## EFFECT OF FINANCIAL LEVERAGE ON FINANCIAL PERFORMANCE OF COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

PHYLLIS MUTHONI KAARA

# A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

**DECEMBER, 2018** 

### **DECLARATION**

I declare that this research project is my own work and has not been submitted for any degree or examination in any other University.

Signature.....

Date.....

Phyllis Muthoni Kaara D61/85514/2016

This research project has been submitted for examination with my approval as University Supervisor

Signature.....

Date.....

Dr. Winnie Nyamute Senior Lecturer, Department of Finance and Accounting

School of Business

University of Nairobi

# DEDICATION

This research is dedicated to my husband Francis Kung'u and sons Allan and Warren.

### ACKNOWLEDGEMENT

I sincerely give thanks to the Almighty God for the gift of Life and good health throughout this research. Special thanks to my parents Julius Kaara and Damaris kaara for the support they offered me throughout my education. Much appreciation also yo my husband Francis Kung'u for his unwavering support both moral and financial. I wish to also extend my thanks to my supervisor Dr. winnie Nyamute who tirelessly played a supervisory role to make this research a success.

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# LIST OF ABBREVIATIONS

CDSC -	-	Central Depository & Settlement Corporation Limited
CMA	-	Capital Markets Authority
IRA	-	Insurance Regulatory Authority
MM	-	Modigliani& Miller
NPM	-	Net Profit Margin
NSE	-	Nairobi Securities Exchange
ROA	_	Return on Assets
ROE	-	Return on Equity
SPSS	-	Statistical Package for Social Sciences

UK - United Kingdom

### ABSTRACT

The choice of financing is vital in the overall survival in the competitive business environment. The main objective of this study was to determine the effect of financial leverage on the financial performance of the companies listed at Nairobi Securities Exchange. This study covered five years from 2013 to 2017. 20 companies which were selected from all the segments at NSE formed the sample for the study. The study utilized descriptive research design in the analysis. Secondary data was analyzed on the basis of the mean and the F test statistic was computed at 5% significance by regression analysis. Analysis of Variance (ANOVA) was conducted. From the findings, the F statistic was 2.723 and was found to be significant, efficiency had a t-value of -0.740, firm size had a t-value of -1.482, liquidity had a t-value of 0.314 which was insignificant and debt ratio had a t-value of 2.634 which was insignificant. The study concluded that financial leverage affects the financial performance of the companies listed at the Nairobi Securities Exchange. The study recommends the prudent use and management of debt financing, this will minimize the exposure of the firms to risks which can negatively affect the performance. Proper use of debt increases the value of the companies. Finally, the study recommends a study be done on informal sectors for example the small and medium enterprises since they are mostly faced with financial challenges which require debt financing to determine whether it affects their performance.

### **CHAPTER ONE: INTRODUCTION**

#### 1.1 Background of the Study

Financing decision of the business entities is critical since it determines the profitability and survival in the long run. Of all the major functions in corporate finance, financing decision is regarded as the most crucial function compared to other functions since it forms the basis of the acquisition and allocation of the investment funds required by the firms. The financing choice of the firms is essential because it will determine their overall financial performance. The choice of debt financing by firms can be advantageous or can lead to financial distress depending on how the finances are utilized by the financial performance. Therefore, financial managers of an organization got to be cautious while settling on money related choices. Financial leverage utilized by corporation is normally intended to acquire more as far as fixed charges on funds is concerned than on costs (Aliu, 2010).

Pecking order theory asserts that firms will prefer internal sources of funds to external sources of funds (Myers, 1984). It assumes that firms do not target debt financing but instead it prefers external sources of funds when internal funds are insufficient. The theory further maintains that the firms which are profitable is as a result of prudent use of debt financing. Trade off theory by Black and Sholes (1974) predicts that the company will select a mix of debt and equity finances so as to balance the cost and benefit of debt. Therefore, the optimal capital structure will be where the benefits are maximized and the cost minimized. This theory assumes that there exist benefits associated with leverage with the capital mix applied till the attainment of an optimal capital structure is achieved.

Listed companies are majorly equity and debt financed, the utilization of debt is useful since interest payments are not taxed and that may prompt increasing firm value and the financial performance. When firms use debt to finance their operations, they are likely to profit more on condition that debt is well spent without any misappropriation. Debt increases the financial power where firms are able to finance their operations smoothly without interruptions (Nawaiseh, 2015).

#### **1.1.1 Financial Leverage**

Financial leverage also known as trading on the equity is a monetary strategy that incorporates the use of extra borrowed funds to maximize investment returns (Al-Otaibi, 2013). Financial leverage involves the utilization of equity and debt financing by the firms to finance their assets (Rehman, 2013). According to Burakat (2012), financial leverage involves the utilization of external funds in backing the business entities aimed at improving their profitability. The returns on investment of the shareholders can be increased by use of debt financial which most occasions yield returns as far as tax imposed is concerned on borrowing.

Firms use financial leverage so as to expand their profits on investment. Over dependence of leverage can be a calamity if not very much managed. Emkwe (2013) investigated the effect of leverage on productivity of Indonesia banks, debt ratio was used as a proxy of leverage. Oduor and Mutisya (2015) in their studies employed debt ratio as the proxy of leverage and working capital as the control variable. A study by Galpin (2014) in Peru used debt ratio as the proxy of debt finan cing. The application of financial leverage leads into two distinctive outcomes, either a gain or exposure to risks.

#### **1.1.2 Financial Performance**

According to Kajirwa (2015), financial performance involves the process of measuring all the policies and activities of the companies in monetary terms. According to Yahaya and Lamidi (2015), financial performance entails the activities of the measurement of the efficient utilization of the available resources of the companies. The financial performance is normally reflected in the firm's profitability ratio. Business entity's profits has always been recognized as the main indication of productive business ventures.

Financial performance is in summary a crucial objective that firms especially the profitoriented firms desire or aim at to achieve. Business ventures can be evaluated in terms of net income generation activities in relation to amount of capital invested. It is of great significance to the firms since it communicates the past performance to various interested parties for example the investors, financiers and creditors. It is assessed by return on assets (Kajirwa, 2015).

#### 1.1.3 Financial Leverage and Financial Performance

How firms utilize debt is critical especially in a competitive environment which is prone to risks within and outside the firms. Debt attracts finance charge hence critical analysis of debt is paramount before the decision is made on how and how much of debt is desired by an entity. Theoretically the pecking order theory gives the insights on how best to approach the issues of debt in order to better the financial results and it recommends that firms give a priority to internal finances since they are not risky and then once depleted the external sources is considered in so doing the firm can reduce the risks associated with debt financing (Mule & Mukras, 2015).

Abubakar and Hafafari (2016) analyzed how leverage affected the performance of the firms. The investigation showed that leverage indeed contributes to better financial results. Funguni (2015) examined the ultimate effect of performance as a result of leverage and confirmed a positive connection between the growth of the sales, debt to equity ratio and profit for assets.

#### 1.1.4 Companies Listed at the Nairobi Securities Exchange

Nairobi Securities Exchange is the sole body mandated to list corporations in Kenya. Incorporated in 1954, NSE is a body corporate established under the companies Act and it comprises licensed stock brokers as the shareholders while NSE is publicly listed, it is mandated to facilitate and supervise transactions carried out by investors and supervise transactions carried out by investors of the listed companies. CMA is charged with the role of regulating and licensing capital market players such as stock brokers, the securities exchange and the listed entities. As at 31<sup>st</sup> December 2017, 72 firms were listed in the NSE across 10 sectors.

As indicated by the NSE site, its market capitalization has immensely enhanced hitting Kshs. 1930.58 billion as of December 2017. Turnover at the NSE expanded remarkably from Kshs. 2.90 billion in the year 2014 to Kshs. 95 billion in the year 2016. The quantity of CDSC accounts that were opened expanded from 80,000 in the year 2015 to more than 1,000,000 in the year 2017 (NSE, 2017). There exist 2 indices used to gauge the performance in the NSE. NSE 20 share index is a measure that is utilized to track the best

performing 20 companies in Kenya that are listed at the NSE. Most companies quoted at the NSE are financed by debt, debt financing has contributed to the improved financial performance as evidenced in high profits. However, those companies which have not managed their debt financing have reported heavy losses due to financial distress for example Uchumi limited.

#### **1.2 Research Problem**

Money related leverage and financial performance are principal issues in corporate finance. According to the pecking order hypothesis, an ideal structure of capital is determined through an extreme balancing of the costs that are identified with debt financing and tax advantage for utilization of obligation fund. Jensen and Meckling (1976) implies that money related use influences the company's capital structure in that it affects managers financial decisions and that these goals have a resulting impact on the corporate performance.

In Kenya, listed companies have had better performance however others have encountered declining fortunes which has been attributed to lack of sufficient skills required to achieve optimal financing choices (Githui, 2015). As per Mwangi, Makau and Kosimbei (2014), most fall of numerous monetary foundations or firms in Kenya has been because of financing issues which ranges from financing plans to sourcing of finances.

The association between leverage and performance of firms with the basis of finance has been analyzed extensively. Emkwe (2013) discovered that leverage had a negative impact hence low debt ratios improved commercial banks productivity. Bakir (2014) was interested on the financial performance of firms in Tehran stock trade and found that they reported better results as a result of debt. The study also found a significant positive association with return of value. Another study by Burakat (2014) in Saudi pharmaceutical firms concluded that the performance greatly declined as a result of debt which was utilized in financing their activities.

Kimani (2017) concluded that financial leverage significantly affects the financial performance. Mutisya (2015) concluded that debt financing has no significant effect on the financial performance. The main shortcomings of the above studies, were the small samples and skewed selections based on what the firms were engaged in. An important aspect of this study was its large sample size and longer period of study which was applied. Therefore, the current study sought to answer this research question; what is the effect of financial leverage on the financial performance of the companies listed at Nairobi Securities Exchange?

#### **1.3 Research Objective**

To determine the effect of financial leverage on the financial performance of companies listed at Nairobi Securities Exchange.

#### **1.4 Value of the Study**

The findings sensitizes industry Practitioners involved in making financing decisions by a vital reference point on the need by firms to determine and maintain optimal financing framework necessary to cushion firms against risks of finance cost.

The study findings are also of assistance to the CMA since it forms the basis in formulation of adequate mechanisms which are necessary in monitoring and in the evaluation of how entities fund their operations. The research adds to the growing literature on financial leverage and financial performance. Further studies can be done in comparison with the findings of this research by acting as a reference point.

### **CHAPTER TWO: LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter covers the theories and empirical works on firms' financial performance, determinants of financial performance, conceptual framework and ends with a summary of literature review.

#### **2.2 Theoretical Review**

This study was based on three theories which are related to financial leverage namely; Pecking order theory (Myers, 1985), Trade off theory (Black &Scholes, 1974) and Modigliani and Miller theory (Modigliani & Miller, 1958).

#### **2.2.1 Pecking Order Theory**

This theory was founded by Myers (1985). It assumes that firms do not target debt ratio but instead it prefers external sources of funds when internal funds are insufficient. The major reason for debt is to expand operations. Firms normally seek external financing to finance projects with positive net present values. Therefore, according to this theory, there's no well-defined target debt ratio implying that debt ratio changes when there's an imbalance in the initial cash flows (Myers, 1985).

Held income is typically given first need amid financing since it is viewed as most secure by the organizations. The pecking order theory has been criticized severally, as per the Basikin (2001), this theory depends on the general financing expenses of a firm whereby firms will dependably need to utilize the financing model with insignificant expenses to maximize the value of the organizations at the expense of other components.

#### 2.2.2 Trade-off Theory

This was founded by Black and Sholes in 1974. This theory clarifies the differences between the cost of money related to distress and the tax benefit related to the utilization of debt by the companies. It recommends that the organization trades off a number of aspects including exposure of the organization's liquidation and agency cost against interest tax shield advantage. By so doing, the last capital structure adopted by the organization is a trade-off between advantages and cost. This infers that there is a target of optimal debt to equity ratio.

Trade off theory predicts that the company will select a composition of debt and equity finances so as to balance the cost and benefit of debt. Therefore, the optimal capital structure will be where the benefits are maximized and the cost minimized. This theory assumes that there exist benefits associated with leverage with the capital mix applied till the attainment of an optimal capital structure is achieved. A high level of debt in business entities is very risky since the investors will not be interested in such a venture. However, researchers on trade off theory concluded mixed results. A research by Titman (1990), affirms that the most profitable firms don't borrow more that is not consistent with the real trade off prediction that the most profitable firms should go for more debt so that tax liabilities are reduced.

#### 2.2.3 Modigliani and Miller Theory

According to Franco Modigliani and Merton Miller (1958), capital structure changes will have no effect on the value of the firms. At the onset, they found that the traditional perspective unacceptable in part because it seemed unsupported by the theoretic frameworks. In particular, they found little reasons apart from some marketing perceptions altering the value of that firm. After all, neither the earnings streams nor the inherent risk could alter the value because it would remain the same under the same industries.

A leveraged firm must have debt finance component, unlevered firm does not have debt finance component which means it's financed solely by equity. At disequilibrium a levered firm may appear to have a higher value which according to MM will not persist for long at this firm and the levered firm is overvalued and therefore the investors in this company will attempt to make switch from a levered firm to unlevered firm. Such investors will sell shares of a levered, borrow an amount which is equivalent to the amount which the management of the firm had borrowed on his behalf and then invest the entire cash proceeds in the levered firm (Modigliani & Miller, 1958).

#### **2.3 Determinants of Financial Performance**

Profit maximization and cost minimization are the major objectives of the firms. This can be achieved by improved financial performance which is influenced by the following factors; financial leverage, profitability, liquidity and firm size.

#### **2.3.1 Financial Leverage**

Financial leverage also known as trading on the equity is a monetary strategy that incorporates the use of extra borrowed funds to maximize investment returns (Al-Otaibi, 2013). Jensen (1986) contended that the moral hazard conduct is diminished throughout financing by decreasing income at the managers' disposal hence expanding the pressure to perform and this enhances the performance of the firm monetarily. Thus, firms with high leverage are in great position to fiscally perform better. Recent studies have concluded that high leverage diminishes the conflict amongst managers and shareholders leading to increase in performance and eventually a positive relationship develops.

#### **2.3.2 Profitability**

The performance of any business entity is depicted in its profitability. Higher profitability indicates the company is financially stable and can finance its operations without depending on leverages. Further, the bankruptcy and agency costs have a direct relationship with leverage since increase leverage leads to increase in agency and bankruptcy costs. Increased profits imply increased earnings to be shared among the shareholders as a result of improved financial performance.

#### 2.3.3 Liquidity

Liquidity estimates the degree to which assets are exchanged at the market with no impact on the cost of the asset. The survival of any business entity depends totally on liquidity. The success of any business element depends completely on liquidity. It is the obligation of the management to guarantee that the funds are accessible on request. Along these lines, the administration has an obligation to address the accompanying inquiries. How much liquid money ought to be kept up, at what time will the organization need this money, how economic is it to keep up that level of liquid money and how safe is this money at the institution or when cash is being transported (Gibbs, 2007). At the point when a business entity has enough liquid assets, it is normal that the financial performance is better than a business element with insufficient liquid (Gibbs, 2007).

#### 2.3.4 Firm Size

Mathur and Kenyon, (1997) in their studies concluded that big firms have a better chance to access finances compared to the smaller firms meaning when the organization is large it generates more revenue hence being in a better and stable financial position. With their big size they are also able to diversify their assumed risks effectively and respond faster to any changes in the operating environment and market. On the contrary smaller firms generates smaller revenue hence making the firm's financial position not to be stable and hence unable to access the financial resources and lower cost hence low prices of the shares.

#### **2.3.5 Firm Efficiency**

Efficiency is the better deployment of the resources by the firms which ensures the costs are minimal, increasing income and thus maximizing their profits. To measure efficiency, the firm can use the assets turnover ratio, that measure how much the investment of assets generate, or total assets growth. The higher the ratio, all factors held constant, the more efficient the firm.

#### **2.4 Empirical Review**

Kamau (2014) conducted a study to investigate how long-term debt affects the value of insurance firms in Kenya in the period 2010 and 2013. A sample of 18 insurance companies was identified for analysis from a population of 34 insurance firms. The study utilized linear regression analysis. The period of the study was short hence study was not conclusive. The study concluded that the use of debt financing significantly influenced the value of the firms positively.

Emkwe (2013) investigated the effect of leverage on productivity of Indonesia banks. A sample of 23 commercial banks was used for analysis from a population of 47 commercial banks. The research entirely used secondary data for analysis and it was obtained from the central bank of Indonesia. The examination discovered that leverage had a negative impact hence low debt ratios improved commercial banks productivity.

Burakat (2014) investigated the effect of leverage on the profitability in Saudi pharmaceutical firms. 340 pharmaceutical firms were considered however just 152 firms were chosen as the sample for the investigation. The study used secondary data from the websites of the firms and linear regression model which was well organized and efficient. From the study, he confirmed that the use of debt led to declined profitability.

Kasinwa (2015) evaluated the effect of debt on the financial performance of Kenyan commercial banks listed at NSE. The period of study was from 2010 to 2014. The sample of the study was 23 banks out of a total population of 43 banks. The study also employed the linear regression model. The study established that debt use led to declined performance.

Abubakar and Hafafari (2016) analyzed the effect of leverage on firm's performance in India. 300 firms were targeted. Due to time and resource constraints, a sample of 215 firms was selected for the study. The methodology used was well structured. The investigation showed that leverage had a critical positive relationship to the company's performance.

Galpin (2014) conducted a study on the impact of debt financing on the value of the pharmaceutical firms in Peru. The time of study was from 2000 to 2010. 258 pharmaceutical firms were considered but only 98 firms were selected for study. From the study, he concluded that the long-term debt was significant determinant of the firm value.

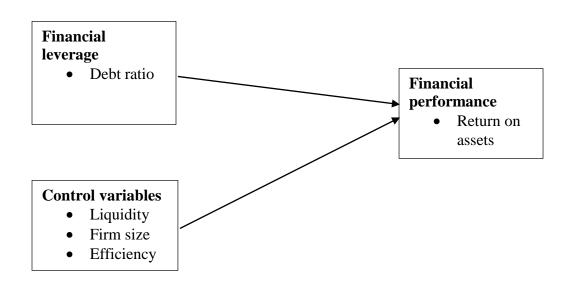
Mutisya (2015) investigated the effect of debt financing on the financial performance of selected companies listed on the NSE between 2010 and 2014. A sample of 14 selected companies was chosen for the study out of the 53 listed companies. The study relied on the secondary data which was readily available. The study also used the multiple regression model in the analysis. The study concluded that leverage significantly affected the value of the listed companies at the NSE.

Halt (2011) sought to determine the profitability of pharmaceutical companies in UK which were highly levered between 2005 to 2010. A sample of 103 firms was chosen from 314 pharmaceutical firms. The study utilized the secondary data for analysis. The study likewise utilized several regression models to demonstrate the association between the study variables. He inferred that leverage did not have any significant impact on the profitability and general value of the pharmaceutical companies in UK.

#### **2.5 Conceptual Framework**

#### **Independent Variable**

**Dependent Variable** 



**Figure 2.1: Conceptual Framework** 

#### 2.6 Summary of the Literature Review

The following theories were reviewed in this study; Pecking order theory (Myers, 1985), trade off theory (Black & Scholes, 1974) and Modigliani and Miller (1958). Empirical literature reviewed include; Kamau (2014), Emkwe (2013), Burakat (2014), Mutisya (2015), Galpin (2014), Halt (2011), Funguni (2015) and Abubakar and Hafafari (2016). Determinants of financial performance were also highlighted. It was noted that the sample size used in some studies was limited and the period of study was short hence the need for this study.

### **CHAPTER THREE: RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter covers the research methodology that was used in conducting the study. They include, the research design, population, sample, data collection, validity and data analysis.

#### **3.2 Research Design**

Research design involves the techniques used to lead the research. This study utilized the descriptive research design since it helped in the depiction of the problem under study. Descriptive research design is appropriate in acquiring data about the current status of variables of interest or conditions in a circumstance. It likewise includes the correlation which researches the connection between the factors. This research design outlines the different factors under the study (Mugenda, 2005).

#### **3.3 Population**

A population entails a collection of items to be investigated (Mugenda, 2005). 65 listed companies formed the population. A sample of companies 20 companies was analyzed.

#### 3.4 Data Collection

This study used secondary data in the analysis which was accessed from the respective company from their financial statements in the websites because the secondary data is readily available. Data was collected for a 5-yearperiod from 2013 to 2017. Data that was collected included, net income, total liabilities, net assets, total assets, current assets, gross income, current liabilities and total assets. All on annual basis.

#### **3.5 Data Analysis**

According to Mugenda (2005), data analysis is the way toward giving and order to the data gathered. Secondary data was gathered and analyzed utilizing the descriptive statistics in terms of mean values.

#### 3.5.1 Analytical Model

To show the relationship between the independent and dependent variables, the following multiple linear regression model was used;

 $Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + e$ 

Where Y was the financial performance= ROA

 $\beta_0$  is the free term of the equation.  $\beta_1, \beta_2, \beta_3 and \beta_4$  are the coefficients of independent variables and they measure the responsiveness of Y to unit change in variable x.

 $x_1$  = Debt ratio = Total liabilities/ total assets

 $x_2 =$  Efficiency= Gross income/net assets

 $x_3$  = Firm size = Natural logarithm of total assets

 $x_4$  = Liquidity = current assets/current liabilities

e = the error term

#### **3.5.3 Test of Significance**

An F-test and T- test at 5% significance level was conducted to determine the strength of the model.

# CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

### **4.1 Introduction**

This chapter covers the analysis of the data that was collected, the findings of the study, interpretation and discussion of results.

#### **4.2 Descriptive Statistics**

 Table 4.1: Descriptive Statistics

The variables analyzed here included the debt ratio, firm size, liquidity, efficiency and return on assets. The means, standard deviations, the minimum values, the maximum values of the variables under study were tabulated as shown below.

	Ν	Minimum	Maximum	Mean	Std. Deviation
Efficiency	100	-0.09	0.72	0.2341	0.14141
Firm size	100	19.05	26.06	22.3398	1.52680
Liquidity	100	0.06	8.47	1.7367	1.73374
Debt ratio	100	0.01	0.88	0.3020	0.23648
ROA	100	-0.12	0.47	.0715	0.08591

# **Descriptive Statistics**

From the findings, the minimum value of liquidity was 0.06 the maximum number was 8.47, the mean was 1.7367 and the standard deviation was 1.73374 which shows a large variations. The minimum debt ratio value was 0.01, the maximum value was 0.88, the

mean was 0.3020 and the standard deviation was 0.23648 which indicated a small variation in the debt ratio. The minimum firm size value was 19.05, the maximum value was 26.06, the mean was 22.3398 and the standard deviation was 1.52680 which indicate the large variations. The minimum value for efficiency was -0.09, maximum value 0.72, mean 0.2341 and standard deviation 0.14141 which implied very small variations in efficiency. The minimum value of return on assets was -0.12, the maximum value was 0.47 the mean was 0.0715 and the standard deviation was 0.08591 which shows very small variations.

#### **4.3 Correlation Analysis**

		Efficiency	Firm Size	Liquidity	Debt ratio	ROA
Efficiency	Pearson Correlation	1				
	Sig. (2-tailed)				u	
	Ν	100				
Firm size	Pearson Correlation	0.208	1			
	Sig. (2-tailed)	0.038				
	Ν	100	100			
Liquidity	Pearson Correlation	-0.029	-0.033	1		
	Sig. (2-tailed)	0.777	0.747			
	Ν	100	100	100		
Debt ratio	Pearson Correlation	-0.061	-0.006	0.067	1	
	Sig. (2-tailed)	0.548	0.953	0.510		
	Ν	100	100	100	100	
ROA	Pearson Correlation	-0.121	-0.165	0.055	0.264	1
	Sig. (2-tailed)	0.231	0.101	0.589	0.008	
	Ν	100	100	100	100	100

#### Table 4.2: Correlation Matrix

The results of the correlation analysis above show that a negative relationship exists between efficiency and ROA however the relationship is not significant. The correlation coefficient was -0.121 and the p-value was 0.231 which is greater than 0.05. The findings showed further that firm size is negatively related to ROA. The relationship was insignificant since the p-value was 0.101 which is greater than 0.05. Liquidity is positively related to ROA. The correlation coefficient was 0.055 and the p-value was 0.589 which is greater than 0.05 implying the relationship is not significant. Debt ratio is positively related to ROA. The correlation coefficient was 0.264 and the p-value was 0.008 which is less than 0.05 implying the relationship is significant.

#### 4.4 Regression Analysis

Table	4.3:	Model	Summary

				Std. Error of the
Model	R	R Square	Adjusted R Square	Estimate
1	.321	.103	.065	.08307

The value of the correlation coefficient from the table above is 0.321 which implies that a positive relationship exists between the study variables. The adjusted R square was 0.065 which implies that 6.5% of the influence of debt ratio, firm size, liquidity and efficiency was explained by the model.

		Sum of				
Mo	del	Squares	df	Mean Square	$\mathbf{F}$	Sig.
1	Regression	0.075	4	0.019	2.723	0.034
	Residual	0.656	95	0.007		
	Total	0.731	99			

**Table 4.4: Summary of One-Way ANOVA** 

The study confirmed the value of F statistic of 2.723, the significance value was 0.034 which is below 5% level of significance thus indicating the model was significant.

**Table 4.5: Regression Coefficients** 

		Unstandardized S Coefficients		Standardized Coefficients		
Mod	lel	В	Std. Error	Beta	t	Sig.
1	(Constant)	0.236	0.124		1.905	0.060
	Efficiency	-0.045	0.060	-0.074	-0.740	0.461
	Firm size	-0.008	0.006	-0.147	-1.482	0.142
	Liquidity	0.002	0.005	0.031	0.314	0.754
	Debt ratio	0.093	0.035	0.257	2.634	0.010

The regression equation above established that efficiency is inversely related to financial performance and the effect was not significant, firm size was confirmed to be inversely related to the financial performance and the effect was not significant, liquidity was confirmed to be directly related to the financial performance and debt ratio was confirmed to be directly related to the financial performance.

The standardized beta coefficient of liquidity was 0.031 meaning a small positive effect of the liquidity on the return on assets. The standardized beta coefficient of debt ratio was 0.257 which means that debt ratio has a weak positive effect on the returns on assets. The standardized beta coefficient of firm size was -0.147 which implies that firm size has a strong effect on the returns on assets. The standardized beta coefficient of efficiency was -0.074 indicating strong effect on returns on assets.

#### 4.5 Interpretation and Discussion of Results

The results of the descriptive statistics confirmed the firm size reported increased trend over the study period. The highest value was19.05 and the minimum value was 26.06. Debt ratio, liquidity, efficiency and return on assets posted mixed results. It implies that there was no a definite relationship between the number of years and the debt ratio, liquidity, efficiency and returns on assets. From the regression analysis results the research established a number of financial leverage variables that affect return on assets and they included debt ratio, liquidity, efficiency and firm size, and the intercept for all these factors was found to be 0.236 for the years analyzed. The four independent variables which were analyzed which included the debt ratio, liquidity, efficiency and firm size were able to explain their effect on the returns on assets up to 6.5% as shown by adjusted R square. This implies that the four independent variables inputs 6.5% on the returns on assets and the remaining 93.5% is contributed by the factors not studied.

This research found out that the coefficient of debt ratio was 0.093 meaning that debt ratio positively influences ROA. This means that, holding all other factors constant, as the debt ratio increases, financial performance increases. Firm size negatively affects the

financial performance this is evident form the value of the coefficient of -0.008. Liquidity impacts positively on financial performance since its coefficient was 0.002. Management efficiency influences ROA negatively since the value of coefficient was -0.045. In general, financial leverage affects the financial performance of the companies listed at NSE. This study concurs with the study by Nabageleka (2016) who concluded that financial leverage affects the financial performance of the companies listed at Uganda Securities Exchange.

# CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### **5.1 Introduction**

This chapter provides a summary, conclusion, recommendations for policy, limitations of the study and recommended areas for further research.

#### **5.2 Summary of the Findings**

The study established that financial leverage affects the financial performance of companies listed at NSE. A company will select a composition of debt and equity finances so as to balance the cost and benefit of debt. Organizations with higher obligation levels are more beneficial than those that are less levered. Debt ratio was found to have a positive effect on financial performance. A debt ratio above 100% indicates that, a firm has more debts than its assets. The higher the debt ratio, the higher the financial risk of the firm since it implies the firm is highly leveraged.

High debt ratio for a firm with a volatile cash flow would pose high financial risky as compared to a firm with stable cash flow. The fundamental aim in the management of any business entity is to ensure prudent sound strategies of current assets and current liabilities in a business entity, this will in turn improve the shareholder's wealth. To achieve the manageable debt ratio, business entities can adopt aggressive, moderate and conservative management policies. Under the aggressive policy, business entities employ more of short-term funds. This approach will bring about an increase in liquidity risk and cash flow challenges but there is the likelihood of return on assets increase since short term finances are cheaper. According to the results liquidity also affected financial performance positively. The livelihood of companies listed at NSE depends entirely on liquidity. Management must ensure that the finances are available on demand. Therefore, the management has a duty to address the following questions. How much liquid cash should be maintained, at what time will the institution be in need of this cash, how economic is it to maintain that level of liquid cash and how safe is this cash at the institution cash safe or when cash is in transit.

The size of the company can influence its financial performance negatively or positively. Large business entities can access most services at reduced costs due to their purchasing power for example finance, production and distribution compared to smaller companies who cannot afford the bulkiness of services. However, large firms incur extra costs of operations due to hiring of more employees. Efficiency had a negative effect on return on assets. Efficiency is better deployment of the resources aimed at increasing income and thus maximizing profits. However adoption of efficiency may demoralize managers who have personal interests as opposed to shareholders interest leading to poor financial performance.

The ANOVA was employed to determine how strong the model was in the analysis. Based on the analysis of the regression statistics, the research concluded that the four factors which include debt ratio, liquidity, efficiency and firm size affected the financial performance of companies listed at NSE. The four independent variables were able to explain their influence on the financial performance up to 6.5% and the rest is contributed by other factors not considered in this study meaning the model was significant.

#### **5.3 Conclusions**

From the study, debt ratio was confirmed to affect the financial performance and the correlation coefficient was found to be 0.264 which was significant because the P value of 0.008 is less than 0.05. A weak negative relationship exists between firm size and financial performance, the correlation coefficient was -0.165 and the relationship was insignificant since the p-value was greater than 0.05. A positive relationship exists between liquidity and financial performance, because the correlation coefficient was 0.055. The relationship was weak and insignificant since P value was 0.589 which is greater than 0.05. Efficiency correlated negatively with ROA since the correlation coefficient was -0.121 and a P-value of 0.231 indicating insignificance.

The ability of the companies listed at NSE to meet its obligations posted mixed results from the findings of the study hence there was no common trend for the ROA. Most companies listed at NSE are financed by debt which contributed to the improved financial performance as evidenced in high profits. However, those companies which have not managed their debt reported heavy losses. This calls for efficient management of debts by the companies to mitigate the losses at the same time improving the financial performance. It shows that the amount of own fund that was available in supporting the companies' business was changing over time. In conclusion, financial leverage affects the financial performance of companies listed at NSE. This is in agreement with Nabageleka (2016) who concluded that financial leverage affects the financial performance of the companies listed at Uganda Securities Exchange.

#### **5.4 Recommendations**

From the outcome of this research, the study recommends prudent use and management of debt financing. This will minimize the exposure of the firms to risks which can negatively affect the performance. Proper use of debt increases the value of the companies.

This study recommends the inclusion of qualitative variables in the analysis. Qualitative variables are pivotal on the financial performance. For example, timely delivery of customer orders and good corporate image.

More funds are key to conclusive studies. Therefore it is recommended that more funds be set aside for the research project which will cover the expenses during the research exercise.

Time is of value, it is recommended that enough quality time is provided for entire research process. Enough time will guarantee collection of data required, analysis and reporting of the outcomes.

#### 5.5 Limitations of the Study

The study had several limitations which included the difficulty in gaining access to the required data at the central place. This called for extra effort to acquire data from the multiple sources.

The time within which the study was conducted was not sufficient to obtain necessary permit to collect data from all the companies. time constraint the whole exercise was successful. More finances were required during the entire process especially to collect data and to obtain necessary materials which were crucial for entire exercise and also in data analysis. Money was spent at every stage of research process.

The model of analysis failed to capture qualitative data. Only quantitative data was captured by the model. Qualitative aspects are also critical since they directly affect the financial performance of the entities.

Not all the control variables were considered during the analysis. Only three control variables were studied namely; efficiency, firm size and liquidity. The inclusion of maximum control variable might yield different results.

#### 5.6 Suggestions for Further Studies

This study suggests that a similar study be conducted on the insurance companies to assess the significance of financial leverage. Insurance companies are entities which require more financing especially debt financing.

This study suggests that a similar study be conducted on the commercial banks since commercial banks are mostly debt finance especially the minimum reserve requirement which forces them to seek external financing.

A Study can be done on informal sectors for example the small and medium enterprises since they are mostly faced with financial challenges which requires debt financing to determine whether it can affect their performance.

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#### REFERENCES

- Abubakar, A. and Hafafari, M. (2016). Relationship between Financial Leverage and Financial Performance of Deposit Money Banks in Nigeria. *International Journal of Economics, Commerce and Management, 3(10), 759 778*
- Adenugba, A. A., Ige, A. A. & Kesinro, O. R. (2016). Financial Leverage and Firms' Value: A Study of Selected Firms in Nigeria. *European Journal of Research and Reflection in Management Sciences*, 4(1), 14-3
- Aivaziana, V. A., Geb, Y. & Qiu, J. (2005). The Impact of Leverage on Firm Investment:Canadian Evidence. *Journal of Corporate Finance* 11, 277–291
- Akbarian, S. (2013). The investigation Effect of Financial Leverage and Environment Risk on Performance firms of Listed Companies in Tehran Stock Exchange. *Journal of Applied Science and Agriculture*, 8(3), 249-255
- Akhtar, S., Javed, B., Maryam, A. &Sadia, H. (2012). Relationship between Financial Leverage and Financial Performance: Evidence from Fuel & Energy Sector of Pakistan. *European Journal of Business and Management*, 4(11), 7 – 17
- Akinmulegun, S. O. (2012). The Effect of Financial Leverage on Corporate Performance of Some Selected Companies in Nigeria. Canadian Social Science, 8 (1), 85-91.
- Aliu, N. O. (2010). Effect of Capital Structure on the Performance of Quoted Manufacturing Firms in Nigeria. *Unpublished Thesis. Ahmadu Bello University*

- Al-Otaibi, R. (2015). Impact of Financial Leverage on the Company's Financial Performance. Saudi Arabia. *Journal of Research* 12, 243–261
- Ayako. A., Kungu, G. & Githui, T. (2015). Determinants of the Performance of Firms Listed at the Nairobi Securities Exchange. Unpublished Thesis University of Nairobi.
- Bakir (2014) investigated the effect of leverage on firms' performance in Tehran stock trade. *Research Journal of Finance and Accounting*, 3(2), 38 76
- Batra, G. (1999). Job Reallocation on the Export Market and Firm Performance.
- Black, F. and Scholes, M. (1974). The Effects of Dividend Policy on Common Stock Prices and Returns. Journal of Financial Economics, 2, 1-22. https://doi.org/10.1016/0304-405X(74)90006-3
- Burakat, A. (2014). The Impact of Financial Structure, Financial Leverage and Profitability on Pharmaceutical Companies Shares Value. *Research Journal of Finance and Accounting*, 5(1), 55 66
- Dufera, A. (2010). Financial Performance Evaluation: A Case Study of Awash International Bank. Unpublished MSc Project. Mekelle University, Ethiopia
- Emkwe, C. I., Agu, C. I. & Eziedo, K. N. (2014). The Effect of Financial Leverage on Productivity of Commercial Banks in Indonesia: Evidence of Quoted commercial banks in Indonesia. *IOSR Journal of Economics and Finance*, 5(3), 17-25

- Evgeny, I. (2015). The Impact of Financial Leverage on Firm Performance: Evidence from Russia. J. of Corporate Finance Research, 34, 24-26
- Frank, M. Z. & Goyal, V. K. (2005). Tradeoff and Pecking Order Theories of Debt. Working Paper. Tuck School of Business
- Funguni (2015). Effect financial leverage on financial performance of non-listed commercial banks. *Unpublished Thesis University of Nairobi*.
- Galpin, C. (2014). Impact debt financing on the value of the pharmaceutical firms in Peru. *Journal of Research and Finance*, 5(2), 27-78
- Gibbs, K. L., (2007). Accounting Management and Control. John Murray (Publisher) Ltd., London.
- Gill, A. & Mathur, N. (2011). Factors that Influence Financial Leverage of Canadian Firms. *Journal of Applied Finance & Banking*, 1(2), 19-37
- Halt, L. (2011). Impact of leverage on the profitability of pharmaceutical companies in UK between 2005 to 2010. *Journal of Applied Research* 1(3), 49-78
- Jensen, M.C. and Meckling, W.H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kajirwa, H. I. (2015). Effects of Debt on Firm Performance: A Survey of Commercial Banks Listed on Nairobi Securities Exchange. *Global Journal of Advanced Research*, 2(6),

- Kamau (2014). Long term debt effects on the value of insurance firms in Kenya in the period 2010 and 2013. *Unpublished Thesis University of Nairobi*.
- Kasinwa (2015). Effect of debt on performance of Kenyan commercial banks listed at NSE. Unpublished Thesis University of Nairobi.
- Kimani (2017). Impact of leverage financing on the value of insurance companies in Kenya between 2010 and 2016. *Unpublished Thesis University of Nairobi*.
- Lumpkin, G. and Dess, G. (1999). Linking to Dimensions of Entrepreneurial orientation of firm performance. The moderating role of environment, firm age and industry life cycle; *Journal of Business Venturing*; Forthcoming.
- Maghanga, E.N. & Kalio, A. M. (2012). Effects of Leverage on the Financial Performance of Parastatals: A Case Study of Kenya Power. *International Journal* of Science and Research, 3(10), 990–994
- Mathur, S. and Kenyon, A. (1997). Creating Value; Sharing Tomorrow's Business.
- Modigliani F. & Miller M., (1958), "The cost of capital, corporation finance and the theory of finance, *American Economic Review*, 48(3), 291–297.
- Moghadam, M. D. &Jafari, M. (2015). The Role of Financial Leverage in the Performance of Companies Listed in the Stock Exchange. *Indian Journal of Natural Sciences*, 5(30), 7402 – 7657
- Muchiri, M. J., Muturi, W. M. & Ngumi, P. M. (2016). Relationship between Financial Structure and Financial Performance of Firms Listed at East Africa Securities

Exchanges. Journal of Emerging Issues in Economics, Finance and Banking, 5 (1), 1734 - 1755

- Mugenda, O. M. & Mugenda, A. G. (2008). Research Methods: Quantitative and Qualitative Approaches. Nairobi: Acts Press.
- Muiruri, P. M. (2014). Effects of Estimating Systematic Risk in Equity Stocks in the Nairobi Securities Exchange. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4(4), 228–248
- Mule, M. 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), 547 - 563
- Mwangi, L. M., Makau, M. S. & Kosimbei, G. (2014). Relationship between Capital Structure and Performance of Non-Financial Companies Listed in the Nairobi. Unpublished Thesis University of Nairobi.

Myers, S. (1984), The Capital Structure Puzzle. Journal of Finance. 39, 575-592.

- Nairobi Securities Exchange, Kenya (2016). Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics, 1(2), 72–90.
- Nabageleka, D. (2016) Effect of financial leverage on the financial performance of the companies listed at Uganda Securities Exchange. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 2(1), 23–45.

- Nawaiseh, R. I. (2015). Do Profitability and Size Affect Financial Leverage of Jordanian Industrial Listed Companies? *European Journal of Business and Innovation Research*, 3(5), 1-12
- Ness, R. K., Paul Miesing, P. & Kang, J. (2010). Board of Director Composition and Financial Performance in a Sarbanes-Oxley World. Academy of Business and Economics Journal, 10 (5), 56-74
- Nyamita, M. O. (2014). Factors Influencing Debt Financing and Its Effects on Financial Performance of State Corporations in Kenya. *Doctorate Thesis. Durban University of Technology*
- Oduor and Mutisya, (2015). Effect of debt financing on the financial performance of selected companies listed on the NSE between 2010 and 2014. Unpublished Thesis University of Nairobi.
- Orodho, J.A. (2003). Essentials of educational and social science research methods. Nairobi: Masola Publishers.
- Raza, M. W. (2013). Effect of Financial Leverage on Firm Performance. Empirical evidence from Karachi Stock Exchange. Online at https://mpra.ub.unimuenchen.de/50383/.
- Rehman, B.S. (2013). Relationship between Financial Leverage and Financial Performance: Empirical Evidence of Listed Sugar Companies of Pakistan. *Global Journal of Management and Business Research Finance*, 13 (8), 1-9

- Sorensen, A., Mukaila, A. & Stuart, T. (1999): "Corporate Governance Mechanisms and Firm Financial Performance in Nigeria", *AERC Research Paper*, No. 149.
- Titman, S. a. (1990). The determinants of capital structure choice. The Journal of Finance
- Yahaya, O. A. & Lamidi, Y. (2015). Empirical Examination of the Financial Performance of Islamic Banking in Nigeria: A Case Study Approach. *International Journal of Accounting Research*, 2(7), 1–13
- Zhao, B. & Wijewardana, W. P. (2012). Financial Leverage, Firm Growth and Financial Strength in the Listed Companies in Sri Lanka. Procedia - Social and Behavioral Sciences 40, 709 – 715

### **APPENDICES**

## **Appendix I: List of Companies Listed at NSE**

- 1. Eaagads Ltd
- 2. Kapchorua Tea Co. Ltd
- 3. Kakuzi
- 4. Limuru Tea Co. Ltd
- 5. Rea Vipingo Plantations Ltd
- 6. Sasini Ltd
- 7. Williamson Tea Kenya Ltd
- 8. Car and General (K) Ltd
- 9. Barclays Bank Ltd
- 10. Stanbic Holdings Plc.
- 11. I&M Holdings Ltd
- 12. Diamond Trust Bank Kenya Ltd
- 13. HF Group Ltd
- 14. Uchumi Supermarket Ltd
- 15. Bamburi Cement Ltd
- 16. E.A. Cables Ltd
- 17. KenolKobil Ltd
- 18. KenGen Ltd
- 19. Umeme Ltd
- 20. Sanlam Kenya PLC
- 21. Liberty Kenya Holdings Ltd

- 22. CIC Insurance Group Ltd
- 23. KCB Group Ltd
- 24. National Bank of Kenya Ltd
- 25. NIC Group PLC
- 26. Standard Chartered Bank Ltd
- 27. Equity Group Holdings
- 28. The Co-operative Bank of Kenya Ltd
- 29. Express Ltd
- 30. Sameer Africa PLC
- 31. Kenya Airways Ltd
- 32. Nation Media Group
- 33. Standard Group Ltd
- 34. TPS Eastern Africa (Serena) Ltd
- 35. Scangroup Ltd
- 36. Longhorn Publishers Ltd
- 37. Deacons (East Africa) Plc
- 38. Athi River Mining
- 39. Crown Paints Kenya PLC
- 40. E.A. Portland Cement Ltd
- 41. Total Kenya Ltd
- 42. Kenya Power & Lighting Co Ltd
- 43. Jubilee Holdings Ltd
- 44. Kenya Re-Insurance Corporation Ltd

- 45. Britam Holdings Ltd
- 46. Olympia Capital Holdings ltd
- 47. Centum Investment Co Ltd
- 48. Trans-Century Ltd
- 49. Home Afrika Ltd
- 50. Kurwitu Ventures
- 51. B.O.C Kenya Ltd
- 52. British American Tobacco Kenya Ltd
- 53. Carbacid Investments Ltd
- 54. East African Breweries Ltd
- 55. Mumias Sugar Co. Ltd
- 56. Unga Group Ltd
- 57. Eveready East Africa Ltd
- 58. Kenya Orchards Ltd
- 59. Flame Tree Group Holdings Ltd
- 60. Safaricom PLC
- 61. Stanlib Fahari-REIT
- 62. New Gold Issuer
- 63. Atlas Development
- 64. Nairobi Business ventures
- 65. Nairobi Securities Exchange ltd

2013	DEBT RATIO	LIQUIDITY	FIRM SIZE	EFFICIENCY	ROA
ARM	0.15	1.76	23.57	0.35	0.01
вос	0.12	2.08	21.53	0.11	0.03
CAR AND GEN	0.26	1.16	22.05	0.28	0.08
CABLES	0.32	1.20	21.56	-0.01	0.06
EXPRESS	0.1	0.78	19.93	0.14	0.04
HSE	0.41	2.76	23.65	0.26	0.12
1&M	0.02	0.13	21.06	0.19	0.01
LIBERTY	0.01	1.75	21.45	0.16	-0.01
POWER	0.38	2.45	21.43	0.07	0.06
KAKUZI	0.54	8.47	20.95	0.26	0.03
UMEME	0.03	1.08	21.78	0.13	0.04
SASINI	0.04	0.82	20.35	0.07	0.03
SAMEER	0.05	0.92	24.95	0.26	0.02
SAFARICOM	0.11	1.76	23.15	0.18	0.05
TPS	0.31	0.06	19.23	0.19	0.08
EAAGADS	0.02	0.67	22.87	0.26	0.04
DTB	0.15	0.07	22.67	0.35	0.01
KENOLKOBIL	0.06	0.91	21.86	0.41	0.06
SANLAM	0.59	1.89	20.67	0.15	0.04
EABL	0.18	2.54	23.56	0.37	-0.12
2014					
ARM	0.11	2.65	20.53	0.24	0.07
BOC	0.51	2.23	21.26	0.19	0.04
CAR AND GEN	0.08	1.11	21.68	0.26	0.09
CABLES	0.38	1.17	20.56	0.03	-0.12
EXPRESS	0.42	5.76	23.67	0.41	0.02
HSE	0.51	4.87	21.04	0.15	0.19
1&M	0.08	0.68	22.17	0.37	0.07

# Appendix II: Data Summary

LIBERTY	0.1	1.78	22.96	0.19	0.02
POWER	0.41	0.93	22.09	0.41	0.13
KAKUZI	0.05	7.95	22.45	0.15	0.04
UMEME	0.01	1.72	23.84	0.37	0.08
SASINI	0.38	1.06	21.87	0.19	0.16
SAMEER	0.25	0.76	22.96	0.07	0.02
SAFARICOM	0.09	0.13	24.45	0.11	0.05
TPS	0.15	0.87	21.32	0.37	0.04
EAAGADS	0.35	3.76	20.82	0.19	0.12
DTB	0.11	2.09	22.99	0.07	0.04
KENOL KOBIL	0.06	1.88	19.76	0.27	0.03
SANLAM	0.02	0.56	21.83	0.30	0.07
EABL	0.35	2.86	23.56	0.45	0.03
2015					
ARM	0.16	0.56	23.76	0.18	-0.03
BOC	0.13	2.14	21.06	0.16	0.11
CAR AND GEN	0.29	1.06	21.97	0.04	0.47
CABLES	0.22	0.93	21.55	0.10	0.23
EXPRESS	0.56	4.76	20.43	0.27	0.22
HSE	0.11	6.08	23.69	0.41	-0.07
1&M	0.36	0.57	21.86	0.15	0.22
LIBERTY	0.67	6.98	21.65	0.37	0.13
POWER	0.12	1.80	22.07	0.19	0.23
KAKUZI	0.03	7.15	20.39	0.02	0.12
UMEME	0.26	1.31	22.06	0.07	0.10
SASINI	0.56	0.70	20.87	-0.09	0.13
SAMEER	0.88	0.74	24.23	0.14	0.16
SAFARICOM	0.68	0.83	25.85	0.19	0.04
TPS	0.78	0.08	19.05	0.33	0.12
EAAGADS	0.55	0.84	22.85	0.19	0.05
DTB	0.68	0.75	23.23	0.33	-0.01

KENOLKOBIL	0.44	0.82	19.95	0.13	0.06
SANLAM	0.37	0.92	21.84	0.19	0.03
EABL	0.03	0.76	23.90	0.67	0.01
2016					
ARM	0.78	1.82	23.95	0.18	0.02
BOC	0.06	2.06	20.56	0.16	0.05
CAR AND GEN	0.03	1.20	21.75	0.04	0.03
CABLES	0.02	0.67	22.85	0.10	0.04
EXPRESS	0.19	0.70	20.52	0.27	0.14
HSE	0.08	0.74	23.19	0.46	0.06
1&M	0.63	0.66	22.96	0.26	0.04
LIBERTY	0.18	1.67	22.09	0.07	0.01
POWER	0.65	2.70	22.45	0.07	0.28
KAKUZI	0.15	4.44	26.06	0.19	0.07
UMEME	0.675	0.60	21.87	0.33	0.04
SASINI	0.71	0.08	22.96	0.46	0.09
SAMEER	0.36	0.07	21.35	0.26	0.01
SAFARICOM	0.45	0.91	25.68	0.15	0.02
TPS	0.33	1.89	20.82	0.37	0.19
EAAGADS	0.56	2.54	20.35	0.19	0.07
DTB	0.11	1.08	23.79	0.41	0.02
KENOLKOBIL	0.36	1.18	22.76	0.15	0.01
SANLAM	0.07	0.69	21.98	0.17	0.04
EABL	0.23	0.81	24.35	0.72	-0.01
2017					
ARM	0.07	0.87	24.57	0.18	0.02
BOC	0.34	0.89	21.79	0.19	0.05
CAR AND GEN	0.46	0.79	22.07	0.26	0.04
CABLES	0.56	0.89	22.56	0.41	0.12
EXPRESS	0.88	1.31	20.56	0.24	0.04
HSE	0.46	0.70	24.56	0.15	0.01

1&M	0.35	0.74	22.09	0.37	0.07	
LIBERTY	0.34	0.83	22.45	0.19	0.03	
POWER	0.65	5.07	26.06	0.27	0.15	
KAKUZI	0.35	4.92	21.87	0.18	-0.03	
UMEME	0.09	1.08	22.96	0.19	0.01	
SASINI	0.53	1.18	21.35	0.26	0.23	
SAMEER	0.03	0.69	25.68	0.41	0.02	
SAFARICOM	0.05	0.81	23.75	0.26	-0.07	
TPS	0.14	1.82	20.76	0.64	0.22	
EAAGADS	0.16	0.87	23.77	0.41	0.13	
DTB	0.29	2.85	23.08	0.15	0.23	
KENOLKOBIL	0.35	0.79	22.86	0.37	0.12	
SANLAM	0.48	0.89	21.68	0.19	0.10	
EABL	0.85	1.31	24.88	0.07	0.25	