

Firm Ownership Characteristics and Long Run Return on Equity Issued: A Case of the Nairobi Security Exchange

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ABSTRACT:- This investigation looked at the link between firm ownership characteristics and long run return on firms that issued equity at the Nairobi Securities Exchange (NSE) in Kenya. The study covered 12 firms that issued shares in the NSE market. Ownership characteristics considered included (state ownership, institutional ownership, foreign ownership, big five shareholders, market capitalization, age of the firm and leverage of the firm) in relationship to average return. The study tested whether each of the firm ownership characteristics had influence on long run performance. Annual returns for these companies was based on market return for a period of five years after shares were issued. Long run performance was compared with three benchmarks namely; NSE index, CAPM and matching firms. Seven hypotheses were developed for the study. Simple-linear regression and multi-linear regression analyses based on panel data were carried out so as to project the long run return on shares issued. The study's outcomes point out that issuing firm performed better than non-issuing firms. These issuing firms also performed better as compared to CAPM. However the issuing firms performed worse than NSEI. In conclusion the long run performance of equity issued at the NSE does not necessarily underperform relative to non-issuing establishments.

Keywords:- State Ownership, Institutional Ownership, Foreign ownership, Big five shareholders, Leverage, Age and Market Capitalization, Long run return.

I. INTRODUCTION

In corporate governance, ownership structure is a key mechanism. Several studies done in this area have concluded that ownership structure when applied appropriately can be an efficient way of decreasing agency costs leading to solution of major corporate governance problems (Thomsen & Conyon, 2012; Arosa, Ituralde & Maseda, 2010; Elyasiani & Jia, 2010). Studies on ownership structure can be decomposed into two ownership scopes, namely, identity and structure (Arosa, Ituralde, & Masda, 2010). Cornett, Marcus, Saunders and Tehranian, (2007) argue that where majority of shares are held by institutions then such firm managers are closely monitored. With close monitoring, administrators may perform in shareholders' best interest therefore this can lead to a decrease in agency cost. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) contend that agency problems in a number of emerging markets are comparably more critical because of lack of solid legal shield alongside other mechanism of governance. Dyck and Zingales (2004) in an investigation on private benefits of control worldwide establish that greater private benefits of control are linked with underdeveloped capital markets and highly concentrated ownership. This paper advances understanding of ownership structure and long run return on firms that have issued equity in Nairobi Securities Exchange.

The study focuses on four ownership structures: shares owned by government, shares owned by establishments, shares owned by foreigners and shares owned by leading shareholders (the big five) for each of the firms that issued shares at the Nairobi Securities Exchange from 2006 to 2013. The four characteristics mentioned above are considered along with the three other variables namely; firm leverage, firm age and market capitalization as control variables. This study has the following objectives: How do these firms' long run return compare with Nairobi Securities Exchange Market Index (NSEMI) as a benchmark? How do these firms compare in terms of long run return with establishments that never issued equity over the study period here described as matching firms (MF) as a benchmark? Where CAPM is used as a benchmark how do these firms compare in terms of long run return? Does any of the 7 variables have any statistical significant effect on long run return for these companies that issued equity? This study assesses a five year period average returns after the issue of equity by these 12 firms. This study differs from a few studies that have been done on the NSE regarding equity issue, for example (Ongore, 2011; Simiyu, Thadeus, Barasa & Mateta, 2016; Kinyua, Nyanumba, Gathainya & Kithitu, 2013). In the first case the above mentioned studies used operating return as measure of performance (Return on Assets (ROA) or Return on Equity (ROE)). Our study uses financial return as performance measure. Operating return as a measure of performance has many short comings. Operating return is based on the operating profits and these could be impinged on by several factors such as accounting methods used, possibility of falsification of accounting figures or one time effect of accounting changes alongside economic aspects like nonrecurring earnings or expenses or short-term changes in demand of product

(Barber & Lyon, 1996; Lee, 1996). A second weakness common with operating return is that it is a lagging measure (Drury, 2017). Secondly a study by Kinyua, Nyanumba, Gathainya and Kithitu (2013) considered only two variables in their study namely liquidity and earnings per share. These two variables were not widely decomposed.

Several scholars have looked at firm ownership structures. Chen, Li, Shapiro and Zhang (2013) contend that an establishment having a number of ownership structures can secure the balancing set of crucial economic and political resources needed for better performance. Previous studies have treated ownership categories separately (Choi, Park & Hong, 2012). Such treatment is likely to ignore the potential advantage of variables that may complement each other in a study (Chen Li, Shapiro & Zhang, 2013). This investigation seeks to bridge these apparent gaps in literature. The remaining part of the study is divided as follows: section two covers literature review. Section three tests a set of hypotheses. Section four discusses empirical results. Finally section five concludes the study with recommendations on areas for further study.

II. LITERATURE REVIEW

Ownership structure can be decomposed into several units. Some of them include: State ownership, institutional ownership, foreign ownership and big five shareholders. The level by which any of the above controls is exercised may be termed as either ownership concentration or ownership identity. The former is the proportion of shares that a single owner holds with reference to the aggregate firm's shareholding (Anstoniadi, Lazarides & Sarrianiades, 2010) whereas the latter is the actual names of key shareholders (Grossman & Hart, 1986). Recent studies have revealed that concentrated ownership structures are commonly found in developing countries (Claessen, Djankov & Lang, 2000). Ownership structure revolves around agency theory, Jensen & Meckling, (1976) and corporate governance theory by (Thomsen & Conyon, 2012). The central premise of these theories is that managers can engage in decision making behavior that may be contrary to the expectations of shareholders.

One type of equity ownership is where the state owns shares in a firm. State ownership arises when the state has control and management of a firm. Some scholars have asserted that State ownership is inefficient and bureaucratic. Villalonga, (1999) asserts that managers are rarely fired for nonperformance in firms that are state controlled. If there is any firing of management, it is not related to firm's performance (Cragg & Dyck, 1999). Therefore managers have little incentive to focus on financial or operational performance of the firms they manage. Porta, Silanes, and Shleifer ((2002) find that greater state ownership of establishments is linked with lower successive financial development and lower economic growth. Iannota, Nocera, and Sironi (2007) find that state-owned banks have lower returns compared to those that are privately owned despite lower costs associated with their operations. Furthermore Gursoy and Aydogan (2002) find that banks owned by state have highly take risks in their operations as many people believe that doing business with state would help the establishment when it is troubled. This has led to many state owned banks end up with large amount of bad debt which are eventually written off (Gursoy & Aydogan, 2002).

The second type of ownership in a firm is Institutional ownership. Zhang & Gimeo (2016) identifies Institutional investors as financial investors like pension funds, mutual funds, hedge funds, banks, insurance establishments, endowments and foundations holding substantial amount of equity in establishments that are publicly traded. Institutional ownership is regarded as a case where an institution has share ownership especially when state has privatized its' holding. Institutional shareholding is a legal ownership since a legal person owns shares in the name of institution (Wei & Varela, 2003; Wei, Xie & Zhang, 2005). Large equity ownership by institutions in an establishment is assumed to encourage stakeholders in monitoring managers' undertakings, stop them from involving in moral hazard activities and to focus on shareholders' interest (Belkhir, 2005; Cornett, Marcus, Saunders, & Tehranian, 2007). Institutional investors are more focused on profit hence have more inducements to scrutinize the establishment's activities. Large shareholders in form of institutions are effective in enforcing their rights and can be able to control managers' excesses (Morck, Nakamura, & Shivdasani, 2000). Yuan, Xiao and Zou (2008) have raised two issues in relationship to firm performance and institutional ownership. These are; enhanced performance argument and reduction performance argument. Where there is performance enhancement, it is due to introduction of good corporate governance. Institutional investors aim at best returns. Good performance is also associated with active monitoring. Performance reduction is associated with investors who require quick returns in a short time (Appel, Gormely & Keim, 2015; Drucker, 1986). This may be detrimental to the organization's performance.

The third form of equity ownership is concentrated ownership. This type of ownership means large shareholding in an organization held by a few shareholders (Appel, Gormley & Keim, 2015). Some scholars refer to them as the large shareholders or the big five shareholders (Rokwaro, 2013). Majority shareholdings assert influence on management and control in the firms. These large shareholders may oversee management and at times intervene when they feel things are not going in the right way (Shleifer & Vishny, 1997). Grossman and Hart (1986) contend that large stakeholders have a high stake in these firms therefore they are apparently

more willing to actively involve themselves in decisions relating to the firm. However large shareholders may have divergent views from those of minorities and in certain cases expropriate their interests. Berger, Clarke, Cull, Klapper and Udell (2005) posit that concentrated ownership may bring with them a negative impact on performance in that such behaviors may lead such firms to fall into financial distress and crisis. This is because large shareholding with high authority will control management and create moral hazard behavior. These large shareholdings are often referred to as the big five shareholders (Wahla, Shah & Hussian, 2012). Big five shareholders are the majority shareholders where they own at most seventy five percent of shareholding (75%). They reflect dominance in the management of firms and in many instances, are family members or government (Soon & Koh, 2007; Khanna & Palepu, 1999).

The fourth type of share ownership is where shares are owned by foreigners. In this paper, foreign shares are those that investors who are non-Kenyan citizens own. It deviates a little from the definition given by Capital Markets Authority Regulation (2002) where foreign investors exclude residents of East African Community. Foreign investors are associated with positive impact in a firm. This can be brought about by the level of firm's performance possibly by the managerial efficacy, technical expertise as well as know-how that foreign investors are likely to bring to the new environment (Uwalomwa & Olamide, 2012).

The extent by which firms raise funds in securities exchange is also swayed by the leverage level it desires to achieve. The utilization of high leverage helps when an establishment is making gains. Contrariwise, an establishment that is highly levered may be troubled if its profitability is declining and may highly risk default compared to unlevered or less levered establishment in similar situation. Leverage ratio can be indicated in the following way:

Debt/ Equity; or Total debt/Total capital.

Leverage ratio is the level to which an establishment is using the funds that are borrowed. It assesses establishment's solvency and capital structure. Modgiliani and Miller (1958) argue that under capital structure theory if there is efficiency in financial markets, then debt and equity financing will essentially be substitutable and that the other aspects will point out the ideal capital structure. The function model for leverage can be expressed in the following way:

$$\text{Market value} = f(\text{Capital structure}) \text{----- (equation 1)}$$

$$\text{Market value} = f(\text{EqC, DeC}) \text{----- (equation 2)}$$

Whereas the obvious form in first difference is;

$$\text{MvF} = \beta_0 + \beta_1 \text{MvF}_{t-1} + \beta_2 \text{EqC} + \beta_3 \text{EqC}_{t-1} + \beta_4 \text{DeC} + \beta_5 \text{DeC}_{t-1} + \text{et-1} \text{----- (equation 3)}$$

$$\text{LogMvF} = b_0 + b_1 \text{logMvF}_{t-1} + b_2 \text{logEqC} + b_3 \text{logEqC}_{t-1} + b_4 \text{logDeC} + b_5 \text{logDeC}_{t-1} + \text{et-1} \text{----- (equation 4)}$$

Where,

MvF = Market Value of firm, EqC = Equity Capital, DeC = Debt Capital, et-1 = Idiosyncratic terms.

Market capitalization is the firm's value of shares

The second last independent variable is firm age. Firm age can be a proxy for risk. Old establishments are more expected to be stable, mature and may have more skills because they have been in operation for a long time (Liargovas & Skandalis, 2008). Firm's age is associated with experience, intensity of knowledge and entrepreneurial flexibility (Chen, Li, Shapiro & Zhang, 2013). Age can be a measure of both uncertainty and investor optimism (Ritter, 1991). The age of a firm is evaluated by the day and date before IPO. An establishment that has been in operation for many years is able to sustain risk. A firm which has been in business for a long time is well known and there is little element of uncertainty (Lowry, Officer and Schewert, 2008; Alvarez, 2015). Ritter (1991); Khurshed (1999); Belghitar and Dixon (2012) document a more pronounced positive relationship between issuer's age and long run performance of IPOs and SEOs. They argue that this is because older firms have less information asymmetry. However in studies done by Brau, Couch and Sutton, (2012); Liu, Uchida and Gao, (2012) it was reported that there existed unsubstantial adverse link between firm's age and IPOs' long run performance. The final independent variable is market capitalization. Firms that are traded in Securities Exchange have their values reflected in the securities market and their values can be determined without waiting for their financial year end. The market price of their shares will show market capitalization by simply multiplying issued shares by market price per share.

III. DATA AND METHODOLOGY

3.1 Hypotheses development

The investigation developed a set of benchmarks in order to determine whether firms that issued equity underperform or over perform these set of benchmarks. The returns from these firms were calculated first. The returns from these firms were determined by changes in share prices during each year and any dividends paid during the year. There after the returns were compared with the relevant benchmarks used to evaluate the average return. With respect to this, several null hypotheses were established to test if the average return was statistically unequal to zero. Several other null hypotheses were developed to determine the link between the average return of establishments that issued equity and firm ownership structure characterized by state share

ownership, institutional ownership, foreign ownership, the big five shareholders, leverage, age and market capitalization. This was based on 5% level of significance. These hypotheses were aimed at justifying study objectives namely: How do these microeconomic variables perform in comparison to the three benchmarks in the long run?

Table 1: Null hypotheses for Bench marks

Bench Mark Number	Measurement	Type of Benchmark and Hypothesis number	Null Hypothesis
Bench mark1	AR	Nairobi Securities Exchange	Long run average return is not substantially significantly different from zero when NSE benchmark is used
Bench mark2	AR	Capital Asset Pricing Model	Long run average return is not substantially different from zero when CAPM benchmark is used
Bench Mark 3	AR	Matching Firm	Long run average return is not substantially different to zero when MF is used as a bench mark

Table.2: Ownership Characteristics

Independent Variables	Hypothesis Number	Null Hypothesis
State ownership	H ₀₄	State ownership does not substantially influence long run average return following equity issue in Nairobi Securities Exchange
Institutional Ownership	H ₀₅	Institutional ownership does not substantially influence long run average return following equity issue in Nairobi Securities Exchange
Foreign Ownership	H ₀₆	Foreign ownership does not substantially influence long run average return following equity issue in Nairobi Securities Exchange
Big Five	H ₀₇	Big five shareholders has no significant effect on long run average return following equity issue in Nairobi Securities Exchange.
Leverage	H ₀₈	Leverage of a firm has no significant effect on long run average return following equity issue in Nairobi Securities Exchange
Age	H ₀₉	Age of a firm has no significant effect on long run average return following equity issue in Nairobi

Securities Exchange

Market Capitalization

H₀₁₀

Market Capitalization has no significant effect on long run average return following equity issue in Nairobi Securities Exchange

During the study period the NSE market witnessed variations in the number of establishments that issued shares in the Stock Market). From 2006 to 2008 there was a rise in the number of establishments that issued shares in the market this was contrary to what should have been expected to happen following the financial crisis that was experienced worldwide in 2008. Probably this can be attributed partly to changes that were introduced in NSE by Capital Markets Authority that were beneficial to investors based on government macroeconomic policies.

3.2 Data Analysis

This investigation set to establish if ownership structure had significant influence on the long run return on firms that make equity issue in The Nairobi Security Exchange. To achieve this objective, the study used NSE market return for all firms that issued equity from 2006- 2013. The investigation’s population was composed of every establishment that issued equity in period stated and survived for at list five years after issuing equity. The total population of the study was 12 firms. The following independent variables were used; state ownership, institutional ownership, foreign ownership, the big five shareholders leverage, market capitalization and firm’s age. In order to determine the long run performance of average return for each firm, the study applied three benchmarks to assess the abnormal returns on firms that issued equity from 2006-2013 in Nairobi Securities Exchange. These benchmarks were: Nairobi Securities Market Index based on 20 share index, Capital Asset Pricing Model and Matching Firms. The study did not rely only on stock market index for comparing net returns because relying on this can yield biased results (Lyon, Barber & Tsai (1999). The study used panel data and applied the following diagnostic tests; test of stationarity of the data and co-integration test to ensure that there was long run association between the output and predictor variables and granger causality test to establish if one time series is significant in predicting another. It used empirical data sets to find patterns of correlation.

Four other diagnostic tests were carried out, these included normality test, multi-co-linearity, auto-co-linearity and homoscedasticity. The study tested normality of the data using Shapiro- Wilk test. Multi-co-linearity test was done using the variance inflation factor (VIF). Auto-co-relation test was done using Durbin Watson *t* test and Wooldridge test for homoscedasticity. The study used the *t* test as a test for individual variables’ significance and F-test for overall significance.

3.3 The Benchmarks for the Study

3.3.1 Nairobi Securities Exchange

The NSE was instituted in 1954. It is fifth largest stock market in Africa after South Africa, Morocco, Nigeria and Egypt. But compared to other world stock markets, it is relatively small and not many firms issue their shares frequently. The benchmark employed in the study is Nairobi Securities Exchange 20 share index. This is represented by value weighted return. Index returns are by compounding daily value weighted NSE return. This is represented by the following equation:

$$ARNSE = Rit - Rmt \text{----- (1)}$$

AR = average return

Rit =Returns on firm that issued equity

Rmt = Market return (NSE)

3.3.2 Capital Asset Pricing Model

Under this benchmark, all equity annual returns have to be evaluated during the period of investigation. The average-annual risk free rate (Rft) represents return on Central Bank of Kenya Treasury bills. This is averaged to give annual interest free rate since the treasury bills rates are for 91 days. This is represented by an equation:

$$ARCAPM = Rit - [Rfi + \beta (Rmt - Rfi)] \text{----- (2)}$$

Where:

Rit =return of firm that issued equity in period *t*

Rmt = market return in year *t* as measured by NSE market index.

Rft = 91 day Treasury bill return in calendar year *t*

β= beta coefficient of CAPM is determined by using correlation coefficient;

Where

$$\beta = \frac{n \left[\sum xy \right] - \left[\sum x \sum y \right]}{n \left[\sum x^2 \right] - \left[\sum x \right]^2}$$

X= is monthly market index (NSE)

Y = is monthly return for each firm that issued equity

3.3.3. Matching Firms

Loughran and Ritter (1995) measures long run return by matching each issuer with non- issuing firm closest in size. This study based matching firms and issuing firms on market value (market price per share multiplied by outstanding shares) to determine their sizes. The average return (AR) according to the benchmark is shown below:

$$ARMF = Rit - RMF \text{ ----- (3)}$$

Where:

ARit = average return for matching firm.

Rit = return of firm that issued equity *i* in event year *t*.

RMF = return of the control portfolio in the event year *t* under this bench mark. The Matched firm’s portfolio returns is equally weighted average return on portfolio of every firm.

3.4. Regression Model

$$Y = \beta_0 + \beta_1 SO + \beta_2 IN + \beta_3 FO + \beta_4 BF + \beta_5 MC + \beta_6 AG + \beta_7 LV + \epsilon \text{ ----- (4)}$$

Y= Benchmark (NSE index, CAPM. Matching Firm)

β_0 = Constant return

$\beta_1 - \beta_4$ Regression coefficients.

SO=Percentage number of shares that the state owns

IN=Percentage number of shares that institutions own.

FO=Percentage number of shares that foreigners own

BF= Percentage number of shares that five big shareholders own

MC=Market capitalization

AG= Age of each firm

LV= Leverage of each firm

IV. DATA ANALYSIS, PRESENTATION AND RESULTS

The study used the Ordinary Least Square (OLS) regression to test the link between state ownership, institutional ownership, foreign ownership and big five shareholders and firm performance in the long run following equity share issue. The study used the following specification model to test the theory:

4.1. Descriptive statistics

Firms that issue shares at the stock markets are generally regarded as growth firms. They need funds to expand their businesses. Generally the average raw return on new issues is low therefore the notion that establishments selling equity underachieve none issuing establishments of similar market (Loughran & Ritter, 1997). Because of this short coming, firm size as a benchmark for determining unusual performance in size matched companies, the study used both cross-sectional and time series multiple regression model in panel data.

Table 3: Descriptive Statistics for each variable

Variables	Mean	Maximum	Minimum	Std Dev	Skewness	Kurtosis
AR	.293	35.48	-22.55	9.736	.926	3.564
NSEI	1.1364	40.14	-47.22	15.00	-.837	2.213
CAPM	-4.4663	38.74	-125.75	29.702	-2.403	7.262
MF	-2.6782	159.8	-102.30	37.569	1.060	6.546
SO	19.5965	78	.00	24.73	1.142	.034
IN	46.3167	78	20	16.96	.250	-1.058
FO	21.833	55	1.00	19.46415	.273	-1.666
BF	75.8667	86.00	60.00	5.167	-1.266	2.952
MC	22.68	26.04	20.05	1.51557	.180	-.562
AG	37.90	57	11.00	14.86	-.78	-.865
LV	2.5764	7.63	.00	2.58	.726	-1.237

Table 3 shows that the mean average return is .293, this is lower than NSEI which is 1.1364 but higher than CAPM which is -4.4663 and higher than Matching firms which has a mean of -2.6782. This means that the companies that issued equity during the investigation period performed better than those that did not issue equity. Data used was normally distributed as shown by skewness whose figures were around 0. Similarly kurtosis values also had values of less than 3 except for Average return, CAPM and Matching firms (Gujarati & Porter, 2009).

4.3 Stationary test

Stationary means the statistical properties of a process generating a time series that never change with time. All the seven (7) independent variables; Institutional ownership, Age of firms, Leverage, Foreign Ownership, Big Five, State Ownership, and Market Capitalization were run using SPSS software to show whether they were stationary. The figures 4.1- 4.7 below show that the data was stationary.

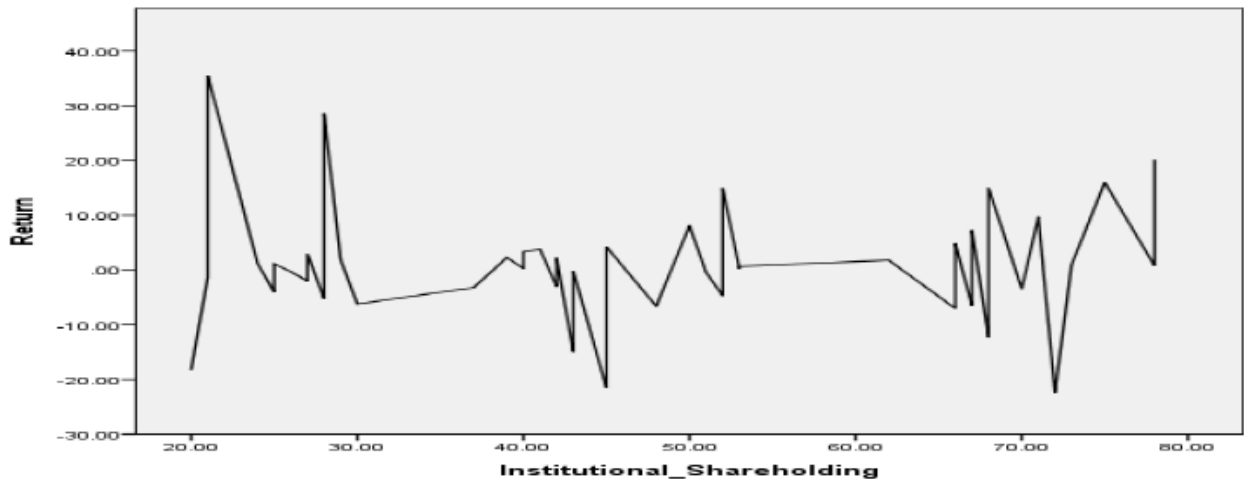


Figure 4.1:



Figure 4.2

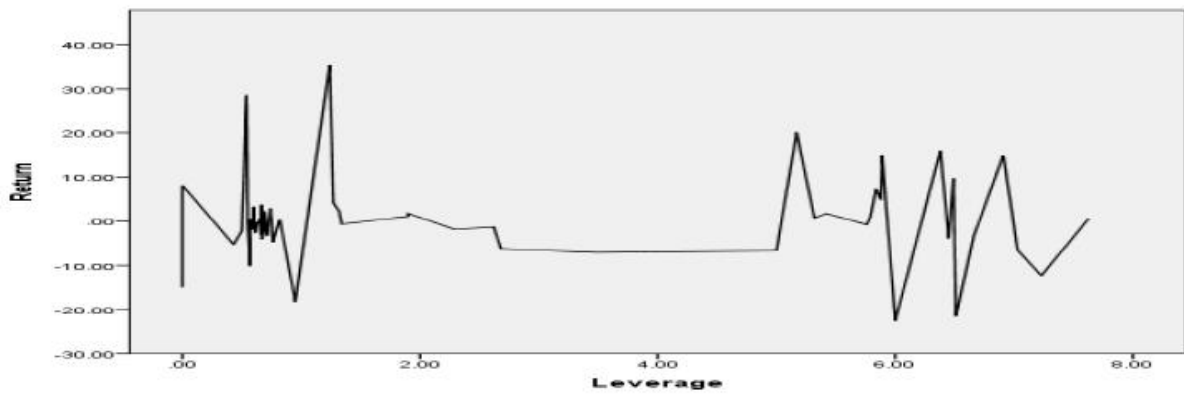


Figure 4.3

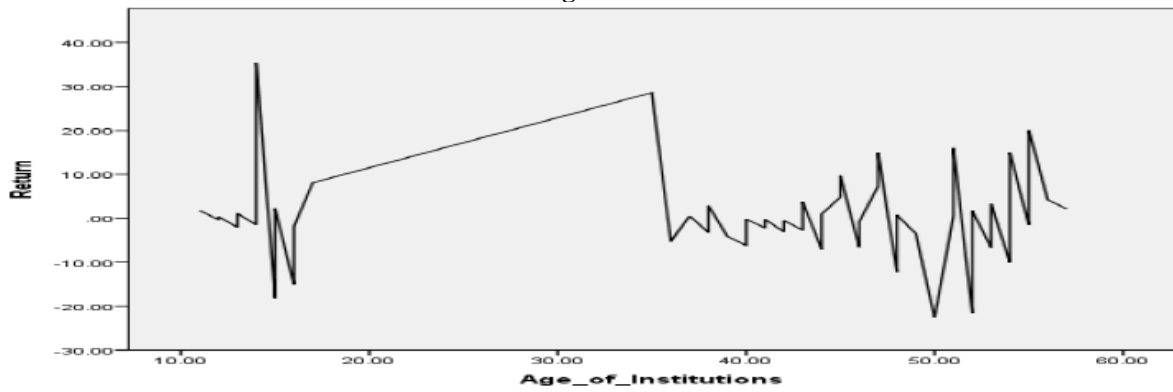


Figure 4.4

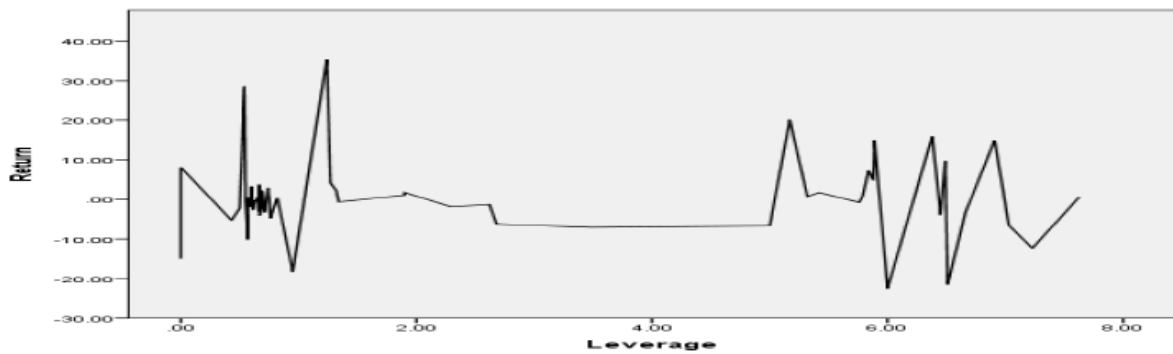


Figure 4.5

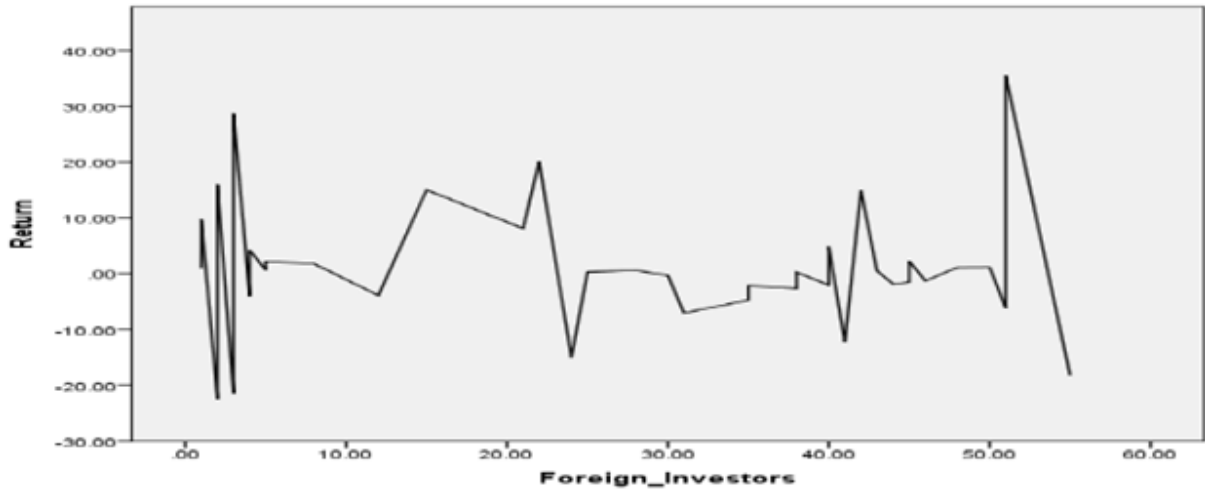


Figure 4.6

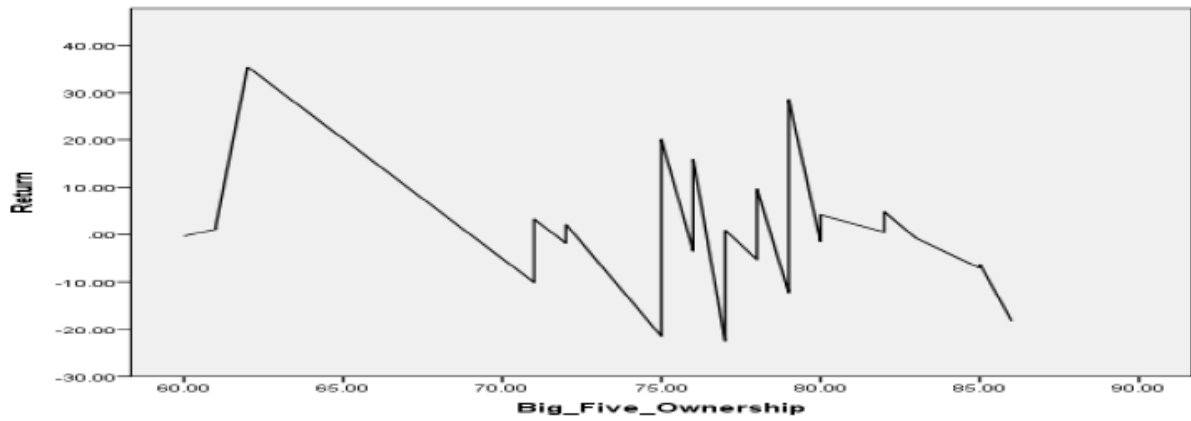


Figure 4.7

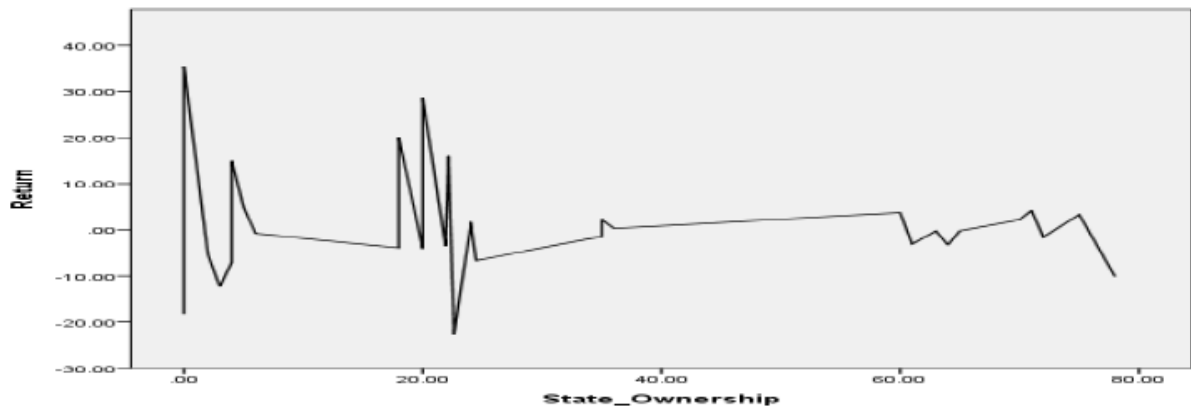


Figure 4.8

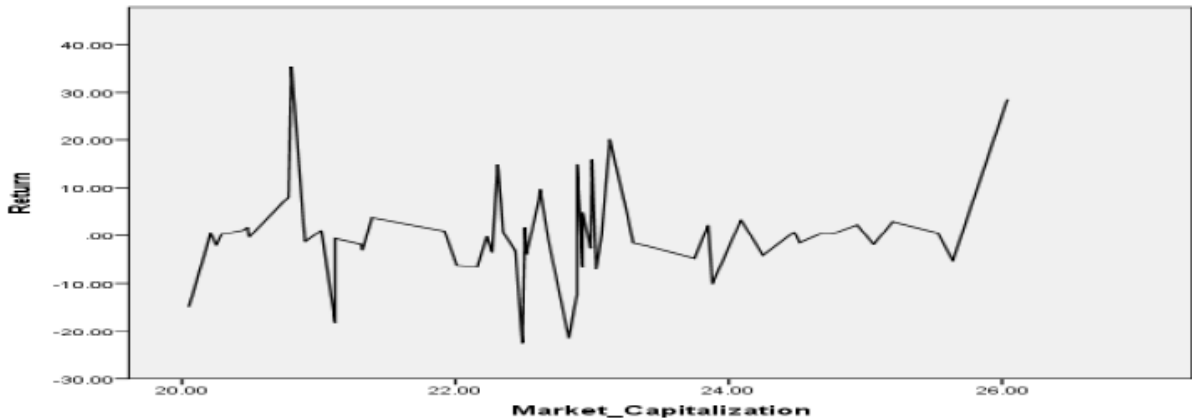


Figure 4.9

4.2 Diagnostic Tests

The study undertook the following diagnostic tests; Normality test, Multicollinearity test, Auto collinearity test and Homoscedasticity test. The results follow below.

4.2.1 Normality test

The data had a normally distribution as indicated by skewness and kurtosis in the descriptive statistics. Under skewness no figure for all independent variables was above one, whereas for kurtosis all figures were below 3 except for average return, CAPM and Matching firms.

4.2.2 Multicollinearity test

Table 4: Multicollinearity Statistics

Model	Tolerance	VIF
Constant	-	-
Institutional Shares	.405	2.471
Age	.458	2.183
Leverage	.330	3.034
Foreign investors	.594	1.684
Big Five ownership	.784	1.275
State ownership	.558	1.793
Market capitalization	.775	1.290

From the data above the value of all variables have VIF of less than 10 and the tolerance value is above 0.1. These factors confirm that the data has no Multicollinearity problem.

4.2.3 Autocorrelation Test

Table 5: Model Summary of Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	the Durbin-Watson
1	.307 ^a	.094	-.028	9.87104	2.473

a. Predictors: (Constant), Market Capitalization, Leverage, Foreign Investors, Big_ Five Ownership, State Ownership, Age of Institution, and Institutional Shareholding

b. Dependent Variable: Return

The Durbin-Watson tests yields a test statistic ranging from 0 to 4. Values nearer to 2 (the middle of the range) indicate less autocorrelation, and values nearer to 0 or 4 point out higher positive or negative autocorrelation in that order. The result shows that there is no problem of autocorrelation in the data used.

4.2.4 Homoscedasticity Test

Figure 4.8



The distribution of data shows that it has normal distribution and that outliers are few and scattered on both upper and lower part of the graph.

4.3 Hypotheses Results

First average return was calculated against the bench marks that were employed (NSE Index, CAPM and Matching firms), a parametric *t* test was utilized to examine if the abnormal return obtained was considerably different from zero at the significant level ($\alpha = 0.05$)

H01: AR sample of NSE index=0 against H01: AR sample of NSE index \neq 0,

H02: AR sample of CAPM=0 against H02: AR sample of CAPM \neq 0,

H03: AR sample of matching firm=0 against H03: AR sample matching firm \neq 0

Further tests were carried out to determine ownership characteristics on average return (AR) using a simple linear regression model and correlated with average return with respect to the three benchmarks utilized. The null hypotheses were tested with respect to the regression analysis at substantial level where p-value is less than .05

H04: K state owned AR <5% against H1, 4 K state owned AR >5%

H05: K Institutional owned AR <5% against H1, 5 K Institutional owned AR >5%

H06: K Foreign owned AR <5% against H1, 6 K Foreign owned AR >5%

H07: K Big Five owned AR <5% against H1, 7 K Big Five owned AR >5%

H08: K Market capitalization < 5% against H1, 8 K market capitalization AR > 5%

H09: K Levered firm AR < 5% against H1, 9 K Levered firm AR > 5%

H010: K Aged firm AR <5% against H1, 10 K Aged firm AR >5%

4.3.1 Long run return: Benchmark 1, Nairobi Security Exchange

Table 6: (AR) Using (NSEI) as a bench mark

	T	Df	Sig. (2-tailed)	Test Value = 0		
				Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
NSEI	.587	59	.569	-1.13645	8.693174	
Rit (Firm Return)	.233	59	.846	.29347	8.429436	

The return from NSEI is .587 this is more as compared to firms that issued equity whose return is.233. Thus it shows that return from the Nairobi Securities Exchange index was more than the return from those firms that issued equity. Nairobi Securities Exchange 20 share Index used in this case consists of 20 major firms in the market. This may have resulted into a higher record performance than those firms that issued shares during the period of study.

4.3.2 Long run return: Benchmark 2, CAPM

Table 7: Sample Results based on CAPM benchmark

	T	Df	Sig. (2-tailed)	Test Value = 0	95% Confidence Interval of the Difference	
				Mean Difference	Lower	Upper
CAPM	-1.165	59	.249	-4.46626	-12.1392	3.2067
Rit (Firm Return)	.233	59	.816	.29317	-2.2221	2.8084

Table 7 above shows that firms that issued equity performed better than CAPM measure. These firms have a return of .233 as opposed to CAPM that gives a return of -1.165.

Table 8: Long run return: Benchmark 3, Matching Firm

	T	Df	Sig. (2-tailed)	Test Value = 0	95% Confidence Interval of the Difference	
				Mean Difference	Lower	Upper
Matching	-0.552	59	.583	-2.67817	-12.3834	7
Rit (Firm Return)	0.233	59	.816	.29317	-2.2221	2

Table 8 above indicates that matching firms performed worse than firms that issued shares. This contradicts studied done by (Loughran & Ritter, 1997; Panagiotis, 2009; Paskelian & Bell, 2010). However the results of this study supports results by (Thomas, Jiao & Yew, 2011; Dang & Yang, 2007).

Table 9: Simple Linear regression of AR with Ownership Characteristics

Independent variables	Benchmarks	R	R ²	α	β	t-stat	(α) Sig	β (Sig)	F-stst.
Institutional shareholding	AR(NSE)	0.224	0.05	10.308	-0.198	-1.75	0.085	0.085	3.063
	AR(CAPM)	0.22	0.048	-22.27	0.384	1.714	0.092	0.092	2.939
	AR(MF)	0.259	0.067	23.89	-0.574	2.042	0.046	0.046	4.171
Age of institutions	AR(NSE)	0.105	0.011	5.166	-0.106	0.807	0.423	0.423	0.651
	AR(CAPM)	0.3	0.09	-27.22	0.6	2.399	0.2	0.2	5.756
	AR(MF)	0.032	0.001	0.364	-0.08	0.242	0.81	0.059	0.81
Leverage	AR(NSE)	0.141	0.02	3.25	0.82	1.086	0.282	0.282	1.179
	AR(CAPM)	0.414	0.172	-16.75	4.77	3.467	0.001	0.001	12.02
	AR(MF)	0.12	0.014	1.808	-1.741	0.918	0.363	0.842	0.363
Foreign Investments	AR(NSE)	0.008	0	0.999	0.006	0.062	0.951	0.951	0.004
	AR(CAPM)	0.001	0	-4.503	0.002	0.008	0.993	0.993	0
	AR(MF)	0.035	0.001	-4.136	0.067	0.264	0.793	0.793	0.07
Big five Ownership	AR(NSE)	0.256	0.66	57.6	-0.744	0.256	-2.02	0.048	4.079
	AR(CAPM)	0.214	0.046	88.76	-1.229	1.666	0.101	0.101	2.778
	AR(MF)	0.054	0.003	27.318	-0.395	0.415	0.68	0.68	0.172
State ownership	AR(NSE)	0.076	0.006	2.039	-0.046	-0.58	0.564	0.564	0.336
	AR(CAPM)	0.14	0	-4.137	-0.017	0.106	0.916	0.916	0.011
	AR(MF)	0.14	0.2	-6.841	0.212	1.076	0.286	0.286	1.157
Market capitalization	AR(NSE)	0.056	0.003	13.67	-0.553	0.426	0.672	0.672	0.181
	AR(CAPM)	0.254	0.065	-117.38	4.978	2	0.05	0.05	4
	AR(MF)	0.042	0.002	21.153	-1.051	0.323	0.748	0.748	12

The results of this study show that certain variables were statistically significant at 5% level in regard to measurement models. Institutional ownership was significant at 0.046 as compared to matching firms. Leverage was significant at 0.001 when CAPM was used as a measure. Similarly Big five was statistically significant at 0.048 where NSEI was used as a measure at 0.05

Using R2 as explainable factor for Average return, based on the three measurement model the study finds that under NSE, big five explains 66% of the returns the remaining 34% are explained by other factors. Under CAPM, institutional share ownership explains 4.8%, Leverage explains 17.2%, Big Five explains 4.6% and market capitalization explains 6.5% other factors not captured in the study covers the rest of the percentage. Finally under matching firms, Institutional share ownership explains 6.7%

4.4 Regression Model

The study used panel data analysis to establish relationship between average return and the microeconomic determinants.

Table 10: Multi-regression results

Rit Firm Return	Co-ef.	Std error	t	p> t	[95% conf Sig.	Lower Interval]	Upper
State ownership	-.016	.070	-.234	.816	-.156	.123	
Institutional ownership	.054	.119	.451	.654	-.185	.293	
Foreign ownership	.029	.086	.339	.736	-.143	.201	
Big five ownership	-.601	.281	-2.139	.037	-1.164	-.037	
Leverage	.089	.867	.103	.919	-1.651	1.829	
Age	-.010	.128	-.076	.940	-.266	.247	
Market Capitalization	1.271	.963	1.320	.193	-.662	3.203	
Con	14.377	24.755	.581	.564	-35.296	64.051	

Of the seven independent variables only big five was statistically significant at 0.037. The rest of the variables were insignificant at the level of 5%. The coefficient of the independent variables give varying results; market capitalization has a positive 1.271, leverage has a positive coefficient value of 0.089, foreign ownership has a coefficient of 0.029, institutional ownership has a coefficient of 0.054 but state ownership, big five and age have -.016, -.601 and -.010 respectively.

Table 10: Model Summary

Model	R	R square	Adjusted R Squared	Std. error of Estimate
1	.307	.094	-.028	9.87104

The model summary points out that the predictor variables have R2 = 0.094 which means that all the predictor variables have only effect of 9.4% on average return. The remaining 89.6% is influenced by other factors.

Table 11: ANOVAa

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	526.745	7	75.249	.772	.613 ^b
Residual	5066.742	52	97.437	-	-
Total	5593.487	59	-	-	-

a average return b independent variables

Testing overall level of significance at 5% using ANOVA, it shows that in general all the independent variables put together are insignificant at 0.613 because this is greater than 0.05.

Table 12: Hypothesis test result

Measurement Tool(Dependent Variable)	Benchmark	Hypothesis Number	Null Hypothesis	Results
AR	Number 1.:Nairobi Security Exchange	H ₀₁	Average return is not substantially different from zero when NSE benchmark is utilized	Rejected
AR	Number2: Capital Asset Pricing Model	H ₀₂	Average return is not substantially different from zero when CAPM benchmark is utilized.	Rejected
AR	Number3:Matching Firms	H ₀₃	Average return is not substantially different from zero when MF benchmark is utilized.	Rejected
Independent Variables	Hypothesis number	Null Hypothesis		Reject or not Reject
State Ownership	H ₀₄	There is no statistical substantial link between the state equity ownership of an establishment and its long run return		Not Rejected
Institutional Ownership	H ₀₅	There is no statistical substantial link between institutional equity ownership of an establishment and its long run return		
Foreign Ownership	H ₀₆	There is no statistical substantial link between the foreign equity ownership of an establishment and its long run return		Not rejected
Big Five Ownership	H ₀₇	There is no statistical substantial link between the big five equity ownership and long run return		Rejected
Market Capitalization	H ₀₈	There is no statistical substantial link between market capitalization of an establishment and its long run return		Not Rejected
Capital Leverage	H ₀₉	There is no statistical substantial link between firm leverage and its long run return.		Not Rejected
Age	H ₀₁₀	There is no statistical substantial link between age of an establishment and its long run return		Not Rejected

V. SUMMARY, CONCLUSION AND FURTHER AREAS OF RESEARCH

5.1 Summary

The study found the following results; first from the independent variables, one independent variable- the big five had significant effect on long run return for the issuing firms. Secondly, from the bench marks used, The NSEI performed better than the firms that issued equity. Thirdly, the issuing firms performed better than matching firms. Fourthly, using CAPM as a benchmark, the issuing firms performed better than this benchmark.

5.1.1 Conclusion

This Study finds support for studies that found firms that issue equity perform better in the long run than those that do not issue equity. On the other hand the result contradict those studies that came up with results that in the long run the firms that equity perform poorly than those that have not issued shares through the security markets

5.1.2 Area for Further Research

There is need for a longer period of study to be undertaken in this area. This may shed more light in the performance of shares issued at the Nairobi Securities Exchange.

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