THE INFORMATION CONTENT OF ANNUAL EARNINGS ANNOUNCEMENTS FOR COMPANIES QUOTED AT THE NAIROBI STOCK EXCHANGE

BY

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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 review with my approval as university supervisor.

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DEDICATION

To my late father Silvans Nyamolo Obala, you were the pillar of my strength. The insights, the foresights and the hindsight you imparted in me has yielded these results. To my late sister Rose, you gave me the master key to open doors that have never been unlocked. To my daughter Sonia, like father like daughter, you gave me the hope and energy to press on.

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Nyamolo O. Kenneth

LIST OF ABBREVIATIONS AND ACRONYMS

ACAR –Average Cumulative abnormal Return

CAR-Cumulative Abnormal Return

ZCAR- Standardized Abnormal returns

AHPAR-Average Holding period abnormal return

CPRA- comparative period return approach

NSE- Nairobi Stock Exchange

SIMM -Single index market model

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ABSTRACT

The objective of the study was to examine the information content for annual earnings announcement for firms listed at the Nairobi Stock Exchange (NSE). A sample of 20 firms that had been consistently listed at the bourse for the five year period beginning 2005 to the 31st December 2009 was used in the analysis.

The study employed the event study methodology to ascertain whether investors relying on the information release could make any abnormal returns by using the new information released by firms. The normal returns and the market returns were calculated and the residual returns determined. These were cumulated and standardized to come out with the Cumulative Abnormal Returns (CAR) for the firms. After the determination of the significance of the CARs, it was necessary to explain abnormal returns by showing that the cross sectional variation in returns across firms is consistent with the theoretical framework.

The results indicated that the in all the weeks of the five year period, the mean return on the report period was less than both the pre and post announcement weeks. The explanatory power or the earnings response coefficient ($R^{2)}$ obtained from these observations was also quite low ranging between 0.019 to 0.171 which meant that only 1.9 % to 17.1 % of returns variability were explained by the earnings announcement within the week with regard to market wide events.

The beta coefficients were also less that 1 suggesting that the sample firms' stock were less sensitive to earnings announcements. The researcher concluded that the earnings

announcement for the sample firm had no information content and if there was, the market model did capture them hence not an appropriate model for measuring information content.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Fama (1970) defines an efficient market as a market where the stock prices fully reflect the available information. He suggests three levels of market efficiency: the weak, the semi strong and the strong form. The efficient market hypothesis is associated with the idea of a random walk which is a term loosely used in finance literature to characterize price series where all subsequent price changes represent random departures from previous prices. The logic of the random walk idea is that if the flow of information is unimpeded and information is immediately reflected in stock prices, then tomorrow's prices will only reflect tomorrow's news and will be independent of price changes today.

Since prices fully reflect all known information, an uninformed investor buying a diversified portfolio at the prices given by the market will obtain a rate of return that is as generous as those received by the experts. An efficient Market should therefore prevent an investor from exploiting information to make abnormal returns as prices have already adjusted to take information into account. Semi strong form tests, in which prices are assumed to fully reflect all obviously public available information, have also supported the efficient markets hypothesis.

A number of studies (Watt, 1972; Ball and Brown, 1968; Scholes, 1969; Rex, 1968; Ondigo, 1995) have found evidence in support of the semi strong efficient market hypothesis and the random walk of stock prices. Fama's definition of efficient market has been heavily cited and criticized.

Le Roy (1976) criticized Fama's model as being tautological and merely implies the expected deviation of a realization from its expected value is zero. Rubinstein (1975) has criticized price oriented definitions of market efficiency for failing to incorporate effects of acquisition. More recently, Grossman and Stiglitz (1980) stresses that markets cannot be perfectly efficient, or there would be no incentive for professionals to uncover the information that gets quickly reflected into the market prices.

Fama et al (1969) finds that the information in stocks split concerning the firms future dividend payment is on average fully reflected in the price of a share split at the time of the split. Several other scholars (Niederhoffer and Osborne, 1962; Beaver, 1968; Petit, 1972; Grossman & Stiglitz, 1980) have however found evidence against the semi strong efficient market hypothesis and disagreed with the random walk of stock prices in the market. The departure from the pure independence of the random walk has been noted by Niederhoffer and Osborne (1966) who document two departures from complete randomness in common stock price changes from transaction to transaction. Pettit (1972) finds evidence that support information contents of annual earnings announcement. These findings contradict the Ball and Brown (1968) studies who concluded that all the information is reflected on share prices. Scholes (1969) have a similar conclusion that supports the semi strong EMH on his study on new issues and large block secondary issues of common stock.

1.1.1 Earnings Announcements

While efficient Market theories have merit, there is evidence that have confirmed existence of post earnings announcement drift (PEAD) in the case of positive earnings surprise and negative earnings surprise. If earnings disclosures have information content, higher than expected earnings would be associated with increases in value of equity and lower than expected earnings with decreases in value of equity.

Miller-Rock (1985) signaling approach shows that the announcement effects including earnings surprises, unexpected dividend changes, and unexpected external financing emerge naturally as implications of the basic valuation model rather than as ad hoc appendages and provide key signals about the prospects of the firm. They note that Share prices of companies experiencing positive announcements tend to drift upwards while the share prices of companies with negative announcements tend to drift downwards.

Debondt and Thaler (1985; 1987) present evidence consistent with stock prices overreacting to current changes in the earnings. This is compounded by the fact that majority of individual investors lack sophistication to digest events immediately. Beaver [1968] investigated changes in trading volumes associated with earnings announcements.

Onyango (2004) analyzed annual earnings announcements for 16 companies quoted at the NSE between 1998 to 2003. The findings revealed that earnings announcements at the NSE contain relevant information to investors which are fully impounded on stock prices.

Ondigo (1995) analyzed earnings announcements of 18 blue chip companies quoted at the NSE between 1990 and 1994 and found no evidence in support of information content of annual reports at NSE. These two studies contradicted but are similar in the sense that they used the annual earnings announcements. The annual earnings announcements are a statutory regulatory requirements for all companies quoted at the NSE to publish their annual financial reports.

1.1.2 Tests for Information Content

Information has been defined as a change in expectation about the outcome of an event. (Beaver, 1968). Within the context of this study, a firm's earnings report is said to have information content if it leads to a change in investors' assessments of the probability distribution of future returns (or prices),such that there is change in equilibrium value of the current market price. Another definition of information states that not only must there be a change in expectation but the change must be sufficiently large to induce a change in the decision-maker's behaviour. According to this definition, a firm's earning report posses informational value only if it leads to the alteration of the optimal holding of that firm's stock in the portfolio of individual investors. To test for the information content of the earnings announcement the event studies methodology will be used.

Ball and Brown (1968) used event studies to examine the usefulness of the information content of annual reports with a primary focus on earnings per share. Other scholars (Beaver, 1968; Oppong, 1980; Ondigo, 1995; Watt, 1972) have used this method to test for the information content of annual earnings announcement in their studies.

The semi-strong market efficiency contents that investors cannot generate abnormal returns based on any publicly available information. It is implied that share prices adjust to publicly available new information very rapidly and in an unbiased fashion, such that no excess returns can be earned by trading on that information. The tests for the semi strong market efficiency include event studies, time series analysis and prediction of cross sectional returns. Empirical studies (Fama, Fisher, Jensen, 1969; Watts, 1978; Ball and Brown, 1968; Aharony and Swary, 1980; Joy, Litzenberger and McEnally, 1977; Patell and Wolfson, 1979) to test for the semi strong efficiency document the claim that no investor can earn an above normal return on publicly available information such as accounting statements, stock splits announcements, dividend announcement and earnings announcements.

Other studies (Niederhoffer and Osborne, 1962; Beaver, 1968; Petit, 1972; Grossman & Stiglitz, 1980) find evidence that shows that inefficiencies do exist in the stock markets and investors can exploit these to make abnormal returns. These studies contradict with those that support the strong market efficiency like Basu (1977). He used the cross sectional return to examine the relationship between the historical P/E ratios for stocks and the returns on the stocks. Some have suggested that a low P/E stocks will outperform high P/E stocks because growth companies enjoy high P/E ratios, but the market tends to overestimate the growth potential and thus overvalues these growth firms while undervaluing those with low P/E ratios.

The time series analysis assumes that in an efficient market the best estimate of future rates of return will be the long run historical rates of return. The point of the tests is to determine whether any public information will provide superior estimates of return for a short run horizon (1-6 months) or a long run horizon. The results of these studies have indicated limited success in predicting short horizon returns the analyses of long horizon returns has been quite successful.

1.1.3 The Nairobi Stock Exchange

The Nairobi Stock Exchange (NSE) is the principal stock exchange of Kenya. It began in 1954 as an overseas Stock exchange while Kenya was still a British Colony with permission of the London Stock Exchange. The NSE is a member of the Africa Stock Association. The Nairobi Stock Exchange (NSE) is the self regulating organization for listed instruments. (Munga, 1974). The NSE uses two indices; the NSE 20-Share Index which has been in use since 1964 and measures the performance of 20 blue-chip companies with strong fundamentals and which have consistently returned positive financial results. In 2008, the Nairobi Stock Exchange All Share Index (NASI) was introduced as an alternative index. Its measure is an overall indicator of market performance. The Index incorporates all the traded shares of the day. Its attention is therefore on the overall market capitalization rather than the price movements of select counters. (NSE Secretariat, 2010).

Ouma (2007) observes that dealing in shares and stocks commenced in the 1920's, but on a gentleman's agreement with no formal market, rules and regulations to govern stock market activities. Trading was done manually with brokers handling a lot of paper work. To the extent that the stock market was less developed, several key issues plagued the market and these included the low market confidence and perception of low standards of corporate governance characterized by the failure of listed firms (Uchumi Supermarkets) and stock brokers (Francis Thuo Stock brokers, Nyaga Stoke brokers) as the brokerage firms did not publish their annual reports.

There was also growing concern for the lack of competitiveness in the local market and the depth in the NSE product offerings (derivatives, option, and securitization).The vulnerability to market shocks, the low level of capital market liquidity and the eminent conflict of interest as brokerage firms also acted as dealers and fund managers. There were also increased mutilations, theft or loss of share certificates and the need to minimize bad or wrong deliveries coupled with regulatory problems.

These seeming 'inefficiencies' at the NSE have made it a fertile ground for empirical studies (Parkinson, 1987; Munga, 1974; Lishenga, 1989; Iminza, 1997; Nyamute, 1998; Oluoch, 2002; Ondigo, 1995; Rioba, 2003; Onyango, 2004; Mbugua, 2004; Maina, 2007; Njoroge, 2003; Omosa, 1989; Kerandi, 1993; Kiweu,1991) to ascertain the various characteristics of the exchange and to test if the various financial models do comply to the conditions at the NSE.

Munga (1974) studied the history and the role of the NSE in the Kenyan economy. He found out that the NSE was characterized by illiquidity and low turnover. Lishenga (1989) found evidence from the NSE that there is a tendency of the less profitable firms delaying the release of their annual earnings report. Kiweu (1991) performed serial correlation and test run on the returns and found no patterns in the shares movement. Rioba (2003) in his study on the predictability of ordinary stock returns evidenced that short term changes in stock market indexes may well be influenced by investor psychology.

The key drivers for change at the NSE included the encroaching globalization of the capital markets-competition from technology based systems such as ECNs & ATS which do not respect borders, the need to create an organization that is ready for mergers & strategic alliances, access to capital for development, the thinness of the capital markets that meant that only a few securities are traded. Equally important was the need to reduce handling of large volume of paper work, the need for Shares to be held safely hence reducing doubts about fraud and fake certificates thus building confidence in the market and lack of investor awareness precipitated into the outsourcing of an Automated Trading System, (ATS) from Millennium Information Technologies (MIT) of Colombo, Sri Lanka, who are also the suppliers of the Central Depository System, (NSE Secretariat, 2010). The process of the automation of the bourse has been a continuous process that began in 2004, with the realignment of the system to trade in fixed income securities taking place in October 2009.

Ouma (2007) contents that with the automation of the NSE trading hours were increased from 2 to 3 hours (10:00 am – 1:00 pm). Besides, he noted that 43.82 % of the value of 2006 equity turnover took place after the automation with Market capitalization in 2006 reaching an all time high of KShs.792 billion.

1.2 Statement of the Problem

The theory of efficient capital markets as postulated by Fama (1970) suggests that if the markets are efficient, security prices can be assumed at any time to fully reflect all available information. Further studies (Watt, 1973; Beaver, 1968; Aharony and Swary, 1980; Ondigo, 1995) support the semi strong efficient market hypothesis. There is however some evidence (Debondt and Thaler, 1985, 1987; Pettit, 1972; Mbugua, 2006 and Onyango, 2004) that support the idea that price may not impound all available information. Grossman and Stiglitz (1980) stresses that markets cannot be perfectly efficient, or there would be no incentive for professionals to uncover the information that gets quickly reflected into the market prices. Although there has recently been an increase in empirical research regarding emerging and developing financial markets, (Beaver, 1968; May, 1971; Oppong, 1980), a glance through the literature reveals that a significant amount of work needs to be conducted in this area to unravel the controversies and contradictions as indicated by the various scholars.

The studies done at the Nairobi Stock Exchange (Munga, 1974; Oluoch, 2002; Rioba, 2003; Onyango, 2004; Ondigo, 1995) have been characterized by limitations arising from the lack of data and where available the accuracy of the data hence the reliance on the data questionable. Moreover, the sample sizes in most of the studies have also raised a

question as to the validity of making generalization on the findings leading to clear research gaps that need to be bridged.

To the extent of these limitations, there was a need for further investigations especially within the context of the automation and demutualization of the NSE as several characteristics of the exchange (like volumes traded, volatility, variability of returns and the liquidity of trading) have drastically changed over time and therefore the study reveals whether annual earnings announcements do have information content at the NSE. This study thus answered the sole research question; do these earnings announcements have information content?

1.3 Research Objectives

The objective of the study was to test for the information content of annual earnings announcements at the Nairobi Stock Exchange.

1.4 Importance of the Study

The study has the following benefits accrue from it:

1.4.1 Investors

Investors require timely and empirically proven information to make rational investment decisions. Mishkin (1978) admits that the cost of obtaining and analyzing information may be quite high for many agents in the economy, and the use of the rules of the thumb to form expectations in decision making might well be appropriate even though these expectations may not be rational. This study provide empirical evidence that is useful to investors in making their investment decisions in a rational manner and l add to the pool

of information available for investors so that their decisions are backed by empirical evidence rather than intuition.

1.4.2 Academics

Several studies (Ondigo, 1995; Maina, 2007; Njoroge, 2003; Rioba, 2003: Onyango, 2004) have been done within the context of this study. However reasonable time has elapsed and fundamental changes have taken place at the NSE since then. For instance the Automation have affected several characteristics of the bourse like volumes traded, volatility, variability of returns and the liquidity of trading. The study reveals evidence based on these changes and adds to the body of knowledge already existing.

1.4.3 Regulators

The regulators have a role to protect investors and regulate the industry, providing checks and balances in the market. The disclosure requirements and the publication of annual reports is a requirement by the CMA that needs to be strictly adhered to. The information asymmetries highlighted by the study is therefore a question of regulation. The regulators therefore will find the information handy to the extent that it reveals laxity in meeting these requirements.

1.4.4 Corporate Governance and Management

Jensen and Murphy (1990) argue that in well developed stock markets, tying managers' compensation to stocks is an incentive-compatible design that aligns the interests of principles and agents thereby spurring efficient resource allocation and economic growth. The evidence, found in this study as to the level of efficiency of the NSE, provides the basis for designing governance and regulatory structures that will monitor insiders, and other market player from exploiting information at their disposal to make abnormal returns and will serve to strengthen the organizations and build confidence in the market.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looks at the various theories that inform the study. It further examines the previous empirical researches in this area of study. A review of the event studies methodology and its key assumptions have equally been discussed. The chapter identifies and discusses three theories, namely; the efficient market theory, the portfolio theory and the theory of behavioral finance. These three theories will bring the understanding on how investors choose their portfolio and make their investment decision.

2.2 The Efficient Market Hypothesis

An Efficient Capital Market is defined as a market where security prices reflect all available information. The level of efficiency existing in a market might be characterized as the speed in which security prices reflect information of a particular type. Fama [1970] classified these types of information, and defined three levels of market efficiency. The weak form efficiency exists when security prices reflect historical price information. That is, an investor cannot generate an abnormal profit by trading based on historical price information and that future prices cannot be predicted by analyzing prices from the past prices. More precisely, it asserts that excess returns cannot be earned in the long run by using investment strategies based on historical share prices or other historical data.

In addition to that, the weak form efficiency contents that technical analysis techniques will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide excess returns. Share prices exhibit no serial

dependencies, meaning that there are no "patterns" to asset prices. This implies that future price movements are determined entirely by information not contained in the price series. Hence, prices must follow a random walk. This 'soft' EMH does not require that prices remain at or near equilibrium, but only that market participants not be able to systematically profit from market 'inefficiencies'. Test for the weak form of market efficiency include statistical tests of independence between rates of return and tests that entails a comparison of risk return-results for trading rules that make investment decisions based on past market information relative to a simple buy and hold policy.

Semi-strong efficiencies exist when investors cannot generate abnormal returns based on any publicly available information. It is implied that share prices adjust to publicly available new information very rapidly and in an unbiased fashion, such that no excess returns can be earned by trading on that information. Semi-strong-form efficiency implies that neither fundamental analysis nor technical analysis techniques will be able to reliably produce excess returns. To test for semi-strong-form efficiency, the adjustments to previously unknown news must be of a reasonable size and must be instantaneous.

The consistent upward or downward adjustments after the initial change must be looked for. If there are any such adjustments it would suggest that investors had interpreted the information in a biased fashion and hence in an inefficient manner. The tests for the semi strong market efficiency include time series analysis, cross sectional tests and event studies. In return prediction studies, investigators attempt to predict the times series of future rates of return for individual stock or the aggregate market using public information. Strong form efficiencies exist when any information, public or private

cannot be used to generate abnormal trading profits. Share prices reflect all information, public and private, and no one can earn excess returns. If there are legal barriers to private information becoming public, as with insider trading laws, strong-form efficiency is impossible, except in the case where the laws are universally ignored. To test for strong-form efficiency, a market needs to exist where investors cannot consistently earn excess returns over a long period of time. Even if some money managers are consistently observed to beat the market, no refutation even of strong-form efficiency follows. Test of the strong-form EMH have analyzed returns over time for different identifiable investment groups (corporate insiders, stock exchange specialist, security analysts and professional money managers) to determine whether any group consistently receive above- average risk-adjusted return.

Womack (1996) found that analysts appear to have both market timing and stock - picking ability, especially in connection with relatively rare sell recommendations. Such a group must have access to and act upon important private information or an ability to act on public information before other investors which would indicate that security prices were not adjusting rapidly to all new information.

Empirical research characterized as efficient market studies have been the subject of considerable attention in recent years. (Gonedes, 1973; Kaplan, 1973; Fama, 1970; Beaver, 1968; Petit, 1972). Fama (1970) suggested that if capital markets were efficient then all stock prices would fully reflect available information and that no investor can make abnormal return through chartists or even fundamental analysis of past stock prices. Cootner (1964) supported the evidence that stock markets has no memory-that is, the way

a stock price behaved in the past is not useful in divining how it will behave in future. Burton (2003) however notes that the collective judgment of investors will sometime make mistakes. Undoubtedly some market participants are demonstrably less than rational and as a result some pricing irregularities and even predictable patterns in stock returns can appear over time and even persist for short periods.

Fama (1998) finds that apparent under reactions to information is about as common as overreaction, and post event continuation of abnormal returns is as frequent as post event reversals. More recent work by Lo and MacKinlay (1999) finds that the short run serial correlation are not zero and the existence of too many successive moves in the same direction enables them to reject the hypothesis that stock prices behave as true random walks. Graham et al (1962 notes that contentions regarding efficient market originated in professional investment community, particularly those involved in security analysis whose goal was to identify mispriced securities.

2.3 The Portfolio Theory

Markowitz (1952) advanced the portfolio theory and portfolio selection. A Portfolio is a bundle of investment held by an investor. This theory assumes that investors are rational and will make rational decisions with regard to their portfolio choices. An investor will therefore buy securities that offer the highest returns but with the least risks. Markowitz introduced the mean-variance analysis to explain the expected return and the risk involved in investing such portfolio. He concluded, that, provided there is appropriate input data and computing power, then an investor can identify a set of portfolio that provides the highest possible expected return for a given level of risk, while at the same time giving the lowest level of risk for each level of expected return. These portfolios form the efficient frontier. A key assumption in the Markowitz optimization and the original CAPM is that investors make decision for only one time period, this clearly is unrealistic assumption since investors can and do rebalance their portfolios on regular basis.

Tobin (1958) takes Markowitz's analysis one step further by showing how to identify which efficient portfolio should be held by an individual investor. He considers how investors should divide his funds between safe liquid assets such treasury bills and risky assets such as bonds and equity. The development of Tobin's separation theorem clarified the task of portfolio selection which proposes breaking down the portfolio selection problems into stages at different levels of the aggregation- allocation first among and then within the assets category. Sharpe (1963) devised his simplified model for portfolio analysis. Sharpe draws an insight of Markowitz (1959) that the stocks are likely to co-

move with the market. His model assumes that the security returns are linearly related to the fluctuation in the market-wide index, with a known degree of sensitivity and that additionally, security –specific returns are generated with a known mean and variance. He concluded that with three parameters per security (i.e. Return, Risk and the covariance's) the task of risk measurement and portfolio optimization are greatly simplified.

Brealey and Myers (1991) note that risk is best judged in portfolio context because most investors do not put all their eggs in one basket; they diversify. Thus the effective risk of any security cannot be judged by an examination of that security alone, part of the uncertainty about the security return is diversified a way when the security return is grouped with others in a portfolio. They further conclude that unique risk stems from the fact that many of the perils that surrounds on individual company are peculiar to the company and perhaps its immediate competitors.

The Capital Asset Pricing Model (CAPM) specifies the relationship between the risk and the rate of return of an asset held in a well diversified portfolio. The model allows us to find the return required for a given level of risk. Roll (1977) have criticized the CAPM and concludes that CAPM tests are flawed in that the market portfolio has not been properly specified.

2.4 The Theory of Behavioral Finance

Behavioral finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets. It is an attempt to explain and increase understanding of the reasoning patterns of investors, including the emotional processes involved and the degree to which they influence the decision-making process.

Behavioral finance attempts to explain the what, why, and how of finance and investing, from a human perspective. The traditional theories of finance had the central paradigms that portfolio allocation is based on expected return and risk; risk-based asset pricing models such as the CAPM and other similar frameworks.

Huberman (2001) provided compelling evidence that people invest in stocks that they are familiar with while often ignoring the principles of portfolio theory. Hong and Stein (2005) presents evidence that can be interpreted in terms of an epidemic model in which investors spread information about stocks to one another by word of mouth consequently ignoring the principles of portfolio theory.

Odean (1999) suggests that momentum investors do not realize excess returns. A sample of such investors suggests that such traders did far worse than buy-and-hold investors even during period where there was clear statistical evidence of positive momentum.

This is because of large transaction costs involved in attempting to exploit whatever momentum exists.

2.5 Event Studies

Event studies have a long history. Perhaps the first published study is James Dolley (1933). 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 the announcement of macro-economic variables such as trade deficits. (MacKinlay, 1997).McWilliams and Siegel (1997) agree that event study method has been used extensively in accounting and finance to help researchers assess the financial impacts of changes in corporate policy. The method has became popular because it obviates the need to analyze accounting based measures of profits, which have been criticized because they are often not very good indicators of true performance of firms.

Benston (1982) observes that managers can manipulate accounting procedures. Stock prices on the other hand are not subject to manipulation by insiders. Stock prices are supposed to reflect the true value of firms, because they are assumed to reflect the discounted value of all future cash flows and incorporate all relevant information. Event studies therefore based stock price changes should measure the impact of a change in corporate policy. Furthermore the method is relatively easy to implement, because the only data necessary are the names of publicly traded firms, event dates and stock prices. Brown and Warner (1980; 1985) established that the usefulness of this analytical technique depends heavily on a set of rather strong assumptions. If these assumptions are violated, the empirical results may be biased and imprecise, and therefore basing conclusions on them would be problematic.

2.5.1 Assumptions Underlying Identification of Abnormal Returns

The efficient market hypothesis assumption provides the basis for the use event study methodology. Market efficiency implies that stock prices incorporate all relevant information that is available to market traders. If this is true then any financially relevant information that is newly released to investors will be quickly (instantaneously) incorporated in stock prices. Dann, Mayers and Raab (1977) found that the market stock prices adjust within 15 minutes of the release of firm specific information. The assumption of market efficiency is difficult to reconcile with long event window periods. The use of long event window period implies that some researchers do not believe that the effects of the events are quickly incorporated in stock prices. This can be interpreted as a violation of the efficient market assumption.

The most crucial research design issue is the event window. Brown and Warner (1985; 1987) showed that using a long event window reduces the power of the test statistic, Zt. This reduction leads to false inferences about the significance of the event. Ryngaert and Netter (1990) have empirically demonstrated that a short event window will usually capture the significant effects of an event. Mitchell and Netter (1989) found that stock market reacted within 90 minutes of news wire stories announcing proposed federal tax legislation. Ryngaert and Netter (1990) observes that the nature of the event study should determine the length of the window period used. Where there evidence that some leakage of information is possible, the window should include some time prior to the announcement date to capture the abnormal returns associated with the leakage of

information. In the absence of uncertainty about when information is actually revealed to the market, it is difficult to justify a long window.

The third assumption is that the events were unanticipated and announced in the press. The market previously did not have information on the event and traders gain information from the announcement. The abnormal returns can then be assumed to be the result of the stock market reacting to new information.

It is possible that that an event will have been anticipated or information leaked to the market in advance of a formal announcement. Such leakages make vent study methodology problematic and it's difficult to determine when traders get the information. Information on corporate control changes and top level management turnover may actually be revealed to the market before the events are officially announced (Beatty & Zajac, 1987; Chatterjee, 1986; Mahoney & Mahoney, 1993; Turk, 1992; Seth, 1990).

The confounding effects in an event study are assumed to have been isolated by the researcher. It is therefore assumed that there are no confounding effects from other events. Confounding events include the declaration of dividends, announcements of impending mergers, signing of a major government contract, announcement of new products, filing of a large damage suit and changes in key executive. Any of these may have an impact on the share price during the event window. Foster (1980) discussed the several ways of controlling the confounding effects. He cites that these can be controlled by eliminating firms that have confounding effects, partitioning a sample by grouping

firms that have experienced the same confounding effects, eliminating the firm on the day that it experiences the confounding effect and subtracting the financial impact of the confounding event when calculating abnormal returns. Salinger (1992) used a technique that subtracted the impacts of confounding events in a study of the Bhopal disaster on Union Carbide. The longer the event window, the more difficult it is for the researcher to claim to have controlled the confounding effects. With a shorter event window the researcher can be reasonably confident that an abnormal return is due to the event, because it is relatively easy to identify confounding effects.

The final issue is with regard to explaining the abnormal returns. After the determination of the significance of the CARs, it is necessary to explain abnormal returns by showing that the cross sectional variation in returns across firms is consistent with the theoretical framework. A regression analysis of the rate of return on share price of firm i on day t and the rate of return on a market portfolio on day t is done and the parameter estimates reported. Friedman and Singh (1989) regress abnormal returns on several variables describing organizational context and precursor events in a study of the effect of CEO succession. Other studies (Clinebell & Clinebell, 1994; Jacobson, 1994; Worrel & Glascock, 1993) have explained abnormal returns and patterns that are consistent with the theory.

2.6 Information Content of Annual Earnings Announcement

Several studies (Beaver, 1968; Pettit, 1972; Watt, 1973; Aharony and Swary, 1980; Oppong', 1980) among other have been conducted to ascertain whether annual earnings announcement have information content. Beaver (1968) investigated changes in trading volumes associated with earnings announcements. He tested whether releases are associated with increased/reduced Trading Volumes Activity (TVA). The TVA for each of the eight (8) weeks relative to announcement period was compared with the average TVA for non-announcement period. He observed that there was increased volume of trading and concluded evidence of information content.

Critics like Rex and Davidson (1968) states that information could be conveyed in the market and prices could change by large margins without a single transaction. On the other hand there could be substantial trading without information release; for example due to portfolio rearrangements. Absence of active trading may not be synonymous to lack of information content as very good information may influence market participants not to be willing to sell shares already held. Thus TVA may be misleading measure for it may not capture the unwillingness to sell due to very good information released in the market.

Oppong (1980) examined the information content of 580 annual announcements of 197 firms in the period 1966-1970. He used residual return analysis and concluded that earnings announcements do not have information content and even if they did, the residual variance information measures are not capable of capturing it. Oppong's study

considered the magnitude and not direction. Since information is available from other sources (interim reports, dividends, bonuses and other company announcements) unless these sources are controlled, annual earnings report may turn to have no information content. He made no attempts to eliminate additional information that could be associated with firms in the sample.

Pettit (1972) studies found clear support for the proposition that the market uses dividend announcements as information for assessing security values. Pettit used both monthly and daily data to investigate the abnormal performance index of firms that had dividend changes of -1% to -99%, 1% to 10%, 10% to 25%, and over 25% cumulative abnormal performance index using daily data for 135 firms. Most of the price adjustment takes place very quickly either on the dividend announcement date or on the following day. Furthermore, the price changes appear to be significant. That led him to conclude that substantial information is conveyed by the announcement of dividend changes. Pettit's results have been criticized because he used the observed dividend changes rather than an expected dividend changes, and he finds statistically significant abnormal returns when firms announce unexpectedly large dividend changes.

Watt (1973) studies also supported the semi strong EMH. He found a positive dividend announcement effect but concluded that the information content is of no economic significance because it would not enable a trader with monopolistic access to the information to earn abnormal returns after transactions costs. Watt looked at the abnormal performance index average across 310 firms. The abnormal performance index

for 24 months around the dividend announcement for the subsamples of the firms that had unanticipated dividend increases or decreases. The performance of firms with dividend increases is better than that of firms with dividend decreases, but the greatest between the two samples in six months around the dividend change is only 0.7% in the month of the dividend. This was a trivial difference.

Arkelof (1970) introduces a concept that cannot be ignored while looking at the information contents of firms' annual announcements. Arkelof explicitly related uncertainty with price and quality. He examines the market for automobiles where there are four types of cars available-new, used, good and bad. In his framework, individuals buy cars not knowing whether they are good or bad. On the other hand after owning the car for a while, the owners get a better idea of the quality of the car, which is, information asymmetry develops since the owners (potential sellers) have more knowledge about the car than the potential buyers. Arkelof's hypothesis is a clear indicator that issuing firms have private information about whether they have high or low value.

Spence (1973) extends the logic of Akerlof's arguments by formally examining a market in which signaling takes place, there are a relatively large number of signalers, and the signalers do not acquire signaling reputation. He demonstrates the existence of a signaling equilibrium with a specific example in the context of joint market signaling. Specifically there are two groups of job seekers within the population and they both face one employer and several information about the two groups are available publicly to the employer e.g. wage rates and educational levels. He noted that there are an infinite

number of equilibrium values and the employer can perfectly distinguish between the two groups. Spence then proceeds to show that group A is worse off with the existence of signaling since they would be paid more than in the no-signaling case. On the other hand, group B is not always better off with the signaling. He concludes that under certain circumstances (for example, different wage functions), pooling equilibrium exists. In such pooling equilibrium, education levels convey no useful information.

Onyango (2004) analyzed annual earnings announcements for 16 companies quoted at the NSE between 1998 to 2003. He concluded that NSE is efficient at semi-strong form. The findings also revealed that earnings announcements at the NSE contain relevant information to investors which are fully impounded on stock prices. Ondigo (1995) analyzed earnings announcements of 18 blue chip companies quoted at the NSE between 1990 and 1994 and found no evidence in support of information content of annual reports at NSE. These two studies contradicted but are similar in the sense that they used the annual earnings announcements. The annual earnings announcements are a statutory regulatory requirements for all companies quoted at the NSE to publish their annual financial reports.

Debondt and Thaler (1985; 1987) present evidence consistent with stock prices overreacting to current changes in the earnings. These unexpected events results into overreaction or under reaction by the investors. Overreaction refers to when prices overreact to surprise announcements moving from their fundamentals.

Under reaction means that stocks do not adjust immediately and completely to announcements thereby causing a drift.

A study by Aharony and Swary (1980) separates the information content of quarterly earnings reports from that of unexpected quarterly dividend changes. They examine only those quarterly dividend and earnings announcements made public on different dates within any given quarter. Their findings strongly support the hypothesis that changes in quarterly cash dividends provide useful information beyond that provided by corresponding quarterly earnings number.

Kane, lee, and Marcus (1984) also select a set of firms whose quarterly dividend and earnings announcements are separated by at least 10 days, build models to predict expected earnings and dividends, and then to test to see if unexpected dividend and earnings announcements corroborate each other-in other words, is there an interaction effect? Their empirical results confirm the earlier studies that found that both earnings and dividend announcements have a significant effect on share price, and in addition they find a significant corroboration effect. Wooldridge (1983) studies the effect of dividend announcements on nonconvertible bonds and nonconvertible preferred stock in an attempt to separate expropriation effects from announcement effects.

If dividend payouts to shareholders are viewed as payments of collaterizable assets, and if debt covenants are imperfect protection, then debt holders and preferred shareholders would view dividend increases as bad news and the market value of their claims on the

firm would fall upon the announcement of dividend increases. On the other hand, if dividend increases are signals about higher future cash flows, then bondholders and preferred stockholders should feel more secure and the market value of their claims should increase. Wooldridge's empirical results support the signaling hypothesis (or at least the conclusion that the signaling effect dominates any expropriation effect). Announcements date abnormal returns are positive given unexpected dividend increases and negative given unexpected dividend decreases.

In the winners curse hypothesis, however, Rock (1986) argues that under-pricing of securities is necessary to induce uninformed investors to participate in a market where they can be exploited by the more informed investors whether the issue is good or bad. Miller and Rock (1985) concludes that the earnings, dividend, and financial announcements are closely related, thus the earnings surprise and the net dividend surprise can convey the same information. The announcement of a dividend will convey information about the future prospects of the firm if the dividend has unexpected or surprise components.

In conclusion therefore, there are explanations from observed market outcomes that are contrary to rational expectations and market efficiency. These include mis-pricings and return anomalies. The misvaluations of financial assets are common, but the question as to whether it is possible or not possible to reliably make abnormal profits off these misvaluations is the subject of the study.

Despite strong evidence that the stock market is highly efficient, there have been scores of studies that have documented long-term historical anomalies in the stock market that seem to contradict the efficient market hypothesis**.**

While the existence of these anomalies is well accepted, the question of whether investors can exploit them to earn superior returns in the future is subject to debate. Investors evaluating anomalies should keep in mind that although they have existed historically, there is no guarantee they will persist in the future. If they do persist, transactions and hidden costs may prevent out performance in the future.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the research design, the population and the sample size used in the study. It further explains the data collection and analysis methods used in the study. The study uses an event study methodology. The chapter documents the process of estimating abnormal returns and testing the parameters for significance in-order to make inferences on the study.

3.2 Research Design

The research adopted a quantitative design that is descriptive in nature. More precisely the event study methodology was used in the study to test for the information content of the earnings announcement. This methodology is consistent with past studies (Beaver, 1968; May, 1971: Ball and Brown, 1968) that have used event studies to determine the information content of annual earnings announcement. McWilliams and Siegel (1997) supports this methodology and observes that when an event is likely to have financial impacts, is unanticipated by the market and provides new information to the market, it is appropriate to use this method. The event window was set at 17 weeks, comprising of 8 weeks before week, t=0 which is the announcement week and 8 weeks after announcement week, t. This was to capture any abnormal returns before and after the announcement or any information that might have leaked out before the announcement date. The measure of the information content was the residual return of the individual stock returns obtained using the Ordinary Least Square (OLS) by regression of the individual stock returns against the return on the market during the non-report period.

3.3 The Population

The population for the study was comprised of all the 55 firms listed at the NSE as at 31st December 2009.

3.4 The Sample

The study examined annual earnings announcements for a sample of 20 firms listed at the Nairobi stock exchange for the 2005 to 2009 with both years included. The five year period is consistent with past studies (Beaver, 1968: May, 1971; Ball and Brown, 1968; Oppon'g, 1980; Ondigo, 1995).The period is considered long enough to allow for the relationships between the variables under study to develop. The Sample firms were drawn from the Main Investment Market Segment (MIMS) and the Alternative Investment Segment (AIMS) of the NSE to achieve representativeness of the samples selected. That ensured that every sector had a proportion in the sample. The firms used in the NSE index computation were used as these are the most followed. However four firms currently used in the index, (Equity bank, Cooperative bank, Safaricom Ltd and Kengen) were not continually listed since 2005 and had to be replaced. A random Sample was drawn from each of these markets segments and new firms (Marshals Kenya, NIC Bank, DTB bank and Total Kenya) were picked to replace them. The resultant sample of 20 firms was thus given as: Agricultural segment (2), Commercial & Services (4), Finance & Investment (5), Industrial & Allied (8), and the Alternative Investment Segment (1). Further to that, the selected firms also met the criteria below:

i) The selected Company must have been listed for the last 5 years under review.

ii) Data on stock prices, dates of releases of earnings announcements and reports, dividends and stock splits are available at the NSE

iii) The Company must have announced NO dividend, stock splits or bonus issues in the same week of earnings announcement or if it did the effects can be mitigated in one of the four ways suggested by Foster (1980) to allow for the adequacy of data and samples.

iv) The year end must be on any other date other than 31st December, i.e. (non-12/31) to avoid clustering of dates in January, February and March.

3.5 Data and Data Collection Method

The data collected was secondary data obtained from the Nairobi Stock Exchange, the Capital Markets Authority library and the Nation Media Library. The data requirements were; the name of the listed firms trading at the NSE, the event dates and stock prices.

3.6 Data Analysis Method and Models

The researcher calculated the returns on the individual stocks, $\mathbf{R_{it}}$ and the returns on the market, $\mathbf{R_{mt}}$. A regression analysis of the rate of return on share price of firm i on week, t and the rate of return on a market portfolio on week, t was run to obtain the residuals and the parameter estimates reported. The ordinary least square regression (OLS) was used with the realized returns in week, t (R_{it}) and returns on the market in the same week, t (R_{mt}) during the non-report period to determine the market parameters, α and β. The models used in this analysis are similar to those used by (Beaver, 1968; May, 1971; Oppon'g, 1980; Ondigo, 1995). They are therefore robust and able to capture the changes and allow test for autocorrelation and or serial correlation to be removed thus improved estimates that are required for reliable statistical testing to see if any event is driving the results.

3.6.1 Estimating the Normal and Abnormal Returns

The standard approach was based on estimating a market model for each firm and then calculating the abnormal returns/residuals. The rate of return on the share price of firm i on day t was expressed using Sharpe's (1963) model as;

$$\mathbf{R_{it}=\alpha_i+\beta iR_{mt}+\varepsilon_{it}}$$

Where

Rit=the rate of return on the share price of firm i on week t

Rmt=the rate of return on a market portfolio of stocks (NSE 20 share index) on week t

α=the intercept term

β=the systematic risk of stock I and

ε_{it}= error term with E (ε_{it}) =0

The risk- adjusted abnormal returns are estimated by taking the difference between the observed and the expected returns. This is expressed as;

$$\mathbf{AR_{it} =R_{it} – (\alpha_i+\beta_iR_{mt})}$$

$$\mathbf{R_{mt} = \frac{M_{i,t}-M_{I,t-1}}{M_{i,t-1}}}$$

$$\mathbf{R_{it} = \frac{P_{it}-P_{it-1}+D^{it}}{P_{it-1}}}$$

Where:

$R_{i,t}$ - Return of stock i in week, t

$P_{i,t}$ - Bid price for stock i in week t

$P_{i,t-1}$ - Bid price for stock i in week, t-1

$D_{i,t}$ - Cash dividends, stock splits, bonuses, right payable on stock in week t

$R_{m,t}$ - Return of the market in week t

$M_{i,t}$ - Market Index in week, t

$M_{i,t}$ - Market index in week, t-1

The Dodd and Warner (1983) method of computing standardized abnormal returns (SARs) was adopted. The abnormal return was standardized by its standard deviation as:

$$\mathbf{SAR_{it}=AR_{it}/SD_{it}}$$

This transformation was necessary to mitigate the effect of changing variance or heteroscedasticity in the variables. The standardized abnormal returns were then cumulated over the weeks, (the event window), to derive a measure of the cumulative abnormal return (CAR_i) for each firm. The standard assumption is that values of CAR_i, are independent and identically distributed. The CAR_i is divided by its standard deviation and the average standardized abnormal returns across n firms ($ACAR_i$) are computed. The results for these are displayed on the findings and analysis chapter next.

3.7 Test of Significance Model

The test statistic used to assess whether the average cumulative abnormal return is significantly different from zero or its expected value was the model suggested by McWilliams and Siegel (1997).

This is expressed as;

$$\mathbf{Z = ACAR_i \; X \; n^{0.5}}$$

The values for the test statistics were calculated automatically during regression analysis and have been presented in the next chapter. If significant, the cumulative abnormal return is assumed to measure the average effect of the event on the value of the n firms.

CHAPTER FOUR: DATA ANALYSIS AND FINDING

4.1 Introduction

This chapter presents the results for the information content analysis for the earnings announcement and their significance. The measure of information content of annual earnings announcement used by Beaver (1968) was adopted for this study. The information content of earnings announcement are measured by the presence of significant abnormal returns in the non-report period i.e. 8 weeks before the announcement week and 8 weeks after the announcement week. These are compared with the results in the announcement or report period, week 0 to see if there are any significant abnormal returns. The t-values have been used to test for significance at 0.05 level.

4.2 The findings and interpretation

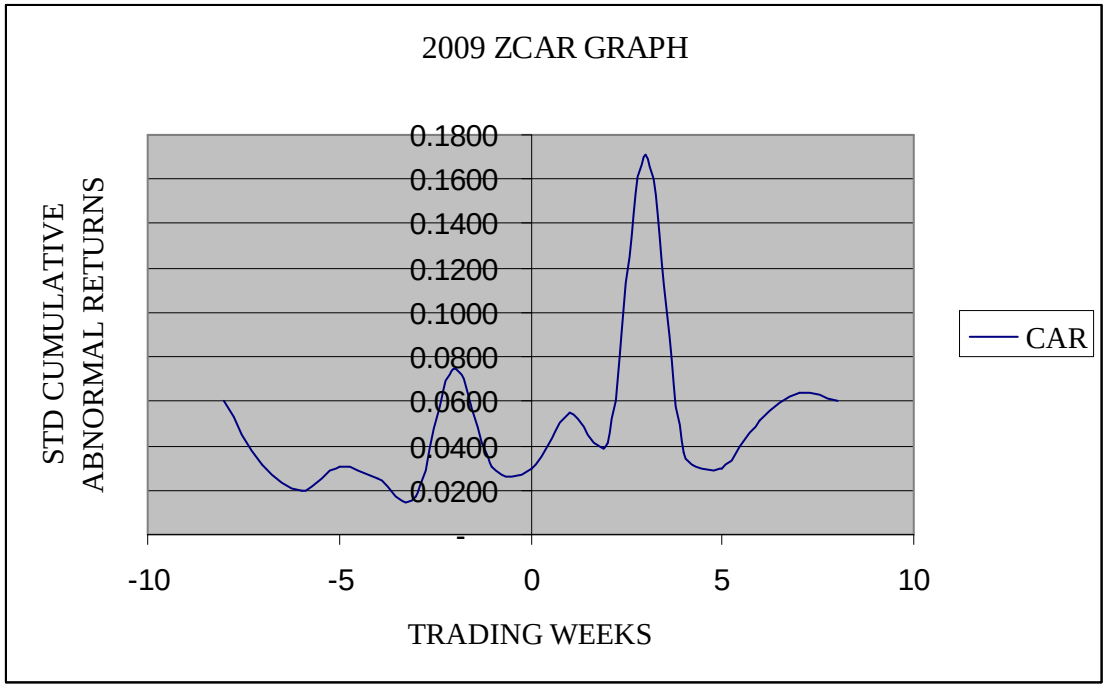
By inspection the result for the pre-announcement weeks show that the standardized residual return ($\mathbf{U_{it}}$) is more than the returns obtained in the report week or the actual announcement week. Similar results are obtained for the post earnings announcement abnormal return where the abnormal returns in week, t=0 is less than the returns in the post event non-report period. The residuals of returns were taken from the market model with the estimates of the model parameters obtained by the OLS regression using the realized values of R_{it} and R_{mt} during the non-report period. The residual return in week, t of the report period ($\mathbf{U_{it}}$) was obtained and transformed or standardized as discussed in chapter three to obtain the measure of information content. The results were then tabulated and given with some descriptive statistics as below.

4.2.1 Results for 2009

The pre announcement mean return ranges from 0.0010 to 0.0030 with the post announcement mean ranging from 0.0015 to 0.0086. The report period has a mean return of 0.0015.

SUMMARY STATISTICS			
WEEK	**MEAN**	**STD DEVIATION**	**ZCAR**
-8	0.0030	0.0067	0.0599
-7	0.0016	0.0025	0.0319
-6	0.0010	0.0016	0.0202
-5	0.0015	0.0020	0.0305
-4	0.0012	0.0027	0.0249
-3	0.0008	0.0010	0.0167
-2	0.0038	0.0074	0.0751
-1	0.0015	0.0027	0.0304
0	0.0015	0.0026	0.0298
1	0.0027	0.0045	0.0547
2	0.0021	0.0029	0.0411
3	0.0086	0.0100	0.1712
4	0.0019	0.0035	0.0371
5	0.0015	0.0033	0.0299
6	0.0025	0.0050	0.0509
7	0.0032	0.0078	0.0641
8	0.0030	0.0075	0.0603

4.2.1.1 Graphical presentation for 2009



4.2.1.2 Test for significance

The test statistics indicate a t-value of 1.236 which is statistically significant suggesting the rejection of the information content assumption given as the null hypothesis.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.049	.009		5.708	.000
	WEEK	.002	.002	.304	1.236	.236

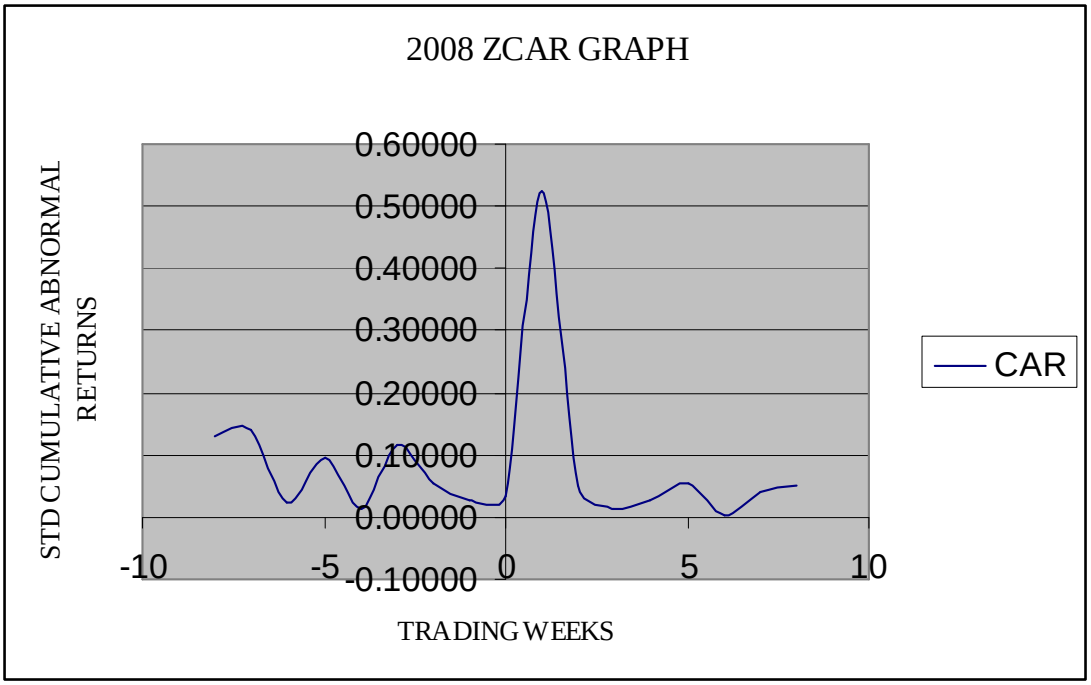
a. Dependent Variable: CAR

4.3 Results for 2008

The pre-announcement mean return ranges from 0.0014 to 0.00694 with post event mean ranging 0.0008 to 0.02623. The report period mean return is 0.00169.

SUMMARY STATISTICS			
WEEK	**MEAN**	**STD DEVIATION**	**ZCAR**
-8	0.00655	0.00899	0.13104
-7	0.00694	0.01090	0.13888
-6	0.00114	0.00157	0.02274
-5	0.00473	0.01172	0.09459
-4	0.00069	0.00118	0.01388
-3	0.00574	0.00577	0.11482
-2	0.00271	0.00180	0.05425
-1	0.00130	0.00369	0.02597
0	0.00169	0.00382	0.03374
1	0.02623	0.04633	0.52469
2	0.00252	0.00320	0.05032
3	0.00066	0.00075	0.01321
4	0.00128	0.00257	0.02556
5	0.00271	0.00718	0.05418
6	0.00008	0.00013	0.00168
7	0.00197	0.00450	0.03938
8	0.00251	0.00450	0.05026

4.3.1 Graphical presentation for 2008



4.3.2 Test for significance

The test statistic shows a t-value of -0.574 which is not statistically significant given the magnitude. The negative sign only indicates the direction of the test.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.082	.030		2.714	.016
	WEEK	-.004	.006	-.147	-.574	.575

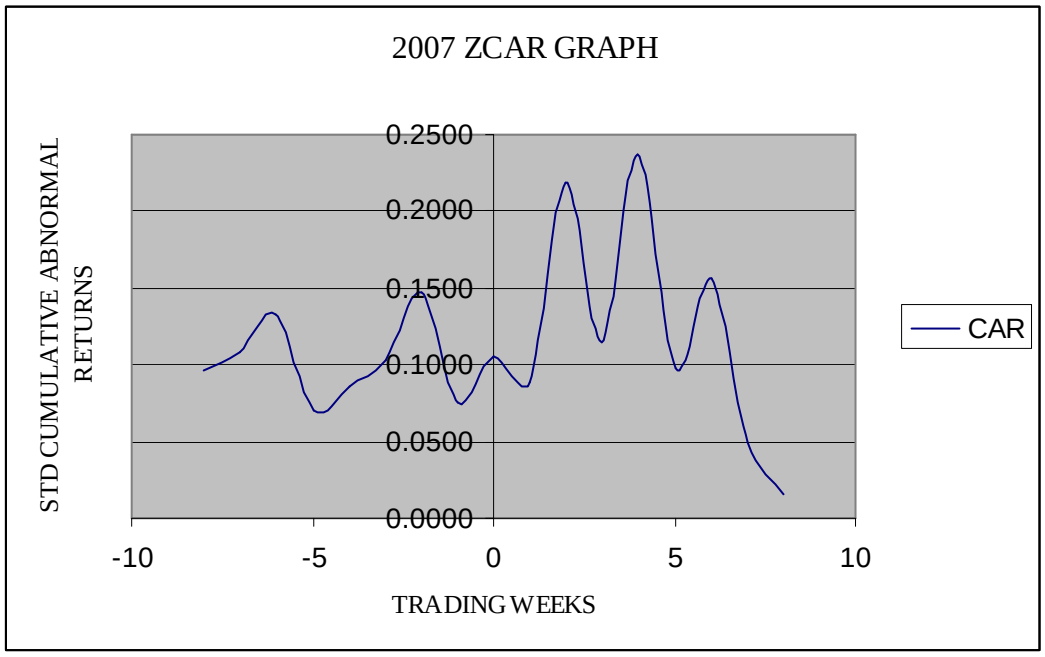
a. Dependent Variable: CAR

4.4 Results for 2007

The weekly pre-announcement mean return ranges from 0.0035 to 0.0074 with post event mean ranging 0.0007 to 0.0118. The report period mean return is 0.0037.

SUMMARY STATISTICS			
WEEK	**MEAN**	**STD DEVIATION**	**ZCAR**
-8	0.0048	0.0072	0.0966
-7	0.0054	0.0111	0.1081
-6	0.0066	0.0070	0.1327
-5	0.0035	0.0052	0.0701
-4	0.0043	0.0082	0.0863
-3	0.0052	0.0065	0.1033
-2	0.0074	0.0078	0.1474
-1	0.0037	0.0065	0.0750
0	0.0053	0.0317	0.1060
1	0.0044	0.0067	0.0887
2	0.0109	0.0239	0.2189
3	0.0057	0.0085	0.1149
4	0.0118	0.0155	0.2368
5	0.0049	0.0071	0.0972
6	0.0078	0.0111	0.1563
7	0.0024	0.0055	0.0489
8	0.0007	0.0014	0.0150

4.4.1 Graphical Presentation for 2007



4.4.2 Test for significance

The t-statistic has a value of 0.003 which is not statistically significant as the further the t values move away from zero the more likely the event is to be statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.112	.014		8.075	.000
	WEEK	8.240E-6	.003	.001	.003	.998

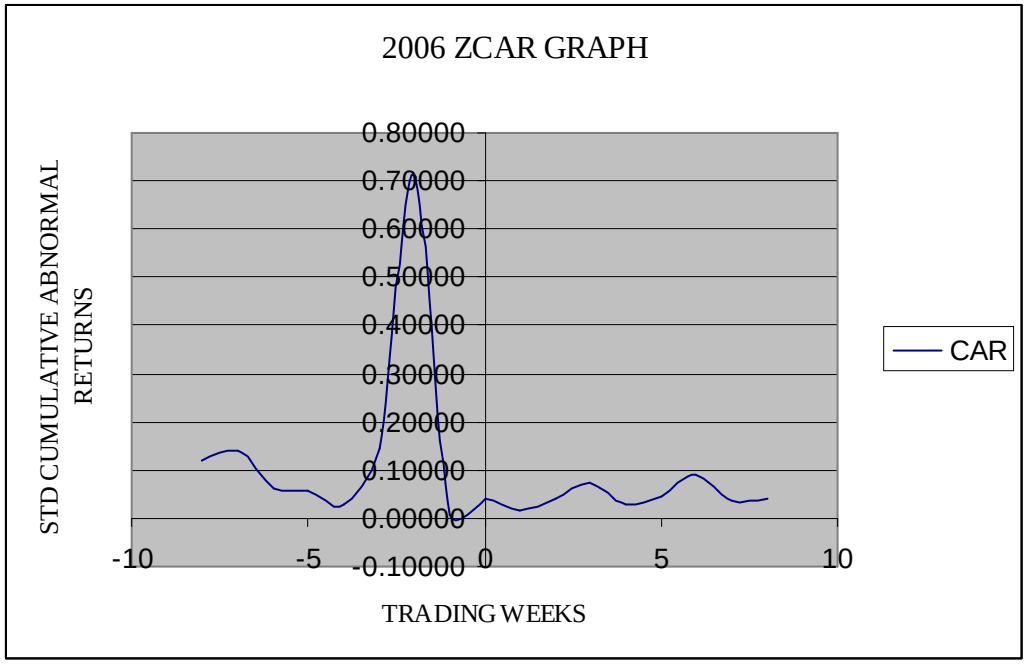
a. Dependent Variable: CAR

4.5 Results for 2006

The summary statistic show the report period mean of 0.00199. The pre-announcement mean ranges from 0.00034 to 0.00694 with post event mean ranging 0.00070 to 0.00365.

SUMMARY STATISTICS			
WEEK	**MEAN**	**STD DEVIATION**	**ZCAR**
-8	0.00603	0.00710	0.12060
-7	0.00694	0.01090	0.13888
-6	0.00304	0.00389	0.06070
-5	0.00291	0.00397	0.05812
-4	0.00143	0.00151	0.02855
-3	0.00723	0.01445	0.14452
-2	0.003575	0.06520	0.71492
-1	0.00034	0.00045	0.00673
0	0.00199	0.00259	0.03983
1	0.00070	0.00122	0.01408
2	0.00205	0.00272	0.04098
3	0.00365	0.00787	0.07298
4	0.00143	0.00151	0.02855
5	0.00223	0.00559	0.04459
6	0.00464	0.00780	0.09285
7	0.00176	0.00336	0.03521
8	0.00206	0.00396	0.04130

4.5.1 Graphical Presentation for 2006



4.5.2 Test for significance

The t-statistic has a value of -0.834 which is not statistically significant given the magnitude. The negative sign only indicates the direction of the test.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.099	.040		2.466	.026
	WEEK	-.007	.008	-.211	-.834	.417

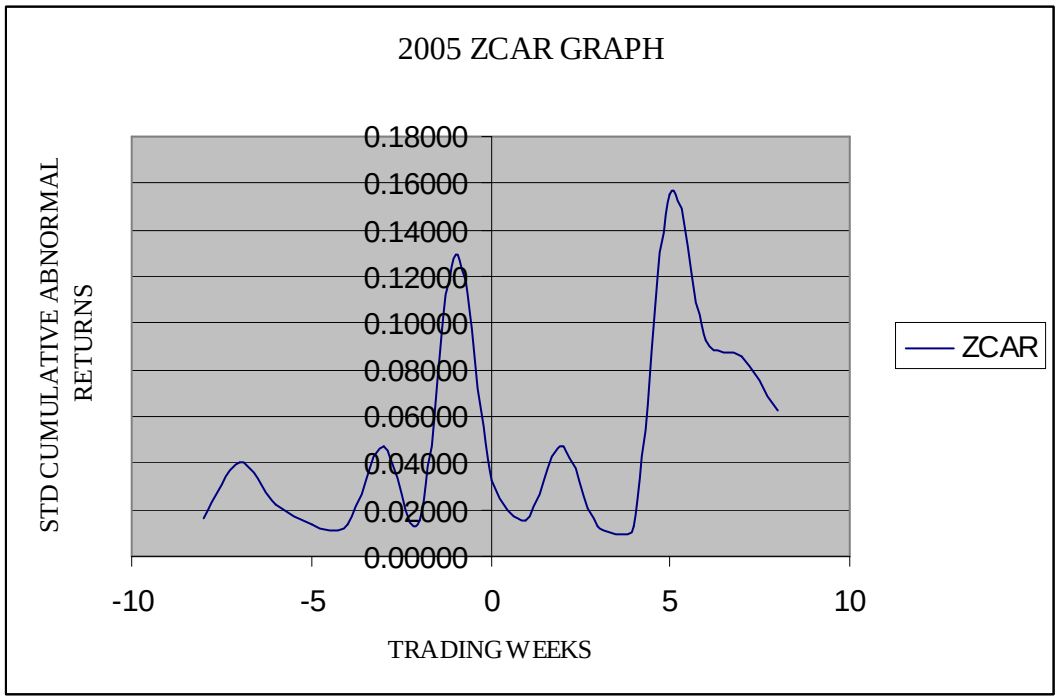
a. Dependent Variable: CAR

4.6 Results for 2005

The summary statistic show the report period mean of 0.00164. The pre-announcement mean ranges from 0.00070 to 0.00646 with post event mean ranging 0.00066 to 0.00776.

SUMMARY STATISTICS			
WEEK	**MEAN**	**STD DEVIATION**	**ZCAR**
-8	0.00080	0.00128	0.01604
-7	0.00201	0.00509	0.04017
-6	0.00112	0.00155	0.02230
-5	0.00069	0.00118	0.01388
-4	0.00070	0.00119	0.01397
-3	0.00235	0.00517	0.04708
-2	0.00078	0.00148	0.01564
-1	0.00646	0.02068	0.12924
0	0.00164	0.00494	0.03280
1	0.00078	0.00148	0.01564
2	0.00235	0.00448	0.04693
3	0.00066	0.00075	0.01321
4	0.00065	0.00170	0.01300
5	0.00776	0.02829	0.15516
6	0.00464	0.00780	0.09285
7	0.00429	0.00826	0.08577
8	0.00315	0.00913	0.06298

4.6.1 Graphical Presentation for 2005



4.6.2 Test for significance

The t-statistic has a value of 0.472 which is not statistically significant as the further the t values move away from zero the more likely the event is to be statistically significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.048	.010		4.977	.000
	WEEK	.004	.002	.472	2.075	.056

a. Dependent Variable: CAR

4.7 Summary of results and finding

The results indicated that in all the weeks of the five year period under examination, the mean return on the report period was less than both the pre and post announcement weeks for the five year period. The explanatory power or the earnings response coefficient, R^2, was also quite low in all the five years under study with the R^2 ranging between 0.019 to 0.171 which meant that only 1.9 % to 17.1 % of returns variability was explained by the earnings announcement within the week with regard to market wide events.

The beta coefficients were also less that 1 suggesting that the sample firms' stock were less sensitive to earnings announcements. These results and findings therefore violate the general assumption for the test of the information content that if earnings reports convey information in the sense of leading to changes in the equilibrium value of the current market price, hence returns, the magnitude of the price change (without respect to sign) should be larger in week 0 (the announcement week) than during the non-report period.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

5.1 Introduction:

This chapter looks at the various interpretations of the findings as contained in chapter 4. Precisely we look at the mean, (U_{it}) as a measure of information content and the standardized residuals (U^2_{it}). It further looks at the Roll (1977) critic on CAPM in determining the measure of residuals. The researcher makes his conclusion, highlights the limitation of the study and recommends areas for further research in this chapter.

The general assumption for the test of the information content is that if earnings reports convey information in the sense of leading to changes in the equilibrium value of the current market price, hence returns, the magnitude of the price change (without respect to sign) should be larger in week 0 (the announcement week) than during the non-report period. The first step in making this prediction operational is to remove the effect of market-wide events upon the individual securities price change. The R_{it} is a measure of the price change of security i during time t, and R_{mt} is a measure of average price change during time period for NSE firms. The residual, U_{it}, represents that portion of individual security's price change that cannot be explained by the market wide events which are reflected in $R_{mt.}$

With regard to the mean, U_{it}, a literal interpretation of information content would be concluded if the mean was greater than 1. In both cases for this study, the mean U_{it}, is less than 1 and ranges from 0.0007 to 0.03575 for the entire period. Since the direction of the price change and hence residual returns cannot be specified, knowledge of the

investors' expectation model(s), some transformation of U_{it} that abstracts from it sign is needed. That transformation is the square of the residual i.e. (U^2_{it}). If earnings reports posses information content, U^2_{it}, should be greater during weak 0 than during the non-report period. The mean of U^2_{it} during the non-report period is simply the variance of that variable (S^2_i). The standardized residuals mean is also greater in non-report week than in week 0.This violates the above assumption. The R^2, also the earnings response coefficient (ERC) obtained from these observation ranges between 0.019 to 0.171 which means that only 1.9 % to 17.1 % of returns variability are explained by the earnings announcement within the week with regard to market wide events. This is quite low given that a higher value of the coefficient of determination implies that more of the variability is explained. The beta coefficients are also less than 1 indicating that the sample firms' stocks were less sensitive to the earnings announcement.

5.2 Conclusion

The results obtained here are subject to two interpretations; either a majority of the annual earnings announcement of the type of firms sampled have no information content or even if the annual earnings announcements do have content, the residual variance information measures are not capable of capturing it. In other words, the market model is not appropriate for the sample of the firms. To this extend, Roll (1977) could be right that there has not been a correct and unambiguous test of CAPM; the residual variance information measures may not be providing an accurate indication of the information content of the sample firms' earnings announcements. However the belief that large firms are closely followed and obligated to additional information flow, which may pre-empt accounting reports, offers a good area of testing the firms' size and its information

content of its annual report. The implications of these are that no investor can earn abnormal returns by using the annual earnings announcement reports. The researcher therefore concludes that the earnings announcement for the sampled firms do not contain any information content that would enable an investor to earn abnormal returns. From the results of the study, we can safely conclude that the earnings announcements do not have information contents as these are already captured through more timely media which include, interim reports, dividends, bonuses and individual company releases.

5.3 Limitation of the study

The study is limited to the 20 firms used as samples in this study. Due to the thinness of the capital markets in Kenya, a sampling challenge is eminent. For instance the researcher intended to use the blue chip companies used in the NSE index computation as these are the most followed stocks. Four of these (Safaricom, Kengen, Cooperative Bank and Equity Bank) could not meet the selection criteria and were dropped and new companies introduced some of which may not be most followed and thus considered 'poor' performers amongst the market leaders. Moreover, the problem caused by clustering of announcement could be eminent in this sample as most of the firms in the NSE index computation are 12/31 firms. Time was another limitation that could not allow the researcher to re-run the test with different firms to test if similar results would be arrived at. The test for the CAPM assumptions were not performed and to that extend the study may be limited to generalization across the firms or industry.

5.4 Areas for further research.

The belief that large firms are closely followed and obligated to additional information flow, which may pre-empt accounting reports, offers a good starting area of study for testing the firms size and the information content of its annual report. Again firms tend to delay bad news and release good news early and therefore the timeliness of these reports should be studied further. Moreover enquiries about a firm's performance are usually made soon after its year end and the chances of the information leaking much earlier than the statutory requirement release dates is beaten. A study of the relations between performance and the time of release of information is further recommended. Rex and Davidson (1968) states that information could be conveyed in the market and prices could change by large margins without a single transaction. On the other hand there could be substantial trading without information release; for example due to portfolio rearrangements. Absence of active trading may not be synonymous to lack of information content as very good information may influence market participants not to be willing to sell shares already held. Lastly, there is need to establish the magnitude and direction of the signals in relation to company size, public image and reputation as well as expectations? Moreover, the combined effects of both annual earnings announcements and dividend announcements should be established.

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APPENDICES

Appendix 1: The Sample Firms

	YEAR END	ANNOUNCEMENT DATE
AGRICULTURE		
REA VIPINGO PLANTATIONS	30-Sep	31-Jan
SASINI TEA & COFFEE	30-Sep	31-Jan
COMMERCIAL & SERVICES		
MARSHALS KENYA	31-Mar	31-Jul
NATION MEDIA GROUP	31-Dec	30-Apr
KENYA AIRWAYS	31-Mar	31-Jul
CMC HOLDINGS	30-Sep	31-Jan
FINANCE & INVESTMENT		
STANDARD CHARTERED BANK LTD	31-Dec	30-Apr
DTB BANK	31-Dec	30-Apr
KENYA COMMERCIAL BANK LTD	31-Dec	30-Apr
BARCLAYS BANK OF KENYA LIMITED	31-Dec	30-Apr
NIC BANK	31-Dec	30-Apr
INDUSTRIAL &ALLIED		
ATHI RIVER MINING LTD	31-Dec	30-Apr
BAMBURI CEMENT LTD	31-Dec	30-Apr
EAST AFRICAN CABLES	31-Dec	30-Apr

BRITISH AMERICAN TOBACCO	31-Dec	30-Apr
TOTAL KENYA	31-Dec	30-Apr
EAST AFRICAN BREWERIES LTD	30-Jun	31-Oct
KENYA POWER & LIGHTING LTD	30-Jun	31-Oct
MUMIAS SUGAR COMPANY LTD	30-Jun	31-Oct
ALTERNATIVE INVESTMENT SEGMENT		
EXPRESS KENYA LTD	31-Dec	30-Apr

Appendix 2: Distribution of Financial statements and announcement dates

Year End	**No of firms with year end**
31 December	**12**
30 June	**3**
30 September	**3**
31 March	**2**
TOTAL	**20**

Appendix 3: Regression Results

Fig.1 Regression results 2009

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.304[a]	.092	.032	.03520652

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	1	.002	1.527	.236[a]
	Residual	.019	15	.001		
	Total	.020	16			

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.049	.009		5.708	.000
	WEEK	.002	.002	.304	1.236	.236

a. Dependent Variable: CAR

Fig.2 Regression results 2008

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.147[a]	.021	-.044	.1241342

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.005	1	.005	.329	.575[a]
	Residual	.231	15	.015		
	Total	.236	16			

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.082	.030		2.714	.016
	WEEK	-.004	.006	-.147	-.574	.575

a. Dependent Variable: CAR

Fig.3 Regression results 2007

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.001[a]	.000	-.067	.0571310

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	1	.000	.000	.998[a]
	Residual	.049	15	.003		
	Total	.049	16			

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.112	.014		8.075	.000
	WEEK	8.240E-6	.003	.001	.003	.998

a. Dependent Variable: CAR

Fig.4 Regression results 2006

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.211[a]	.044	-.019	.1655571

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.019	1	.019	.696	.417[a]
	Residual	.411	15	.027		
	Total	.430	16			

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.099	.040		2.466	.026
	WEEK	-.007	.008	-.211	-.834	.417

a. Dependent Variable: CAR

Fig. 5 Regression results 2005

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472[a]	.223	.171	.0397958

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.007	1	.007	4.306	.056[a]
	Residual	.024	15	.002		
	Total	.031	16			

a. Predictors: (Constant), WEEK

b. Dependent Variable: CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.048	.010		4.977	.000
	WEEK	.004	.002	.472	2.075	.056

a. Dependent Variable: CAR

Appendix 4: Financial Year Ends of Listed Companies

LISTED COMPANY	YEAR END	DUE DATE
CAR & GENERAL	30-Sep	31-Jan
CMC HOLDINGS	30-Sep	31-Jan
REA VIPINGO PLANTATIONS	30-Sep	31-Jan
SASINI TEA & COFFEE	30-Sep	31-Jan
EVEREADY	30-Sep	31-Jan
ACCESS KENYA GROUP	31-Dec	30-Apr
BAMBURI CEMENT LTD	31-Dec	30-Apr
EAST AFRICAN CABLES	31-Dec	30-Apr
KENYA COMMERCIAL BANK LTD	31-Dec	30-Apr
BARCLAYS BANK OF KENYA LIMITED	31-Dec	30-Apr
HOUSING FINANCE	31-Dec	30-Apr
BRITISH AMERICAN TOBACCO	31-Dec	30-Apr
KENYA ORCHARDS LIMITED	31-Dec	30-Apr
DIAMOND TRUST BANK	31-Dec	30-Apr
PAN AFRICA INSURANCE HOLDINGS LTD	31-Dec	30-Apr
JUBILEE HOLDINGS LTD	31-Dec	30-Apr
KENYA-RE CORPRATION LTD	31-Dec	30-Apr

SCANGROUP LTD	31-Dec	30-Apr
KAKUZI LTD	31-Dec	30-Apr
SAMEER AFRICA LTD	31-Dec	30-Apr
TPS EASTERN AFRICAN LIMITED	31-Dec	30-Apr
STANDARD NEWSPAPERS GROUP	31-Dec	30-Apr
NATION MEDIA GROUP	31-Dec	30-Apr
TOTAL KENYA LTD	31-Dec	30-Apr
EAAGADS LTD	31-Dec	30-Apr
NATIONAL INDUSTRIAL CREDIT LTD	31-Dec	30-Apr
STANDARD CHARTERED BANK LTD	31-Dec	30-Apr
EQUITY BANK	31-Dec	30-Apr
BOC	31-Dec	30-Apr
CFC HOLDINGS LIMITED	31-Dec	30-Apr
NATIONAL BANK OF KENYA LTD	31-Dec	30-Apr
CROWN-BERGER KENYA LTD	31-Dec	30-Apr
ATHI RIVER MINING LTD	31-Dec	30-Apr
EXPRESS KENYA LTD	31-Dec	30-Apr
LIMURU TEA COMPANY LTD	31-Dec	30-Apr
KENYA OIL COMPANY LTD	31-Dec	30-Apr
CO-OPERATIVE BANK LTD	31-Dec	30-Apr
MABATI ROLLING MILLS (BOND)	31-Dec	30-Apr
PTA BANK (BOND)	31-Dec	30-Apr
FAULU (BOND)	31-Dec	30-Apr

EAST AFRICAN DEVELOPMENT BANK (BOND)	31-Dec	30-Apr
OLYMPIA CAPITAL	29-Feb	30-June
A BAUMANN	31-Mar	31-Jul
SAFARICOM LTD	31-Mar	31-Jul
CENTUM	31-Mar	31-Jul
KENYA AIRWAYS	31-Mar	31-Jul
WILLIAMSON TEA KENYA LTD	31-Mar	31-Jul
KAPCHORUA TEA KENYA LTD	31-Mar	31-Jul
MARSHALLS	31-Mar	31-Jul
E.A.PORTLAND CEMENT LTD	30-June	31-Oct
EAST AFRICAN BREWERIES LTD	30-June	31-Oct
KENYA POWER & LIGHTING LTD	30-June	31-Oct
MUMIAS SUGAR COMPANY LTD	30-June	31-Oct
UCHUMI SUPERMARKETS LTD	30-June	31-Oct
UNGA GROUP LTD	30-June	31-Oct
KENGEN	30-June	31-Oct
CARBACID INVESTMENTS LTD	31-Oct	29-Feb
CITY TRUST LTD	31-Oct	29-Feb

SOURCE: NSE Secretariat 2010