IMPACT OF THE ANNOUNCEMENT OF SENIOR MANAGEMENT CHANGES ON COMPANY VALUE IN THE FINANCIAL SECTOR OF THE NAIROBI SECURITIES EXCHANGE

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Submitted in partial fulfilment of the requirements for the Degree of Actuarial Science at Strathmore University

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[December, 2017]

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Abstract

This study examines the effect of a senior management change on the share price of a company. Previous international studies have shown mixed and inconsistent results, hence the interest to test if the same would apply in a Kenyan setting. The analysis was performed on a sample of 13 companies listed in the financial sector of the Nairobi Securities exchange that made a senior management change announcement between the years 2000 and 2016.The study used an event study approach and the market model, to investigate whether abnormal returns, average abnormal returns and cumulative average abnormal returns were significant. Using the standard event study methodology, statistically insignificant positive and negativeabnormal and average abnormal returns were found, while statistically significant positive and negative cumulative average abnormal stock returns were found. From the study findings it became apparent that a senior management change has an impact on actual stock performance in Kenya. A possible recommendation for these listed companies therefore, would be to plan a succession strategy taking these effects into account

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List of Acronyms and Abbreviations

AAR	Average Abnormal Returns
CAAR	Cumulative Average Abnormal Returns
CAPM	Capital Asset Pricing Model
CEO	Chief Executive Officer
EMH	Efficient Market Hypothesis
NSE	Nairobi Securities Exchange
JSE	Johannesburg Stock Exchange

1. Introduction

1.1. Background to the study

This study investigates the impact of a senior management change on the stock price of a company. A top management change is defined as "any change in the set of individuals holding title of chief executive officer (CEO), president or chairman of the board" (Warner, Watts, & Wruck, 1987, p. 1).

There are various reasons why a senior management change would occur in an organisation. A view that is frequently brought forth on the subject of top management succession is that it is a means through which companies cope with their problems (Comte & Mihal, 1990). Research describes a significant link between senior management turnover and operational performance.However there are other external and internal factors that influence the decision of management change. External factors include aspects such as the volatility of the environment in which the firm is based, the extent of resource availability in the business sector as well as the financial risk inherent in the company structure. Internal factors on the other hand focus on idiosyncratic characteristics of the various companies such as board composition, firm size and power of the incumbent (Comte & Mihal, 1990).

Vancil (1987) found that contrary to expectation, a minority of CEOs actually leave their position due the performance of the company. The most common causes of CEO turnover according to Vancil (1987) are retirement, death or disability. Alternatively, one could say that CEO dismissals as a consequence of company underperformance, ownership and restructuring changes, as well as an alteration of company strategy, hold less explanatory power on CEO turnover (Stein & Capape, 2009).

The impact of a senior management change in this study will be measured using the stock price of listed companies. Listed companies are "firms whose shares are quoted on a stock exchange for public trading"(Business Dictionary, 2017). A company would look to list on the exchange for multiple reasons that include: greater access to capital with more fund-raising opportunities, increased number shareholders within the company which could lead to more frequent trading, and finally, improvement in company value since empirical evidence shows that listed companies have a higher net worth than unlisted companies (Seychelles Securities Exchange, 2014).

Stock prices are affected by both internal and technical factors of the industry and business the company operates in. The internal factors differ from firm to firm since they are calculated with reference to the specific performance of the company. They include assessment of fundamental company ratios such as Earnings per Share, Price Earnings Ratio or Dividends (Harper, 2017).

Demand and supply of a company stock is what influences its ultimate price. Technical factors are the various external and macroeconomic factors that cause a shift in this supply and demand (Harper, 2017). They include interest rates, inflation, demographics, trends, economic strength of market and peers, incidental transactions and liquidity.

Another factor that affects the share price of a company is the announcement of an event.Actual experience seems to coincide with the view that the prices of securities are affected by an array of unexpected events and that some of these events have more explanatory power than others (Ross, Roll, & Chen, 1986). In this study the event of interest is the announcement of a change in senior management.

The uncertainty that accompanies an announcement of senior management changeleaves a window of opportunity open for investors to make higher returns based on the market's perception of the efficiency of the change. Upon announcement of the change in senior management, investors will be unsure of the capability of the new senior manager, his or her long term plans for company growth and development, as well as his or her fit within the organisation (Geertsema, Lont, & Helen, 2015). As a result of this ambiguity, the investor's confidence in the ability of the firm to continueto generate shareholder value would change. However, it is possible to identify a general sentiment or perception among the market in regards to the suitability and viability of the change. In an efficient market, this market belief would be reflected in the share price of the company upon announcement.

A study was carried out by FTI Consulting, a global business advisory firm, to assess the risks in CEO transitions. It found that, the market's assessment of a new CEO forms the basis of more than half of investment decisions (Roady & McCoun, 2011). This means that a change in senior management would be seen as a threat towards previous investment decisions for as long as the investor does not have an established opinion of the new senior manager (Roady & McCoun, 2011).In June 2015, following the announcement of Twitter's CEO decision to step down, there was a corresponding 10% increase in the company stock price. Later that year in September, the CEO of Software giant Oracle announced his retirement and the news caused the stock price to fall from $41.55 dollars to $37.56 (Olenick, 2015).

Senior management turnover has been significant in Kenya over the last few years. In 2013 alone, more than 11 CEOs listed on the Nairobi Securities (NSE) resigned from their posts (Mutegi, 2013). According to Constant(2016),this rapid turnover is explained by the falling

country revenues which has been linked to a tougher business climate and poor execution of strategies.

1.2. Problem Statement

The focus of this paper will be to search for an average post-event trend in the case of changes in senior management. It aims to examine the extent to which the announcement of a changecreates value for shareholders as seen by either an increase or decrease in share price.In this study shareholder value is defined as being created when the returns earned by shareholder in a certain period exceed the return earned by the market (Fernandez, 2002). The excess returns above market expectations are known as abnormal returns. This study will examine if there is abnormal return on stock price of the company making the senior management change, at announcement period and the extent to which these returns are predictable.

In research literature attention has been paid to changes in management structure with particular emphasis on senior management alterations and their effects. According to Citrin(2012) no positive correlations exists between the stock price of a company after the announcement of a CEO change and the stock price of a company during the actual incumbency of the CEO. Manne (1965) on the other hand claims a significant and positive interrelationship between how efficient company managers are and company stock price.Warner, Watts, and Wruck (1987) found that the stock market was indifferent towards senior management change announcements as the prices of securities were not affected in any significant way.

Studies carried out in Africa have similarly conflicting results. An event study carried out using share price data from the JSE (Johannesburg Stock Exchange) and 143 CEO turnover events found that CEO Turnover improves firm performance after the occurrence of the event by a statistically significant 13.6% (Wilkes, 2014). Mugucia

(2013) found that amongst manufacturing companies in Kenya, there was an abnormal positive performance after a change in CEO. Li, (2012) on the other hand, in his study of corporateof 100 corporate firms listed on the New York Stock Exchange, concluded that returns earned during the announcement period were not statistically significant and therefore the announcement of a change in CEO did not affect the company stock price.

As seen from the above studies, there is some inconsistency over the results of these investigations. And while there have been numerous international studies conducted on this effect, there is a lack of this study in the Kenyan market. This paper shall attempt to reach a formal conclusion on the question of value creation for investors during announcement of senior management changes, in reference to the listed companies on the Nairobi Securities Exchange.The purpose of this research is to add more general conclusions to how senior management changes influence how companies are valued in the short term in the Kenyan market.

1.3. Research Objectives

1. To determine whether investors experience any short term gain or loss after announcement of a senior management change with respect to abnormal returns earned.
2. To determine whether abnormal returns earned during this event window are statistically significant.

1.4. Research Questions

1. Do investors experience any short term gain or loss after announcement of a senior management change with respect to abnormal returns earned?
2. Are abnormal returns earned during this event window statistically significant?

1.5. Scope of the study

The population of this study comprised of companies listed in financial sector of the Nairobi Securities Exchange[1]. The financial sector includes the banking, insurance and investment segments of the NSE. Out of the total of these 22 companies, thirteen made senior management changes duringthe period 1st January 2001 to 31st December 2016. This time period was considered since it incorporates relevant technological advancements such as digitalization of the NSE processes (Chege, 2015).

1.6. Significance of the study

This study will benefit students, investors and shareholders. Students would benefit from this as a source of reference with which to carry out further research in the areas of finance and management.

This paper is also intended to aid investors and shareholders alike in the determination of the extent to which senior management changes increase the value of various firms in terms of share price. By analysing pre and post effects of senior management change announcements it is possible for investors to recognize exploitable patterns in the movement of share prices and therefore manage their expectations accordingly.Given this information, the investor can then better decide whether to buy, sell, or hold his assets in a company during this period.It will therefore act as a guideline to investors and shareholders to consider before investing.

[1]See Appendix One

2. LITERATURE REVIEW

2.1.Introduction

Hiring and firing of top managers by the board of directors is one of the most important -and possibly beneficial- internal mechanisms of corporate control (Bonnier & Bruner, 1998). However, despite the significance of this event, empirical research has reached no formal consensus on the benefits of such internal control.

This chapter discusses the underlying theories surrounding this subject as well as other studies carried out by other researches on the same. It is aimed at comprehensively summarizing the relevant literature that will enable an understanding and conclusion on the study to be made. Specifically this section focuses on the different views towards management and their influence on performance, the way in which the impact of this event is measured, as well as discussing literature presented from previous studies.

2.2. Theoretical Framework Review

2.2.1 Review under senior management influence on performance

Strategic leadership theory postulates senior managers who have wide-ranging governance over their company can greatly affect the organizational performance of their firms (Finkelstein, Hambric, & Cannella, 2009). This perspective holds that the long term strategic choices made by management are influenced by the senior manager's subjective attitudes, viewpoints and judgement. The company would therefore reflect the perceptions of their senior management. According to Doorn (2011), because of the difference in managerial skills, abilities, beliefs and approach to leadership, the actions performed by each of these various managers would differ.This would result in very different company performancesdepending on the leader's characteristics. Wasserman, Nohria and Anand (2001 p. 7)

added that managers are "the force within the firm that creates, perceives and pursues opportunities, and therefore the force that drives differences in organizational performance."

Alternatively, there are researchers who argue that external and environmental constraints on executivesare too limiting, and as such, top executives do not have great ability to alter company performance (Doorn, 2011). The Population Ecology perspective argues that CEOs cannot affect company performance in a significant way (Lessonet, 2001).According to Hannan and John(1977) there are intertial pressures, both internal and external, that constrain the impact management of management decisions. This school of thought holds that the number of factors influencing the CEO, are too numerous and constricting for the CEO to have any substantial impact on the performance of the company (Wasserman, Nohria, & Anand, 2001). The internal considerations include factors such as level of information top manager's would recieve, history of the organisation and internal political constraints. External considerations on the other hand, include factors such as legal and fiscal barriers to entry and exit and the cost of acquiring comprehensive information about the environment and market.

Finally the Scapegoating perspective believes in the uniformity of managerial ability and effort so the manager is seen to be more of a "scapegoat" since firm characteristics are not altered after a change in the CEO (Lessonet, 2001).

2.2.2 Review under assessing company value

Generally, there are five internal events affecting stock prices: mergers and acquisitions, financial reports, dividend policy changes announcements, the development or approval of a new innovative produce, and the hiring and firing of company executives (Li, 2012). The contribution of senior managers to the value of the firm is not a

quantity which is precisely observable; however it is possible to infer the value of this contribution by analysing the stock prices of the relevant companies (Warner, Watts, & Wruck, 1987).Event studies aim to assess and measure the impact of a particular event on firm value using data from financial markets (Mackinlay, 1997).

The event study methodology is based on the theory of Efficient Market Hypothesis (EMH) developed by Fama (1970). This is its first assumption. The Efficient Market Hypothesis postulates that all relevant and available information relating to the price of shares is already incorporated into stock prices. If this assumption is true, the all relevant information will be quickly reflected in the price of shares (Siegel &McWilliams, 1997). The information reflected in the share price is not singularly constrained to financial or research information; it can include the political situation of a country, major economic events, investor perception on various market conditions can be incorporated into the price of shares (Mugucia, 2013).

Event studies are typically used to assess the extent to which a firm would earn abnormal returns following specific events.Conceptually, they differentiate between the returns that would have been expected if the analysed event would not have taken place (normal/expected returns) and the returns that were caused by the respective event (abnormal returns) (Mackinlay, 1997). The significance of the event can then be determined depending on the extent of abnormal returns earned.

In the calculation of expected returns, a variety of return models could be used. Sitthipongpanich (2010) specifies the use of the following possible models:

a) The mean-adjusted return model given by the average return earned over the estimation period

$$E(R_{i,t}) = \bar{R}_i$$

b) The market adjusted return model which equates expected return directly to market return

$$E(R_{i,t}) = R_{m,t}$$

c) The market-model-adjusted return and,

$$E(R_{i,t}) = \alpha_i + \beta R_{m,t}$$

d) The CAPM-adjusted return model

$$E(R_{i,t}) = R_{f,t} + \beta(R_{m,t} - R_{f,t})$$

Cable and Holland (1999) checked the viability of these four models and came to the conclusions that out of the thirty cases studies: (i) the relationship between firm and market return was not statistically significant in majority of the cases; (ii) the mean adjusted model and market adjusted model did not provide good approximations in nine of the cases but the market model demonstrated viability in all other twenty one cases (iii) the CAPM was rejected in nine of the twenty-one cases and, in the remaining twelve, was clearly preferred to the market model in only three.

It is clear from this study that the best model would be the Market Model which is given by:

$$E(R_{i,t}) = \alpha_i + \beta R_{m,t}$$

Where α_i and β are the parameters of the market model estimated using Ordinary Least Square Regression and $R_{m,t}$ is the return earned by the market index.

The secondsupposition of the event study methodology includes the assumption that the event under study is unanticipated and only generally known when it is revealed to the public. It is then possible to assume that any abnormal returns earned are attributable to the stock market's reaction to the new information (Siegel & McWilliams, 1997). The third assumption is that there are no confounding effects

during the event period.If any of these assumptions do not hold then empiricalresults obtained using this method may be inaccurate.

In instances when stock prices are considered to be influenced by major confounding effects, it is possible to use different financial information sources such as earnings reports to assess the impact of the event of firm performance (Warner, Watts, & Wruck, 1987). However these accounting-based profit computations may be unreliable measures of firm performance since they are susceptible to manipulation.Benston (1982) outlined various ways in which corporate managers act in their own interests rather than in the interest of shareholders, for example, by using employing accounting procedures that exaggerate profits earned by the company in order to enhance the attractiveness of the firm.This susceptibility to manipulation of accounting procedures makes event studies a more popular method because event studies rely on stock prices which are not as easy to manipulate (Siegel & McWilliams, 1997).

However there are limitations associated with event studies that are difficult to overcome. First of all the assumption of market efficiency that underlies the methodology of an event study may not always be true in all circumstances and markets. As a result of this, markets may not always fully, accurately and immediately reflect all new information in to the price of shares (Sitthipongpanich, 2010). Further, information leakages in the market are possible before the official announcement of the senior management change (Siegel & McWilliams, 1997). This would detract from the accuracy of the event study since it based on measuring abnormal returns earned when the public gains knowledge of an event. In this case, the timeframe of the leakage would be problematic to specify. Thirdly, it is difficult to control for confounding factors throughout the period of investigation during the event study.

2.2. Empirical Review

This section reviews previous studies that have been carried out in this field of research and the various conclusions reached. It shall be discussed from the perspectives brought forward in the theoretical framework.

2.2.1 Strategic Perspective

There have been a number of studies that agree with the view that the CEO has an impact on stock price. As previously stated, the event study has become the standard procedure for measuring the impact of an event on company stock price. For this reason, all studies reviewed below carry out event studies in their assessments. The market model is also used to calculate expected return.

Wilkes (2014) carried out his study on 143 CEO Turnover events in the Johannesburg Stock Exvhange with a pre-event of 250 days and a post event window of 500 days. Overall a change in the CEO was seen to cause an improvement of 13.6% in company performance after the occurrence of the event. Other variables such as CEO succession as a result of firm underperformance were discussed. It was observed that if the CEO was replaced in a firm where prior to the event there was an underperformance, then the performance of the company improved by 96%.

Ishak, Ismail and Abdullah(2013)investigated 145 CEO succession events on company's publicly listed on the Malaysian stock exchange In this study, both a t-test and a Wilcoxon signed rank test were used to test for statistical significance where significant positive performance was found post event in both cases.Other variables considered were internal versus external CEO successsion. Ishak, Ismail and Abdullah (2013) found that external successions lead to more positive company performance than internal successions.

Egholm and Nordström (2011) performed their study on 133 CEO turnover announcements that occurred over the previous 5 years by companies listed on the OMX Nordic exchanged. In this study voluntary CEO turnover yielded abnormal returns that were positive and significant while forced turnover from underperforming companies yielded statistically significant negative stock return. Similarly to Ishak, Ismail and Abdullah (2013), Egholm and Nordström (2011) found that internal successions lead to lower company performance.

In the Kenyan market, a study was carried out by Mugucia (2013) on all the manufacturing companies in the Nairobi Securities Exchange. Abnormal negative performance and abnormal positive performance were found before and after the announcement of the change respectively.

2.2.2. Population Ecology perspective

There have also been some studies that support the Population Ecology perspective which states that key executives are too constrained to affect company performance in significant ways. Doorn (2011) investigated 179 senior management succession announcement from the period of 1999-2010. The study concluded that positive abnormal returns were earned after the announcement of the event, but these returns were not significantly different from zero

Li (2012) investigated 100 corporate frims on the NASDAQ and New York Stock Exchange. None of the abnormal returns earned (average abnormal returns and cumulative abnormal returns) were significantly different from zero. Furthermore, investors were unable to obtain excess returns over the event window meaning that the market being investigated was efficient.

Johnson, Magee, Nagarajan, and Newman (1985) analyzed the impact of sudden executive deaths on the stock price of companies. This was

investigated over a time period of 1971 to 1982 with a sample of 53 sudden deaths of senior corporate executives. Empirical results also showed excess returns that were not significantly different from zero.

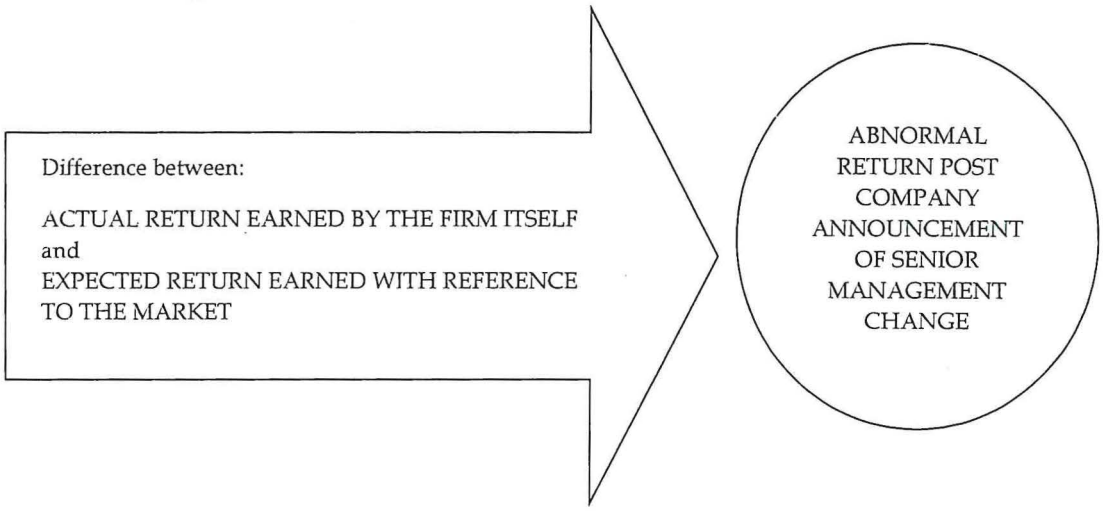
From the above literature it is evident that no conclusive results have been found on theimpact of senior management change on company value. This is especially true for the Kenyan market.

2.3. Conceptual Framework

This study is investigating whether or not senior management changes provide value to the investors measured by abnormal returns earned. Abnormal returns are calculated as the excess of expected return over actual return. To calculate expected return, the market model is used. In this model, return on the market is used as a yardstick for estimating normal returns that would (otherwise) be expected to be earned during that period i.e. returns that are consistent with the returns earned on the market. In this study, the return on the market is approximated by the NSE 20 SHARE INDEX. The actual return is measured using the company's stock price itself, without any application of formula.

The purpose of this paper is to investigate the impact of the announcement of senior management changes on company value. This impact will be measured by the extent of abnormal returns earned over the period of announcement. If it is possible to earn abnormal returns during this period, then the stock price, and hence company value, has been affected by the announcement. If it is not possible to earn abnormal returns during this period then the stock price, and hence company value, is not impacted by the announcement of a change.

Figure 1: Figure showing relationship between variables in the study



Assuming that other things are constant during the performance of the study, it will be possible to relate these two factors and confirm whether a senior management change truly creates value for an investor. A hypothesis test will be carried out to determine whether the conclusions reached in this study are statistically significant. The null hypothesis will state that abnormal returns earned during this period are zero while the alternative hypothesis will state that abnormal returns earned during this period are not equal to zero.

3. Methodology

3.1. Introduction

In this section, the methods used to answer the research questions put forth in chapter one of this study are explained. It will include the research design, population of the study, sample size and method, and finally, data collection method and procedures.

3.2 Research Design

This Research is quantitative in nature since it requires manipulation of financial data collected from the NSE, in order to compute expected returns.

The research design of this paper is causal in nature since its aim is to quantify the impact of a particular change on existing norms and assumptions. The investigation seeks to determine whether a change in senior management helps in the prediction of the company's stock price.

3.2. Population of the study

The population of this study comprised of companies listed in financial sector of the Nairobi Securities Exchange[2]. Foster (1980) found that one of the methods to reduce the impact of confounding effects on the results of an event study is to divide a sample into groups of firms that experience similar confounding effects. The focus of this paper is therefore solely on financial firms listed in the NSE as a means to control for confounding effects.

The financial sector includes the banking, insurance and investment segments of the NSE. Out of the total of these 22 companies, thirteen made senior management changes during the period 1st January 2001 to 31st December 2016. This time period was considered since it

[2]See Appendix One

incorporates relevant technological advancements such as digitalization of the NSE processes (Chege, 2015).

3.3. Sampling size and method

For the sample size, all 13 financial institutions that have made a senior management change over the last 16 years were considered. The method of sampling that was used is purposive. The population of all the companies in the Kenyan financial sector that trade on the NSE 20 SHARE INDEX was divided according to those companies that experience the specific event of interest in this study.

3.4. Data Collection

The research was based on secondary data which was obtained from the Nairobi Securities Exchange and public announcements of the event from newspapers. The data needed was name of company, announcement date and share prices. The return earned on the market (NSE 20 SHARE INDEX in this case) was also needed.

3.5. Data Analysis

Abnormal returns, as previously specified are defined in terms of excess returns. To calculate excess returns, a returns generating model is needed. The returns generating model used to calculate the normal returns i.e. the returns that would be expected to be earned if the event had not taken place, was the market model. The relationship between the return on an underlying security and the return on the market is defined through a linear relationship which is given as:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + e_{it}$$

Where,

$R_{it} is the daily returns to shareholders of company i$

$R_{mt} is the return on the market$

$\alpha_i is the intercept term$

$\beta_i measures the sensitivity of firm i's return to the market return$

$e_{it} is the error term where \sum e_{it} = 0$

Abnormal returns are then calculates as follows:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

There are three segments included in an event study: the estimation period, the event window and the event date. For this study, the announcement date of the senior management change is the event date and it is regarded as time t=0. The event window was then taken as 30 days pre and post the event date [-30, 30] as specified in (Brown & Warner, 1984). The event window was also the time period over which abnormal returns are computed. The estimation period in this case was taken to be 120 days before the event window. It is the period over which parameters specified in the returns generating model. The parameters of the model i.e. α and β were estimated during this period using Ordinary Least Square regression analysis.

Parametric tests were also carried out to carry out to investigate whether the returns earned over this period are significant. Abnormal Returns, Average Abnormal Returns and Cumulative Average Abnormal Returns were used to carry out these tests as specified in (Mackinlay, 1997).

Assuming that the market is efficient, it should not be possible to earn **abnormal returns**. This is the basis of the null hypothesis and it states that:

H_0: the senior management change announcement has no impact on company stock price or $\boldsymbol{H_0}: \boldsymbol{AR_{it}} = \mathbf{0}$

H_1: the senior management change announcement has an impact on company stock price or $\boldsymbol{H_1}: \boldsymbol{AR_{it}} \neq \mathbf{0}$

Where,$\boldsymbol{AR_{it}}$is the Abnormal Return earned by security i on day t.

The test statistic was estimated as follows:

$$t_{AR} = \frac{AR_{it} - 0}{S(AR_{it})}$$

Where,$\boldsymbol{S(AR_{it})}$ is the standard deviation of abnormal returns

If the value of the test statistic was greater in absolute value than a critical value of 1.96 then the null hypothesis was rejected at the 5% level. The rejection of the null hypothesis would mean that the senior management change had no statistically significant impact on the company's stock price.

Average abnormal returns are calculated as follows:

$$AAR_{it} = \frac{1}{N}\sum_{i}^{N} AR_{it}$$

Again, assuming market efficiency holds, then Average Abnormal returns would also be equal to zero as on average, the investors should not be able to consistently make higher returns than the market.

The null hypothesis is $\boldsymbol{H_0}: \boldsymbol{AAR_{it}} = \mathbf{0}$ compared against the alternative hypothesis $\boldsymbol{H_1}: \boldsymbol{AR_{it}} \neq \mathbf{0}$

The test statistic was estimated using the same approach as above:

$$t_{AAR} = \sqrt{N}\frac{AAR_{it}}{S(AAR_{it})}$$

Where $S(AAR_{it})$is the standard deviation of average abnormal returns and was estimated as follows:

$$S(AAR)_s = \sqrt{\sum_{t=1}^{T_0} \frac{(AR_t - AAR_t)^2}{N-1}}$$

Where N are the number of days in the estimation window

If the value of the test statistic was greater in absolute value than a critical value of 1.96 then the null hypothesis was rejected at the 5% level. The rejection of the null hypothesis would mean that the senior management change had no statistically significant impact on the company's stock price.

Cumulative Average Abnormal returns are calculated as follows:

$$CAR_{it} = \sum_{i}^{N} AR_{it}$$

$$CAAR_{it} = \frac{1}{N} \sum_{i}^{N} CAR_{it}$$

It is possible to earn Cumulative Abnormal Returns on a long-term horizon if abnormal returns earned are not equal to zero. But since we are hypothesizing that the market is efficient, then according to the null hypothesis, cumulative average abnormal returns should also be equal to zero.

The test statistic is given as:

$$t_{CAAR} = \sqrt{N} \frac{CAAR_{it}}{S(CAAR_{it})}$$

Where

$$S(CAAR)_s = \sqrt{\sum_{t=1}^{T_0} \frac{(CAR_t - CAAR_t)^2}{N-1}}$$

If the value of the test statistic was greater in absolute value than a critical value of 1.96 then the null hypothesis was rejected at the 5% level. The rejection of the null hypothesis would mean that the senior management change had no statistically significant impact on the company's stock price.

The first objective of this paper is to determine whether short term gains or losses are earned over the event window. This objective is realized in the calculation of the abnormal returns, average abnormal returns and the cumulative average abnormal returns. If there is any abnormal return earned then it is possible for the shareholders to make short term gains or losses.

It is also possible that although shareholders are able to make short term gains or losses, the abnormal returns earned would not be significantly different from zero. This is the second objective of the study and it is realized by the performance of the parametric t-test on all returns specified.

4. Data Analysis and Findings

4.1. Introduction

In this chapter, the data collected is analysed and summarised. The average abnormal returns and average cumulative abnormal returns earned over the event window are used to interpret the data. The event window is considered to be 30 days before and after the announcement of a senior management change. The dates of announcement and various companies that made senior management changes are tabulated in Appendix Two[3].

4.2. Event Study Methodology Results

In this paper, Event Study Methodology will be used. An event study is "an econometrical method to evaluate the effect of an event on the value of a firm" (Egholm & Nordström, 2011, p. 11). The effect on firm value is measured in terms abnormal returns earned on the underlying security. This is done through the comparison of the stock price of the underlying security (which represents actual return earned) and the expected price of the security, calculated using a return generating model (Cable & Holland, 1999). In literature, the event study methodology has now become widely accepted as the standard measure of the reaction of a company's stock price to events or announcements (Binder, 1998).

As mentioned in the previous chapter, parameter estimation of α and β is done over the estimation period of 120 days. A regression of firm specific return against market return was carried out in order to estimate these parameters. A period of 120 days was used since it assumed to be a period over which the returns of the firm would not be affected by any information leakages and the following table illustrates the market model equation.

[3]See Appendix Two

Table 1: Table showing the parameters in the market model across the various firms

Firm	Market Model Equation
Barclays Bank Ltd	$R_{it} = 0.000589 + 0.303284R_{mt}$
CFC Stanbic Holdings Ltd	$R_{it} = -0.00000039 + 0.457160R_{mt}$
I&M Holdings Ltd	$R_{it} = 0.000436 - 0.243144R_{mt}$
Kenya Commercial Bank Ltd	$R_{it} = 0.001981 + 0.913347R_{mt}$
Standard Chartered Bank Ltd	$R_{it} = -0.000619 + 0.145618R_{mt}$
National Bank of Kenya Ltd	$R_{it} = 0.000242 + 0.562872R_{mt}$
Cooperative Bank Ltd	$R_{it} = 0.001167 + 0.660436R_{mt}$
Jubilee Holdings Ltd	$R_{it} = -0.000115 + 0.629291R_{mt}$
Pan African Holdings Ltd	$R_{it} = -0.000923 + 1.190664R_{mt}$
Kenya Reinsurance Corporation Ltd	$R_{it} = 0.000181 + 1.013219R_{mt}$
CIC Insurance Group Ltd	$R_{it} = -0.0000401 + 0.750811R_{mt}$
Olympia Capital Holdings Ltd	$R_{it} = 0.000541 + 0.313839R_{mt}$
Trans-Century Ltd	$R_{it} = 0.001149 + 0.080850R_{mt}$

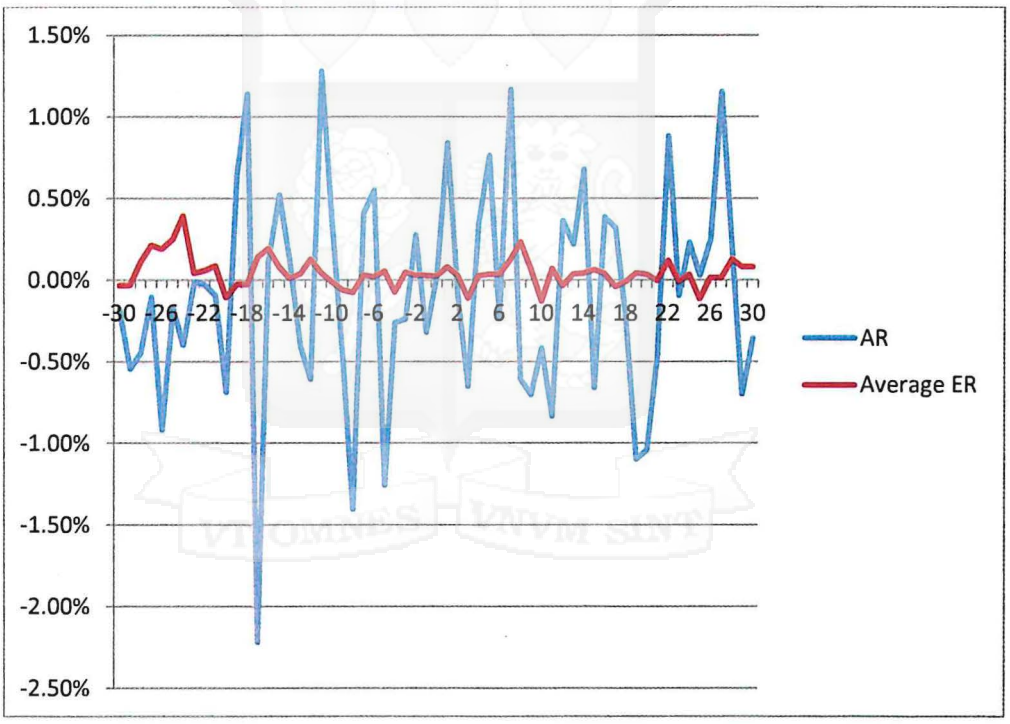
The alphas of the various companies represent the return attributable to the firm itself. This is the return earned by the firm that is not explained by the market. The betas of the various companies represent the firm's sensitivity to the return earned by the market. For instance, the alpha of CIC Insurance is -0.0000401. This means that the returns earned by Pan African Holdings that are not explained by the market are essentially zero. The beta of CIC Insurance is 0.750811. This means that the returns earned by Pan African Holdings are highly correlated with market returns. This makes sense since demand for insurance generally tends to increase or decrease in line with aggregate economic expansion or contraction.

These equations were then used to calculate expected returns during the event window of 30 days before and after the event date.

Abnormal Returns

Abnormal returns are calculated as the excess of actual return earned by the firm over expected return calculated. Chart 1 below shows a graphical representation of the average expected return and the average abnormal return across all firms over the 60 day event window.

Chart 1: Chart showing relationship between abnormal return and expected return over each day in the event window



From the chart it can be discerned that abnormal returns are realized across all firms during the days around the announcement of a senior management change. These returns are both negative and positive with no clear discernible pattern indicating an increase in stock price volatility during the event window. However on Day 1, immediately following the announcement, a large positive abnormal return is earned across firms.

Average Abnormal Returns

Average abnormal returns are the sum of all abnormal returns earned over the event period divided by the number of days over which that return is earned.

Upon further analysis, it is seen that although averageabnormal returns have been earned across all firms, very few of them (as shown in the Table below) are significant.Table 2 below shows the average abnormal return earned across all firms as well as the tests of significance that were carried out.

Statistical significance was determined using the statistical tests specified in the Methodology. If the test statistic was found to be greater than the critical value of 1.96 then the results are significant at the 5% level. If the results were found to be significant, the null hypothesis was rejected. The rejection of the null hypothesis implies that the senior management change had no statistically significant impact on the company's stock price.

Table 2: AARs and their significance across firms

Firm	AAR	Test statistic	Significant?
Barclays Bank	0.07%	0.52	No
CFC Stanbic	-0.14%	-0.52	No
I&M Holdings	0.02%	0.07	No
KCB Ltd	-0.17%	-0.98	No
Standard Chartered	-0.05%	-0.33	No
NBK Ltd	-0.43%	-0.89	No
Cooperative	-0.14%	-1.07	No
Jubilee	0.01%	0.02	No
Pan African	0.20%	0.60	No
Kenya Reinsurance	-0.38%	-2.03	Yes
CIC Insurance	-0.05%	-0.17	No
Olympia Capital	-0.08%	-0.17	No
Trans Century	-0.09%	-0.21	No

From this table it is clear to see that average abnormal returns earned across all firms, while present, were not significant. Out of all 13 companies analysed, only Kenya Reinsurance made significant abnormal average negative returns.

Cumulative Average Abnormal Returns

This study also analyses Cumulative Average Abnormal Returns to determine whether the announcement of a senior management change can create wealth for an investor.

Cumulative abnormal returns are the consecutive sum of the firm's abnormal returns. Cumulative average abnormal returns are found using the formula specified in the methodology. They are simply the sum of all cumulative abnormal returns earned divided by the period of time over which those returns were earned. In our case, this period is our event window of 61 days.Table 3 shows the cumulative average abnormal returns earned across all firms as well as the tests of significance carried out on those returns.

Statistical significance was determined using the statistical tests specified in the Methodology. If the test statistic was found to be greater than the critical value of 1.96 then the results are significant at the 5% level. If the results were found to be significant, the null hypothesis was rejected. The rejection of the null hypothesis implies that the senior management change had no statistically significant impact on the company's stock price.

Table 3: CAARs and their significance

Firm	CAR	Test statistic	Significant?
Barclays Bank	4.50%	10.51	Yes
CFC Stanbic	-2.53%	-3.87	Yes
I&M Holdings	3.34%	9.61	Yes
KCB Ltd	-10.53%	-22.98	Yes
Standard Chartered	-2.46%	-6.93	Yes
NBK Ltd	-29.86%	-14.27	Yes
Cooperative	-1.88%	-5.09	Yes
Jubilee	1.66%	4.16	Yes
Pan African	5.28%	4.68	Yes
Kenya Reinsurance	-8.90%	-11.56	Yes
CIC Insurance	0.05%	0.06	No
Olympia Capital	-6.51%	-11.46	Yes
Trans Century	-7.38%	-12.86	Yes

From this table it is clear that significant cumulative abnormal returns were earned upon announcement of senior management change. However it can also be seen that most of these returns earned are negative; where only Barclays Bank, I&M Holdings, Jubilee Holdings, Pan African Holding and CIC Insurance earned positive abnormal returns. Therefore only 5 out of 13 companies generate positive cumulative abnormal returns. In addition to this, the positive cumulative abnormal returns earned are much lower in magnitude than the negative cumulative abnormal returns earned. This can be seen by looking at the magnitude of abnormal returns for the various companies. For instance, NBK Ltd earns the largest negative cumulative average abnormal return of -29.86% whereas Pan African Insurance earns the largest positive cumulative average abnormal return of only 5.28%. The smallest negative CAAR is earned by Cooperative Bank at -1.88% whereas the smallest positive CAAR is earned by CIC Insurance at 0.05%.

From these observations, two things become clear. The first is that when CAARs are earned in the companies in the financial sector of

the NSE, it is more likely that the abnormal return would be negative rather than positive. Earning positive cumulative abnormal returns essentially means that the investor is consistently performing better than the expected market return. In essence, positive CAARs are gains to an investor. Since a majority of the CAARs earned are negative, this means that losses made on senior management changes are less likely than gains.

5. Discussions, Conclusions and Recommendations

5.1. Discussions

The purpose of this paper was to examine the extent to which the announcement of a senior management change creates value for shareholders with respect to average and cumulative average abnormal returns earned during the days surrounding the announcement.

The effect of senior management changes was examined from two angles: to establish whether there were abnormal returns, average abnormal returns and cumulative average abnormal earned during the event window and; to establish whether these abnormal returns earned were significant or not.

In regards to the first objective, abnormal returns, and hence average abnormal returns and cumulative average abnormal returns were found to be earned during the event window (as shown in Graph 1).

However, with respect to the second objective of this study, only cumulative average abnormal returns were found to be significant. The results from the event study methodology using a 30 day window indicated that the stock prices do not show statistically significant average abnormal returns upon announcement of a senior management change (as shown in Table 2). Conversely, statistically significant positive and negative cumulative average abnormal returns are earned in a majority of the firms in the financial sector following an announcement (as shown in Table 3).

Drawing back on earlier discussions in this study, three perspectives dominate the view of stock price volatility following senior management changes. These perspectives are the Strategic Leadership Perspective, the Population Ecology perspective and the Scapegoating Perspective. The first perspective highlights the CEO's capability to affect the company's stock price, the second perspective maintains that the share price of a company is beyond the influence of a senior manager while the last perspective believes in the uniformity of managerial ability and effort so the manager is seen to be

more of a "scapegoat" instead of a person with actual power to influence company stock price.

The findings of this study are consistent with the strategic leadership perspective where the CEO is deemed capable of influencing organizational performance of their firm. This is because, an effect evidenced in significant CAARs earned, is observed following a change in senior management change.

This is consistent with other studies carried out in this field. In the Kenyan market, Mugucia (2013) carried out an event study on all the manufacturing companies in the Nairobi Securities Exchange. Both abnormal positive and negative performance was observed by these firms during the event window of a senior management change.

5.1 Conclusion

This paper examined the impact of senior management change on the stock price of a firm in the financial sector of the Nairobi Securities Exchange. The study analysed data from a sample of 22 financial firms, of which thirteen made a senior management change in the calendar years 2000 to 2016.

From the study findings using the standard event study methodology it can be concluded that the announcement of a senior management change has an impact on the share price of companies in the financial sector of the Nairobi Securities Exchange.

5.2 Recommendations

Announcing a new CEO for a firm introduces volatility in the market. People would be uncertain of the new CEO's ability, strategy and potential to boast company performance. Upon announcement of a senior management change, there will therefore be a time period over which the market would evaluate the new CEO's characteristics. This paper establishes that stock price volatility is high during the days surrounding the announcement with abnormal returns both increasing and decreasing throughout the window.

As a result of this volatility, it is possible to earn cumulative abnormal returns during the event window. However most of the CAARs earned during this period by the companies in this study are negative.

CAARs are calculated with reference to abnormal returns earned. If abnormal returns are negative then CAARs will be negative. Abnormal returns are negative when actual return earned by a firm (measured by its share price) is less than the return it is expected to earn given the return on the market. The negative CAARs earned by the companies in this study therefore indicate that the actual share price on a financial firm listed on the NSE will tend to fall during this period. This implies that the market has a negative perception of senior management changes for companies in the financial sector of the Nairobi Securities Exchange.

A possible recommendation for these listed companies therefore, would be to plan a succession strategy taking these effects into account. A succession strategy would be beneficial for the firm as it would eliminate some of the uncertainty surrounding a senior management change. It would provide a sense a sense of direction, stabilityand expectations for all key stakeholders. This could help reduce the volatility of the stock price during this period, and hence reduce the possibility of share price falling during this period.

5.3. Limitations

The findings of an event study are limited in validity by the possibility of confounding effects influencing the share price of the company. There could have been other economic reasons for the stock price volatility during the time period when new senior manager is announced. These effects are impossible to isolate and therefore form a limitation of the study.

Another possible limitation of this study is the size of the sample. Due to constraints of time and data, only companies listed in the financial sector of the Nairobi Securities Exchange (NSE) are included in this study. This makes it difficult to generalize the results for all companies listed on the NSE.

Since the event study methodology is used in this paper, share price is the main measure used to determine company performance. However, stock prices form a limited assessment of the financial performance of a firm and cannot be used as a generalization to other measures of financial performance.

In this study, the personal characteristics of the CEO are not considered. The primary focus of the research was the financial impact associated with the senior management change. It does not consider the individual characteristics of a CEO that could be responsible for the positive or negative variation of the financial performance of the firm.

5.4. Areas for further study

This study focuses on financial firms on the NSE. A possible further area for study could focus on all listed companies in the exchange. Further research could also extend to countries of similar geographic, economic and income levels and try to compare or offer explanation for the different results.

Another possible area for further research could include multiple executives aside from the CEO or chairman in order to "identify the real value or contribution of an executive to a company" (Doorn, 2011).

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Appendix One: List of all companies in the Financial Sector of the Nairobi Securities Exchange

BANKING INDUSTRY

Barclays Bank Ltd

CFC Stanbic Holdings Ltd

I&M Holdings Ltd

Diamond Trust Bank Kenya Ltd

HF Group Ltd

KCB Group Ltd

National Bank of Kenya Ltd

NIC Bank Ltd

Standard Chartered Bank Ltd

Equity Group Holdings

The Co-operative Bank of Kenya Ltd

INSURANCE INDUSTRY

Jubilee Holdings Ltd

Pan Africa Insurance Holdings Ltd

Kenya Re-Insurance Corporation Ltd

Liberty Kenya Holdings Ltd

Britam Holdings Ltd

CIC Insurance Group Ltd

INVESTMENT INDUSTRY

Olympia Capital Holdings Ltd

Centum Investment Co Ltd

Trans-Century Ltd

Home Afrika Ltd

Kurwitu Ventures

Appendix Two: List of companies that made a senior management change and event dates

Company name	Event Date
Barclays Bank Ltd	27/11/2012
CFC Stanbic Holdings Ltd	30/04/2015
I&M Holdings Ltd	16/05/2016
Kenya Commercial Bank Ltd	23/06/2013
Standard Chartered Bank Ltd	11/12/2013
National Bank of Kenya Ltd	25/04/2016
Cooperative Bank Ltd	17/06/2015
Jubilee Holdings Ltd	22/01/2016
Pan African Holdings Ltd	25/02/2015
Kenya Reinsurance Corporation Ltd	13/04/2010
CIC Insurance Group Ltd	16/02/2015
Olympia Capital Holdings Ltd	19/09/2012
Trans-Century Ltd	01/11/2016