# DOES SHAREHOLDERS CONCENTRATION AFFECT THE INFLUENCE OF FIRM FINANCIAL CHARACTERISTICS ON STOCK RETURN OF MANUFACTURING COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE?

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**Abstract**

*Investment decision making should be anchored on logical evaluation of risk and return interactions. Evaluation of the link between risk and return should be evaluated through use of attributes that has the highest prediction power. Consequently, the current study examined the moderating effect of shareholders concentration on the influence of firm financial characteristics on stock return of listed manufacturing companies in Nairobi Securities Exchange. For this, a Census of 8 manufacturing listed companies was considered. The study used unbalanced panel data from 2009 to 2018. Correlation research design was applied and univariate and multivariate analysis techniques analyzed the data. Shareholders concentration was operationalized as percentage shareholding of majority shareholders. Firm financial characteristics were operationalized as firm value, financial health, liquidity, leverage. Study findings indicate positive and significant influence of firm value, liquidity and leverage on stock return of listed manufacturing companies. Shareholder concentration has significant moderating*

*effect on the influence of firm financial characteristics on stock returns. There is call for evaluation of attributes of firm value financial health liquidity and leverage optimization strategies. To understand leverage approach in an organization there is need for alignment of credit policies with organization operational guidelines so as to enhance gains to be derived from financing projects through debt capital.*

## INTRODUCTION

Investment return in securities exchange can be evaluated through capital gains and dividend returns. This would increase shareholders wealth and may have influence on decision making (Ebrahim & Chadegani, 2011). Investment decision making should be anchored on logical evaluation of risk and return interactions. Evaluation of the link between risk and return should be evaluated through use of attributes that has the highest prediction power. To cushion from investment losses, there is need for quicker criterion for examination of securities, otherwise profitable opportunity may be lost due to delayed decision making (Tehrani & Bajelan, 2009).

According to Ismail (2011), the commonly available indicators of stock return are financial data that can be retrieved from financial statements and if ratios, graphical evaluation and modelling is carried out, it can be easier to predict returns. The challenge is how to select the viable indicators of stock return since Sharpe (1964), Linter (1965) and Black (1962) used beta coefficient as predictor of stock return. This was questioned by Fama and French (1993) since stock return cannot be solely influenced by risk. These findings may not be replicated in Kenya among manufacturing listed companies since they are exposed to different industry specific risks, sources of data are not coherent as compared to developed economies and number of listed firms are few.

Stock return has been evaluated through different measures, for instance, Issahaku, Ustartz, and Domanban, (2013) examined stock performance through use of securities market index. This examination was based on weighted average. Gupta and Reid, (2012) mixed South African securities exchange index and specific segment indexes. Though, there was segmented index, it was not possible to harmonize the return measure, since different companies responded differently to publicly available information. In Kenya, Ndungu, Ochieng, and Wairimu, (2015) adopted NSE share index to evaluate the effect of post-election violence on stock return. It would have been prudent to use specific company equity return because not all firms considered in 20 NSE index have consistent trading pattern, which may create gaps in the data.

Even though, firm financial characteristics has amplified its empirical importance, it is worth to note that firm financial characteristics are many and contribution of each of them differs. According to Ufo, (2015), the contribution of firm financial characteristics to performance is significant. Moreover, Ebrahimi and Chadegani (2011), argue that firm financial characteristics demonstrate co-movement. Hence, they can be perceived to be information on equity performance of listed companies (Tripathya & Ahluwalia, 2015). Consequently, this current paper seeks to examine the moderating effect of shareholders concentration on the influence of firm financial characteristics on stock return of listed manufacturing companies in Kenya.

According to agency theory as documented by Jensen and Meckling (1976) there is a separation of ownership and management of listed companies. This arrangement creates recipe for conflict of interest due to monitoring and agency costs. Moreover, shareholders participate in governance through election of boards of management, since voting is contingent to shareholding, majority shareholders has more voting power. Due to this, shareholders may have vital power on decision making that may enhance, alter or antagonize the influence of firm financial characteristics on stock return of listed manufacturing companies. Hence, this current paper also evaluate moderating effect of shareholders concentration on the influence of firm financial characteristics on stock return of listed manufacturing firms in Kenya. This paper is based on the following hypotheses:

i. There is no significant influence of firm value on stock return of listed manufacturing companies in Kenya.

ii. There is no significant influence of financial health on stock return of listed manufacturing companies in Kenya.

iii. There is no significant influence of liquidity on stock return of listed manufacturing companies in Kenya.

iv. There is no significant influence of leverage on stock return of listed manufacturing companies in Kenya.

v. Shareholders concentration has no significant moderating effect on the influence of firm financial characteristics on stock return of listed manufacturing companies in Kenya.

## LITERATURE REVIEW

Julianto and Syafarudin (2019) investigated causality between stock return and value of plastic and packaging companies listed in Indonesia Securities Exchange. Specifically, the study evaluated causality of return of assets, current ratio, leverage, price earnings ratio and exchange rate of rupiah to US dollar. Secondary data was gathered over eight years from 2010 to 2017. A sample of 64 plastic and packaging listed companies was considered. Panel

regression modelling analyzed the data. Study findings indicate that profitability, liquidity, leverage, price earnings ratio have positive and significant effect on stock return. Exchange has inverse effect on stock return. There were conceptual differences since stock return was considered as mediating variable as compared to this current paper that examine moderating effect of shareholders concentration on relationship between firm value and stock return.

M'muriungi, Muturi and Olouch (2019) investigated the effect of firm factors on stock return of listed non-financial companies in Nairobi Securities Exchange. Specifically, the study examined the effect of firm value, earnings per share and firm size on stock return of non-financial listed companies in Kenya. Census of all firms was applied and secondary data collected from 2008 to 2016. Classical regression modelling was applied. Study findings revealed inverse and non-significant relationship between firm value and stock return. Earnings per share has positive and significant effect on stock return.

Mwanje and Otinga (2019) investigated factors affecting stock performance of banking sector companies listed in Nairobi Securities Exchange. Specifically, the study investigated the influence of earning information, capital structure on stock performance. Explanatory research design was applied and data gathered through administration of questionnaires. Descriptive and inferential statistics analyzed the data. Study findings indicate that stock performance was influenced by earning information sharing and capital structure. The study should have used secondary data instead of primary to allow itself to carry out long and short effect of earnings information sharing and capital structure on stock return.

Moch and Prihatni (2019) investigated the effect of liquidity, profitability, solvability on financial distress of listed manufacturing companies in Indonesia Securities Exchange from 2015 to 2017. Logistics regression model was used on the data. Study findings depicted that there was negative effect of liquidity and working capital to total assets on financial distress. In contrast profitability, debt to equity ratio and solvency negatively affected financial distress of manufacturing companies. These results may not be replicated in Kenyan perspective due to differences in social and political environment that may impact business environment which will ultimately influence stock return.

Mahmood, Rizwan and Rashid (2018) investigated relationship between financial distress, financial flexibility and financial performance of companies listed in Pakistan securities exchange. Secondary data was collected from 192 companies listed from 1992 to 2014. Logistics regression model was utilized Study findings documented that financially flexible firms have lower odds of financial distress. Financially flexible firms have better performance as compared to others. There was significant association between financial flexibility and financial distress. Study findings were in support of pecking order theory and they supported reliance of

internally generated funds among most companies. This would minimize cost of capital and lower likelihood of constrained financial costs.

Ayuba, Balago and Dagwom (2018) investigated the effect of firm size, book to market value per share and earnings per share on stock return of listed firms from 2007 to 2016. Ex-post facto research design was adopted and secondary data gathered from annual financial statements. Panel regression modelling analyzed the data. Findings documented positive and significant relationship between firm size and stock return. Price earnings ratio had positive and non-significant effect on stock return. Book to market value per share had negative and not significant effect on stock return. These findings considered companies listed in different sectors who firm specific risks differed across sectors hence findings may not be generalized in manufacturing companies listed in Kenya.

Akomeah, Bentil and Musah (2018) investigated causality between capital structure and firm value of non-financial companies listed in Ghana. A sample of 20 listed firms in Ghana were considered and data gathered over seven years from 2010 to 2016. Regression modelling was utilized. Study findings depicted that there was an inverse association between leverage and performance. These results refuted theoretical expectations that short term should positively affect performance since it is cheaper as compared to long term financing while an organization is using conservative policy.

Mutai (2018) investigated the effect of firm characteristics on post of companies after IPO in Nairobi Securities Exchange. Event study research design was adopted and census of 12 companies that has undertaken initial public offering between 1996 and 2013 were considered. The data was prospectus and trading volume, daily share prices and NSE indices were analyzed. Firm characteristics have influence on stock performance.

Sumaryati and Tristiarini (2017) investigated the effect of cost of equity on firm value and financial distress of 144 companies listed in Indonesia from 2011 to 2015. Conceptually, financial distress mediated the relationship between costs of equity on firm value. Univariate and classical regression modelling analyzed the data. There was significant association between cost of equity and financial distress and firm value. Firm value was positively and not significantly affected by financial distress. There are conceptual differences in the current paper since it explores mediating effect of shareholders concentration on the relationship between firm value and stock return of listed manufacturing companies in Kenya.

Wairimu (2017) evaluated the effect of firm size on stock return of listed companies in Nairobi securities exchange. Correlation research design was applied and regression analysis analyzed the data. Study findings indicate strong relationship between firm size and stock

return. The study considered all companies listed hence its findings may not be generalized in a single industry due to heterogeneity of industry specific risks.

ElGhouty & El-Masry (2017) investigated the effect of ownership structure on firm stock performance in Ghana. Particularly the study investigated the effect institutional ownership, block shareholding and stock performance. Causal research design was adopted and classical modelling used Study findings indicate that there was an inverse and significant association between institutional ownership and stock performance. Further, ownership concentration has significant and positive effect on stock performance.

Ngunjiri (2016) investigated the effect of financial performance on stock return of listed companies in Nairobi securities exchange. Descriptive research design was applied and secondary data collected over five years among 67 listed companies from 2011 to 2015. Ordinary least squares model analyzed the data. Study findings indicate that financial performance and share price levels has positive and significant relationship with stock returns. Further, there was positive and not significant relationship between dividend yield and stock return. The study should have adopted causal research design instead of descriptive. It was appropriate to report on diagnostic tests prior to modelling to minimize odds of fitting spurious model.

Khodaminpour, Golestami and Khorram (2013) investigated relationship between liquidity, company size and firm size of listed companies in Tehran Stock Exchange A sample of 100 listed companies was selected and data gathered from 2007 to 2010. Regression model was employed Study findings indicate that there is no significant association between stock risk and size of companies. There was significant association between market value, liquidity volume and stock return. Since the study adopted classical regression modelling, it was appropriate to carry out diagnostic tests. There are geographical differences between Tehran stock exchange and Nairobi securities exchange which may be characterized by political and economic environment. Furthermore, the study considered listed in different sectors and failed to factor in industry specific risks exposure which are manifested through industry risk exposure.

Caixe and Kranter (2013) investigated the influence of ownership and control structure on market value in Brazil. Correlation research design was applied and unbalanced panel data gathered among 237 Brazilian non-financial publicly listed companies from 2001 to 2010. Dynamic regression modelling was applied. Study findings documented quadratic relationship between cash flow rights of majority shareholders and incentive effect. The study evaluated direct effect of ownership structure and its governance structure differs from Kenyan perceptive hence its findings may not be generalized in manufacturing listed firms.

Olowoniji and Ojenike (2012) investigated determinants (expected growth, size, profitability, tangibility and leverage) of stock return listed companies in Nigeria. Univariate,

bivariate and multivariate techniques were used for data analysis. Study findings indicate positive and significant association between profitability, expected growth and stock return. Leverage and tangibility had inverse and significant effect on stock return. The study evaluated stock return through use of dividend yield as compared to current study that used holding period return. The study did not report on diagnostic tests hence it was not possible to examine robustness of regression model.

Antwi, Millis and Zhao (2012) investigated causality between capital structure and firm value among 34 companies listed in Ghana Securities Exchange (GSE). Ordinary least squares model was employed and it showed positive and significant relationship between firm value and long-term debt. It was concluded that corporate financial decisions should finance their operations using long term debt financing. There are contextual differences since these findings considered all listed companies as compared to current empirical examination of causality between firm financial characteristics and stock return of listed manufacturing companies.

**Conceptual Framework**

The study conceptualized that firm financial characteristics that include firm value, financial health, liquidity and leverage has influence on stock return of listed manufacturing companies. This influence was moderated by shareholders concentration. The hypothesized relationship is as shown in Figure 1.
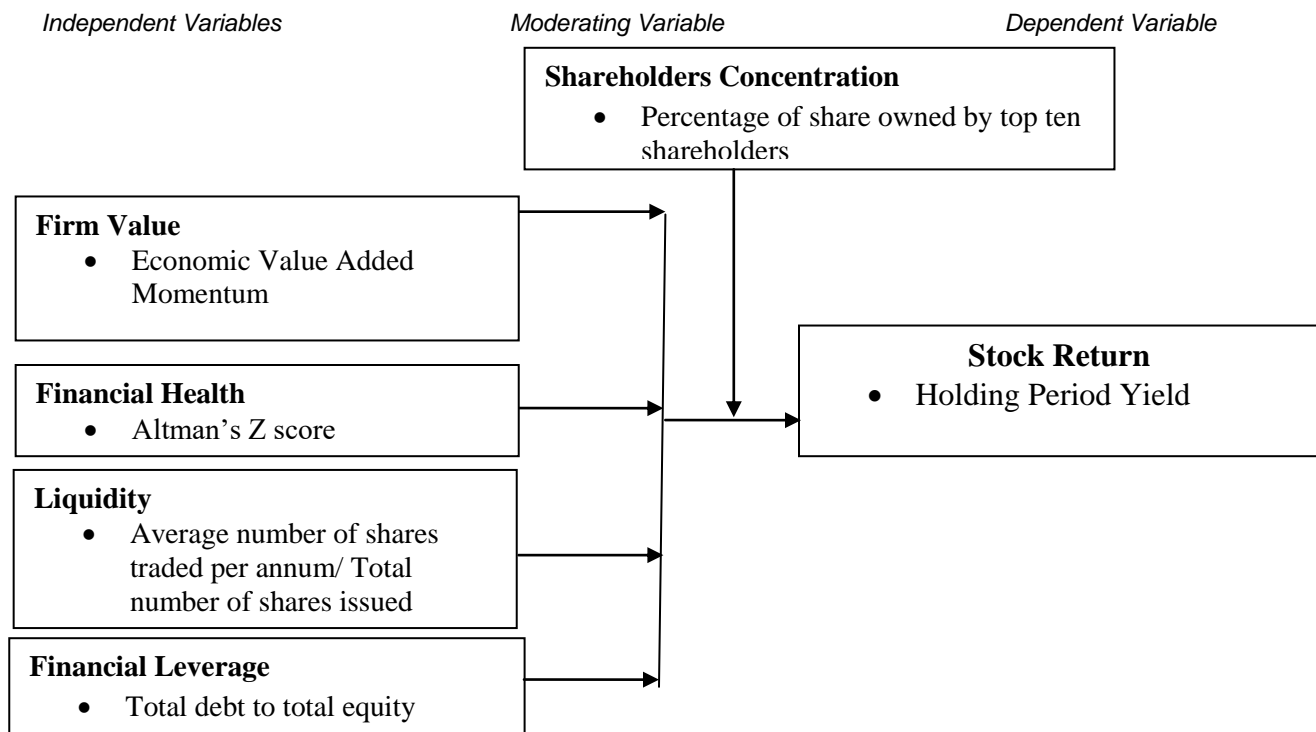


Figure 1. Conceptual Framework

## METHODOLOGY

Correlation research design was adopted. Panel data was retrieved from annual financial statements for periods 2009 to 2018. The period was considered since it was two years after post-election violence to evaluate whether the state of manufacturing company's performance was contingent to political stability. Secondary data was gathered from annual audited financial statements of listed manufacturing companies in Kenya. Census of 8 companies was adopted. Only 8 manufacturing companies were listed in Nairobi securities exchanges. Descriptive statistics and inferential statistics were used to analyze the data. Descriptive statistics include mean, standard deviation, minimum, maximum, skewness and Kurtosis. Inferential statistics include Product moment correlation and regression modelling. Fixed effects model evaluated the influence of firm financial characteristics on stock return of listed manufacturing companies. Prior to modeling, diagnostic tests that included stationarity, multicollinearity, random effects tests, Testparm, Hausman, Breusch Godfrey tests and Woodridge serial correlation tests. Study findings are presented in tables. Moderating effect of shareholders concentration was examined through examination of marginal effect as argued by (Wairimu, Muturi, & Olouch, 2019; Githaiga, Olweny, & Muturi, 2020). Models without and with moderation are as shown:

$$SR_{it} = \beta_0 + \beta_1 FV_{1it} + \beta_2 FH_{2it} + \beta_3 Liquidity_{3it} + \beta_4 Leverage_{4it} + \varepsilon_{it} \dots\dots\dots\dots\dots. Equation\ 3.1$$

$$SR_{it} = \beta_0 + \beta_1 FV_{1it} + \beta_2 FH_{2it} + \beta_3 Liquidity_{3it} + \beta_4 Leverage_{4it} + \beta_5 SC_{it} + \beta_6 FV_{1it} SC_{it} +$$
$$\beta_7 FH_{2it} SC_{it} + \beta_8 Liquidity_{3it} sc_{it} +$$
$$\beta_9 Leverage_{4it} sc_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots. Equation\ 3.2$$

Where;

$SR_{it}$ represent Stock return

$FV_1 it$ represent Firm Value for firm i in period t; $FH_{it}$ represent Financial Health for firm i in period t; $Liquidity_{it}$ represent Liquidity for firm i in period t; it represent Leverage $_{it}$ for firm i in period t; $SC it$ represent Shareholders' concentration for firm i in period t.

$FV_{it}*SC_{it}$ represent interaction between firm value and Shareholders' concentration for firm i in period t.

$FH_{it}*SC_{it}$ represent interaction between firm health and Shareholders' concentration for firm i in period t.

$Liquidity_{it}*SC_{it}$ represent interaction between liquidity and Shareholders' concentration for firm i in period t.

Leverage $_{it}*SC_{it}$ represent interaction between leverage and Shareholders' concentration for firm i in period t.

To confirm the moderating effect of shareholders concentration, moderated and non-moderated regression coefficients were compared with marginal change of firm financial characteristics on stock return of listed manufacturing companies in Kenya. If the marginalized coefficient were different with none moderated coefficients then there was moderation. This was achieved by differentiating model 3.2, partially and incorporating the average moderating value (shareholders concentration) as follows.

$$\frac{\delta y_{i,t}}{\delta FV_{i,t}} = \beta_1 + \beta_6 SC_{it}$$

$$\frac{\delta y_{i,t}}{\delta FH_{i,t}} = \beta_2 + \beta_7 SC_{it}$$

$$\frac{\delta y_{i,t}}{\delta Liquidity_{i,t}} = \beta_3 + \beta_8 SC_{it}$$

$$\frac{\delta y_{i,t}}{\delta Leverage_{i,t}} = \beta_4 + \beta_9 SC_{it}$$

## RESULTS

Descriptive measures of dispersion, central tendency and flatness were summarized as shown in Table 1. The average return for listed manufacturing companies was 9% with a maximum of 31% and minimum of -53%. The average standard deviation was 15%. The stock return was not normally distributed as indicated by Jarque Berra of 192.54, p value = 0.000. The average economic value added momentum (firm value) of listed manufacturing companies in Kenya was 0.91, with an average standard deviation of 0.79. Firm value of listed manufacturing companies differed so widely with a maximum of 3.36 and minimum of 0.03. This can be attributed to variations in their asset bases and annual revenue. The average financial health of listed manufacturing companies in Kenya was 3.30, with a minimum of -7.09 and maximum of 8.30. This indicates that there were some listed manufacturing exposed to financial distress since their financial distress score was less than the gray zone. The average liquidity was 2.49, this indicates that market for listed manufacturing company's securities was thin. The average leverage for manufacturing companies was 0.73 with a maximum of 0.89 and minimum of 0.35. The average shareholders concentration in manufacturing was 0.46, with a maximum of 0.84 and minimum of 0.20. The variables were not normally distributed since their respective p values for Jarque Berra coefficients were less than 0.05.

Table 1: Descriptive Statistics

|  | Stock Return | Firm Value | Financial Health | Liquidity | Leverage | Shareholders concentration |
|---|---|---|---|---|---|---|
| Mean | 0.09 | 0.91 | 3.30 | 2.49 | 0.73 | 0.46 |
| Maximum | 0.31 | 3.36 | 8.30 | 14.23 | 0.89 | 0.84 |
| Minimum | -0.53 | 0.03 | -7.09 | 0.19 | 0.35 | 0.20 |
| Std. Dev. | 0.15 | 0.79 | 2.75 | 2.75 | 1.43 | 0.19 |
| Skewness | -2.18 | 1.49 | -0.92 | 3.00 | 1.67 | 0.13 |
| Kurtosis | 9.66 | 4.51 | 4.97 | 11.74 | 8.06 | 2.17 |
| Jarque-Bera | 192.54 | 33.86 | 22.15 | 341.48 | 111.60 | 2.29 |
| Probability | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.32 |
| Sum | 6.55 | 66.26 | 240.99 | 181.88 | 81.98 | 33.47 |
| Sum Sq. Dev. | 1.57 | 45.44 | 544.33 | 545.46 | 147.99 | 2.61 |
| Observations | 72 | 72 | 72 | 72 | 72 | 72 |

Correlation analysis in Table 2 indicates that firm value has positive but not significant influence on stock return of listed manufacturing companies in Kenya (rho = 0.16, p value > 0.05). Financial health has positive but not significant influence on stock return of listed manufacturing companies (rho = 0.15, p value > 0.05). Liquidity has positive but not significant influence on stock return (rho = 0.15, p value > 0.05). Leverage has positive but not significant influence on stock return of listed manufacturing companies in Kenya (rho = 0.19, p value > 0.05). Shareholders concentration has inverse effect on stock return of listed manufacturing in Kenya (rho = -0.16, p value > 0.05).

Table 2: Correlation Analysis

|  | SR | FV | FH | Liquidity | Leverage | SC |
|---|---|---|---|---|---|---|
| Stock return (SR) | 1 |  |  |  |  |  |
| Firm value (FV) | 0.46** | 1 |  |  |  |  |
|  | 0.00 | ----- |  |  |  |  |
| Financial Health (FH) | 0.23 | 0.36 | 1 |  |  |  |
|  | 0.22 | 0.25 | ----- |  |  |  |
| Liquidity | 0.54** | 0.32 | 0.24 | 1 |  |  |
|  | 0.00 | 0.29 | 0.04 | ----- |  |  |
| Leverage | 0.58** | 0.38 | -0.02 | -0.33 | 1 |  |
|  | 0.00 | 0.28 | 0.88 | 0.00 | ----- |  |
| Shareholders concentration (SC) | 0.42** | 0.41 | 0.22 | -0.14 | -0.36 | 1 |
|  | 0.00 | 0.39 | 0.07 | 0.23 | 0.00 | ----- |

**Diagnostic Tests**

Classical regression modelling is based on assumptions on linearity, serial autocorrelation, multicollinearity, heteroskedasticity and normality. Further, while modelling panel data there is need to confirm stationarity, fixed effects, chose between random and fixed effects. In this study multicollinearity was evaluated through variance inflation factors and tolerance limits. Stationarity was evaluated through use Levin, Lin & Chu, Im, Pesaran and Shin W-Stat, ADF-Fisher Chi Square and PP Chi Square. Other tests include Breusch- Pagan test, Testparm, Hausman test, Breusch-Godfrey test and Wooldridge tests.

Stationarity test in Table 3 indicates that stock return, firm value, financial health, leverage and shareholder's concentration were stationary at levels hence there was no need for lagging.

Table 3: Stationarity

| Variable | Test | Statistic | P value |
|---|---|---|---|
| SR | Levin, Lin & Chu | -3.63 | 0.00 |
|  | Im, Pesaran and Shin W-stat | -2.18 | 0.01 |
|  | ADF - Fisher Chi-square | 29.09 | 0.01 |
|  | PP - Fisher Chi-square | 80.97 | 0.00 |
| FV | Levin, Lin & Chu | -6.08 | 0.00 |
|  | Im, Pesaran and Shin W-stat | -2.97 | 0.00 |
|  | ADF - Fisher Chi-square | 35.57 | 0.00 |
|  | PP - Fisher Chi-square | 71.71 | 0.00 |
| FH | Levin, Lin & Chu | -2.49 | 0.01 |
|  | Im, Pesaran and Shin W-stat | -2.47 | 0.01 |
|  | ADF - Fisher Chi-square | 24.82 | 0.04 |
|  | PP - Fisher Chi-square | 80.15 | 0.00 |
| Liquidity | Levin, Lin & Chu | -6.87 | 0.00 |
|  | Im, Pesaran and Shin W-stat | -1.93 | 0.03 |
|  | ADF - Fisher Chi-square | 28.12 | 0.01 |
|  | PP - Fisher Chi-square | 41.09 | 0.00 |
| Leverage | Levin, Lin & Chu | 12.99 | 0.00 |
|  | Im, Pesaran and Shin W-stat | -2.19 | 0.00 |
|  | ADF - Fisher Chi-square | 19.96 | 0.13 |
|  | PP - Fisher Chi-square | 71.77 | 0.00 |
| SC | Levin, Lin & Chu | -3.12 | 0.00 |
|  | Im, Pesaran and Shin W-stat | -2.65 | 0.03 |
|  | ADF - Fisher Chi-square | 28.49 | 0.02 |
|  | PP - Fisher Chi-square | 23.67 | 0.00 |

The *p*-values for the Fisher tests were based on asymptotic Chi-square distribution. The LLC test is based on asymptotic normality.

Multicollinearity test is carried out to evaluate the strength of collinearity between independent variables under examination. Table 4 indicates that firm value, financial health, liquidity, leverage and shareholders concentration were not highly correlated since the lower tolerance limit was 0.35 and maximum of 0.83 and none of variance inflation factors exceeded 10.

Table 4: Multicollinearity

|  | Tolerance | VIF |
|---|---|---|
| Firm value | 0.40 | 2.51 |
| Financial Health | 0.83 | 1.21 |
| Liquidity | 0.35 | 2.85 |
| Leverage | 0.68 | 1.47 |
| Shareholders Concentration | 0.71 | 1.41 |

Further, study findings in Table 5 indicates that test for time fixed effects indicates that all years are equal to zero since the p values for model without and with moderations were greater than 0.05. Lagrangian multiplier test has $\chi^2-\text{value} = 4.23, \text{p value} = 0.0198$ for model without moderation and $\chi^2-\text{value} = 3.93, \text{p value} = 0.0237$. This indicates that evaluation of the influence of firm financial characteristics on stock return of manufacturing listed firms in Kenya cannot be evaluated by ordinary least squares since p values were less than 0.05. Consequently, random effect model was the most appropriate. There was heteroskedasticity and no serial correlation challenges as indicated by p value greater than 0.05 and greater than 0.05 respectively. Hence, robust standard errors while modelling.

Table 5: Other Diagnostic Tests

| Diagnostic Test | Test | Without Moderation | With Moderation |
|---|---|---|---|
| Testing for fixed effects | Testparm | F = 1.60, p value = 0.1387 | F = 1.66, p value = 0.1226 |
| Random effects test | Breusch-Pagan Lagrangian Multiplier Test | $\chi^2-\text{value} = 4.23,$ p value $= 0.0198$ | $\chi^2-\text{value} = 3.93,$ p value $= 0.0237$ |
| Heteroskedasticity | Breusch-Pagan Godfrey (chi) test | $\chi^2-\text{value} = 22.48,$ p value $= 0.07$ | $\chi^2-\text{value} = 34.15,$ p value $= 0.09$ |
| Serial Correlation | Woodridge serial autocorrelation test | F = 54.26, p value = 0.2151 | F =135.48, p value = 0.1458 |

## Hypothesis Testing

To examine influence of firm financial characteristics on stock return model 1 of the form; SR = C + Firm Value + Financial Health + Liquidity + Leverage. Moderating effect of shareholder's concentration was evaluated through model 2 of the form; SR = C + Firm Value + Financial Health + Liquidity + Leverage + FV*SC + FH*SC + Liquidity*SC+ Leverage*SC.

In the first regression, model 1, an R squared of 0.722 indicates that 72.2% of variations in stock return of listed manufacturing companies can be accounted for by firm value, financial health, liquidity and leverage. The model goodness of fit indicates that firm value, financial health, liquidity and leverage has joint significant influence on stock return F= 33.421, p value < 0.05. Firm value has positive and significant influence on stock return of listed manufacturing companies in Kenya (β = 0.359, p value < 0.05). Hence, there was enough evidence to warrant rejection of the null hypothesis and we conclude that firm value significantly affect stock return of listed manufacturing companies. Secondly, financial health has positive and not significant influence on stock return of listed manufacturing companies in Kenya (β = 0.006, p value > 0.05). Hence, there was no enough evidence to warrant rejection of null hypothesis that stated, financial health has no significant influence on stock return and we conclude that financial health has no significant influence on stock return of listed manufacturing firms. Thirdly, liquidity has positive and significant influence on stock return of listed manufacturing companies in Kenya (β = 0.003, p value <0.05). Hence, there was enough evidence to reject the null hypothesis that liquidity has significant influence on stock return. Finally, there was positive and significant influence of leverage on stock return of listed manufacturing companies in Kenya (β = 0.028, p value < 0.05). Hence, there was enough evidence to warrant rejection of the null hypothesis and we conclude that leverage has positive and significant influence on stock return of listed manufacturing companies in Kenya. The resultant equation is of the form:

Stock Return = -0.004 + 0.359*Firm Value + 0.006*Financial Health + 0.003*Liquidity + 0.028*Leverage

In model two, an R squared of 0.7942, indicates that 79.42 of changes in stock return of listed manufacturing companies can be explained by firm value, financial health, liquidity, leverage, shareholders concentration and moderated firm value, financial health, liquidity and leverage. The model goodness of fit indicates that firm value, financial health, liquidity leverage, shareholders concentration and moderated firm value, financial health, liquidity and leverage has joint significant influence on stock return F= 52.361, p value < 0.05. Shareholder's concentration has inverse and significant effect on stock return of listed manufacturing companies in Kenya (β = 0.762, p value < 0.05). To examine moderating effect of shareholders

concentration on stock return of listed manufacturing companies. Marginal effects were examined through partial differentiation as shown below:

$$\frac{\delta yi,t}{\delta FVi,t} = \beta_1 + \beta_6 Z_{it} = 0.083 + 0.210*0.46 = 0.1796$$

$$\frac{\delta yi,t}{\delta FHi,t} = \beta_2 + \beta_7 Z_{it} = 0.008 + 0.043*0.46 = 0.028$$

$$\frac{\delta yi,t}{\delta Liquidityi,t} = \beta_3 + \beta_8 Z_{it} = 0.016 + 0.013*0.46 = 0.022$$

$$\frac{\delta yi,t}{\delta Leveragei,t} = \beta_4 + \beta_9 Z_{it} = 1.178 + 1.197*0.46 = 1.729$$

Comparative analysis of marginalized coefficients and non-moderated coefficients in (Stock Return = -0.004 + 0.359*Firm Value + 0.006*Financial Health + 0.003*Liquidity + 0.028*Leverage) indicates difference. Therefore, it was concluded that shareholders concentration moderated the influence of firm financial characteristics on stock return of listed manufacturing companies in Kenya. Further, shareholder's concentration has significant positive moderating effect on the influence of financial health and stock return of listed manufacturing companies in Kenya. Moreover, shareholders concentration has positive and non-significant moderating effect on the influence of firm value, liquidity, leverage and stock return of listed manufacturing companies in Kenya.

Table 6: Regression Modelling

| | Dependent variable Stock Return | |
| Independent variable | Model 1 | Model 2 |
| --- | --- | --- |
| C | -0.004(0.038) | 0.190(0.161) |
| Firm value | 0.359(0.174)** | 0.083(0.029)** |
| Financial Health | 0.006(0.008) | 0.008(0.046) |
| Liquidity | 0.003(0.001) | 0.016(0.007)** |
| Leverage | 0.028(0.013) | 1.178(0.479)** |
| Shareholders concentration | | 0.762(0.311)** |
| FV*SC | | 0.210(0.062)** |
| FH*SC | | 0.043(0.019)** |
| Liquidity*SC | | 0.013(0.005)** |
| Leverage*SC | | 1.197(0.346)** |
| R-squared | 0.722 | 0.821 |
| Adjusted R-squared | 0.705 | 0.813 |
| Durbin-Watson stat | 2.123 | 2.156 |
| F value | 33.421** | 52.361** |

## DISCUSSION

The study findings are in support of (Julianto & Syafarudin, 2020) who reported positive effect of liquidity and leverage on stock return. The findings contradict (Khodamipour & , Shahram Golestani, 2013) who documented positive and significant association between market value, liquidity volume and stock return of listed companies in Tehran securities exchange Further, the study Contradicted (Mmuriungi et al., 2019) who indicated inverse and significant effect of firm value on stock return of non-financial listed companies in Nairobi Securities Exchange. This can be attributed to failure to consider industry specific risks while modelling. Moreover, the study concurs with (Mahmood et al., 2018) whose study documented significant effect of financial flexibility, financial distress on performance of listed firms. These results were in contradiction with (Ayuba et al., 2018) who documented that market to book value of listed Nigerian firms has significant influence on stock return. The study considered all listed firms in exclusion of industry specific characteristics. The study confirms findings by (Wairimu, 2017) who found influence of firm value on stock return of listed firms in Kenya. Moreover, (Pascal, 2019) indicates that stock performance is contingent to earnings information and capital structure disclosure. Further, in line with (Moch et al., 2019) stock performance of listed firms is linked to firm characteristics such as solvability, profitability and debt to debt equity ratio.

## PRACTICAL IMPLICATIONS

Study findings indicate that firm value, financial health, liquidity and leverage have positive influence on stock return of listed manufacturing companies in Kenya. This calls for evaluation of attributes of firm value that includes sales revenue, total assets, financial health, working capital management, profitability, market value to book value, retained earnings, information access strategies and leverage optimization strategies. To understand leverage approach in an organization there is need for alignment of credit policies with organization operational guidelines so as to enhance gains to be derived from financing projects through debt capital. Further, there is need for adoption of strategies that are aimed at maximizing shareholders wealth through generation of more value from capital projects invested on income generating projects.

There is need for listed manufacturing companies to develop mechanism of promoting their shares. This can be achieved through adoption of innovative strategies that would enable them to penetrate new market spheres. Through penetration to new region, firms would increase their market share and generate more revenue that would optimize return of shareholders. Since these firms produce different products there is need for development for

collaborative mechanisms of research and development so as to identify opportunities that may lead to minimization of operational costs.

Since, listed in Nairobi have other sectors there is need for a subsequent study to examine the effect of firm financial characteristics on stock return of other sectors. Further, future scholars should consider long panels by considering the year of listing.

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