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*Effect of Financial Leverage on the Financial
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Effect of Financial Leverage on the Financial Performance of Construction and Allied Firms Listed at the Nairobi Securities Exchange

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Abstract

This paper aimed at determining the effect financial leverage on the financial performance of construction and allied firms listed at the Nairobi Securities Exchange. Study established that debt ratio has a positive connection with return on assets and the connection is significant which implies that high leverage leads to better financial performance. Results further established that firm size has a negative association with return on assets and the association is insignificant. This means that financial performance tends to decline as companies grow larger. Firm age was confirmed to have a positive connection with returns on assets, and the interconnection is significant which confirms that older firms tend to perform better compared to smaller ones. Finally, liquidity has a positive association with return on assets, and the association is significant which implies that, when firms maintain higher liquidity, overall financial success is enhanced. Research recommends firms set suitable leverage ratios such as debt ratio necessary for monitoring firms closely with an objective of ensuring firms remain within the range of acceptable risk tolerance. Further, firms need to develop a robust liquidity management policy to aid in the management of liquidity problems. This entails establishment of receivables management framework to manage firm's receivable accounts and inventory management to ensure firms maintain adequate levels of inventory to avoid instances of unnecessary inventory shortage.

Keywords: financial leverage, financial performance, liquidity, agency theory.

1. INTRODUCTION

Financial leverage is the firm's debt utilization and is very critical among the firms since it focuses on how investment funds are acquired and how they are allocated (Kinkel, 2016). Survival of the firms is dependent on leverage which also affects financial performance of the entities. This means that, how debt is acquired and managed can lead to losses or better financial performance (Jones & Krogh, 2018). Debt is normally applied when firms are in expansion stage, acquisition of other assets and during the period of financial distress (Rehman & Sharma, 2019). Prudent utilization of debt leads to better financial performance. Therefore, firms have the responsibility of ensuring adequate measures are implemented regarding debt usage because of its pivotal role in the organizations (Davis, 2015).

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Financial leverage and financial performance is still a puzzle because of contradicting arguments. According to Modigliani and Miller theory by Modigliani and Miller (1961), value of the levered entity is the same as the value of an unlevered entity implying that their value is the same. On contrary, agency theory by Jensen and Meckling (1976), asserts that conflict of interest exists between managers and shareholders whereby manager's focus is prioritization of self-interest as opposed to shareholder's wealth maximization and use of more debt can be employed to control free cash flows to better financial performance.

The nexus existing between financial leverage and financial performance is unresolved globally (Smith, 2022). Guler (2022) research in Brazil revealed that, leverage is negatively linked to financial performance of the firms. Sayed *et al* (2023) research in Turkey established that, leverage is positively linked to financial performance of Turkey's commercial banks. Kaniz (2023) research in Malaysia revealed that, leverage is positively related to financial performance. Edore and Hudu (2020) research in Nigeria revealed that, leverage of insurance firms is negatively linked to financial performance. Mixed outcomes were confirmed from different studies. Mutiso (2021) research in Kenya revealed that financial leverage of agricultural firms is negatively linked to financial performance. Otieno (2020) research in Kenya revealed leverage of commercial and services firms significantly impacted their financial performance. Contextual gap was revealed because the focus of the studies was in other sectors and regions compared with this research which was contextualized at the construction and allied firms at the Nairobi Securities Exchange aimed to test the effect of financial leverage on the financial performance.

2. METHODOLOGY

In specifying this research's methodology, researchers employed a descriptive research design since it provides detailed information on the phenomenon's current status. Secondary data was key data source because of its easy accessibility from the websites of the firms. Researchers collected data from 2017 to 2023 covering seven years. In evaluation of collected information, inferential statistics which consist of correlation and regression played a critical role. Descriptive statistics were also useful in describing in detail the variables of the study. The regression model was formulated as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon.$$

Where: Y = Financial performance

α = y intercept

$\beta_1, \beta_2, \beta_3, \beta_4$ = regression coefficients

X_1 = Financial leverage

X_2 = liquidity (control variable)

X_3 = Firm size (control variable)

X_4 = Firm age (control variable)

ε = error term

3. RESULTS AND DISCUSSIONS

Data was collected by the researchers, and description was in terms of a variety of measures which were employed in giving data traits specifically through skewness, mean, kurtosis, maximum, standard deviation and minimum values. Mean highlighted the central tendency with kurtosis, skewness and standard deviation explaining data spread. Research analysis yielded the following outcome as presented in Table 1. Debt ratio's mean, maximum, standard deviation and minimum values were; 0.4319, 0.88, 0.19880 and 0.11 respectively with kurtosis and skewness of 0.347 and 0.598 respectively. It depicts small variations in debt ratio; skewness of data was to right with wide shape. Firm age's mean, maximum, standard deviation and minimum values were; 4.1447, 4.51, 0.21906 and 3.78 respectively with kurtosis and skewness of -0.956 and 0.166 respectively. It means small variations in firm age; skewness of data was to right and with flat shape. ROA's mean, maximum, standard deviation and minimum values were; 0.0333, 0.09, 0.02806 and -0.02 respectively with kurtosis and skewness of -0.788 and 0.052 respectively. It implies small variations in ROA; skewness of data was to right with flat shape. Firm size's mean, maximum, standard deviation and minimum values were; 6.9634, 7.95, 0.56350 and 6.12 respectively with kurtosis and skewness of -0.839 and 0.473 respectively. It depicts moderate variations in firm size; skewness of data was to right and with flat shape. Liquidity's mean, maximum, standard deviation and minimum values were; 0.4503, 0.81, 0.15608 and 0.18 respectively with kurtosis and skewness of 0.347 and 0.757 respectively. It indicates small variations in liquidity; skewness of data was to right and with wide shape.

Table 1: Descriptive Results

Variables	N	Min	Max	Mean	Std. Dev.	Skewness	Kurtosis
Debt ratio	35	0.11	0.88	0.4319	0.19880	0.598	0.347
Firm age	35	3.78	4.51	4.1447	0.21906	0.166	-0.956
ROA	35	-0.02	0.09	0.0333	0.02806	0.052	-0.788
Firm size	35	6.12	7.95	6.9634	6.9634	0.473	-0.839
Liquidity	35	0.18	0.81	0.4503	0.15608	0.757	0.347

Correlation Analysis

Correlation statistics are essential in research because it aids in establishing interrelations existing among variables. Pearson correlation was utilized which also determined the direction of the existing linkage. The outcome is indicated in Table 2:

Table 2: Correlation Matrix

	ROA	Debt ratio	Liquidity	Firm size	Firm age
ROA	1				
Debt ratio	0.336*	1			
Liquidity	0.198	-0.245	1		
Firm size	-0.028	0.278	-0.397*	1	
Firm age	0.481*	-0.149	0.442*	0.022	1

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

The following observation about correlation was established by the researchers; a significant positive connection between debt ratio and return on assets ($r = 0.336$, $p < 0.05$). This implies that high debt levels are linked to better financial performance. A positive connection between liquidity and return on assets was confirmed ($r = 0.198$). This suggests that more liquid firms perform better compared to illiquid firms. A negative connection between firm size and return on assets was established ($r = -0.028$). This suggests that as firms get larger, their financial performance tends to decline. A significant positive connection between firm age and return on assets was confirmed ($r = 0.481$, $p < 0.05$). This implies that, how long a firm has been operational has an effect on its efficiency generation of profits.

Regression Analysis

Regression analysis outcome is provided in this section. The results are presented in Table 3, 4 and 5.

Model Summary

Based on the study's outcome of R square, it was established that the predictor variables explained variations of 0.305 in return on assets. This is the confirmation that, outside model variables account for 69.5% of the variability in financial performance, while four variables selected account for 30.5% of the variations.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.552 ^a	.305	.212	.02491
a. Predictors: (Constant), debt ratio, firm age, firm size, liquidity				

Analysis of Variance

Table 4 indicates that the model is appropriate in drawing conclusions based on F- test's P value of 0.024 (P<0.05).

Table 4: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.008	4	0.002	3.290	0.024 ^b
	Residual	0.019	30	0.001		
	Total	0.027	34			
a. Dependent Variable: Return on assets						
b. Predictors: (Constant), debt ratio, firm age, firm size, liquidity						

Regression Coefficients

The regression coefficients of the model are presented in Table 5. The outcome revealed that debt ratio positively and significantly affects financial performance ($\beta=0.039$, $p=0.013$). Additionally, liquidity ($\beta=0.05$, $p=0.004$) and firm age ($\beta=0.055$, $p=0.000$) which are control variables positively

and significantly affect financial performance. However, firm size (control variable) confirmed non-significant impact ($\beta=-0.003$, $p=0.771$).

Table 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.263	0.096		2.737	0.000
	Liquidity	0.05	0.034	0.027	3.141	0.004
	Firm size	-0.003	0.009	-0.342	-1.250	0.771
	Firm age	0.055	0.023	0.426	2.955	0.000
	Debt ratio	0.039	0.001	0.280	2.736	0.013
a. Dependent Variable: ROA						

Study outcome concurs with research by Sayed et al. (2023) in Turkey assessing the association existing between financial leverage and performance targeting banking sector from 2017 to 2022 which targeted one hundred and ten commercial banks. Outcome revealed that, leverage is positively linked to financial performance of Turkey's commercial banks. Research results contradict the findings of Mutiso (2021) in Kenya which aimed to establish the association existing between financial leverage and financial performance targeting commercial and services firms quoted at Nairobi Securities Exchange from 2016 to 2021. Outcome revealed that leverage is negatively linked to financial performance among commercial and services firms.

4. CONCLUSION AND RECOMMENDATIONS

Financial performance is improved because of strategic advantage of debt. When an organization utilizes debt effectively in financing profitable projects, it causes an increase in firm's earnings which translates to better financial performance. Further, when an organization finances by high leverage, it can easily enjoy tax shield since it is tax deductible implying the overall burden of tax is greatly reduced to enhance after-tax profits and improve financial performance. However, with very high debt, financial risk is very high which threatens financial performance if not prudently managed which can lead to poor financial performance.

Firm age has a positive association with return on assets and the association is significant. This is an indication that, as years of operation increase, financial performance improves. When firms grow older, they tend to accumulate market knowledge and valuable experience needed to remain competitive to enhance operational efficiency and better decision-making. In addition, over time, organizations have the capacity to build assets, establishing market positions and brand reputation which enhances strong financial performance and increased profitability.

Superior financial performance is exhibited by business organizations with high liquidity levels. When firms have adequate liquidity, assets deployment is optimized effectively which allows them to channel resources to productive ventures to enhance generation of high returns and better financial performance. Financial distress is mitigated by sufficient liquidity because firms can easily free up available resources for investment and growth by seizing opportunities and improving creditworthiness of the firms, which leads to improved financial performance.

The study recommends management of firms to set suitable leverage ratios such as debt ratio necessary for monitoring firms closely with an objective of ensuring firms remain within the range of acceptable risk tolerance. Firms must have a clear policy on leverage by establishing a comprehensive leverage framework which outlines acceptable levels of debt, kinds of debt and associated risk parameters. Further, financial planning on leverage is essential which can be attained through evaluation of potential benefits of leverage. Establishment of early warning signs is beneficial to the firms in the identification of any financial burden related to financial leverage and necessary mitigations.

Additionally, development of a robust liquidity management policy by firms will aid in the management of liquidity problems. This entails establishment of receivables management framework to manage firm's receivable accounts and inventory management to ensure firms maintain adequate levels of inventory to avoid instances of unnecessary inventory shortage. Firms must invest in liquidity by allocating adequate resources to improve liquidity which include investing in efficient processes and systems. Additionally, liquidity considerations must be integrated in organization's strategic plans with an objective of ensuring organization's financial health and financial performance is achieved.

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