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INFLUENCE OF INDEPENDENCE OF DIRECTORS ON STOCK LIQUIDITY OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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Abstract

The aim of this paper was to establish the influence of independence of directors on stock liquidity of firms listed at the Nairobi Securities Exchange. The success of securities exchange highly depends on the ability to trade large size quickly at low cost. Independence of directors has been found to play a key role as an aspect of corporate governance on firms' financial performance but its role still remains unclear on stock liquidity of listed firms at the Nairobi securities exchange. It is on this merit that this paper sought to fill the existing gap by establishing whether independence of directors' influences stock liquidity of firms listed. The study adopted a descriptive research design and targeted 68 firms listed at the Nairobi securities exchange for the period from 2014 to 2018. This study used both primary and secondary sources. Data analysis was done using descriptive and inferential statistics. Under descriptive statistics; mean, median, minimum, maximum, and standard deviation were used



and for the inferential statistics correlation and regression analysis were used. The research findings revealed that independence of directors has no significant influence on stock liquidity of firms listed at the Nairobi securities exchange.

Keywords: Board Independence, Directors, Stock Liquidity, Nairobi Securities exchange

INTRODUCTION

Background of the Study

The independence of directors has been the subject of much debate in the corporate governance literature. Since the work of Fame and Jensen (1983) it was assumed that board independence and its effectiveness are linked. The role of directors was to monitor the tasks performed by management, to oppose to bad decisions, and provide advice at a high management level. The rooting theory predicts that outside directors have not sufficient power to oppose the strategies used by leaders in order to enhance their power and partners including the development of asymmetric information. In this framework Fame and Jensen also argue that the most influential members in the board naturally have to be internal members, since they have valid and specific information regarding the activities of the firm. The information was mainly obtained by internal mutual supervision of other managers.

The proportion of independent directors is one of the key features of the board effective structure. The Cadbury committee produced two major recommendations with respect to the structure of UK corporate boards. Firstly, boards should consist of at least three non-executive directors, two of whom should be independent of management. Also, the positions of the chairman and CEO (or equivalent) should not be held by the same individual. The rational for this was to ensure a higher level of monitoring by company boards by introducing more independence and to prevent any one individual from dominating the board (Cadbury Report, 1992). Based on a wide range of positive study findings on the relationship between board independence and stock performance CBK recommends that non-executive directors should not be less than 3/5 on board size in order to enhance accountability among the listed firms (CBK, 2013).

The firms have started paying attention to the monitoring role of the independent directors as means of improving corporate governance. Independent boards are strong and more effective at monitoring managers. Lei, Lin & Wei, (2013) illustrates that the increase of independent directors in firms is a popular regulatory measure in Asia after the financial crisis. It could presumably restore stakeholders' confidence (Rezaee, 2009). However, the independence of directors comes with its own challenges. Good advice and effective monitoring



requires a framework of trust and information sharing. (Adams and Ferreira, 2007) argued that independence of directors' advisory role depends critically on the information provided by the CEO. Therefore, as with almost everything; independence of directors comes with benefits of mitigating informational asymmetries through demand of additional number disclosure of information and also generate its own agency costs by aggravating incentives for managers to affect the quality of information.

Agency theory recommends the need to involve independent directors in the company's board to monitor any self – interested actions by managers with a view of minimizing agency costs (Williams, Duncan & Ginter, 2006). The internal directors are normally known to be aligned with the CEO who was the highest ranking company executive with power to appoint executives. In actual corporate scene, the directors dully appointed by the CEO may not effectively monitor the CEO. Byrd and Hickman (1992) argued that a high caliber CEO may appoint independent directors to please shareholders with an illusion that there was active monitoring in the company's activities and assets when indeed there is none. The truly independent directors of the board are more likely to opt for a clean slate by hiring replacement of the CEO when the company's stock liquidity deteriorates significantly (Borokhovich & Parrino, 1996). Poudel and Hovey (2012); Mohammad and Shahid (2012); Oyoga (2010) all agree in their findings that there was a positive influence of the high presence of independent directors in the board with high stock performance.

Although independent directors help a great deal in decision making in organizations, research has found no direct linkage between board independence and firm stock performance. The board independence is affected by stock performance, companies reacting to bad performance by adding outside directors to the board and the advantages of an active independent board are normally realized when specific issues such as; CEO replacement or acquisition proposals are to be voted on. Coles, Naveen and Naveen (2015) attributes the missing link between board independence and stock performance to board ineffectiveness. Despite of mixed findings on the influence of outside directors on the stock liquidity performance agency theory perspective has been adopted to evaluate the influence of board independence on stock liquidity. Pankaj and Vijay, (2012); Romano, Ferretti, and Rigolini (2012) found no influence of the presence of independent directors in the board with their stock performance.

Statement of the Problem

Securities markets across the globe have been facing tremendous challenges with increased collapse of the markets, escalating delisting of firms and fluctuations in stock prices the aspect that possess a threat to their overall continuity. Failure of independent directors to monitor the



CEO activities has been largely criticized for the decline in shareholders' wealth and corporate failure in recent times. Independence of director has been questioned for firms' inability to trade large size quickly at low cost, adversely affecting some listed firms at the Nairobi securities exchange been suspended from trading and the recent corporate scandals and collapse of Euro Bank, Uchimi Supermarket, and the near collapses of Unga group and National Bank of Kenya (CBK, 2017). The inability to ease of buying and selling of large quantities of shares in the securities exchange has continuities despite of corporate governance guidelines by the Kenya Capital Markets Authority. This paper therefore sought to establish the influence of independence of directors on stock liquidity of the listed firms at the Nairobi securities exchange.

Objectives of the Study

General Objective

The general objective was to establish the influence of independence of directors on stock liquidity of firms listed at the Nairobi securities exchange.

Specific Objectives

- 1. To evaluate the influence of independence of directors on stock liquidity of firms listed at the Nairobi securities exchange.
- 2. To analyze the moderating influence of firm size on the relationship between independence of directors and stock liquidity of firms listed at the Nairobi securities exchange.

Research Hypotheses

 H_{01} : Independence of directors has no significant influence on stock liquidity of firms listed at the Nairobi securities exchange.

 H_{02} : There is no significant moderating influence of firm size on the relationship between independence of directors and stock liquidity of firms listed at the Nairobi securities exchange.

Scope of the Study

The study covered the period spanning January 2014 to December 2018. The choice of January 2014 as the starting point of this study was informed by the fact that this was after the introduction and implementation of the Capital Market Authority corporate governance guidelines in Kenya of 2002 and the great financial crisis of 2008 and the time period captures the activities after NSE automated its trading activities in 2012.



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LITERATURE REVIEW

Theories used

Agency Theory

The agency theory has its origins in the in the organizational works of Mitnick and economical agency theory developed by Ross both published in 1973. The principal - agent relationship originates when a principal hires agent to perform a service. The agents' presence a high level of information and the inability of the principal to monitor the efforts of the agents not to take advantage of this information asymmetry to enrich themselves demonstrates the importance of effectiveness of the board. Agency theory scholars (Jensen and Meckling, 1976; Fama and Jensen, 1983) argue that the independent directors have the power and legitimacy to oversee managers and ensure that they act in the best interests of the firm's shareholders and other stakeholders. Independence of directors in terms of the alignment of directors' and shareholders' interests plays an important role of providing advice and preventing the CEO from dominating the board of directors.

Stewardship Theory

The stewardship theory has its roots from psychology and sociology. Stewards are company executives and managers working for the shareholders. The stewards protect and profits for shareholders and they are satisfied and motivated when organizational success is attained (Abdulla & Valentine, 2009). The theory argues that the effective control held by external (independent directors) professional managers empower them to maximize firm performance and corporate profits. Regarding the leadership structure, stewards maximize their utility because they achieve organizational rather than self- serving objectives (Balta, 2008). Stewardship theorists argue that superior corporate performance is associated with the majority of inside directors because; firstly, they ensure more effective and efficient decision - making and secondly, they contribute greatly to maximize profits for shareholders (Kiel & Nicholson, 2003). Consequently, insider- dominated boards are favored more for their depth of knowledge, access to current operational information, technical expertise and commitment to the firm.

Resource Dependency Theory

The origin of resource dependence theory was from the work of Jeffery Pfeffer (1972) indicated the importance of the relationship between power and exchange within and around the firm. The theory was further emphasized (Salancik & Pfeffer, 1978; Aldrich & Pfeffer 1976). Since the introduction of resource dependence theory in 1972, RDT used as a premier perspective in understanding organizational environmental relationships (Dress & Heugens, 2013). Salancik



and Pfeffer also had the intention to provoke additional thoughts, the study attention and concerns for three different ideals, include the concept of resource interdependence, external social constraint and organizational adaption.

Transaction Cost Economics Theory

Transaction cost theory is a variant of agency theory that can be defined as an interdisciplinary coalition of economics, law and organizations which views the firm as system comprising of people with different motives and objectives (Williamson, 1999). This means that shareholders and managers have different goals and pursue their own self – interest. The problem may arise when managers as agents do not deliver as promised (moral hazard) or misrepresent themselves (adverse selection). It was based upon the fact that costs arise when you hire someone else to act upon your behalf like elected directors who perform business operation for the owners. Based on the above comparisons and findings, this study adopted the agency theory framework.





Empirical Review

Sakwa (2015) investigated the effect of corporate governance on stock market liquidity of firms listed at NSE. The studies addressed the gap of whether the corporate governance variables had an effect on the stock liquidity and whether one can use them to predict the stock liquidity at the bourse. The population of the studies comprised of all the listed firms at NSE from the period of 2009 to 2013. The study adopted the independent variables of board of directors' size, board of director's independence, seniority of directors, frequency of board meetings and unitary



structure of board. The dependent variable of stock liquidity were measured by; trading volumes, price volatility, share price and firm size. The study found that none of the variables were significant in predicating stock market liquidity. The ANOVA test of significance on the five predictor variables found none of the variables to be of significance in predicating stock liquidity in the model. The study recommended that none of the selected corporate governance variables of firms at the NSE can be reliably used to project stock liquidity variations of listed firms. The nature of the relationship in terms of both magnitude and direction; an increase in board independence led to a sizeable increase in stock liquidity; an increase in board size led to a marginal increase in stock liquidity; the presence of unitary structure in the board led to a slight decrease in stock liquidity; an increase in slight decrease in stock liquidity; an increase in seniority of the board resulted in a marginal decrease in stock liquidity.

Wepukhulu (2016) researched on the relationship between corporate governance and performance of commercial banks in Kenya. The study conducted a survey on 43 commercial banks incorporated and were operating in Kenya during the period. The study used long term series data of 2001 to 2013. Corporate governance mechanisms were measured using selected internal corporate monitoring mechanisms of block ownership, institutional ownership, board independence and board size. The study used return on assets, return on equity and Tobin's q ratio as key variables that defined banks performance, whereas bank size was adopted as a control variable. The findings demonstrated that board independence was not significant in the relationship between corporate governance and performance of commercial banks when using return on asset, return on equity and Tobin's q.

METHODOLOGY

The descriptive research design was adopted as the best approach to fulfill the objectives of this study. The target population was the 68 listed firms at NSE for period spanning from 2014 -2018. The rationale behind the choice of this data time series was informed by the fact that this was after the introduction and implementation of corporate governance guidelines and 2013 new prudential guidelines by central bank of Kenya (CBK, 2013). The period also captured the activities after NSE automated its trading activities in 2012. Both primary and secondary data was collected. Primary data was collected using a structured questionnaire. The secondary data was obtained from the respective firms' publications and annual reports using a data collection sheet.

Data analysis was done using descriptive and inferential statistics by the use of SPSS and E-views. Under descriptive statistics mean and standard deviations were used and



inferential statistics the hypotheses tested through a regression model to give ANOVA, regression coefficients and P-values.

In order to establish the combined influence of the independent variables on the dependent variable, a linear model was used. Therefore the model for this study was consolidated as:

Y= β **o** + β **1X1** + εEquation (i)

The moderating variable in this study was firm size. To determine the presence of moderating effect, the OLS model will be then compared with the MMR model. Equation (ii) shows the Ordinary Least Squares (OLS) regression equation model predicting Y scores from the firstorder effects of X and Z observed scores.

 $Y = \beta_0 + \beta_1 X_1 + Z + \varepsilon$ Equation (ii)

Equation (iii), the Moderated Multiple Regression (MMR) model was formed by creating a new set of scores for the two predictors (i.e. X, Z), and including it as a third term in the equation, which yields the following model:

 $Y = \beta_0 + \beta_1 X_1 + \beta_4 Z + \beta_5 X_1 * Z + \varepsilon$ Equation (iii) Where:

Y is the Stock Liquidity

X1 is the independence of directors

Z is the firm size (moderating variable)

FINDINGS

Response Rate

The study targeted 68 firms listed at the Nairobi securities exchange. Out of these, 59 firms filled and returned back the questionnaires indicating 86.76% response rate. Mugenda and Mugenda (2009) recommended that: 50% response rate is adequate, 60% good any other response rate above 70% very good. Based on these recommendations, the response rate of 86% was very good.

Empirical Results

The findings of this study on Table 1 revealed that quoted spread as a measure of stock liquidity reported an average of 4.83% with a maximum of 80% and minimum of 3.21% with a deviated of 6.21% on both sides of the mean. Turnover as measure of as a measure of stock liquidity, the findings indicates an average of 8% with a maximum of 72.67% and a minimum of 1.7% with a deviated of 15.37% on both sides of the mean. The standard deviation of turnover was relatively high to that of quoted spread by 9.09%. Illiquidity when used as a measure of stock liquidity of



listed firms at the NSE, the findings indicates an average of illiquidity was Ksh8.66 with a maximum of Ksh40.42 and a minimum of Ksh6.40 which deviated on both sides of the mean by Ksh7.82. Liquidity ratio as a measure of stock liquidity, the findings shows that firms listed at the NSE reported an average liquidity ratio of 0.2587 with a maximum of 1.928 and a minimum of zero that deviated by 0.2644 on both sides of the mean. On average the proportion of NEDs in the board, the findings indicate an average of 44.54%, a minimum of 25% and maximum of 69.9%. The findings further indicate that independent directors constituted nearly 50% of the board size with standard deviation of 5.29%.

The descriptive statistics results indicates that the standard deviation was relatively low with stock liquidity measures of quoted spread, turnover and liquidity ratio of 6.21%, 15.37%, 26.44% respectively and highest with illiquidity over 100%. The adopted measures were indication that the internal corporate governance mechanisms of firms listed at the NSE were sufficient in assisting them to monitor and control the transaction costs. The maximum over 100% and the minimum of 6.21% implied that all other factors constant the trading cost variation was 6.21% and over 100%. Given these results quoted spread suffers from the hereroskedesticity and high volatility when adopted as stock liquidity measure. The illiquidity emerged as the best measure of the influence of corporate governance on stock liquidity. A number of studies show that illiquidity is a reliable measure of price impact and stock liquidity (Hasbrouck, 2009; Lesmond, 2005; Goyenko, Holden & Trzcinka, 2009; Karolyi, Lee & Van Dijk, 2012).

Skewness coefficients revealed that board effectiveness, independence of directors and seniority of directors were skewed to the negative side (skewness coefficient -2.8886, -0.4772 and -0.9803). These findings were in support of Uyaebo and Usman (2015) who demonstrated that stock liquidity in Nigeria was not normally distributed though it was positively skewed. These findings are in support of random walk hypothesis which stipulates that stock market returns responds to both positive and negative news and could explain its ability to trade large size quickly at low cost. The independent variables; board effectiveness, independence of directors, board structure and seniority of directors had Jargue-Bera values of 5047.08, 150.20, 10939.72 and 53.34 respectively with p value of 0.0000. The Jarque-Bera statistics for the dependent variables; quoted spread, turnover, Illiquidity and Liquidity ratio were 64717, 745.53, 421.95 and 2269.26 respectively with p value of 0.0000. All these values were far away from zero that means the variables were not normally distributed.



| Mean0.25878.65770.04830.08001.04740.08610.44530.90990.1769Median0.18586.40000.03210.01711.04140.06230.45450.95420.0345Maximum1.928040.4200.80000.72671.25581.00000.69901.07922.5000Minimum0.00011.08000.00000.00000.07920.00000.25000.69900.0002Std. Dev.0.26437.81730.06210.15360.12940.15280.05280.12040.3476Skewness2.80092.02686.46642.5481-2.8885.2318-0.477-0.9803.5791Kurtosis15.3787.230274.3998.889122.42230.9376.36272.295817.340Jarque-Bera2269.3421.9564716745.535047.110939150.1953.3433157.6Probability0.00000.00000.00000.00000.00000.00000.00000.00000.0000 | | LR | ILLIQ | Quoted | Turnover | BE | BS | BDEP | BSEN | Firm |
|---|--------------|--------|--------|--------|----------|--------|--------|--------|----------|--------|
| Mean 0.2587 8.6577 0.0483 0.0800 1.0474 0.0861 0.4453 0.9099 0.1769 Median 0.1858 6.4000 0.0321 0.0171 1.0414 0.0623 0.4545 0.9542 0.0345 Maximum 1.9280 40.420 0.8000 0.7267 1.2558 1.0000 0.6990 1.0792 2.5000 Minimum 0.0001 1.0800 0.0000 0.0000 0.0792 0.0000 0.2500 0.6990 0.0002 Std. Dev. 0.2643 7.8173 0.0621 0.1536 0.1294 0.1528 0.0528 0.1204 0.3476 Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 | | | | Spread | | | | | | Size |
| Median0.18586.40000.03210.01711.04140.06230.45450.95420.0345Maximum1.928040.4200.80000.72671.25581.00000.69901.07922.5000Minimum0.00011.08000.00000.00000.07920.00000.25000.69900.0002Std. Dev.0.26437.81730.06210.15360.12940.15280.05280.12040.3476Skewness2.80092.02686.46642.5481-2.8885.2318-0.477-0.9803.5791Kurtosis15.3787.230274.3998.889122.42230.9376.36272.295817.340Jarque-Bera2269.3421.9564716745.535047.110939150.1953.3433157.6Probability0.00000.00000.00000.00000.00000.00000.00000.0000 | Mean | 0.2587 | 8.6577 | 0.0483 | 0.0800 | 1.0474 | 0.0861 | 0.4453 | 0.9099 | 0.1769 |
| Maximum 1.9280 40.420 0.8000 0.7267 1.2558 1.0000 0.6990 1.0792 2.5000 Minimum 0.0001 1.0800 0.0000 0.0000 0.0792 0.0000 0.2500 0.6990 0.0002 Std. Dev. 0.2643 7.8173 0.0621 0.1536 0.1294 0.1528 0.0528 0.1204 0.3476 Skewness 2.8009 2.0268 6.4664 2.5481 -2.888 5.2318 -0.477 -0.980 3.5791 Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 | Median | 0.1858 | 6.4000 | 0.0321 | 0.0171 | 1.0414 | 0.0623 | 0.4545 | 0.9542 | 0.0345 |
| Minimum 0.0001 1.0800 0.0000 0.0792 0.0000 0.2500 0.6990 0.0002 Std. Dev. 0.2643 7.8173 0.0621 0.1536 0.1294 0.1528 0.0528 0.1204 0.3476 Skewness 2.8009 2.0268 6.4664 2.5481 -2.888 5.2318 -0.477 -0.980 3.5791 Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 | Maximum | 1.9280 | 40.420 | 0.8000 | 0.7267 | 1.2558 | 1.0000 | 0.6990 | 1.0792 | 2.5000 |
| Std. Dev. 0.2643 7.8173 0.0621 0.1536 0.1294 0.1528 0.0528 0.1204 0.3476 Skewness 2.8009 2.0268 6.4664 2.5481 -2.888 5.2318 -0.477 -0.980 3.5791 Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 | Minimum | 0.0001 | 1.0800 | 0.0000 | 0.0000 | 0.0792 | 0.0000 | 0.2500 | 0.6990 | 0.0002 |
| Skewness 2.8009 2.0268 6.4664 2.5481 -2.888 5.2318 -0.477 -0.980 3.5791 Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 Brobability 0.00000 0.00000 0.00000< | Std. Dev. | 0.2643 | 7.8173 | 0.0621 | 0.1536 | 0.1294 | 0.1528 | 0.0528 | 0.1204 | 0.3476 |
| Kurtosis 15.378 7.2302 74.399 8.8891 22.422 30.937 6.3627 2.2958 17.340 Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 Probability 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | Skewness | 2.8009 | 2.0268 | 6.4664 | 2.5481 | -2.888 | 5.2318 | -0.477 | -0.980 | 3.5791 |
| Jarque-Bera 2269.3 421.95 64716 745.53 5047.1 10939 150.19 53.343 3157.6 | Kurtosis | 15.378 | 7.2302 | 74.399 | 8.8891 | 22.422 | 30.937 | 6.3627 | 2.2958 | 17.340 |
| P_{cob} | Jarque-Bera | 2269.3 | 421.95 | 64716 | 745.53 | 5047.1 | 10939 | 150.19 | 53.343 | 3157.6 |
| | Probability | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.000000 | 0.0000 |
| Sum 76.325 2554.0 14.250 23.612 309.00 25.420 131.38 268.42 52.187 | Sum | 76.325 | 2554.0 | 14.250 | 23.612 | 309.00 | 25.420 | 131.38 | 268.42 | 52.187 |
| <i>Sum Sq. Dev.</i> 20.545 17966 1.1349 6.9432 4.9272 6.8674 0.8220 4.2652 35.541 | Sum Sq. Dev. | 20.545 | 17966 | 1.1349 | 6.9432 | 4.9272 | 6.8674 | 0.8220 | 4.2652 | 35.541 |
| Observations 295 295 295 295 295 295 295 295 295 295 | Observations | 295 | 295 | 295 | 295 | 295 | 295 | 295 | 295 | 295 |

Table 1: Descriptive Statistics

Correlation Analysis

The findings in Table 2 show that the correlation of guoted spread with each of the four proxies of corporate governance namely; board effectiveness, independence of directors, board structure, and seniority of directors were not statistically significant at 5% level (r=.249, p value =.686; r=.209, p - value =.735; r=.050, p -value = .936 and r=-.008 p - value = .989 respectively). Implying that the correlation between each of these variables with quoted spread does not exist above and beyond the influence of firm size. Invariably meaning the above corporate governance mechanisms have got no influence on the quoted spread of firms listed at the NSE.

In these results, the correlation between board effectiveness and firm size is about r=0.867, which indicates that there is a positive relationship between the variables. The correlation between independence of directors and firm size is r= 0.297 and between independence of directors and quoted spread is r=-.209. The relationship between these variables is negative, which indicates that as firm size and quoted spread increases, board effectiveness decreases thus stock liquidity. These correlation analysis findings were in line with those of Kahuthu, (2017) that an increase in the spread had a negative influence on stock liquidity and firm performance. These findings were similar with those found by Roulestone (2003) there is a negative association between bid ask spread and trading volume.



| | Table 2: Partial Correlation Analysis Results | | | | | | | | | |
|--------|---|------|--------|------|-------|------|------|------|------|------|
| | | Firm | Quoted | Turn | ILLIQ | LR | BE | BDEP | BS | BSEN |
| | | Size | Spread | over | | | | | | |
| Firm | Pearson | 1 | | | | | | | | |
| Size | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | | | | | | | | | |
| | Ν | 59 | | | | | | | | |
| Quoted | Pearson | .144 | 1 | | | | | | | |
| Spread | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .817 | | | | | | | | |
| | Ν | 59 | 59 | | | | | | | |
| Turn | Pearson | 482 | .527 | 1 | | | | | | |
| over | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .441 | .361 | | | | | | | |
| | Ν | 59 | 59 | 59 | | | | | | |
| ILLIQ | Pearson | .814 | .098 | 577 | 1 | | | | | |
| | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .094 | .876 | .308 | | | | | | |
| | Ν | 59 | 59 | 59 | 59 | | | | | |
| LR | Pearson | 554 | 033 | .591 | 932* | 1 | | | | |
| | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .333 | .958 | .294 | .021 | | | | | |
| | Ν | 59 | 59 | 59 | 59 | 59 | | | | |
| BE | Pearson | .867 | 249 | 834 | .726 | 545 | 1 | | | |
| | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .057 | .686 | .079 | .165 | .342 | | | | |
| | Ν | 59 | 59 | 59 | 59 | 59 | 59 | | | |
| BDEP | Pearson | .297 | 209 | 204 | 259 | .517 | .431 | 1 | | |
| | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .628 | .735 | .742 | .674 | .372 | .469 | | | |
| | Ν | 59 | 59 | 59 | 59 | 59 | 59 | 59 | | |
| BS | Pearson | .221 | 050 | 271 | .720 | 868 | .150 | 807 | 1 | |
| | Correlation | | | | | | | | | |
| | Sig. (2 – tailed) | .721 | .936 | .660 | .170 | .057 | .810 | .098 | | |
| | Ν | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | |
| BSEN | Pearson | 948* | .008 | .717 | 892* | .717 | 946* | 201 | 352 | 1 |
| | Correlation | | | | | | | | | |
| | Sig.(2 – tailed) | .014 | .989 | .173 | .042 | .173 | .015 | .746 | .561 | |
| | N | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 | 59 |

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



Unit Root Test Results on Independence of Directors

Table 3 below shows the unit root test results on the independence of directors. Independence of directors was found to be stationary at intercept and level I (0) because the Levin, Lin & Chu t* had a probability value of 0.0000 which was significant at 5% level of significance. Therefore, the null hypothesis that independence of directors had a unit root was rejected.

| | | | Cross- | |
|-----------------------------|---------------------------|------------|----------|---------|
| Method | Statistic | Prob.** | sections | Observ. |
| Null: Unit root (as | ssumes common unit roo | t process) | | |
| Levin, Lin & Chu t* | -17.2083 | 0.0000 | 46 | 184 |
| | | | | |
| Null: Unit root (as | sumes individual unit roc | t process) | | |
| Im, Pesaran and Shin W-stat | -3.45202 | 0.0003 | 46 | 184 |
| ADF - Fisher Chi-square | 115.705 | 0.0480 | 46 | 184 |
| PP - Fisher Chi-square | 128.620 | 0.0071 | 46 | 184 |
| | | | | |

Table 3: Unit Root Test Results on Independence of Directors

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Regression Results

Hausman test was conducted to test the hypothesis that there was no influence between the dependent variable of quoted spread and the predictor independent variables: board effectiveness, independence of directors, board structure and seniority of directors while moderating the influence of firm size.

The test results were as per table 4, indicated that the Chi-square test statistic was 4.754061 with an insignificant p - value of 0.4466. This therefore means that the null hypothesis was rejected in favor of the random effects model. Therefore, the random effects model was accepted as suitable for this equation.

| | Chi-Square | Chi-Square | | |
|----------------------|------------|------------|-------------|--|
| Test Summary | Statistic | Difference | Probability | |
| Cross-section random | 4.754061 | 5 | 0.4466 | |

Table 4: Hausman Test Results on Quoted Spread



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| Cross-section random effects test comparisons: | | | | | | | |
|--|-----------|-----------|-------------|-------------|--|--|--|
| | | Variable | | | | | |
| Variable | Fixed | Random | (Different) | Probability | | | |
| Board Effectiveness | 0.044616 | 0.080318 | 0.000994 | 0.2575 | | | |
| Independence of Directors | 0.027233 | 0.091727 | 0.003344 | 0.2647 | | | |
| Board Structure | -0.016101 | 0.000217 | 0.000175 | 0.2175 | | | |
| Seniority of Directors | -0.017434 | -0.093168 | 0.050489 | 0.7361 | | | |
| Firm Size | 0.002421 | 0.024328 | 0.001184 | 0.5243 | | | |

Table 5 shows that board effectiveness had r=0.08 and a significant p - value of 0.0102 which was significant at 5 percent level of significance. This means that when board effectiveness increased by 0.08 percent per year then tightness increased by 1 percent in the same year. Independence of directors had r=0.09 and an insignificant p - value of 0.2002. This meant that independence of directors had no significant influence on tightness during the study period. Independence of directors had a positive but insignificant relationship. Board structure had r=0.000217 and an insignificant p - value of 0.9926. This meant that board structure had no significant influence on tightness during the study period. Board structure had a positive but insignificant relationship. Seniority of directors had r=-0.09 and a significant p - value of 0.0155 which was significant at 5 percent level of significance.

The coefficient of seniority of directors was negatively significant. This suggests that improved corporate governance was inversely linked with trading cost dimension of stock liquidity. This means that when seniority of directors decreased by 0.09 percent per year then tightness increased by 1 percent in the same year. Firm size had r=0.02 and an insignificant p - value of 0.0570. This means that firm size had no significant influence on tightness during the study period. Firm size had a positive but insignificant relationship. The constant had r=0.004 and an insignificant p - value of 0.9439. This means that jointly these proxies of corporate governance did not influence tightness as a measure of stock liquidity during the period of study. Given these findings therefore, accept the null hypothesis that there is no significant influence of independence of directors on stock liquidity of firms listed at the NSE and fail to reject the alternative hypothesis that there is a significant influence of independence of directors on stock liquidity of firms listed at the NSE and hence conclude that independence of directors does not influence stock liquidity of firms listed at the NSE.



| Variable | Coefficient | Standard Error | t-Statistic | Probability |
|---------------------------|-------------|----------------|-------------|-------------|
| Board Effectiveness | 0.080318 | 0.031069 | 2.585102 | 0.0102 |
| Independence of Directors | 0.091727 | 0.071446 | 1.283864 | 0.2002 |
| Board Structure | 0.000217 | 0.023396 | 0.009279 | 0.9926 |
| Seniority of Directors | -0.093168 | 0.038272 | -2.434369 | 0.0155 |
| Firm Size | 0.024328 | 0.012732 | 1.910791 | 0.0570 |
| Constant | 0.003777 | 0.053602 | 0.070460 | 0.9439 |

| Table 5: Random | Effects | Model on | Quoted | Spread |
|-----------------|---------|----------|--------|--------|
|-----------------|---------|----------|--------|--------|

Effects Specification

| | | Standard | |
|---------------------------|-----------------------|-------------------------|----------|
| | | Deviation | Rho |
| Cross-section random | | 0.024491 | 0.1657 |
| Idiosyncratic random | | 0.054957 | 0.8343 |
| | Weighted Statistics | | |
| R-squared | 0.051410 | Mean dependent variable | 0.034219 |
| Adjusted R-squared | 0.034998 | S.D. dependent variable | 0.055920 |
| S.E. of regression | 0.054933 | Sum squared residual | 0.872103 |
| F-statistic | 3.132515 | Durbin-Watson stat | 1.661149 |
| Probability (F-statistic) | 0.009036 | | |
| | Unweighted Statistics | | |
| R-squared | 0.084772 | Mean dependent variable | 0.048308 |
| Sum squared residual | 1.038746 | Durbin-Watson stat | 1.394656 |

CONCLUSIONS

Generally, establishing whether independence of directors influences stock liquidity of firms listed at the Nairobi securities exchange is important for firms and investors. The findings revealed that there was no significant influence of independence of directors on stock liquidity of firms listed at the Nairobi securities exchange. Given such findings, one of the important practical implications of this study is that listed firms, investors and regulars at the NSE need to monitor the role of independent directors more closely in a way to improve the listed firms' ability to trade large size quickly at low cost. The findings are interesting both from the practical and academic point of view by contributing to the existing literature and may help the regulators to consider other factors that influence monitoring role of independent directors to lower the probability of informed trading resulting in firms greater ability to trade large volume quickly at low cost. Based on the findings of this study, in order to improve monitoring of the board this study recommended that the capital market authority as a regulator should have a seat in the



boards of directors' in all firms listed at the NSE. Future researchers to focus their studies on firms operating outside the NSE and investigate the influence of independence of directors on financial performance using differ measures as such ownership structure, nomination, audit and remuneration.

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