ANNOUNCEMENTS ON THE STOCK RETURNS OF FIRMS LISTED AT THE NAIROBI STOCK EXCHANGE

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A RESEARCH PROJECT PROPOSAL SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS

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## Declaration

This research project is my original work and has never been submitted for examination in any other university.


This proposal has been submitted for examination with my approval as the University supervisor.


## Acknowledgement

It is not possible to successfully complete such research project work of this magnitude without the corporate effort of many gifted people who were willing to network and submit their talent, experience, passion and finance for a common goal. This work is a product of countless individuals whose thoughts, ideas, perspectives, and work have given me the knowledge I had placed in this research project.

My sincere appreciation goes to my supervisor Mr. J.M. Karanja who created conducive environment and direction within which necessary information was availed to me in order to come conclusively with a research project of this magnitude; I reiterate that I am indeed grateful for all his inputs, co-operation and tireless assistance.

My gratitude and appreciation would fall short if I did not mention the guidance given to me by my class lecturers, whose tireless effort and commitment made this research project reach its finalization.

Lastly, I would like to thank all those not mentioned by name that contributed and participated in one way or the other to make this work a readable.

This piece of research work is dedicated to my late father who taught me the value of education.

My gratitude goes to my family, especially to my wife Margaret and children;-Adrian and Warren. They were my great source of inspiration; and this work belongs to them.


#### Abstract

The aim of this research was to study the effect of Chief Executive Officer change announcements on the stock returns at the Nairobi Stock.

Event study methodology was used in the research. Average Abnormal Returns were computed around the CEO change announcement to find their statistical difference from zero. Market model was used to drive expected return and $t$-statistic to test the hypothesis.

There were 17 events between 2005 and 2009. Only 15 of these resulted in the CEO change announcement in this study.

The research observed a statistically significant negative impact on the stock returns at the date of announcement of CEO change; but this was wiped out by a statistically significant positive return when looking at the prior to the CEO announcement. Stock returns showed a significant adjustment to CEO change at the time of announcement. From the findings, CEO change is treated by investors as bad news. The result of this study found that NSE is in semi-strong form of efficiency.

This study contributes to the debate of market efficiency, particularly, in the Kenyan context and provides ground for further research relating to CEO changes.


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## CHAPTER ONE

### 1.0 INTRODUCTION

### 1.1. Market Efficiency

The concept of efficiency is central to finance. Primarily, the term efficiency is used to describe a market in which relevant information is impounded into the price of financial assets. Sometimes, however, economists use this word to refer to operational efficiency, emphasizing the way resources are employed to facilitate the operation of the market (Dimson at el, 2000).

In economic theory, an efficient market is one in which market prices adjust rapidly to reflect new information. The degree to which the market is efficient depends on the quality of information reflected in market prices. In an efficient market, profitable arbitrage opportunities do not exist and traders cannot expect to consistently-outperform the market unless they have lower-cost access to information that is reflected in market prices or unless they have access to information before it is reflected in market prices. Efficient market provides mechanism to correctly allocating and transforming resource. It also aid in correctly and timely incorporating new information into asset prices ( Njogu, 2003).

Fama first defined the term efficient market in financial literature in 1965 as a market with a large number of profit-maximizers with each trying to predict future market values and information is almost freely available.

New information is price sensitive and they are likely to affect the price of a security. These new information are events in the capital markets. Many researches have been devoted to testing the semi strong efficiency; others have tested share sensitivity to other
events (Njogu, 2003). A number of announcements of stock price sensitive events by quoted firms bave been studies various researchers in finance. Among of these announcement studies included announcement of accounting changes, dividend announcement.

Market efficiency assumes that all information, public as well as private, is reflected in market prices would imply that even investors with precise inside information will be unable to beat the market. Market efficiency is a description of how prices in competitive markets respond to new information (Njogu, 2003).

According to the Efficient Market Hypothesis (EMH), an operationally efficient stock market is expected to be externally and informationally efficient; thus "security prices at any point in time are an unbiased reflection of all the available information" on the security's expected future cash flows and the risk involved in owning such a security (Reilly and Brown 2003: 57).

Price changes are only expected to result from the arrival of new information. Given that there is no reason to expect new information to be non-random, period-to-period price changes are expected to be random and independent. In other words, they must fully incorporate the expectations and information of all market participants (Lo, 1997).

Basic idea underlying market efficiency is that competition will drive all information into the price quickly. This idea got its start at least in part due to Ball and Brown's 1968 paper looking at earnings announcements. The authors found that the market had forecasted $80 \%$ of the news before the announcement and the 3 and 6-month returns after the announcement was approximately zero. Following Fama, French, Jensen, and Roll's 1969 dividend split paper, which was the first true "event study," researchers regularly
found the market to be very efficient. These papers helped remove the generally prevailing view that market prices were noisy estimates that could not be trusted let alone used as a means of academic research. The more theoretical models of Modigliani and Miller (1958), Sharpe (1964) and Lintner (1965) on CAPM, and Black and Scholes (1973) helped this idea that markets were efficient gained support.

Most of the studies support the fact that stock prices rapidly adjust to the announcement of new information.

### 1.2. Market Efficiency and Announcements

Announcements are the statements that are required to be disseminated by listed companies and their controlling entities in the event of any privileged information, namely news that is not in the public domain concerning a listed company or its group and which investors might reasonably use for the purpose of their investment decisions since they can notably affect the price of the financial instruments.

For example, approval of draft financial statements, half-year reports or other accounting situations, such as merger or takeover operations, or changes in a company's top management are all items of news which - if circulated - can influence the behaviour of financial intermediaries and therefore the market prices for listed shares. If the price sensitive announcements were not to be promptly disseminated in a manner that allows access to all investors, the result would be an unacceptable asymmetry of information. It is therefore extremely important for prudent intermediaries to take into consideration such reports, which are totally indispensable in order to have a complete picture and better knowledge of the market, prior to deciding their respective investment strategies.

Many research studies have examined announcements similar to the one above, to determine whether the market reacts as predicted. Many types of events have been studied, including mergers and acquisitions, seasoned equity offerings, spin-offs, dividend announcements, etc.. The evidence generally indicates that the market reacts quickly to these various corporate announcements - often in a matter of minutes. Thus, investors cannot expect to earn superior returns by trading on the announcement date.

Fama, Fisher, Jensen and Roll (1969) performed the first test for semi-strong market efficiency. Using risk-adjusted return to test for market efficiency with respect to the announcement of stock split, they found a considerable high abnormal return prior to the announcement of stock split. On the other hand, after the stock split there is no extraordinary return, and the situation returns to exactly what EMH predicted. There is another study for stock split by Charest (1978a). Fama et al. (1969) and Charest (1978a) found that market is efficient with respect to stock split information.

Testing of EMH with respect to dividends announcement was performed by Petit (1972), Charest (1978b) and Abeyratana et al. (1993), who found a significant abnormal return following cash dividends announcement. Foster and Vickrey (1978) found stock dividends have information content because the stock price rises at the time of stock dividends announcement. Hadi (2005) found evidences from Kuwait that market react to the release of dividends information. And that is consisted with efficient market hypothesis (EMH). Also, in Kuwait market we found Al-Deehani (2003) which investigated top management's perception of value-relevant and value- irrelevant determinants of dividend policy.

There is overwhelming evidence in the financial literature suggesting that targets of takeover attempts gain significantly upon an announcement of the acquisition plan by the bidder. Interestingly, there is a small upward drift in price prior to the announcement, indicating that some information leaked out. However, notice that after the announcement the stock price changes are, on average, close to zero. This finding is consistent with efficient market hypothesis, since it suggests that the full effect of the information (about the announcement of takeover attempt and the potential implication of the takeover for the target's value) is incorporated immediately.

Dahyaa and McConnel (2003) investigate on market reaction of 523 CEO turnover announcements, for the period 1988 to 1999. Their results show that there is evidence that UK investors perceive CEO turnover as good news. The market reacts positively and they find an abnormal return of $0.39 \%$ (significant at $1 \%$ level), at these announcements. Suchard, Singh and Barr (2001) investigate market reaction to CEO turnover in Australia over the period 1989 to 1995. Their sample consists of 59 CEO turnover announcements. The results show that investor earn a negative abnormal return surrounding the announcements date. Therefore, Australian investor perceived that CEO turnover are bad news.

### 1.3. CEO change Announcements in Kenya

CEO change announcement is limited to only replacement of chief executive officer. Replacement of the Chief Executive Officer (CEO) is one of the most important decisions and responsibilities of a board of directors (Olson and Halloran, 1997). There could be two ways to select a new CEO, either to bring someone outside the organization or promote someone internally to assume this key position. Which way to go depends
upon a number of factors like profile and role of a CEO, experience according to the future requirement of business, leadership needed in future, and capability to deal with internal and external challenges. CEO change announcements are caused by various reasons, such as, death, retirement, resignation, expiry of contract, board of directors' resolutions, etc. This study will consider the effect of CEO change announcements on stock returns; excluding the causes of CEO replacement, insider or outsiders, firm performance, board composition, gender, CEO removal without replacement, etc.

The announcements of CEO changes in Kenya are guided by The Capital Markets Authority Act which prohibits against use of unpublished insider information.

Many Kenya's NSE listed companies have made changes of Chief Executive Officers within the last 8 years. Each of these replacements occurred at different times. Chief Executive Officer changes announcement are price sensitive information that require to be communicated effectively to investors.

Examples of the companies that experienced changes in Chief Executive Officers as a result of replacement included British American Tobacco Company in December 2006, Standard Chartered Bank Limited in November 2006, Kenya Airways 2003, Housing Finance in 2006, Kenya Commercial Bank Ltd June 2005, Kenya Power \& Lighting CO. Ltd in June 2007, East African Breweries ltd in 2009, East African Cable in November 2008, and Nation Media Group Ltd.

Changes in the Chief Executive Officer announcement information help investors in making their investment decisions. Such information is disseminated into the market through company announcements, as well as other announcements by Capital Market Authority (CMA) and other fiscal and monetary authorities.

NSE seeks to ensure early, equal and wide dissemination of all information that is expected to have an effect on the prices of securities listed on the NSE. Nairobi Stock Exchange makes data delivery by transmission of live data to subscribed information vendors, NSE members and financial institutions.

### 1.4. Statement of the Problem

The Nairobi Stock Exchange (NSE) established in 1954 is one of the oldest of its type in Africa and ranks fourth on the continent after the stock exchanges of South Africa, Morocco, and Zimbabwe. The Stock Exchange has a market capitalization of nearly US\$ 2.2 billion and 56 listed companies. Daily turnover is estimated at US\$ 225,000 and foreigners are now permitted actively participate in trading in the market.

The Stock Exchange has in recent years been instrumental in mobilizing domestic savings and channeling them into productive investment; facilitated the transfer of ownership from shareholders to potential investors at reasonable market prices; and has been catalytic the establishment of joint ventures in Kenya.

If the Nairobi Stock exchange is to harness funds from local and foreign investors for viable investment opportunities that will bring about economic growth, it needs to be efficient. This has made it imperative that research be carried out in this area to identify the level of efficiency. A study of CEO change announcement is one key area that will provide important information for investors, academia and the government on the efficiency of the market and through that process, promote further interest in the market. Most studies on market efficiency have been carried out in developed countries such as United States and United Kingdom whose characteristics are different from developing
and emerging economies. For example, Fama et al (1969) examined the stock price reaction around stock splits. However, following the split, they observed no evidence of abnormal stock price performance. That is, investors would not be able to profit by purchasing the stock on the split date. Keown and Pinkerton (1981) provide an example of average changes in stock prices of target companies around the announcement of takeover attempts. However, they noticed that after the announcement the stock price changes are, on average, close to zero. This finding suggests that the full effect of the information is incorporated immediately.

In Kenya, a few studies have been carried out on the reactions of stock markets towards various corporate announcements. For example, a study by Njogu (2003) had sought to determine the price impacts of commercial paper issue announcement amongst listed companies that had issued commercial papers in Kenya. A year later, a study by Onyangoh (2004) had sought to determine the stock price responses to earnings announcements from the NSE.

Nevertheless, there is no study known to the researcher to date that has investigated the effect of Chief Executive Officer change announcements on stock returns in Kenya.

It is therefore the overall aim of this study to determine whether the Kenyan Stock market reacts efficiently to CEO change announcements in terms of stock price and return adjustments.

### 1.5. Objective of the Study

The objective of the study is to determine whether stock returns adjust to CEO change announcement of firms listed at the Nairobi Stock Exchange.

### 1.6. Value of the Study

This study will be of importance to the following categories of stakeholders and interest groups.
i) The Government of Kenya

The study will be importance to the policy makers in the Ministry of Finance, the Capital Markets Authority (CMA) and the Nairobi Stock Exchange in regard to forming dissemination approaches applied by listed firms when announcing CEO changes. This will help cushion the investors against possible volatility effects after the market responds to such announcements. For instance, the authorities may use the findings of this study to recommend appropriate timings when such announcements should be made, e.g. after the market trading hours.

## ii) Management of Listed Firms

The objective of all listed firms is to maximize the returns on the investments for their shareholders. This study stands to inform the management of listed firms on the effects of making sensitive announcements (such as Chief Executive Officer change) on the value of their shareholders' wealth.

## iii) Investment advisors

This study will assist Investment advisors in semi-strong form market efficient markets change their strategies in advising investor on holding diversified portfolio as no way anyone can to earn excess profits, (more than the market overall), by using publicly available information.

## iv) Investors

Investors cannot expect to beat the market risk adjusted market average return except by chance in efficient markets. The study will assist investors to effectively utilize holding to well-diversified portfolio strategy.

## v) Future Researchers and Academicians

The study will be of importance to future researchers and academicians conducting studies related to market efficiency and volatility of shares prices of firms listed at the Nairobi Stock Exchange.

## CHAPTER TWO

### 2.0. LITERATURE REVIEW

### 2.1. Capital Market Efficiency

Capital markets are places where investors buy and sell company and government securities. Their trading decisions reflect information on company performance provided by financial statements and financial analysis, dividend announcements by companies, market expectations on the future levels of interest rates and inflation, and investment decisions made by companies. Capital markets have two main functions. First, they are a place where long-term funds can be raised by companies from those with funds to invest, such as financial institutions and private investors.

In fulfilling this function, they are primary markets for new issues of equity and debt. Second, capital markets allow investors to sell their shares and bonds, or buy new ones to increase their portfolios. Here, capital markets act as secondary markets for dealing in existing securities. The secondary market plays a key role in corporate finance, because by facilitating the buying and selling of securities it increases their liquidity and hence their value. The secondary market is also a source of pricing information for the primary market and so helps to increase the efficiency with which the primary market allocates new funds to their best use. The efficient market hypothesis is concerned with establishing the prices of capital market securities and states that the prices of securities fully and fairly reflect all relevant available information (Fama 1970). Market efficiency therefore refers to both the speed and the quality (i.e. direction and magnitude) of the
price adjustment to new information. The testing of markets for efficiency has led to the recognition of three different levels or forms of market efficiency.

### 2.2. Different forms of market efficiency

The efficient markets hypothesis predicts that market prices should incorporate all available information at any point in time. There are, however, different kinds of information that influence security values. Consequently, financial researchers distinguish among three versions of the Efficient Markets Hypothesis, depending on what is meant by the term "all available information".

## i) Weak Form Efficiency

The weak form of the efficient markets hypothesis asserts that the current price fully incorporates information contained in the past history of prices only. That is, nobody can detect mis-priced securities and "beat" the market by analyzing past prices. The weak form of the hypothesis got its name for a reason - security prices are arguably the most public as well as the most easily available pieces of information. Thus, one should not be able to profit from using something that "everybody else knows". On the other hand, many financial analysts attempt to generate profits by studying exactly what this hypothesis asserts is of no value - past stock price series and trading volume data. This technique is called technical analysis.

The empirical evidence for this form of market efficiency, and therefore against the value of technical analysis, is pretty strong and quite consistent. After taking into account
transaction costs of analyzing and of trading securities it is very difficult to make money on publicly available information such as the past sequence of stock prices.

## ii) Semi-strong Form Efficiency

The semi-strong-form of market efficiency hypothesis suggests that the current price fully incorporates all publicly available information. Public information includes not only past prices, but also data reported in a company's financial statements (annual reports, income statements, filings for the Security and Exchange Commission, etc.), earnings and dividend announcements, announced merger plans, the financial situation of company's competitors, expectations regarding macroeconomic factors (such as inflation, unemployment), etc. In fact, the public information does not even have to be of a strictly financial nature.

The assertion behind semi-strong market efficiency is still that one should not be able to profit using something that "everybody else knows" (the information is public). Nevertheless, this assumption is far stronger than that of weak-form efficiency. Semistrong efficiency of markets requires the existence of market analysts who are not only financial economists able to comprehend implications of vast financial information, but also macroeconomists, experts adept at understanding processes in product and input markets. In addition, the "public" information may be relatively difficult to gather and costly to process. It may not be sufficient to gain the information from, say, major newspapers and company-produced publications. One may have to follow wire reports, professional publications and databases, local papers, research journals etc. in order to gather all information necessary to effectively analyze securities.

## iii) Strong Form Efficiency

The strong form of market efficiency hypothesis states that the current price fully incorporates all existing information, both public and private (sometimes called inside information). The main difference between the semi-strong and strong efficiency hypotheses is that in the latter case, nobody should be able to systematically generate profits even if trading on information not publicly known at the time. In other words, the strong form of EMH states that a company's management (insiders) are not be able to systematically gain from inside information by buying company's shares ten minutes after they decided (but did not publicly announce) to pursue what they perceive to be a very profitable acquisition. Similarly, the members of the company's research department are not able to profit from the information about the new revolutionary discovery they completed half an hour ago. The rationale for strong-form market efficiency is that the market anticipates, in an unbiased manner, future developments and therefore the stock price may have incorporated the information and evaluated in a much more objective and informative way than the insiders. Not surprisingly, though, empirical research in finance has found evidence that is inconsistent with the strong form of the EMH.

### 2.3. Implications of the efficient market hypothesis

## i) Investors

Investors of efficient stock market paying for investment research will not produce above-average returns. In the same strength, studying published accounts and investment tips will not produce above-average returns for them. In an efficient stock market, there are no bargains (underpriced shares) to be found on the stock market.

## ii) Company and its managers

For a company and its managers, the implications of stock market efficiency are:
The share price of a company fairly reflects its value and market expectations about its future performance and returns. The financial manager should therefore focus on making good financial decisions which increase shareholder wealth as the market will interpret these decisions correctly and the share price will adjust accordingly.

## iii) Event Studies

If markets are efficient and security prices reflect all currently available information, new information should rapidly be converted into price changes. Let's look at an example. The research department of Safaricom Ltd, a communication company, developed a new, revolutionary type of money transfer service that can serve rural and urban for both unbanked and banked population. Rolling out of this service is potentially a very profitable activity. Assume that on Monday, the price of one share of safaricom Ltd is Ksh10, and that the estimated present value of the developed money transfer service is ksh 5 per share. What will happen on Tuesday morning when Safaricom announces the discovery of the new money transfer service?

If the market is efficient, the stock price would quickly adjust to this new information. The price would jump instantanously to Kshs 15 to fully reflect the effect of the new service announced by the company. The efficient capital market theory implies that market participants will react immediately and in an unbiased manner. That is, one can expect that the stock price should not under-react and trade below kshs 15 nor over-react to the announcement and trade above Kshs 15 in a predictable manner. That way, no investor buying or selling shares after the announcement is made (say, on Tuesday
morning) could be expected to make money based on the safaricom's announcement the stock price would have already fully incorporated the impact of this information.

### 2.4. The Theories of Efficient Market

The Efficient Market Hypothesis (EMH), which plays an important role in the financial economics literature, relies on the efficient exploitation of information by economic actors. Generally, an asset market is referred to be efficient if the asset price in question must fully reflect all available information. If this is true, it should not be possible for market participants to earn abnormal profits. Based on the definitional statement of an efficient market above, Fama (1970) suggested three models for testing stock market: the Expected Return or Fair Game model, the Submartingale model, and the Random Walk model.

## i) Expected Return or "Fair Garne" Models

The definitional statement of EMH is that prices 'fully reflect' all the available information. To verify this, the process of price formation has to be specified in model form, in order to define more precisely the empirical implications of 'fully reflect.' An assumption is made here that conditions of market equilibrium can be expressed in terms of expected returns. The expected returns can be expressed as

$$
E\left(r_{j, t+1} \mid \Phi_{i}\right)=\frac{E\left(P_{j, t+1} \mid \Phi_{\mathrm{t}}\right)-P_{j, t}}{\mathrm{P}_{\mathrm{j}, \mathrm{t}}}
$$

and

$$
E\left(P_{i, t} \mid \Phi_{t}\right)=\left[1+E\left(r_{j, t+1} \mid \Phi_{t}\right)\right] \underline{P}_{j, t}
$$

Where
$E$ is the expected value operator
$r$ is the one period percentage return
$P$ is the price of security $j$
$\Phi_{\mathrm{t}}$ is the information set that is reflected in the share price
and $P_{j l}$ is with cumulative dividends.
However, regardless of how the return is calculated, it is assumed that the information $\left(\Phi_{t}\right)$ is fully utilized in determining the expected return. It should be noted that the assumption that the conditions of market equilibrium can be stated in terms of expected returns, is purely a mathematical concept that is not attributed with any special importance by the EMH per se (Campbell, 1997; Keane, 1983).

Defining 'fully reflect' in this sense implies that efficiency can be described using the fair game model, which expresses efficiency in terms of the opportunities for speculators to earn excess returns. Thus, the possibility of having trading systems based only on $\Phi_{t}$ which earn expected returns in excess of the equilibrium expected returns is eliminated. If $X_{j,{ }^{2}+1}$ is the excess market value of security $j$ at time $t+1$ i.e.

$$
X_{j,+1}=P_{j, t+1}\left(P_{j, t+1} \mid \Phi_{j}\right)
$$

then

$$
E\left(X_{j, \lambda+1} \mid \Phi_{V}\right)=0
$$

Or, if

$$
Z_{,,+1}=r_{j, t+1}-\left(r_{, i,+1} \mid \Phi_{l}\right)
$$

then

$$
E\left(Z_{j,+1} \mid \Phi_{V}\right)=0
$$

so the sequence of $X_{j,+1+1}$ and $Z_{j, t+1}$ is a fair game in respect to information sequence $\Phi_{1}$ (Fama, 1970).

If all the information available at time $t$ is factored into the price, then price changes will only be expected to be a result of new information. Given that both the arrival and the quality of new information are not expected to be non-random, the sequence of price changes is expected to be random, or rather follow a random walk (Kendall, 1953).

## ii) The Submartingale Model

This model assumes that the price sequence for security follows a submartingale with respect to the information sequence, which is to say nothing more than that the expected value of next period's price, as projected on the basis of the information, is equal to or greater than the current price.

The Submartingale model is the Fair Game model with a small adjustment in expected return. In this model, the expected return is considered to be positive instead of zero as in the Fair Game model. The adjustment implies that prices of securities are expected to increase over time. In other word, the returns on investments are projected to be positive due to the risk inherent of capital investment. The Submartingale model can be mathematically written as follows:
$\mathrm{E}(\mathrm{pj}, \mathrm{t}+1 \mid \mathrm{It}) \geq \mathrm{pj}, \mathrm{t}$
$\mathrm{E}(\mathrm{rj}, \mathrm{t}+1 \mid \mathrm{It})=\mathrm{E}(\mathrm{pj}, \mathrm{t}+1 \mid \mathrm{It})-\mathrm{pj}, \mathrm{t} \quad \geq 0$

This model states that the expected return sequence $\{r j, t+1\}$ follows a submartingale, conditional on the information sequence $\{$ It $\}$, which is meaningless in forecasting stock prices, except that the expected return, as projected on the basis of the information It, is equal to or greater than zero (Fama, 1970). The important empirical implication of the submartingale model is that no trading rule based only on the information set It can have greater expected returns than a strategy of always buying and holding the security during the future period in question.

The martingale condition, which is considered to be necessary for an efficient securities market, is such that information in past prices is fully and perpetually reflected in current prices (Samuelson, 1973). Nevertheless, the martingale model still has important applications in modern theories of asset prices.
~ iii) The Random Walk Model
According to Fama (1970) an efficient market is a market in which prices reflect all available information. In the stock market, the intrinsic value of a share is equivalently measured by the future discounted value of cash flows that will accrue to investors. If the stock market is efficient, share prices must reflect all available information which is relevant for the evaluation of a company's future performance, and therefore the market price of share must be equal to its intrinsic value. Any new information, which is expected to change a company's future profitability, must be immediately reflected in the share price because any delay in the diffusion of information to price would result in irrationality, as some subsets of available information could be exploited to forecast
future profitability. Thus, in an efficient market, price changes must be a response only to new information. Since information arrives randomly, share prices must also fluctuate unpredictably. The Random Walk model can be stated in the following equation:

$$
P_{t+1}=P_{t}+\varepsilon_{t+1}
$$

Where
$\mathrm{P}_{\mathrm{t}+1}=$ price of share at time $\mathrm{t}+1$;
$\mathrm{P}_{\mathrm{t}}=$ price of share at time t ;
$\varepsilon_{t+1}=$ random error with zero mean and finite variance.

In the equation the price of a share at time $t+1$ is equal to the price of a share at time $t$ plus given value that depends on the new information (unpredictable) arriving between time t and $\mathrm{t}+1$. In other word, the change of price, $\varepsilon_{\mathrm{t}+1}=\mathrm{Pt}+1-\mathrm{Pt}$, is independent of past price changes. Fama (1970) argued that the random walk model is an extension of the expected return or fair game model. Specifically, the fair game model just indicates that the conditions of market equilibrium can be stated in terms of expected returns while the random walk model gives the details of the stochastic process generating returns. Therefore, he concluded that empirical tests of the random walk model are more powerful in support of the EMH than tests of the fair game model.

The main essence of the random walk model is that price the change during period $t$ is independent of the sequence of price changes during previous time periods. This implies that chart reading is of no real value to the investor.

### 2.5. Stock Market Reaction to CEO Change Announcements

Researches about market reaction based on abnormal return surrounding CEO turnover announcement, shows inconsistent results. Warner, Watts and Wruck (1988) investigate market reaction to CEO turnover in USA period 1962-1978. Their samples consist of 269 firms listed at NYSE and 567 CEO turnover announcements. Warner, Watts and Wruck (1988) detect positive abnormal retum but not significant. They confirm the result of Reinganum (1985) that does not find market reaction to CEO turnover, too.

On the other hand, Weisbach (1988), Denis and Denis (1995), and Huson, Malatesta and Parrino (2003) find significant abnormal return around a CEO turnover in the US. Weisbach (1988) investigate the relationship between CEO turnover and Board of Directors composition. The samples of his research enclose the period of 1974 to 1983 and there were 367 CEO turnovers during this period. The result shows that the market reacts positively to a CEO turnover announcement. The market reacts even stronger if independent directors dominate the composition of the board. The market does not react if inside directors are dominating board composition.

Bonnier and Brunnier (1989) confirm the results found by Weisbach (1988). They find that market reacts positively to CEO turnover announcements over the period of 1969 to 1983. The result indicates that a CEO turnover announcement is useful information for investors in order to make investment decisions. Denis and Denis (1995) also show positive abnormal return ( $0.63 \%$ ) for window periods for CEO change announcements. They show that a firm's performance increases after a CEO turnover, too. This confirms the market reaction that a CEO turnover as good news; they perceive that an incoming CEO will make a significant contribution to the firm's performance.

Huson, Malatesta and Parrino (2003) investigate market reaction to CEO change announcements in US over the period of 1971 to 1995. The source of the CEO change is "Forbes" magazine, while the exact announcement date is derived from "Wall Street Journal". Their sample consist of 1200 CEO turnover announcements. Their results show that over a two days observation ( $\mathrm{t}-1$ and t 0 ) market reacts positively (CAR $0,354 \%$ ) to CEO turnover announcements. Huson, Malatesta and Parrino (2003) confirm the results of Weisbach (1988), Bonnier and Brunner (1993), and Denis and Denis (1995), but they are not consistent to Warner, Watts and Wruck (1988). The research of market reaction to CEO turnover in US shows inconsistent results. The next section reviews the research about market reaction to CEO change announcement outside US.

The results of the research conducted about market reaction to CEO turnover in UK shows mixed results, too. Dedmen and Lin (2002) find evidence that UK investor perceive CEO turnover as bad news. The market reacts negatively to CEO turnover announcements. Investor worry that new CEO would not improve firm's performance.

On the other hand, the results of Dahyaa and McConnel (2003) are inconsistent to those found by Dedmen and Lin (2002). Dahyaa and McConnel (2003) investigate on market reaction of 523 CEO turnover announcements, for the period 1988 to 1999. Their results show that there is evidence that UK investors perceive CEO turnover as good news. The market reacts positively and they find an abnormal return of $0.39 \%$ (significant at $1 \%$ level), at these announcements.

Suchard, Singh and Barr (2001) investigate market reaction to CEO turnover in Australia over the period 1989 to 1995. Their sample consists of 59 CEO turnover announcements. The results show that investor earn a negative abnormal return surrounding the
announcements date. Therefore, Australian investor perceived that CEO turnover are bad news. This is consistent to the result found by Dedmen and Lin (2002).

Kang and Shivdasani (1996) investigate investor reaction to CEO succession announcements in Japan. Their sample consists of 432 CEO changes announcements of the period 1985 to 1990 . The results of their research show that market reacts positively to these announcements. Japanese investor perceived that this news is good news; they hope that a new CEO brings new insight into leading the company.

Other studies by Bonnier and Bruner (1989), Furtado and Rozeff (1987), Rosenstein and Wyatt (1990), Worrell et al (1993), Denis and Denis (1995), Fox and Opong (1999) report significant positive abnormal returns around the time of CEO change.

In US, Weisbach (1988), Denis and Denis (1995), and Huson, Malatesta and Parrino (2004) found positive market reaction to Chief Executive Officer Change announcements. On the other hand, Reinganum (1985), and Warner, Watts and Wruck (1988) did not find market reaction for the US.

In UK researchers find mixed results on stock returns upon CEO change announcements. Dahya, McConnel and Travlos (2003) show that there is evidence that market react favorably to Chief Executive Officer change announcements and find positive abnormal returns around Chief Executive Officer turnover announcements. But, on the other hand Dedmen and Lin (2002) find negative abnormal returns around Chief Executive Officer changes and they claim that markets react negatively to Chief Executive Officer change announcements. Suchard, Singh and Barr (2001) confirm the result found by Dedmen and Lin (2002) using Australian data. Investors in Australia perceived Chief Executive Officer changes as bad news, therefore they react negatively to these announcements.

Research about market reaction to Chief Executive Officer turnover in Asia, i.e. in Japan conducted by Kang and Shivdasani (1996) shows positive abnormal returns. This means that market perceives Chief Executive Officer succession as an improvement of a firm's firm performance, or good news, and therefore they react positively.

Warner et al (1988) studied stock prices and top management changes in the USA, using event study methodology. In their research of a sample of 269 firms listed in the New York and American Stock Exchange found that no stock price reaction detected at announcement of top management change.

Reinganum (1985) examines the effects of executive succession on stockholder wealth on his research in New York and American Stock exchanges firms during 1978-1979, using event study methodology, found significant positive succession effects around the time of the announcement of management change.

Tomoaki et al (1999) on their study, impact of Chief Executive Officer succession in Japanese companies: A co evolutionary perspective on a sample of 81 large Japanese companies using cross sectional analysis found out that there is a significant positive effect on Chief Executive Officer changes. They had sampled 81 companies which experienced Chief Executive Officer succession.

Dahyaa (2000) changes in corporate management and if they have an impact on share prices and company earnings. In their research in the UK on a large sample of 2643 companies who announced Chief Executive Officer changes over a period of four years of which they used event study methodology. The study found that there was abnormal returns on the day of announcement of Chief Executive Officer change and also increase in profitability.

## CHAPTER THREE

### 3.0. RESEARCH METHODOLOGY

### 3.1. Research Design

This study examined the effect of Chief Executive Officer (CEO) change announcements on the stock returns of Nairobi Stock Exchange (NSE) listed companies. The study excluded the composition of the Board of directors, the causes of the CEO removal or whether CEO replacement is from inside or outside, CEO gender, change in other senior management and CEO removals without new appointment. CEO in this study refers to the chief executive, Managing Director or the Executive Chairman of a company. Therefore, the study is restricted to the effect of the CEO change in the stock returns and whether investors treat them as good or bad news.

## Event study and methodology

An event study was used to examine the effect of CEO change on stock returns. This included the following;

## i) Data collection process of firms with announcements

To address the research problem, secondary data were gathered from publicly available information sources. The research treated the announcement as the date the company made the announcement as stated in the annual reports. The explanatory data regarding the changes was collected from the NSE company listings, NSE announcements, company financial statements and articles in the financial press.

## ii) Define announcement date

The day of announcement in this study was designated as day zero. Announcement dates were taken as stated in the financial reports of the companies affect by CEO change.

## iii) Define Estimation period and event period of the study

The study defined CEO change announcement time point as Day 0 (event day). Consequently, the estimation period is from Days -45 to -16 . The event window of interest begins from Day -15 and ends on Day +15 , and entire observational period covers 61 trading days as shown as;


Figure 1. The diagram of event studies period

An event window is a period over which the event occurred and within which parameters are estimated. This study used thirty one days. Fifteen days before the CEO change announcement, the event day (time point) and fifteen days after the CEO change announcement. The window period was meant to address any information leakage before announcement and/or delayed reaction after CEO change announcement.

## iv) Computation of return of each days studied

Stock returns were measured by determining the closing share prices of the stock and the closing price from the previous day; subtracting the previous day's closing price from the current day's close; adding any dividend income received. Divide the result by the previous day's close.

Hence

$$
R_{x}=\frac{P_{x}-P_{x-1}+D_{x}}{P_{x-1}}
$$

$R_{x}=$ rate of return for each share on day $t$
$\mathrm{P}_{\mathrm{x}}=$ closing price on share on day t
$\mathrm{P}_{\mathrm{x}-\mathrm{l}}=$ closing price on share on day $\mathrm{t}-1$ (Previous day)
$\mathrm{D}_{\mathrm{x}}=$ Dividend income received on share on day t

## v) Abnormal return

The abnormal return produced by a security or portfolio is the excess of the actual over the return that would be expected given the level of risk take. The expected return was derived using the market model where the model parameters intercept $(\alpha)$ and beta ( $\beta$ ) were obtained from the estimation period. The market model is the linear relations between the individual stock return and the market return. The market model equation (Defusco et al, 2001);
$R_{i}=\alpha_{i}+\beta_{i} R_{m}+\varepsilon_{i}$

Where $R_{i}$ is the return asset $i$ and $R_{m}$ is the return to the market portfolio, $\alpha_{i}$ is the average return to asset $i$ that is not related to the market return, $\beta_{i}$ is the effect of the
return on the market to asset i (Beta modulus that is system (non diversifiable) risk of individual stock, indicating the sensitivity of the security's excess return to that of the market portfolio), $\varepsilon_{\mathrm{i}}$ is an error term.

Beta measures the part of the asset's statistical variance that cannot be removed by the diversification provided by the portfolio of many risky assets, because of the correlation of its returns with the returns of the other assets that are in the portfolio. Beta represents systematic risk that investor are compensated for.

R -squared was used to explain the movement in the stock return. R -squares is a statistical measure that represents the percentage of a security's movements that can be explained by movements in a benchmark index (risk free T-Bill).

## vii) Average Abnormal Return

The researcher examined abnormal return $(A R)$ to see whether $A R$ significantly differs from zero. In this research used data characteristic choice to choose suitable test statistics, and examined the event window whether have outstanding abnormal return, and understanding the influence of CEO changes announcement event on stock returns.

Thus, average abnormal returns were calculated as below;

$$
A A R_{E}=\frac{1}{N} \sum_{i=1}^{N} A R_{i E}
$$

Where, N is the number of CEO change
viii) Cumulative Average Adjusted Abnormal Returns (CAAR)

Cumulative average abnormal returns (CAAR) were obtained as follows,

$$
\operatorname{CAAR}\left(\tau_{1}, \tau_{2}\right)=\sum_{E=\tau_{1}}^{\tau_{2}} A A R_{E}
$$

Individual stock Average Returns were used to standardize, and calculate AAR and CAAR. This was done with objective of transforming the distribution of AR into standard normal distribution, correspond with identical distribution.

## ix) The t-test

Ordinary cross-sectional method was used with the main goal of overcoming variation of return rate, for event period. Therefore, we used the variation of estimate term to estimate the variation of event term AR. T-test assessed the statistical difference of Average Abnormal returns from zero.

$$
t=\frac{A A R_{E}}{\sqrt{\operatorname{Var}\left(A A R_{E}\right)}}
$$

### 3.2. Population

The population of interest consisted of all companies listed at the Nairobi stock exchange that experienced CEO changes between 2005 and 2009.

### 3.3. Sample Design

The sampling frame consisted of all actively trading companies quoted at the Nairobi Stock Exchange as at the end of 2009 that had CEO changes. The sample is considered a representative of the market segments at Nairobi Stock Exchange.

During the period of 5 years there were 17 changes of CEO changes the sample consisting of 17 CEO change events were selected as per the criteria described in the sample method and sample size in chapter 4. Of these 17 firms with CEO change Marshalls (E.A) Ltd was not actively trading in the 31 day period under study. Therefore was excluded from the sample to biased results. E.A. Portland Cement made changes in CEO without replacement hence was excluded from the sample. This sample accounts for over $27 \%$ of the entire NSE listed companies. The sample period was a period of 5 years from 2005 to 2009

### 3.4. Data collection method

The study used mainly secondary data obtained from the Nairobi Stock Exchange (NSE). Information on stock prices and announcement dates were collected. Although there were 55 listed companies on the NSE, only 15 were used in the study. The rest of the firms were rejected because either they had no CEO change within the period of study 2005 to 2009 or they had stopped trading at some point in time and therefore had data gaps. Other agencies from which secondary data were collected included the Capital Market Authority (CMA), Annual financial company reports, journals and Newspapers.

In this study data relating to the reasons and causes of CEO changes, the composition of the board, replacement from outside or inside, the tenure of the CEO and gender were excluded. The reasons such as death, retirement, assuming other positions in the firm,
poor performance, take other positions, health, policy difference, or fired are ignored. As it was the case with Warner et al (1998), the identification of reason of CEO departure is difficult because the press release or annual company reports rarely describe the reason of replacement. This study will examine the CEO changes announcement by firms and their effect on companies' stock returns.

Where the CEO changes involves two or more changes at different dates within the period under review, the last change will be taken and treated as one change in the study. Share data was collected from NSE. Individual data sets were collected a per the table below;

Table 1: Data collected and sources of data

| Data collected | Sources of data |
| :--- | :--- |
| Companies listed on the NSE for the full <br> period 2005 to 2009 | NSE database of companies listed on the <br> main board |
| CEO change events occurring during 2005 <br> to 2009 including; <br> i) $\quad$ DSE announcements of change announcement <br> ii) $\quad$ Names of new and old CEOs | Annual reports of companies with CEO <br> changes <br> Articles in the financial press of time of the <br> announcement |
| Share price information; <br> i) Closing price on day of ,days |  |
| before and after announcement of change |  |
| event |  |
| ii) Daily share price data for 15 days |  |

before and after the change event
iii) Index values for 15 days before and after the change event

The date of CEO change announcement, departure and appointment in all events are all treated as one and same. Announcement of change and appointment of new CEO were made on the same day as the departure announcement in the 15 cases.

### 3.5. Data Analysis Procedure

The study intends to determine 31 daily returns surrounding each stock around the CEO change announcement; that is 15 days abnormal returns for pre-announcement period and the CEO change announcement day and 15 days abnormal returns post announcement period. Data from secondary source were analyzed using the figure shown below;


Comparison period
Comparison period
Figure. 2: Data analysis

The portfolio daily returns on the stock were computed on each day surrounding the CEO change announcement.

The mean portfolio daily return was also calculated for the CEO change announcement window and comparison periods. For each day, $t$-statistics and test of significance was done using SPSS statistics analysis software, the difference between the two period was
computed to establish whether excess return around the announcement date are different from returns during the window period, the sign of the excess return determined the effect; if positive or negative.

## CHAPTER FOUR

### 4.0. DATA ANALYSIS, RESULTS AND DISCUSSION

The study was aimed at determining the effect of CEO change announcements on stock returns by testing the statistical difference of the mean daily returns of the event period (observation period with the mean daily return of the comparison period).

The comparison period for this study comprised of 15 surrounding days before the event study and 15 surrounding days after the CEO change announcement window. The mean daily returns were calculated for the CEO change announcement window and comparison periods. For each day, t-statistics and test of significance was done using SPSS statistical package for social science. The differences between the two periods were computed to establish whether excess returns around the announcement date are different from zero. There were 17 companies in the sample that experienced CEO change. But two of them were excluded from the studies either because they were did not have new appointment upon removal of the CEO or they did not trade during the study window.

All the firms in the sample were studied and they were assigned control groups of firms that never experienced CEO change during the period. This was necessary for purpose of statistical computation of the required results.

### 4.1. Firms with CEO changes

Companies that experienced CEO changes announcement were obtained from annual financial reports filed with Capital Market Authority (CMA) and Nairobi Stock Exchange (NSE).

Table 2: CEO changes per year

| Year | No. of CEO changes | $\%$ |
| :--- | :--- | :--- |
| 2005 | 1 | 7 |
| 2006 | 4 | 26 |
| 2007 | 1 | 7 |
| 2008 | 6 | 40 |
| 2009 | 3 | 20 |
| Total | 15 | 100 |

From table 2, it was observed that the year 2008 had the largest number of CEO changes with $40 \%$. Out of the sample of 15 firms, 6 changes were experienced in 2008. The least changes were observed in 2005 and 2007 where each had one changes.

Table 3: No. of CEO changes per segment

| Market <br> sector | 2005 <br> - | 2006 | 2007 | 2008 | 2009 | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  <br> Investment | 1 | 2 | - | 2 | 1 | 6 |
|  <br> Allied | - | 1 | - | 3 | 2 | 7 |
| Commercial <br> \& Allied | - | 1 | - | - | - | 1 |
| Agricultural | - | - | - | 1 | - | 1 |
| Total | 1 | 4 | 1 | 6 | 3 | 15 |

Table 3 shows that most of the changes of CEO were done in Industrial \& Allied sector during the period of study. Industrial \& Allied sector experienced the highest number of CEO at 7; while Finance \& Investment had 6 CEO changes. Commercial \& Allied and Agricultural sector had the smallest number of CEO at 1 each.

### 4.2. Market model

i) Companies Return computations: The opening and closing prices and dividends of the underlying stocks were collected for each of the 15 days prior to the CEO changes announcement date, the day of the announcement, and each of the 15 days after. These were summarized and analyzed using the following formula:

$$
R_{x}=\frac{P_{x}-P_{x-1}+D_{x}}{P_{x-1}}
$$

Where $\mathrm{R}_{\mathrm{x}}$ is rate of return for each share on day t ; $\mathrm{P}_{\mathrm{x}}$ is closing price on share on day t ; $P_{x-1}$ is closing price on share on day $t-1$ (Previous day) and $D_{x}$ is Dividend income received on share on day $t$.

The excess returns, by day, are averaged across all firms in the sample and a standard error is computed as given below;

Average excess return on day $t=\quad j=N$

$$
\sum_{\mathrm{j}=\mathrm{N}} \mathrm{ERj} t \mathrm{~N}
$$

where
N is the CEO changes
ii) Market Return calculation: The returns on the market index (Rmt) were computed for each of the 21 trading days. Market return was taken as the geometric average return from the day's closing prices divided by opening prices and subtracted one.
iii) Expected returns: Market model is a linear relationship of the market and the returns of the specific company. The linear regression equation was used to obtain expected returns of the firms in the sample.
vi) Abnormal returns: Abnormal returns were obtained by deducting expected returns from actual returns of the companies in the sample. The computed abnormal returns were tested to identify any statistical different from zero.

### 4.3. Statistical Analysis of R-Squared

Table 4: Statistical analysis of firms with CEO changes; Sample size 15

| COMPANY | AR | SEE | t-statistics | $\mathrm{r}^{2}$ |
| :--- | :---: | :---: | :---: | :---: |
| KCB | 0.220 | 0.011 | $2.407^{* *}$ | 0.376 |
| STANCHART | 0.5990 | 0.0062 | $8.4696^{* * *}$ | 0.6792 |
| HOUSING FINANCE | -0.246 | 0.028 | 0.210 | 0.065 |
| TOTAL | 0.385 | 0.012 | $7.881^{* * *}$ | 0.441 |
| EAST <br> CABLES | -0.135 | 0.025 | 0.285 | 0.054 |
| BAMBURI | 0.499 | 0.011 | $6.967^{* * *}$ | 0.582 |
| BAT | -0.249 | 0.012 | 0.002 | 0.001 |
| NMG | -0.0883 | 0.0402 | 0.6753 | 0.1837 |
| CENTUM | 0.185 | 0.018 | $2.134^{*}$ | 0.348 |
| KPLC | -0.158 | 0.015 | 0.046 | 0.008 |
| SAMEER | 0.479 | 0.039 | $6.524^{* * *}$ | 0.566 |


| PAN AFRICAN | -0.026 | 0.036 | 0.824 | 0.121 |
| :--- | :---: | :---: | :---: | :---: |
| SASINI | -0.117 | 0.055 | 0.266 | 0.042 |
| CFC BANK | -0.197 | 0.011 | 0.011 | 0.002 |
| EABL | 0.053 | 0.008 | 1.224 | 0.290 |

$\mathrm{AR}=\mathrm{Abnormal}$ return

SEE $=$ Standard error of estimate
$r^{2}=$ coefficient of determination

Table 5: Statistical analysis of firms without CEO changes

| COMPANY | AR | SEE | t-statistics | $\mathrm{r}^{2}$ |
| :--- | :---: | :---: | :---: | :---: |
| BARCLAYS | 0.028 | 0.008 | 1.227 | 0.149 |
| NATIONAL BANK | 0.162 | 0.007 | $1.970^{*}$ | 0.330 |
| DIAMOND TRUST | -0.074 | 0.030 | 0.653 | 0.140 |
| UNGA | 0.251 | 0.036 | $3.010^{* * *}$ | 0.376 |
| MUMIAS | -0.176 | 0.042 | 0.101 | 0.020 |
| MUMIAS | -0.190 | 0.006 | 0.040 | 0.008 |
| ATHI RIVER | -0.022 | 0.035 | 0.891 | 0.182 |
| SCAN GROUP | 0.9182 | 0.0107 | $5.9089^{* * *}$ | 0.9387 |
| EQUITY | 0.079 | 0.056 | 1.431 | 0.263 |
| KENGEN | 0.325 | 0.017 | $3.884^{* * *}$ | 0.437 |
| EVEREADY | -0.189 | 0.050 | 0.047 | 0.009 |
| JUBILEE | -0.183 | 0.023 | 0.073 | 0.014 |
| KAKUZI | -0.104 | 0.011 | 0.433 | 0.080 |


| KENYA RE | 0.552 | 0.009 | $8.393^{* * *}$ | 0.627 |
| :--- | :---: | :---: | :---: | :---: |
| UNGA GROUP | 0.554 | 0.012 | $8.466^{* * *}$ | 0.629 |

$\mathrm{AR}=\mathrm{Abnormal}$ return
SEE $=$ Standard error of estimate
$r^{2}=$ coefficient of determination

In table 4 and table 5 it's indicated that the systematic risk at NSE explained $67.92 \%$ of the total risk. The unexplained part related to the diversifiable or unsystematic risks.

### 4.4. Average Abnormal Returns

Table 6: Average Abnormal Return at announcement date of CEO change

|  | Abnormal <br> Returns(AR) | Cumulative <br> Abnormal <br> Returns <br> (CAR) | Average <br> Adjusted <br> Returns (AAR) | Cumulative <br> Average <br> Adjusted <br> Returns(CAAR) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -15 | -0.00101 | -0.03268 | -0.02133 | -0.40525 | -. 651 |
| -14 | 0.00293 | -0.03167 | -0.02239 | -0.38392 | -. 144 |
| -13 | -0.00283 | -0.03461 | -0.03698 | -0.36153 | -. 333 |
| -12 | -0.00133 | -0.03177 | -0.02334 | -0.32454 | -. 876 |
| -11 | -0.00338 | -0.03044 | -0.02367 | -0.30120 | -.652*** |
| -10 | -0.00509 | -0.02706 | -0.02236 | -0.27754 | -. 026 |
| -9 | -0.00135 | -0.02197 | -0.02295 | -0.25518 | -. 958 |
| -8 | -0.00360 | -0.02062 | -0.02831 | -0.23222 | 1.283 |


| -7 | -0.00671 | -0.01702 | -0.02396 | -0.20391 | 1.422 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -6 | -0.00402 | -0.01031 | -0.02258 | -0.17995 | 1.451 |
| -5 | -0.00298 | -0.00629 | -0.02675 | -0.15737 | 1.919*** |
| -4 | 0.00138 | -0.00331 | -0.02629 | -0.13062 | 1.989 |
| -3 | -0.00284 | -0.00469 | -0.02344 | -0.10433 | 1.518 |
| -2 | -0.00349 | -0.00185 | -0.02525 | -0.08089 | 2.711** |
| -1 | 0.00167 | 0.00164 | -0.02806 | -0.05563 | 2.641 |
| 0 | -0.00003 | -0.00003 | -0.02757 | -0.02757 | 2.367 |
| 1 | -0.00030 | -0.00034 | -0.03757 | -0.06514 | 2.538 |
| 2 | -0.00043 | -0.00077 | -0.02281 | -0.08795 | 2.358 |
| 3 | -0.00506 | -0.00583 | -0.02650 | -0.11445 | 1.688 |
| 4 | . 0.00022 | -0.00560 | -0.01935 | -0.13380 | 1.341 |
| 5 | 0.00158 | -0.00403 | -0.02060 | -0.15440 | 1.274 |
| 6 | 0.00138 | -0.00265 | -0.01839 | -0.17279 | 1.253 |
| 7 | -0.00155 | -0.00420 | $-0.01849$ | -0.19128 | 1.317 |
| 8 | -0.00405 | -0.00825 | -0.01674 | -0.20802 | 1.392 |
| 9 | 0.02245 | 0.01420 | -0.01756 | -0.22557 | 1.931 |
| 10 | -0.02614 | -0.01194 | -0.01917 | -0.24475 | $1.358^{* * *}$ |
| 11 | -0.00717 | -0.01912 | -0.02147 | -0.26621 | 1.228 |
| 12 | -0.00820 | -0.02731 | -0.01830 | -0.28451 | 1.624 |
| 13 | -0.00492 | -0.03223 | -0.02092 | -0.30543 | 1.895 |
| 14 | -0.00653 | -0.03876 | -0.00267 | -0.30811 | -1.295 |


| 15 | -0.00009 | -0.03885 | -0.01973 | -0.32784 | .515 |
| :--- | :--- | :--- | :--- | :--- | :--- |

* Statistically significant at the $10 \%$ level
**Statistically significant at the $5 \%$ level
***Statistically significant at the $1 \%$ level

Figure 3: Average return for all the companies


In order to determine the sensitivity of the stock price to CEO change announcement, the researcher calculated the $t$-statistics for the 15 days before, during CEO announcement and after CEO change announcement, if the $t$ - value was close to 2 this was an indication that the shares were sensitive to CEO change announcement. From the finding shown in table 6 , it was found that on 15 date before CEO change announcement the $t$ statistics was negative an indication that the share price were sensitive to CEO change announcement.. Approaching -8 day there was a positive rise. On the event date it was found that the share prices were sensitive to CEO change announcement as shown by t -
value of 2.367 . Stock prices on event day adjusted rapidly to incorporate the new information of CEO change announcement.

Average abnormal returns represent the extent to which actual returns over 31 day event window different from the expected. Table 6 shows that the Abnormal return for the 31 days event window fluctuated between negative and positive for the days studied. $22.58 \%$ of all the abnormal returns over the events window were positive.

In table 6 a statistically positive AR of $2.711 \%$ is observed on day -2 , being the second day before the announcement which was statistically significant at the $5 \%$ level. The AAR observed on event day 0 of $2.367 \%$ which is statistically significant at the $10 \%$ level. Combining the AAR on -1 day and 0 day gives a total AAR for the two days of $5.008 \%$ or a positive reaction to the announcement of the CEO change.

The AAR observed on day +1 and +2 are also positive, $2.538 \%$ and 2.358 respectively, but are statistically significant.

Five statistically significant AAR were found and recognizable around the CEO change announcement at $5 \%$ significance level. Two were before the announcement, two after the announcement and the other on announcement day with positive AAR of $2.711 \%$, $2.641 \%, 2.538 \%, 2.358 \%$ and $2.367 \%$ respectively.

Furtado and $\operatorname{Karan}(1990)$ on their ten event studies of the effect CEO change on shareholder wealth find that the results of the studies at the date of the change were inconclusive. Six of the studies observed positive abnormal returns at the announcement date, three of which were statistically significant. Of the four studies observing negative abnormal returns, one result was at a significant level.

It was observed from figure 3 that the AAR was negative before and during the day of CEO change announcement. After the announcement AAR of firms with CEO changes gradually rose positively.

## 4. 5. Hypothesis testing

The main objective of this study was to test the effect of CEO changes announcement on stock returns. The abnormal returns around the announcement date were tested to determine that they are significantly different from zero.

The null hypothesis states that Average Cumulative Abnormal Returns (CAR) at the date of CEO change announcement of NSE listed company that experienced change of CEO is not significantly different from zero.

## T-statistics for $\mathbf{3 0}$ days surrounding event date

From table 4 and 5, it was found out that 6 of the companies with CEO changes in the sample rejected the null hypothesis. 4 of the hypothesis were rejected at $95 \%$ confidence level. 9 of the companies, that is, $40 \%$ of the sample failed to reject the null hypothesis. It was observed that the same numbers of hypothesis were rejected for both companies that experienced CEO change and those without.

Table 7: Average cumulated Abnormal Returns (ACAR)

| Event window | Average cumulated Abnormal Returns <br> $($ ACAR $)$ |
| :--- | :--- |
| $(0)$ | -0.02757 |
| $(-5,+5)$ | -0.28419 |


| $(-10,+10)$ | -0.4947 |
| :--- | :--- |
| $(-15,+15)$ | -0.7055 |

The hypothesis was tested using event window $(0),(-5,+5),(-10,+10)$ and $(-15,+15)$.
From table 7 average cumulative Abnormal returns of -0.02757 was observed for day 0 , event window which was significant at the $5 \%$ level. The market, therefore, react negatively to the announcement of the CEO change at the date of announcement. This gives sufficient evidence to reject hypothesis at 5\% significance level.

In the contrast, Suchard et al (2001) in their study of Australian firms find a positive but insignificant on the day of CEO change announcement. They also observed a significant a negative response the day after of announcement of the CEO change.

A negative ACAR of -0.28419 was observed on 11-day, event window $(-5,+5)$ indicating a small reaction in the total when the market had four days to adjust to the announcement.

Bonnier and Bruner (1989) they found a different result. They found significantly positive excess returns in response to the announcement of the CEO change. But they considered only firms which had underperformed prior to the CEO change. Negative of 0.4947 and -0.7055 results were observed for 21 -day event window $(-10,+10)$ and $31-$ day event window $(-15,+15)$ respectively.

In this study a significant negative reaction was observed on the day of the CEO change announcement day and the null hypothesis is rejected

### 4.6. Market performance before, during and after CEO change

Figure 4: KCB stock market performance during CEO change announcement


Figure 5: Standard Chartered stock market performance during CEO change announcement


Figure 6: Housing Finance stock market performance during CEO change announcement


Figure 7: Nation Media Group stock market performance during CEO change announcement


Figure 8: Total Kenya stock market performance during CEO change announcement


Figure 9: E. A. Cables stock market performance during CEO change announcement


Figure 10: Bamburi Cement stock market performance during CEO change announcement


Figure 11: BAT stock market performance during CEO change announcement


Figure 12: Centum Investments stock market performance during CEO change announcement


Figure 13: KPLC stock market performance during CEO change announcement


Figure 14: Sameer stock market performance during CEO change announcement


Figure 15: Pan African stock market performance during CEO change announcement


Figure 16: Sasini stock market performance during CEO change announcement


Figure 17: CFC Stanbic stock market performance during CEO change announcement


Figure 18: EABL stock market performance during CEO change announcement


## CHAPTER FIVE

### 5.0. SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents discussions of the key findings presented in chapter four conclusions drawn based on such findings and recommendations there-to. This chapter will thus be structured into summary, conclusion, recommendations, limitations and areas for further research.

### 5.1. Summary of Major Findings

This study studied 15 instances of CEO change announcement events from 2005 to 2009 that make $29.41 \%$ of the active listed firms at NSE that experienced CEO change in the five years. The objective of the study as outlined earlier was to determine whether stock returns adjusted to CEO change announcement. The study has found out that the announcement of the CEO change has a significant effect on stock returns on the day of the announcement.

The study established that the market was very sensitive to CEO change announcement.
The study found that on 15th day before CEO change announcement the $t$ - statistics was negative, an indication that the share price were insensitive to CEO change announcement. From -2 day through to -1 before CEO change announcement there was a declining positive reaction and the market was found to be sensitive to CEO change announcement. On event date it was found that the share prices were sensitive to CEO change announcement as shown by $t$-value of 2.367 . This continued up to second day after the announcement, a clear indication that during few days before, during and after the event date the share prices were very sensitive to CEO change announcement .

The study found that CEO change announcement had various effects on the market performance of various companies; it was revealed that CEO announcement had positive effect on market performance of some companies. In the case of CEO change announcement by KCB, the study found that stock return increased following CEO change, this was followed by a sharp reduction in stock returns. These depict that stock prices are followed by price reduction making the stock tradable in the market after the CEO change. This concurs with the findings Denis and Denis (2005) who found that a positive impact on firm performance of change of CEO requires that the board of director has ability to recognise and attract and superior successor. Rhim et al (2006) find that the stock market reacts more favorably in cases where the CEO change was not anticipated by the market. It can be argued that anticipated events are already incorporated into the current share price of the affected company (Fama, 1970). Friedman and Singh (1989) find that stockholders react positively if prior firm performance is poor, and the succession was initiated by the Board or the CEO, and if the prior firm performance was good, the stock price reaction is negative.

The study has found that the announcement of CEO change has significant negative effect on stock returns on the day of announcement. There is a significant negative movement in the stock the day after the announcement and insignificant positive movement a day before the announcement date which suggests that the market has received the information about the pending change event prior to the date of official announcement (carol, 2007).

CAR of the studied sample gave positive result in -1 day before or 9 day after the announcement but not significant. The CEO change did not destroy value on average but did not provide a significantly better performance than the market as a whole.

In summary companies generally experienced a small negative information effect or reaction to CEO change events. These events then led to a small but insignificant negative real effect over the 31 days period.

### 5.2. Conclusions

Based on the findings presented in chapter four and discussed above, the study concludes that CEO change announcements by firms listed at NSE yielded either positive and negative effects on daily mean returns. Negative effects were on the days nearing the CEO change announcement event days which were as result of investors expectation in the market while positive effects were in the days far from the CEO change announcement day which were result of buyer seller initiated trading.

The study has found that the announcement of CEO change had a significant negative effect on the stock returns on the day of the announcement. There was an insignificant positive movement in the stock returns the day before the announcement which suggested that market had received the information about the impending CEO change prior to the announcement date. It would appear that the reaction on the day of announcement was a market correction of the previous day's positive reaction.

The effect of the CEO change announcement on the stock returns was, however, not significant when considered over 3-day, 7 -day and 31-day event windows. This suggested that the information effect around the event date of CEO change had no permanent impact on stock returns of companies making changes.

The CAR analysis using daily data showed that the firms generally respond to CEO change announcements. The market picks up signals of impending CEO change announcements and responds to both good news and bad news. The study shows, however, that the market continues to respond to both types of news that is inconsistent with the efficient market hypothesis.

Finally, the study provides evidence that NSE is a semi-strong form of market efficiency because stock prices adjusted rapidly to the announcement of CEO change announcement.

### 5.3. Recommendations

A number of recommendations emerge from the findings of the study, ranging from the encouragement of capital inflows and proper dissemination of information. The key recommendations are:

Improve the communication infrastructure: this study will encourage efforts to improve the communication infrastructure at NSE. Information about the stock market should be disseminated on a daily basis, as is done in developed markets. Most newspapers and television stations now disseminate stock market information during the weekdays, and this can be extended to weekends. However, poor electricity supplies limit access to information disseminated through the television.

Recommendation to listed companies to acknowledge that CEO change announcement is price sensitive information. Disseminating of the same must be cautiously to avoid leakage of impeding changes to the market before the official announcement date. This will enable the market to adjust rapidly to the new information on the date of
announcement and nobody make abnormal returns from the publicly available information.

Encourage quoted companies to provide reports: Companies should be given incentives by CMA and NSE to provide timely information about their activities and more especially CEO changes.

Recommendation for the Board of directors would be to take care in choosing a CEO for replacement, because the CEO is a key driving factor in the company and stock return performance.

### 5.4. Limitations of the study

This studies, like most other studies, experienced limitations and difficulties including among others: the number of companies trading at NSE are fewer compared to developed countries; there was no single event studies on the effect of CEO change announcements that had been done in Kenya making the researcher to rely on studies done in developed countries; Most time the reasons of CEO departure are given in the financial reports are Board resolutions, resignation or retirement but no explanation given to cause of departure.

The research was concerned with the financial impact of a change in CEO. It examined only the effect of a single historical event and did not examine the personal characteristics of a CEO that may bring about positive or negative change in the stock returns. The study can therefore not be used to assess the likely effect of an outgoing or incoming CEO on financial performance based on the CEO's individual characteristics.

The research studied the effect of CEO change announcement event which had already taken place. It was not analysis of the factors leading to the CEO change, and cannot be used as a predictor of the likehood of a change in CEO.

The period of CEO change measured was for 5 years period and may therefore not be generalized to all CEO changes over time.

Only listed companies were included in the study, making it difficult for the findings to be generalized to non listed organization.

This research used a single method of calculating stock expected returns. Other methodologies such as Fama and French (1992) three-factor model may have yielded different results.

## 5. Areas of Further Research

Unlike studies on market efficiency done in developed countries, few studies have been done in emerging and developing markets. Very little effort has been made so far in testing the semi-strong efficient markets in Kenya.

This study leaves wide areas on CEO change that requires further investigation, such as, the effect of CEO change on firm performance; and inside and outside replacement effect on stock returns.

Possible area of further research is on pre-CEO change financial performance of the firm as this would be used to predict CEO change particularly in the case of poor financial performance.

Further research can be conducted on Board composition and possible association between independent Board of directors or with majority of outside directors and the CEO change.

The result of this study leads to a recommendation of further studies on other announcements such as takeovers, bankruptcy, merger, poor performance, etc.

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## APPENDICES

Appendix 1: Number of CEO changes by year, 2005-2009, sample of 15 companies listed at NSE

| COMPANY | DATE OF <br> ANNOUNCEMENT | OLD CEO | NEW CEO |
| :---: | :---: | :---: | :---: |
| British Amcrican <br> Tobacco Kenya Ltd | December 1,2006 | Simion Welfford | N. Mistre |
| Standard Chartered <br> Bank Ltd | November 1,2006 | Michael Hart | Richard Etemesi |
| Pan Africa Insurance <br> Holdings Ltd | April 1, 2008 | Andrew Greenwood | Tom Gitogo |
| Housing Finance Co. <br> Ltd | July 26, 2006 | Peter Lewis <br> Jones  | Frank Ireri |
| Kenya Commercial <br> Bank Ltd | Janaury 1, 2005 |  | Martin Oduor <br> Otieno  |
|  <br> Lighting Co. Ltd | September 1,2007 | Zachary Oyieko | Joseph Njoroge |
| East African <br> Breweries Ltd | July 1, 2009 | Gerald K. Mahinda | Seni Adetu |
| E.A. Cables Ltd | December 1, 2008 | Mugo Kibati | George Mwangi |
| Sasini Ltd | October 1, 2008 | P.W.Muthoka | Caeser <br> M.J.Mwangi |


| Nation Media Group | December 1, 2006 | Kiboro <br> Wilfred | Linus Githai |
| :--- | :--- | :--- | :--- |
| Ltd |  |  |  |$\quad$| Centum Investment | October 1,2008 | P.K.Mwangi | James Mworia |
| :--- | :--- | :--- | :--- |
| Bamburi Cement Ltd | Jannuary 20, 2009 <br> . | Michel <br> Puchercos | H. Mansi |
| Total Kenya Ltd | August 30, 2008 | Felex <br> Majekodunmi | Fontanges |
| CFC Stanbic Holdings <br> Ltd | January 1,2009 | Munda A. | Mbathi Kitili |
| Sameer Africa Ltd | January 1, 2008 | E.M.Kimani | M.M. Karanja |

Appendix 2: Firms' AAR on CEO changes announcement

| Positive Stock Returns | Negative Stock Returns |
| :--- | :--- |
| KCB | Total Kenya |
| Standard chartered | E.A Cables |
| House Finance | Bamburi cement |
| Nation Media Group | BAT |
| Centum Investments | KPLC |
| EABL | Sameer Africa |
| Pan Africa Insurance | Sasini Tea |
|  | CFC Stanbic Bank |

