OWNERSHIP CONCENTRATION AND FINANCIAL PERFORMANCE OF LISTED FIRMS IN KENYA: AN ECONOMETRIC ANALYSIS USING PANEL DATA

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Abstract

In this study, we use panel methodology comprising 53 firms listed at the Nairobi Securities Exchange to establish the effect of ownership concentration on financial performance of these firms for the period 2007 to 2011. Before empirical estimations were conducted, the data series were subjected to unit root tests to establish their stationarity conditions and where a series is found to be non-stationary at levels, it was differenced until it become stationary. The study findings revealed that on average, firms listed at the Nairobi Securities Exchange enjoy a return on equity and return on assets of about 16.5 percent. The sectors that registered the highest return on equity included insurance, commerce and construction at 20.8 percent, 19.3 percent and 20.1 percent, respectively. On the other hand, the sectors that registered relatively higher return on assets include commerce, telecommunications and manufacturing with average ROA of 23.0 percent, 20.0 percent and 25.4 percent; respectively. The study also found that the highest ownership concentration is 96.310 %, while the lowest is 11.040%, with an average ownership concentration of 64.286 % and variability of 17.292 % implying that the percentage of shares held by those considered as large shareholders range between 96.310 % and 11.040 %, with a mean of 64.286 % and finally the results of correlation analysis revealed non-significant relationship between ownership concentration and performance of firms at the Nairobi Securities Exchange. On the other hand, from the panel

regression analysis results, ownership concentration was found to be negatively related to all the three measures of performance in firms listed at the Nairobi Securities Exchange namely ROE, ROA and Tobin's Q with coefficients of -0.0005, -0.0002 and 0.0057 respectively. The adjusted R squared for the return on equity, return on assets and Tobin's Q models were 77.32%, 88.52% and 85.94% respectively.

Keywords: Ownership Concentration, Econometric analysis, performance, panel methodology

Introduction

1.1 Background of the Study

The connection between ownership concentration and firm's performance has been the subject of an important and ongoing discourse in the corporate governance and finance literature. The debate goes back to the Berle and Means (1932) thesis, which suggests that an inverse correlation should be observed between diffuseness of shareholdings and firm performance. Previous studies have either looked at ownership concentration as an endogenous outcome of decisions which reflect the influence of shareholders and of trading on the market for shares (Demsetz, 1983; Demsetz and Lehn, 1985; Morck *et al.,* 1988; Loderer and Martin, 1997) others controlled for the determinants of performance (Foroughi and Fooladi ,2011; Ndwiga ,2012). Whereas, most of these studies used single equations (linear) OLS, the present study adopted panel methodology and OLS to investigate the effect of ownership concentration on firm's performance. According to the Economic Survey, 2010, Kenya's equities market recorded marked improvement in activity in both primary and secondary markets. Market capitalization rose by 40 % in 2010, exceeding the Kshs 1 trillion, with average annual return of 36 % based on the NSE 20 Share Index. As a result, NSE was among the best performing equity markets in Africa after the Uganda Securities Exchange, which recorded an index return of 53 %. Equity turnover and share volume recorded 190 % and 127 % respectively, as market capitalization rose by 40% compared to 2009. This impressive performance was attributed to improved business confidence in the market on account of economic recovery, adoption of best practice within capital markets, resumed participation by foreign and institutional investors. For instance, turnover attributed to foreign investors reached a historical high of Kshs 50 billion or 46 % of total annual turnover, with a Kshs 15 billion net foreign portfolio inflow.

Table 1.1 Gross Secondary Market Statistics (Equities)

Year End	Share Volume (Millions)	Equity turnover (Kshs Billions)	NSE Index	Market Cap (Kshs Billions)
2006	95	1,455	5,646	792
2007	89	1,938	5,445	851
2008	98	5,857	3,521	854
2009	38	3,169	3,247	834
2010	110	7,181	4,432	1,167

Source: Capital Markets Authority and Nairobi Securities Exchange, 2010

In Kenya, a number of problems relating to the way companies are controlled and directed have been identified. These problems range from errors, mistakes to outright fraud. The origins of these problems range from concentrated ownership, weak incentives, and poor protection of minority shareholders to weak information standards (Ongore and K'Obonyo, 2011). With such an environment in the background, together with weak judicial system, the interest of both the minority shareholders could be compromised and managed to be skewed towards the interest of such block shareholders. Consequently, performance of such firms might be compromised. This situation is worsened by the fact that limited research has been done on the effect of ownership concentration on performance of listed companies especially in the developing countries.

1.2 Statement of the Problem

Despite impressive performance at the Nairobi Securities Exchange, firm's at the Nairobi Securities Exchange are still characterized by higher ownership concentration providing the controlling shareholders with the opportunity to use their power to undertake activities intended to obtain personal gains to the detriment of minority shareholders and other stakeholders while adversely affecting the firms' performance. Given the importance of company's ownership concentration in corporate governance mechanisms, studies on ownership concentration and performance of firms have yielded non-conclusive empirical findings. Therefore, this study sought to investigate the effect of ownership concentration on performance of firms listed at the Nairobi Securities Exchange, Kenya.

1.3 Objectives of the Study

The purpose of the study was to investigate the effect of ownership concentration on financial performance of firms listed at the Nairobi Securities Exchange, Kenya.

Specifically, the study sought to:

1. Determine the level of financial performance of firms listed at the Nairobi Securities Exchange, Kenya.
2. Establish the ownership concentration levels among firms listed at the

Nairobi Securities Exchange, Kenya.

3. Ascertain the effect of ownership concentration on financial performance of firms listed at the Nairobi Securities Exchange, Kenya.

1.4 Research Hypothesis

H_A: There is a positive significant relationship between ownership concentration and performance of firms listed at the Nairobi Securities Exchange.

$H_{0:}$ There is no positive significant relationship between ownership concentration and performance of firms listed at the Nairobi Securities Exchange.

1.5 Scope of the study

This research was limited to the study of two variables namely: ownership concentration and performance of the 58 firms listed at the Nairobi Securities Exchange as constructed in the conceptual framework in figure 1.1 below. Section 1.7 below delineates the scope of each of these variables. The research was designed as a panel survey. Each firm considered in the study sample was based on the same number of time series observations among the panel members; therefore, the panel data of the firm was a balanced panel. The study area was Nairobi City being the capital city and commercial hub of Kenya, where most listed firms have their head offices. In line with Yabei and Izumida (2005), who contend that most studies use data from large enterprises, particularly listed companies, due to enormous difficulties in collecting data for smaller enterprises, the study looked at firms listed at the only organized capital market in Kenya. In addition, companies at the Nairobi Securities Exchange were chosen because they have clear ownership structures an aspect pertinent to this research.

1.6 Significance of the study

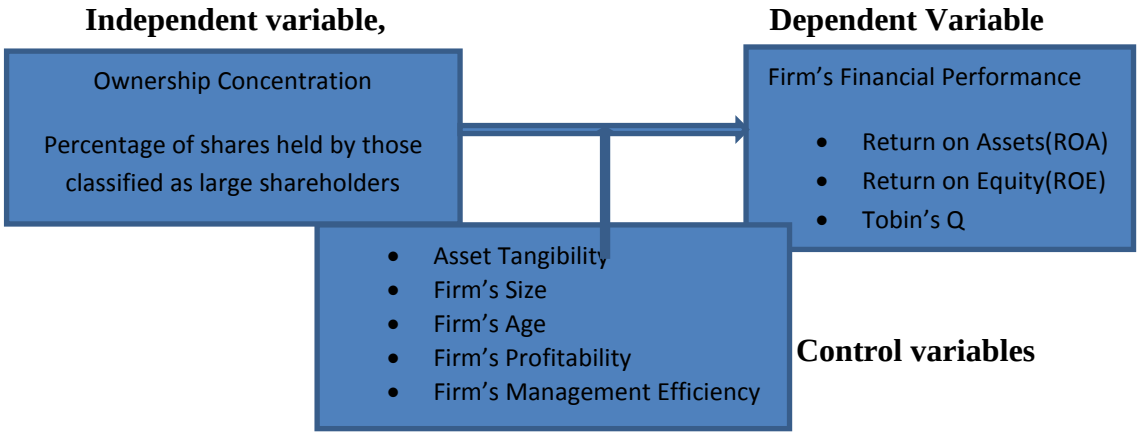
This study was conducted in the context of a developing securities exchange. The motivation of the study was due to financial scandals around the world and the recent collapse of some companies in Kenya that raised questions on ownership concentration and financial performance of firms at the Nairobi Securities Exchange and erosion of investor confidence in the market (Ongore and K'Obonyo, 2011). This study contributes to the literature in three dimensions: first by combining market based and standard accounting financial indicators as measures of firm performance to test the predictions of agency theory. Secondly, the study provides new empirical evidence on the effect of ownership concentration on firm's financial performance in a developing stock market in all the sectors of the stock market where about 77.59 % (www.nse.co.ke) of the listed firms are capital

intensive companies where the decisions about ownership concentration are fundamental to the performance of the firm. Finally, it provides further evidence on the possibility of co-existence of the opportunistic and informative institutional and block-holders ownership, and their differential association with performance of a firm.

1.7 Conceptual Framework

The study examined the relationship between ownership concentration and firm's performance. using both market and accounting based financial indicators as measures of firm performance to test the predictions of the agency theory also known as stakeholder's theory while controlling for the firm's size, age, profitability, asset tangibility, and management efficiency. In this framework, three performance measures namely return on assets (ROA), Return on Equity (ROE) and Tobin's Q are used. This choice is motivated by the fact that these indicators may have different interpretations regarding firm's performance. The hypothesized relationship is shown in figure 1.1 below.

Figure 1.1: Ownership concentration and firm's financial performance relationship



Source: Self-Conceptualization, 2012)

3.0 Research Methodology

This chapter presents the research methodology, research design, study area, target population, sampling frame, data collection methods, and data analysis.

3.1 Research Design

Robson (1993) posits that research design begins with selection of the topic and a paradigm. The topic of the study was to investigate the effect of ownership concentration on performance of firms listed at the Nairobi Securities Exchange, Kenya. A paradigm provides the research with an idea

of assumptions about the social world and how a study should be conducted. It suggests legitimate problems, solutions, and criteria of proof. Paradigms encompass both theories and methods. According to Philips (1987) and Creswell (1994) a study can follow a qualitative and/or a quantitative paradigm. The quantitative paradigm is termed as the traditional, positivist, experimental, or empiricist paradigm. It is based on the empiricist tradition (Schiffman and Kanuk, 2009; Smith, 1983). In contrast, the qualitative paradigm is termed as the constructivist, naturalistic, interpretative, post-positivist, experiential or post-modern perspective (Schiffman and Kanuk, 2009; Smith, 1983). This study followed the quantitative paradigm. This study utilized a quantitative paradigm to investigate the effect of ownership concentration on performance of firms listed at the Nairobi Securities Exchange. A correlational research design was used for this study to establish effect of ownership concentration on financial performance of firms listed at Nairobi Securities Exchange since it allows for analysis of covariant data to determine a pre-existing relationship and researcher makes no attempt to manipulate an independent variable.

3.2 Study Area

The study was conducted on companies listed at the Nairobi Securities Exchange since data was available and these companies are considered a representative sample of other firms in Kenya. This is in line with Yabei and Izumida (2005), who contend that most studies use data from large enterprises, particularly listed companies, due to enormous difficulties in collecting data for smaller enterprises. In addition, companies at the Nairobi Securities Exchange are chosen for this study because they have clear ownership structures aspects pertinent to this research.

3.3 Target Population

The unit of analysis was the firm. The population of this study comprised all the 58 companies listed at the Nairobi Securities Exchange drawn from the agriculture, commercial and services, telecommunications and technology, automobile and accessories, banking, insurance, investment, manufacturing and allied, and energy and petroleum sectors listed at the Nairobi Securities Exchange as at 1st January 2013 (www.nse.co.ke). These firms are chosen for this study because they have clear ownership structure an aspect pertinent to this research.

3.4 Sampling Frame

A census approach was used, since the units of study were not too many, were concentrated in Nairobi City and, therefore, accessible, and not prohibitive in terms of cost, time and other resources (Saunders *et al.*, 2007;

Sekaran, 2000).Such a methodology enhances validity of the collected data by including certain information-rich cases for study (Ojera, *et al.*, 2011).Thus the sampling frame consisted of all the 58 firms listed on the NSE. However, five (5) firms were excluded from the sample because they were delisted, merged during the relevant period or newly listed hence automatically excluded.

3.5 Data Collection Methods

The study employed secondary data on firms listed on the Nairobi Securities Exchange over a period of five years that is 2007 to 2011. Secondary data was collected from different sources including audited published financial statements of firms listed on the Nairobi Securities Exchange as well as from the NSE Hand Books which are readily available at the NSE and the Capital Markets Authority (CMA) libraries. Secondary data on, ownership concentration, asset tangibility, asset intangibility, firm's size, liquidity, profitability and firm's performance was extracted and/or derived from financial reports of listed companies and summaries provided by the NSE and the CMA whereby relevant ratios were computed.

3.7 Data Analysis

Data was analyzed using quantitative approaches notably descriptive statistics, correlation analysis and pooled multiple regression analysis. The following main descriptive statistics were used to compare variables numerically and ascertain a pattern in the data set. These are frequency, mean, median, and standard deviation. According to Saunder *et al.*, (2007), every statistics to describe a set of data usually summarizes the information in the data by disclosing the average indicators of the variables used in the study. Subsequently, Pearson's correlation analysis and panel multiple regressions analysis was performed to determine the effect of ownership concentration on financial performance of firms listed at the Nairobi Securities Exchange. Panel methodology and OLS method was used aided by E-views software since it increases efficiency by combining time series and cross-section data. Panel data involves the pooling observations on a cross section of units over several time periods. Furthermore, panel data facilitates identification effects that cannot be detected using purely cross-section or time series data.

3.7.1 Model Specification

To reveal the effect of ownership concentration on firm's financial performance, the estimation procedure used by Kuznetsov and Muravyev (2001) was adopted and modified as:

$Y_{it} = \alpha_i + \beta_i X_{it} + \varepsilon_{it}$ **(Eq.3.2)**

Where:

Y_{it}= is performance measures (ROA, ROE and Tobin's Q).

α_i = refers to time-invariant firm-specific effects.

β_i = Coefficients

X_{it}= are independent variables

ε_{it} = is a random disturbance

Based on the above general model the effect of ownership concentration on performance of listed firms at the Nairobi Securities Exchange was evaluated using the mathematical model outlined below:

$ROA_{it} = \beta_0 + \beta_2 OWNC_{it} + \beta_3 Z_{it} + \varepsilon_{it}$ (Eq.3.3)

$ROE_{it} = \beta_0 + \beta_2 OWNC_{it} + \beta_3 Z_{it} + \varepsilon_{it}$ (Eq.3.4)

$TOBIN's\ Q_{it} = \beta_0 + \beta_2 OWNC_{it} + \beta_3 Z_{it} + f_{it}$ (Eq.3.5)

Where:

ROA_{it} = ratio of pre-tax profits to total assets for firm i in period t.

ROE_{it} = ratio of net earnings divided by equity in book value for firm i in time t.

$TOBIN's\ Q_{it}$ = ratio of market capitalization to book value of assets for firm i in period t.

$\varepsilon_{it}, and\ f_{it}$ = are the error terms for equations 3.3, and 3.4, respectively. ($\varepsilon_{it} \sim N(0, \sigma^2)$

$_{it}$ = The subscripts i and t represent listed firm and time respectively.

$OWNC_{it}$ = the percentage of shares held by five greater shareholders of firm i in period t.

Z_{it} = is a vector of control variables namely asset tangibility, firm's size, age, management efficiency and profitability.

The variables included in Z_{it}control for firm characteristics. More specifically, the researcher assumes that profitability, asset tangibility, asset intangibility, age, management efficiency, and firm's size are likely to influence firm's performance.

4.0 Results and Discussions

4.1 Results

4.1.1 To determine the level of financial performance of firms listed at the Nairobi Securities Exchange, Kenya

To address this objective, descriptive statistics were computed and summarized in the tables 4.1.1 and 4.1.2 below.

Table 4.1.1a: Descriptive Statistics on Financial Performance of Firms listed at the Nairobi Securities Exchange

Statistics	TOBINSQ	ROE	ROA
Mean	1.319	0.165	0.165
Median	0.861	0.143	0.121
Maximum	7.791	0.693	0.709
Minimum	0.061	-0.238	-0.62
Std. Dev.	1.346	0.12	0.172
Skewness	2.028	1.045	0.448
Kurtosis	7.462	5.803	5.549
Jarque-Bera	387.741	130.368	77.838
Probability	0	0	0
Sum	337.696	42.163	42.165
Sum Sq. Dev.	462.163	3.649	7.528

Source: Research Data, 2013

Table 4.1.1b: Sectoral Averages

Sector	TOBINSQ	ROE	ROA	Number of firms
Agriculture	1.09	0.162	0.169	7
Commerce	2.114	0.193	0.23	6
Telecommunications	2.849	0.17	0.2	2
Automobiles	1.112	0.135	0.138	4
Banking	0.852	0.146	0.133	10
Insurance	0.88	0.208	0.145	3
Investment	0.92	0.165	0.1	4
Manufacturing	1.985	0.182	0.254	8
Construction	1.365	0.201	0.175	5
Energy & Allied	0.504	0.084	0.084	3
Industrial & Allied	1.183	0.132	0.177	1

Source: Research Data, 2013

Table 4.1 1a and 4.1.1b above displays the descriptive statistics of the variables of interest across all the firms sampled. It can be observed that on average, firms listed at the NSE enjoy a return on equity and return on assets of about 16.5 percent. The sectors that register the highest return on equity include insurance, commerce and construction at 20.8 percent, 19.3 percent and 20.1 percent, respectively. On the other hand, the sectors that register relatively higher return on assets include commerce, telecommunications and manufacturing with average ROA of 23.0 percent, 20.0 percent and 25.4 percent, respectively (Table 4.1.1b). These results are consistent with previous findings of Shehla *et al*, 2012, who found high levels of ROE among firms in the fuel & energy sector of Pakistan. The other measure of firm performance that this study looks at is the ratio of market capitalization

to book value of assets as captured by the Tobin's Q measure which is a proxy for the investors' opinion and confidence of a company's net worth and is major determining factor in stock valuation (Rajni, 2012). The results above show an average ratio of 1.319 implying that the firms market capitalization supersede their book value of assets by close to 32 percent. This is mainly reflected in firms in the Commerce, Telecommunications and manufacturing sectors which take up most of the market capitalization when compared to firms in other sectors. These findings are in tandem with Rajni (2012) findings who reported high market capitalization among telecommunication sector companies in India.

4.1.2 Establish the ownership concentration levels among firms listed at the Nairobi Securities Exchange, Kenya

To address this objective, descriptive statistics were computed and summarized in the table 4.1.2 below.

Table 4.1.2: Descriptive Statistics of ownership concentration levels

STATISTICS	OWNERSHIP CONCENTRATION
Mean	65.286
Median	69.405
Maximum	96.31
Minimum	11.04
Std. Dev.	17.292
Skewness	-0.892
Kurtosis	3.705
Jarque-Bera	39.227
Probability	0
Sum	16713.3
Sum Sq. Dev.	76249.16
Observations	256

Source: Research Data, 2013

As shown in the table 4.1.2 above, the highest ownership concentration is 96.310%, while the lowest is 11.040%, with an average ownership concentration of 64.286% and variability of 17.292% implying that the percentage of shares held by those considered as large shareholders range between 96.310% and 11.040%, with a mean of 64.286%.

These results appear to vindicate the findings of Foroughi and Fooladi (2011) who found that high level of ownership concentration can create operational and financial risk and cause the major shareholders to expropriate the firm's resources for their own interests. Therefore, the benefits of ownership concentration such as monitoring management and aligning their interest with shareholders' interests may be compromised. The

kurtosis for the data is 3.705. As a general rule, the kurtosis of a normal distribution is 3. If the distribution has thicker tail than does the normal distribution, its kurtosis will exceed three and is said to abnormal. The JB statistic which tests whether a series is normally distributed is 39.227 with a p-value of 0.000. In this case, p-value is 0.0000 hence data series is normally distributed.

4.1.3 Ascertain the effect of ownership concentration on financial performance of firms listed at the Nairobi Securities Exchange, Kenya

To address this objective, correlation analysis and pooled regression analyses were conducted and the results are summarized in the tables 4.1.3 and 4.1.3b below.

In order to establish the level and direction of correlation among the variables of interest, below is the Correlations Matrix. This matrix attempts to provide insights on the hypothesis tests that the study intended to test. It can be observed that we cannot reject the null hypothesis that there is no significant relationship between ownership concentration and performance of firms at the NSE (Table 4.1.3a).

Table 4.1.3a: Results of Correlation analysis

	TOBINSQ	ROE	ROA	OWNC
TOBINSQ	1			
ROE	0.333	1		
ROA	-0.038	-0.025	1	
OWNC	-0.027	0.142	0.044	1

Source: Research Data, 2013

4.1.3b: Econometric Estimation

The study employs a panel data analysis approach in order to capture firm-specific effects in the three equations specified above. The model is estimated using seemingly unrelated regression technique which is an unbiased estimator especially when the error terms are likely to be auto-correlated (Baltagi, 2001). This method allowed the researchers to account for heteroscedasticity which may be present given that there were significant variations in the firms that were under study.

4.1.3c: Data and Unit Root Tests

A panel of 53 firms is used in analysis spanning over 2007 to 2011. Before empirical estimations were conducted, the data series were subjected to unit root tests to establish their stationarity conditions i.e. their orders of integration and where a series was found to be non-stationary at levels, it was differenced until it was stationary. This study used the Levin, Lin, Chu (LLC) and Im, Pesaran; Shin (IPS) for testing for unit roots and the results

are summarized in the table 4.1.3b below. The results indicate that all variables are integrated of order zero i.e. are stationary at levels. Given that all variables are integrated of order zero, there was therefore no need for testing for cointegration in the series.

Table 4.1.3b: Unit Root Test Results

Variable	Levin, Lin, Chu (LLC)	Im, Pesaran, Shin (IPS)	Conclusion
Ownership Concentration (OWNC)	-24.566 (0.000)	-4.861 (0.000)***	I(0)
Tobin's Q	-153.376 (0.000)	-27.165 (0.000)	I(0)
Return on Equity (ROE)	-9.391 (0.000)	-2.221 (0.000) ***	I(0)
Return on Assets (ROA)	-42.944 (0.000)	-9.729 (0.000) ***	I(0)

Source: Research Data, 2013

Note: *Statistics shown on the first row of each respective variable are the estimated coefficients while those in parentheses are their respective p-values. *, **, *** represent significance at 10%, 5% and 1% respectively.*

4.1.3d: Panel Least Squares Regression Results

This section presents the econometric results obtained by empirically testing three sets of equations as presented in the previous chapter for a panel of 53 firms between 2007 and 2011. The regression analysis was carried out using panel data. The panel data used to estimate this model consist of *i* cross-sectional units where *i* = 1, 2. . . 53 firms observed at each of *t* time periods, t = 1, 2. . . 5 (2007 through 2011). We estimate equations 3.3, 3.4 and 3.5 and the results obtained from panel least squares are posted on Table 4.1.3c below. From the results, ownership concentration is negatively related to all the measures of performance in firms listed at the NSE. These results are consistent with the previous studies' findings (for example Foroughi and Fooladi, 2011; Gomez *et al.,* 2001; and Miller *et al*., 2007 who studied corporate ownership structure and firm performance using panel data and found that company's ownership concentration had a statistically negative relationship with firm performance at 5% significance level while controlling for the firm's size, financial leverage, systematic risk and industry. This negative effect means that higher ownership concentration provides majority shareholder with more opportunity and incentive to expropriate firm's resources at the expense of minority shareholders which is in line with expropriation hypothesis. The size of company has a positive effect on companies' financial performance measured in terms of return on equity.

This is consistent with Onder (2003) and Tran (2005). A bigger firm can perhaps devise better ways and means to fight the market risks and uncertainties, have better chances to offset random losses (Surajit & Saxena, 2009). Moreover, size brings bargaining power over the suppliers and competitors. When products are standardized and can be produced on a mass scale with longer production-runs such as Iron and Steel, a large firm will be more efficient. A big firm can buy up the best sites with related advantage, the superior technology and best professional experts because of its control over the market.

Profitability of firms significantly supports return on assets and market capitalization but not the return on equity. The factors that significantly enhance firms' return on equity include firms' tangibility and growth in size as management efficiency and age of the firm significantly undermine return on equity. These two factors similarly affect growth in firms' market capitalization over more than they undermine growth in capital (the Tobin's Q). Firms' tangibility supports the financial performance of firms by enhancing market capitalization faster than the capital base of firms. Pertinent literature regarding the relationship between ownership concentration by corporations and financial performance of firms emphasizes that investors differ in the degree to which they are prepared to take risks (Shleifer & Vishny, 1997; Welch, 2000; Xu & Wang, 1997, Ongore and K'Obonyo, 2011). Firm owners make investment choices that are influenced by their interests and preferences. When a firm acquires shares in another firm, the shareholders of the first firm extend their investment preferences, interests and risk taking behavior to that new firm.

Table 4.1.3c: Panel Least Squares Estimation Results
Source: Research Data, 2013

	Return on Equity Model (Equation 3.2)				**Return on Assets Model (Equation 3.3)**				**Tobin's Q Model (Equation 3.4)**			
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	0.0657	*0.0587*	1.1192	0.2644	0.0602	*0.0385*	1.5639	0.1194	5.1563	*0.5189*	9.9377	0.0000
OWNC	**-0.0005**	***0.0006***	**-0.8071**	**0.4206**	**-0.0002**	***0.0005***	**-0.5303**	**0.5965**	**-0.0057**	***0.0027***	**-2.1191**	**0.0353*****
TANG	0.0200	*0.0107*	1.8695	0.0630*	-0.0025	*0.0048*	-0.5209	0.6030	0.2302	*0.0993*	2.3179	0.0215**
PROF	0.0291	*0.0268*	1.0865	0.2786	0.8191	*0.0316*	25.9107	0.0000***	0.9092	*0.2056*	4.4209	0.0000***
FSIZE	0.0196	*0.0038*	5.1257	0.0000***	0.0010	*0.0022*	0.4648	0.6426	-0.1404	*0.0382*	-3.6745	0.0003***
ME	-0.0096	*0.0037*	-2.6037	0.0099***	-0.0035	*0.0028*	-1.2418	0.2158	0.0460	*0.0471*	0.9751	0.3307
FA	-0.0065	*0.0019*	-3.3374	0.0010***	-0.0007	*0.0011*	-0.6440	0.5203	-0.0558	*0.0128*	-4.3645	0.0000***
Adjusted R-squared		0.7732			0.8852				0.8594			
Durbin Watson Stat		1.8000			2.4500				1.8900			

Adjusted R squared measures the success of the regression model in predicting the values of the dependent variable within the sample. Theoretically, Adjusted R squared will be one if the regression fits perfectly and zero if the regression does not. As shown in the table 4.1.3c; return on Equity mode l (Equation 3.2), Adjusted R squared is 0.7732 implying that 77.32 % of the dependent variable (return on equity) is well explained by the independent variables (ownership concentration, financial leverage, asset tangibility, profitability, firm's size, managerial efficiency and firm's age).The remaining variation, which is the error term, of 22.68% is unexplained and attributed to other factors not included in the model. On the hand, return on assets model (Equation 3.3), Adjusted R squared is 0.8852 which means that 88.52 % of the variation in the dependent variable (return on assets) is well explained by the independent variables (ownership concentration, financial leverage, asset tangibility, profitability, firm's size, managerial efficiency and firm's age).The remaining variation, which is the error term, of 11.48 % is unexplained and attributed to other factors not in the model. The Adjusted R squared for Tobin's Q model (Equation 3.4) is 0.8594 which means that 85.94 % of the variation in the dependent variable (Tobin's Q) is well explained by the independent variables (ownership concentration, financial leverage, asset tangibility, profitability, firm's size, managerial efficiency and firm's age).The remaining variation, which is the error term, of 14.06 % is unexplained and attributed to other factors not in the model.

One of the assumptions of the classical regression is that the disturbances in the model are not auto correlated. Another way of stating this assumption is that the correlation between disturbances from different observation period is zero. To test for serial correlation, we used the D-W test. The rule of thumb for this test is that if d is found to be 2 in an application, one may assume that there is no first-order autocorrelation, either positive or negative. This also implies that the closer the statistic is to 2, the better. Specifically, the DW statistic will fall below 2 if there is positive serial correlation (in the worst case, it will be near zero) and lie between 2 and 4 if there is negative correlation. All the three models seem to meet this threshold hence no autocorrelation.

5.0 Conclusions

This study set out to investigate the effect of ownership concentration on performance of firms listed at the NSE. It pursued three measures of performance of firms i.e. the ROE, ROA and the Tobin's Q. In addition to ownership concentration, the study expanded the list of explanatory variables that have been argued to impact on performance. The study used a balanced panel data for 53 firms listed at the NSE spanning the period 2007 to 2011 to

estimate equations 3.2, 3.3 and 3.4. From the results above, it is clear that ownership concentration of the top five largest shareholders and age of a firm are factors that undermine performance while profitability, growth in firm size and partially tangibility enhance performance. In this regard, we can reject the null hypotheses that there is no relationship between ownership concentration and the performance of firms at the NSE.

Based on the above conclusions, we can recommend that for firms to enhance their performance there is need to look at tangibility of firms' assets, ensure that firms grow in size, and that they invest in profitable ventures. Efforts should also be directed at ensuring that firms do not just grow in age but rather grow faster in size and that ownership does not grow among few owners(higher ownership concentration) but rather spread out to many owners(diffused ownership). Firms should equally watch over growth in financial leverage as this would undermine their performance. There is a significant negative relationship between ownership concentration and firm performance. The monitoring and control school of thought argues that the free-rider problems associated with diffuse ownership do not arise with concentrated ownership, since the majority shareholder captures most of the benefits associated with this monitoring. This found out that the reverse is actually true in the Kenyan context. The implication is that when more than 30 per cent or more of shares are concentrated on a few hands (i.e. five shareholders or less), there is a tendency for the shareholders to be overzealous in their monitoring, controlling and ratification roles over managers. This stifles managers' creativity and innovation, and ultimately affects firm performance adversely. It is even worse when the shareholders lack specific and general knowledge about the business of the firm. The results of the current study have therefore, shown there is dire need to reasonably diversify shareholding as a way of attracting more skills and competencies among the shareholders that can be tapped to improve firm performance. At the same time, the managers should be protected from unnecessary direct interference by the shareholders. There is a positive relationship between insider ownership and firm performance. It has been argued that when managers own shares in their company, they become more committed to the organization since they have a stake in the residual income of the firm, and are likely to bear the cost of mismanagement. This commitment translates to superior performance. In fact, the study reaffirmed this position among listed companies in Kenya. What was not established by the study however is the critical level of shareholding, beyond which there would be accelerated firm performance arising from commitment of managers.

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