

**EFFECTS OF EARNINGS ANNOUNCEMENT ON THE SHARE
PRICE FOR FIRMS LISTED AT THE 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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DEDICATION

This project is dedicated to my Parents, My Late Mum, Phelgona Oyuga and my Dad Philip Oyuga. To my soulmate, Ibrahim Alubala and children, Natasha and Philip Alubala.

ABSTRACT

This study was undertaken with a view of establishing whether earnings announcements affect the stock prices of firms listed at the Nairobi Securities Exchange for the years 2009-2013. The objective of study was to determine whether the earnings announcements generate abnormal returns and the duration of abnormal returns of firms listed at the Nairobi Securities Exchange. Data was extracted from the NSE Daily stock and NSE Handbook 2009-2013 and analyzed using E-Views and EXCEL. The graphs and the tables confirm a turning point in residual abnormal returns around the date of earnings announcements for most of the companies in the sample population. The findings indicate movements around the earnings announcement both pre and post announcement. These objectives were achieved by studying a sample of 19 firms listed at the NSE having made earnings announcement in the period of the study. The daily adjusted prices for the sample stocks were recorded during the event window of 17 days, 8 days before and after the announcements. The study adopted a descriptive research design. The event study methodology was employed to determine the effects of the earnings announcement. The sample population posted both negative and positive abnormal returns around the earnings announcement dates which show how the stock prices have reacted to the earnings announcement event. The above findings show that statistically negative abnormal returns were observed in the post and pre earnings announcements of firms listed at the Nairobi Stock Exchange. Given that a number of issues to be deliberated at earnings announcements are public information prior to earnings announcements and one would not expect revision in share prices that result into abnormal gains or losses. In which case abnormal gains or losses is only realizable if good or bad news emerges from the earnings announcements.

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ABBREVIATIONS

AAR: Average Abnormal Return

AIMS: Alternative Market Segments

CAAR: Cumulative Average Abnormal Return

CMA: Capital Market Authority

FISMS: Fixed Income Securities Market Segments

IPO: Initial Public Offering

MIMS: Main Market Segments

NSE: Nairobi Securities Exchange

TVA: Trading Volume Activity

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Earnings announcement is important to investors and is closely watched all over the world and considered to be an important source of information as to the performance of the company. It is expected that investors will react positively to good news and negatively to bad news. (Fama, 1970) argues that in efficient markets, the prices reflect all public and private information and as such neither technical nor fundamental analysis can give the investor any undue advantage in the market. Similarly when companies meet expectations, then it seems like there is almost no effect on the share price. The impact and the duration taken for market to assimilate the available in the market and adjust the market prices is dependent on various aspects of the company. This then makes earnings announcement one of the important aspects of consideration when determining the movement in the share prices.

1.1.1 Earnings Announcement

Earnings announcement is a public statement of a company's profitability for a specific time period. It can be quarterly, annually or even monthly. Earnings announcement is important to investors and is closely watched all over the world and considered to be an important source of information as to the performance of the company. Beaver (1998) characterizes earnings as having information content about a security's value if its release alters investors' beliefs regarding the attributes they value, such as claims to future dividends. Hence, for earnings to possess information content, the information contained in the release must be incremental to that

already contained in alternative or competing information sources. Beaver finds that earnings possess information content as both trading volume and stock price volatility increase in the week surrounding earnings announcements.

1.1.2 Share Price

A share price is the price of a single share of a number of saleable stocks of a company, derivative or other financial asset. The stock price or the value of a company is therefore the value of its future cashflow. The Share price of a company is calculated when a company goes public, an event called an initial public offering (IPO). In an IPO a company may contract an investment firm to analyses and determine the value of the company through the various valuation techniques. They further use these techniques to determine how many shares will be offered to the public and at what price.

An investment bank evaluates the company's current and projected performance and health to determine the value of the initial public offer for the business. The bank can do this by comparing the company with the IPO of another similar company, or by calculating the net present value of the firm. The company and the investment bank will meet with investors to help determine the best IPO price through a series of road shows. Finally, after the valuation and road shows, the firm must meet with the stock exchange, which will determine if the IPO price is fair. For example, a company whose value is estimated at \$100 million may want to issue 10 million shares at \$10 per share or they may want to issue 20 million at \$5 a share Koech (2013).

Once trading starts, share prices are largely determined by the forces of supply and demand. A

Company that demonstrates long-term earnings potential may attract more buyers, thereby enjoying an increase in share prices. A company with a poor outlook, on the other hand, may attract more sellers than buyers, which can result in lower prices. In general, prices rise during periods of increased demand - when there are more buyers than sellers. Prices fall during periods of increased supply - when there are more sellers than buyers. A continuous rise in prices is known as an uptrend, and a continuous drop in prices is called a downtrend. Sustained uptrends form a “bull” market while sustained downtrends form a “bear” market. Other factors can affect prices and cause sudden or temporary changes in price. Some examples of this include earnings reports, political events, financial reports and economic news. Not all news or reports affect all securities Nyamosi (2011).

Stock prices can also be driven by what is known as herd instinct, which is the tendency for people to mimic the action of a larger group. For example, as more and more people buy a stock, pushing the price higher and higher, other people will jump on board, assuming that all the other investors must be right (or that they know something not everyone else knows). There may be no fundamental or technical support for the price increase, yet investors continue to buy because others are doing so and they are afraid of missing out. This is one of many phenomena studied under the umbrella of behavioral finance.

1.1.3 Relationship between Earnings Announcement and Share Price

Investors generally are perceived to be value maximizing personalities. Therefore, positive earnings announcements should be associated with good and positive expectation while a negative earnings announcement is expected to generate bad and negative expectation. If the

information content theory conjecture is factual, then a neutral earnings announcement is expected to have no influence on perceived value maximizing investors' positive and negative expectation. The abnormal return to be generated during the earnings announcement period can be attributed to the investor reaction upon hearing the news Bernard and Thomas (1990).

It is also important to state that there will be the likelihood of information (earnings announcements) differences due to the fact that various groups of investors have different forms of acquisition abilities and even the level of resources availability to acquire that same information. Market participants who have a little expertise in acquiring information and lack the resources normally depend on public information which tends to be general to all whilst the highly skilled and hugely resourced investors operate basically on pre-disclosure symptoms of information in making decisions on various investment portfolios. This indicates that there would obviously be clear difference between these two groups of investors. There will be investors who are differently informed prior to expected earnings announcements which will result in them having different views (response) to the announcement Hakansson (1977).

1.1.4 Firms Listed at the Nairobi Securities Exchange

In Kenya, dealing in shares and stocks started in the 1920's when the country was still a British colony. Over the years the NSE has evolved and automated the Trading Systems in November 2009. In July 2011 they changed their name from Nairobi Stock Exchange to Nairobi Securities Exchange Limited. September 2011 the NSE converted from a company limited by shares and adopted a new Memorandum and Articles of Association.

A lot of studies have been done on the Nairobi Stock exchange. Munga (1974) studied the history, organization and role of NSE in the Kenyan Economy. He found out that NSE was illiquid and characterized with low turnover. Omosa (1989) studied the predictive ability of asset pricing models on the NSE and found that the models were generally not good predictors of prices due to what she argues to be inefficiency of the models and market imperfections. Lishenga (1989) in her study of the relationship between corporate attributes and timeliness of the annual reports observed that there is a tendency for less profitable companies to delay in reporting.

Kerandi (1993) tested the predictive ability of dividend valuation model in the Nairobi Stock Exchange. He observed that the models have less predictive ability at the NSE. He collected data in form of the share prices, market indices and dividend per share. These were then used to predict prices for the selected companies and comparison made with actual prices. Empirical tests on the information content of annual reports and accounts of companies listed at the Nairobi Stock Exchange were done by Ondigo (1995). Oluoch (2003), a study on the timing effect of earning announcement on the stock returns of companies listed at the Nairobi Stock Exchange and the finding indicating that there is no relationship between a firm's earnings and the timing of the release of the annual reports. Rioba (2003) evaluated the predictability of ordinary stock price returns at the Nairobi Stock Exchange in Kenya. The observation was that the predictability evidence for ordinary shares at the NSE is weak.

The Nairobi Securities Exchange has three segments namely; Main Investment Market Segment (MIMS), Alternative Investments Market Segment (AIMS) and Fixed Income Securities Market Segments (FISMS). This study is based on the MIMS segment of the NSE. Further the eligibility

criteria for a company to be listed at NSE include an assessment on the basis of incorporation status, share capital, Net Assets, Transferability of shares, financial records, directors and management, previous track record, solvency, share ownership structure, dividend policy and certificate of comfort from the primary regulator. There are 62 listed companies at the NSE in the Main Investment Market segment (NSE Website).

1.2 Research Problem

The NSE is ranked as the fourth largest Securities Market in Africa and the Largest in East Africa. The share price of companies listed at the NSE has a substantial impact on the investor's decision as to whether to buy or sell their shares in the Kenyan market. Some of the investors especially those who take up shares for capital gains are keen on the movement in the share price. An increase in the share price for an investor therefore means a growth in the value of their assets and a decrease in the share price a decrease in the value of their assets. Value meaning the total market price of the securities held. The expected relationship between the earnings announcement and the share price is that negative earnings announcement will cause share price to go down and positive earnings announcement will cause the prices to increase.

A lot of studies in this area have been done in the developed Capital Markets in Europe, Asia and USA, with minimal number of studies done on small emerging capital markets particularly from Africa except a few on Johannesburg Stock Exchange Yakubu Awudu Sare, Elijah Akuoko, Samson Vivian Esumaha, (August 2013). Ball and Brown (1968) in their study found that about 85% of the information content of the annual earnings announcement was reflected in the stock prices prior to the release of the actual annual earnings figure. Beaver (1968) studied the extent

to which common stock investors perceive earnings to possess informational value. He hypothesized that if earnings report conveys information in the sense of leading to changes in equilibrium value of the current market price, the magnitude of the price change should be larger in the week of the announcement than during the non report period.

Recent related studies in Kenya have been done by Danson Musyoki (2011) and Mohamed Hussein Mohamed (2010). These studies did not consider the effects of earnings announcement on the share price that warranted this study furthermore, the proposed study focuses on a more recent period being 2010 to 2013. Onyangoh (2004), in his study, stock prices responses to Earnings announcement sampled 16 companies out of 48 listed companies at NSE covering the period 1998-2003. The results of this study showed that the earnings announcement contain relevant information to investors which are fully impounded in the stock prices prior to or almost instantaneously at the time of announcement. This paper adds to the current literature on the effects of earnings announcement on the share price. With the recent adoption of the electronic trading platform by the Nairobi Securities Exchange, the study aimed to find out whether the market adjusts more promptly and precisely to new information in the market.

1.3 Research Objectives

The research objective is to identify the impact of earning announcement on the stock prices of the companies listed at the Nairobi Securities Exchange.

1.4 Value of the Study

Given the scanty research on emerging capital markets in Africa, and their potential to provide significant portfolio diversification benefits (Harvey, 1994), the need for further research on the

efficiency and responsiveness of markets in the region to information disclosures has become deeply imperative. This study therefore, serves to fill this gap by assessing the informational efficiency of the Nairobi securities Exchange market with respect to firms' earnings announcements. A study of share price adjustment to earnings announcements is of significance to investors, policy makers, regulators and researchers. Investors and portfolio managers, keen on increasing their portfolio returns, would be interested in identifying opportunities for profit making by trading around earnings disclosure dates in emerging markets. For policy makers and regulators in developing markets, stock market inefficiency is a matter of concern because it implies less-than-optimal allocation of investment resources within the economy. Lastly, evidence from analyzing stock price reaction to earnings announcements in a developing market may throw more light on whether the theory of efficient markets is supported, or contradicted, by empirical findings, and this is of significant interest to researchers.

CHAPTER TWO

LITREATURE REVIEW

2.1 Introduction

Earnings announcement have been for a long time been considered as the logical way of informing the investors and shareholders as far as the company's past performance is concerned and are also extensively used in the forecasting of future performance and Equity valuation. This has made earnings announcement a subject of research for many scholars. The specific areas covered under this theoretical review are efficient market Theory and Prospect theory of Behavioral Finance.

2.2 Theoretical Review

2.2.1 Efficient Market Theory

The origin of Efficient Market Hypothesis can be traced back to the 1960s from the work by two individuals, Eugene F. Fama and Paul A. Samuelson. An efficient capital market is one where the stock prices fully reflect available information. It has two general implications, first, that in a given period of time, stock's abnormal return depends on information or news received by the market in that period and secondly, that the investors who rely solely on this information cannot earn abnormal returns over time.

American economist, Eugene Fama, proposed three types of efficiency: weak form, semi-strong form and strong form efficiency. Weak form efficiency claims that all past prices of a stock are reflected in today's stock price. Therefore, technical analysis cannot be used to predict and beat a market. Semi-strong efficiency implies that all public information is calculated into a stock's current share price. It means that neither fundamental nor technical analysis can be used to achieve superior gains. Strong

form efficiency is the strongest version of market efficiency. It states all information in a market, whether public or private, is accounted for in a stock price. Not even insider information could give an investor the advantage. Random walk theory claims that stock market can be analyzed as random walk according to next three facts: efficient markets respond very fast to new information, if the share price is a reflection of all available information, it is impossible to use that information for market predictions. It is impossible to predict market movement other than randomly.

There are two ways of testing this form of efficiency, namely the tests of independence also known as the random walk method and trading rules test. In the semi-strong form of efficiency the security prices reflect all publicly available information including the data in weak form. In the semi-strong form of efficiency high level of fundamental analysis is required for the prices to fully reflect all publicly available information, Fama (1970). There are three models of calculating abnormal returns namely: the market model, the mean adjusted returns model, and the market adjusted returns model. Of the three, the market model, which is based on the capital asset pricing model-CAPM (Markowitz, 1952; Sharpe, 1964), is the best specified model since it controls for the both systematic and the unsystematic risk of the stock. The strong form of efficiency is the highest level of market efficiency whereby security prices reflect all public and private information both published and the unpublished. Efficient markets attract more investors translating into increased market liquidity (Osei, 1998).

The validity of the efficient markets hypothesis (EMH) has been questioned as several recent studies have reported evidence that significant abnormal returns can be generated by trading on the basis of public information. For example, Kausar and Taffler (2006) found that stocks of UK firms in distress that have a publicised going concern audit report tended to experience significant negative price reactions ranging between -24% and -31%. Other studies which question the EMH have found evidence of slow post-announcement stock price adjustment to earnings disclosures. Sponholtz

(2005), using the event study method, examined the information content of annual earnings announcements in the Danish stock market. Utilizing data from 1999 to 2001, Sponholtz found significant abnormal price reactions in the period surrounding the announcements. Contrary to the EMH, the abnormal price reactions persist several days after the announcement, suggesting that the Danish stock market may not be informational efficient. Sponholtz (2005) attributes the slow post-announcement adjustment of prices to the small size of the Danish stock market.

2.2.2 Traditional Finance Theory

The models within the traditional finance paradigm assume that investors act rationally and consider all available information in the decision making process. The investment markets are therefore efficient and securities prices reflect the true 'intrinsic values' of these assets. The investors act promptly to new information and update prices correctly within a normatively acceptable process. Investment markets are believed to follow a random walk pattern and are therefore not predictive. Underlying all these is the theory of arbitrage, which suggests that rational investors undo price deviation away from the fundamental, values quickly and maintain market equilibrium Tversky and Kahneman (1974).

The Modern Portfolio Theory, Capital Asset Pricing Model and Arbitrage Pricing Theory are the quantitative models that underpin the rational expectations based theories (Markowitz, 1995; Sharpe, 1964; Ross, 1976). The theory is based on the notion that investors act rationally and consider all available information in the decision making process and as a result the investment markets are efficient and reflects all available information.

2.3 Determinants of the Share Price

Economists believe that prices of commodities are determined by the forces of supply and demand in a free economy. In the Securities market, the share prices are affected by a number of factors which include book value of the firm, dividend per share, earnings per share, price earnings ratio and dividend cover (Gompers, Ishii & Metrick, 2003).

The most basic factor that influence the price of a share is the demand and supply factors such that if many people start buying a particular share then its demand goes up and so will the prices and if people start selling the share then its demand goes down and prices go down. Government policies, firms and industry performance and potentials have an impact on the demand behavior of the investor. The share price is therefore determined by both Macro and Micro Economic factors.

2.3.1 Macro Economic Factors

Probably the relationship between stock prices and macroeconomic variables is well illustrated by the Dividend Discount Model (DDM) proposed by Miller and Modigliani (1961) than any other theoretical stock valuation model. According to the model the current price of an equity share equals the present value of all future cash flows to the share. Thus, the determinants of share prices are the required rate of return and expected cash flows. Arnott and Hansen,(1989) and Tessaromatis, 2003) suggesting that economic factors that influence the expected future cash flow and required rate of return affect the share price.

Fama and Gibbon (1982) find that expected real returns on bills and expected inflation rates are inversely related. This is due to the positive correlation between expected real returns on financial assets and real activity. Using the multi-factor APT framework, Hamao (1988) shows that inflation significantly influenced Japanese stock returns. An investigation of the relationships between stock prices and real activity, inflation, and money conducted by Fama in 1981 shows a strong positive correlation between common stock returns and real variables.

2.3.2 Micro Economic Factors

Micro being factors that affecting demand and supply conditions which can be influenced by performance of the company and performance of the company as compared to its peers in the industry. There is also a substantial literature that examines the explanatory power of financial ratios of firms on stock returns. This literature goes back to Fama & MacBeth (1973) where the researchers find that there is a positive simple relationship between average stock returns and beta which is a measure of risk in the pre-1969 period. Basu (1977) finds that stocks with high (low) P/E ratios generate lower (higher) stock returns.

Rosenberg et al. (1985) find that average stock returns are positively related to the ratio of a firm's book value of common equity to its market value in the US market. Bhandari (1988) finds that the expected common stock returns are positively related to the ratio of debt to equity, controlling the beta and firm size. This relationship is found not to be sensitive to variations in the market proxy, estimation technique, etc. The evidence suggests that the "premium" associated with the debt/equity ratio is not likely to be just some kind of risk premium.

2.4 Empirical Studies

Ball and Brown (1968) had already noted evidence of post-earnings announcement “drift” in the direction indicated by an earnings surprise. Ten years later, Ball (1978) summarized twenty studies of earnings and dividends, and concluded that the collective evidence of anomalous behavior was strong. This study examined properties of daily stock returns and how the particular characteristics of these data affect event study methodologies for assessing the share price impact of firm-specific events. The use of daily data in event studies involves a number of potentially important problems. These can be summarized as follows. The daily stock return for an individual security exhibits substantial departures from normality that are not observed with weekly or monthly data. The evidence generally suggests that distributions of daily returns are fat-tailed relative to a normal distribution (Fama 1976). The same holds true for daily excess returns.

Earnings announcement affects the stock price of the firms because of the information content, if the information is good news that this year’s earning is higher than last year’s earning or the company is forecasting that next year’s earning will be higher than this year, this may bring the stock price of the company to change. When the information contains bad message like current year’s earning is lower than last year or earning forecasted for next year is lower than usual, than the expectation of investors will change and company stock price may go down. Also late announcement of earning can convey bad news because while early release of earning information can convey good news, early or late meaning earlier or later than the time earning information was released last year. Investor expect that earning announcement will be released at the same time every year and earning amount is higher or equal to last earnings announcement.

Kim and Verrecchia (1991) show that announcement is positively related to the precision of the announced (new) information, and negatively related to the precision of the preannouncement information. If earnings reports cease to capture information at the end of the fiscal quarter to which they pertain, their information content declines the farther away their timing is from the fiscal quarter end. Unless the earnings number captures information that becomes known to managers after the fiscal quarter end, it will be less informative as this time lag increases due to mitigation of the new information by the precision and amount of the preannouncement information. The study provide evidence that earnings lose their informativeness as this time lag increases, and that such information mitigation is relatively more pronounced for smaller firms.

Needham Jones and Frank Bacon (2007) study the effect of announcement of quarterly earnings surprises on stock price's risk adjusted rate of return for 50 randomly selected firms. The study analyzed 11,183 observations using standard risk adjusted event study. When a firm announces positive surprise earnings, investors appear a positive signal about the firm's future which causes and increase in the firm's stock price. This study's results suggest that positive surprise earnings announcement do indeed send a positive signal about the profitability and future success of a firm. As a result of this positive signal, stock prices do increase and market reacts quickly to available information.

Eilifsen, Knivsfla and Sættem (2001) find a significant reduction in stock price volatility in the post announcement period relative to pre-announcement period for companies traded on the Oslo Stock Exchange in the period 1990 – 1995. Potential explanations for this phenomenon are tested by relating the observed return volatility to changes in the volatility of underlying business, the speed at which the information is incorporated into stock prices, and amount of noise in the price process.

They concluded that there is significant decline in the noise term for the largest companies after the earnings release date, supporting the hypothesis that earnings announcements reduce informational asymmetries among investors.

Brooks, Patel, and Su (2003) explicitly examine unanticipated news announcements, in particular, 21 catastrophic events during 1989-1992. They find wide spreads and high volume and volatility after the unanticipated announcement. However, Brooks et al. (2003), do not compare unanticipated events to anticipated events, examine depth or adverse selection, nor attempt to separate content from timing effects. The study explicitly performs these tasks, which also allow comparing and contrasting the theoretical implications from asymmetric information models. Only after earning report is released investors might purchase or sale securities.

Beaver (1968) shows the relationship between interim and annual earnings announcements and stock market behavior. His argument was there should be increased security return availability associated with release of financial statements if at all the statements have any information. The research sampled 143 companies and observed the information content of quarterly earnings announcement for the period 1961 – 1965. He used trading volume activity (TVA) and market model to test the information content of interim and annual reports, the test revealed a drastic increase in trading volume and a high variability in stock return in 17 weeks surrounding the announcement date. His conclusion was that the earning reports have information content which could affect the stock prices.

Ball and Brown (1968) examined the behavior of stock return within 12 months up to earnings announcement date for 8 years 1957 – 1965. They intend to determine the time and information content of accounting numbers; they selected a sample of 261 companies from New York Stock

Exchange and classified them into two groups for each year of study, that is, companies whose earnings increased. They noted that the stock returns of firms whose earnings decreased had negative abnormal returns of 11.3% while the firm whose earning increased had a positive abnormal return of 5.6%. They concluded that the year's income number captures 50% or more of the information about firm's availability during a year.

Kaul (2007) examined the effects on stock prices when companies provided earnings preannouncements versus when earnings surprises occurred. The data was divided into two categories positive preannouncement (surprise or preannouncements) and negative preannouncements (surprise or preannouncements). Positive preannouncements resulted in an upward price movement 70% of the times, and average price change was 5.19% rise. Negative preannouncements resulted in a downward price movement 73% of the times, and average price change was a 7.43% drop. The study concluded companies tended to fare significantly better when they provided positive preannouncements.

Gupta (2006) in his study, Impact of earnings Announcements on stock prices, investigates the stock market reaction associated with earning announcements in the Indian market, and to verify whether these announcements posses any information value. The Average Abnormal Return (AAR) for good news is greater than zero on the announcements day. The AAR is less than zero on the announcement day for the bad news. It has been observed the price reaction in the case of bad news is much larger than in the case of good news. The results of study indicate that earning announcements contain important information which causes stock prices to change.

This study is similar to the study done by Gupta (2006) using an event study by testing 50 companies in India comprising CNX Nifty Index which made earning announcement in March 2004, concluding

that earnings announcements contain important information which cause stock price to change. and Kong and Taghavi (2006) examining the annual earnings announcement effect of the stock Markets in China concluding that a higher than expected earnings announcement leads to a rise in the conditional mean of stock returns on days before news announcement and fall afterwards, supporting the rejection of semi-strong-form efficiency. Islam and Clark (2005) did a study as to whether emerging markets are efficient by investigating partial correlation function on Stock returns during 1992-2001. The study observed that there is an autocorrelation on Thai Stock Market especially during the post-crisis period to conclude that the emerging capital market is inefficient.

In Africa, Olowoniyi & Ojenike (2012) investigated the determinants of stock returns of listed firms in Nigeria. Panel econometric approach was used to analyse panel data (2000 to 2009) obtained from 70 listed firms. The Fixed Effect, Random Effect and Hausman-test based on the difference between fixed and random effects estimators were conducted. Stock return (dependent variable) was measured by dividend layout, expected growth was measured by capital expenditure divided by total assets, size was proxied by logarithm of firms' total assets, profitability was proxied by ratio of earnings before interest, tax and depreciation on total assets, tangibility was measured by total fixed assets divided by net profit after tax while leverage was measured by ratio of book value of total debt to total assets. The findings suggested that with the exception of profitability and tangibility (which were significantly and negatively related to stock return), all the independent variables were positively and significantly related to stock return. The findings of this research implied a need to further assess how tangibility and profitability can be improved upon to raise the level of stock return. This will ensure the correctness of several policies formulated to stabilise the financial base of firms based on either capital structure or stock return.

Uwuigbe, Olusegun & Godswill (2012) examined the determinants of share prices in the Nigerian stock exchange market. Using the judgmental sampling technique, a total of 30 companies were selected and data (2006 to 2010) collected from the stock exchange and annual reports of the firms. The paper modeled the effects of financial performance, dividend payout and financial leverage on share price of listed firms by using regression analysis. The study concluded that financial performance and dividend payout had a significant positive relation with share prices while financial leverage (proxied by debt-equity ratio) had significant negative influence on the market value of share prices in Nigeria. Further studies could be conducted incorporating the independent variables under current analysis as well as having other internal and external variables.

Eita (2011) in investigating the macroeconomic determinants of stock market prices in Namibia used an estimation equation using time series properties of variables and concluded that stock market prices in Namibia were determined by economic activity, interest rates, inflation, money supply and exchange rates. The period under study was 1998 to 2009 and two measures of stock market development were used namely; market capitalisation to GDP and the Namibian stock exchange overall index. A positive relationship existed between stock prices on one hand and money supply and economic activity on the other hand while inflation and interest rates had a negative relationship with stock prices. More information is needed on the effect of exchange rates on the stock prices.

In Kenya several studies have been done on the determinants of the share price. Buguit, Soi, Koskei & Kibet (2013) In their study on the relationship between the capital structure and the share prices in NSE assessed the effect of debt, equity and gearing ratio on the share price. Using panel data pertaining to the energy sector over the period 2006 to 2011 and employing multiple regression analysis, the results indicated that debt; equity and gearing ratio were significant determinants of the

share price for the sectors under consideration. Further, the gearing ratio and debt were found to positively affect share prices while equity negatively affected the share price.

Aduda, Masila and Onsongo (2012) sought to investigate the determinants of development of NSE. The study employed secondary data (2005 to 2009) to model the impact of 8 Macroeconomic and institutional factors on the development of NSE. The macroeconomic factors included income level, savings and investment, stock market liquidity, macroeconomic stability and private capital flows. Institutional factors included political risk, bureaucratic quality, law and order, corruption and democratic accountability. Using regression analysis, it was found that stock market development was determined by stock market liquidity, institutional quality, income per capita, domestic savings and bank development while macroeconomic stability (proxied by inflation) and private capital flows were found to have no relationship with stock market development. Further, research is needed to establish whether macroeconomic instability and foreign private capital flow affect stock market development. Also, behavioral factors could be considered in development of stock markets as well as comparison of different factors affecting stock market growth in the East African Communities Countries

The inefficiency in the emerging markets being caused by of lack of development and implication on the policy choices. Dickinson and Muragu (2006) in their paper, Market efficiency in Developing countries, a case of the Nairobi Stock Exchange, extends evidence on the efficiency of the stock markets in the developing countries using data from the NSE and also addressing some methodological issues which have contributed to the sparseness of similar studies. Evidence is provided from this study that small markets such as the NSE may provide

empirical results consistent with weak-form efficiency. The evidence held the NSE irrespective of whether bid-, ask-, or market-price series are used in conducting the study.

Aduda and Muimi (2011) in their paper, Test for investor rationality for companies listed at the NSE, they study the investors rationality for companies listed at the NSE and tests for overreaction by investors to news and performance of companies listed at the NSE as an anomaly that has been proven in other markets. The study concludes that investors indeed overreact to both bad and good news. Confirming that investors are irrational and make decisions based on some biases. Oluoch (2003) findings indicated no systematic relationship between a firm's earnings (whether good or bad) and the timing of the release of the annual reports. This study contradicts early study conducted by Linsheng (1989) about time lag.

2.5 Summary of Literature Review

There are a number of reasons why the evidence documented for developed markets may not apply to Africa's emerging markets. According to Alford et al., (1993), the varying accounting standards and information environments across markets are likely to impact differently on the manner in which stock markets indifferent regions and countries react to information. Additionally developed markets are highly sophisticated, highly liquid, closely regulated and considerable amount of resources is devoted to securities research and analyses. Emerging markets, on the other hand are characterized by relatively large number of poorly informed and unsophisticated investors, low liquidity levels, weak legal, regulatory and institutional framework and operational bottlenecks (Osei, 2002).

The current study marks a departure from previous studies and contributes to the literature in a number of important ways: First using daily prices, we investigate whether significant abnormal

returns can be generated in the Nairobi Securities Exchange market in the period surrounding firms' annual earnings disclosures. Second we assess the information content of earnings disclosures using recent data (2011 to 2013) which enables us to capture recent trends in globalization, technological progress and reforms in financial market regulation.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This is a descriptive design with a quantitative data collection method used to collect information from the selected sample population. An event study has been used to examine the effects of earnings announcements on the stock price of the selected companies listed at the NSE. The event study was used to describe the relationship between the independent variable Earnings Announcement and the dependent variable stock prices. Secondary data was collected from the Nairobi Securities Exchange to compare and generalize the result to the population. Data was collected from the selected firms listed at the Nairobi Securities Exchange during the period of the study.

An event study was originally introduced by Ball and Brown (1968) and Fama et al, (1969) subsequently modified by Campbell et al. (1997) and MacKinlay model (1997) to determine the abnormal return.

3.2 Population and Sample Design

The population of the study is on a selected list of 19 companies listed at the Nairobi Securities Exchange which announce their earnings atleast once a year. The population considered is all listed at the NSE at 1 January 2010 to 31st December 2013. This being the most recent annual financial period and would be a more reflective of the current development in the stock market.

A purposeful and judgmental sampling method was employed for the study. In order to include the target sample, the extracted sample of the earnings announcements has to meet the following

criteria; that the shares of the announcing firm should have been listed at the NSE and actively traded, there has been an annual earnings announcement at the NSE News Services, there are no missing data, No Confounding event should have occurred in the 16-day event window. Firms that make multiple announcements during the 16 days event period are excluded from the sample. Other confounding announcement includes dividends, capital expenditure projects, litigations, share splits management change (including hiring or dismissal of key members of the executive team) and restructures and that the stock values being considered are atleast 3 months before and after the earnings announcement.

3.3 Data Collection

Secondary data has been collected from the NSE, the CMA, annual reports of the firms, data from Kenya National Bureau of Statistics (KNBS) and other research material on the share prices and earnings announcements.

3.4 Data Analysis

The market model of Sharpe (1964) was used to estimate the returns on the stock.

E-views will be used to generate the market returns, abnormal returns and statistical values to test significance. Tables and graphical presentations will be used as appropriate to present the data collected for ease of understanding and analysis.

The market model is specified thus:

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

Where

R_{it} = returns on stock i at time period t

R_{mt} = market return at time t

ε_{it} = error term

In order to test for market reaction to the announcements, we estimated abnormal returns (AR) at the time of the announcement, and before and after the announcement.

The abnormal return is to be obtained as follows:

$$AR_{it} = R_{it} - \alpha - \beta R_{mt}$$

The AR is the percentage change in share price below or above what would normally be expected to occur.

The ARs are test for statistical significance using the t-statistic will be:

$$tAR = AR_t / SD(AR_t)$$

Where $SD(AR_t)$ = standard deviation of AR_t calculated over the estimation window

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The objective of this study is to analyse the existence of abnormal returns that resulted from the effect of earnings announcements on stock prices of firms listed at the Nairobi Stock Exchange, which required collection of data from firms selected which were listed during the period under study. The chapter presents and discusses the findings of the study, using 19 firms reviewed over the period 2009 to 2013. In addition the chapter covers the regression results of ARCH models estimated.

The population of the study comprised of 19 selected companies that have been continuously listed in Nairobi Stock Exchange as at January 2009 to December 2013 and which announce earnings at least once a year. The data used for this study comprised of daily stock prices, earnings announcements dates for all companies included in the study for the five year period 01/2009 – 12/2013 and NSE-20 share index.

This study defines the period to be studied (2009 – 2013) and determine the precise day of announcement of the earnings and make this as day zero. In this research 8 days before the announcement and 8 days after the announcements was studied to compute daily abnormal positive or negative returns for all firms listed at Nairobi Stock Exchange during the period under investigation. Daily returns was calculated by using models mentioned in the research methodology to find out actual daily returns and compare using estimated daily market returns for the same period to generate abnormal returns for each day for event window of 16 days.

The research expects that the magnitude of the effect of earnings announcements to vary across the firms because such announcements made by the firms in different industries at different times. In

which case, it is useful examining individual firm behavior. For summary of analysis of return and cumulative abnormal returns (see appendix 3).

Analysis of the findings was done using Microsoft Excel and SPSS. Excel was used in the data compilation while SPSS was used for final statistical data analysis. Parametric t-test was used to determine the statistical significance of market adjusted average abnormal return (MAAR) and Cumulative Abnormal Return (CAR) of earnings announcement over the window period (-8 day to +8 day relative to earnings announcement).

4.2 Market Adjusted Abnormal Return

Appendix 3 presents the Market Adjusted Abnormal Return from 8 days before and 8 days after announcements for the earnings announcing firms. The event being studied is the earnings announcements and their effect on share prices. The author therefore examines the returns before and after the earnings announcements. The day of announcement is denoted as day zero.

This section is presentation of detailed data analyses that was carried out and includes the findings of the research. The study proceed to test for the effect of earnings announcements on stock prices of listed firms, to construct, daily stock prices was collected from NSE for the entire period of under study (2004 – 2008). $\frac{P_{it} - P_{it-1}}{P_{it-1}}$ was used to determine the actual daily positive/negative abnormal returns (R_{it}). Also $\frac{I_{it} - I_{it-1}}{I_{it-1}}$ to calculate daily expected market returns (R_{mt}). $R_{it} - R_{mt}$ calculated the positive or negative abnormal returns. The results from MAAR provide the empirical evidence regarding the relationship among returns and were further tested with 5% of significance level.

Daily NSE 20 share index price chosen to be the yard stick for abnormal return either positive or negative. NSE 20 share index price is the share price of selected listed twenty firms in case a firm is suspended another one selected by following the selection criteria. According to the 62 firms currently listed 19 firms is a good sample out of 62 listed.

In this case the daily prices of 19 firms for five years period which constitute 323 observations were arranged in the form of window of 16 days, 8 days before the announcement day and 8 days after the announcement day showing the announcement date as day zero. By using MS excel now it is easy to arrange and form a table to calculate actual daily returns of selected listed firms, but still it is not clear whether there is positive abnormal return or negative abnormal return unless compared with estimated daily returns from selected NSE 20 Share index firms. The estimation in this index is done by Nairobi Stock Exchange by using geometric mean formula. The second step was to find the difference between average actual daily return from 323 observations and daily NSE 20 index price which automatically shows whether there is positive abnormal return, if average actual daily return is greater than daily NSE 20 index price and negative abnormal return if the daily NSE 20 share index price is higher. After this stage data was transferred to E Views to do further analysis by testing with 5% level of significance to show if the abnormal return is significant.

Findings shows that average market adjusted abnormal returns (MAARs) on the day of earnings announcement was 2 percent, which was statistically significant at 5% significance level (t value=2.45, p-value=0.016). This implies that the announcement of earnings normally carries surprise to the market. It is also worth noting that negative returns are earned most days before the announcement and positive excess returns on the day of announcement of event implying a surprise on the day of announcement. These results strongly suggest that the effect of earnings announcement is strong in Nairobi Stock Exchange.

The results also show that MAARs of day -6 and -2 are about -4.4 percent and -7.7 percent respectively, which are significant at 5 percent level. However, the percentage returns on these days are less than that on day zero. This suggests that market start to react a few days earlier than the actual announcement of earnings. This could be due to the fact that the information of earnings payment often leaks out to the market a few days before the announcement made by the companies. During the post-announcement periods (day +1 to +8), all MAARs are insignificant except those on day +4 and +8.

4.3 Summary Statistics for the Daily Stock Returns and Market Returns

	R_t	R_m
Mean	0.000109	0.000113
Median	8.21E-05	8.21E-05
Maximum	0.091325	0.091325
Minimum	-0.091325	-0.091325
Std. Dev.	0.005364	0.005368
Skewness	0.064996	0.065364
Kurtosis	149.2738	148.8251
Jarque-Bera	112.4184	111.7297
Probability	0.000000	0.000000
Sum	0.137587	0.142312
Sum Sq. Dev.	0.036256	0.036311
Observations	1261	1261

Table 4-1 Summary of daily stocks returns and market returns

From the results, the daily mean for the individual stocks for 2009 – 2013 is 0.0001 while that of the market returns is 0.00011. Looking at the volatility capture by the standard deviation, both

the stock returns and the market return post almost similar results. Skewness measure posits the both stock and market returns are positively skewed. However, the kurtosis of greater than 3.0 portrays the characteristic of leptokurtosis which is common in financial data. The significance of the Jarque-Bera statistics reflected by their respective probability values negates the null hypothesis of normal distribution since they are less than 5 percent.

Summary Statistics for Weekdays					
	MON	TUE	WED	THUR	FRI
Mean	0.0001	-0.0008	0.0004	-0.0006	0.0001
Median	0.0002	0.0001	0.0001	0.0001	0.0001
Maximum	0.0913	0.0349	0.1287	0.0302	0.0469
Minimum	-0.0349	-0.1298	-0.0154	-0.0469	-0.05
Std. Dev.	0.0059	0.0076	0.0063	0.0043	0.0046
Skewness	6.2505	-9.9672	13.0612	-1.4848	-0.0427
Kurtosis	101.9303	160.8043	259.6591	30.2609	40.6776
Jarque- Bera	271373.9	691521.9	1819205.0	20554.02	38743.53
Probability	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	0.0832	-0.0533	0.2942	0.0404	0.0512
Sum Sq. Dev.	0.0225	0.0383	0.0263	0.0121	0.0140

Table 4-2 Summary statistics for weekdays

The table shows day specific summary statistics. Wednesday has the highest positive daily mean returns of 0.0004 with fattest tails followed by Monday and Friday at 0.0001 and 0.00008 respectively. However, Tuesday and Thursday have negative daily mean returns with Tuesday having the largest negative returns. This perhaps explains the effects of announcements for auctions in government's treasury bills on Thursdays and the actual trading taking place on Tuesdays. Tuesday has higher volatility in stock return relative to other days. Therefore, Tuesdays present a case of leverage effect; - a negative relationship between volatility and stock returns since it experiences the highest negative daily returns as well as highest volatility. On the contrary Thursdays have the lowest volatility.

	With Intercept		With Intercept and Trend	
ADF test statistics	Calculated Values	Critical Values	Calculated Values	Critical Values
R_t	-29.936	-3.432 (at 1%)	-29.931	-3.961 (at 1%)
		-2.862 (at 5%)		-3.411(at 5%)
		-2.567 (at 10%)		-3.127(at 10%)
AR 1	-29.932	-3.432(at 1%)	-29.928	-3.961 (at 1%)
		-2.862 (at 5%)		-3.411(at 5%)

Table 4-3 Unit Root Test (ADF)

The test for stationarity is based on the Box and Jenkins (1976). Following this test the daily stock returns should be stationary. The use of the dickey fuller test for unit root reveals that the daily stock returns are integrated of order zero implying the absence of unit root.

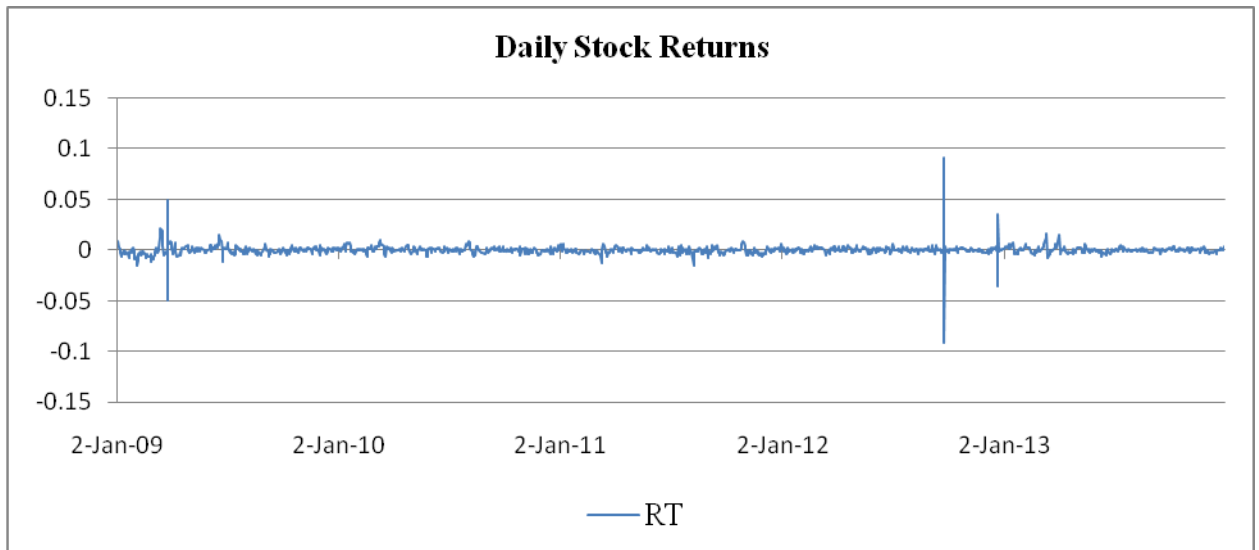


Figure 1 Daily Stock returns

Plotting the daily stock returns of the selected counters we find that low returns are followed by low returns while high returns are followed by high returns. Thus we conclude the presence of volatility clustering in the selected stock's daily returns.

4.4 Regression Results for the ARCH Model

Mean Equation				
	Coefficient	Std. Error	z-Statistic	Prob.
R _m	0.561058	0.04462	12.5753	0
MON	0.000286	0.00053	0.54105	0.5885
TUE	-0.003327	0.00031	-10.853	0
WED	0.000257	0.0005	0.51369	0.6075
THUR	-0.000869	0.00034	-2.5553	0.0106
FRI	-1.07E-05	0.00053	-0.0202	0.9839
Variance Equation				
C(7)	2.70E-05	2.92E-06	9.23425	0
C(8)	0.599456	0.07405	8.09582	0
C(9)	0.08043	0.02719	2.95775	0.0031
C(10)	0.435909	0.05025	8.67569	0
C(11)	-0.011084	0.08001	-0.1385	0.8898
R-squared	0.532378	Mean dependent var		0.00011
Adjusted R-squared	0.544637	S.D. dependent var		0.00536
S.E. of regression	0.006667	Akaike info criterion		-8.1801
Sum squared resid	0.055558	Schwarz criterion		-8.1352

Table 4-4

First we compute the daily stock returns for the selected firms from their daily stock prices. After this we compute the market returns from the daily NSE -20 Share indices. In addition we generate the day of the week dummies to capture the event data for the selected firms.

We then pool the data from the selected firms to form one data set. Upon the pooling the data, we estimate the ARCH model since we are dealing with the daily data to capture the volatility in the stock market for the selected stocks.

4.5 Average Abnormal Returns and Cumulative Average Abnormal Return

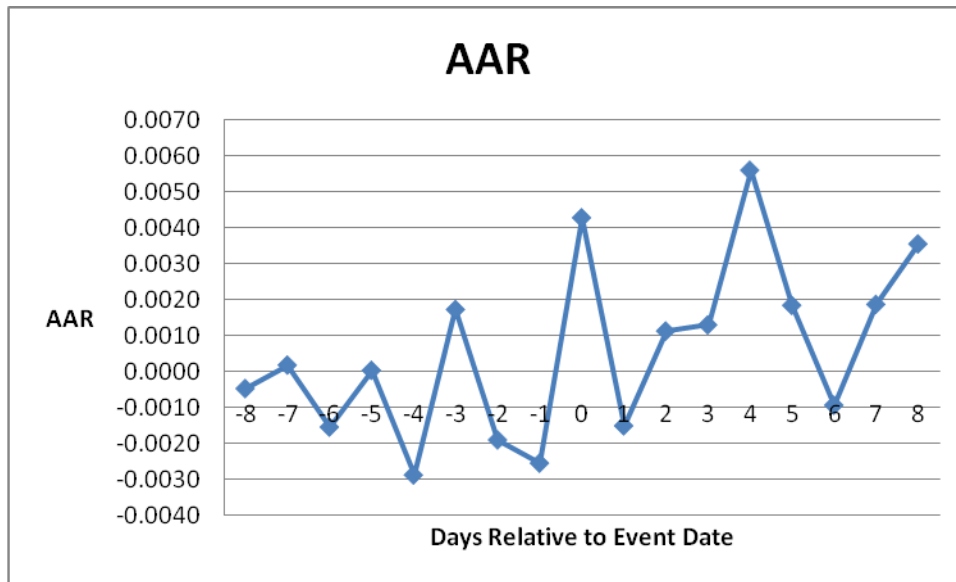


Figure 2 Average Abnormal Return

Figure 1 above shows the AARs before and after earning Announcement, There is a Positive Average abnormal return of +0.05 on day on the announcement date but then a sharp decrease in the

abnormal return subsequently on the next day after the announcement and a gradual rise on the second, third to a peak of +0.06 on day 4 again a decline on the fifth and sixth day. Looking at the trend from day six, there seems to be an upward movement in the return on the share price.

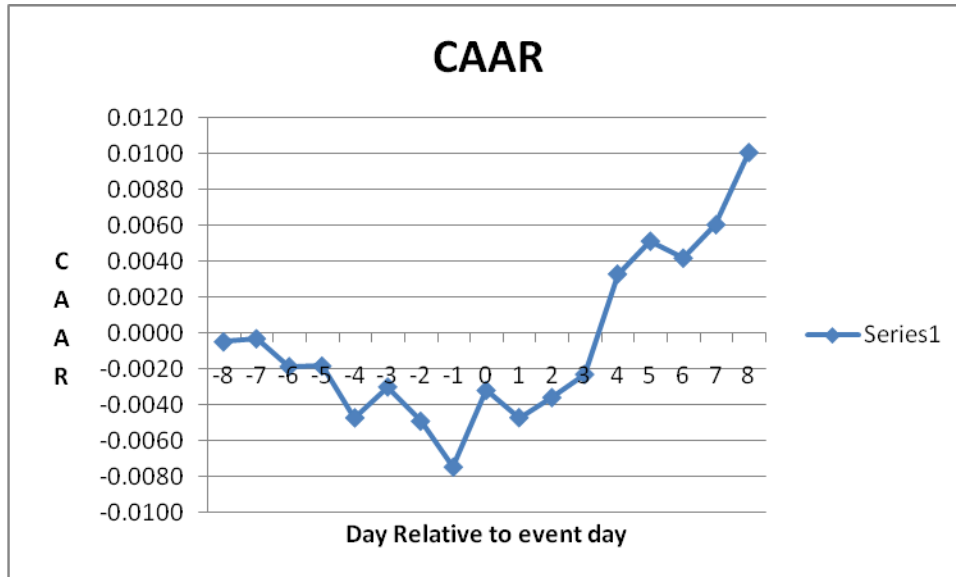


Figure 3 Cumulative Average Abnormal Return

The cumulative Average Abnormal Return demonstrate an upward gain on by the investors on the days preceding the earnings announcement. An declining trend from day eight before the announcement upto the eve of the announcement and subsequently an increase upto day eight after the earnings announcement upto +0.0100.

4.6 Discussion of Research Findings

From the results we find that the market R_m coefficient is 0.0000. Thus we can predict the individual daily stock returns for the selected firm using the daily market returns.

Looking at the effects of the event dates (announcement) we find that depending on the week day that the event date falls on, the effect on the daily stock returns for the selected firms will vary. From the results, if the event data falls on a Monday, This has a positive shock on the daily stock returns although insignificant since the probability is greater than 5 percent. If the event data falls on a Tuesday, the effect on the individual stock return is negative and very significant. For a Wednesday, the individual stock price is positively shocked though insignificant. The effects for Thursday are similar to those of Tuesday with Friday having negative but insignificant shock.

Looking at the variance equation, we find that the ARCH effect given by $C(9) = 0.080430$ is significant implying that low returns are followed by low returns while high daily returns are by high daily stock returns hence presence of volatility clustering in the daily returns of the selected firms.

The study found out that earnings announcements are normal concurrent events in Nairobi Stock Exchange as some firms announced the two together as against the developed stock market where such announcements are made separately. Price reaction to announcements using daily stock prices around the announcement dates is consistent with findings by Onyangoh (2004).

The results of the study show that the earnings announcements contain relevant information to investors which are fully impounded in stock prices prior to or almost instantaneously at the time of announcement as long as announcement date has positive excess returns. Secondary evidence resulting from this study is the conclusion that NSE shows presence of semi strong model of EMH. This is contrary to early evidence adduced by the study of Ondigo (1995).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study analyzed the effects announcements on the daily stock returns at Nairobi Securities Exchange for the period 2nd January 2009 to 31st December 2013. The study adopted a an ARCH model to capture the effect of the market return computed the daily NSE 20 – Share index as well as the day of the week effect on which the event date fall. This study was undertaken a view of establishment whether earnings announcements effect the stock prices of the firms listed at the Nairobi Stock Exchange for the years from 2004 – 2008.

The objective of this is study was to determine whether earnings announcements generate abnormal returns and duration of abnormal returns of firms listed at the Nairobi stock exchange. Data extracted from NSE Daily stock and NSE handbook for the 2009 -2013 and was analyzed using EXCEL and E-views with focus on comparing critical t-value with table t-value and was presented using tables and graphs. From the data analysis and resulting tables show that all companies sampled had an eventful earnings announcements. The graphs confirm a turning point in residual around the date of earnings announcements for most of the companies. The findings are that significant movements in return were observed periodically, pre and post earnings announcements. Most of the shares posted negative abnormal returns around the earnings announcements dates which shows how stock prices have reacted the earnings announcement event.

The above findings show that statistically negative abnormal returns were observed in the post and pre earnings announcements of firms listed at the Nairobi Stock Exchange. Given that a number of issues to be deliberated at earnings announcements are public information prior to earnings announcements and one would not expect revision in share prices that result into abnormal gains or losses. In which case abnormal gains or losses is only realizable if good or bad news emerges from the earnings announcements.

5.2 Conclusion

The study examined the effect of earnings announcements on stock prices of listed firms at NSE for the period 2009 to 2013. The period under study is the period around the earnings announcements even though all firms do not announce their earnings on one and same but the period is spread between January – April every year. Therefore, the study conclusion is based on the average return of the period surrounding the earnings announcement. It is suggested that earnings announcements have an impact on the shareholders' value (Ball and Brown, 1968) and finds abnormal earning before and after earnings announcements. While the abnormal return before the earnings announcements are relatively easy to theorize away as leakage of information into the market, such is not the case with respect to the abnormal return after the earnings announcements. (Fama 1998) stated “most long term returns anomalies tend to disappear with reasonable technique” or “when alternative approaches are used to measure them”.

An announcement of earnings payments may carry some information for the market and stock prices may be adjusted accordingly. Based on the 19 NSE listed companies declaring earnings during January 2008 and December 2013, it is realized that there is correlation between the share prices and earnings announcement. It is also observed that there is significant reaction on the announcement

date itself and also a few days around it. We therefore conclude that earnings announcement are quickly and adequately reflected in the stock prices and do therefore have a significant effect on the share price. Whereas the results are inconsistent with the efficient markets hypothesis, the behavior of the share price is found to be consistent with the semi strong form of the efficient market hypothesis

5.3 Policy Implications

The findings of this study have a number of policy implications. For instance the negative daily returns and high volatility on Tuesdays and Thursdays shows the effects of open market operations mainly through the sale of government securities (treasury bills) on the daily stock returns and volatility. Therefore in the scenario whereby the date for books closure for a firm falls on a Tuesday or Thursday investors holding equity for such a firm would lose upon making the sale on such a date in addition to selling cum dividend.

Listed companies should be encouraged to ensure timely release of their financial statements. Timely release of financial information is expected to discourage unnecessary speculation by investors while it attracts investors, boosts liquidity and helps improve the informational efficiency of the stock market. Market regulators and the policy makers may need to impose strict penalties or sanctions on companies that delay the release of their results.

Since the NSE activities are by themselves beneficial to the economy, the government should undertake policies to ensure macroeconomic stability since it is an important element that can boost investor confidence on the stock market and ensure firms to list on the market.

5.4 Limitations of the Study

All mediums of disclosure other than public announcements were excluded, only those announcements recorded at the NSE were considered for the study. Further the method of sampling the population used was non-probabilistic. The study was therefore not able to test external validity and conclusions drawn are in respect to the sample.

The study focused on the share price movement in relation to the public earnings announcements. The study did not separate good from bad earnings announcements. As a result either bad or good announcements may have outweighed the other and hence impact the results of the study.

The study only considered annual earnings announcement and did not deal with quarterly and half yearly announcements. The information content of those earnings were therefore not captured in the study.

The 16-day event window did not appear to be able to illustrate when rectification or price recovery would occur.

5.5 Suggestions for Further Research

Nairobi Stock Exchange has been extensively researched and a lot more needs to be done to provide more information to stock holders, traders, students and general public at large. As seen earlier the stock exchange plays an important role in any country's development a lot of information about this market needs to be known to attract more players and also for existing

players to commit more of their funds in the markets to increase turn over. This study undertook to analysis the effect of earnings announcements on stock prices, the result shows that the events of earnings announcements have an impact on stock prices, different stock exchange show different impacts.

For more robust results further work is required in this area, which utilizes better proxy variables and conducted at the intraday level before firm conclusion can be reached. Comparison between the Kenyan economic and other economies and Stock Exchanges to find out the reasons why fluctuations are either positive or negative need to be done. A research on macroeconomic and other factors to find out the other causes of these fluctuations should also be done to shed some light on why there are these fluctuations. This is important to be able to determine in advance what to expect in the market scene. A research on the effect of regime changes such as experience in Kenya should be looked into and other major events to determine the effect of the event to the stock prices.

In this time of modernized information and communication Technology (ICT) markets all over the world are going greater efficiency. ICT allows for more effective, faster means of information dissemination. Bearing in mind a researcher may feel the need to establish whether the recent adoption of electronic trading by the Nairobi Stock Exchange has developed for prices to adjust more precisely to new entering the market.

In future studies other models other than return analysis should be employed and data should also cover a longer period. For the purpose of improving this study, it is suggested that a similar

study could be carried out to cover a longer period of time so as to obtain more reliable findings. The variables identified in this study can be tested on companies not quoted at the Nairobi Stock Exchange. The additional information obtained thereof including the result of this study can be used to draw generalization for firms in Kenya. Researchers can extend the study to include the type of market weak form or strong form.

Researcher can also research if chartists are making profits by predicting the pattern of market stock prices. Also researcher can study the existence of insider trading. To extend the current study and include none listed companies. To compare effect of earning announcement of listed and none listed companies

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APPENDICES 1

Names of Firms Listed at the NSE

Agricultural

1. Kakuzi Ltd
2. Rea Vipingo Plantations Ltd
3. Sasini Tea & Coffee Ltd.
4. Unilever Tea Kenya

Commercial and Services

5. Car & General (K)
6. CMC Holdings Ltd.
7. Kenya Airways
8. Marshalls (E.A.)
9. Nation Media Group
10. Tourism Promotion Services Ltd

Finance and Investment

11. Barclays Bank Ltd
12. CFC Bank Ltd.
13. Centum Investment Co. Ltd
14. Diamond Trust of Kenya
15. Equity Bank Ltd Ord.
16. Housing Finance Co. Ltd
17. Kenya Re-Insurance Corporation
18. Jubilee Insurance Co. Ltd
19. Kenya Commercial Bank

20. Standard Chartered Bank Kenya Ltd
21. National Bank of Kenya Ltd
22. NIC Bank Ltd.
23. Pan Africa Insurance Co. Ltd.

Industrial and Allied

24. Athi River Mining
25. BOC Kenya Ltd.
26. Bamburi Cement Ltd
27. British American Tobacco Kenya
28. Carbacid Investment Ltd.
29. Crown Berger
30. E.A. Cables
31. E.A. Portland cement
32. East African Breweries Ltd.
33. Eveready East African Ltd
34. Sameer Africa Ltd
35. KenGen Ltd
35. Kenya Oil Co. Ltd
36. Mumias Sugar Co. Ltd
37. Kenya Power & Lighting Co. Ltd.
38. Total Kenya Ltd
39. Unga Group Ltd.

Alternative Market Segments

40. A Baumann & Co.

41. City Trust Ltd.
42. Eaagads Ltd
43. Express Kenya
44. Williamson Tea Kenya Ltd
45. Kapchorua Tea Kenya Ltd
46. Kenya Orchards Ltd.
47. Limuru Tea

APPENDICES 2

Company Name : _____				
	Daily Stock price		NSE 20 share Index	
Day	Opening Price	Closing Price	Opening Price	Closing Price
-8				
-7				
-6				
-5				
-4				
-3				
-2				
-1				
0				
1				
2				
3				
4				
5				
6				
7				
8				

APPENDICES 3

Day Relative to event	AAR	CAAR
-8	-0.0005	-0.0005
-7	0.0002	-0.0003
-6	-0.0016	-0.0019
-5	0.0000	-0.0018
-4	-0.0029	-0.0047
-3	0.0017	-0.0030
-2	-0.0019	-0.0049
-1	-0.0026	-0.0075
0	0.0043	-0.0032
1	-0.0015	-0.0047
2	0.0011	-0.0036
3	0.0013	-0.0023
4	0.0056	0.0033
5	0.0018	0.0051
6	-0.0009	0.0042
7	0.0019	0.0061
8	0.0035	0.0101

APPENDICES 4

List of sample population and Event dates

LISTED COMPANY	2009	2010	2011	2012	2013
WILLIAMSON TEA	19.12.2009	19.12.2010	19.12.2011	19.12.2012	30.05.2013
KAKUZI LTD	30.03.2009	30.03.2010	30.03.2011	30.03.2012	28.03.2013
CAR & GENERAL	27.01.2009	27.01.2010	23.01.2011	23.01.2012	27.01.2013
SAMEER	26.03.2009	26.03.2010	26.03.2011	26.03.2012	26.03.2013
BARCLAYS BANK	13.02.2009	13.02.2010	13.02.2011	15.02.2012	13.02.2013
EQUITY BANK	28.02.2009	27.02.2010	26.02.2011	28.02.2012	28.02.2013
NATION MEDIA GROUP	19.03.2009	16.03.2010	16.03.2011	19.03.2012	19.03.2013
KENYA AIRWAYS	13.06.2009	15.06.2010	13.06.2011	14.06.2012	13.06.2013
CROWN& BERGER	29.04.2009	29.04.2010	25.04.2011	30.04.2012	29.04.2013
EAST AFRICA PORTLANDS	29.10.2009	29.10.2010	24.10.2011	26.10.2012	29.10.2013
KENOL KOBIL	8.04.2009	8.04.2010	8.04.2011	8.04.2012	8.04.2013
KPLC	15.10.2009	17.10.2010	15.10.2011	10.10.2012	10.10.2013
PAN AFRICAN INSURANCE	04.04.2009	04.04.2010	04.04.2011	5.04.2012	5.04.2013
Jubilee INSURANCE	26.03.2009	21.03.2010	22.03.2011	26.03.2012	26.03.2013
CENTUM INVESTMENTS	4.06.2009	4.06.2010	08.06.2011	06.06.2012	4.06.2013
B.O.C	26.03.2009	26.03.2010	26.03.2011	26.03.2012	26.03.2013
EAST Africa Breweries	23.08.2009	23.08.2010	23.08.2011	23.08.2012	23.08.2013
SAFARICOM	14.05.2009	14.05.2010	14.05.2011	15.05.2012	14.05.2013
NIC BANK	24.02.2009	18.02.2010	20.02.2011	21.02.2012	20.02.2013