EFFECT OF EARNINGS ANNOUNCEMENT ON SHARE PRICE IN KENYA: A STUDY OF NAIROBI SECURITIES EXCHANGE

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university.

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This research project has been submitted for examinations with my approval as university supervisor.

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DEDICATION

I dedicate this work to my family, more so my Husband, my beloved mother, my sisters, my children and all my lecturers and friends.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to God Almighty, for His eternal blessings.

My dear husband for his everlasting support.

My beloved mother for her encouragement.

My adorable children for their support and understanding.

My loving and caring sisters.

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These last few years have taught me a great deal, and are invaluable in many ways.

I will forever remain indebted to all those who made this possible.

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LIST OF ABBREVIATION AND ACRONYMS

AAR - Average Abnormal Return

ATS - Automated Trading System

CBK - Central Bank of Kenya

CDS - Central Depository System

CMA - Capital Markets Authority

ETF's - Exchange Traded Funds

EMH - Efficient Markets Hypothesis

IPO - Initial Public Offering

NASI - NSE all share index

NPV - Net Present Value

NSE - Nairobi Securities Exchange

P E - Price Earnings

P E A D – Post Earnings Announcements Drift

ABSTRACT

The objective of this study is to determine whether an effect exists on share prices due to the announcement of earnings by individual companies listed on the Nairobi Stock Exchange and the significance of these announcements on their aforementioned companies. An event study research design was selected since it explains how a given response variable, in this case- the share price is influenced by a set of explanatory variables, such as time or earnings announcement. A reasonable event window of 30 days had been selected and was expected to provide ample allocation for any expected reaction in share price as a result of an earnings announcement. The data used incorporated daily share price data from 65 listed companies in the Nairobi Securities Exchange. The scope of the data was 2 years (2014 and 2015). For data analysis, the market model was used. The response variable was the actual return on stock and this return was compared to the general return in the market. The abnormal return (AR) was thus a difference between the actual return and the market return. To model the actual return, a regression model was used, with the market return as the main explanatory variable. For model testing, the t-model was used. For additional model testing, the Chi-Square test was used and it had been selected due to its ease of implementation, especially for categorical data such as the ones used in this study (returns for stocks in different sectors). Through observation of abnormal returns, it was seen that the market is not strong form efficient and that due to relative delays in market adjustments, investors might exploit such "inefficiencies" in order to generate excess risk adjusted returns. This investigation showed that earnings announcements are a significant factor that influence share prices. This was shown through t-tests and chi square tests. In addition, it showed that the market is more sensitive to announcements of a negative nature (earnings decline or loss) as compared to positive announcements (earnings increase). This investigation also led to the discovery that effects of earnings announcements are observed even before the announcement date and they continue to be felt even after the announcement. It is very reactionary and this is seen where the market takes a relatively long period of time to adjust market prices back to their expected levels.

CHAPTER ONE: INTRODUCTION

1.1Background of the Study

Information relating to an entity's earnings has and still is a critical issue in the field of finance and accounting. Information influences every aspect of corporate businesses and the contemporary financial market (Demers & Vega, 2008). The management uses the various corporate announcements for instance, earnings announcements, dividend announcements among other corporate actions to relay information to the stakeholders and more specifically, the shareholders. Earnings announcements in particular, is a statement made publicly by an entity to report its profitability and performance over a given time duration usually on a quarterly, semiannual or annual basis. It may be expected that that share prices react to the released announcements. This however has been subject to diverse opinions from various finance scholars.

Fama (1970) emphasizes that for markets to be efficient, stock prices should rapidly and accurately incorporate the available information. Kahneman and Travesky (1974) however posit that investors are influenced by behavioral biases when making investment decisions rendering the market inefficient. Consequently, investors decisions are influenced either positively or negatively, both directly and indirectly of course depending on how the information is perceived. This study seeks to investigate the effect of earnings announcements on share prices in the Nairobi Securities Exchange in light of new technological aspects that have emerged assuming rationality amongst investors.

1.1.1. Earnings Announcements

Earnings are essentially the amount of profits after tax that a company makes over a given time duration. Information on earnings of a company is usually contained in the statement of financial performance which basically entails the revenues and expenses of the company. Earnings announcements on the other hand is a statement made publicly by an entity to report its profitability and performance over a given time duration usually on a quarterly, semiannual or annual basis to aid in stakeholder's decision making process (Siegel & Chang, 2009). For instance, shareholders would want to ascertain the possibility of receiving dividends, potential investors would want to determine the possibility of a return on their investment while investment managers would want to assess the market for profitable investment opportunities to venture in (Booth et al., 2011).

Numerous studies on earnings announcements have generated mixed results across the globe. Aharony and Swary (1980) discovered that earnings announcements are used by managers as a signaling tool to convey information about the prospects of a firm. They further point out that just like dividends, this information is immediately reflected in the stock price following the public announcement. Oluoch (2003) in his research on the effect of earnings announcement on share prices at the Nairobi Stock Exchange concludes that timing of the release of annual reports do not correlate with firm's earnings. Generally, a company is viewed more favorably by the investors if it exhibits high earnings as opposed to low earnings (Barker & Imam, 2008). In this regard, the subject of earnings announcements has and will always be regarded as a riveting topic for research.

1.1.2. Stock Price

A share price is simply the price at which a stock trades at the securities exchange market. According to Fama (1970), the market price of a given stock should be equal to its intrinsic value. As such, a stock can be qualified as being undervalued, correctly valued or overvalued depending on the position of the market price relative to its intrinsic value. Malkiel (1973) further hypothesizes that stock prices movements are erratic and as such past stock price data cannot be used to predict future stock prices. Stock price movements have also been reported to vary contemporaneously with patterns in reported earnings in the long run (Halsey, 2001).

A stock price extensively reflects a company's value and its overall strength as a going concern and is usually driven by the earnings projections. A company that is doing well financially will post a rise in its share price and on the other hand a company in financial distress will post a falling share price. Shareholders normally make return by employing the strategy of buying low and selling when the stock prices go up. Share prices have however also been found to be influenced by other factors other than the performance of the firm (Peiro, 2016). Nyamute (1998) ascertained that macroeconomic variables such as inflation rate, money supply, treasury bill's rate and exchange rate influence the movement of stocks prices at the securities market. Sharif et al. (2015), documents a positive and substantial relationship between the logarithm of market capitalization and return of equity, book value per share, dividend per share and price earnings ratio an indication that these factors are instrumental in modeling the general movement in market share prices. Interestingly, they found a significant negative relationship found between market price per share and dividend yield.

1.1.3. Stock Prices and Earnings Announcements

Normally, the stock price can take a positive and negative trend after an earnings announcement of course depending on either internal or external factors including exchange rates inflation (Reilly & Brown 2002). According to the EMH, any new information released in the market is instantaneously reflected in the stock prices. The post earnings announcement drift (PEAD) is one of the most prevalent market anomalies in the field of finance and accounting. Shivakumar (2007) points out that this anomaly occurs when the earnings information discharged to the market is not absolutely processed and reflected in the stock prices causing a gap that leads to an impediment in adjusting the stock prices back to equilibrium levels. Existence of the anomaly is an indication of existence of behavioral biases amongst investors a phenomenon which has rather gained a lot of prominence in the field of finance and accounting especially after the Nobel Prize to Kahneman & Tversky in 2002.

Studies on stock prices and earnings announcements have generated mixed results. The drift was first documented by Ball and Brown (1968) who found out that yearly income numbers (EPS) are valuable and linked to movements in security prices. However, these reports were not the only source of information used by investors to decide what exactly constitutes the intrinsic value of a stock leading to the conclusion that it is rather laborious to determine the complete impact of earnings announcements on share price movements. Brav and Heaton (2002) evidenced increase in information uncertainty amongst investors. This led to colossal transactions costs and increased the investors ability to take advantage of arbitrage opportunities therefore affecting the share prices. Bernard and Thomas (1989) arrived at the same conclusion.

Clearly, this topic has been subject to numerous research amongst scholars. However, a gap exists due to profound technological advancements in securities markets. This study therefore seeks to examine the impact of earnings announcements on share prices in light of these developments.

1.1.4. Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) is a voluntary association of stockbrokers which was instituted in 1954 and charged with the mandate of developing and regulating the securities market. The Capital Market Authority oversees the activities of the NSE as stipulated in the CMA Act (Cap 495A). It essentially helps in creating a reliable, orderly and efficient market trading platform. The automation of NSE in 2006 alongside its demutualization in 2012 was a momentous event that positively positioned it to enhance liquidity in the market and facilitate informational and allocational efficiency. The NSE has various stock indices to measure market performance; NSE All Share Index (NASI), NSE 20 share index (N20I) and NSE 25 share index (N25I) which was introduced to facilitate trading of derivatives at the NSE (NSE, 2015).

NSE has been shown to exhibit a number of anomalies amongst them pre and post earnings announcement which causes erratic fluctuations in the share price. Maina (2009) evidenced that stock returns including earning per share and trading activity of quoted companies reacted to earnings announcements. Warning announcements have also been evidenced to cause similar unforeseen movements in security prices. Examples of companies that issued warnings include KQ and Uchumi: In September 2015, Uchumi Supermarket issued a profit warning, the forecast had a 25% decline in

earnings for the year 2015 as compared to the 536 million profits earned for the year 2014. Despite the profit warning, Uchumi share prices rose due to speculation. In compliance with CMA regulations, Kenya Airways issued a profit warning in November 2014, anticipating a decline in earnings by at least 25%, for the year ending 31/03/2015.The share prices have mostly been in the decline since then.

This undoubtedly brings out the PEAD anomaly at the NSE. However, an interesting gap exists with regards to the current trend of technological rev up. For example, today people and businesses can access information anywhere and anytime due to the advanced networking efforts by the major technological firms in the world. This together with the fact that we used all the listed firms at the NSE formed the focal point of this intriguing research.

1.2. Research Problem

Earnings are an important tool used by stakeholders to gauge the performance of a company. For instance, shareholders would want to ascertain the possibility of receiving dividends, potential investors would want to determine the possibility of a return on their investment while investment managers would want to assess the market for profitable investment opportunities to venture in (Booth et al., 2011). A stock price extensively reflects a company's value and its overall strength as a going concern and is usually driven by the earnings projections among other factors. Generally, the relationship between earnings and stock price has and still is generating profound debate amongst finance and accounting scholars. However, as stipulated in finance theories, any earnings announcement should be instantaneously reflected in the stock prices. Basically a company that is doing well financially will post a rise in

its share price and on the other hand a company in financial distress will post a falling share price.

Studies conducted at the NSE indicate the anomaly of post and pre earning announcement drift. Koech (2013) observed and concluded that stock split announcements are informational events which caused general increase in stock prices while Wamweya (2012) evidenced that companies that reported negative news for a period of a minimum of 60 days from the day of earning announcements posted the anomaly. This has greatly been attributed to the fact that investors are human beings and are often influenced by heuristic driven biases, frame dependence, social and emotional and market inefficiencies when making investment decisions (Kahneman & Tversky, 2002). This debate between behavioral finance and market efficiency proponents has led to numerous research indicating that the NSE is efficient in the weak form, evidence of the existence of market anomalies.

Global studies on earnings announcements and stock price have yielded diverse results. Thu (2014) studied the stock reaction to earning announcement at the Ho Chi Minh stock exchange. It was established that average abnormal return and cumulative abnormal return can be earned in some specific days which means earnings announcement had some impacts on stock performance. Aga and Kocaman (2008) studied reactions of stock behavior around earnings announcements. They evidenced positive market reaction to high earnings announcements and negative reaction to low earnings announcements. Mendenhall (1991) also arrived at the same conclusion but Das, Pattanayak and Pathak (2008) evidenced the nonexistence of visible abnormal returns encircling earnings announcements. A recent research conducted on this topic by Mlonzi et al. (2011) using a sample period of one year, tested the sample firms

listed on the alternate exchange (ALtX) whereas our study tested all sample firms listed on the NSE securities exchange irrespective of exchange listing.

Local studies conducted at the NSE on the topic of earnings announcements and stock price have shown the presence of the PEAD anomaly. Koech (2013) observed and concluded that stock split announcements are informational events which caused general increase in stock prices while Wamweya (2012) evidenced that companies that reported negative news for a period of a minimum of 60 days from the day of earning announcements posted the anomaly. Francis (2013) found out that dividend payment increase announcements instigated an increase in stock prices while a dividend payment decrease announcement caused a decrease in stock prices. Clearly, there exists a gap on earnings announcement in organizations listed in Nairobi Securities Exchange in Kenya due to the entrance of emerging trends in technology. Therefore, the research question became; what was the effect of earnings announcement on share price on Nairobi Securities Exchange?

1.3 Research Objective

This study seeks to investigate the effect of earnings announcement on share prices at the Nairobi Securities Exchange.

1.4 Value of the Study

Earnings announcements can be of value to the following stakeholders: Investors and shareholders, Academicians and Researchers, Policy makers and Regulators.

Investors and shareholders can benefit from this information to make rational decisions, either to diversify their portfolio with the aim of increasing their wealth. Investors are able to make decisions on which stocks to hold or sell in order to maximize their overall wealth. This can be achieved by timing the release of the information and therefore taking advantage of the abnormal returns generated by some stocks.

Researchers and Academicians can enhance their knowledge on theories such as the EMH. This will enable them to come up with new theories in this subject matter. The study would also bring more perceptions as to the validation of the efficient market hypothesis.

Policy makers and Regulators rely on earning announcements to formulate and implement new laws which can enhance utilisation of economic resources. Information on the earnings announcement will be used in policy formulation so as to provide an environment which will promoted optimal allocation of resources by the stock markets.

1.5. Chapter Summary

Earnings are an important tool used by investors to predict the future of firms. Through earnings, investors picture a certain image about a company; it may be positive or negative depending on how they view it. The earnings announcement affects the performance of share prices in very significant ways. For, instance they show the longevity of a company in the market.

Both international and local researchers have invented different theories to explain the effects of earnings announcement on stock prices clarifying themselves through the Signaling and Random Walk theories and the Efficient Market Hypothesis. Others have taken a close look on macro-economic variables. All these researchers came to infer that earnings announcements, be it dividends, stock splits have the capability of swaying the investors to or away from a specific firm's side. The announcements are the spine that enables the investors to make decisions about where to invest their money. A better performing firm encourages investors to pull to their side while one that does not suffer the opposite.

This study sought to investigate the effect of the earnings announcement on stock prices at the NSE on light of new technological advancements with a view of examining all firms listed at the NSE.

The NSE has been mandated to provide a conducive trading base for all listed securities and to overseeing and regulating the activities of its individual firms.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is divided into three sections. First section discusses the theoretical literature on Earnings announcement and share prices and the relationship between the two variables. Second section examines the empirical studies on the effect of Earnings announcement on share prices and the lastly is a summary of the literature review, empirical evidence and the space or gap that this research intends to fill.

2.2 Theoretical Review

The theoretical review will be based on three theories which will help explain how the earnings announcement and stock prices relate. These theories are the efficient market hypothesis, the random walk theory and signaling theory.

2.2.1 The Efficient Markets Hypothesis

The EMH was introduced by Professor Eugene Fama in 1970. He stipulated that the stock prices should be quoted at the intrinsic value and as such investors cannot purchase undervalued or overvalued stocks (Fama, 1970). This implies that outperforming the market is a matter of an impossibility regardless of whether one is an expert in selecting stocks or timing the market and as such the only way to obtain higher returns is by taking riskier investments. In summary, the efficient market hypothesis, rests on a slew of assumptions which have time and again been greatly

criticized on the grounds that they are illogical and impractical: Oe, investors have equal access to market information and use the information to make investment and trading decision by evaluating individual securities, the markets and the economy at large. Two, major events in the market are random and are quickly broadcasted by the investors as soon as they happen e.g. major lawsuits, accidents, labor strikes etc. and of course cause major impacts on stock prices. Three, investors reaction to the new information is full and quick.

Fama (1970) further hypothesized three forms or levels of market efficiency: Weak form of market efficiency, under this form of EMH stock prices reflect all past information such as trading volumes and past stock prices. Semi strong form asserts that stock prices completely reflect both the past and publicly available information. Rosenberg et al. (2006) explains that public information includes both previous prices, and data reported in a company's financial statements (annual reports, income statements, filings for the State Security Commission, etc.), dividend payments, stock split announcements, announced merger plans, new product. Lastly, the strong form of EMH is more extensive as stock prices reflect both public information as well as private, typically held by corporate insiders, such as officers and executives of the corporation. Under this form of EMH even the corporate insiders cannot use information at their disposal to beat the market. Cheol (2012) reiterates that a strong form of efficiency involves all public and private available information plus all other important pieces of information.

Numerous studies conducted to test the validity of the efficient market hypothesis have generated mixed results. Mlonzi et al. (2011) tested this hypothesis by observing the reaction of stock markets to earnings announcements and observed inefficiencies

in the market. The EMH purports that the movements in stock prices display a random pattern and as such an investor cannot use the current or past data to predict future prices which definitely discredits the work of chartists. This implies that in as much a share price has gone up over the past days it does not mean the next pattern will be downward sloping and vice versa. However, Fama (1970) explains that investors can for sure make investment margins by trading on company reports and other publicly available information. Mabhunu, 2004 established that investors at times are left with no motivation to collect and analyze the publicly available information since all the information is already known by all the participants in the market

2.2.2. Random Walk Theory

Random walk theory posits that market stock prices depict a random trend and thus stock market predictions cannot be done in advance. That is, direction and past movements of the price of a given stock or rather the market cannot be used to project future movements. It further assumes that each and every change is autonomous of any previous changes and thus trends identified by technical analysts are not helpful. It is universally accepted that the random walk is clarified by Fama's (1970) Efficient Market Hypothesis. This theory was renown in 1973 upon the publication of the book 'A Random Walk Down Wall Street' by Barton Malkiel. Proponents of the random walk hypothesis believe that it is out rightly impossible to outperform the market without bearing extra risk. In this book, Malkiel explains that fundamental analysis and technical analysts are a complete waste of time and debatable literature exists as to whether assuredly these two can be used to outperform the market.

A natural candidate for analysis was the behavior of stock market prices over time. Assuming that stock prices reflect the prospects of the firm, recurrent patterns of peaks and troughs in economic performance ought to be displayed in those prices. Maurice (1953) examined stock prices behavior, over time and established that indeed stock prices are a mirror of a firms prospects and economic performance. To his great disbelief, he could not spot any predictable patterns in stock prices. He found to his great surprise that he could identify no predictable patterns in stock prices. There seemed to randomly evolve, that is prices followed a random walk. Shleifer (2000) identified three main arguments for the random walk and the EMH; one investor behaves rationally and thus do their analysis rationally, two investors behave irrationally but interestingly their trading activities are random and eventually cancel out, and three investors behave irrationally but their influences is security prices are eliminated by rational arbitrageurs. Certainly, if all of these holds, then efficient markets and share prices would be very nonuniform and thus would follow a random walk.

2.2.3. Signaling Theory

This is when insiders have information that is not available to the market and outside investors. Signaling theory is suitable for assessing information especially when describing the behavior of two distinct parties. Normally, the sender, one of the parties should choose first whether to communicate that information and if yes how to communicate and the receiver should decide how to interpret the received information. Akerlof (1970) highlighted this theory in his book "Lemon markets" and Spence (1973) talked about how educational credentials were entangled to the signaling theory.

Most management literatures such as strategic management, entrepreneurship and Human resource management highly rely on the signaling theory. Credible signals sent to the capital markets are highly accepted as they are the tools for drawing apart the excellent firms from the poorly performing ones as reiterated by the signaling theory. The indicator will only be plausible when the underperforming firm will be unable to retaliate the signals sent by the excellent performing firms. When the underperforming gets a higher cost it may find it unnecessary to imitate the good firm. Inferior companies may be motivated to temper with the signals in a bid to ingratiate themselves to investors (Johnstone & Grafen, 1993). The presence of false signalers has been integrated in many management studies.

The major essence of the signaling theory is that information is let loose for insiders. The insiders harbor information that outsiders cannot access and thus it culminates to information imbalance. The Modgliani and Miller (1961) dividends irrelevance theory assumes that every investor has analogous information regarding the future of the firm and its dividends. The scope of view of various investors varies a great deal as the investors hold dissimilar opinions on dividends. Dividend increment reacts positively to the stock price while its decline leads to a fall in its price. It has been observed that an increase in dividends is often accompanied by a stock price increase while a fall leads to stock price decline.

2.3. Determinants of Stock Prices

2.3.1. Dividend

Dividends are the sums of money paid quarterly, semiannually or yearly to the shareholders of a company usually after the company pays its taxes. It is also a sign that a company is healthy and it is well managed. Investors and shareholders are very keen on dividend announcements. If a company pays high dividends and are consistent in the same, they will portray a positive image to the public (Modgliani & Miller, 1958).

Dividend can take the form of stock or cash, for cash dividend, the shareholder receives cash in proportion of the number of shares held. Dividend declaration influences a company's stock price according to how its price is perceived by the market. A higher may lead to a higher stock price while a lower one may lead to a decreasing stock price. Declining yields have been found to cause an increase in share price (Gatua, 2013). Zahir & Khanna (1982, 1992) found that dividend yield was negatively associated with share price in most of the studies.

2.3.2. Earnings Announcement

Earnings are an important element to investors as they serve as their mirror. Good earnings reflect a company's potential while bad earnings showcase a company's incapability. They assure investors on the likelihood of them getting a profit from a company. The stock price is directly proportional to the performance of a company such that if the results are positive the demand of the stock goes a notch higher while the negative leads to the contrary however uncertain earnings lead to price volatility

which compromises with the symmetry of the stock prices. Cheol (2012) reported that earnings recorded a prudent but certainly not mind boggling amount of information for the market. Cheol, & Sabherwal (2012) found that one common way used by high growth companies to manage their earnings is by regulating the timing of receipts and expenditure and by choosing substitute procedures of accounting. The study realized that earnings dictate share prices positively.

2.3.3. Book Value

This is the value of a security or an asset as entered in a company's books. It is the value an asset is carried forward or brought down in the statement of financial position. Normally, it is calculated by taking the purchase cost of the asset less the accumulated depreciation. It is the difference between a company's total assets and total liabilities.

The value of the asset may differ from the market value if the earnings of the asset has increased or decreased from the date they were purchased. Book value is of use for companies with tangible assets and therefore it is insignificant for companies with intangible assets. Investors give it a number one consideration.

To calculate book value, you divide a company's current stock by its stated book value per share (B/P). This will give you the B/P ratio. A B/P ratio that is less than one signifies that the shares of that particular company are trading at a lower value than the company's assets. This puts the company at a risk, whereby, in the event of bankruptcy, the company's assets are susceptible to being sold off. The investors won't be affected by the selling of the company's assets; they are still going to get returns. Al-Deehani (2005) did a research for the 61 listed Kuwait companies and

found a strong explanatory power of book value per share on stock prices using relaxed extreme bound analysis to determine the strength of the various stock determinants.

2.3.4. Corporate Announcements

Corporate actions including corporate announcements usually influence a firm's capital structure and its operations so much so that it also affects the value of the firm (Brick & Frierman, 2002). This is likely to result to increased volatility in share prices and share trading at securities markets. A good example would be a company that has been subjected to a hostile takeover. This will definitely impact the company's cash flows of course resulting from the synergetic benefits of the merger upon acquisition.Despite the constant debate on the benefits of mergers and acquisitions, numerous studies have supported that mergers on average record positive results ,however, current analysts have come with varying opinions regarding the merits of mergers and acquisitions, empirical evidence suggests that, on average, they have a positive outcome (Andrade, Mitchell & Stafford, 2001).

Holthausen and Verrecchia (1990) evidenced the trader's activities are usually influenced by the investors perception of the firms' value and that the degree of discrepancy between the traders determines the magnitude of the effect. This implies that increase in trading activity can be caused by these announcements mostly before and after the announcements are made. Copeland, Lemgruber and Myers (1987) argued managerial motivation can lead to increase in the value of the firm. Similarly, exchange offers, bonus issues, rights issues affects the financing costs of the firm

most probably the entity's business strategy and eventually have a substantial impact on the share price of that company.

2.4. Empirical Studies and Knowledge Gaps

Various scholars have conducted studies in the stock market to find out how stock price react to earnings announcement. These studies however, produced assorted results and hence the continuing debate on the validity of the EMH. However, there are studies that found different results. Inherent the studies the evidence supports weak-form of efficiency and semi-strong form of efficiency while no evidence supports the existence of strong form of efficiency.

A deeper experiment on the efficiency of markets conducted by Dickinson and Muragu (1994) for ten years that is (1979-1989) in the NSE declared that markets were efficient in the weak form, overruling one which was done earlier on by Parkinson which pointed out to markets as efficient in the strong form. To further on with their studies their conclusions gave staunch reasons on how the NSE was a weak form of market efficiency regardless of whether the bid-ask or market prices sequence is used to get on with the research phenomenon. (e.g. Stock market crash of October 1987). To fortify the weak form of efficiency, Reilly and Brown were also in the task force that took the research. They repudiated the fact that markets were efficient in the strong form giving evidences which factored on prices. They argued that markets would be efficient in the strong form if prices were directly similar to the discharged information, howbeit as fore stated insiders have a tendency of retaining almost all pieces of information in a bid to gain surplus proceeds. (Reilly & Brown, 2011).

How legal the efficient market hypothesis (EMH) is, is still in doubt as studies done recently state that highly observable results could be found by transacting on public available information. Post announcement led to an underperforming stock prior to earnings release. As discovered by (Spinouts, 2008), typical results were observed during the announcements. Unlike the EMH, the abnormal responses continued for a couple of days prior to the announcement. These ruled out the Danish stock markets plastering them as being inadequate in regards of being a library of information. Kausar and Taffler (2006) agreed that the stocks in the UK markets were suffering. Audits reported stated that there was a notable reduction in price ranging from -24% and -31%.

In a study done by Gupta (2006b) for 50 listed Indian companies comprising CNX Nifty index towards the response of earnings to announcements. The results supported the findings that earnings announcements had a great influence on stock prices such that negative news caused outstanding changes on the stock prices compared to positive news.

Kong and Taghavi (2006) did an investigation which was consistent with both the Shanghai and Shenzhen. This study provided a Chinese view that stated abnormal returns increased significantly (through an overreaction) four days prior to announcements and declined (through rectification) four to six days' post announcements.

Two reputable scholars Worthington and Higgs (2004) did a probe on at least 20 markets in Europe, 4 of the markets were the upcoming ones. The data range spanned between (1988 -2003). They also varied the procedures at which they were using to conduct their extensive examination in order for them to come up with accurate

results. Random walk specification was etched on five of the countries namely Britain, Germany, Ireland, Portugal and Sweden. Five of the nations met the semi-strong market efficiency those are Finland, France, Norway, Netherlands and Spain. Majority of the tested countries displayed the weak form of efficiency and those were the remaining 10 nations except Hungary which proved otherwise; some of the ten nations that supported the weak form of efficiency were Austria, Belgium, Denmark, Greece, Italy and Switzerland just to mention.

Emerging markets provided a stable base to do studies in regard to Efficient Market Hypothesis and this is the very reason why numerous studies were concentrated there for provenance. Mishra and Pradhan (2009) did a comprehensive study in the Bombay Stock Exchange, their study covered 33 companies all in different fields of specialization, here they discovered that stock prices were allied to the random walk hypothesis in the long run but were utterly otherwise in the short run. Firm specific factors were the key reason why share prices were hoicked to the random walk theory and that is why economic factors would actually be neglected still in the same case.

The gap that is brought about by incorrect rules and policies egressed that lead to market inefficiency. Clark (2005) posited in his observation that there is an autocorrelation on the stock market of Thai, most observably during the post crisis duration. This led to his conclusion that the emerging stock market is not efficient.

The weak form of efficiency was also operated on by Vitali and Mollah (2010). Their study took an overwhelming period of 10 years that is from (1999-2009). They were subject specific and thus they did this research targeting Africa's responsiveness to the weak form of market efficiency. They used the Random Walk Theory as their foundation. They subjected it to different approaches of auto-correlation unit root, run

and variance ratio test on daily prices indices of some chosen countries. Kenya, Morocco, Nigeria, Tunisia, Mauritius, Egypt and South Africa. This study posted that South Africa in the second sub period (2007-2009) was the only weak form while the rest were in the otherwise form of efficiencies. They therefore rejected it in the other countries, howbeit. Dickinson and Muragu (1994) disputed their claims by portraying the Kenyan market as a weak form of market efficiency in their inference.

Nyamute (1998) argued that macro-economic factors like inflation rate, money supply, interest rates, and exchange rates affect the performance of stock prices.

The findings by Njuru (2007) who decided to test for existence of under reaction anomaly at NSE using stock dividend announcement showed that there was a general decrease in abnormal and cumulative abnormal returns before dividend announcements for the 20 days and a general increase after announcements for the full sample analysis.

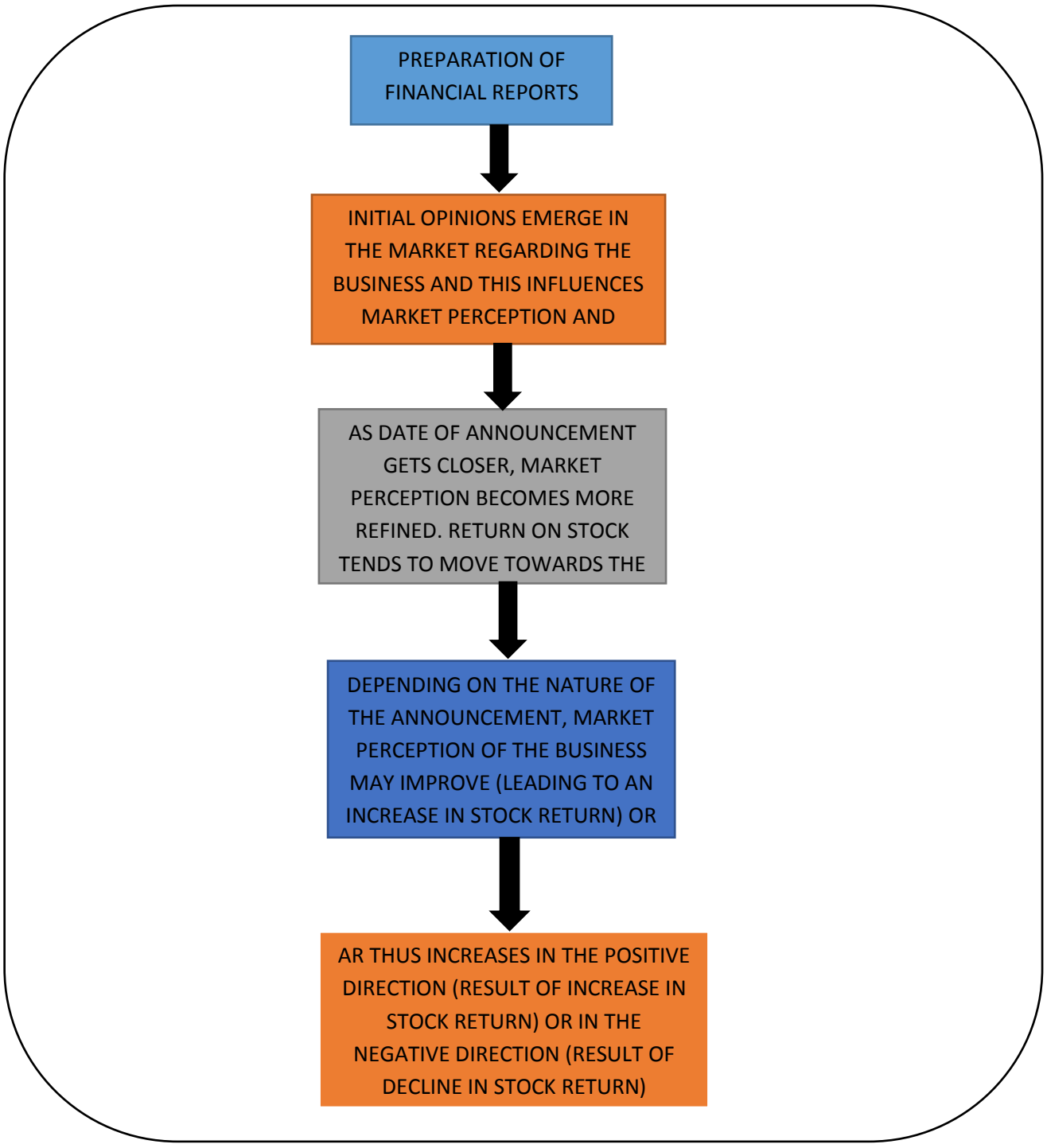
Information value (IV) was also put into context by Maina (2009), He proceeded to conduct a research that sought to investigate how yearly earnings reacted towards stock returns and trading activities. His cardinal reason for doing the research was hinged on the question of whether the information had any substantial value? He concluded that the average abnormal returns and average abnormal volume on the periods of announcements are observably greater than zero as compared to the non-event period. The research brought out a conclusion that summarized the share prices and trading activities of quoted companies reacted to the earnings announcements.

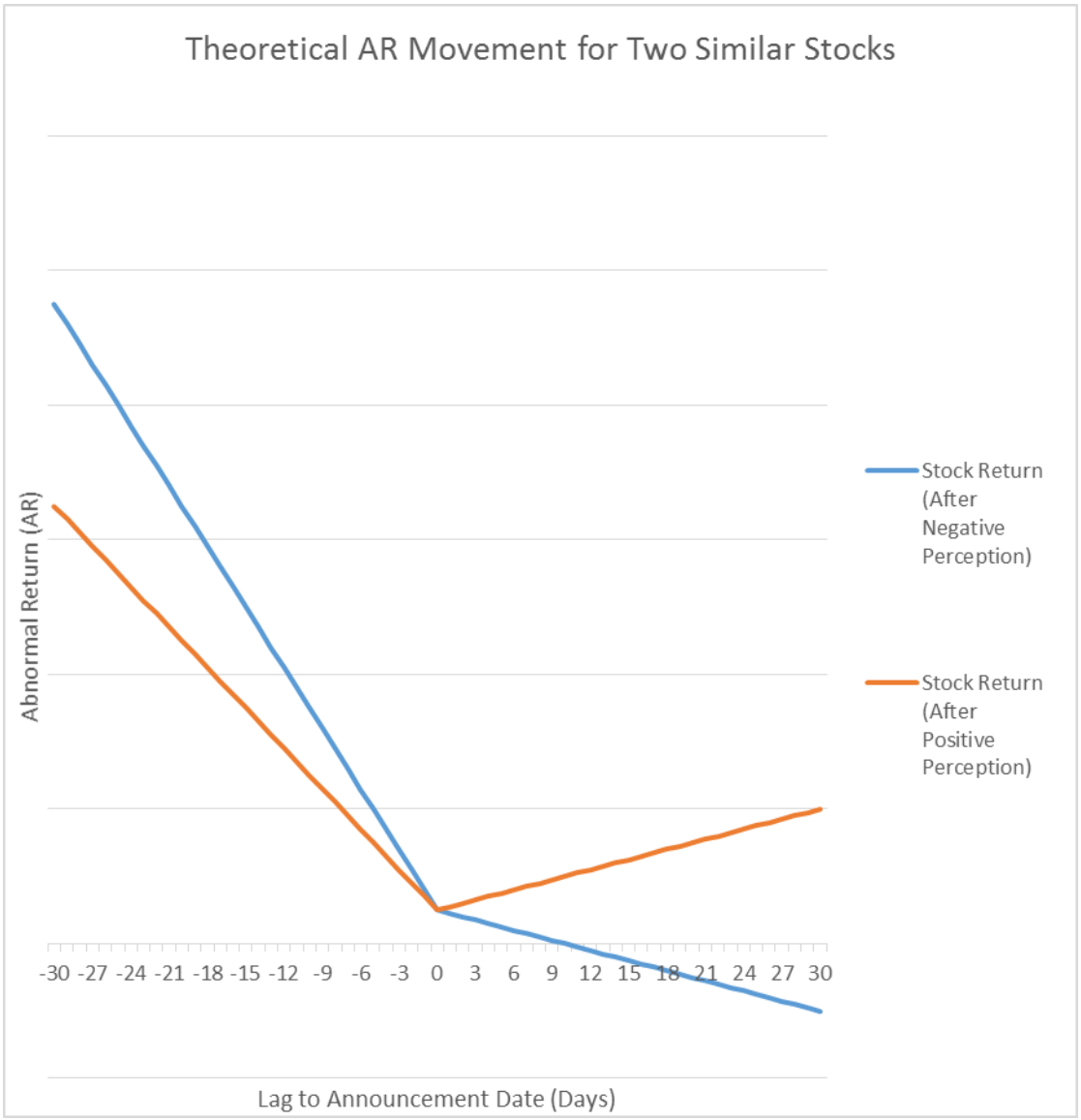
2.4. Chapter Summary

Numerous studies have been conducted on the topic of the effects of earnings announcements on share prices by Dickinson and Muragu (1994), Nyamute (1998), Worthington and Higgs (2004), Kausar and Taffler (2006), Kong and Taghavi (2006), Njuru (2007) Maina (2009), Mishra and Pradhan (2009), Vitali and Mollah (2010), Reilly & Brown (2011) among others using different methodologies and of course arriving at different conclusions as detailed above.

However, there exists some similarities amongst the authors in that they agree that indeed markets exhibit post earnings announcement drift due to a high level of irrationality that has been tested by investors as evidenced by Kahneman and Tversky (2002) a discovery that puts strain as to the validity of the Fama's (1970) Efficient Market Hypothesis. This study sought to investigate the effect of earnings announcements on share prices at the Nairobi Securities Exchange in light of new technological developments with a view of examining all firms listed at NSE for a duration of 2 years.

2.5. Conceptual model




Theoretical AR Movement for Two Similar Stocks
Abnormal Return (AR)
-30 -27 -24 -21 -18 -15 -12 -9 -6 -3 0 3 6 9 12 15 18 21 24 27 30
Lag to Announcement Date (Days)
Stock Return (After Negative Perception)
Stock Return (After Positive Perception)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

The research methodology describes the procedures and methods that will be utilized during the study. It further details how data will be collected, analyzed, presented and discussed. Conclusions can thus be drawn from the discussion. For this particular study, the methods used for data analysis included the market model. For statistical testing, the t-statistic as well as the chi square test were used.

3.2. Research Design

The study used event study method to test the stock prices response to earnings announcement. The event study methodology was usually used to show the effects of any type of event on the direction of stock price changes. The event study has many applications. In accounting and finance research, event studies have been applied to a variety of firm specific and economy wide events. Some examples include mergers and acquisitions, earnings announcements, issues of new debt or equity, and announcements of macroeconomic variables such as the trade deficit. MacKinlay (1997) explained the period of the announcements and how it affected the stock prices during the window period of 30 days before the announcements and 30 days after the announcements. The announcement day was represented by day 0.

-30, -29, -28, -27, -26…-3, -2, -1, 0, +1, +2, +3…+26, +27, +28, +29, +30

A broad event window of (-30 to +30) was selected with an aim to come up with market returns and to seize possible pre-event reaction. This was because of the abnormal nature of the information atmosphere in developing stock markets in emerging countries, where there was a possibility for the markets to start reacting prematurely prior to the announcements.

3.3. Population and Sample

A population refers to the entire set of objects on which generalizations will be based on results of this research (Cooper & Schindler, 2008). For this study, the population included all 65 actively traded stocks at the Nairobi Securities Exchange. The time scope of the study was 2 years 2014-2015.

The reason for selecting this population was the relative ease of obtaining data since listed companies are required by law to publish audited financial reports. The study covered all the companies and therefore there was no sampling.

3.4. Data Collection

The data collected for the purposes of this study was 2-year stock price data from the NSE from January 2014 to December 2015. This is secondary data which, as described in the previous section, was relatively easy to acquire given that listed companies are required to publish audited yearly financial reports. This relative ease of obtaining data saves on time.

Additional secondary data that was collected was data on the NSE 20 share index, which was used as an indicator of market performance.

3.5. Data Analysis

The market model was applied to analyze the data collected. Market model, according to MacKinlay (1997) was preferred for its mathematical tractability and the realistic and reasonable assumptions on which it is based. It is a simple linear model described as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where,

R_{it} = actual stock return/price of stock *i* at time *t*,

R_{mt} = market return at time *t*,

ε_{it} = error term.

The abnormal return (AR) may be defined as the deviation of the actual stock return from the prevailing return on the market. This was computed as follows:

$$AR_{it} = R_{it} - R_{mt}$$

The population being studied was split into two groups: the firms that announced positive in earnings and the firms that announced negative earnings. For each of these groups, the AR was computed and appropriate analysis done to establish how the AR changed depending on the nature of the announcement.

For a given set of firms, the average abnormal return was obtained as follows:

$$AR_t = \sum \frac{AR}{m}$$

In this case, *m* represents the quantity of stocks in the set being considered.

To test for statistical significance, the following t-statistic was used:

$$t_{AR} = \frac{AR_t}{SD(AR_t)}$$

Where the denominator is the standard deviation of $AR_{t.}$

In addition to the AR, the cumulative abnormal return (CARs) added additional insight into the sensitivity of stock prices to earning announcements. The CAR was obtained as follows:

$$CAR_t = \frac{1}{N}\sum AR_{it}$$

Where,

N = no. of securities in each category.

CAR was obtained by adding all ARs that correspond to a given category of securities and dividing by the number of securities. To test the CAR, the following t-statistic was computed:

$$t_{CAR} = \frac{CAR_t}{SD(CAR_t)}$$

Where the denominator is the standard deviation of $CAR_{t.}$

The computer package used for this study was the Statistical Package for Social Science (SPSS). This software was preferred for its robustness in carrying out

statistical analyses and tests, as well as its ease of use and its ability to generate graphical presentations that are visually appealing.

For additional testing, the chi-square test was used.

This test is a test for the deviations between observed data and what is to be expected based on a given hypothesis or model. For chi-square tests, the null hypothesis being considered was: No difference exists between the observed (O) and expected (E) observations. It was also used to determine how good a fit the model was to the data by testing deviations from the expected observations. A conclusion was reached as to whether the observed deviations were significant and the null hypothesis rejected if the test found the deviations to be significant.

The chi-square formula is described as:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

It is a summation of squared deviations from the expected values divided by the same expected value for each group of data. This chi-square value was then compared with the standard chi-square distribution given a particular level of significance and a given number of degrees of freedom (df). The df was obtained by summing the total number of data groups less one. This comparison allowed for determination of significance of the deviations.

In this study, the chi-square test helped to establish the goodness of fit of the market model, which estimated the effect of earnings announcements on share prices.

3.6. Chapter Summary

An event study research design was selected since it explains how a given response variable, in this case- the share price is influenced by a set of explanatory variables, such as time or earnings announcement. A reasonable event window of 30 days was selected and was expected to provide ample allocation for any expected reaction in share price as a result of an earnings announcement.

The data used incorporated daily share price data from 65 listed companies in the Nairobi Securities Exchange. The scope of the data was 2 years (2014 and 2015). This sample was sufficient for the purpose of cross sector analysis.

For data analysis, the market model was used. This model was selected to analyse price reactions to earnings announcements. The response variable was the actual return on stock and this return is compared to the general return in the market. The abnormal return (AR) was thus a difference between the actual return and the market return. To model the actual return, a regression model was used, with the market return as the main explanatory variable. It was selected since it is expected to sufficiently model the effect of earnings announcements on share price, which is usually felt in the short term. It was selected in preference to other stock return models such as the Capital Asset Pricing Model (CAPM) since it appropriately models short term volatility, which the CAPM does not do as efficiently. Also short term price movements are generally linear and hence the market model was seen as appropriate for this study.

For model testing, the t-model was used. It was selected since it is the standard test used to analyse expected return based on a sample of stocks (the 65 listed companies

in the NSE). This was opposed to the z-test, which requires data on the entire population.

For additional model testing, the Chi-Square test was used and was selected due to its ease of implementation, especially for categorical data such as the ones used in this study (returns for stocks in different sectors).

CHAPTER FOUR:

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter entails the analysis that was done on the sensitivity of stock prices to earnings announcements. The data used in this analysis was obtained from the Nairobi Securities Exchange (NSE). The market model described in Chapter 3 was fitted and the appropriate statistical tests done. Below are the findings of this investigation.

4.2. Data presentation

4.2.1 Daily Closing Share Prices

To start off, a sample of 65 companies was taken which provided points of reference for this investigation. For each of these companies, earnings announcement dates were obtained from reports from the NSE as well as reliable business media. Daily closing share prices were then recorded for each of the 30 days prior and 30 days after the announcement date. The table below presents data for one of the sampled firms, Safaricom**.** More detailed tables can be seen in Appendix II.

Table 1: Daily Closing Share Prices for Safaricom

Day from Earnings Announcement	Share Price	NSE 20 Share Index	MR (Points)
-30	15.90	5265.67	-2.5
-25	16.70	5242.62	3.7
-20	15.95	5142.35	-1.0
-15	16.30	5126.02	1.7
-10	17.05	5042.85	-5.5
-5	17.30	5061.11	4.6
-1	17.55	5083.94	-3.3
0	17.15	5074.76	-12.3
+1	17.05	5070.75	-0.1
+5	16.35	4979.71	3.9
+10	16.30	4928.91	-5.9
+15	15.55	4805.89	1.0
+20	16.35	4784.07	-2.6
+25	16.05	4765.02	1.0
+30	16.05	4778.63	-2.0

4.2.2 Descriptive Statistics

For five of the 65 sampled companies (Kakuzi, Barclays Bank, Kenya Airways, Safaricom and KenGen), summary statistics for their daily share prices are presented in table 2. Statistics for all 65 companies are provided in Appendix II. These descriptive statistics include values for the minimum, maximum, mean, standard deviation and skewedness over the two-year period covered in this investigation. From the table it can be seen that for Kakuzi and Barclays Bank, the skewedness was markedly negative, with a skewedness statistic of -0.004 for Kakuzi and 0.927 for Barclays Bank. This is an indication that for these two securities, share return has a higher likelihood of being negative. In addition, Kenya Airways, Safaricom and Kengen displayed a skewedness statistic of 0.007,0.152 and 0.099 respectively. This is an indication that for these three securities, share return has a higher likelihood of being positive.

Table 2: Summary Statistics for Sampled Share Prices

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Kakuzi Ltd Ord.5.00	501	93	379	228.27	85.083	-.004	.109
Safaricom Ltd Ord 0.05	502	10.75	17.55	14.0759	1.66473	.152	.109
Kenya Airways Ltd Ord 5.00	502	4.45	13.85	8.8612	2.57944	.007	.109
KenGen Co. Ltd Ord. 2.50	502	6.40	13.85	10.0380	1.42649	.099	.109
Barclays Bank of Kenya Ltd	502	11.80	18.20	15.8587	1.56257	-.927	.109
Valid N (listwise)	501						

4.2.3 Analysis of Abnormal Returns.

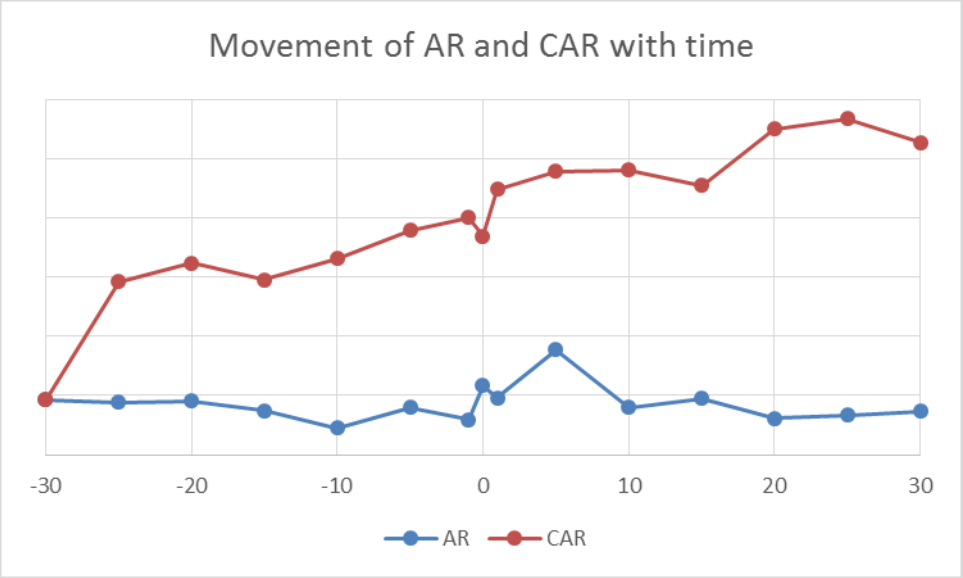
Theoretically, in an efficient market, share prices adjust quickly and accurately to all available information and hence, investors should not be able to generate excess risk adjusted returns by transacting based on new earnings information from subject firms. This also applies to information available prior to the announcement date. Based on this, share prices should generally reflect the feelings of the market on what the anticipated announcement will be. Share prices should thus adjust to this anticipation even before the announcement date.

Table 3: Table of Abnormal Return and Cumulative Abnormal Return

Day	AR (%)	CAR (%)
-30	1.86%	1.86%
-25	1.76%	5.84%
-20	1.81%	6.48%
-15	1.48%	5.91%
-10	0.91%	6.61%
-5	1.58%	7.57%
-1	1.17%	8.02%
0	2.34%	7.38%
+1	1.91%	8.96%
+5	3.55%	9.57%
+10	1.59%	9.61%
+15	1.89%	9.10%
+20	1.22%	11.01%
+25	1.34%	11.34%
+30	1.47%	10.55%

From Table 3 above, the average ARs appear to be declining towards the announcement date (see graph 1 below). This shows adjustment of abnormal returns to informational expectations especially when close to the earnings announcement date. After the announcement date, abnormal returns decline steadily. This observation is also seen in the CAR which is generally positive and is mostly positive around the announcement date. From the table, a CAR of 7.38% is seen on

announcement date and it hits a peak of 11.34% 25 days after announcement date. The CAR then falls in the days that follow. This shows some level of inefficiency where the market takes a considerable amount of time to adjust to the effects of earning announcements.



Graph 1: Graph of AR and CAR movement with time.

This also indicates that contrary to Efficient Markets Hypothesis, the market takes time to adjust security prices to reflect all available information, providing an opportunity for investors to generate risk adjusted positive returns by trading in these securities.

Table 4 below shows results of a t-test carried out to test the statistical significance of Abnormal Returns.

Table 4 Results of t-test for statistical significance of ARs

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Kakuzi Ltd Ord.5.00	-.269	14	.791	-.003557864701550	-.031875020642499	.024759291239399
Barclays Bank of Kenya Ltd	-.982	14	.343	-.001668963870567	-.005314604238335	.001976676497202
Safaricom Ltd Ord 0.05	1.243	14	.234	.002584100869524	-.001876310581523	.007044512320570
KenGen Co. Ltd Ord. 2.50	.506	14	.621	.005673156334567	-.018374276070362	.029720588739497
Kenya Airways Ltd Ord 5.00	-.540	14	.597	-.005631147364869	-.027976953955799	.016714659226062

For Kengen and Safaricom, a positive t-value indicates that earnings announcements have a significant effect on share prices. For Kengen, this might have been attributed to expansion in terms of capacity, with the launch of the Ol Karia Geothermal project around the time of the announcement. In addition, for Safaricom, market expectations might have been that the company would maintain its position as the country's most profitable company. This market sentiment might have led to excess positive returns

around the time of the earnings announcement. Conversely for the other companies in the sample, earnings announcements showed no significant influence on stock returns.

4.2.4 ARs for Companies Announcing Earnings increase vs. Companies Announcing Earnings Decline.

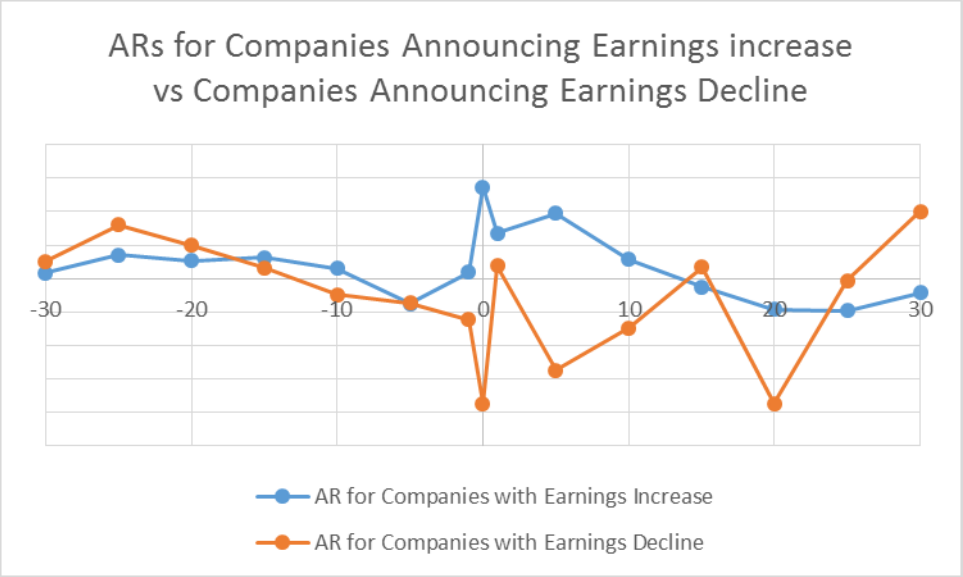
For further analysis, the sample was split between companies that announced an increase in earnings and those that announced a decline in earnings. Table 5 below shows the ARs obtained for the two categories.

Table 5: ARs for Companies with increased earnings vs. companies with decreased earnings

Day	AR (Increased)	AR (Declined)
-30	0.08%	0.26%
-25	0.35%	0.81%
-20	0.27%	0.49%
-15	0.31%	0.16%
-10	0.15%	-0.24%
-5	-0.38%	-0.37%
-1	0.09%	-0.62%
0	1.37%	-1.87%
+1	0.68%	0.19%
+5	0.97%	-1.37%

+10	0.29%	-0.74%
+15	-0.13%	0.17%
+20	-0.47%	-1.87%
+25	-0.48%	-0.03%
+30	-0.22%	1.00%

Under increased earnings, ARs were relatively closer to zero as compared to declined earnings. In addition, AR grew increasingly positive on the announcement day, recording a value of 1.37% on average. This indicates that markets did not adjust fully to anticipated earnings announcements up until the announcement date. Following announcement, the AR declined back, to a similar trend seen before announcement and even became negative from day +15. This shows possible overreaction to the earnings announcement. Under declined earnings, AR was negative for most data points, with absolute AR values being bigger on average than under increased earnings. During the observation period, AR values under declined earnings were in the range (-1.87% to 1.00%) while those under increased earnings were in the range (-0.48% to 1.37%). This indicates that reaction to declined earnings was more adverse/volatile as compared to reaction to increased earnings. In other words, the market reacts more when earnings decrease than when earnings increase. Below is a graph of ARs under increased earnings vs. under decreased earnings.



Graph 2: ARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline

4.2.5 CARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline.

Further to the above analysis based on AR, analysis based on CAR was also performed. Table 6 below shows the CARs obtained for the two categories.

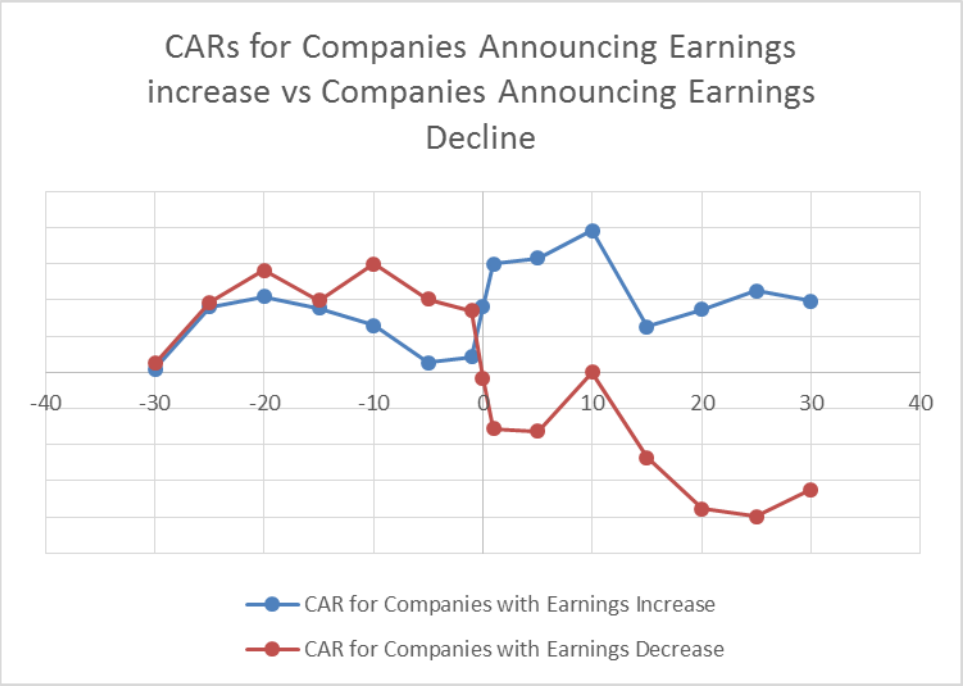
Table 6: CARs for Companies with increased earnings vs companies with decreased earnings

Day	CAR (Increased)	CAR (Declined)
-30	0.08%	0.26%
-25	1.81%	1.94%
-20	2.10%	2.82%

-15	1.77%	2.00%
-10	1.30%	3.00%
-5	0.27%	2.03%
-1	0.43%	1.71%
0	1.81%	-0.16%
+1	3.01%	-1.55%
+5	3.16%	-1.63%
+10	3.93%	0.00%
+15	1.26%	-2.36%
+20	1.75%	-3.78%
+25	2.26%	-3.99%
+30	1.97%	-3.24%

Under increased earnings, CAR appears to be dropping steadily with movement towards the announcement day. The CAR then suddenly moves more in the positive direction after the announcement day, where it starts falling again towards zero from around day +10. This indicates relative market inefficiency since share prices take relatively long to adjust to earnings information. Investors can thus exploit this and outperform the market albeit for a limited period of time.

Under decreased earnings, CAR is initially positive at time -30 (0.26%) and appears to grow increasingly positive and it is at its most positive at time -10 (3.00%). Following the announcement, CAR suddenly moves in the negative direction and maintains its negative position, with CAR at time +30 being -3.24%. This shows a wider spread effect of decreased earnings announcements. It displays some kind of "hangover" effect, where the shares involved underperform as compared to the market for a relatively long period of time.



Graph 3: CARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline

In addition to the one sample t-test, a chi square test was performed to test the significance of the abnormal returns. Table 7 shows the results of this test:

Table 7: Chi square test for significance of ARs

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	210.000[a]	196	.234
Likelihood Ratio	81.242	196	1.000
Linear-by-Linear Association	1.766	1	.184
N of Valid Cases	15		

a. 225 cells (100.0%) have expected count less than 5. The minimum expected count is .07.

From the observed p-value of 0.234, it may be concluded that there is a relatively weak association between actual returns and the market returns during periods of earnings announcements. This is consistent with other observations made where it was seen that ARs tend to change depending on the period to/ from the announcement date as well as the nature of the announcement (whether it is an earnings increase or an earnings decrease).

4.3 Summary and Interpretation of Findings

This study was done to examine the effect of earnings announcements on share prices. Share price data from the Nairobi Securities Exchange was used in the investigation.

The scope of observation was 30 days prior to the announcement date and 30 days after the announcement date for each company considered. Day 0 was set to represent the date when the earnings announcement was made.

Table 1 is a simple summary of share price data for one of the sampled companies (Safaricom) over the 60-day time horizon. Table 2 shows sample statistics for the sampled share prices. These descriptive statistics included values for the minimum, maximum, mean, standard deviation and skewedness over the two-year period covered in the investigation. From the table it was seen that for Kakuzi and Barclays Bank, the skewedness was markedly negative, indicating that for these two securities, share return had a higher likelihood of being negative. Conversely, Kenya Airways, Safaricom and Kengen displayed positive skewedness, indicating that for these three securities, share return had a higher likelihood of being positive. Similar observations can be seen for the other 60 companies as indicated in Appendix II.

Table 3 shows the average ARs and CARs. On average abnormal returns appeared to be tending towards zero with movement towards the announcement date. This showed adjustment of share prices to anticipated announcements, especially when close to the earnings announcement date. However, on the announcement day, on average, the AR moved marginally away from zero in the positive direction. This observation was also seen in the CAR which was positive around the announcement date. This is contrary to Efficient Markets Hypothesis which suggests that in an efficient market share prices adjust quickly and accurately to reflect all available information. The existence of abnormal returns especially close to and on the announcement date shows that earnings announcements have an influence on share prices and also, the market is

relatively inefficient, providing investors an opportunity to generate excess risk adjusted returns.

A one sample t-test was performed to test the significance of the ARs for each of the 65 sampled companies. The comprehensive results of the test can be seen in Appendix III. Kengen and Safaricom had positive t-values, an indication that earnings announcements had a significant influence on abnormal returns and share price. This could be attributed to market anticipation, where both companies were expected to announce significantly increased earnings. This market sentiment might have led to the excess positive returns observed around the time of the earnings announcement.

Further analysis was done to investigate whether earnings announcements had different effects on AR and CAR under conditions of increased earnings as well as decreased earnings. The results of this are recorded in tables 5 and 6 and their corresponding graphs may be observed in Graph 2 and 3. From the investigation of AR, the reaction or abnormal returns to earnings announcements under the conditions of decreased earnings showed greater volatility than under conditions of increased earnings. Generally, the market showed greater sensitivity to earnings decline than to earnings increase. Depending on the nature of the announcement, AR followed a similar trend. From the investigation of CAR, it was observed that the market experienced extended effects of earnings announcements particularly where earnings declines were announced. This showed relative market's inefficiency, where share prices took a significant amount of time to adjust the abnormal returns back to average numbers.

A chi square test was also done to investigate the significance of the relationship between actual share returns and the market return during earnings announcements. This test showed that this relationship was not significant and it was concluded that the announcement itself had a greater influence on share price as compared to the market rate of return.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study was done to investigate the impact of earnings announcements on share prices. Share price data from the Nairobi Securities Exchange was used in the investigation. The scope of observation was 30 days prior to the announcement date and 30 days after the announcement date for each company considered. Day 0 was set to represent the date when the earnings announcement was made.

5.2 Summary

This investigation was done with theoretical knowledge of markets whereby efficient markets were expected to react quickly and accurately to new information. However, in realistic situations this may not have been the case and so the market may have reacted to information long before it was released and it is for this reason that the 60-day time horizon was selected. From share prices, abnormal returns were computed and also, cumulative abnormal returns were obtained by summing abnormal returns.

A one sample t-test was performed to test the significance of the ARs for each of the 65 sampled companies. Companies such as Safaricom and Kengen had positive t-values (1.243 and 0.506 respectively), an indication that earnings announcements had a significant influence on abnormal returns and share price. This could be attributed to market anticipation, where both companies were expected to announce significantly increased earnings. This market sentiment might have led to the excess positive returns observed around the time of the earnings announcement.

Further analysis was done to investigate whether earnings announcements had different effects on AR and CAR under conditions of increased earnings as well as decreased earnings. From the investigation of AR, the reaction or abnormal returns to earnings announcements under the conditions of decreased earnings showed greater volatility than under conditions of increased earnings. Generally, the market showed greater sensitivity to earnings decline than to earnings increase. Depending on the nature of the announcement, AR followed a similar trend. From the investigation of CAR, it was observed that the market experienced extended effects of earnings announcements particularly where earnings declines were announced. This showed relative market's inefficiency, where share prices took a significant amount of time to adjust the abnormal returns back to average numbers.

A chi square test was also done to investigate the significance of the relationship between actual share returns and the market return during earnings announcements. From the observed p-value of 0.234, it showed that this relationship was not significant and it was concluded that the announcement itself had a greater influence on share price as compared to the market rate of return.

Through observation of abnormal returns, it was seen that the market is not strong form efficient and that due to relative delays in market adjustments, investors might exploit such "inefficiencies" in order to generate excess risk adjusted returns. For the investor, the rationale behind such an action would be to sell poorly performing securities so as to buy high performing stocks which outperform the market for a

certain length of time, even after an earnings announcement has been made. This would provide excess returns.

5.3 Conclusions

This investigation showed that earnings announcements are a significant factor that influence share prices. In addition, it showed that the market is more sensitive to announcements of a negative nature (earnings decline or loss) as compared to positive announcements (earnings increase).

Clark (2005) posited in his observation that there is an autocorrelation on the stock market of Thai, most observably during the post crisis duration. This led to his conclusion that the emerging stock market is not efficient. Also Njuru (2007) who decided to test for existence of under reaction anomaly at NSE using stock dividend announcement showed that there was a general decrease in abnormal and cumulative abnormal returns before dividend announcements for the 20 days and a general increase after announcements for the full sample analysis. Kong and Taghavi (2006) did an investigation which was consistent with both the Shanghai and Shenzhen. This study provided a Chinese view that stated abnormal returns increased significantly (through an overreaction) four days prior to announcements and declined (through rectification) four to six days' post announcements.

This investigation also led to the discovery that effects of earnings announcements are observed even before the announcement date and they continue to be felt even after the announcement. This might reflect information asymmetry whereby investors lack

sufficient information and insights needed to make accurate assumptions as to how earnings will affect share prices. It is very reactionary and this is seen where the market takes a relatively long period of time to adjust market prices back to their expected levels.

5.4 Recommendation

Following this investigation, the following recommendations are suggested:

Establishment of proper regulatory frameworks through regulatory bodies such as the Capital Markets Authority, whereby all relevant stakeholders have access to information that relevant and timely. This will improve informational efficiency and reduce chances of market exploitation.

Also, proper measures need to be taken to curb insider trading, which is facilitated by an inefficient market. A legal framework needs to be established and executed to limit insider trading and impose stiff punishments on individuals or firms that engage in insider trading.

In addition, industry regulators should set rules on reporting standards and deadlines where they set rules on disclosure and set standard deadlines for all players in each industry. This will ensure unbiased judgments by investors which may lead to abnormal returns observed in stock prices.

The Capital Markets Authority should engage in investor sensitization and should provide technical support to enable investors make better informed decisions. This may be done even in institutions of learning, where young and prospective investors would get educated on good investment practices.

5.5 Limitations of the Study

The major challenge experienced was in the acquisition of data from the Nairobi Securities Exchange. Comprehensive data on all quoted shares was not easily available and hence only data over a period of two years (2014-2015) was obtained.

The data obtained did not cover the entire spectrum of companies which would have been considered, based on the study only listed companies were considered but not the entire companies. The disadvantage of basing the study on publicly traded companies is that the values of such companies are subject to bias from investors who may lack sufficient information for decision making.

Another limitation of this study was the exclusive consideration of earnings announcements as a factor affecting share prices. Other factors such as inflation and interest rates were not considered yet they are very important in determining the prices of shares.

Also, stock price information for some firms is not available, especially for newly listed companies or companies whose stocks have been suspended. This limits the time scope over which the study may be done. The cost of acquiring data from the NSE was also a limitation to this study.

Lastly, the earnings announcement dates considered were different for each firm. Significant prevailing market conditions may thus have been varied. However, it is difficult to quantify the effect of such factors on the share prices.

5.6 Suggestions for Further Studies

For further studies, it would be suggested that the scope of the investigation be enhanced.

Firstly, the time range of the investigation should be extended from the 60-day period used in this research. This will enable capturing of insights which take effect long before and long after earnings announcements are made.

Second, this investigation should be extended to companies that are not listed on the Nairobi Securities Exchange, subject to availability of information. In addition, other factors affecting share prices should be included in such a study. This will enable a more holistic view of the market.

Due to requirements in certain industries to report semiannual and quarterly reports, investigations should be carried out based on such announcements to increase the granularity of the research. Findings will thus be more detailed and robust, facilitating better informed actions by different stake holders in the market.

Also, methodology should be developed which allows for the differences in announcement dates by incorporating additional factors and variables which enable better comparisons between ARs of different companies.

Lastly, similar investigations should be carried out, comparing Kenya to other emerging countries in Africa and beyond so as to draw solutions that are both generally applicable to developing markets and specifically applicable to the Kenyan Market.

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Appendices

Appendix I: List of Stocks Traded on the NSE.

AGRICULTURAL

1. Eaagads Ltd Ord 1.25 AIM
2. Kakuzi Ltd Ord.5.00
3. Kapchorua Tea Co. Ltd Ord 5.00 AIM
4. The Limuru Tea Co. Ltd Ord 20.00 **AIMS**
5. Sasini Ltd Ord 1.00
6. Williamson Tea Kenya Ltd Ord 5.00 AIM

AUTOMOBILES & ACCESSORIES

7. Car & General (K) Ltd Ord 5.00
8. Marshalls (E.A.) Ltd Ord 5.00
9. Sameer Africa Ltd Ord 5.00

BANKING

10. Barclays Bank of Kenya Ltd Ord 0.50
11. CFC Stanbic of Kenya Holdings Ltd ord.5.00
12. Diamond Trust Bank Kenya Ltd Ord 4.00
13. Equity Group Holdings Ltd Ord 0.50
14. Housing Finance Co.Kenya Ltd Ord 5.00
15. I&M Holdings Ltd Ord 1.00
16. Kenya Commercial Bank Ltd Ord 1.00
17. National Bank of Kenya Ltd Ord 5.00
18. NIC Bank Ltd Ord 5.00
19. Standard Chartered Bank Kenya Ltd Ord 5.00
20. The Co-operative Bank of Kenya Ltd Ord 1.00

COMMERCIAL AND SERVICES

21. Atlas Development & Support Services Ltd
22. Express Kenya Ltd Ord 5.00 **AIMS**
23. Hutchings Biemer Ltd Ord 5.00
24. Kenya Airways Ltd Ord 5.00
25. Longhorn Publishers Ltd Ord 1.00 **AIMS**
26. Nation Media Group Ltd Ord. 2.50
27. Standard Group Ltd Ord 5.00
28. TPS Eastern Africa Ltd Ord 1.00
29. Uchumi Supermarket Ltd Ord 5.00
30. WPP Scangroup Ltd Ord 1.00

CONSTRUCTION & ALLIED

31. ARM Cement Ltd Ord 1.00
32. Bamburi Cement Ltd Ord 5.00
33. Crown Paints Kenya Ltd Ord 5.00
34. E.A.Cables Ltd Ord 0.50
35. E.A.Portland Cement Co. Ltd Ord 5.00

ENERGY & PETROLEUM

36. KenGen Co. Ltd Ord. 2.50
37. KenolKobil Ltd Ord 0.05
38. Kenya Power & Lighting Co Ltd Ord 2.50
39. Kenya Power & Lighting Co Ltd 4%
40. Kenya Power & Lighting Co Ltd 7%
41. Total Kenya Ltd Ord 5.00
42. Umeme Ltd Ord 0.50

INSURANCE

43. Britam Holdings Ltd Ord 0.10
44. CIC Insurance Group Ltd ord.1.00
45. Jubilee Holdings Ltd Ord 5.00
46. Kenya Re Insurance Corporation Ltd Ord 2.50
47. Liberty Kenya Holdings Ltd Ord.1.00
48. Pan Africa Insurance Holdings Ltd Ord 5.00

INVESTMENT

50. Centum Investment Co Ltd Ord 0.50
51. Home Afrika Ltd Ord 1.00
52. Kurwitu Ventures Ltd Ord 100.00
53. Olympia Capital Holdings ltd Ord 5.00
54. Trans-Century Ltd Ord 0.50 AIM

INVESTMENT SERVICES

55. Nairobi Securities Exchange Ltd Ord 4.00

MANUFACTURING & ALLIED

56. B.O.C Kenya Ltd Ord 5.00
57. British American Tobacco Kenya Ltd Ord 10.00
58. Carbacid Investments Ltd Ord 1.00
59. East African Breweries Ltd Ord 2.00
60. Eveready East Africa Ltd Ord.1.00
61. Flame Tree Group Holdings Ltd Ord 0.825
62. Kenya Orchards Ltd Ord 5.00 AIM
63. Mumias Sugar Co. Ltd Ord 2.00
64. Unga Group Ltd Ord 5.00

TELECOMMUNICATION & TECHNOLOGY

65. Safaricom Ltd Ord 0.05

Appendix II: Descriptive Statistics for all stocks.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Eaagads Ltd Ord 1.25 AIM	502	18.15	53.00	33.0135	5.82399	.297	.109
Kakuzi Ltd Ord.5.00	501	93	379	228.27	85.083	-.004	.109
Kapchorua Tea Co. Ltd Ord Ord 5.00 AIM	502	116	342	153.72	26.219	1.745	.109
The Limuru Tea Co. Ltd Ord 20.00 AIMS	502	475	1248	888.34	206.589	-.304	.109
Sasini Ltd Ord 1.00	502	11.55	22.50	15.7889	1.69432	.191	.109
Williamson Tea Kenya Ltd Ord 5.00 AIM	502	230	418	308.38	45.752	.905	.109
Car & General (K) Ltd Ord 5.00	502	28.00	61.50	42.9462	7.01727	.072	.109
CMC Holdings Ltd Ord 0.50	278	13.5	13.5	13.500	.0000	.	.
Marshalls (E.A.) Ltd Ord 5.00	502	8.00	13.50	11.1722	1.42076	-.315	.109
Sameer Africa Ltd Ord 5.00	502	3.35	9.10	5.9110	1.30307	-.233	.109
Barclays Bank of Kenya Ltd Ord 0.50	502	11.80	18.20	15.8587	1.56257	-.927	.109
CFC Stanbic of Kenya Holdings Ltd ord.5.00	502	80.0	148.0	112.936	17.2229	-.379	.109
Diamond Trust Bank Kenya Ltd Ord 4.00	502	184	275	228.82	21.409	-.162	.109
Equity Group Holdings Ltd Ord 0.50	502	29.75	59.00	44.1041	6.49908	-.494	.109
Housing Finance Co.Kenya Ltd Ord 5.00	502	20.25	50.25	34.8471	8.96789	-.182	.109
I&M Holdings Ltd Ord 1.00	502	96.0	147.0	122.622	12.2449	-.523	.109
Kenya Commercial Bank Ltd Ord 1.00	502	38.75	65.00	51.8591	6.73355	-.178	.109
National Bank of Kenya Ltd Ord 5.00	502	14.00	36.25	24.6061	5.54286	-.164	.109
NIC Bank Ltd Ord 5.00	502	35.75	81.50	57.6155	9.40340	-.323	.109
Standard Chartered Bank Kenya Ltd Ord 5.00	502	195	355	300.13	43.480	-1.118	.109
The Co-operative Bank of Kenya Ltd Ord 1.00	502	16.00	24.00	19.7061	1.57861	.197	.109
Atlas Development & Support Services Ltd	259	1.60	12.35	8.2929	3.92411	-.644	.151
Express Kenya Ltd Ord 5.00 AIMS	502	3.85	8.35	5.5404	1.12168	.347	.109

Kenya Airways Ltd Ord 5.00	502	4.45	13.85	8.8612	2.57944	.007	.109
Longhorn Publishers Ltd Ord 1.00 AIMS	502	3.90	28.00	11.6484	5.70028	1.038	.109
Nation Media Group Ltd Ord. 2.50	502	133	325	252.65	62.978	-.556	.109
Scangroup Ltd Ord 1.00	138	23.00	42.75	32.5199	5.69424	.097	.206
Standard Group Ltd Ord 5.00	502	25.25	47.25	34.4133	4.15027	.110	.109
TPS Eastern Africa Ltd Ord 1.00	502	25.00	50.00	35.8606	5.15438	.217	.109
Uchumi Supermarket Ltd Ord 5.00	502	6.50	21.00	11.3702	3.03255	1.025	.109
ARM Cement Ltd Ord 1.00	502	34.00	97.50	74.8486	16.77781	-1.238	.109
Bamburi Cement Ltd Ord 5.00	502	139	214	167.05	19.163	.955	.109
Crown Paints Kenya Ltd Ord 5.00	502	55.5	182.0	98.074	29.5018	.537	.109
E.A Cables Ltd Ord 0.50	502	10.00	16.85	14.7296	1.89049	-1.480	.109
E.A Portland Cement Co. Ltd Ord 5.00	502	38.25	105.00	65.6116	14.19324	.606	.109
KenGen Co. Ltd Ord. 2.50	502	6.40	13.85	10.0380	1.42649	.099	.109
KenolKobil Ltd Ord 0.05	502	7.95	10.35	8.9784	.59921	.361	.109
Kenya Power & Lighting Co Ltd Ord 2.50	502	12.80	18.45	15.2802	1.41678	.277	.109
Kenya Power & Lighting Co Ltd 4%	502	5.3	8.0	6.662	1.3296	-.020	.109
Kenya Power & Lighting Co Ltd 7%	502	5.5	5.5	5.500	.0000	.	.
Total Kenya Ltd Ord 5.00	502	17.15	31.25	23.6438	2.82324	-.442	.109
Umeme Ltd Ord 0.50	502	13.00	23.00	17.3183	3.06047	-.214	.109
British-American Investments Co.(Kenya) Ltd Ord 0.10	281	12.90	37.00	21.9913	5.37641	.568	.145
CIC Insurance Group Ltd ord.1.00	502	5.65	16.30	8.5768	1.67866	.170	.109
Jubilee Holdings Ltd Ord 5.00	502	282	598	446.25	92.406	-.156	.109
Kenya Re Insurance Corporation Ltd Ord 2.50	502	15.50	22.25	18.3934	1.27037	.627	.109
Liberty Kenya Holdings Ltd Ord.1.00	502	15.00	27.75	20.7166	2.96737	-.182	.109
Pan Africa Insurance Holdings Ltd Ord 5.00	502	60.0	141.0	103.857	26.8342	-.526	.109
Centum Investment Co Ltd Ord 0.50	502	33.25	78.00	51.3645	10.24503	-.062	.109
Home Afrika Ltd Ord 1.00	502	1.20	6.90	3.7290	1.35665	-.068	.109
Kurwitu Ventures Ltd Ord 100.00	283	1500	1500	1500.00	.000	.	.
Olympia Capital Holdings ltd Ord 5.00	502	2.60	9.90	5.1599	.86091	1.445	.109

Trans-Century Ltd Ord 0.50 AIM	502	6.70	30.25	19.2948	5.79729	.135	.109
Nairobi Securities Exchange Ltd Ord 4.00	329	16.30	27.00	21.1407	1.86697	1.141	.134
B.O.C Kenya Ltd Ord 5.00	502	95	189	135.79	16.442	-.360	.109
British American Tobacco Kenya Ltd Ord 10.00	502	521	1047	751.80	123.908	.102	.109
Carbacid Investments Ltd Ord 1.00	502	14.05	57.00	24.6464	8.41154	1.043	.109
East African Breweries Ltd Ord 2.00	502	219	350	290.51	20.438	.026	.109
Eveready East Africa Ltd Ord.1.00	502	2.50	4.90	3.5229	.50361	.151	.109
Flame Tree Group Holdings Ltd Ord 0.825	288	5.75	13.85	7.9911	1.16305	.648	.144
Kenya Orchards Ltd Ord 5.00 AIM	502	3.00	190.00	71.9055	50.30825	-.285	.109
Mumias Sugar Co. Ltd Ord 2.00	502	1.40	4.00	2.3636	.60392	.434	.109
Unga Group Ltd Ord 5.00	502	2.95	54.50	36.7545	8.39620	-.739	.109
Safaricom Ltd Ord 0.05	502	10.75	17.55	14.0759	1.66473	.152	.109
Valid N (listwise)	0						

Appendix III: One Sample t-test for ARs for all listed companies

One-Sample Test

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Kakuzi Ltd Ord.5.00	-.269	14	.791	-.003557864701550	-.031875020642499	.024759291239399
Barclays Bank of Kenya Ltd Ord 0.50	-.982	14	.343	-.001668963870567	-.005314604238335	.001976676497202
Safaricom Ltd Ord 0.05	1.243	14	.234	.002584100869524	-.001876310581523	.007044512320570
KenGen Co. Ltd Ord. 2.50	.506	14	.621	.005673156334567	-.018374276070362	.029720588739497
Kenya Airways Ltd Ord 5.00	-.540	14	.597	-.005631147364869	-.027976953955799	.016714659226062
Eaagads Ltd Ord 1.25 AIM	.533	14	.602	.012346332514713	-.037290223036030	.061982888065456
Kapchorua Tea Co. Ltd Ord Ord 5.00 AIM	-.811	14	.431	-.005500602593644	-.020040215490438	.009039010303149
The Limuru Tea Co. Ltd Ord 20.00 AIMS	-.839	14	.415	-.009944971950692	-.033593052058l5	.001469361304430
Sasini Ltd Ord 1.00	-.117	14	.908	-.000643463893858	-.012401233150025	.011114305362310
Williamson Tea Kenya Ltd Ord 5.00 AIM	.757	14	.462	.002652081269426	-.004862618268590	.010166780807442
Car & General (K) Ltd Ord 5.00	1.854	14	.085	.016926181044667	-.002654918819051	.036507280908385
CMC Holdings Ltd Ord 0.50	.810	12	.433	.002496816128094	-.004216057486982	.009209689743170
Marshalls (E.A.) Ltd Ord 5.00	.364	14	.721	.002925909199516	-.014323842859681	.020175661258713
Sameer Africa Ltd Ord 5.00	-2.617	14	.020	-.014696342748604	-.026740882270180	-.002651803227029
CFC Stanbic of Kenya Holdings Ltd ord.5.00	.943	14	.362	.008221163250999	-.010482657734093	.026924984236090
Diamond Trust Bank Kenya Ltd Ord 4.00	.520	13	.612	.002068080998087	-.006527559758014	.010663721754187
Equity Group Holdings Ltd Ord 0.50	.126	14	.902	.000343348378765	-.005508288016099	.006194984773630
Housing Finance Co Kenya Ltd Ord 5.00	-1.344	14	.200	-.005333464891177	-.013846261164838	.003179331382483
I&M Holdings Ltd Ord 1.00	-.848	14	.410	-.004207773209090	-.014844346677293	.006428800259113
Kenya Commercial Bank Ltd Ord 1.00	1.432	14	.174	.004129782022839	-.002053840718266	.010313404763943
National Bank of Kenya Ltd Ord 5.00	-.518	14	.613	-.002272631125285	-.011683897812075	.007138635561506
NIC Bank Ltd Ord 5.00	.193	14	.849	.000503683011351	-.005081532157277	.006088898179980
Standard Chartered Bank Kenya Ltd Ord 5.00	1.161	14	.265	.007140786290864	-.006053813291402	.020335385873129
The Co-operative Bank of Kenya Ltd Ord 1.00	.191	14	.851	.000779843135091	-.007960065300085	.009519751570267
Atlas Development & Support Services Ltd	-.797	14	.439	-.004298669211715	-.015872395639557	.007275057216127

Express Kenya Ltd Ord 5.00 AIMS	2.637	14	.020	.013985016894665	.002611592089197	.025358441700133
Longhorn Publishers Ltd Ord 1.00 AIMS	-.764	14	.458	-.007864441136430	-.029944588578048	.014215706305188
Nation Media Group Ltd Ord. 2.50	-.081	14	.937	-.000145701761669	-.004000412615581	.003709009092243
Scangroup Ltd Ord 1.00	2.077	12	.060	.011086092851129	-.000541321900616	.022713507602874
Standard Group Ltd Ord 5.00	2.143	14	.050	.020115818647789	-.000017038254328	.040248675549906
TPS Eastern Africa Ltd Ord 1.00	-.701	14	.495	-.003959770560557	-.016077539889452	.008157998768338
Uchumi Supermarket Ltd Ord 5.00	-.871	14	.398	-.007305061109902	-.025295500600936	.010685378381133
ARM Cement Ltd Ord 1.00	-.966	14	.351	-.005479912171683	-.017652410236352	.006692585892987
Bamburi Cement Ltd Ord 5.00	.397	14	.697	.002014838412971	-.008860166269974	.012889843095917
Crown Paints Kenya Ltd Ord 5.00	-1.332	14	.204	-.017042293960258	-.044481315030799	.010396727110283
E.A.Cables Ltd Ord 0.50	-.621	14	.545	-.001578061347161	-.007030576133618	.003874453439297
E.A.Portland Cement Co. Ltd Ord 5.00	.045	14	.965	.000425781319284	-.019817008130606	.020668570769173
KenolKobil Ltd Ord 0.05	-.751	14	.465	-.005232151359589	-.020174168780825	.009709866061648
Kenya Power & Lighting Co Ltd Ord 2.50	.355	14	.728	.003797697274945	-.019132396493799	.026727791043690
Kenya Power & Lighting Co Ltd 4%	-1.944	14	.072	-.002150147147346	-.004521831890390	.000221537595698
Kenya Power & Lighting Co Ltd 7%	-1.944	14	.072	-.002150147147346	-.004521831890390	.000221537595698
Total Kenya Ltd Ord 5.00	-2.057	14	.059	-.013239572010733	-.027043514262189	.000564370240723
Umeme Ltd Ord 0.50	-.737	14	.473	-.005274334941669	-.020629607742109	.010080937858771
British-American Investments Co.(Kenya) Ltd Ord 0.10	.254	14	.803	.001784933226630	-.013309454456541	.016879320909801
CIC Insurance Group Ltd ord.1.00	-2.089	14	.055	-.013564009255777	-.027491970305469	.000363951793914
Jubilee Holdings Ltd Ord 5.00	1.258	14	.229	.003129870870908	-.002207100365605	.008466842107421
Kenya Re Insurance Corporation Ltd Ord 2.50	.664	14	.517	.001294258574365	-.002885919819775	.005474436968506
Liberty Kenya Holdings Ltd Ord 1.00	.642	14	.531	.005538170033755	-.012973677285347	.024050017352857
Pan Africa Insurance Holdings Ltd Ord 5.00	.969	14	.349	.009137326838649	-.011085639519164	.029360293196463
Centum Investment Co Ltd Ord 0.50	-.082	14	.936	-.000441255741392	-.011972292765893	.011089781283108
Home Afrika Ltd Ord 1.00	-2.976	14	.010	-.016528637586223	-.028441472554630	-.004615802617816
Kurwitu Ventures Ltd Ord 100.00	-1.217	14	.244	-.001231641814320	-.003402475851838	.000939192223199
Olympia Capital Holdings ltd Ord 5.00	1.279	14	.222	.009965586677165	-.006744984466652	.026676157820982

Trans-Century Ltd Ord 0.50 AIM	-.799	14	.438	-.00582321195358 4	-.02145686279219 5	.00981043888502 7
Nairobi Securities Exchange Ltd Ord 4.00	.611	14	.551	.00179399477882 9	-.00449830486384 1	.00808629442149 8
B.O.C Kenya Ltd Ord 5.00	-1.612	14	.129	-.00963181841710 1	-.02245015517678 4	.00318651834258 2
British American Tobacco Kenya Ltd Ord 10.00	-.264	14	.796	-.00090929101380 4	-.00830250352736 7	.00648392149976 0
Carbacid Investments Ltd Ord 1.00	-.346	14	.735	-.00259667210679 8	-.01870460782194 3	.01351126360834 8
East African Breweries Ltd Ord 2.00	.843	14	.413	.00405512865730 6	-.00626257669922 6	.01437283401383 8
Eveready East Africa Ltd Ord.1.00	-2.324	14	.036	-.01438158648027 3	-.02765218016458 9	-.00111099279595 6
Flame Tree Group Holdings Ltd Ord 0.825	-.455	14	.656	-.00509171259519 7	-.02908217503872 5	.01889874984833 0
Kenya Orchards Ltd Ord 5.00 AIM	1.478	14	.162	.00384313537237 8	-.00173438877658 9	.00942065952134 4
Mumias Sugar Co. Ltd Ord 2.00	.535	14	.601	.00434478569635 0	-.01308356954290 4	.02177314093560 4
Unga Group Ltd Ord 5.00	.591	14	.564	.00533008098861 4	-.01402377760156 2	.02468393957879 0

Appendix IV: Return Statistics for KenGen

Day	Share Price	Actual Return (%)	NSE 20 Share Index	MR (%)	AR (%)	CAR
-30	9.70	-2.51%	5193.93	0.76%	-3.27%	-3.27%
-25	9.60	0.52%	5159.96	0.49%	0.03%	-1.12%
-20	9.60	0.00%	5207.04	0.12%	-0.12%	-1.90%
-15	9.70	-0.51%	5280.72	-0.07%	-0.45%	-2.13%
-10	10.25	0.00%	5340.08	0.16%	-0.16%	2.05%
-5	10.65	0.95%	5465.90	0.22%	0.73%	3.57%
-1	10.60	-0.47%	5475.84	-1.00%	0.53%	3.20%
0	12.05	13.68%	5491.37	-0.17%	13.85%	17.05%
1	12.25	1.66%	5499.64	-0.58%	2.24%	19.29%
5	11.80	-2.48%	5373.22	0.18%	-2.66%	16.82%
10	11.10	0.45%	5350.30	-0.23%	0.69%	11.03%
15	11.10	1.37%	5304.41	-0.50%	1.87%	10.66%
20	9.95	-6.57%	5242.35	0.20%	-6.77%	-1.04%
25	10.90	0.46%	5179.76	-1.34%	1.80%	10.19%
30	10.05	0.50%	5128.02	0.29%	0.21%	2.33%

Appendix V: Return Statistics for Safaricom

Day	Share Price	Actual Return (%)	NSE 20 Share Index	MR (%)	AR (%)	CAR
-30	15.90	0.32%	5265.67	-0.25%	0.57%	0.57%
-25	16.70	0.60%	5242.62	0.37%	0.23%	3.87%
-20	15.95	0.31%	5142.35	-0.10%	0.41%	1.66%
-15	16.30	1.24%	5126.02	0.17%	1.07%	3.80%
-10	17.05	-0.87%	5042.85	-0.55%	-0.32%	7.52%
-5	17.30	0.58%	5061.11	0.46%	0.12%	8.70%
-1	17.55	0.29%	5083.94	-0.33%	0.61%	9.69%
0	17.15	-2.28%	5074.76	-1.23%	-1.05%	8.65%
1	17.05	-0.58%	5070.75	-0.01%	-0.57%	8.07%
5	16.35	1.55%	4979.71	0.39%	1.16%	6.00%
10	16.30	-0.91%	4928.91	-0.59%	-0.32%	6.41%
15	15.55	2.30%	4805.89	0.10%	2.20%	4.97%
20	16.35	-0.61%	4784.07	-0.26%	-0.35%	8.57%
25	16.05	0.00%	4765.02	0.10%	-0.10%	7.31%
30	16.05	0.00%	4778.63	-0.20%	0.20%	6.78%

Appendix VI: Return Statistics for Barclays Bank

Day	Share Price	Actual Return (%)	NSE 20 Share Index	MR (%)	AR (%)	CAR
-30	16.70	0.30%	4885.04	0.48%	-0.18%	-0.18%
-25	16.90	0.30%	4868.81	-0.07%	0.37%	-0.05%
-20	17.00	0.00%	4902.30	0.08%	-0.08%	1.10%
-15	17.00	0.00%	4896.77	-0.28%	0.28%	1.16%
-10	16.60	-2.06%	4863.87	-0.69%	-1.38%	-0.76%
-5	17.00	0.00%	5003.36	1.16%	-1.16%	-1.58%
-1	17.05	0.29%	5015.57	-0.12%	0.41%	-0.64%
0	17.05	0.00%	5023.49	0.03%	-0.03%	-0.67%
1	17.05	0.00%	5010.13	0.09%	-0.09%	-0.76%
5	17.50	0.29%	5070.13	0.23%	0.06%	0.81%
10	18.05	0.28%	5044.40	0.00%	0.27%	3.49%
15	17.95	-0.28%	5163.21	0.45%	-0.72%	1.28%
20	17.35	-1.14%	5182.89	0.10%	-1.24%	-2.17%
25	17.15	0.59%	5217.25	0.38%	0.21%	-4.32%
30	17.80	0.85%	5377.29	0.07%	0.78%	-3.16%

Appendix VII: Return Statistics for Kenya Airways

Day	Share Price	Actual Return (%)	NSE 20 Share Index	MR (%)	AR (%)	CAR
-30	9.30	0.54%	5249.65	-0.39%	0.93%	0.93%
-25	9.00	0.56%	5272.53	-0.16%	0.72%	-1.46%
-20	8.85	1.14%	5290.09	-0.19%	1.33%	-2.52%
-15	8.90	-1.11%	5161.21	-1.01%	-0.10%	-0.52%
-10	9.10	0.55%	5194.89	-0.28%	0.83%	1.72%
-5	9.20	0.55%	5074.93	0.21%	0.34%	2.67%
-1	8.65	-8.47%	5123.45	0.53%	-9.00%	-5.10%
0	7.95	-8.09%	5139.37	0.63%	-8.72%	-13.82%
1	7.85	-1.26%	5111.47	-0.31%	-0.95%	-14.77%
5	8.30	7.10%	5166.45	0.00%	7.10%	-8.25%
10	8.25	0.00%	5156.33	-0.30%	0.30%	-9.58%
15	9.05	2.26%	5184.92	0.39%	1.87%	-1.96%
20	8.70	-2.79%	5106.67	-0.50%	-2.29%	-3.52%
25	8.30	-2.35%	4910.32	0.43%	-2.78%	-4.53%
30	8.70	1.75%	5112.65	-0.22%	1.97%	-3.56%

Appendix VIII: Return Statistics for Kakuzi

Day	Share Price	Actual Return (%)	NSE 20 Share Index	MR (%)	AR (%)	CAR
-30	246.00	0.00%	5330.01	0.49%	0.49%	0.49%
-25	315.00	8.25%	5446.04	0.75%	-7.50%	1.97%
-20	330.00	-4.35%	5467.78	0.37%	4.72%	3.99%
-15	330.00	0.00%	5461.08	-0.16%	-0.16%	1.11%
-10	310.00	4.38%	5362.43	0.16%	-4.21%	1.23%
-5	280.00	-3.45%	5342.36	0.33%	3.78%	1.21%
-1	280.00	0.36%	5254.60	0.35%	0.00%	1.34%
0	280.00	0.00%	5275.10	0.27%	0.27%	1.61%
1	252.00	-10.00%	5252.74	0.45%	10.45%	2.06%
5	280.00	0.00%	5240.53	0.06%	0.06%	2.81%
10	280.00	0.00%	5123.97	-0.55%	-0.55%	-0.38%
15	276.00	7.81%	5093.00	1.01%	-6.80%	1.81%
20	259.00	-8.80%	5061.09	0.42%	9.23%	1.64%
25	295.00	3.87%	5085.40	-0.12%	-3.99%	1.97%
30	300.00	0.00%	5042.52	-0.46%	-0.46%	0.39%

Appendix IX: Request Letter

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE. 18. August 2016

TO WHOM IT MAY CONCERN

The bearer of this letter BAJABER AMINA SWALEH

Registration No. D63/78015/2015

is a bona fide continuing student in the Master of Finance degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
18 AUG 2016
P.O. Box 30197 - 00100, NAIROBI

PATRICK NYABUTO
SENIOR ADMINISTRATIVE ASSISTANT
SCHOOL OF BUSINESS