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Capital Structure and Firm Value of Non-Financial Firms Listed at the Nairobi Securities Exchange

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Abstract
This study sought to provide evidence on the relationship between capital structure and firm's value. The study was drawn secondary data from 36 companies quoted on the Nairobi Securities Exchange (NSE) for the year ended 31st December 2011 to 2015. The results above indicate there was a statistically significant relationship between the capital structure and value of nonfinancial firms listed on the Nairobi Securities Exchange. The study recommended that Firms are strongly advised always to compare the marginal benefit of using long-term debt to the marginal costs of long-term debt before concluding on using it in financing their operations. This recommendation came as a result as shown by the study. Long-term debt impacts positively on firm's value just like equity capital.
Keywords: Capital structure, firm value, Agency Cost, Weighted Least Squares

1.1 Introduction

The Modigliani and Miller theory, proposed by Modigliani and Miller (1958 and 1963), forms the basis for modern thinking on capital structure. In their seminal article, Modigliani and Miller (1958 and 1963) demonstrate that, in a frictionless world, financial leverage is unrelated to substantial value, but in a world with tax-deductible interest payments, firm value and capital structure are positively related. Saleem and Rafique (2013) defined the capital structure as the various financing alternatives of its assets used by the firm. Debt, equity and retained earnings are the essential components of the company's capital structure. The capital structure of a company is the mix of debt, equity and other sources of finance that the management uses to fund companies' activities (Muturi & Bosire, 2014).

Capital structure model was remarkable to Modigliani and Miller (1958) because they were the pioneers to present a formal model on the valuation of capital structure. They show that under the assumption of perfect financial markets, similar risk class, no taxes, 100% dividend payout rate and fixed cost of debt, the value of the firm is independent of its capital structure (Modigliani & Miller, 1958). Leland and Toft (1991) state that, the value of a company is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. The Higher firm value will increase the wealth of the shareholder. The increase of share price will also enhance the value of the company.

Pandey (2004) states that the capital structure decision of a firm influences its shareholders to return and risk. Consequently, the market value of its shares may be affected by the capital structure decision. The company's objective should, therefore, be the maximization of its value by examining its capital structure or financial leverage decision from its impact on the firm value.

1.2 Research Problem

Studies on the relationship between capital structure and firm value have yet to provide a convincing causal link between the key variables. In developed and developing economies, few studies have attempted to link capital structure and firm value and still arrived at inconclusive and mixed results (Rajan & Zingales, 1995; Rayan, 2008); and Akhtar and Oliver, 2009). Therefore, there is still no conclusive empirical evidence from the existing literature about how capital structure, firm growth, and macroeconomic factors influence on firm value.

Despite academic advancement and the availability of tools for relating financing decisions and firm value, the process by which integrated investment decisions lead to desired outcomes is still unclear. The raising of the appropriate fund in an organization will aid the firm in its operation; hence, it is important for listed companies at Nairobi Securities Exchange to know the debt-equity mix that gives an effective and efficient performance, after an excellent analysis of business operations and obligations. Existing studies such as Maina and Kondongo (2013), Murekefu (2012) and Nyamao et al. (2012), have not incorporated the entire key mediating variables in a single study to comprehensively analyze the effect of capital structure on firm value, and specifically among listed companies in Kenya. Also, the interaction effect of the company growth and macroeconomic factors has not been considered by these studies. Instead, the past studies only focused on the direct impact of the individual financing decisions on firm value.

The government and the private sector have invested heavily in creating an enabling environment for doing business in Kenya and, indeed, some companies have performed exceedingly well as a result (Mwangi, 2014). Momentous efforts to revive the ailing and liquidating companies have focused on financial restructuring.

However, managers and practitioners still lack adequate guidance for attaining optimal financing decisions (Kibet et al., 2011). Many of the problems experienced by the firms in the developing countries were mainly attributed to funding. This situation has led to a loss of investors' wealth and confidence in the stock market. There have been attempts to conduct studies on the subject of capital structure by Kyereboah and Cleman (2007) in Ghana, Nigeria, and South Africa. They posit that micro-finance institutions in sub-Saharan Africa have high debt level, which is positively related to growth. In other words, country-specific studies in Africa seem to be consistently reporting a negative and significant relationship between capital structure and firm growth (Abor, 2005; Onaolapo &Kajola, 2010).

Therefore, these results cannot be generalized with that of Kenya due to differences in economic environment. According to Omondi (1996), firms with high return on investments use relatively high debt than those with low yields. In the light of these findings, most of the studies have been focusing on the determinants of capital structure (Omondi, 1996). Ngugi (2008) examined capital structure financing behavior of firms listed on the NSE and further indicated that Kenyan listed firms prefer to finance their investments with short-term debt and bank overdrafts regardless of uncertainty and financial risk associated with this method of financing which sets back the companies' value. In the light of the present literature findings, this study shift focus from the previous studies, which were dealing with determinants of capital structure by Omondi (1996), and investigation of capital financing behavior of firms list at the NSE by Ngugi (2008). Following from this, the objective of this study therefore was; to determine the effect of capital structure on the value of non-financial firms listed on the Nairobi Securities Exchange.

1.3 Study Hypothesis

The study hypothesis tested to ascertain the relationship between capital structure and firm value:
H0There is no statistically significant association between the capital structure and value of nonfinancial firms listed on the Nairobi Securities Exchange.

2.1 Theoretical and Literature review

The author anchored the study on three theories on the relationship between capital structure and firm's value that is the trade-off theory), the existence of optimal financial hierarchy (the pecking order theory) and the Modigliani and Miller irrelevance theory of capital structure about a firm's value. The capital structure in this study means the term used to represent a combination of long-term debt and equity. Long-term debt includes obligations that are not due to be repaid within the next twelve months. Such debt consists mostly of bonds or similar obligations, including a great variety of notes, capital lease obligation and mortgage issues. Debt refers to borrowed funds that a firm has used to finance its investment. The borrower has to repay the funds at an agreed date to the lender. The cost of capital is impressive, and the firm has to meet its obligation. In addition to the requirement to pay interest, a debt may also carry restrictive covenants that the borrower must satisfy to prevent default (Jane, Malonis & Cengage, 2000).

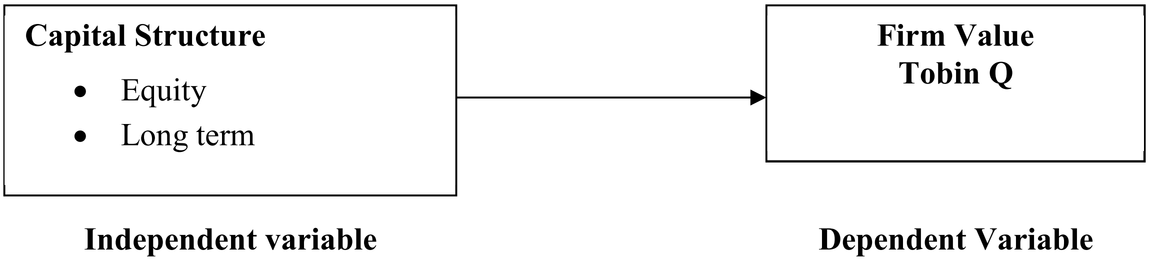
Thus, a significant cost of issuing debt is the possibility of financial distress (Jane Malonis and Cengage, 2000). According to Ehrhard and Bringham (2003), the value of a business based on the going concern expectation is the present value of all the expected future cash flows to be generated by the assets, discounted at the company's weighted average cost of capital (WACC). From this, the study found that the WACC has a direct impact on the value of business. According to Johannes and Dhanraj (2007), the choice between debt and equity aims to find the right capital structure that will maximize stockholder wealth.

The existing studies on the relationship between capital structure and firm value have revealed inconclusive and mixed results in the past as well as the present studies. Hadlock and James (2002) showed the positive relationship, and Simerly and Li (2000) indicated negative or weak/no connection between the firms' value and leverage level. Also, according to the Booth et al. (2001), Demirguc-Kunt and Maksimovic (1999) studies, developing countries have a substantially lower amount of long-term debt compared with developed countries. Therefore, it would be interesting to see the relative proportion and the effects of debt maturity in this emerging market. In capital market perspective, a substantial value consisted of everlasting, consistent development of company valuation rather than short-term previous profit making (Mansoon& Rauf, 2013).

Zeitun and Tian (2007) examining the relationship between capital structure and financial performance of Jordan firms. They found debt level to be negatively related to financial performance (ROA and ROE) which is supported by Abor (2005) on small and medium-sized enterprises in Ghana, and South Africa showed that long-term and total debt level is negatively related to performance. Probably this explains the contradictory results of the studies that empirically tested the predictions of a relationship between leverage and firm's performance. Mwangi (2010) did a study on the capital structure of companies listed on the Nairobi Stock Exchange also tried to look on the relationship between capital structure and financial performance. The study identified a strong positive relationship between leverage and returned on equity, liquidity, and return on investment existed.

Abbasali et al. (2012) investigated the impact of capital structure on the financial performance of companies listed on the Tehran Stock Exchange. (ROA) And (ROE) were used to measure the financial performance of businesses and found a significant negative relationship between debt ratio and financial performance of companies, and a significant positive correlation between asset turnover, asset tangibility ratio, and growth opportunities with financial performance measures. But the relationship between ROA and ROE measures with the firm age is not significant. Also, research results show that by reducing debt ratio, management can increase the company's profitability and thus the amount of the company's financial performance measures and can also increase shareholder wealth.

2.1 Conceptual Framework



3.0 Methodology
The study adopted cross-sectional survey research design to conduct the analysis and came up with results that were able to provide information to investors across the capital markets. The time series shows the data of the study were secondary data collected at the particular pointing time. The study population was the firms listed on the NSE. The study sampled the nonfinancial companies listed on the Nairobi Securities Exchange and an unbalanced dataset over the period of 2011 to 2015.

The study excluded all financial firms due to their unique capital structure, which reduced the sample to only 44 unique public listed companies. The secondary data used in the study were collected from annual reports and statements of account of the companies under consideration. The regression method adopted in this study was Weighted Least Square. To be specific, WLS regression technique was adopted. Since this study sets out to test the relationship (association) between firm value and capital structure, the WLS correlation method was appropriate.

3.1 Model Specification
The model of the study to be regressed on the relationship between capital structure and the firm value was presented in a relational form as follows:

$$Y_{it} = \alpha + \beta_1 CS_{it} + \varepsilon_{it} \quad \ldots\ldots(1)$$

Where Y is the composite of firm value parameters (Tobin Q), α is the interceptor Constant, $\beta 1$is regression coefficient. CS is the composite of capital structure parameters (Debt ratio and Equity ratio), ε is a random error term that accounts for the unexplained variations, i is some firms used in the sample and t are the period of the study.

4.0 Results and Discussions
4.1 Descriptive Statistic for Pooled Data
From the result of a descriptive statistic of pooled data shown in Table 1, it revealed that the mean (medium) of Tobin's Q was 0.863 (0.558). The study indicated that the substantial market value was less than the recorded value of the assets of the company; in other words, the market has undervalued Kenyan listed companies. While for the leverage, it has recorded the mean of 0.405, which indicated that Kenyan registered businesses in average financed their assets by debt in around 40.5 percent. Lastly, regarding dividend per share, it showed that Kenyan listed businesses in average have paid out the dividend of Kshs. 0.10 per shares to their shareholders.

Table 1: Descriptive Statistic for Pooled Data

	Tobin's Q	Leverage	DPS
Mean	0.863	0.405	0.101
Median	0.558	0.124	0.040
Maximum	8.836	34.366	2.450
Minimum	-0.404	-0.685	0.000
Std. Dev.	1.070	1.328	0.212
Skewness	3.244	19.283	5.873
Kurtosis	17.716	479.571	49.740
Jarque-Bera	9699.715	8572776.000	87096.640
Probability	0.000	0.000	0.000
Sum	777.071	364.159	90.945
Sum Sq. Dev.	1029.350	1584.588	40.369
Observations	900.000	900.000	900.000

4.2 Hypothesis Testing

The study sought to test the following hypothesis:

H0There is no statistically significant relationship between the capital structure and value of nonfinancial firms listed on the Nairobi Securities Exchange.

Table 2: WLS Regression results (Independent Variable on Firm Value)

	Coef.	Std. Err.	t	P>t
DERatio	0.203454	0.011633	17.49	0.0000
_cons	0.414398	0.065446	6.33	0.0000

Regarding hypothesis 1, the results in the table above show there was a statistically significant relationship between capital structure and Firms value, with DE-Ratio taken as the best of the capital structure predictor variable (β=0.203, p=0.0000). The regression model was also significant (F-stat=305.90, p=0.0000). The WLS regression results in Appendix 5 show that Capital Structure parameters significantly predict almost half of Firm value by approximately 48% (R2=0.4773, P=0.0000).

The results above indicate there was a statistically significant relationship between the capital structure and value of nonfinancial firms listed on the Nairobi Securities Exchange. Variation inflation factor was used to test whether there was multicollinearity among variables in the study. If the VIF value is greater than 10, then there is high collinearity among the variables while VIF values of below 10 indicate the presence of no multicollinearity. In this case, the mean VIF was 1.00 thus the findings show there is no multicollinearity and this supports the significance of the model.

These results presented in Table 2 were consistent with the results of Hadlock and James (2002) that revealed a positive relationship between capital structure parameters and Firm value. Moreover, these results corroborate the irrelevance theory of Modigliani and Miller (1958) that posited that there is no relationship between capital structure and a firm's value. These current study findings, on the other hand, contradicted the empirical results obtained by Simerly and Li, (2000). That indicated negative or weak/no relationship between the firms' value and leverage level and those of Abbasali, Vida, and Bagheri, (2012) which concluded a significant negative correlation between debt ratio and financial performance of companies. Furthermore, this study reveals that in an emerging economy like Kenya, equity capital as a component of the capital structure is relevant to the value of a firm. The proponents of the pecking order theory and the traditionalist theory of capital structure in agreement with the claims put this forward relevant. However, it is not in agreement with the capital structure irrelevancy theory of Modigliani and Miller (1958). Which states that equity capital is unrelated to substantial value; and Millers (1977) hypothesis with corporate and personal income tax, which states that the capital structure of a company does not impact on its market value.

5.0 Conclusion

This research work has examined the capital structure theory and its relationship with the value of the firm in the Kenyan setting, taking into cognizance 34 listed companies. All other theories, except the M-M theory (1958), have attempted to resolve the capital structure puzzle enunciated by M-M (1958) propositions. Each of this theory relaxes conditions under which the M-M (1958) theorem was derived from the assumptions from the seminal work of MM. Based on this and the findings of this study, we can conclusively state that: capital structure decisions have various implications, and one of them is its effect on the value of the firm, which formed the basis of our study. The study recommended that Firms are strongly advised always to compare the marginal benefit of using long-term debt to the marginal costs of long-term debt before concluding on using it in financing their operations. The study indicted long-term debt has a positive impact on the firm's value as well as equity

capital.

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