

**THE EFFECT OF PROFIT ALERTS ON STOCK RETURNS OF
FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE**

BY

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DECLARATION

I declare that this Research Project is my original work and has not been presented for a degree in any other University.

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D61/79520/2012

This Research Project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this project to my family.

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LIST OF ABBREVIATIONS

| | |
|--------------|--|
| ANOVA | Analysis of Variance |
| AR | Abnormal Returns |
| ATS | Automated Trading System |
| CAPM | Capital Pricing Model |
| CAR | Cumulative Abnormal Returns |
| CBK | Central Bank of Kenya |
| CMA | Capital Markets Authority |
| DASS | Delivery and Settlement System |
| EBIT | Earnings before Interest and Tax |
| EPS | Earnings per Share |
| EMH | Efficient Market Hypothesis |
| EU | European Union |
| FISD | Financial Information Services Division |
| GDP | Gross Domestic Product |
| NSE | Nairobi Securities Exchange |
| SAR | Standardized Abnormal Returns |
| SCAR | Standardized Cumulative Abnormal Returns |
| STDEV | Standard Deviation |
| UK | United Kingdom |
| US | United States |

ABSTRACT

Listed Companies at Nairobi Securities Exchange (NSE) usually disclose information to investors about the performance of the company or the future plans of the company. All firms are required by CMA to disclose the information which includes profitability, profit warning alerts. If a company expects its financial performance to be lower by twenty five percent from the previous year's earnings, they are required under the Capital Markets Act to make a profit warning announcement. In this study, a sample of 13 firms that issued profit warnings between 2014 and 2015 was analyzed using event study methodology where data was collected from Nairobi Securities Exchange for a period of 51 days (-25, +25). The event date was denoted as time zero ($t=0$) and a 51 day event window made up of 25 days prior to the event and 25 days after the profit warning announcement. Abnormal returns and Cumulative abnormal returns statistical significance was tested using the t-test. The study found out that stock returns are negatively affected by profit warning announcements as evidenced by a decline in abnormal returns around the event announcement period. The decline especially one day after the profit warning announcement and on the second day ($t=-3.4235$, $P=0.0365$) and ($t=-2.7645$, $P=0.0211$) was found to be statistically significant at 5% level. The study also established that there was a slight improvement in the stock returns from day +10 where the stocks resumed their earlier pattern although the market took long to recover from the effects of the profit warning because by day +25, the cumulative abnormal returns were still negative meaning that investors continued to make losses. Based on this study, the conclusions is that profit warnings negatively affect stock returns for those firms listed at NSE.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Investors always make financial investment steps based on the stock information that is available from the listed companies. Most of the investors and analysts both local and international rely on the information on returns in determining whether to buy, hold or sell shares of a particular listed company in the NSE, (Nyabundi, 2013). Profit alerts give an indication of how the firm is performing in the current trading period as compared to the previous trading period. It also gives an indication of earning that the investors are expected to make and general information about the financial performance of a given company, (Skinner, 1994).

Kenyan and international Investors come to the stock market with very high expectations. Large numbers of the investors invest for short-run while others invest for long-run benefits. For that goal to be achieved, the investors evaluate their potential investment by calculating the profits (returns) and the cost of the stock investment, (Aduda & Chemarum, 2010). NSE requires with time every listed company management to fulfill their agency duties of communicating to stakeholders' about the performance of the companies. However, this performance information was being given at the discretion of the management thus resulting into information asymmetry and inconsistencies especially where negative information is involved. To reduce the information asymmetry and promote corporate governance, rules and regulations were published to supervise companies listed in NSE (Capital Markets Authority, 2002) whether the information is positive or negative, (Kamini & Nidhi, 2013).

Profit warning alerts is one of the mechanism companies use to inform the investors and general public that the company is likely to make profits, losses or report lower earnings than previous trading period, (Aduda and Chemarum, 2010). The aim of issuing the profits alerts is to reduce the high and low expectation gap between the shareholders and other interested investors in which are based on the company's performance. However, financial stocks react negatively to profit warnings alerts, (Kiminda, Githinji & Riro, 2014). From the year 2015 to 2016, more than 10 companies listed in the NSE having issued profit alerts. In NSE, profit alerts issued are either qualitative or quantitative; however it is the duty of the researcher to focus on both types of alerts information to estimate its effect on stock returns (Kamini & Nidhi, 2013).

1.1.1 Profit Alerts

Profit alerts is an announcement made by a public company in advance of its earnings announcement indicating that profits will fall short of previously expected levels. According to Elayan and Pukthuanthong (2009), the decline in earnings can be expressed in other terms like net profits, sales, earnings before interest and tax (EBIT) and earnings per share (EPS). The timing of management disclosures affects the revision of subsequent analyst forecasts. Baginski and Hassell (1990), show that analysts follow management forecasts more closely in the fourth quarter than in the other quarters. Previous researches also indicate that the timing of when the warnings are issued results into several implications because of shareholder reaction. Previous studies indicate that firms issue profit warnings for different reasons.

Skinner (1994) identified two reasons why companies tend to issue earnings-related warnings in the US stock markets; one is stockholders lawsuit and another is reputational costs while Kasznik & Lev (1995) indicated that profit warning also helps reduce the expectations gap that shareholders may be having and lower the market reaction in the stock price and avoid large stock price fluctuation. Alves, Pope and Young (2009) in their research found out that profit warnings issued by firms is received as bad news not only within the country where the firm is listed but also by investors in comparable foreign non –announcing firms although, cross-border transfers vary according to firm, industry and country level characteristics.

Wang and Tumurkuu (2010) recommend that it is important for investors to pay attention to the nature of profit warning because, different profit warning result into different impact. They found out that during the event window, the average share price reaction was about -35% and therefore, reaction of such magnitude affects stock returns to a large extend. In Kenya, profit warning is a mandatory disclosure for firms listed at NSE and firms which fail to issue profit warnings as per legal notice no 60 of May 2002 are likely to face sanctions as some firms have been punished before. For example, in 2012 CMC Motors was penalized by CMA for failing to comply with some corporate governance requirements as required by the CMA Act (CMA, 2014)

1.1.2 Stock Returns

Stock represents a unit of share ownership in a corporation or a public Company while stock returns are the gains expected by an investor from investing in the stock, Wang and Tumurkuu (2010). The aim and objective of any investor is to get a fair return from their

investment. These returns are measured in the form of dividends paid or capital gains and losses. However, dividends are paid by firms at the end of the trading period and thus investors focus mainly on stock price movements of the stocks they hold to assess their returns. Ross et al (2010) states that the return of stock traded in the financial markets is composed of two parts; The normal or expected returns which is dependent on the information that the shareholders have that bears on the stock and is based on the market understanding of the important factors that will influence the stock in the coming year and the return that is uncertain and risky. This risky portion comes from unexpected information revealed within the year among them being profit warning announcement.

Stock returns are mainly affected by factors which are micro or macro, the issues of stock returns are the most important reason for business growth or failure, Olowoniyi and Ojenike (2012). They identified a firms expected growth, size, inflation, stock return policies as well as legal regime as the determinants of stock returns. However, dividends are ranked highly as one of the measures of stock returns; there have been numerous criticisms on the payment of dividends by firms as per Miller and Modigliani 1961 dividend irrelevance theory. Supporters of the bird in hand theory, signaling theory and agency theory believe that dividend payments increase shareholders wealth and value. The value of a company is also expressed as a sum of all the future earnings less investment expenditures. Researches indicated that stock returns are negatively correlated with market based debt ratio especially in firms that do not rebalance their debt ratios following periods of fluctuations in stock prices.

Er and Vuran (2012) in their research found out that stock returns are influenced by stock performance, financial structure of a firm, activity and profitability ratios. The prevailing exchange rate, money supply and beta of the firm were also found to significantly affect stock returns. In this research, inflation and a reduction in economic activity negatively affects stock prices and hence returns. According to CMA (2015), holders of stock have the opportunity to buy new stock to diversify their portfolio or dispose the stock that they are holding for capital gains. The trading rules are issued by NSE to ensure that no unfair trading occurs. NSE also oversees the firms listed at NSE to ensure that they are compliant with the capital markets requirements. Investors (current and potential) can acquire or dispose their stock at NSE with the help of stock brokers or investment banks.

1.1.3 Profits Alerts and Stock Returns

Profit alerts are voluntary disclosures of bad news by company management prior to the actual announcements in which they can be either qualitative or quantitative. EMH indicates that any new information is immediately incorporated in the prices of stocks and therefore, the prices of stocks will be correctly priced (Lindner et al, 2010). Signaling theory on the other hand indicates that profit warnings just like dividend signaling theory, sends information to the investors that future expected or anticipated dividends will be less and thus, Kiminda, Githinji and Riro (2014), indicate that this negative signal will lead to a decline in stock prices hence decline in returns.

Tucker, (2006) did research on both warning and non-warning firms and raised the opinion against previous researchers' findings which the openness seems like punishment for warning firms by investors. The author found the warning firms had lower returns

than non-warning firms in short term window, five days after earnings warnings. However, returns were similar between warning and non-warning firm in long term like three months. Maarten (2011) and Dons and Sletness (2013), both agree that profit warnings serve as bad news and thus investors react in a stronger way to bad news than to good news. However, Herrerias et al (2003) argues that although the returns are negative around the time of the announcement, there is a drift which is likely to occur after six months that will reverse the negative trend with some small positive returns.

Donker and Church (2010) in their research argue that negative stock returns following profit warning announcements can be reversed if companies issue detailed qualitative and quantitative information. They further argue that openness by firms that issues multiple successive profit warnings will be rewarded with a dampened market reaction on the share prices. Tserendash and Xiaojing (2010) on the other hand argues that firms need to be more tactful when they are releasing profit warnings because the level of transparency and the content of the warning affect the security prices of the firm most negatively. They further argue that when firms think about the likely implications of non-disclosure, they would rather prefer to disclose than fail to. In this study, the conclusions reached at are consistent with the findings of other researches that indicate that profit warnings negatively affect stock returns.

1.1.4 Nairobi Securities Exchange

NSE is licensed and regulated by the Capital Markets Authority (NSE 2014). It comprises of approximately 63 active listed companies trading over Ksh.500 million with market capitalization of approximately Ksh1500 billion and trading in government bonds

averaging Ksh.6 billion on a daily basis. Trading at NSE is automated and is done through Automated Trading System (ATS) which is also linked to Central Bank of Kenya (CBK) and Central Depository System (CDS). This trading of stocks and other securities at NSE is regulated by the CDS Act 2000, CMA Act Cap 485A and the trading rules and regulations issued by NSE which are approved by the CMA.

Firms listed at NSE are required to disclose any material information for example, the issue of new shares, bonus issue, stock splits as well as any payment of extraordinary dividends to CMA. The fluctuations in the daily prices for any security in a single trading session is capped at 10% except during major corporate announcements with short selling and same day turn around transactions being prohibited (Kiminda, Githinji and Riro, 2014).

Capital Markets Authority has made it a mandatory requirement for all companies listed at the NSE to inform the company announcement office of any material discrepancy in its earnings before a profit warning is issued as per legal notice no 60 of 2002. The Authority requires companies to make the disclosures of profits if earnings are projected to fall by more than 25 per cent hence warn investors of the risks of capital losses and reduced dividend due to the profit fall. As of 30th June 2016, more than 10 firms listed at NSE had issued profit warnings in line with the regulatory requirements.

1.2 Research Problem

NSE Profit warning alerts is the main market information that all investors need to be informed about in making their investment decisions. Profit warning alerts have a

negative effect on the stock returns of respective listed companies which in turn affects liquidity of the shares at the stock market attributed by the poor performance of the listed firm, (Bulkley and Herrerias, 2004). Profit warning alerts restrict the listed companies to raise additional capital through equity financing in form of a rights issues. The effect of the profit announcements influences investor's decision in respect to investment decision that may accordingly lose confidence in the market and put their money elsewhere or alternatively withdraw from the market. This significantly affects the performance of the NSE, (Nyabundi, 2013). This study therefore sought to examine the relationship between profit warning and share prices of listed firms at the NSE.

Stock markets are influenced by Efficient Market Hypothesis theory which has extensive impact on finance and has received acceptance and criticism in equal measure from many studies. The theory states that today's stock prices incorporate all the information that is currently available to potential buyers and sellers. EMH exists in the strong, semi strong and weak form. According to Fama (1998) today's market prices of stocks incorporate all historical information about the stock and that analysis of past prices cannot give investors a competitive advantage. This argument is in agreement with the random walk hypothesis which states that stock prices are random and are not controlled by past trends. Semi strong hypothesis states all published information is already included in the current stock prices and strong form the current stock prices reflect all available information about the stock. Although in EMH, relationship between profit warnings and stock returns doesn't exist since it is an efficient market.

Profit alerts warning studies in developed countries have been conducted in UK and US stock markets in the 1990s and in the early 2000s. Skinner (1994), (Kasznik and Lev, 1995) investigated the event of disclosure of profit warning in the US market. (Clare, 2001), (Helbok and Walker, 2003) studied the relationship between the profit warning and stock prices in the UK. (Helbok and Walker, 2003) investigated the attitudes toward the profit warning disclosure in London Stock Exchange when the UK made it compulsory for the quoted companies to release the profit alerts. They compared the companies' performances and market reactions before and after the new rule. Through these studies, negative market reactions were found.

However, the impact of the profit warning alerts is different based on firm specific factors at NSE like size. Nyabundi (2013) examined whether dividends, earnings and book-value explain changes in share prices for companies listed on the NSE from 2005 to 2010. Aduda and Chemarum (2010) used trading activity ratio while Ngugi (2003) used microstructure theory. Leonard (2012) and Michael (2013) used event study to investigate the stock price performance of listed companies at NSE after profit warning alerts. All of them found that small firms were beaten more than the large firms.

Although there has been substantial research on the impact of profit alerts warning on stock price, there are few such studies of other developing markets such as Kenya. This study differs from the other studies because it focuses on the all listed companies in NSE while other studies focused on the different market segment at NSE. Hence the study will establish the effect of profit warning alerts on stock returns in all listed companies at NSE.

1.3 Research Objective

To analyze the effect of profit alerts on stock returns of firms listed at Nairobi Securities Exchange.

1.4 Value of the Study

The listed companies management at the NSE will use this study in making decisions regarding capital raising through equity as well as how to increase investor confidence generally while increasing its returns. In this regard, the management personnel will be in a prime position to know the effects of profit alerts on returns of listed companies at the NSE in Kenya which in turn can play a bigger role in shaping their operations.

The investors and the capital markets practitioners will also get an insight on the effects of profit alerts on share returns of listed companies at the NSE in Kenya. This will help them develop policies on how to mitigate the challenges.

This study will be of use to researchers and academic community who will use the findings of this study as a stepping stone for further studies on listed companies on NSE. In addition, the students and academicians are going to use this study as a basis for discussions on the topic at hand.

Listed companies are subject to various regulatory requirements. The regulators will be interested with the level of compliance by these firms to the regulations. This study will help regulators to understand the effect of the various regulatory requirements on stock returns which will help them whenever they need to make changes to such regulations or when enforcing compliance.

The ordinary investors will find this study useful as a basis of formulating and implementing sound investment decisions devoid of market inefficiencies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter examines what other researchers and scholars have done; it covers the theoretical framework, determinants of stock returns, empirical literature and a summary of the literature.

2.2 Theoretical Framework

Theoretical framework focuses on the theories which explain the relationship of profit alerts and the stock returns in the financial markets. The theories include Agency theory, Behavioral Theory, Efficient Market Hypothesis theory and Signaling Effect Theory.

2.2.1 Agency Theory

The agency theory traces its origin to 1972 when Stephen Ross presented a paper published in AER proceedings issue in May 1973 building on the theory of the firm. In 1976, Jensen and Meckling argued on the importance of separating the ownership of firms from control. According to Ross, agency relationship exists where two parties one called agent acts on behalf of the other “principal” in a particular domain of decision problems. In most cases, an agency problem arises where the agent acts in a manner inconsistent with the expectation of the principals. With this conflict of interest there was need to separate ownership of firms from control and this was consistent with the views of Adam Smith (1776).

There are several reasons why principal agent relationship exists. First, shareholders (principals) are at times too many and are geographically dispersed hence they may not

be available to actively manage the firm. Secondly, these shareholders may not be in possession of the necessary skills required to run the organization and thus the need to engage specialized personnel to run the companies. To minimize the agency problem, Jensen & Meckling (1976) indicate that firms must be willing to incur agency costs to monitor the agents. Bowny et al (2006), define agency costs as the total cost of monitoring, bonding and residual loss.

The activities that firm agents engage in have a direct impact on a firm's stock returns because it can either increase or decrease the returns that investors expect. When investors engage agents, they expect that the agents will engage in activities that will maximize their wealth. In the quest to fulfil their agency duties, CMA legal notice no. 60 of 2002 requires agents to notify the shareholders and the market of any material changes in the firm that will affect the returns investors expect. For example, where there is a material decline in the firm's profits by about 25%, the firm's agents are required to issue a profit warning as part of fulfilling their agency duties and also as a sign of good corporate governance.

2.2.2 Behavioral Theory

Behavioral finance is the psychological theories of the financial market (Penman, 2009) and the application of the cognitive psychology to the market participants (Ruppert, 2004). Behavioral finance provides the explanations to the rational and irrational behaviors of financial market practitioners in relation to the psychological phenomena. Behavioral finance study how psychology can be used in explaining financial market events and the actions and behavior of market participants (Shefrin, 2002). Behavioral

finance explains driving forces that influences the stock price deviate from fundamental value (Penman, 2009).

Barberis & Thaler (2003), suggested that the behavioral finance has base of the two blocks. First one is that the market participants are not fully rational, irrationality that exist has more impact on the price of stock thus limits the arbitrage opportunity. Another is cognitive psychology that explains how irrationality affects in the behavior of market participants and their decision makings. The behavioral theory is classified into different categories/schools of psychology for instance, we have the “Behaviorist” founded by John Watson in 1913 which underscores the fact the idea that man is a biological machine and hence our behaviors are result of learning.

We also have the “Psychoanalytic” school with its founder Sigmund Freud in 1900. “Structuralism” school. “Gestalt” psychology founded by Max Wertheimer in 1912 is modeled on the principle that we use our imaginations to perceive our surroundings however, during this process we make mistakes therefore our perceptions can be different from reality. Humanistic” psychology was founded by Abraham Maslow in 1943 that focused persons needs or desires to be prioritized in respect to the class or hierchary of needs. Lastly we have the “Cognitive” psychology which was founded by Ulric Neisser in 1967, focuses on how human thought controls behavior (Tserendash and Xiaojing, 2010).

In summary therefore, the behavioral finance explains the behavior of the investors and other participants from the psychological point of view. The profit warning is the

information that result in the surprise thus financial market participants react to the news with overreaction and under reaction.

2.2.3 Efficient Market Hypothesis

Efficient market hypothesis is a theory that has been studied extensively in finance and has received acceptance and criticism in equal measure. The term efficient means that today's stock prices incorporate all the information that is currently available to potential buyers and sellers. Efficient market hypothesis exists in three forms i.e. the strong, semi strong and weak form. In the weak form of efficient market hypothesis, Fama (1998) believes that today's market prices of stocks incorporate all historical information about the stock and that analysis of past prices cannot give investors a competitive advantage. This argument is in agreement with the random walk hypothesis which states that stock prices are random and are not controlled by past trends.

The concept of semi strong hypothesis is based on the argument that all published information is already included in the current stock prices. In the strong form of efficiency, current stock prices reflect all available information which could be known and that even insider and privileged information cannot be used by investors to make better than normal returns. In the EMH, there is no relationship between profit warnings and stock returns because in an efficient market, all information is immediately incorporated in the stock prices and therefore there is no possibility that someone will make some unfair returns by beating the market because stocks are exchanged at their fair values (Lindner et al, 2010).

2.2.4 Signaling Effect Theory

According to Connelly et al (2011), Signaling theory is used to describe behavior between two parties who have access to different information. In this theory, the sender (firms) chooses how to relay some information to the recipients (stakeholders) and these recipients choose how to interpret the signals. From previous studies done, profit warnings serve as bad news to investors and therefore, when a company issues a profit warning, such warnings serve as signals to the market that, stock returns shall be lower in the coming days. However, Bhattacharya and Amy (2001) argues that a good firm can separate itself from a bad firm by issuing a costly signal and attracting scrutiny from the market and therefore we consider profit warning announcements as an example of such a costly signal.

Signaling theory is beneficial if it is true because the market must be able to rely on this information and therefore a firm's management should first possess the information and prospects as well as have incentives to convey this information to the market, Mungai (2011). In finance, signaling theory has been used in a number of studies. For example, Hobbs & Schneller (2012) used signaling theory to study dividend signaling and sustainability, Hoffer (2006) study on corporate signaling and with multiple signaling costs as well as Seaton and Walker (1996) research on signaling, disclosure and implications of financial structure for UK corporate R&D. This theory has been extensively used in studies on dividend payment by firms.

Signaling theory is based on the assumption that information is not available to all parties at the same time. In the same way dividends serve as a signal of better returns to the

investors as per dividend signaling theory, profit warning come as a shock to some investors and therefore in response to the information, researches done by Heesters (2011), Dons & Sletness (2013) among others have found that profit warnings lead to negative returns.

2.3 Determinants of Stock Returns

Stock returns is affected by three main factors: Inflation, Interest rates and Economic Growth

2.3.1 Inflation

Inflation refers to the general rise in the price of goods and services. Green and Bhai (2008) as well as Kamini (2013), in their studies found out that there is a negative relationship between stock returns and inflation. Crosby (2001) indicates that increases in price levels reduce the real level of the stock price index. Although inflation negatively affects stock returns, Groenewold et al (2010) states that this should not be a puzzle because this is an outcome of interactions in the whole economy. They further argue that inflation in itself does not directly affect stock returns but does so through.

Inflation may be either demand pull inflation or cost push inflation. Demand pull inflation is caused by persistent rises in aggregate demand thus the firms respond by raising prices and partly by increasing output, (Sloman & Kevin., 2007). Cost push inflation is associated with persistent increase in the costs experienced by firms. Firms respond by raising prices and passing the costs on to the consumer and partly cutting

back on production. Hendry (2006) agrees that inflation is the resultant of many excess demands and supplies in the economy.

2.3.2 Interest Rates

Interest is the price charged by commercial banks on loans. Interest rates influence the behavior of both current and potential investors and it's the major cause of uncertainty for firms and thus a major area of concern to everyone including the regulators. Researches done by Green and Bhai (2008) and Kamini (2013) indicate that there is an inverse relationship between interest rates and stock returns. This is because when interest rates are high, there are few money in circulation due to low borrowing by both individuals and institutions and savings become attractive as well thus this affects that trading activities at the capital markets and vice versa (Aroni, 2011).

Uddin (2009) indicates that interest rates play a crucial role in the growth of any economy and as such, movements of interest rates have implication on monetary policies and risk management practices. His findings are consistent with those of other researchers that, there exists a negative relationship between interest rates and stock returns. They charge a price for the intermediation services offered under uncertainty and set the interest rate levels for deposits and loans. The disparity between the gross costs of borrowing and the net return on lending defines the intermediary costs which include information costs, transaction costs, administration, default costs and operational costs (Rhyne, 2002).

2.3.3 Economic Growth

Economic growth as the increase in the capacity of an economy to produce goods and services compared from one period to another. Economic growth is measured in terms of gross domestic product (GDP) and is usually associated with changes in technology, increased personal savings and labor participation (Ritter, 2005). Yao, Jakob and Dzhumashev (2011) in their research indicate that there is a significantly positive relationship between stock returns and economic growth. It's also argued that investors prefer investing in those countries that have the largest potential growth. However, other researches done by Ritter (2005) and Wade (2013) indicate that although stock returns have a relationship with economic growth, there is no express consensus since this relationship is more prevalent during times of high output volatility.

According to Ritter, (2005), Economic growth is not arguable and spans across disciplines affecting all areas of society directly and indirectly. In addition, macroeconomic policies on factors like interest rates and inflation rates assist in promoting economic growth and also equally important, are vehicles of economic growth such as the stock market. However, a basic proposition of growth theory is that, in order to sustain a positive growth rate of output per capita in the long run, there must be constant advances in technological knowledge in the form of new goods, new markets, or new processes.

2.4 Empirical Literature Review

According to Michael (2013), there is a steady decrease in stock returns up to the announcement day and a steady increase but at lower rate after the announcement depicting little increase in abnormal returns owing to absorption of the information into the stock prices with investors benefiting from the public information. The aim of this research was to find out the impact of profit warnings on stock value. In his research, a total of 13 firms that had issued profit warnings between 2005 and 2012 were selected. Quantitative data was collected and studied using events study model.

Augustine (2011), indicates that profit warnings results into abnormal returns which negatively revalues a firm. His study focused on the information content of profit warning announcements by studying 14 firms that had issued profit warnings between 2010 and 2012. This study used daily adjusted price for sample stocks over a period of 31 days which was analyzed using events study methodology and abnormal returns calculated using the market model. According to Olowonyi (2012) stock returns are affected by the expected growth and size of a firm and that efforts aimed at improving the size of a firm and adjustments of firm's tangibility to a positive side is suggested to improve the financial situation of firms through stock return.

Tserendash and Xiaojing (2010) conducted a research on the relationship between profit warnings and stock returns in the EU market covering a sample of 87 firms that issued profit warnings between 2008 and 2010. In their research, they used event study methodology while CAPM was used to calculate normal returns. Tserendash and Xiaojing (2010) argue that the impact of profit warning on stock returns is bigger for

qualitative type of warning than quantitative types. The goal of this study was to find out the impact of profit warnings on stock returns.

Church and Donker (2009), a greater degree of disclosure positively impacts the abnormal returns of firms with multiple successive profit warnings significantly. In their study, they of the view that firms can diminish negative influence of profit warning on shareholder returns by releasing detailed information. The purpose of their study was to examine the influence of profit on shareholder returns and to investigate the information content that maximizes shareholders value.

Alves, Pope, and Young (2011) in their research indicate that the disclosure of negative earnings surprises by firms in one country affect investors' perceptions of comparable non-announcing firms in other countries because profit warnings are considered as bad news. However, markets respond positively for a large proportion of non-announcer. This study was based on a sample of 4,283 firms drawn from 29 European countries as well as 1,357 profit warning issued by firms in 20 countries. The results were analyzed using market adjusted returns.

Spohr (2014) in his research indicate that firms' stock prices respond differently to profit warnings depending on the riskiness of the firm and if the warning is more surprising to the market. Spohr in his study used a framework of surprise and risk to explain the response of profit warnings using a sample of 474 firms (356 positive warnings and 118 negative warnings) collected from Nasdaq OMX Nordic from 2005 to 2011. Events study

method was used to study the response of market to profit warning while abnormal returns were computed using the market model.

According to Elayan and Pukthuanthong (2008), openness by firms while releasing information should be rewarded. The irony in this is that, studies indicate the market responds negatively around the announcement dates with the magnitude being around -17% over a 2 day announcement period. This research was conducted with an aim of establishing why firms voluntarily release earnings forecast in advance, how long such news lasts as well as the long term operating performance of both the stock and the warning firms.

Jackson and Madura (2003), indicate that foreign firms are punished when they issue profit warnings and that market participants with inside information capitalize on market inefficiencies. Their study focused on profit warnings and the pricing behavior of ADRs using a sample of 110 firms that had issued profit warnings from October, 1998 to September, 2001. This research used the event study methodology to analyze data.

Heesters (2011), in his research found out that the market reacts more negatively to qualitative profit warning announcements than quantitative announcements with negative cumulative abnormal returns of about -8.79% during the event window. The research findings in this study were consistent with those of Tserendash and Xiaojing (2010). This study focused on 117 firms listed in Euronext Amsterdam between 2001 and 2007. The aim of this research was to find out how the market reacts to the different types of profit warnings. Data collected was analyzed using event study methodology.

2.5 Summary of Theoretical and Empirical Literature Review

From the theoretical framework, Agency theory gives the importance of separating the ownership of firms from control. Agency relationship exists where two parties one called agent acts on behalf of the other “principal” in a particular domain of decision problems. Principal agent relationship exists due to shareholders (principals) are at times too many and are geographically dispersed hence they may not be available to actively manage the firm. Secondly, these shareholders may not be in possession of the necessary skills required to run the organization and thus the need to engage specialized personnel to run the companies. Agents engage in activities which have direct impact on a firm’s stock returns since it can either increase or decrease the returns that investors expect. CMA legal notice no. 60 of 2002 requires agents to notify the shareholders and the market of any material changes in the firm that will affect the returns investors expect.

Behavioral finance explains the rational and irrational behaviors of financial market practitioners in relation to the psychological phenomena. Behavioral finance relates psychology and financial market events, the actions and behavior of market participants, driving forces that influence the stock price deviate from fundamental value (Penman, 2009). Behavioral finance has two aspects, market participants are not fully rational, irrationality that exist has more impact on the price of stock thus limits the arbitrage opportunity. However, cognitive psychology explains irrationality effects in the behavior of market participants and their decision makings.

Efficient market hypothesis efficient means that current stock prices incorporate all the information that is currently available to potential buyers and sellers. Efficient market

hypothesis exists in three forms i.e. the strong, semi strong and weak form. However, in EMH relationship between profit warnings and stock returns does not exist because in an efficient market, all information is immediately incorporated in the stock prices and therefore there is no possibility that someone will make some unfair returns by beating the market because stocks are exchanged at their fair values (Lindner et al, 2010).

Signaling theory describes the behavior between two parties who have access to different information. In this theory, the sender (firms) chooses how to relay some information to the recipients (stakeholders) and these recipients choose how to interpret the signals. The market must be able to rely on this information and therefore a firm's management should first possess the information and prospects as well as have incentives to convey this information to the market. The theory is based on the assumption that information is not available to all parties at the same time. In the same way dividends serve as a signal of better returns to the investors as per dividend signaling theory, profit warning come as a shock to some investors and therefore in response to the information.

In the stock market, there is a steady decrease in stock returns up to the announcement day and a steady increase but at lower rate after the announcement depicting little increase in abnormal returns owing to absorption of the information into the stock prices with investors benefiting from the public information. Stock returns are affected by the expected growth and size of a firm and that efforts aimed at improving the size of a firm and adjustments of firm's tangibility to a positive side is suggested to improve the financial situation of firms through stock return, (Olowonyi2012).

The greater degree of disclosure positively impacts the abnormal returns of firms with multiple successive profit warnings significantly. The disclosure of negative earnings surprises by firms in one country affect investors' perceptions of comparable non-announcing firms in other countries because profit warnings are considered as bad news. However, markets respond positively for a large proportion of non-announcer. The results were analyzed using market adjusted returns, (Church & Donker., 2009). Stock prices respond differently to profit warnings depending on the riskiness of the firm and if the warning is more surprising to the market, the firms while releasing information should be rewarded. Market responds negatively around the announcement dates. According to Jackson & Madura (2003), foreign firms are punished when they issue profit warnings and that market participants with inside information capitalize on market inefficiencies.

2.6 Conceptual Framework

The conceptual model of the study is based on profits alerts on expected rate of return measured by (Expected market returns/Prices after the profit warning) which is the dependent variable. Market returns / Prices before the profit warning, Normal returns and stock price after profit alerts form the independent variables of the study. Figure 2.1 below shows the conceptualization depicting the relationship of determinants of profit alerts in NSE.

Dependent Variable

Independent Variable

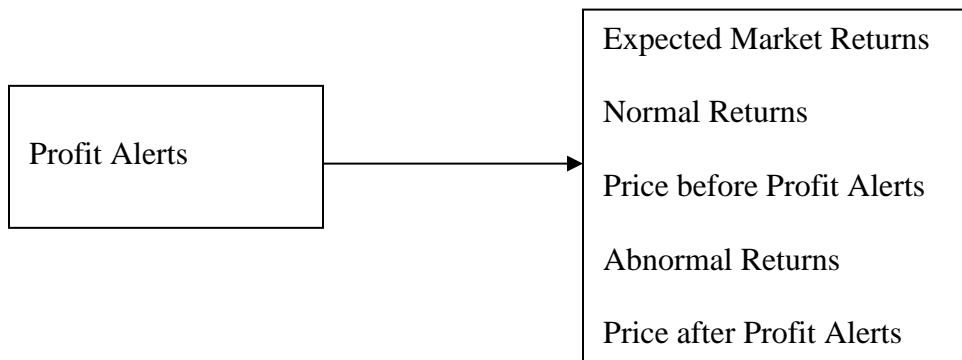


Figure 2.1: Conceptual Framework

2.7 Summary of Literature Review

EMH is of the opinion that no relationship exists between profit warnings and stock returns because any new information is immediately incorporated in a firm's stock. Signaling theory and the agency theory on the other hand both concur that there is a significant relationship between profit warnings and stock returns because when firms issue profit warnings, such warnings serve as a signal to the market that the firm may not be doing well and that the firms' future returns are likely to be affected. As a result of this, the market reacts leading to abnormal returns due to overreaction to the information.

From a further review of literature, it emerges that profit warning is not only an area that has generated a lot of interest not only to investors and management of firms but also to other stakeholders. Although profit warnings are voluntary disclosures, previous studies show that firms disclose such information for diverse reasons key among them is to avoid

being punished by the shareholders through law suits and overreaction to the information. Over time, most markets have seen an increase in the number of firms that continue to issue profit warnings despite studies revealing negative market reaction. To encourage disclosure, laws and regulations have been passed setting the criteria upon which firms can issue profit warnings.

In Kenya, such regulations were issued by CMA which is the regulator of NSE. Firms which fail to issue profit warnings are likely to face sanctions from the regulators. From the literature, most of the studies available on profit warnings are from the developed countries like US and UK with few studies from less developed markets like Kenya. Further, different studies used different methodologies to carry out their research hence the need to further carry out researches in this area and more so, in developing countries like Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses about the research methodology that will be used in the study. This includes the research design, population of study, sample and sample design, data collection and analysis methods.

3.2 Research Design

This study will use descriptive design using an event study methodology. Event study methodology is a method which is used to measure the effect of an event on the price of a security. Events study methodology operates on the assumption that in an efficient market, stock prices respond to new information immediately (MaCkinlay, 2009). Moreover, many researches done in this area of profit alerts have used event study methodology.

For example, Michael (2013), Wang and Tumurkhuu (2010), Elayan and Pukthuanthong (2009), Jackson & Madura (2010) and Leonard (2012) all used event study methodology in their research. The use of event study method is that, the event has an immediate impact on the asset price which can be measured by observation of shorter time periods in comparison with the direct measure method which need longer time period observations.

3.3 Population of Study

The target population is the population in which the researcher wishes to generate the study (Mugenda and Mugenda, 2003). The target population of this study will consist of

all NSE listed companies which issued profit warning between 2014 and 2016. For data collection and analysis purpose, the companies listed at NSE will be considered according to their NSE segment.

3.4 Sample Design

Sampling design is the process of selecting a number of individuals for a study in such a way that the selected individuals represent the population from which they were selected, (Babbie, 1995). However, a sample is a set of all individuals selected to participate in a study (Mugenda and Mugenda, 2003). A well-chosen sample of about 10% of a population can often give good reliability, (Cooper and Schindler, 2003). In this study, the population will be all the listed companies at NSE as at June 2016. To obtain a study sample, purposive sampling technique was applied and all the 13 (100%) listed companies that issued profit warning from 2014 to 2016 will be selected. Purposive sampling is applied when the sample of the study is quite small and the main aim is to focus on specific characteristics of a population that are of interest, which will best enable the researcher to answer the research questions, (Campbell, 1955); (Bernard,2002).

3.5 Data Collection Methods

The study will concentrate on secondary data. The share price data for the sampled companies, 30 trading days before and after the profit warning will be obtained from the respective sampled listed companies as well as the Nairobi Securities Exchange.

3.6 Data Processing and Data Analysis

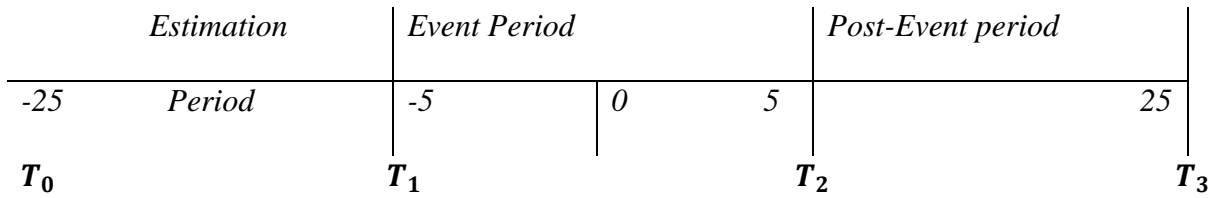
The data collected will be analyzed according to NSE sector segment using SPSS version 21 and presented in the form of tables and graphs. To analyze the data and answer the research questions, event study models will be used and the results significance tested using t-tests and z-tests at 95% significance level and ANOVA.

3.6.1 Event Study Analysis

The event study analysis will define the event of interest and the event window. The study event of interest will be the profit alerts announcement, which contains the information that earnings of the issuing firm will not meet the market expectations. The calendar date of the profit warning announcement will become time zero in event time. All remaining time periods were presented in event time in relation to this time zero (Bowman, 1983). The event time line that was used in the study for analysis is shown in figure 3.1.

The T_0 to T_1 estimation window was 25 days before the profit warning announcement; from T_1 to T_2 is the event window consisting of pre-event 20 days, actual day of announcement was 0, and from 0- T_2 will be 5 days after the announcement. T_2 - T_3 is the post event window, consisting of the next 25 days from the actual day of announcement.

Figure 3.1: Event Time Line



Source: MacKinlay, C., (1997). Event Studies in Economics and Finance, Journal of Economic Literature, 35(1), 20

3.6.2 Study Model

In this study, I used the NSE 20 share index as the benchmark for computing abnormal returns. The NSE 20 share index is a capital weighted price index for the top 13 most liquid listed firms. Abnormal returns was computed using the market model and t-tests conducted to test significance because several studies previously done by Wang & Tumurkhuu (2010), Bulkley & Herrerias (2005) and Jackson & Madura (2003) on event study indicated that the market model was the most preferred and best tool.

OLS estimator was used to obtain α and β . In this study I computed abnormal returns as:

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

Where AR_{it} is the abnormal returns of stock i at day t , R_{it} is the stock returns at day t , R_{mt} is the Market returns at day t and α , β are constants as estimated using statistical models.

The cumulative abnormal return concept used to determine the effect of profit was first applied by (MacKinlay, 1997). The aggregation was done through time and across

sampled companies' securities. Aggregation through time for individual security was done as follows:

$$\mathbf{CAR}(t_1, t_2) = \sum_{t=t_1}^{t_2} \mathbf{AR}_t \dots \dots \dots \mathbf{(2)}$$

Where:

CAR_{t_1, t_2} – Cumulative abnormal return on *i* share obtained in the event window, t.

Standardized abnormal returns were also computed as:

$$SCAR_{it} = CAR_{it} / S(CAR_{it})$$

Where $S(CAR_{it})$ is the standard deviation of CARs adjusted for forecast error. Student t-test statistic was used to measure the statistical significance of the ARs and CARs reported during the event day and the interval around the event date at a 5% significance level. T-test statistic assumes that sampling distribution is normally distributed.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter contains research findings and discussion, data was analyzed in reference to the research objectives and findings presented using tables. The chapter has been divided into four sections; the estimation model, The Abnormal returns, Analysis of the abnormal returns and Analysis summary.

4.2 The Estimation Model

In this study, I used event study methodology where the market model was used to compute the abnormal returns as shown by the model below.

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

Where:

$$E(R_{it}) = -0.0155 + 0.8681 R_{mt}$$

Where α is -0.0155 and β is 0.8681. The daily closing stock prices, dividends paid by the firms during the period under study for each of the 13 firms under study and the NSE 20 share index was collected from Nairobi Securities Exchange for a period of 51 days. To obtain alpha (α) and beta (β) of the firms, a regression of the stock returns on the market returns (NSE 20 share index) during the estimation period from -25 days to 25 days was conducted. Alpha and beta of the firms was thereafter used to compute the estimated returns of the firms and thereafter the abnormal returns. Abnormal returns are computed by subtracting the estimated returns from the return of the market. Abnormal returns

measures the daily average abnormal return of a warning stock while cumulative abnormal return records the cumulative value of all AR up to each day.

In this study, I used Excel to analyze the data and the results presented as per the tables and figures below. T-test statistic was also used to estimate the significance levels of the results at 5%. Mean abnormal returns and mean cumulative abnormal returns to test the effect of profit warning on stock returns. Previous studies conducted by Wang & Tumurkhuu (2010), Jackson & Madura (2003), Kioko (2011) and Njagi (2010) all used the mean abnormal and mean cumulative abnormal returns. Wang and Tumurkhuu (2010) indicate that single event observations are not very useful and thus recommended the use of aggregated numbers to make overall conclusions. The aggregation is done through time and across securities. To achieve this, it's assumed that there is no overlap in the event windows of the firms under study with abnormal returns and cumulative abnormal returns being independent across securities.

The mean abnormal returns was obtained by averaging the abnormal returns for each of the firms for each of the days during the event window while the mean cumulative abnormal returns (CAR) was obtained by summing the value of the mean abnormal returns up to each day. The mean standardized abnormal returns (SAR) was obtained by dividing the mean abnormal returns with the standard deviation of the mean abnormal returns while the standardized mean cumulative abnormal returns (SCAR) was obtained by dividing the mean cumulative returns with the standard deviation of the mean cumulative abnormal returns.

4.3 Abnormal Returns

In this study, I analyzed a sample of 13 firms that had issued profit warnings between 2014 and 2015 and the results presented as per the tables and figures below.

Table 4.1: Mean Abnormal Returns for all sampled firms.

| Day | AR_{it} | STDEV of AR_{it} | Standardized AR_{it} | T-test | P Value |
|-----|-----------|--------------------|------------------------|---------|---------|
| -25 | -0.0726 | 0.0424 | -1.7112 | 0.7768 | 0.4523 |
| -24 | 0.0695 | 0.0323 | 2.1517 | 0.6345 | 0.3526 |
| -23 | 0.0695 | 0.0323 | 2.1517 | 0.6345 | 0.3526 |
| -22 | -0.0666 | 0.0146 | -4.5713 | 0.7129 | 0.4895 |
| -21 | -0.0310 | 0.0765 | -0.4053 | -1.5768 | 0.6532 |
| -20 | -0.1027 | 0.0524 | -1.9614 | -1.0984 | 0.2931 |
| -19 | -0.10010 | 0.0216 | -4.6653 | -1.0804 | 0.3012 |
| -18 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| -17 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| -16 | -0.0052 | 0.0390 | -0.1343 | -0.0560 | 0.9562 |
| -15 | 0.0726 | 0.0424 | 1.7112 | 0.7768 | 0.4523 |
| -14 | 0.0695 | 0.0323 | 2.1517 | 0.6345 | 0.3526 |
| -13 | 0.0695 | 0.0323 | 2.1517 | 0.6345 | 0.3526 |
| -12 | 0.0666 | 0.0146 | 4.5713 | 0.7129 | 0.4895 |
| -11 | -0.0497 | 0.0191 | -2.5968 | 0.5319 | 0.6045 |
| -10 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| -9 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| -8 | -0.1183 | 0.0279 | 0.4203 | 0.1256 | 0.9021 |

| Day | AR_{it} | STDEV of AR_{it} | Standardized AR_{it} | T-test | P Value |
|----------|----------------|-----------------------|---------------------------|----------------|---------------|
| -7 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| -6 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| -5 | 0.0346 | 0.0199 | 1.7384 | 0.3702 | 0.7177 |
| -4 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| -3 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| -2 | 0.0346 | 0.0199 | 1.7384 | 0.3702 | 0.7177 |
| -1 | -0.0021 | 0.0123 | -0.1707 | -0.4753 | 0.5234 |
| 0 | 0.0001 | 0.0134 | 0.00746 | 0.0104 | 0.7645 |
| 1 | -0.3212 | 0.0278 | -11.5539 | -3.4235 | 0.0365 |
| 2 | -0.2432 | 0.0334 | -7.2814 | -2.7645 | 0.0211 |
| 3 | -0.10010 | 0.0216 | -4.6653 | -1.0804 | 0.3012 |
| 4 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| 5 | -0.0916 | 0.0250 | -3.6620 | -0.9803 | 0.3463 |
| 6 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| 7 | 0.0548 | 0.0147 | 3.7355 | 0.5865 | 0.5684 |
| 8 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| 9 | -0.10010 | 0.0216 | -4.6653 | -1.0804 | 0.3012 |
| 10 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| 11 | 0.0346 | 0.0199 | 1.7384 | 0.3702 | 0.7177 |
| 12 | 0.0726 | 0.0424 | 1.7112 | 0.7768 | 0.4523 |
| 13 | -0.0695 | 0.0323 | -2.1517 | 0.6345 | 0.3526 |
| 14 | 0.0695 | 0.0323 | 2.1517 | 0.6345 | 0.3526 |
| 15 | -0.0666 | 0.0146 | -4.5713 | 0.7129 | 0.4895 |
| 16 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |

| Day | AR_{it} | STDEV of AR_{it} | Standardized AR_{it} | T-test | P Value |
|-----|-----------|-----------------------|---------------------------|---------|---------|
| 17 | -0.10010 | 0.0216 | -4.6653 | -1.0804 | 0.3012 |
| 18 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| 19 | 0.0666 | 0.0146 | 4.5713 | 0.7129 | 0.4895 |
| 20 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| 21 | -0.1027 | 0.0524 | -1.9614 | -1.0984 | 0.293 |
| 22 | 0.0497 | 0.0191 | 2.5968 | 0.5319 | 0.6045 |
| 23 | -0.1174 | 0.0334 | -3.5186 | -1.2558 | 0.2331 |
| 24 | 0.0346 | 0.0199 | 1.7384 | 0.3702 | 0.7177 |
| 25 | -0.0715 | 0.0343 | -5.5325 | 0.7651 | 0.4580 |

Source: Research Findings

Table 4.1, denotes statistical significance at 5% significance level. From the research is proven that in 26 days out of 51 days window period, there were negative abnormal returns. One day after the event date, profit warning firms registered abnormal returns that were statistically significant at 5% significance level ($t=-3.4235$, $P=0.0365$), second day ($t= -2.7645$, $P=0.0211$) and on the third day at ($t=-1.0804$, $P=0.3012$).

Table 4.2: Mean Cumulative Abnormal Returns for all sampled firms.

| Day | CAR_{it} | STDEV of CAR_{it} | T-test | P Value |
|-----|------------|------------------------|---------|---------|
| -25 | -0.0956 | 0.0781 | -1.2249 | 0.2441 |
| -24 | -0.2240 | 0.1044 | -21450 | 0.0531 |
| -23 | 0.1393 | 0.0390 | 3.5696 | 0.0039 |
| -22 | 0.0089 | 0.1110 | 0.0798 | 0.9377 |

| Day | CAR_{it} | STDEV of CAR_{it} | T-test | P Value |
|------------|------------------------------|---------------------------------------|---------------|----------------|
| -21 | 0.0036 | 0.1309 | 0.0276 | 0.9784 |
| -20 | 0.0666 | 0.0146 | 4.5713 | 0.0006 |
| -19 | -0.0690 | 0.1300 | -0.5308 | 0.6053 |
| -18 | -0.0223 | 0.1362 | -0.1638 | 0.8726 |
| -17 | -0.0421 | 0.0912 | -0.4615 | 0.6527 |
| -16 | -0.1522 | 0.0999 | -1.5240 | 0.1534 |
| -15 | 0.0484 | 0.1335 | 0.3627 | 0.7231 |
| -14 | 0.0366 | 0.0735 | 0.4977 | 0.6277 |
| -13 | -0.0089 | 0.1110 | -0.0798 | 0.9377 |
| -12 | -0.0036 | 0.1309 | -0.0276 | 0.9784 |
| -11 | -0.0666 | 0.0146 | -4.5713 | 0.0006 |
| -10 | 0.0036 | 0.1309 | 0.0276 | 0.9784 |
| -9 | -0.0956 | 0.0781 | -1.2249 | 0.2441 |
| -8 | -0.2240 | 0.1044 | -2.1450 | 0.0531 |
| -7 | -0.1393 | 0.0390 | -3.5696 | 0.0039 |
| -6 | -0.0690 | 0.1300 | -0.5308 | 0.6053 |
| -5 | 0.0484 | 0.1335 | 0.3627 | 0.7231 |
| -4 | 0.0673 | 0.1368 | 0.4920 | 0.6316 |
| -3 | 0.0673 | 0.1335 | 0.3627 | 0.7231 |
| -2 | -0.0421 | 0.0912 | -0.4615 | 0.6527 |
| -1 | -0.1522 | 0.0999 | -1.5240 | 0.1534 |
| 0 | -0.4328 | 0.1876 | -2.3069 | 0.0397 |
| 1 | -0.3412 | 0.1766 | -1.9324 | 0.0397 |
| 2 | -0.3909 | 0.1732 | -2.2566 | 0.0435 |

| Day | CAR_{it} | STDEV of CAR_{it} | T-test | P Value |
|------------|------------------------------|---------------------------------------|---------------|----------------|
| 3 | -0.3517 | 0.1418 | -2.4997 | 0.0290 |
| 4 | -0.5605 | 0.1636 | -3.4258 | 0.0050 |
| 5 | -0.4527 | 0.1708 | -2.6506 | 0.0212 |
| 6 | -0.2366 | 0.1735 | -1.3636 | 0.6277 |
| 7 | -0.2292 | 0.1359 | -1.6865 | 0.8334 |
| 8 | -0.3302 | 0.1298 | -2.5439 | 0.8200 |
| 9 | -0.3223 | 0.1362 | -2.3663 | 0.8721 |
| 10 | -0.2036 | 0.1309 | -1.5553 | 0.9784 |
| 11 | -0.2484 | 0.1335 | -1.8606 | 0.7231 |
| 12 | -0.2673 | 0.1368 | -1.9539 | 0.6316 |
| 13 | -0.3673 | 0.1935 | -1.8981 | 0.7231 |
| 14 | -0.3223 | 0.1362 | -2.3663 | 0.8721 |
| 15 | -0.2036 | 0.1309 | -1.5553 | 0.9784 |
| 16 | -0.2484 | 0.1335 | -1.8606 | 0.7231 |
| 17 | -0.2673 | 0.1368 | -1.9539 | 0.6316 |
| 18 | -0.3673 | 0.1935 | -1.8981 | 0.7231 |
| 19 | -0.2292 | 0.1359 | -1.6865 | 0.8334 |
| 20 | -0.3302 | 0.1298 | -2.5439 | 0.8200 |
| 21 | -0.3223 | 0.1362 | -2.3663 | 0.8721 |
| 22 | -0.2036 | 0.1309 | -1.5553 | 0.9784 |
| 23 | -0.2484 | 0.1335 | -1.8606 | 0.7231 |
| 24 | -0.2673 | 0.1368 | -1.9539 | 0.6316 |
| 25 | -0.3673 | 0.1935 | -1.8981 | 0.7231 |

Source: Research Findings

Figure 4.2 above shows the mean cumulative abnormal returns and from the table, it shows that in 25 days, there were high negative cumulative abnormal returns especially from a day after the profit warning announcement date. The presence of negative cumulative abnormal returns from -1, +25 which are statistically significant indicate that the market takes long to recover from the effect of the profit warning announcements. From figure 4.2, we can conclude that the fluctuations in abnormal returns resume the initial pattern exhibited from days -25 to the event date after -3 days.

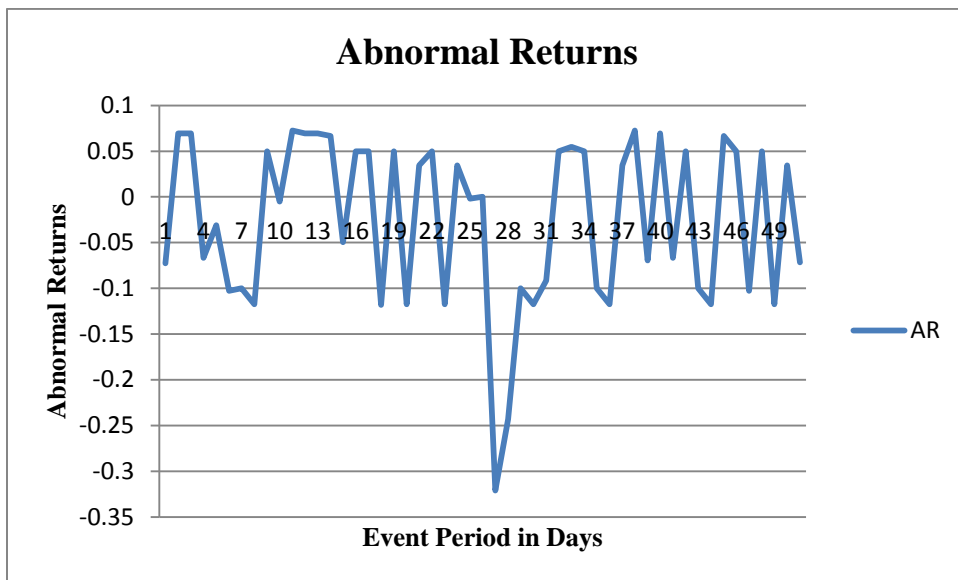
4.4 Analysis of Abnormal Returns

Abnormal returns were calculated based on the event window of -25 days to + 25 days i.e. for a period of 51 days. The figures below show the results of the analysis. Figure 4.1 below shows the cumulative abnormal returns (CAR) over the event period. Negative abnormal returns are seen to be on the increase from the day after the warning announcement +1, +25. From the table it's evident that the market receives profit warnings as bad news and therefore high negative abnormal returns after the warning announcement which is statistically significant at 5% significance level.

The presence of insider trading is also possible since on day -15, the market recorded some abnormal gains which are statistically significant at 5% significance level with a $t=0.7768$ and $P=0.4523$ and that some investors are likely to have taken advantage of this information to make some abnormal returns. The availability of negative abnormal returns before the announcement date indicates possible leakage of information before it was released and hence the negative reaction of the stocks.

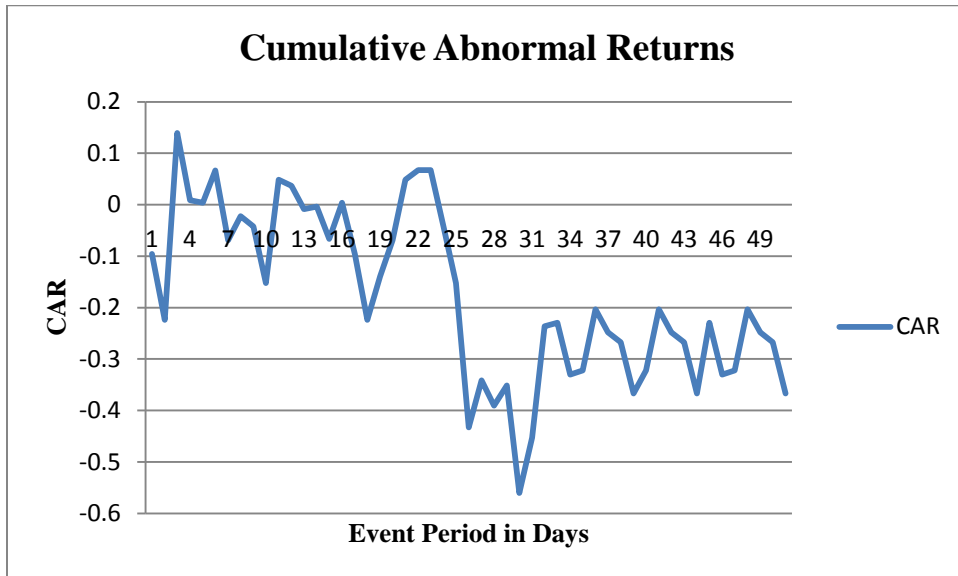
From figure 4.1 below, it's noted that there is a sharp increase in negative abnormal returns from the event date to day +3. This sharp increase in AR is due to the overreaction of the market because of the unexpected news of a profit warning. From day $t = +3$, we notice a marked improvement in AR where it also resumes the initial pattern before the event date. This also confirms what other researchers had concluded that quantitative profit warnings are considered as bad news.

Figure 4.1: Graph of mean Abnormal Returns (AR) for all firms during the 51 day event window



Source: Research Findings

Figure 4.2: Cumulative Abnormal Returns for all the firms during the 51 day event window.



Source: Research Findings

In figure 4.2 above shows the cumulative abnormal returns over the 51 day event window. In 35 out of the 51 day event window, firms that issued profit warnings registered high negative cumulative abnormal returns. On the first and second day following the profit warning, firms made cumulative abnormal returns that were statistically significant at 5%. The decline in returns was so high that even by day +25, the cumulative abnormal returns were still negative. During this period, investors continued to make losses despite a slight improvement in the abnormal returns. The improvement in the returns is so small in that it cannot reverse the effects of the profit warnings so that by day +25, the effects of the profit warning announcement were still being felt.

4.5 Analysis Summary

In this study, it was concluded that there are significant negative returns following a profit warning announcement at NSE. During the 51 day event period, there was a significant cumulative loss of up to -63%. The presence of negative abnormal returns indicates that NSE is inefficient since according to efficient market hypothesis, prices of stock immediately incorporate all information into the stock hence no abnormal returns.

From the research it's very difficult for investors to make positive returns from firms that have issued profit warnings especially from a day after the profit warning as evidenced with the negative cumulative abnormal returns which lasted even beyond 25 days after the announcement. This demonstrates indeed that profit warnings are bad news to investors and indeed affects stock returns.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

5.1 Introduction

This chapter provides a summary of findings, recommendations and conclusions into the study on the effect of profit warnings on stock returns for firms listed at Nairobi Securities exchange (NSE). Finally, suggestions for future research are also listed.

5.2 Summary of Findings

The study aim was to establish the effect of profit warnings on stock returns for those firms listed at NSE using the event study methodology over an event period of 51 days (-25, +25) with an estimation period of 24 days (-50, +26). From the research, it is noted that there were negative AR and CAR from a day before the profit warning announcement up to day (+25). This means that stock returns are negatively affected by profit warning announcements. The study established that the market takes long to recover from the effects of profit warning announcements as seen after the profit warning date and lasting even and up to day +25, where CAR was still negative.

The study also found that there are possibilities of insider trading as seen that on day -20 (table 4.1 above) there were positive cumulative abnormal returns that were statistically significant at 5% with a t-test of 4.5713 implying that investors on this day made positive abnormal returns. There is also a sharp decline in abnormal returns from the event date to -1 confirming that the market receives profit warnings as a shock and thus the high negative cumulative abnormal returns around the event date.

5.3 Conclusions and Recommendations

From the study, it is concluded that stock returns are negatively affected by profit warnings as evidenced by the highly negative cumulative returns that are statistically significant. This is shown in Table 4.2 at the first, second; third, fourth and fifth day shows that the market receives profit warnings announcements as bad news and thus the highly negative returns around the announcement date. The firms that are considering to be listed at NSE should be aware that profit warnings lead to negative abnormal returns as investors react negatively to such news.

Regulators should enforce compliance among firms so as to ensure adequate financial disclosure is done by listed firms at NSE. This is because firms are likely to shy from making complete disclosures due to the fear that the market will react negatively if they were to provide a detailed profit warning announcement. Firms that have issued more than one profit warnings should re-evaluate themselves so as to establish the factors affecting their performance because a profit warning can act as a pointer to a deeper problem within the firm of which action may need to be taken.

Finally, Potential investors, investor as well as stock brokers and analysts need to pay attention to profit warnings issued by firms as this affects the returns that will be derived from the firms issuing such warnings. This will help in minimizing the expected loss an investor is likely to suffer from investing in a firm's stock.

5.4 Limitations of the Study

This study is limited to only those firms that are listed at Nairobi Securities Exchange and had issued profit warning during the period under study, (2014-2015). The number of firms that had issued profit warning is smaller (20.96%) and thus the higher the chances of bias setting in especially when sorting and eliminating firms at NSE. However, some firms issued more than one profit warning during the period under review and therefore there are possibilities of some confounding effects on the results of this study.

The unavailability of data from CMA, NSE and the company websites as to what actually motivated these companies to issue a profit warnings is also a limitation to the study as it is difficult to conclusively and objectively determine such reasons because other than the regulatory requirements, there may be other reasons for such a move. Currently, there is no database that shows profit warning firms and thus one is forced to rely on information obtained from the media and company websites.

5.5 Recommendations for Further Research

Future research can focus on listed firms that have issued profit warnings more than once as well as those issuing qualitative types of profit warnings to ascertain if the returns of those firms are significantly different during the subsequent warning or it's just at the same level as the first warning. The research can also focus on establishing whether firms issuing profit warnings more than once could be having corporate governance issues.

Researches can also be conducted on those firms that issue profit warning announcements together with financial statements to ascertain the extent to which stock prices and returns

are affected. Further, a research should also be conducted to find out if profit warnings affect stock returns of those firms which have been cross listed in other countries.

Research can be conducted to test if the effects of profit warning announcements vary according to the size of the company and the sector in which the firm operates in.

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APPENDIX I: LISTED COMPANIES AT NSE AS AT JUNE 2016

AGRICULTURAL

Eaagads Ltd

Kapchorua Tea Co. Ltd

Kakuzi Ltd

Limuru Tea Co. Ltd

Rea Vipingo Plantations Ltd

Sasini Ltd

Williamson Tea Kenya Ltd

AUTOMOBILES & ACCESSORIES

Car and General (K) Ltd

CMC Holdings Ltd

Sameer Africa Ltd

Marshalls (E.A.) Ltd

BANKING

Barclays Bank Ltd

CFC Stanbic Holdings Ltd

I&M Holdings Ltd

Diamond Trust Bank Kenya Ltd

Housing Finance Co Ltd

Kenya Commercial Bank Ltd

National Bank of Kenya Ltd

NIC Bank Ltd

Standard Chartered Bank Ltd

Equity Bank Ltd

The Co-operative Bank of Kenya Ltd

COMMERCIAL AND SERVICES

Express Ltd

Kenya Airways Ltd

Nation Media Group

Standard Group Ltd

TPS Eastern Africa (Serena) Ltd

Scangroup Ltd

Uchumi Supermarket Ltd

Hutchings Biemer Ltd

Longhorn Kenya Ltd

Atlas Development and Support Services

CONSTRUCTION AND ALLIED

Athi River Mining Ltd

Bamburi Cement Ltd

Crown Berger Ltd

East Africa Cables Ltd

East Africa Portland Cement Ltd

ENERGY AND PETROLEUM

Kenol Kobil Ltd

Total Kenya Ltd

KenGen Ltd

Kenya Power & Lighting Co Ltd

Umeme Ltd

INSURANCE

Jubilee Holdings Ltd

Pan Africa Insurance Holdings Ltd

Kenya Re-Insurance Corporation Ltd

Liberty Kenya Holdings Ltd

British-American Invest Company (K)

Ltd

CIC Insurance Group Ltd

INVESTMENT

Eveready East Africa Ltd

Kenya Orchards Ltd

A.Baumann CO Ltd

Flame Tree Group Holdings Ltd

Olympia Capital Holdings ltd

Centum Investment Co Ltd

Trans-Century Ltd

Home Afrika Ltd

Kurwitu Ventures

INVESTMENT SERVICES

Nairobi Securities Exchange Ltd

MANUFACTURING AND ALLIED

B.O.C Kenya Ltd

British American Tobacco (K) Ltd

Carbacid Investments Ltd

East African Breweries Ltd

Mumias Sugar Co. Ltd

Unga Group Ltd

TELECOMMUNICATION AND**TECHNOLOGY**

Safaricom

REAL ESTATE INVESTMENT**TRUST**

Stanlib Fahari I-REIT

Source; NSE 2016

APPENDIX II: NSE COMPANIES WITH PROFITS ALERTS IN 2015

Athi River Mining Ltd

Pan Africa Insurance Ltd

Atlas Development Ltd

Sameer Africa Ltd

Car and General (K) Ltd

Standard Chartered Bank Ltd

Crown Berger Ltd

Standard Group Ltd

East Africa Cables Ltd

TPS Serena Ltd

Express Ltd

Uchumi Supermarket Ltd

Mumias Sugar Co. Ltd

Source: NSE 2016