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*Moderating effect of Firm Size on the relationship
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Moderating effect of Firm Size on the relationship between Capital structure and Value of Non-Financial firms listed at the Nairobi Securities Exchange

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Abstract

Capital structure is critical in the determination of the survival and the firm values since it aids in describing how their finances are raised through equity, debt or firms combining equity and debt. It is argued that debt use is beneficial provided that the acquisition rates are favorable and the monies are well utilized. Current research aimed at assessing the influence of size on the relationship between capital structure and the value of non-financial firms listed at the NSE. The study was anchored on trade off theory and positivism philosophy. This study utilized panel data of the twenty-nine listed entities. Research relied on secondary data from the published reports which were availed from various websites of the twenty-nine non-financial firms. Collection of data was from 2013 to 2020. Analysis involved descriptive statistics as well as inferential statistics. Descriptive statistics were used in the analysis to aid in deep understanding of the specifics of collected data. Prais Winsten Panel regression was utilized in the inferential analysis. The study confirmed that equity ratio and firm value were positively related and statistically significant and the link between debt ratio and value was negative and significant. The study further found that size does not moderate the link between capital structure and value. This study supports the need for injecting more money in form of equity instead of relying heavily on borrowed funds. Study further recommends that; entities should avoid very high levels of debt since it exposes them to financial distress.

Keywords: *Capital structure, Firm Size, Firm value, Nairobi securities exchange*

Introduction

Capital structure decisions are critical in the determination of the survival and final values since it helps in describing how their finances are raised through equity, debt or by combining equity and debt. Critical decisions must be taken with an aim of achieving an ideal financing mix due to its pivotal role (Brigham, 2005). Theoretically, capital structure is pivotal in the firms since it influences their size and values making it key in any managerial decisions (Palmer, 2009). The size of an entity is also critical in the determination of the final value of any business organization since management can control it to attain its goal (Khan, 2012).

Size is critical since is a major determinant of the final value of any business entity. For instance, firms which are large have the capacity to attract and retain more experienced work force unlike small firms with

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less financial capabilities. In terms of the competition, small firms are able to concentrate on the small niche markets which are not competitive unlike large firms. Size is also critical since any resource a company owns is reflected in its size and eventually its value. When investors are making investment choices, the size of the firm is inevitable since it is the basis for making informed choices. Entities which are large in size are able to provide the information which is detailed to various accounting information users for example the government, creditors, management and investors this is critical in decision making aimed at improving the value of their entities (Sinha, 2017).

According to Njeri and Kagiri (2018), debt levels for non-financial entities at NSE ranged from 30% to 72% for the period 2015 to 2017. Adequate decision making on capital structure ensures improved values due to minimization of the costs incurred by non-financial entities which have the capacity to maximize the profits. According to Bilafif and Ibrahim (2019), non-financial entities at NSE revealed varying signals on their values. It was also confirmed that capital structure is the major determining factor of the final values of the entities, the urge for more investment has motivated the entities to look for sources of funds with debt finance being preferred by listed non-financial entities at NSE (CMA, 2019). In terms of the sizes of the entities, variations in assets base and turnover was evident. Non-financial entities are free to have any capital structure unlike financial firms which have a unique financial structure. Management of an entity is critical in deciding between equity finance option and debt finance option.

Research Problem

Capital structure assumes a key role since it is connected with the requests of the shareholders who are essential to a firm regarding success or failure (Haugen & Senbet, 1988). However, the link between capital structure and value still remains a puzzle in corporate and academic world to date. In theory, it is expected that good capital structure decisions lead to improved values of the entities, poor capital structure can negatively impact the size of the entities thus reducing their values (Guler, 2018). According to Gibbs (2005), when capital structure decisions are ideal, value of the entities are increased. However, optimal financing mix that guarantees maximum values is still unanswered.

The values of non-financial entities are dependent on several factors, some are controlled by management while others are beyond management control for example the presence of macroeconomic factors. Capital structure is one of critical factors and is of great concern among non-financial entities. The urge to better

their values has led them to massive application of debt as per the Nairobi securities exchange handbook report (CMA, 2019). It is argued that debt use is beneficial provided that the acquisition rates are favorable and the monies are well utilized for example in the acquiring of productive assets which are beneficial to the firms. Non-financial sector has experienced performance and values related issues as evidenced by delisting and collapse of once giant firms in Kenya for example Mumias sugar company ltd, athi river mining, express Kenya, kenolkobil and deacons ltd. (CMA, 2019).

Conceptually, contradicting results were confirmed. Gantino and Margono (2021) concluded that debt ratio had a positive impact on values of entities and size was confirmed to relate positively with the firm's value and the association is significant. Malik (2016) confirmed that; asset structure impacts value and size has the potential effect of influencing the value of the entities. Contextually, the study by Chaleeda et al (2019) was conducted in Malaysia, Guler (2018) carried out a research in Brazil and Hirdinis (2019) carried out a research in Indonesia which are developed economies with superior distinct regulatory and economic characteristics. This necessitated the present study aimed at addressing the gaps in answering the question; what is the influence of size on the relationship between capital structure and the value of non- financial firms listed at the NSE?

Research Objectives

To determine the effect of firm size on the relationship between capital structure and value of non-financial firms listed at the Nairobi Securities Exchange.

Literature Review

Theoretical Background

The moderating effect of size on capital structure and value relationship was anchored on trade off theory and Modigliani and Miller theory. Trade off theory by Myers (1984) asserts that striking the balance of costs and the associated advantages of leverage improves firm's value. Entities tradeoff a number of aspects which includes the exposure to bankruptcy and agency cost against the tax benefit which results from the use of debt. Theory gives managers of non-financial entities a solution to leverage by determining the optimal debt to employ and also the ideal debt equity ratios in terms of the amounts of equity and also amounts of debt to adopt by their entities with an objective of maximizing the value of the entities. Modigliani and Miller theory (1961) asserts that an entity's value depends on capital

structure and this implies that capital structure is relevant which means that when an entity changes its capital structure, it results into changes in cost of capital and ultimately its value. It supports financing by debt since it increases value of entities since application of debt by the entities allows them to pay less in taxes.

Empirical Review

Mixed research findings were evident from the studies done on moderating effect of size on capital structure and value relationship. Gantino and Margono (2021) carried out a research in Indonesia on 10 firms from 2016 to 2019 and the target was for entities in the food and beverage sector. Conclusions from the study include; debt ratio had a positive impact on values of entities and size was confirmed to relate positively with the firm's value and the association is significant. Analysis was conducted in developed economies with superior distinct regulatory, institutional, political and economic characteristics which leads to non-applicability in developing economies.

Dakane and Warui (2019) carried out a research in Kenya aimed at assessing the association between firm characteristics and leverage of the entities and how they relate to their values. The focus was on 64 entities listed in NSE. Conclusions from the study include; debt ratio had a positive impact on values of entities, assets and liquidity were confirmed to relate positively with the firm's value and the association was not significant. Non comparability in the outcome is evident since the study was for all listed firms.

Zaher (2019) carried out a research in Jordan aimed at assessing the association between leverage, size of the entities and asset structure and how they relate to the value of firms. The focus was on 12 firms from 2011 to 2018 and the focus was for entities in the mining sector. Conclusions from the study include; debt ratio was confirmed to have no impact on values of entities, size and asset structure were confirmed to relate positively with the firm's value and the association is significant. Focus of a single sector (mining) limits the extension of study outcome to multi- industry set up.

Zheng and Wang (2017) carried out a research in Greece aimed at assessing the decisions on capital structure, firm growth and size and how they relate to the value of firms. They focused on the firms in the mining sector. 112 firms was the target of the survey and the survey analyzed 64 entities with the utilization of primary information in the survey. Firm growth was indicated by sales and size was indicated by the

assets of the entities. Cross sectional design with the aid of questionnaire was employed. Multiple regression technique was employed. The analysis concluded that capital structure decisions affected the value of the entities. Size and firm growth were confirmed to have positive link with the value of the entities. Survey used primary data, present research utilized secondary data.

Malik (2016) carried out a research in Japan aimed at assessing the association between asset structure and size and how they relate to the value of firms. The focus was on 290 firms from 2014 to 2016, purposive sampling was conducted with the aid of panel correlation methodology and multiple regression technique. Conclusion from the study were; asset structure impacts value and size has the potential effect of influencing the value of the entities. Context of the survey was developed economies which leads to non-applicability in developing economies.

Conceptual Framework

The hypothetical relationship were as presented in figure 1 below

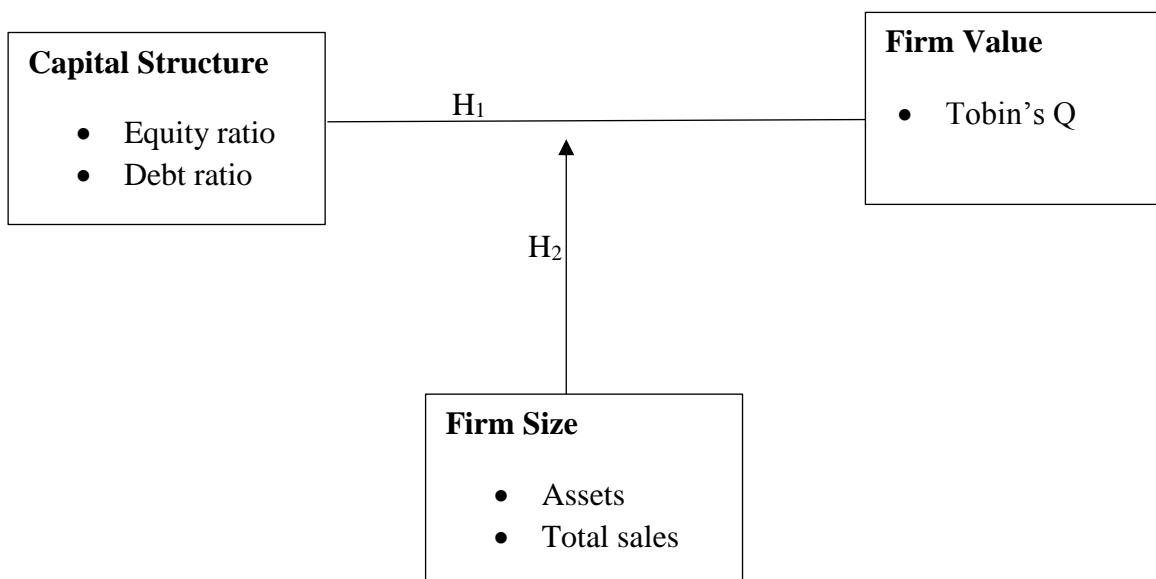


Figure 1: Conceptual Model

Research Hypotheses

H₁: The relationship between capital structure and the value of listed non- financial firms at the Nairobi Securities Exchange is not significant.

H₂: The moderating effect of size on the relationship between capital structure and the value of listed non- financial firms at the Nairobi Securities Exchange is not significant.

Research Methodology

This analysis employed longitudinal research design because the researcher used panel data for different firms covering a time span of eight years (8 year data points) from 2013 to 2020. This research design was ideal in summarizing the various variables which were helpful in the determination of the link of the variables. Population of this research consisted non-financial entities at NSE and were forty in number as per the records of 31st December, 2020. This analysis relied on the already published data which was accessed directly from published financial reports which were availed from the NSE handbook. Descriptive statistics was used in the analysis to aid in deep understanding of the specifics of collected data. Correlation was applied as well as regressions. Respective regression models which were used in testing the hypothesis are explained below:

Objective one focused on the relationship between capital structure and the value of non- financial firms at the Nairobi Securities Exchange using the following regression model:

$$FVi_t = \beta_0 + \beta_1Ei_t + \beta_2Di_t + \epsilon \dots \dots \dots (3.2)$$

FV_{it}= Value for i firm in t period, E=equity ratio, D=Debt ratio, β₀=intercept, β₁ and β₂ are regression coefficients and ε= Error term

Objective two focused on the moderating effect of firm size on the relationship between capital structure and the value of non-financial firms at the Nairobi Securities Exchange which was determined by hierarchical multiple regression by Baron and Kenny (1986) The model involved two steps as follows:

Step 1: $FVi_t = \beta_0 + \beta_1Ei_t + \beta_2Di_t + \beta_3Ai_t + \beta_4Si_t + \epsilon \dots \dots \dots (3.3)$

Step 2: $FVi_t = \beta_0 + \beta_5Ei_t + \beta_6Di_t + \beta_7Ai_t + \beta_8Si_t + \beta_9INT1i_t + \dots + \beta_{12}INT4i_t + \dots \epsilon. (3.4)$

Where FV is firm value, β₀ is intercept, β₁...β₁₂ are regression coefficients, A was assets, S was sales and ε = Error term. INT1 was the interaction term between equity ratio and sales, INT2 was the interaction term between debt ratio and sales, INT3 was the interaction term between equity ratio and assets and INT4 was the interaction term between debt ratio and assets.

Results and Discussions

Descriptive statistics was achieved by employing the measurement of central tendency.

Table 1: Summary Statistics of Study Variables

| Variables | Obs | Min | Max | Mean | Std. Dev. | Skewness | Kurtosis |
|------------------|------------|------------|------------|-------------|------------------|-----------------|-----------------|
| Tobin's Q | 226 | -2.180 | 2.790 | 0.707 | 0.760 | -0.681 | 2.590 |
| Equity Ratio | 226 | -0.780 | 0.970 | 0.539 | 0.236 | -1.096 | 3.980 |
| Debt Ratio | 226 | 0.000 | 0.560 | 0.136 | 0.148 | 0.843 | -0.403 |
| Sales | 226 | 4.690 | 8.420 | 6.717 | 0.841 | -0.092 | -0.271 |
| Assets | 226 | 5.300 | 8.620 | 6.934 | 0.759 | 0.247 | -0.178 |

The results of analysis confirmed that the mean value of Tobin's Q which indicated firm value was 0.707, corresponding minimum result was -2.180 and maximum result was 2.790 with the result of standard deviation of 0.760. It meant a moderate variation in terms of values of the entities with some recording negative values and others positive values. Kurtosis and skewness values were confirmed to be 2.590 and -0.681 respectively. Implying distribution was not peaked and data sets were skewed left.

Analysis results further confirmed that the mean value of total assets which indicated firm size was 6.934, the corresponding minimum result was 5.300 and the corresponding maximum result was 8.620 with the value of standard deviation of 0.759. It meant a small variation in terms of sizes of the entities with some having small sizes and others large sizes. Kurtosis and skewness values were confirmed to be -0.178 and 0.247 respectively. Implying that the distribution had a flat shape and data sets were skewed right. The mean value of sales was 6.717, the corresponding minimum result was 4.690 and corresponding result was 8.420 with the value of standard deviation of 0.841. It was an indication of small variation in terms of sizes of the entities with some having small sizes and others large sizes this was based on the fact that total sales made by entities differed. Kurtosis and skewness values were confirmed to be -0.271 and -0.092 respectively. Implying that the distribution had a flat shape and data sets were skewed left.

The mean value of equity ratio which indicated capital structure was 0.539, the corresponding minimum result was -0.780 and corresponding maximum result was 0.970 with the value of standard deviation of 0.236. It was an indication of large variation in terms of financing by owners' equity with some firms having more liabilities than the corresponding assets as indicated by negative equity ratio which is a sign of financial distress of the entities. It meant a larger proportion of assets are not owned by an entity. Kurtosis and skewness values were confirmed to be 3.980 and -1.096 respectively. Implying distribution was not peaked and data sets were skewed left.

The mean value of debt ratio which indicated capital structure was 0.136, the corresponding minimum result was 0.000 and corresponding maximum result was 0.560 with the value of standard deviation of 0.148. It was an indication of a large variation in terms of financing by debt. With zero debt ratio implying that some entities do not finance through borrowing at all. Kurtosis and skewness values were confirmed to be -0.403 and 0.247 respectively. Implying that the distribution had a flat shape and data sets were skewed right.

Correlation Analysis

Table 2: Correlation Matrix

| | Tobin's Q | Equity ratio | Debt ratio | Assets | Sales |
|--------------|-----------|--------------|------------|---------|-------|
| Tobin's Q | 1 | | | | |
| Equity ratio | 0.1075 | 1 | | | |
| Debt ratio | -0.1588* | -0.6379* | 1 | | |
| Assets | -0.2815* | -0.2433* | 0.3472* | 1 | |
| Sales | -0.1674* | -0.3653* | 0.3218* | 0.6291* | 1 |

*Correlation is significant at the 0.05 level (2-tailed)

Table above depicts correlation between firm value which is the response variable as indicated by Tobin's Q and the predictor variable which is capital structure which is operationalized by equity ratio and debt ratio. Noted from the correlation analysis performed is that; Tobin's Q and equity ratio were positively correlated and the relationship was weak ($r=0.1075$). This means that when equity ratio increases, value also increase and vice versa. Debt ratio and Tobin's Q were negatively correlated and the relationship was weak but significant ($r=-0.1588$). This means that when debt ratio increases, value decreases and vice versa.

Table above depicts the correlation between firm value which is the response variable as indicated by Tobin's Q and the moderating variable which is firm size which is operationalized by the total assets of the firm and its sales. Noted from the correlation analysis performed is that; Tobin's Q and the total assets of the firm were negatively correlated and the relationship was weak but significant ($r=-0.2815$). Tobin's Q and the sales of the firm were positively correlated and the relationship was weak but significant ($r=0.1674$). This means that increase in the sales of the entities causes an increase in their values.

Noted from the correlation analysis performed was that; equity ratio and debt ratio were negatively correlated and the relationship was strong and significant ($r= -0.6379$). Equity ratio and assets were confirmed to be negatively correlated and the relationship was weak but significant ($r= -0.2433$). Equity ratio and sales were confirmed to be negatively correlated and the relationship was significant ($r= -0.3653$).

Debt ratio and assets were confirmed to be positively linked with moderate and significant impact ($r=0.3472$). A positive correlation was evident between debt ratio and sales and it was a moderate and significant relationship ($r=0.3218$). Finally a positive correlation was evident between assets and sales and it was a strong and significant relationship ($r=0.6291$). This means that when assets of an entity increase, they cause an increase in sales and vice versa.

Capital Structure and Firm Value

The study focused on the determination of the relationship between capital structure and the value of non-financial firms listed at the NSE. The indicators of capital structure were debt ratio and equity ratio. Value was operationalized by Tobin's Q. The hypothesis of the study was;

H₁: *The relationship between capital structure and the value of listed non- financial firms at the Nairobi Securities Exchange is not significant.*

Table 3: Effect of Capital Structure on firm Value

| Praise-Winsten regression, heteroskedastic panels corrected standard errors | | | | | | |
|---|------------------------------|-----------|--------------------|----------|---------------------|-----------|
| Group variable: | id | | Number of obs | = | 226 | |
| Time variable: | Year | | Number of groups | = | 29 | |
| Panels: | heteroskedastic (unbalanced) | | Obs per group: min | = | 5 | |
| Autocorrelation: | Panel-specific AR (1) | | avg | = | 8 | |
| | | | max | = | 8 | |
| Estimated covariances = | | 29 | R- squared | = | 0.3590 | |
| Estimated autocorrelation = | | 29 | Wald chi2(3) | = | 15.47 | |
| Estimated coefficient = | | 3 | Prob >chi2 | = | 0.0004 | |
| Het-corrected | | | | | | |
| Tobin's Q | Coef. | Std error | Z | p>(z) | (95 conf. interval) | |
| Equity ratio | 0.30387 | 0.1350075 | 2.25 | 0.024 | 0.0392601 | 0.5684798 |
| Debt ratio | -0.4222997 | 0.2096522 | -2.01 | 0.044 | -0.833210 | -0.001138 |
| _Cons | 0.6176721 | 0.0919736 | 6.72 | 0.000 | 0.4374072 | 0.7979371 |
| rhos = | 0.8808334 | 0.7070879 | 0.4349776 | 0.913690 | 0.0071341 | 0.8776338 |

Praise-Winsten regression confirmed the following results; prob chi square value was 0.0004, regression coefficient, standard error, z value and the p values for equity ratio were 0.30387, 0.1350075, 2.25 and 0.024 respectively. Regression coefficient, standard error, z value and p values for debt ratio were -0.4222997, 0.2096522, -2.01 and 0.044 respectively. It was confirmed from the research that capital structure indicators had p values of less than 5% meaning their influence was significant (equity ratio p value=0.024 and debt ratio p value=0.044). Generally it was deduced that, a significant relationship between

CS and FV of listed non-financial entities at NSE exist. The analysis resulted into the following linear model;

$$Y = 0.6176721 + 0.30387X_1 - 0.4222997 X_2$$

Where,

Y = Firm Value

X₁ = Equity ratio

X₂ = Debt ratio

Moderating Effect of Firm Size on the Relationship between Capital Structure and Firm Value

Objective number two focused on the determination of the moderating effect of size on the relationship between capital structure and the value of non- financial firms at NSE. The indicator of size was total assets and sales. The hypothesis employed in the study was;

H₃: The moderating effect of firm size in the relationship between capital structure and value of non-financial firms listed at NSE is not significant

The moderating effect of size on the relationship between capital structure and the value of non- financial entities at NSE was determined by Baron and Kenny (1986) model which involved two steps. Step one focused on ascertaining the joint effect of capital structure and size on firm value. Second step focused on ascertaining the joint effect of capital structure, size and the interaction terms on firm value. Moderation is assumed to take place if the interaction terms between capital structure and size and also interaction terms between capital structure and sales were significant.

Effect of Capital Structure and size on Firm Value

Step one focused on ascertaining the joint effect of capital structure and size on firm value. Capital structure was the predictor variable and was indicated by equity ratio and debt ratio. Size was the moderating variable as indicated by total assets and sales. Firm value was the response variable and was indicated by Tobin's Q.

Table 4: Effect of Capital Structure and size on Firm Value

| Praise-Winsten regression, heteroskedastic panels corrected standard errors | | | | | | |
|---|------------------------------|-----------|--------------------|-------|---------------------|-----------|
| Group variable: | id | | Number of obs | = | | 226 |
| Time variable: | Year | | Number of groups | = | | 29 |
| Panels: | heteroskedastic (unbalanced) | | Obs per group: min | = | | 5 |
| Autocorrelation: | Panel-specific AR (1) | | avg | = | | 8 |
| | | | max | = | | 8 |
| Estimated covariances = | | 29 | R- squared | = | | 0.5099 |
| Estimated autocorrelation = | | 29 | Wald chi2(3) | = | | 122.85 |
| Estimated coefficient = | | 5 | Prob >chi2 | = | | 0.0000 |
| | Het-corrected | | | | | |
| Tobin's Q | Coef. | Std error | Z | p>(z) | (95 conf. interval) | |
| Equity ratio | 0.3460094 | 0.119666 | 2.89 | 0.004 | 0.111468 | 0.5805508 |
| Debt ratio | -0.2115999 | 0.179749 | -1.18 | 0.239 | -0.563901 | 0.1407019 |
| Assets | -0.5668679 | 0.063947 | -8.86 | 0.000 | -0.692207 | -0.441534 |
| Sales | 0.2719527 | 0.0643737 | 4.22 | 0.000 | 0.1457825 | 0.3981228 |
| _Cons | 2.607294 | 0.3118996 | 8.36 | 0.000 | 1.995982 | 3.218606 |
| rhos = | 0.8783423 | 0.838591 | 0.31 | 0.909 | -0.048197 | 0.8745842 |

Praise-Winsten regression confirmed that the variance of firm value accounted for by capital structure and size was 50.99% before the interaction terms were included and the model confirmed a statistically significant relationship between capital structure, size and firm value (p=0.0000).

Effect of Capital Structure, Size and Interaction Terms on Firm Value

Second step focused on ascertaining the joint effect of capital structure, size and the interaction terms on firm value. Moderation is evident if the interaction terms between capital structure and size and also interaction terms between capital structure and sales were significant.

Table 5: Multicollinearity Test

| | Collinearity Statistics | |
|--------------|-------------------------|-------|
| | Tolerance | VIF |
| Debt ratio | 0.327 | 3.06 |
| Equity ratio | 0.294 | 3.40 |
| Sales | 0.142 | 7.03 |
| Assets | 0.134 | 7.46 |
| INT1 | 0.059 | 16.88 |
| INT2 | 0.118 | 8.44 |
| INT3 | 0.0617 | 16.21 |
| INT4 | 0.119 | 8.37 |

The interaction terms employed were four namely: INT1 which was the interaction term between equity ratio and sales, INT2 was the interaction term between debt ratio and sales, INT3 was the interaction term between equity ratio and assets and INT4 was the interaction term between debt ratio and assets. Multi collinearity was performed with an aim of assessing interrelationships or correlation existing among predictor variables after the inclusion of four interaction terms.

Table 6: Multi collinearity Test

| | Collinearity Statistics | |
|--------------|-------------------------|------|
| | Tolerance | VIF |
| Debt ratio | 0.373 | 2.68 |
| Equity ratio | 0.354 | 2.82 |
| Sales | 0.149 | 6.73 |
| Assets | 0.138 | 7.26 |
| INT2 | 0.176 | 5.67 |
| INT4 | 0.153 | 6.54 |

Table 7: Effect of Capital Structure, Size and Interaction Terms on Firm Value

| Praise-Winsten regression, heteroskedastic panels corrected standard errors | | | | | | |
|---|------------------------------|-----------|--------------------|-------|---------------------|-----------|
| Group variable: | id | | Number of obs | = | | 226 |
| Time variable: | Year | | Number of groups | = | | 29 |
| Panels: | heteroskedastic (unbalanced) | | Obs per group: min | = | | 5 |
| Autocorrelation: | Panel-specific AR (1) | | avg | = | | 8 |
| | | | max | = | | 8 |
| Estimated covariances = | | 29 | R- squared | = | | 0.5248 |
| Estimated autocorrelation = | | 29 | Wald chi2(3) | = | | 142.34 |
| Estimated coefficient = | | 7 | Prob >chi2 | = | | 0.0000 |
| | Het-corrected | | | | | |
| Tobin's Q | Coef. | Std error | Z | p>(z) | (95 conf. interval) | |
| Equity ratio | 0.3806562 | 0.120236 | 3.17 | 0.002 | 0.1449975 | 0.6163148 |
| Debt ratio | -0.1975579 | 0.184973 | -1.07 | 0.286 | -0.5601 | 0.1649841 |
| Assets | -0.6060285 | 0.0717858 | -8.44 | 0.000 | -0.746726 | -0.465330 |
| Sales | 0.2940888 | 0.065147 | 4.51 | 0.000 | 0.166403 | 0.4217746 |
| INT2 | -0.3562723 | 0.3694031 | -0.96 | 0.335 | -1.080289 | 0.3677444 |
| INT4 | 0.4452485 | 0.3886604 | 1.15 | 0.252 | -0.316519 | 1.207009 |
| _Cons | 2.701402 | 0.3275485 | 8.25 | 0.000 | 2.059419 | 3.343385 |
| rhos = | 0.8793998 | 0.842946 | 0.21 | 0.907 | -0.083404 | 0.8736086 |

Based on research findings, assets had a VIF value of 7.46, debt ratio had a VIF value of 3.06, equity ratio had a VIF value of 3.40, and sales had a VIF value of 7.03. INT1, INT2, INT3 and INT4 had VIF of 16.88, 8.44, 16.21 and 8.37 respectively. Results confirmed multi - collinearity problem for INT1 and INT3 since their VIF variables were greater than 10. The problem was solved by dropping them from further analysis. Table 6 depicts the outcome of multi - collinearity test.

Praise-Winsten regression confirmed that the variance of firm value accounted for by capital structure, size and interaction terms was 52.48% after the interaction terms were included which was an increase from 50.99% before the interaction terms were included and the model confirmed a statistically significant relationship between capital structure, size, interaction terms and firm value ($p=0.0000$). However, the interaction terms were not statistically significant in moderating the relationship.

Conclusions and Recommendations

Objective number one focussed on the determination of the relationship between capital structure and the value of non- financial firms at NSE. The indicators of capital structure were debt ratio and equity ratio. Value was operationalized by Tobin's Q. With the following linear model; $\text{Firm Value} = 0.6176721 + 0.30387\text{equity ratio} - 0.4222997\text{debtratio} + e$, it was concluded that capital structure significantly affects the value of the firms. This led to the rejection of the first hypothesis, implying that the mix of equity and debt by the firms has a bearing on their values.

The outcome of this study confirm Bilafif and Ibrahim (2019) findings that, financial leverage positively affects firm value. It further confirmed Chaleeda et al (2019) that, the ratio between debt in the short term and long term and the total assets of the entities relates positively with the value of the firm and the association is significant. But this study contradicts the studies by Aras (2017) who confirmed no evidence of direct association between debt to equity ratio and the value of the entities and that inventory turnover did not affect the market value and the association was not significant.

Objective number two focused on the determination of the moderating effect of size on the relationship between capital structure and the value of non- financial firms at the NSE. The study confirmed that, size does not moderate the relationship between capital structure and value of non-financial firms listed at the NSE. The outcome of this study was inconsistent with the studies by Malik (2016) who concluded that there is a positive and significant relationship between firm size and firm value. Additionally, it contradicts Basil

and Dana (2018) who confirmed positive link between external financing and SMEs value, and also size was confirmed to be positively related to their values.

This research drew conclusions grounded on the two main objectives. The findings of the study confirmed that, the relationship between equity ratio and firm value was positive and statistically significant and the link between debt ratio and firm value was negative and significant. This led to the conclusion that a significant link exists between capital structure and firm value of non-financial firms listed at the Nairobi Securities Exchange. Study further confirmed that size does not moderate the link between capital structure and value of non-financial firms listed at NSE.

This study supports the need for injecting more money inform of equity instead of relying heavily on borrowed funds. Study further recommends that; entities should avoid very high levels of debt since it exposes them to financial distress. Managers of non-financial entities may use the recommendations of this study in developing best capital structure choices which are aimed at improving the value of their entities. Non-financial firm's managers in Kenya should consider the impact capital structure has on value without being concerned with how large or small their firms are.

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