



**Moderating Effect of Board capital on Firm Leverage and Financial Performance of Firms
listed at Nairobi Securities Exchange in Kenya**

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ABSTRACT

The variations in financial performances of firms listed at Nairobi Securities Exchange in Kenya are dependent on the decision made by the board of directors, more so on capital structure. While from the previous studies, there has been an inadequate linkage of board capital and financial performance with other themes. Firms listed in Kenya have financed their operation with more equity as compared to debt. The purpose of this study is to establish the moderating role of board capital on the relationship between firm leverage and financial performance for the firms listed at Nairobi Securities Exchange Kenya. The study objectives are to examine the effect of; Firm leverage on the financial performance of listed firm at Nairobi Securities Exchange in Kenya and establish whether board capital has an interactive relationship on firm leverage and financial performance. The steward theory and trade-off theory informed the. The philosophical foundation underpinning the study was positivism and an explanatory research design. The target population comprised all the 65 firms listed at NSE in Kenya. The sample was done using inclusive and exclusive criteria, and secondary data was used to collect data and information. All the suspended and delisted firms were excluded. As a result, panel data from audited financial reports were collected from 40 firms listed. Four hundred observations were, therefore, obtained from firms listed. Descriptive statistics were used, and inferential statistics. In addition, panel regression analysis was employed to establish the nature and significance of the relationship between independent variables and dependent variable with leverage with beta $\beta = -.295$, $q < .05$ to financial performance. Later the process was repeated with the moderating variable the results showed a significant moderating effect of board capital on the relationship between leverage and financial performance ($R^2\Delta = 0.07, \beta = 0.03; q < 0.05$) The study found out that the board capital had an enhancing moderation effect on leverage and the study found out that firm boards of Directors are able to advise on how to vary the leverage while meeting the listing requirements to suit the operations for the company, with the board, there should also be a sound management of firms leverage to the extent of improving financial performance. Theoretically, the enhancing effect of board capital by the firms listed in NSE validates the stewardship theory, which is on the premise that directors and managers are trustworthy and fair stewards of the resources entrusted to them. In addition, this research would equip regulators, owners and investment advisors of firms listed on how to improve their financial performance. Finally, the researcher recommends a further study focusing on firms not listed in NSE to ascertain whether the study results hold.

Keywords: *firm leverage, board capital and Financial performance.*

Introduction

The financial performance of companies is a subject that has attracted a lot of attention, comments and interests from both financial experts, researchers, the general public and the management of corporate entities. Financial performance of a firm can be analyzed in terms of profitability, dividend growth, sales turnover, and return on investments among others. However, there is still debate among several disciplines regarding how the performance of firms should be measured and the factors that affect financial performance of companies (Johl, Kaur, & Cooper, 2015). Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage (Marinova, Plantenga, & Remery, 2016),

According to Masulis' (2011) and DeAngelo and Masulis' (2014) assumption that a firm may question and optimal level of debt that it could have may increase or diminish its value and may move push towards industry average. Firms efforts to work out optimal capital structure (DeAngelo and Masulis, 2014) is determined by various agency costs bankruptcy or tax gain on losses from leverage usage, compensating for other tax shield instruments of depletion, depreciation, amortization and investments tax credits. Another research conducted by Hamada (2012), found the relationship of equity cost and leverage of firms across industries. More variations were observed for the firms using leverage than that performing unlevered capital structure.

Stulz and Johnson (2015) demonstrated theoretically that secured debt reduced firm's opportunities to engage in asset substitution. Firms with proportionately more tangible assets, which can serve more easily as collateral find it difficult to shift to riskier projects when specific assets secure their debt. Pandey (2015) reveals that the levels leverage in the Indian Industry is moving upwards and that the large majority of companies leverage decisions seem to be independent of their size profitability growth and industrial variations.

Board Capital has been referred to as a controlling force in organizations. Board capital which is usually referred to board incumbents' capabilities to advise and guide company management and also to have a check over their performance varies among directors. Findings of this study are congruent with the views that board capital in terms of outside directors' qualification and capabilities to exert control over management benefits the business. Meckling (1976) emphasized that controlling and motivating forces moderate administrator' opportunistic activities. External directors are precious in enhancing a board's advisory and pursuing capabilities. Acharya, et al. (2019) outlined that influential external directors can be precious while CEOs are less entrenched and decrease supervisor-shareholder organization charges which offended shareholder pursuits. Independent directors play an inevitable role and check over managements' performance and activities. A greater ratio of independent or outside directors on board makes the managements' performance supervision more robust.

Theoretical review.

This research was informed by Stewardship theory which was introduced by Donaldson and Davis (1989) as a normative alternative to the agency theory. While Agency theory assumes that principals and agents have divergent interests and that agents are essentially self-serving and self-centered, Stewardship theory takes a diametrically opposite perspective. It suggests that the agents (directors and managers) are essentially trustworthy and good stewards of the resources entrusted to them, which makes monitoring redundant (Donaldson 1990; Donaldson & Davis, 1991; Donaldson & Davis, 1994; Davis et al., 1997). Donaldson and Davis (1991, p. 51) observe, "organizational role-holders are conceived as being motivated by a need to achieve, to gain intrinsic satisfaction through successfully performing inherently challenging work, to exercise responsibility and authority, and thereby to gain recognition from peers and bosses". The stewardship perspective views directors and managers as stewards of firm. As stewards, directors are

likely to maximize the shareholders' wealth. Davis, et al (1997) posit how stewards derive a greater utility from satisfying organizational goals than through self-serving behavior.

Conceptual framework

This is a device that organizes empirical observations in a meaningful Structure (shapira, 2011). Childs (2010) argued a conceptual framework to be a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation.

It's the researcher's explanation of how the research problem would be explored. The framework defines the connection between the main concepts of a study. This study seeks to establish the moderating effect of board capital on firm leverage and financial performance of firms listed at Nairobi Securities Exchange.

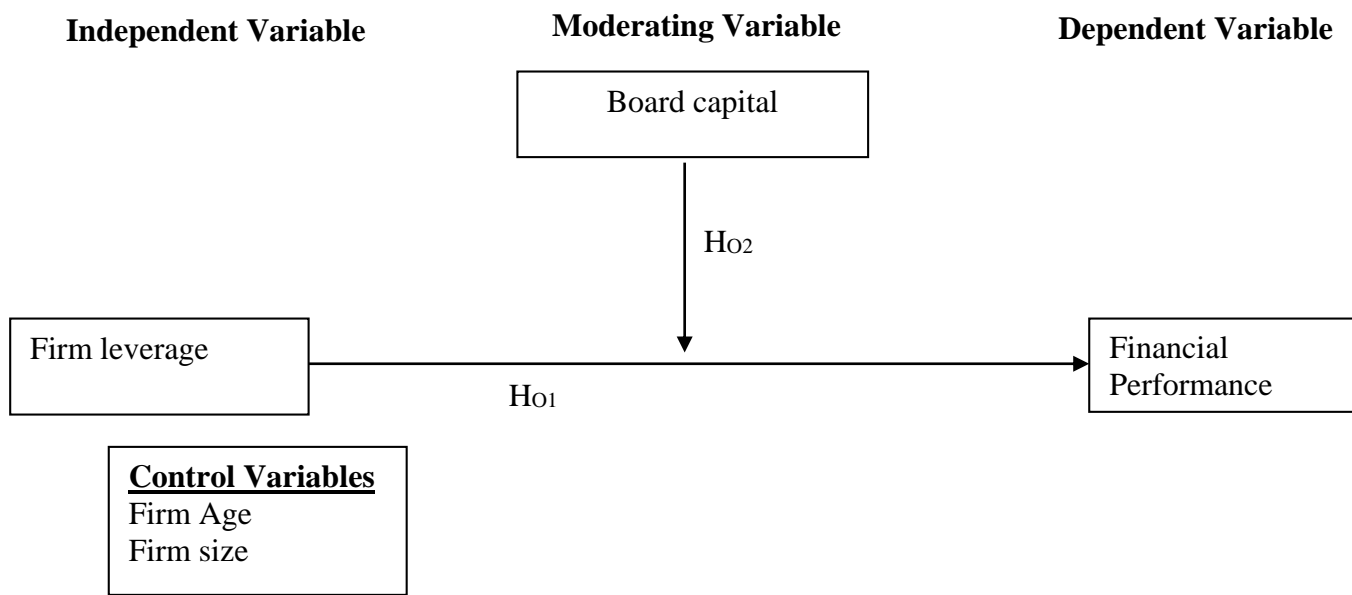


Figure 1: Conceptual Framework

Source; Author (2020)

Hypotheses

During the study, it was hypothesized that:

H₀₁ There is no significant relationship between firm leverage on the financial performance of firms listed at Nairobi Securities Exchange in Kenya.

H₀₂ Board capital does not moderate the relationship between firm leverage and financial performance of listed firm at Nairobi Securities Exchange in Kenya.

Methodology

This study is in line with the positivism approach of paradigm, which pursues to use existing theory to deduce and formulate variables. The study employed an explanatory research design. Explanatory research is conducted for a problem which was not well researched before, demands priorities, generates operational definitions and provides a better-researched model. (Creswell & Creswell, 2017). It is actually

a type of research design which focuses on explaining the aspects of your study in a detailed manner. The Explanatory research is not used to give us some conclusive evidence but helps us in understanding the problem more efficiently.

The research design is suitable in studies where both panel data characteristics of the units being studied are required because it can support these. (Gujarati, 2003). The data of the study comprised all the companies listed in Kenya's Nairobi Securities Exchange during the 10 years period from 2008 to December 2017. In total, 65 firms formed the target population of the study which are listed at Nairobi Securities Exchange. The data for the variables that were collected included independent variables (firm leverage) and dependent variable (financial performance) and moderating variable (board capital). However, after inclusion and exclusion criteria the inclusion criterion was based on all firms listed at the NSE from 2008 to 2017. While all the suspended and delisted firms were excluded. As a result, panel data from audited financial reports were collected from 40 firms listed.

The regression model:

Control Effect.

$$FP = \beta_0 + \beta_1FA_{it} + \beta_2FS_{it} + \varepsilon \dots\dots\dots 1$$

Direct Effect.

$$FP = \beta_0 + \beta_1FA_{it} + \beta_2FS_{it} + \beta_4LEV_{it} + \varepsilon \dots\dots\dots 2$$

Moderating effect –effect

$$FP = \beta_0 + \beta_1FA_{it} + \beta_2FS_{it} + \beta_4LEV_{it} + \beta_8LEV * BC_{it} + \varepsilon_j \dots\dots\dots 3$$

Where:

FP- Financial performance, BC-Board Capital LEV-Firm Leverage, FA- Firm age, FS-Firm size

E- Random error term, β_0 -Intercept, β_j ; beta coefficients, t - Time indices i -Firm indices

Results

Skewness / Kurtosis and Jarque-Bera test

Variable	Obs	Pr (Skewness)	Pr (Kurtosis)	adjchi2(2)	Prob>chi2
Residuals	400	0.0695	0.3534	7.29	0.086
. jb residuals					
Jarque-Bera normality test:					
7.705 Chi(2)	0.0612				

Jarque-Bera test for Ho: normality:

Source: Research Data, 2020

The results of Skewness/Kurtosis in Table above show the number of observations which are 400 and the probability of Skewness which is 0.0695 implying that Skewness is normally distributed (p-value of Skewness > 0.05). Similarly, 0.3534 Pr(Kurtosis) indicates that kurtosis is asymptotically distributed (p-value of kurtosis > 0.05). Finally, chi (2) is 0.086 which is greater than 0.05 meaning that the null hypothesis cannot be rejected. Therefore, according to SK test for normality, residuals show normal distribution.

Jarque-Bera test was also utilized to determine normality of research variables. In this test, if significance level is lower than 5% (Sig< 5%), the null hypothesis is rejected at confidence level 95%. Test assumptions are as follows:

H0: Data distribution is normal. H1: Data distribution is not normal.

For the Jarque-Bera Test, if the p-value is lower than the Chi (2) value then the null hypothesis cannot be rejected. It can therefore be concluded that the residuals are normally distributed. From Table 4.9, the chi

(2) is 0.0612 which is greater than 0.05 meaning that the null hypothesis cannot be rejected. The implication is that there is no violation of the normal distribution assumption of error terms as the residuals are coming out to be normal.

Table 4. 1: Descriptive Results of Study Variables

Stats	N	Min	Max	p50	Mean	kurtosis	Skewness
ROA	400	-0.27	51.34	0.07	0.25	395.26	19.82
LEV	400	-70.77	7.77	0.19	0.25	366.51	-18.69
BC	400	2.25	9.64	4.50	4.58	5.52	0.95
FS	400	3.79	11.16	7.24	7.10	4.57	-0.52
FA	400	3.00	138.00	53.00	57.43	2.55	0.42

Key=ROA= return on asset (financial performance), LEV =leverage, BC = board capital, FA = firm age, FS = firm size

Source: *Research Data, (2020)*

The summary of descriptive statistics for firm performance, firm leverage, board capital, firm age and firm size are presented in above. Findings showed that the return on assets was at a mean ratio of 0.25. More findings revealed that leverage was at a mean of 0.25. Also, board capital was at a mean of 4.58 with the firm size at a mean of 7.10. Finally, the firms listed at NSE have been in operation for an average of 57 years (mean = 57.43).

Correlation Results

	ROA	LEV	BC	FS	FA
ROA	1				
LEV	-.429**	1			
BC	.463**	-0.046	1		
FS	-.230**	.245**	0.075	1	
FA	-0.095	.117*	-0.008	.313**	1

** correlation is significant at the 0.01 level (2-tailed).

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

Source: *Research Data, 2020*

From above findings revealed that there was a negative correlation between firm leverage and financial performance is ($r = -0.429$) and significant at $p < 0.01$. The findings also revealed that board capital was positively correlated with financial performance ($r = 0.463$, $p < 0.01$). In addition, firm size had a negative correlation with financial performance ($r = -0.230$, $p < 0.01$). However, there was no significant correlation between firm age and financial performance ($r = -0.095$, $p > 0.01$).

Direct Effect-Regression Results

ESD	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
LEV	-0.295	0.042	-7.090	0.000	-0.376	-0.213
FS	-0.832	0.705	-1.180	0.238	-2.218	0.554
FA	0.399	0.169	2.360	0.009	0.066	0.731
_cons	-2.353	1.439	-1.630	0.103	-5.184	0.478
_cons	0.11	0.03	3.74	0	0.05	0.17
sigma_u	0.817					
sigma_e	0.896					
Rho	0.454	(fraction of variance due to u_i)				
F test that all u_i=0: F(39, 351) = 6.22 Prob > F = 0.0000						

Key=ROA= return on asset (financial performance) LEV =leverage,BC = board capital, FA = firm age, FS = firm size

Control Variables

The study controls the firm age and firm size the finding shows that firm size had a negative and insignificant effect on financial performance ($\beta = -.832$, $q > .05$). while, firm age showed a positive and significant effect on financial performance ($\beta = .399$, $q < .05$). Specifically, an increase in firm age by .399 units leads to an in financial performance by the same unit. The t-value = 2.360, which implies that it is more than the standard error.

Hypothesis Testing

H₀: *There is no significant relationship between firm leverage on the financial performance of firms listed at Nairobi Securities Exchange in Kenya.*

Stated that firm leverage has no significant effect on financial performance. However, the regression results indicated that firm leverage had a negative and significant influence on financial performance ($\beta = -.295$, $q < .05$). The null hypothesis was therefore not accepted, and it was concluded that an increase in firm leverage by .295 units leads to a decline in financial performance by the same unit. Contrary to the results Hossain, &Hossain, (2015) who concluded that leverage of the firm positively influenced the financial performance of insurance firms listed in the Nairobi Securities Exchange.

Moderation results

According to Frazier, Tix and Barron (2004), there are three types of moderations; First is the enhancing interactions where both the predictor and moderator affect the outcome variable in the same direction and together have a stronger than additive effect, secondly, is the buffering interaction where the moderator variable weakens the effect of the predictor variable on the outcome, and lastly is the antagonistic interactions where the predictor and moderator have the same effect on the outcome but the interaction is in the opposite direction. Moderation is a situation in which independent variables' effect on the dependent varies as a function of some third variable which is the moderator variable (Hayes, 2018). The study used a hierarchical regression model to test the moderation hypotheses by gradually introducing the interactions and interpreting the resulting output. A moderated effect is typically modeled statistically as an interaction between predictors and the moderator variable (Hayes, 2018), which are gradually added into the models. As an indication to arrive at a conclusion as to whether there is a moderation effect, Hayes (2018) stated that three conditions must hold; First, the R square for without and with interaction should vary, secondly

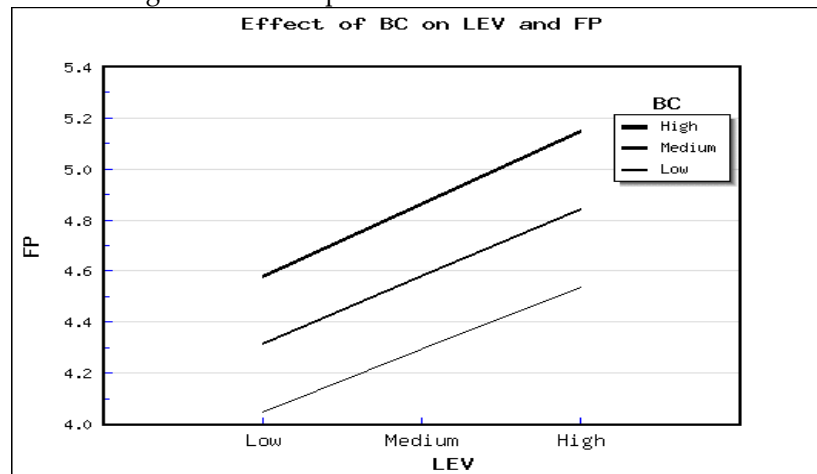
the coefficient for the interaction should be different from zero, and lastly is that the overall model (F-value) should be significant.

ROA	Model 1 B(SE)	Model 2 B(SE)	Model 3 B(SE)
_cons	1.06(1.95)	(-2.35(1.4)	2.45(1.24)*
control			
FS	-.68(.94)	(-0.83(.70)	-2.57(.59)**
FA	(-.57(.23)*	0.40(.17)*	(-0.13(.14)
predictors			
LEV		-0.29(.04)**	-0.28(.03)**
moderator			
BC			0.37(.07)**
Interaction			
LEV*BC			0.03(.01)*
R-sq: within	0.02	0.50	0.67
Between	0.04	0.17	0.25
Overall	0.02	0.36	0.56
R-sq Δ	-	0.34	0.07
F stat	3.88	59.23	88.55
Prob > chi2	0.02	0.00	0.00
sigma_u	0.81	0.82	0.86
sigma_e	1.25	0.90	0.73
Rho	0.30	0.45	0.58

Further, the results indicate a positive and significant moderating effect of board capital on the relationship between leverage and financial performance ($R^2\Delta=0.07$, $\beta= 0.03$; $p<0.05$). The results show that there is a 7% increase in the variation of financial performance by the addition of board capital on the relationship between leverage and financial performance. Board capital strengthens the relationship between leverage and financial performance. The null hypothesis that board capital has no significant moderating effect on the relationship between leverage and financial performance was thus rejected.

Nature of moderating effect of board capital using Modgraphs

Figure below demonstrated that an increase in board capital brought about a steeper slope between leverage and financial performance; hence, null hypothesis 1 was not supported. This implied that board capital positively and significantly moderates the relationship between leverage and financial performance. The findings in below indicate an enhancing moderation effect where increased board capital result in an increased effect of firm leverage on financial performance.



Modgraph of board capital on the relationship between leverage and financial performance

Discussion

Firm leverage has a negative and significant effect on financial performance. In tally with the findings, Anjum and Malik (2013) concluded that the leverage is positively significant to the financially distressed firms in Pakistan's securities exchange. This meant that the use of a high level of leverage contributes to bankruptcy. Similarly, Razak (2012) found that leverage is negatively associated with firm performance. In the same way, Akande (2013) in a study on the influence of financial leverage on the financial performance of 10 firms from Nigeria. The findings are also in tally with that of Chinaemerem and Anthony (2012), which showed that financial leverage has a significant but negative effect on the financial performance denoted by ROA(Return On Asset and ROE Return On Equity).

On the other hand, Uwalomwa and Uadiale (2012) established that short-term debt positively influences financial performance, while long-term debt negatively influences the financial performance of firms in Nigeria. Further support of the study findings is by Innocent *et al.* (2014), who noted that the debt ratio and debt-equity ratio have a negative link with ROA in pharmaceutical firms in Nigeria. As well, Maina and Kondongo (2013) revealed that the debt-equity ratio has a significant negative association with all measures of financial performance. The study findings are also in tally with that of Ningsih and Djuariah (2013), which discovered a negative relationship between financial leverage and ROA. Nevertheless, Rehman (2013) established that financial leverage has a positive relationship with Return On Asset and sales growth. Overall, the majority of the studies have confirmed that financial leverage negatively impacts on firm financial performance. The study, therefore, validates prior studies that have found a negative link between financial leverage and financial performance of firms.

However, board capital positively and significantly moderated the relationship between firm leverage and financial performance ($\beta = 0.03$; $\rho < 0.05$). Notably, with the incorporation of board capital, the effect of firm leverage on financial is no longer negative but positive. The knowledge and intellect that is brought to the board by members coming from varied backgrounds lead to excellent and sound management of firms leverage. Consistent with the results, Johl, Kaur, & Cooper, (2015) elucidated that the experience brought

by the board made it possible for the firm to convince the suppliers, customers, employees, lenders, and shareholders to stay put throughout the tough times thereby enhancing the financial performance.

Theoretical and Managerial Implications.

The theoretical implication of this study is that it supports and extends the trade-off theory by confirming that financial leverage might not be adequate to enhance financial performance despite being critical in tax savings associated with the use of debt. Besides, with the prudent restriction on leverage, there is a possibility that the shareholders are confident that the directors would maximize their wealth. Overall, having control empowers the management of the firms listed in Nairobi Securities Exchange to managers to maximize corporate profits. As well, the firms' management is good stewards since they have utilized firm leverage to facilitate financial performance. They therefore bring good returns to investors and at the same time a good reputation for the firm.

The study also concluded that financial leverage negatively impacts on the financial performance of firms listed in the Nairobi Securities Exchange. The implication of the study is that debt and equity ratios negatively influence financial performance. It could be that the financial leverage strategies are not

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adequate to enhance the performance of the firms. There is also a possibility that the firms listed were not better placed to raise good capital from fixed income securities. However, when moderated with board

capital, leverage enhances firm financial performance. Consequently, with the board, there is sound management of firms leverage to the extent of improving financial performance.

Additionally, financial leveraging has a negative impact on the financial performance of firms listed in NSE. The study, therefore, recommended for firms to embrace feasible financial leveraging strategies that can boost firm profitability. The focus needs to be on raising good capital from fixed income securities. Other than that, the firms listed in NSE need to have effective debt management mechanisms so to elicit an improvement in the financial performance

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