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Review Article

The Influence of Financial Flexibility on Firm Value of Non-Financial Companies Listed at the Nairobi Securities Exchange in Kenya

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Abstract

The purpose of this study aimed to examine the influence of financial flexibility on the firm value of listed non-financial corporations at the NSE in Kenya from the period 2011 to 2019. Specifically, this study examined the influence of cash holdings; debt capacity; and financing cost restrictions on firms' value of listed non-financial companies quoted at the NSE. The study further examined the moderating role played by firm size in the association between financial flexibility and firm value of non-finance companies quoted at the NSE in Kenya. The study was underpinned by the free cash flow theory, the trade-off theory and the pecking-order theory. The study adopted a descriptive longitudinal research design and focussed on all the 37 non-financial listed at the NSE as of December 31, 2020. However, firms that were financially distressed as of the time of data collection did not form part of the study. As a result, only 31 firms with 272 firm-year observations formed part of the study. The study utilized panel data that was analysed using panel multiple regression analysis and aided by the STATA statistical package. To ensure the non-violation of statistical assumption and to allow for remedial action when a violation occurred, diagnostic tests were carried out. Hausman specification test results favoured the use of the random-effects model.

Keywords: Firm value, Financial flexibility, cash holdings, debt capacity, financing cost, non-financial companies.

INTRODUCTION

Every entity will at a time face an unanticipated crisis which requires instantaneous cash flow flexibility. The global shutdown occasioned by COVID 19 is a typical example. Financial flexibility, the capability of a business enterprise to get hold of the required financing at minimal cost and as and when required for a justifiable need, allows firms to invest in value-enhancing projects as and when they arise (Mohmood *et al.*, 2019). Moreover, financial flexible firms can respond to negative shocks arising from cash flow problems and liquidity (Rostami & Rezaei, 2021). Challenged by an uncertain external environment, financial flexibility allows firms to adjust by raising additional financial resources allowing them to maximise their value (Chang & Ma, 2019).

Financial flexibility is an essential topic for deciding financial policies, capital structure and investments that enhanced firms' value (Salehi & Moghadam, 2019). According to Chang and Ma (2019), financially flexible firms can take advantage of unforeseen opportunities with sufficient practicability. Further, financial flexibility relates to a company's entire capital structure and ability to counter unexpected conditions relating to its obligations and resources (Ferrando, Marchica, & Mura, 2017). In this context, the ability to gain low-cost financial resources to counter cashflow challenges or to take advantage of profitable opportunity costs is financial flexibility (Rostami & Rezaei, 2021).

According to Rostami and Rezaei (2021), financial flexibility can be viewed from two perspectives; internal and external. Internal financial flexibility can be measured using cash holdings and debt capacity. Cash holdings mainly include companies' cash deposits and other cash equivalents that are easily convertible into known amounts of cash with little or no

risk of loss of value (Chang & Ma, 2019). Extant literature documents transactional motive, precautionary motive and speculative motive as the major reasons firms hold cash. Transaction motive relates to firms having cash holdings with an aim of reducing transaction costs without resulting in seeking external finance or selling off some assets as either move would occasion significant costs and loss of firm value (Galpin, 2020).

Bhat *et al.,* (2020) posit that financial flexibility facilitated firm value amongst Chinese quoted companies. Equally, while Nguyen *et al.,* (2018) point out that financially flexible firms in Vietnam were able to raise up to 40 per cent of their value, Kenyan firms raised their value by only 10 per cent in the corresponding period (Capital Markets Authority, 2021). Furthermore, additional evidence indicates that in the past five years, at least eight firns have been delisted or suspended from the NSE either due to financial challenges or to undertake financial restructuring (Capital Markets Authority, 2021). Could the delisting if this firms be attributed to financial inflexibility? In practice, public firms in developed economies enjoy easily accessible debt financing from their well-established debt and bond markets, compared to developing countries such as Kenya (Mule *et al.*, 2015). Further, though the firm values as measured by market capitalization, have taken on an upward trajectory amongst listed firms in Kenya, this is largely on account of one firm, Safaricom which at present accounts for more than 50 per cent of the total market capitalization at the Nairobi Securities Exchange (Capital Markets Authority, 2021).

The moderating role of firm size on the relationship between financial flexibility on firm value in Kenya is lacking. This study takes cognizance of the fact that firm value may be a function of factors key among them financial flexibility. However, this relationship is affected by a host of factors such as firm size. There is therefore a need to critically assess the financial flexibility of the listed firms and how it impacts firms' value as a way of improving the investors' confidence at the NSE. Kibaya (2019) deduced that cash holding had a significant positive influence on the value of listed firms in Kenya. Wambua (2019) established a significant negative relationship between debt financing and ROA and Kulati (2014) revealed that firm size and capital structure does affect the value of a firm positively. These studies however did not examine the combined effect of financial flexibility on the firm value. This study thus sought to address the gaps identified from the literature review by interrogating the influence of financial flexibility on the firm value of non-financial companies at Kenya's NSE.

Objectives of the Study

The objective of the study was to examine the influence of financial flexibility on the firm value of non-financial firms listed in Kenya's Nairobi Security Exchange.

Theoretical Framework

Jensen (1986) presented the free cash flow theory and defined free cashflows as the excess of cashflows from operating activities that are needed for investment in projects. The theory suggests that a firm's value can be increased or decreased depending on how free cash flow is utilised (Jensen, 1986). The free cash flow theory developed by Jensen (1986) and holds that executives of companies have inventive to keep a huge amount of cash in a bid to shore up the total assets they control while gaining discretionally power over the firms' investment decisions and ultimately, firm value. Jensen (1986) posits those managers of firms will systematically keep higher cash out of their free cashflows and invest in self-serving projects and those that increase their compensation and power than those with positive net present value, thus reducing firm value. The free cash flow theory developed by Jensen (1986), therefore proposes the distribution of excess cash to shareholders and raising external funds to finance profitable investment projects as a mitigating measure. However, retaining extra cash in the firm might be crucial for well-managed firms to execute projects with positive net present value.

Myers (1984) postulated the pecking order theory of the financing decisions. The pecking order arises in a situation where the cost of raising new finance is greater than the net benefit arising out of using either debt or dividends as modes of financing. The transaction costs arising from raising new finance and the possession of the manager's privileged information lead to a pecking order. In particular, if the privileged information possessed by the managers relates to the riskiness of assets, then we end up with a pecking order (Fama & French, 2002). According to Fama and French (2002), the costs and information asymmetry create a hierarchy through which the firms finance new investments. Initially, the firm uses riskless and costless retained profits and after its exhaustion, riskless debt before turning to risky debenture financing. It is only after all the other options have been used that the firm moves to equity.

Myers, (1984) postulated the trade-off theory arguing that the ideal level of debt is that in which the discounted tax advantage of using debt financing should outweigh the discounted cost of possible distress. In the context of trade-off theory, there are costs and benefits arising from debt use, which determine the optimum level for a value-maximizing firm. The firm identifies its target debt level which is at the point where the marginal cost of debt is offset by its marginal benefit (Barclay & Smith, 1995). The cost of debt consists of

the financial distress cost and agency costs of asset substitution whilst the benefits are the tax advantage and the reduction in agency costs (Tong & Green, 2005).

As a result, the trade-off theory recommends that the optimal amount of debt is determined by weighing the advantages of tax relief against the cost of possible and higher bankruptcy costs. Taking into account the tax benefits of debt financing on one hand and financial distress on the other, it can be concluded that firm value is maximized at the point where the cost of capital is lowest.

LITERATURE REVIEW

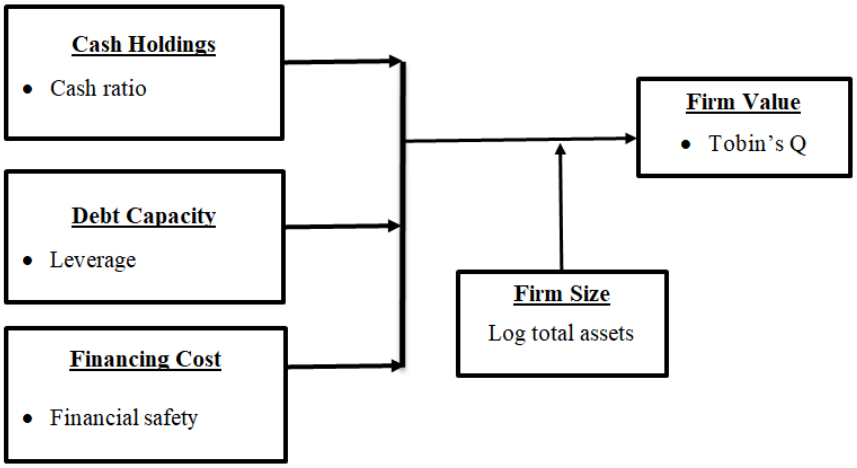
The review of extant literature reveals that a relationship exists between financial flexibility and corporate value. For instance, Nguyen *et al.,* (2018) study indicated a non-linear relationship between corporate cash holding thus supporting the trade-off theory about cash holding and firm value of non-financial firms in Vietnam. Asante-Darko *et al.,* (2018) found an insignificant negative association between cash holdings and firm value in companies that were listed on the Ghana stock exchange. However, Dimitropoulos *et al.,* (2020) findings indicated that cash holdings significantly and positively influenced corporate performance both in the pre and post-Greek debt crisis.

Mafrolla and D'Amico (2017) in a study that was carried out in small firms in Italy, Portugal and Spain found out that the borrowing capacity was not significantly related to earnings capacity. However, Attia (2019) found borrowing capacity positively and statistical association with the real earning management of firms in Tunisia. On the other hand, Pan, Liu and Wang's (2019) study showed that debt capacity strengthened the relationship between managerial overconfidence and the premium in the acquisition activities. A China study by Bhat *et al.,* (2020) indicated that a firm's debt capacity significantly influenced the financing decisions of the companies in the country.

Madrid-Guijarro *et al.,* (2016) findings indicated a negative and statistically significant association between financial constraints and innovation which impacted the firm's ability to remain financially viable over time. Small and Medium Enterprises (SMEs) in Spain. Similarly, Ayalew and Xianzhi (2019) found that financial constraints adversely affected African firms' ability to engage in innovative activities. Dhole, Mishra and Pal (2019) found a negative association between financial constraints and the future share price of quoted Australian firms during the period 2000 to 2016. On the relationship between firm size and financial flexibility, Hooshyar and Mohammadi (2019) found firm size had a significant but negative influence on the financial flexibility of firms listed on the Tehran Stock Exchange. However, in Pakistan Stock Exchange, (Mahemood *et al.,* (2018) found that when firm size was used as a control variable, a positive but insignificant impact on corporate financial flexibility existed.

From the foregoing, there are conceptual, methodological and contextual research gaps that this study seeks to address. Conceptual there is no consensus on the role of financial flexibility on firm value as the studies are inconclusive. While some argue that financial flexibility is related to firm value (Dimitropoulos et al., 2020; Nguyen *et al.*, 2018), others hold that financial flexibility is unrelated to firm value (Asante-Darko *et al.,* 2018). Most of the studies were carried out in developed nations and findings may not be generalized to a Kenyan situation. For instance, Ferrando *et al.* (2017) focused on the European countries, while Chang and Ma's (2019) focus was on Chinese firms. This creates the need to investigate the influence of financial flexibility on the firm value of Kenyan firms.

Conceptual Framework



This study adopted the descriptive longitudinal research design. Alternatively referred to as panel data surveys, longitudinal studies are carried out over a long time (Saunders & Tossey, 2015). In longitudinal surveys, a researcher repeatedly examines the same variable to detect if any changes might occur over a long time (Gujarati & Sangeetha, 2013). The final sample had 31 non-financial firms that were listed at the NSE as of December 31, 2020. The sample observations consisted of 9 years between 2011 and 2019, but observations for some companies were less than 9 years because of their late admission to the bourse and data unavailability. As a result, the study had unbalanced panel data with 272 firm-year observations. As the Covid-19 pandemic may have impacted firm value since the first case was reported in Kenya in the first quarter of 2020, this study has kept the sample years up until 2019. This makes the study period unbiased and free from bias as the sample period is not characterised by an unfavourable economic environment occasioned by the pandemic.

The secondary panel data collected from the audited financial statements were used to extract the various ratios identified in Table 2.1, operationalisation of variables. The ratios identified were analysed quantitatively using regression equations that were solved with the help of the STATA statistical package. To summarise the status of cash holdings, debt capacity, financing cost restrictions, firm size and firm value, the study employed descriptive statistics, correlational analysis as well as inferential statistics. The analyzed data is presented in the form of tabulations, percentages, mean and standard deviation.

This study employed panel data regression analysis. However, to determine whether to use a fixed-effects model or a random-effect model, the study deployed the Hausman specification test. Equation (1) presents the unmoderated model and equation (2) shall apply for the moderated relationship.

$$FirVal_{it} = \beta_0 + \beta_1 * Cash_{it} + \beta_{2*} DebtCap_{it} + \beta_3 * FinCost_{it} + \varepsilon ... \text{ equ (1)}$$

The study will adopt the Shaver (2005) method of testing for moderating effect. Introducing firm size as a moderating variable, the moderated equation shall take the form of equation (2) below.

$$FirVal_{it} = \beta_0 + \beta_1 * Cash_{it} + \beta_{2*} DebtCap_{it} + \beta_3 * FinCost_{it} + \beta_4 (Size_{it} * FinFlex_{it}) + \varepsilon ... \text{equ (2)}$$

Where: FirVal = Firm Value; Cash = Cash Holdings; DebtCap = Debt Capacity; FinCost = Financing Cost Restrictions; FinFlex = Financial Flexibility; Size = Firm Size; β_1, β_2, β_3,= Regression Coefficients for each independent variable, β_4 = Regression Coefficients for the meoderating variable and ε = error term.

DATA ANALYSIS AND RESULTS

Descriptive Analysis

Presents the descriptive statistics for firm value which is the dependent variable admission by Tobin's Q ratio. From the findings, the mean for firm value was 1.653 with a standard deviation of 1.506. This suggests that non-financial firms listed on the NSE, on average, had their market values exceeding the average. In other words, the market values of the firms were approximately 1.65 times their book values. Other firms, however, showed larger market valuations of approximately 8 times the book value as indicated by the maximum value of 8.160. However, other companies exceed their book values by 10 per cent. Further, the results of standard deviations suggest that the variations in firm value were not overly dispersed.

The results presented in Table 4.1 also present the descriptive statistics for cash holdings. In this case, cash holding was proxied by cash ratio measured as the quotient of cash and total assets. From the findings, the average cash holdings were 0.048 with a standard deviation of 0.129. This suggests that the average cash holding for publicly listed non-financial companies was 4.8 per cent of total assets. However, the standard deviation suggests a moderately large variability of cash ratio among the firms. This large variability in cash holdings can be attributed to the wide variation between maximum values and minimum values. At a minimum, cash holdings were -0.601 and a maximum value of 0.371.

Debt capacity was determined from the panel data that the study collected and proxied by the leverage ratio measured as total debt divided by total assets. The summary statistics presented in Table 4.1 shows that on average, non-financial firms listed at the NSE, on average have a greater proportion of their total assets financed by total debt. The mean value of 0.554 suggests that, on average, listed non-financial firms were financed through debt. Findings further show a standard deviation of 0.425 which suggests that variations of debt capacity are not overly dispersed. The minimum value of 0.112 concerning debt capacity suggests that some firms financed only 11.2 per cent of their assets using debt, while the maximum value reveals that some firms financed their assets by up to 3.2 times the value of their debt.

In addition, Table 4.1 presents the descriptive statistics regarding financing cost restrictions. Financing cost restrictions are proxied by the financial safety score indicated by the Altman Z-Score. From the finding, the average for financial safety is 3.628. As the Z-score value is above 2.9, non-financial firms listed on the NSE are deemed safe. The standard deviation value of 3.256 suggests variations in financial safety are not widely dispersed. However, the minimum value of -2.018, which is below the required threshold of 1.23 suggests that some firms face a high likelihood of

financial distress. The maximum value of 19.531 in respect of financial safety indicates that some non-financial companies listed on the NSE are viable.

Finally, the descriptive statistics presented in Table 4.1 indicates that non-financial firms used in the study differed in size. The size of the firm was measured as the natural logarithm of total assets. Whereas on average some firms had total assets, in antilog of 16.277, some firms recorded a minimum size of 12.167 and a maximum size of 22.235. There is variation among forms in terms of this variable though this is minimal as evidenced by a standard deviation of 2.088.

Table 4.1: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max
Firm Value (Tobin's Q)	272	1.653	1.506	0.105	8.160
Cash Holdings	272	0.048	0.129	-0.601	0.371
Debt Capacity	272	0.554	0.425	0.112	3.196
Financing Cost Restriction	272	3.628	3.256	-2.018	19.531
Firm Size	272	16.277	2.088	12.161	22.235

Table 4.2: Jarque-Bera Test for Normality

Variable	Observations	Chi-Square	p-value
Residuals	272	31.70	0.000

Table 4.3: Test for Multicollinearity

Variable	VIF	Tolerance = $1/VIF$
Cash holdings	1.29	0.775274
Debt capacity	1.28	0.779273
Financing cost restrictions	1.12	0.890825
Firm Size	1.06	0.946594
Mean VIF	**1.19**	

Table 4.4: Test for Heteroscedasticity

Breusch-Pagan/Cook-Weisberg Test for Heteroskedasticity	
Variables: Fitted values of Tobin's Q	
Chi^2 (1)	10.48
Prob > chi^2	0.0012

Table 4.5: Results of Autocorrelation Test

Wooldridge test for autocorrelation in panel data	
F (1, 30)	14.693
Probability > F	0.0006

Table 4.6: Hausman Specification Test Results

Model	Chi^2	Chi^2 degrees of freedom	p-value
1	2.66	4	0.6155

Table 4.7: Correlational Matrix

	Tobin's Q	Cash holdings	Debt capacity	Financing costs	Firm size
Tobin's Q	1.000				
Cash holdings	-0.0515	1.0000			
Debt capacity	0.2892*	-0.4424*	1.0000		
Financing cost	0.6759*	0.2338*	-0.2319*	1.000	
Firm size	-0.0796	0.0374	0.0952	-0.1929*	1.0000

(*) represents a 5 per cent level of significance

Table 4.8: Cash Holdings and Firm Value

```
Random-effects GLS regression                   Number of obs      =       272
Group variable: FirmId                          Number of groups   =        31
R-sq:  within  = 0.0418                         Obs per group: min =         5
       between = 0.1094                                        avg =       8.8
       overall = 0.0836                                        max =        10
                                                Wald chi2(1)       =     13.91
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0002
------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
debtcapacity |   .9413976   .2523772     3.73   0.000     .4467472    1.436048
       _cons |   1.165645   .2862913     4.07   0.000     .6045244    1.726766
-------------+----------------------------------------------------------------
     sigma_u |  1.3585905
     sigma_e |  .72670365
         rho |  .77753668   (fraction of variance due to u_i)
------------------------------------------------------------------------------
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Table 4.9: Debt Capacity and Firm Value

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Random-effects GLS regression                   Number of obs      =       272
Group variable: FirmId                          Number of groups   =        31
R-sq:  within  = 0.0418                         Obs per group: min =         5
       between = 0.1094                                        avg =       8.8
       overall = 0.0836                                        max =        10
                                                Wald chi2(1)       =     13.91
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0002
------------------------------------------------------------------------------
     tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
debtcapacity |   .9413976   .2523772     3.73   0.000     .4467472    1.436048
       _cons |   1.165645   .2862913     4.07   0.000     .6045244    1.726766
-------------+----------------------------------------------------------------
     sigma_u |  1.3585905
     sigma_e |  .72670365
         rho |  .77753668   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Table 4.10: Financing Cost Restrictions and Firm Value

```
Random-effects GLS regression                   Number of obs      =       272
Group variable: FirmId                          Number of groups   =        31
R-sq:  within  = 0.4628                         Obs per group: min =         5
       between = 0.4588                                        avg =       8.8
       overall = 0.4568                                        max =        10
                                                Wald chi2(1)       =    230.28
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
------------------------------------------------------------------------------
             tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+----------------------------------------------------------------
financingcostrestrictions |   .2770337   .0182559    15.18   0.000     .2412529    .3128146
                   _cons |   .6991663   .2043243     3.42   0.001      .298698    1.099635
---------------------+----------------------------------------------------------------
                 sigma_u |   1.060489
                 sigma_e |   .5441054
                     rho |  .79161451   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Table 4.11: Combined influence of Financial Flexibility on Firm Value

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Random-effects GLS regression                   Number of obs      =       272
Group variable: FirmId                          Number of groups   =        31
R-sq:  within  = 0.6652                         Obs per group: min =         5
       between = 0.6495                                        avg =       8.8
       overall = 0.6511                                        max =        10
                                                Wald chi2(3)       =    528.42
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
------------------------------------------------------------------------------
             tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------------+--------------------------------------------------------------
        cashholdings |   -.667148    .330859    -2.02   0.044     -1.31562   -.0186763
        debtcapacity |   1.930173    .161207    11.97   0.000     1.614214    2.246133
financingcostrestrictions |   .3374158   .0152456    22.13   0.000      .307535    .3672967
               _cons |  -.5888311   .1966605    -2.99   0.003    -.9742786   -.2033836
---------------------+--------------------------------------------------------------
             sigma_u |  .84766481
             sigma_e |  .43110278
                 rho |  .79450172   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Table 4.12: Moderating Effect of Firm Size

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Random-effects GLS regression                   Number of obs      =       272
Group variable: FirmId                          Number of groups   =        31
R-sq:  within  = 0.6473                         Obs per group: min =         5
       between = 0.6293                                        avg =       8.8
       overall = 0.6323                                        max =        10
                                                Wald chi2(3)       =    487.64
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
------------------------------------------------------------------------------
               tobinsq |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----------------------+--------------------------------------------------------------
      cashholdings_Mod |  -.0431375    .021526    -2.00   0.045    -.0853277   -.0009472
      debtcapacity_Mod |   .1175964   .0103612    11.35   0.000     .0972888     .137904
financingcostrestrictions_Mod |   .0210612    .000985    21.38   0.000     .0191306    .0229919
                 _cons |  -.5865831   .2035916    -2.88   0.004    -.9856153    -.187551
-----------------------+--------------------------------------------------------------
               sigma_u |  .86530583
               sigma_e |  .44242824
                   rho |  .79275448   (fraction of variance due to u_i
------------------------------------------------------------------------------
```

DISCUSSION AND CONCLUSION

This study sought to establish the influence of financial flexibility on firm value of non-financial firms listed on the Nairobi Securities Exchange in Kenya. To achieve this goal, four specific objectives and a similar number of hypotheses were stated and tested. The study adopted a longitudinal research design. Secondary panel data were analysed using the random effect model. Descriptive and inferential regression was carried out and varied results were obtained. The findings of the study were compared with existing empirical literature and conclusions were made.

On its own, cash holdings were found not to have any effect on the firm value of listed non-financial companies in Kenya. Independently, debt capacity was found to have a positive and statistically significant influence on the firm size of public non-financial firms. Similarly, financing cost restrictions were found to have a positive and statistically significant effect on firm value.

Overall, the combined influence of financial flexibility significantly explained variations in firm value. When the firm size was introduced as the moderator variable, it was found that financial flexibility accounted equally explained a significant portion of the variations in firm value. The study, therefore, concluded that firm size exalted a negative but marginal moderating role in the relationship between financial flexibility and firm value of listed non-financial firms in Kenya. Though the findings in relation to financial flexibility and firm value were mixed, this was not inconsistent with the existing empirical literature.

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