. The study was carried out against the same background.

### 1.3 Research Objectives

- i. To establish the effect of debt ratio on financial performance of consumer goods firms listed on the NSE.
- ii. To determine the effect of firm size (control variable) on financial performance of consumer goods firms listed on the NSE.

### 1.8 Conceptual framework

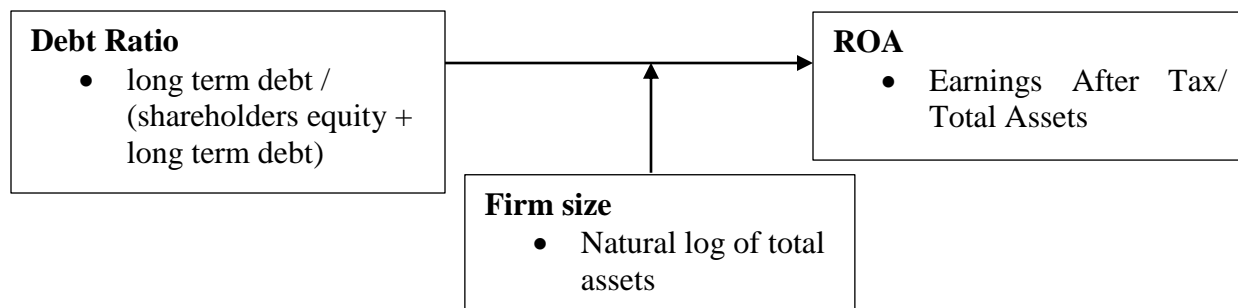


Figure 1: Conceptual framework

## 2.0 Literature Review

### 2.1 Theoretical Review

#### 2.1.1 Traditional Theory of Capital Structure

This theory asserts that optimal level of leverage is attained when the cost of capital is minimized. This has an implication of maximizing the value of the firm (Brealy & Myers, 1988). This happens since at lower levels of debt, increasing leverage does not raise the cost of debt and hence by replacing equity with debt, the firm value is improved. However, borrowing continues until a certain level beyond which the cost of debt begins to rise. It is at this turning point that the firm's value is at maximum and is considered to be the optimal capital structure. Alexander (1963) supports this view and maintains that weighted average cost of capital (WACC) decreases

with debt use. Pandey (1999) also supports the view of traditional theory in terms of the existence of an optimal level of capital structure on two accounts; the tax deductibility of interest charges and market imperfections.

### **2.1.2 Modigliani and Miller (MM) Proposition**

Modigliani and Miller (1958) seminal article demonstrates that firm's capital structure is irrelevant in determination of its value, thus the firm's WACC is also independent of its capital structure. The assumptions underlying this conclusion include; perfect capital market, borrowing and lending based on risk-free rate, absence of bankruptcy costs and agency costs (Ahmeti & Prenaj, 2015). Modigliani and Miller's ideas were that if a firm can lower its average cost of capital, then the firm will be able to increase its profitability thereby increasing its value and shareholder's wealth (Cline, 2015). This is because the cost of equity is greater than the cost of debt. Their notions were that the shareholder bears the financial risk and business risk of the company while the debt holders only bear default risk.

Modigliani and Miller (1963) however demonstrate that in a world with tax deductible interest payments, the firm's value and capital structure are positively related. This is because as a firm increases leverage it gets more and more tax relief and so it lowers its after tax cost of capital, which in turn increases profitability as well as its value. Therefore with tax deductible interest payment, the firm should utilize as much debt as possible if it wants to minimize the cost of capital, maximize its value as well as its shareholders' wealth. This would suggest that highly profitable firms would choose to have high levels of debt in order to obtain attractive tax shields.

Miller (1977) however added personal taxes to the analysis and demonstrated that optimal debt usage occurs at a macro-level, but does not exist at a firm level. Moreover, DeAngelo and Masulis (1980) argued that interest tax shields may be unimportant to companies with other tax shields which are non-debt tax shield such as depreciation allowances and investment tax credits.

Modigliani-Miller (MM) theorem is the broadly accepted capital structure theory because is it the origin theory of capital structure theory which had been used by many researchers (Titman, 2002). The prediction of the Modigliani and Miller model that in a perfect capital market the value of the firm is independent of its capital structure, and hence debt and equity are perfect substitutes for each other, is widely accepted. However, once the assumption of perfect capital markets is relaxed, the choice of capital structure becomes an important value-determining factor (Hasan, Ahsan, Rahaman & Alam, 2014). This paved the way for the development of alternative theories of capital structure decision and their empirical analysis. Although it is now recognized that the choice between debt and equity depends on firm-specific characteristics, the empirical evidence is mixed and often difficult to interpret.

### **2.1.3 Agency cost theory**

Agency costs rose from separation of ownership and control and conflicts of interest between categories of agents. One of the problems that cause conflict between managers and shareholders is free cash flows. Jensen (1986) and Williamson (1988) define debt as a disciplinary tool to ensure that managers give preference to wealth creation for the equity-holders. Thus, in the companies that have high cash flow and profitability, increasing of debts can be used as a tool of

reducing the scope for managers until resources of company may not be waste as a result of their individual purposes. Choice of capital structure may help mitigate the agency cost (Papa & Speciale, 2007; Richardson, 2005 & Douglas, 2002). High leverage reduces agency cost by constraining or encouraging managers to act more responsibly in the interest of the shareholders by reducing cash flows available for spending to managers. Therefore, we expect high earnings where debt ratios are high.

Agency conflicts are derived from the divergence of ownership and control. Thus, firms where shareholders' rights are severely restricted are likely to suffer higher agency costs because managers are better able to exploit the weak shareholder rights and place their own private benefits ahead of shareholders' interests. The importance of monitoring is recognized by Allen *et al.*, (2000) who noted that institutional investors prefer to own shares of firms making regular payments, and this type of investors is more prone to frequent monitoring than small shareholders.

Payouts can be used to self-impose discipline. Jensen (1996) suggested that equity holders can allow for management to go on spending sprees or invest in negative NPV projects. One way to remove unnecessary cash from the firm is to increase pay out. Jain and Kini (1999) argued that dividend transfer wealth from the debt holder to the shareholder. This reduces the claim of the debt holders in the case that the firm has difficulties in meeting its financial obligations. Debt holders will have debt covenants with the firm in order to limit payment of dividends by firms. Thus they protect themselves from expropriation of wealth by shareholders and ensure that the value of the firm is not reduced by the actions of shareholders.

According to Jensen and Meckling (1996), firms can reduce agency problems by issuing more debt and paying a higher ratio, reducing the cash flow. The authors argued that if the company earnings are not distributed as dividends to the shareholders, managers can use them for unprofitable projects or for perquisite consumption that does not maximize the shareholders' wealth. These dividends are paid to control agency problems by getting away with excess cash and assuring the shareholders that the company is being managed in their interest.

#### **2.1.4 Pecking order theory**

The pecking order theory can be explained from the perspective of asymmetric information and the existence of transaction costs. Myers (1984) suggests that asymmetric information and transaction costs overwhelm the forces that determine optimal leverage in the trade-off models. To minimize these financing costs, firms prefer to finance their investment first with internal cash flows (Frank & Goyal, 2003). Only if there's residual financing need will they use external capital in the following order; first safe debt, then risky debt and finally equity issues. So, contrary to the trade-off theory, the pecking order theory predicts no long run target capital structure (Zoppa & McMahan, 2002). There is no optimal debt-equity mix because there are two kinds of equity, retained earnings at the top of the pecking order and the issue of new shares at the bottom (Myers, 1984).

Pecking order theory of capital structure by Myers (1984) states that, firms have a preferred hierarchy for financing decisions. Firms will borrow instead of issuing equity when internal cash flow is not sufficient to fund capital expenditure. The highest preference is to use internal



financing before resorting to any form of external funds. Internal funds incur no floatation costs and require no additional disclosure of financial information that may lead to a possible loss of competitive advantage. If a firm must use external funds, the preference is to follow a certain order of financing sources: debt, convertible securities, preferred stock, and common stock, (Miller, 1977). This order reflects the motivations of the financial manager to retain control of the firm, reduce the agency costs of equity, and avoid negative market reaction to an announcement of a new equity issue (Bontempi, 2002). The amount of debt will reflect the firms' cumulative need for external funds. The theory has two key assumptions about financial managers. The first of these is the likelihood that a firm's managers know more about the company's current earnings and future growth opportunities than outside investors (Ahmadimousaab, *et al.*, 2013). There is a strong desire to keep such information proprietary. The use of internal funds prevents managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them.

The second assumption is that managers will act in the best interests of the company's existing shareholders. The managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new shareholders at the expense of the old, (Fischer, Heinkel & Zechner, 2009). However the theory has some limitations since it does not explain the influence of taxes, financial distress, security issuance costs, agency costs, or the set of investment opportunities available to a firm upon that firm's actual capital structure. It ignores the problems that can arise when a firm's managers accumulate so much financial slack that they become immune to market discipline. As such the theory is offered as a complement to, rather than a substitution for, the traditional trade-off model.

### **2.1.5 Trade off Theory**

According to Elliott (1972), the firm is viewed as setting a target debt-equity ratio and gradually moving towards it. The firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. In particular, capital structure moves towards targets that reflect tax rates, assets type, business risk, and profitability and bankruptcy costs. The firm is balancing the costs and benefits of borrowings, holding its assets and investment plans constant (Adedeji, 1995). The firm's optimal capital structure will involve the trade-off between the tax advantage of debt and various leverage-related costs. Due to the distinctions in firm-specific characteristics, target leverage ratios will vary from firm to firm. Institutional differences, such as different financial systems, tax rate and bankruptcy law, will also lead the target ratio to differ across countries.

The theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios (Elliott, 1972). Firms with more intangible assets, whose value will disappear in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms should mean more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.

## 2.2 Empirical Literature

### 2.2.1 Capital structure

Modigliani and Miller (1963) theorem is considered the greatest breakthrough in theory of optimal capital structure. The theorem specifies the financial decisions by firms that are irrelevant to the firm's value. Its propositions include; the value of a firm is the same regardless of whether it finances itself with debt or equity. The weighted average cost of capital is constant. The assumptions of the theorem are; Perfect and frictionless markets, no transaction costs, no default risk, no taxation, both firms and investors can borrow at the same interest rate; there is homogeneous expectation, homogeneous risk and equal access to all of relevant information (Mwaura, 2014)

### 2.2.2 Firm size

Large firms are associated with high profits as they enjoy economies of scale due to their mass production which gives them a competitive advantage over small firms (Rayan, 2010). They also have higher market share than their counterparts due to their penetration giving them a competitive advantage (Anić, Rajh & Teodorović, 2009). From the above statements, it's clear that the size affects profitability in form of the preference of capital structure mix. As big companies have advantageous position in raising external funds easily from the capital markets, also there is less reliance on internal funds (Al-Tally, 2014). Firm size could be seen from many perspectives- market structure, level of turnover and profitability, assets structure, or number of employees in an organization (Chandrapala & Knápková, 2013).

### 2.2.3 Financial performance

Financial performance can be described as a measurement of how well a firm uses its assets from its primary mode of business to generate income. The term is also used as general measure of a firm's overall financial health over a given period of time. Certain firm characteristics have been associated with firm performance such as firm size (Malik, 2011), liquidity (Dogan, 2013), and leverage (Mule & Mukras, 2015). The performance of firms could be affected by both internal and external firm characteristics. In this study, capital structure is studied in relation to the financial performance of consumer goods firms listed on the NSE.

## 3.0 Research Methodology

This study was guided by postpositivism philosophy. This study adopted a panel research design. The population consisted of 12 firms of the consumer goods sector of the NSE for the period of five years (2012-2016). The study conducted a census of all the 12 firms. The study is going to employ a dynamic panel data regression model using Eviews Software. Panel data model is as follows;

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \epsilon_{it} \dots \dots \dots 3.1$$

Where;

$Y_{it}$  = Financial Performance (ROA)

$X_{1it}$  = Debt ratio of firm i at time t

$X_{2it}$  = Firm size of firm i at time t

$\beta_0$  = Constant

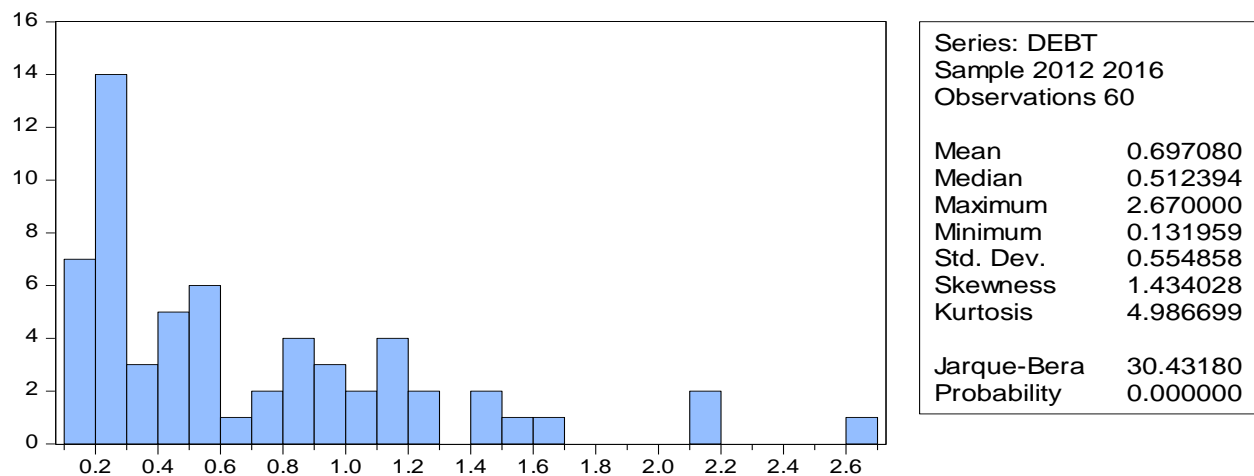
$\beta_{1...2}$  = Coefficient of the variables

$\epsilon_{it}$  = Error term of firm i at time t

#### 4.0 Presentation, Discussion and Interpretation of Findings

##### 4.1 Descriptive Statistics

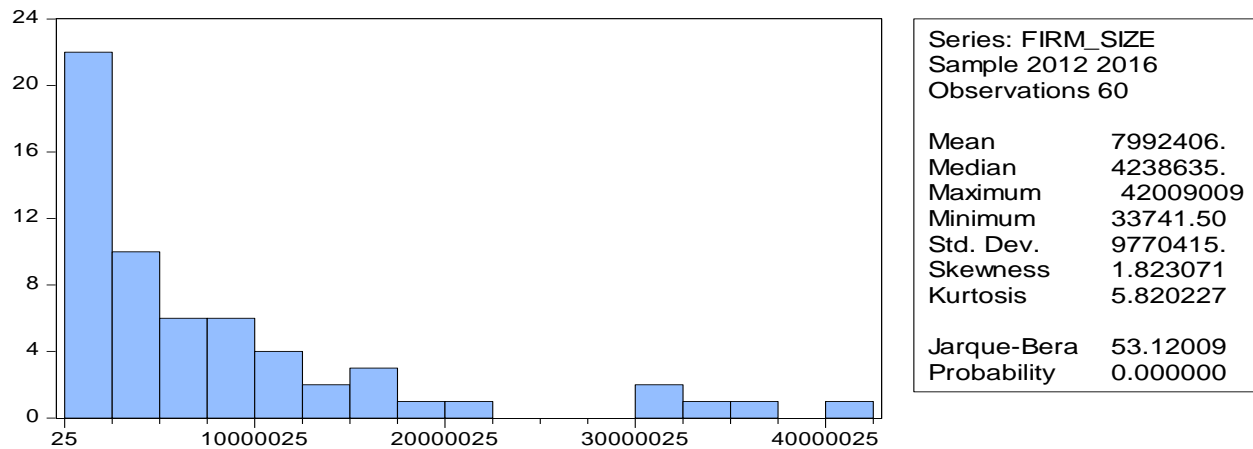
This section provides a summary of the data obtained for each of the variables in this study. The descriptive statistics employed were; mean, median, maximum and minimum values, standard deviation, skewness, kurtosis, and the results of the Jarque-Bera test for normality. These statistics are discussed in figure 1 and figure 2.



**Figure 1: Debt Ratio Descriptive Statistics**

Figure 1 shows that the minimum and maximum values of the debt ratio series were 0.131959 and 2.164613 respectively. This predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will disappear in case of liquidation, should rely more on equity financing. However a mean and a median of 0.697080 and 0.512394 respectively infer that more profitable firms should mean more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. A standard deviation of 0.554858 shows variations in the debt during the study period. The Jarque-Bera test had a probability value of 0.0000 which imply that at 5% significance level the null hypothesis of normality of the data is rejected and the data is considered to be significantly different from normal. However the data has a degree of skewness of 1.434028 and Kurtosis of 4.986699 which according to Kline (2011) is considered to be

approximately normal. Kline (2011) suggests that skewness and kurtosis values that lie within a range of  $\leq 3$  and  $\leq 10$  respectively are considered to be approximately normal. This data can therefore be subjected to parametric statistical analysis.



**Figure 2: Firm Size Descriptive Statistics**

From Figure 2, the maximum and minimum values for firm size series was KES 33741.50 and KES42009009 respectively while the mean and the median was KES7992406 and KES4238635 respectively. The Jarque-Bera test had a probability of 0.0000 which at 5% significance level imply that the data was not significantly different from normal and can be subjected to parametric tests. This fact is also supported by an almost equal value for the mean and the median. A standard deviation of KES 9770415 shows variability in firm size during the measurement period. The data has a degree of skewness of 1.823071 and Kurtosis of 5.820227 which according to Kline (2011) is considered to be approximately normal. Kline (2011) suggests that skewness and kurtosis values that lie within a range of  $\leq 3$  and  $\leq 10$  respectively are considered to be approximately normal. This data can therefore be subjected to parametric statistical analysis.

#### 4.2 Model Specification and Output

From the Hausman test done, a fixed effects panel regression model was found to be the most suitable estimation model. The model was estimated on the Eviews software and the results are shown in Table 1.

**Table 1: Panel Least Squares Regression Output**

Dependent Variable: ROA

Sample: 2012 2016

Cross-sections included: 12

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.411588	0.157508	-2.613122	0.0124
DEBT	-0.401967	0.066923	-6.006392	0.0000
LOG FIRM SIZE	0.080114	0.019610	4.085403	0.0002
Effects Specification				
Cross-section fixed (dummy variables)				
Period fixed (dummy variables)				
R-squared	0.748696	Mean dependent var		0.067926
Adjusted R-squared	0.646978	S.D. dependent var		0.204700
S.E. of regression	0.121624	Akaike info criterion		-1.132443
Sum squared resid	0.621278	Schwarz criterion		-0.504140
Log likelihood	51.97330	Hannan-Quinn criter.		-0.886679
F-statistic	7.360482	Durbin-Watson stat		2.320669
Prob(F-statistic)	0.000000			

$$Y = -0.411588 - 0.401967X_1 + 0.080114X_2$$

Where;

Y = Financial performance (Return on Assets)

X<sub>1</sub> = Debt ratio

X<sub>2</sub> = Firm size

The first objective of this study was to establish the effect of debt ratio on financial performance of consumer goods firms listed on the NSE. The results from Table 1 showed that debt ratio had a negative coefficient of -0.401967 and a t-statistic of -6.006392. The p-value of 0.0000 suggests that the relationship is statistically significant at 5% significant level since the value is lower than the critical p-value of 0.05. The null hypothesis is debt ratio does not have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. The hypothesis was tested using t-value. The null hypothesis was therefore rejected. The study adopted the alternative hypothesis that debt ratio have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. This was supported by a calculated t-statistic of -6.006392 which is greater than the critical t-statistic of 1.96. The study therefore concluded that a significant negative relationship exists between debt ratio and financial performance of listed at the Nairobi Securities Exchange. From the results, it is

expected that it is consistent with the Traditional Theory of Capital Structure that that optimal level of leverage is attained when the cost of capital is minimized. This has an implication of maximizing the value of the firm (Brealy & Myers, 1988). This happens since at lower levels of debt, increasing leverage does not raise the cost of debt and hence by replacing equity with debt, the firm value is improved. The results are in agreement with Ahmed Sheikh and Wang (2013) that debt has negative relation with profit. Goyal (2013) in India found that short term debt has positive impact on profitability. While long term has negative impact. The negative effect of financial structure variables: total debt to total equity ratio and short term debt to total equity ratio tends to buttress that as result of agency conflict, performance of firms that are highly geared are negatively affected. The findings also were in conformity with the proposition of the pecking order theory that firm performance and financial structure are negatively correlated.

The second objective was to determine the effect of firm size (control variable) on financial performance of consumer goods firms listed on the NSE. The results from Table 1 showed that firm size had a positive coefficient of 0.080114 and a t-statistic of 4.085403. The p-value of 0.0002 suggests that the relationship is statistically significant at 5% significant level since the value is lower than the critical p-value of 0.05. The null hypothesis is firm size does not have a statistically significant effect on financial performance of consumer goods firms listed on the NSE. The hypothesis was tested using t-value. The null hypothesis was therefore rejected. The study adopted the alternative hypothesis that firm size has a statistically significant effect on financial performance of consumer goods firms listed on the NSE. This was supported by a calculated t-statistic of 4.085403 which is greater than the critical t-statistic of 1.96. The study therefore concluded that a significant positive relationship exists between firm size and financial performance of listed at the Nairobi Securities Exchange. It was therefore concluded that firm size has a significant positive effect on the financial performance of listed at the Nairobi Securities Exchange. The results are consistent with resource Based View Theory by Penrose (1959) who argued that a firm's superior performance is achieved when the resources are controlled by the firm. Resources have been found to be important antecedents to products and ultimately to performance (Maxfield, 2007). Larger firms enjoy the benefits of economies of scale and scope, they are stronger, more resilient, and tend to be more diversified (Gu, Lee, & Ro-sett, 2005). The results are also in agreement with Akinyomi & Olagunju (2013) that firm size, both in terms of total assets and in terms of total sales, has a positive effect on the profitability. Another study of Velnampy and Nimalathan (2007) indicated that sales are positively associated with profitability ratios except ROE. The results are also in agreement with Dioha, Mohammed and Okpanachi (2018) that firm size and sales growth have significant effects on profitability.

Table 1 shows that the model was a good fit for the data. The adjusted R-squared of 0.748696 indicate that 74.87% of the variation in the dependent variable is explained by changes in the explanatory variables. Thus the model had a high explanatory power. The model had an F-statistic of 7.360482 with a p-value of 0.0000 showing that the model as a whole was significant and that at least one coefficient was different from zero. The Durbin-Watson statistic of 2.320669 was within the acceptable range of 1.5 to 2.5 (Field, 2009) for the absence or near absence of the problem of serial correlation in the data.

## **5.0 Conclusions**

From the findings of the study debt ratio and firm size were found to be important aspects of capital structure influencing financial performance of consumer goods firms listed on the NSE. A significant negative relationship between debt ratio and financial performance shows that companies that have high cash flow and profitability, increasing of debts can be used as a tool of reducing the scope for managers until resources of company may not be waste as a result of their individual purposes. Choice of capital structure may help mitigate the agency. High leverage reduces agency cost by constraining or encouraging managers to act more responsibly in the interest of the shareholders by reducing cash flows available for spending to managers. Therefore, we expect high earnings where debt ratios are high.

A significant positive relationship between firm size and financial performance of consumer goods firms imply that in accordance with the trade-off theory large firms face lower risks due to their diversity and low cash flow uncertainties. Firm's superior performance is achieved when the resources are controlled by the firm. Resources have been found to be important antecedents to products and ultimately to performance. Larger firms enjoy the benefits of economies of scale and scope, they are stronger, more resilient, and tend to be more diversified. Firm size, either in total assets or total sales, has a positive effect on the profitability.

## **6.0 Recommendations of the Study**

From the significant negative relationship between debt ratio and financial performance of consumer goods firms listed at NSE. The study recommends a balance when financing a firm through either debt or equity. The study recommends that NSE listed consumer goods firms with high levels of current assets should consider using more equity to finance their daily operations. Since debt ratio significantly impact on firms' financial performance, consumer goods firms in the NSE should determine the appropriate debt-equity mix that will impact positively on their financial performance.

Firm size was found to have a positive relationship with financial performance of consumer goods firms listed at NSE. The study recommends prudent use of firms' resources to ensure that firms' goals and objectives are attained. This way a firm can increase its revenue base. Large firms are associated with high profits as they enjoy economies of scale due to their mass production which gives them a competitive advantage over small firms. They also have higher market share than their counterparts due to their penetration giving them a competitive advantage.

## REFERENCES

- 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.
- Ahmadimousaabad, A., Bajuri, N., Jahanzeb, A., Karami, M., & Rehman, S. (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*, 1(1), 11-18.
- Ahmeti, F., & Prenaj, B. (2015). A critical review of Modigliani and Miller's theorem of capital structure. *International Journal of Economics, Commerce* 3(6),914-924
- Al-Tally, H. A. (2014). *An investigation of the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies*. Unpublished Doctoral Dissertation. Victoria University.
- Anić, I. D., Rajh, E., & Teodorović, I. (2009). Firms' characteristics, Strategic Factors and Firms' performance in the Croatian Manufacturing Industry. *Ekonomski pregled*, 60(9), 413-431.
- Barbosa, N., & Louri, H. (2005). Corporate performance: Does ownership matter? A comparison of foreign-and domestic-owned firms in Greece and Portugal. *Review of Industrial Organization*, 27(1), 73-102.
- Bontempi, M. E. (2002). The dynamic specification of the modified pecking order theory: its relevance to Italy. *Empirical Economics*, 27(1), 1-22.
- Brealey, R. A., Myers, S. C., Allen, F., & Mohanty, P. (2012). *Principles of corporate finance*. Tata McGraw-Hill Education.
- Chandrapala, P., & Knápková, A. (2013). Firm-specific factors and financial performance of firms in the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 243(7), 2183 – 2190
- Chitiavi, M. S., Musiega, M. G., Alala, O. B., Douglas, M., & Christopher, M. O.(2013). Capital Structure and Corporate Governance practices. Evidence from Listed Non-Financial



- Firms on Nairobi Securities Exchange Kenya. *IOSR Journal of Business and Management* 10(2), 08-16
- Cline, W. R. (2015). Testing the Modigliani-Miller theorem of capital structure irrelevance for banks.
- DeAngelo, H., & Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of financial economics*, 8(1), 3-29.
- Charles, D., Ahmed, M. N., & Joshua, O. (2018). Effect of Firm Characteristics on Profitability of Listed Consumer Goods Companies in Nigeria. *Journal of Accounting, Finance and Auditing Studies*, 4(2), 14-31.
- Doğan, M. (2013). Does firm size affect the firm profitability? Evidence from Turkey. *Research Journal of Finance and Accounting*, 4(4), 53-59.
- Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of financial economics*, 67(2), 217-248.
- Hasan, M. B., Ahsan, A. M., Rahaman, M. A., & Alam, M. N. (2014). Influence of capital structure on firm performance: Evidence from Bangladesh. *International Journal of Business and Management*, 9(5), 184.
- Hausman, J.A. (1978). Specification Tests in Econometrics. *Econometrica*, 46(6), 1251-1271.
- 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.
- Kakanda, M., Bello, A., & Abba, M. (2016). Effect of Capital Structure on the Performance of Listed Consumer Goods Companies in Nigeria. *Research Journal of Finance and Accounting*, 7 (8), 211-219
- Karani, M. A. (2015). *The Effect of Capital Structure Decisions On Financial Performance Of Firms Listed Under Energy And Petroleum Sector At The Nairobi Securities Exchange* (Doctoral dissertation, University Of Nairobi).

- Kubai, F. B. (2016). *The Effect of Capital Structure on the Financial Performance of Manufacturing Firms in Kenya*. Unpublished Thesis.
- Malik, H. (2011). Determinants of insurance companies' profitability: An analysis of insurance sector of Pakistan. *Academic Research International*, 1(3), 315-321.
- Mauwa, J., Namusonge, P. G., & Onyango, P. S. (2016). Effect of capital structure on financial performance of firms listed on the Rwandan stock exchange. *European Journal of Business, Economics and Accountancy*, 4(4), 2056-6018.
- Mburu, S. M., (2015). Impact of Capital Structure on Financial Performance; Evidence from Non-Financial Firms Quoted at the Nairobi Securities Exchange in Kenya, *Academic Research International* 5(7) 45-67
- Miller, M. H. (1977). Debt and taxes. *The Journal of Finance*, 32(2), 261-275.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American economic review*, 53(3), 433-443.
- 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), 534-550.
- Mwangi, L. W., Makau, M. S., & Kosimbei, G. (2014). Relationship between capital structure and performance of non-financial companies listed in the Nairobi Securities Exchange, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics*, 1(2), 72-90.
- Myers, S. C. (1984). The capital structure puzzle. *The journal of finance*, 39(3), 574-592.
- Nassar, S. (2016). The impact of capital structure on Financial Performance of the firms: Evidence From Borsa Istanbul. *Journal of Business and Financial Affairs*, 5(173), 2167-0234.

- Nwaolisa, E. F., & Chijindu, A. A. (2016). The Effect of Financial Structure on the Performance of Nigeria Consumer Goods Firms. *Journal of Scientific Research & Reports*, 10(4), 1-15.
- Ogebe, P., Ogebe, J., & Alewi, K. (2013). *The Impact of Capital Structure on Firms' Performance in Nigeria*.
- Omukaga, K. O. (2017). *Effect Of Capital Structure On Financial Performance Of Firms In The Commercial And Service Sector In The Nairobi Securities Exchange For The Period 2012-2016* (Doctoral dissertation, United States International University-Africa).
- Pandey, I. M. (1999). *Financial Management*, Vikas Publication House Pvt. Ltd. 8 th Edition. New Dehli.
- Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences*, 65(4) 156-166.
- Samour, S., & Hassan, L. (2016). *Capital Structure and Firm Performance: Did the Financial Crisis Matter? A cross-industry study*.
- Samuel, D. K. (2016). *Effects of capital structure on financial performance of commercial banks in Kenya* (Doctoral dissertation).
- Titman, S. (2002). The Modigliani and Miller theorem and the integration of financial markets. *Financial Management*, 101-115.
- Zoppa, A., & McMahon, R. G. (2002). Pecking order theory and the financial structure of manufacturing SMEs from Australia's business longitudinal survey. *Small Enterprise Research*, 10(2), 23-41.