

**EFFECT OF PROFIT WARNING ON SHARE PRICE OF COMPANIES  
LISTED AT THE NAIROBI SECURITIES EXCHANGE**

**BY**

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## DECLARATION

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

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Date .....

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

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## **DEDICATION**

This project is dedicated to my late parents (Mr & Mrs Bramwell Lusweti) for their patience, love, great support and sacrifice to ensure that I got quality education.

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Last but not least, thanks be to God almighty for my life through tests during the study. You have made my life more bountiful and a success. May your name be exalted, honored and glorified.

## **ABSTRACT**

Companies usually disclose information to investors about the performance of the company or the future plans of the company. Some of this information is disclosed voluntarily and other times the legislation in place requires company to disclose particular information. One such information that companies listed at the Nairobi Securities Exchange are required to disclose is the profit warning announcement. If a company expects its financial performance to be lower by twenty five percent from the expected, they are required under the Capital Markets Act to make a profit warning announcement. This study was aimed at establishing the Effect of Profit warning on the share price of the companies listed at the Nairobi Securities Exchange. Secondary data of the share prices of companies listed at NSE over a period of five years from the year 2008 to 2013 was collected from Nairobi Securities Exchange. The data collected was 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 was used and the results' significance tested using t-tests and z-tests at 95% significance level and ANOVA. The findings of this research indicates that profit warning has negative effect on the stock prices in Kenya with only exemptions where it is released earlier in the financial year and is accompanied with an optimistic information that things may be better towards the end of the year.

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## ABBREVIATIONS

CAR	Cumulative Abnormal Returns
CMA	Capital Markets Authority
CNN	Cable News Network
DPS	Dividend Per Share
EBIT	Earnings Before Interest and Tax
ETS	Electronic Trading System
EPS	Earning Per Share
GDP	Gross Domestic Product
NASI	NSE All Share Index
NSE	Nairobi Securities Exchange
SEC	Securities Exchange Commission
UK	United Kingdom
US	United States

# CHAPTER ONE

## INTRODUCTION

### **1.1 Background of the Study**

Investors usually make investment decisions based on the information that is available to them. Many investors and analysts rely on the information on profit in determining whether to buy, hold or sell shares of a particular company. Profit warning gives an indication of how the firm is performing in the current year as compared to the previous year. 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.

Investors are more willing to invest in capital markets if they are assured that their orders are carried out fairly, efficiently and that market intermediaries including listed companies can be relied on to safeguard their interests. They expect that their investment will bring a high return in the future which will compensate for the related risks and expenses (Nyabundi, 2013). In this regard, most investors will take steps towards determining the true value of firm and as a result will out rightly need credible, substantive, and time value relevant information from firm. (Ogden, Jen, and O'Connor, 2003). These disclosures from the companies contribute to reduce information asymmetry between the companies and investors and improve market transparency (Jackson and Madura, 2003). When information in the market is credible, true and timely then investors are able to make informed investment decisions. Capital markets react to various corporate announcements, and one such significant announcement is the earnings announcement. The basic idea underlying

market efficiency is that competition will drive all information into the price quickly (Nyabundi, 2013)

In order to maintain transparency, companies disclose different types of information to communicate with the public, such as, the key operating performance indicators, borrowing and capital structure, and dividend payment. In this way, the investors will know the company's financial condition. The company's earnings which are at times referred to as profit warning are a main determinant of the stock price, because the earnings indicate the operational result of the firm and its future success. These earnings are presented to the public on a quarterly or yearly basis, often in the month following the end of each quarter. Consequently, if this earnings surprise is positive the share price will usually increase, or if it is negative the share price will decrease. In order to avoid such drastic changes in the stock prices and to reduce the magnitude of the market reaction companies warn the public regarding the unexpected level of earnings. The content of the warning is that the company earnings will not meet the market expectations. This announcement is called the profit warning. Therefore, companies are required to inform the investors about its performance. (Tserendash and Xiaojing, 2010).

Profit warning is an attempt to communicate the earnings disappointment from the companies to the investment community. As the information disclosure, the profit warning improves transparency, which may result in re-evaluation of the stock price thus enabling financial market participants to make the right choice. According to (Clare, 2001), the profit warning is an adverse outlook for the company's future earnings and profitability through the press, which is market-relevant information and might result in revising profitability expectations from financial agents. Similarly,

(Tserendash and Xiaoqing, 2010) State that according to (Holland and Stoner, 1996) profit warning is one of the events that make the companies reveal price-sensitive information to the market. Thus it is arguable to restate that disclosure of the profit warning is one approach for the companies to deliver the company's information to the public, thereby reducing the information asymmetry and keeping transparent (Tserendash and Xiaoqing, 2010).

Different countries have varying regulation about this unscheduled warning announcement, the profit warning. In US, before August 2000, listed companies were allowed to disclose their profit warnings selectively. In Kenya, it is legal requirement under the Kenyan Capital market Legal and regulatory framework to disclose and or issue profit warning as a material public announcement. This disclosure has been made mandatory upon all listed firms in Kenya by dint of Regulation G.05 of the Fifth Schedule of the Capital Markets (Public Offers, Listing and Disclosures) Regulation (2002) failure upon which enforcement action is taken against the non-complying company.

### **1.1.1 Profit Warning**

Profit warning refers to the announcement about the profit expectations of a company. In some countries for example the United States companies make voluntary announcement about the profit expectations. In Kenya, listed companies are required to make profit warning announcement if the profit of the company is expected to be lower by over twenty five percent as compared to the previous year.

A profit warning is a description that analysts and journalists give to an unexpected corporate announcement that earnings for a specified future quarter will fall short of current expectations (Bulkey and Herrerias, 2002). Profit warnings are earnings forecasts made by management that warns of an expected earnings shortfall in relation to a relevant standard in this research. Management profit warnings may be released at any time prior to the announcement of actual earnings report. The earnings shortfalls may be in terms of net profits, sales, earnings before interest and taxes, and earnings per share (Elayan and Pukthuanthong, 2009)

The profit warning is classified into two types: quantitative and qualitative. Literally, the quantitative warning is the warning announcement involved in the numbers, which provides the exact number of earnings estimate or interval. On the other hand, the qualitative one states or indicates that earnings will fall below the current expectations without offering a specific estimation of the new earnings. (Tserendash and Xiaojing, 2010).

### **1.1.2 Share Prices**

Share price is the price of a single share of a number of the saleable stock of a company. This is the cost of purchasing a security on the exchange for example at the Nairobi Securities exchange. The Nairobi Securities Exchange usually releases daily share prices of the companies listed at the exchange and the variation from the previous day share price.

The price at which a share is currently trading is referred to as the Market price of the share. The Market Prices change from time to time depending on the demand and supply of a given share. Investors and analysts usually receive information that affects how they perceive a given stock. Negative information may cause the price to go down and positive information for example growth in earning of a company or a profitable business venture that a company is pursuing may be perceived as positive information and would lead to increased demand for the share

### **1.1.3 Profit warning and Share prices**

It is expected that Profit warning would results in the decrease in share price of the company that has issued the warning. This is because investors would perceive profit warning as negative information that would lead to decrease in demand of shares of the company.

Various studies have been carried out to determine the impact of profit warning on share price. Most of these studies found out that profit warning had a negative impact on the share prices of companies. (Kasznik and Lev, 1995) found in general firms issued the profit warnings would obtain more negative stock returns than non-warning firms.

(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

#### **1.1.4 Nairobi Securities Exchange**

The Nairobi Securities Exchange (formerly 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 African Stock Exchanges Association. It is Africa's fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of Gross Domestic Product (GDP). The Exchange works in cooperation with the Uganda Securities Exchange and the Dar es Salaam Stock Exchange, including the cross listing of various equities. Trading is done through the Electronic Trading System (ETS) which was commissioned in 2006. ([www.nse.co.ke](http://www.nse.co.ke)).

Two indices are popularly used to measure performance. The NSE 20-Share Index 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 NSE 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. The Nairobi Stock Exchange comprises approximately 55 listed companies with a daily trading volume of over United States Dollar (USD) 5 million and a total market capitalization of approximately USD 15 billion. Aside from equities, Government and corporate

bonds are also traded on the Nairobi Stock Exchange. Automated bond trading started in November 2009 with the KES 25 billion KenGen bond. Average bond daily trading is USD 60m. Trading hours are from 09:00 to 15:00. Delivery and settlement is done scrip less via an electronic Central Depository System (CDS) which was installed in 2005.

## **1.2 Research Problem**

Profit warning is one amongst many material market information that investors need to be informed about in making their investment decisions. The respective disclosures of profit warning do have a negative effect on the stock price 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. In addition, the profit announcement further restricts the listed firm to tap or raise additional capital through equity financing in form of a rights issues. The implication of such profit announcements (despite being material information) is that it influences investors (both prospective and actual shareholders) mind 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. This study therefore sought to examine the relationship between profit warning and share prices of listed firms at the NSE.

A number of studies have been under taken establishing the relationship between the profit warning and share prices of listed firms at the NSE. Most of these studies were carried out in developed countries. Extensive research has been conducted on the profit warnings and its impact in UK and US stock markets in the 1990s and in the



early 2000s. Skinner (1994), (Kasznik and Lev, 1995) and (Bulkley and Herrerias, 2004) investigated the event of disclosure of profit warning in the US market. (Clare , 2001), (Helbok and Walker, 2003) and (Collett, 2004) 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 warning in 1994. They compared the companies' performances and market reactions before and after the new rule. Through these studies, negative market reactions were found.

Moreover, the impact of the profit warning is different based on firm specific factors, such as size. (Kasznik and Lev, 1995), (Bulkley and Herrerias, 2004), (Jackson and Madura, 2003), (Collett, 2004), Francoeur, Labelle, and Martinez (2008), and (Elayan and Pukthuanthong, 2009) compared the different effects for large versus small firms following the profit warning. They divided the companies into large or small according to the total assets. All of them found that small firms were beaten more than the large firms.

Although there has been substantial research on the changes in the relevance of financial statement information in the developed markets, there are few such studies of other developing markets such as Kenya. It is unclear whether the trends found in the developed markets also exist in other markets especially the developing economies.

Related prior research locally has examined the effect disclosure of material information especially financial information on share price of listed firms at the NSE.

For instance, (Nyabundi , 2013) examined whether dividends, earnings and book-value explain changes in share prices for companies listed on the Nairobi Securities Exchange (NSE) from 2005 to 2010.

This study differs from the other studies because it focuses on the Kenyan market. Most studies focused on USA, South Africa and Europe. The study also focusses on the different market segment at NSE other than studying effect of profit warning on all the companies at NSE because companies have unique features that attracts a specific group of investors.

### **1.3 Objective of the Study**

The objective of this study is to examine the effect of profit warning on the share price of listed companies at the Nairobi Securities Exchange in Kenya.

### **1.4 Value of the Study**

The study will be helpful to the following stakeholders:

The management of listed companies at the Nairobi Securities Exchange who will find the study invaluable 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 warning on share prices of listed companies at the Nairobi Securities Exchange in Kenya which in turn can play a bigger role in shaping their operations.

The securities industry and capital markets practitioners will also get an insight on the effects of profit warning on share prices of listed companies at the Nairobi Securities Exchange in Kenya. This will help them develop policies on how to mitigate the challenges.

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

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 discusses the literature review of the study. The purpose of literature review is to explore on the existing and available information covered by different researchers on a given topic. The literature was reviewed from journals, reference books, working papers, periodicals and reports. The review of literature focuses on the conceptual framework of the study and also provides empirical review, summary and research gaps of the study.

#### **2.2 Review of Theories**

Several theories concerning the relationship of profit warning and share prices variables have been advanced on by various scholars in various financial literatures. We discuss some theories such as the efficient market hypothesis, signaling theory and behavioral finance.

##### **2.2.1 Efficient Market Hypothesis Theory**

According to (Fama, 1970), the stock prices reflect all available information and the market responds the new information rapidly in the efficient market. Therefore, no stocks will be mispriced and no companies will be overvalued or undervalued in this market. For example, if a company is undervalued, all investors want to buy the company's stock at low prices and sell it at high prices. Then the stock price of the company will increase because many investors flood to buy it till the price equals the real value of the company. Consequently, the information always is reflected in the

stock price and no one can always earn abnormal returns. (Tserendash and Xiaoqing, 2010).

(Fama, 1965) states that, efficient market was first introduced in the securities markets.

The definition of efficient market was a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. Besides, Fama pointed out the efficiency indicated that in an efficient market, on the average, competition will cause the full effects of the information on intrinsic values to be reflected "instantaneously" in actual prices.

The literature linking the firm's earnings to changes in the firm's market value (i.e., stock returns) depends on three assumptions about the information contained in earnings and share prices. First, it assumes that financial reporting provides information to equity shareholders about current and expected future profitability, the second assumption is that current and expected future profitability provides shareholders with information about the firm's current and expected future dividends, third it assumes share price equals the present value of expected future dividends to the shareholder. (Nyabundi, 2013).

Accordingly high quality financial statement information is a pre-requisite for well-functioning capital market and the economy as a whole and as such they are of high importance to investors-both individual and institutional, regulators among other

stakeholders. These links imply that new financial statement earnings information that triggers a change in investors' expectations for future dividends should correspond with a change in the market value of the firm. (Nyabundi, 2013).

### **2.2.2 Signaling Theory**

This theory also referred to as the information content hypothesis states that investors regard dividend changes as signals of management earnings forecasts. Merton and Rock (1985) suggested that dividend announcements convey information to investors regarding the firm's future prospects. Many earlier studies had shown that stock prices tend to increase when an increase in dividend is announced and tend to decrease when a decrease or omission is announced. Miller and Rock pointed out that this is likely due to information content of dividends. When investors have incomplete information about a firm they will look for other information that may provide a clue as to the firm's future's prospects. Investors can use this knowledge to inform their decision to buy or sell the firm's stock. This research adopts this theory in explaining the effect of profit warning on dividends pay out emanating from profits. The investments and financing decisions of a firm are made at the management's discretion.

It is argued that company managers use earnings as a signaling tool to convey information about the prospects of a company, and that like dividends, if earnings convey useful information, this will be reflected in stock price changes immediately following a public announcement. Nyabundi (2013). An increase in equity (shares) issued by the company reduce the price of its shares, stock splits cause an increase in the price, while issuing more debt instruments leads to price increase actions.

### **2.2.3 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 and 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 B.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 hierarchy 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.

### **2.3 Review of Empirical Studies**

Earnings are not the only available source of information to investors as other more timely reports containing the same information exist. Thus by the time annual earnings are released, any potential information content has already been used by investors and stock prices reflect the same. It can therefore be argued that earnings report have little or no information content. The literature argues that earnings announcements are one of the important signaling devices used by managers to transmit information to the public about the firm’s future prospects.

Management further uses earnings information to inform both shareholders and investors about the state of health of a firm. In other words, earnings announcements provide a yardstick that can be utilized by the market to assess the wealth and profitability of a firm.

Earnings per Share (EPS) are among the figures in the financial statements often looked out for by investors. Earnings and earnings-based valuation are associated with stock returns and such measures are considered relevant ( Nyabundi, 2013)



Extensive research has been conducted on the profit warnings and its impact in UK and US stock markets in the 1990s and in the early 2000s. (Skinner, 1994), (Kasznik and Lev, 1995) and (Bulkley and Herrerias, 2004) investigated the event of disclosure of profit warning in the US market. (Clare, 2001), (Helbok and Walker, 2003) and (Collett, 2004) 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 warning in 1994. They compared the companies' performances and market reactions before and after the new rule.

Through these studies, negative market reactions were found. Moreover, the impact of the profit warning is different based on firm specific factors, such as size. (Kasznik and Lev, 1995), (Bulkley and Herrerias, 2004), (Jackson and Madura, 2003), (Collett, 2004), (Francoeur, Labelle and Martinez, 2008), and (Elayan and Pukthuanthong, 2009) compared the different effects for large versus small firms following the profit warning. They divided the companies into large or small according to the total assets. All of them found that small firms were beaten more than the large firms. The market reactions following the profit warning is a complicated issue.

The disclosure of the profit warning will influence brokers' and analysts' evaluation of company. Analysts will revise the previous earnings expectation based on the company's current operating conditions. Then the analysts might warn the company's shareholders and potential shareholders. The investors are concerned about the

company's profitability and competitive power in the long-term after the company releases the profit warning, which might cause a negative market reaction. (Nyabundi, 2013).

(Jackson and Madura ,2003) studied profit warnings in the same time period and same market, and then found the similar result that profit warnings lead to a strong negative market response around the period of announcement. (Helbok and Walker, 2003) found news disclosed publicly brought more negative effect than the non-warning news before or after 1994 when LSE regulated the profit warning into the mandatory disclosure information.

The profit warning disclosure results in a negative market response to warning companies. However, from the long-term perspective, it is helpful for allocating the capital efficiently, reducing the information asymmetry, protecting the interests of the investors, building the investors' confidence in the market and correcting the market expectation regarding overvalued firms. If there is regulation to disclose the profit warning, there will be less information asymmetry problem. (Kasznik and Lev, 1995) studied the regulated firms like banks and utility providers give reports to regulators, which indirectly inform the public. As previously discussed, SEC Rule 10b-5 requires that firms disclose important information to investors as quickly as possible. Numerous studies (Skinner, 1994), (Kasznik and Lev, 1995) suggest that management releases material information, especially the one that is negative, to provide information to shareholders in a timely manner.

Further, for firms that are subject to SEC accounting and enforcement actions, researchers report a significant negative market reaction. (Skinner, 1997) finds that lower lawsuit settlements are related to more timely disclosure of adverse earnings information. (Elayan and Pukthuanthong, 2009)

Thus, profit warnings made by high-tech firms would be associated with more negative market reaction in comparison to non-high-tech firms and this variable should have a negative parameter estimate in the regression model. (Elayan and Pukthuanthong, 2009).

Researchers have compared analysts' forecasts with management forecasts. Waymire (1984, 1986) concludes that bad news (good news) management forecasts are associated with significant negative (positive) abnormal returns in the days immediately surrounding the date of the management forecast publication in the *Wall Street Journal*.

Based on the Efficient Market Hypothesis (Fama, 1970), the market will respond to the new information rapidly. The profit warning will result in the movement of the stock prices, as soon as, the company releases it to the market. After the adjustment of the market, the security price can reflect the all available information in the market. No company will be overvalued or undervalued. However, in practice, the investors overreact or under react to the warning announcement, which is associated with the investors' behavior and the timing of the information.

Despite the negative consequence on firm valuation, firms choose to issue profit warning due to several motives that are discussed herein. There are several related studies associated with it. (Skinner, 1994) identified there are at least two reasons for companies to tend to issue earnings-related warnings in the US stock markets; one is stockholders lawsuit and another is reputational costs. (Skinner, 1994) also stated that failure to disclose bad news or issue profit warning may have legal consequence as firms do not meet their promised earnings and take advantage of information asymmetry for not informing investors. (Elayan and Pukthuanthong, 2009) agreed with this idea about releasing profit warnings to avoid shareholder lawsuits by “*material information in a timely manner*”. (Holland and Stoner, 1996) found price sensitive information is issued by companies to the public because of several market incentives. For example the companies might confront high cost of capital through share price reduction and liquidity reduction if they fail to disclose the bad news. Market makers widen the spread between buy and sell or increase the risk premium, while investors pay less for share or stop holding shares of the firm that did not disclose appropriate information. These impose the increase in the cost of the capital

Another motive to issue profit warnings is the firm’s willingness to maintain the good relations with investors, moreover maintain its reputation and image in the market.

Through good communication with investment community, firms can meet their demand for corporate financing and corporate control. Disclosures of the information are important tool of communication with investors especially those firms that are less followed by analysts or not listed in the stock exchange. (Holland and Stoner, 1996); (Skinner, 1994). Particularly firms pay attention to maintaining good communication and relationship with institutional investors because they lead the rest of the market

participants with their trading behavior. The rest of the market participants assume that institutional investors have superior information thus their trading behavior is rational, then they follow or reconsider their trading decisions in relation to analysis or behavior of institutional investors.

Therefore, miscommunication with institutional investors may lead to overreaction in the market (Holland, 1998). Moreover, being transparent can help in maintaining the credit rating and keeping the reputation on the labor market, and these can be external market pressure for being transparent. (Francoeur et al., 2008). Not only has the firm that has bad news wanted to disclose but also the firm that has good news wish to disclose information with another reason. Firms that have good news willing to inform the market with the intention to distinguish it from its competitors thus maybe raise the reputation among market (Skinner, 1994). The market appreciates the firm reputation for integrity as it is important in the long term relationship and thus it can give competitive advantage to firm (Tserendash and Xiaoqing, 2010)

Besides, there have been a contrary opinion and literature on whether profit warning should be disclosed to the public. For instance, (Kasznik and Lev, 1995) investigated the disclosure policy when managers confront a large earnings surprise and pointed out that managers fell in dilemma on disclosure policy for profit warnings and they do not know whether they should alert investors or keep silent prior to publishing earnings announcements. (Kasznik and Lev, 1995) identified that investors may interpret the profit warning as bad signal of long term competitiveness and economic viability of company that leads to substantial decline in stock price. They considered that maybe by this reason half of their sample firms did not submit any warning

before earnings surprise. Companies were concerned with overreaction of investors. After investigation, (Bulkley and Herrerias , 2004) also obtained the same reason as (Kasznik and Lev, 1995), which managers do not want to release profit warnings is because they worry market will overreact to profit warnings through interviewing managers. They also found substantial negative average abnormal returns on stocks purchased two days after a profit warning and it lasts for the next three months.

(Holland , 1997) and (Holland and Stoner, 1996) investigated UK companies and found benefits of communicating price sensitive information privately instead of publishing profit warning to the public on the financial institutions, analysts and companies aspects. Firstly, they found through releasing private disclosure, the major shareholders and analysts can understand the company's performance and have strong confidence for the management. On the other hand, the company can increase the capability of financing and prevent a takeover. Secondly, they identified the responds of financial institutions and analysts to the profit warning are rapidly and correctly based on their professional knowledge and experience better than individual investors and finally cause the market reaction. It gives positive influence on market efficiency and avoids the market react to the price sensitive information under-reaction or over-reaction.

## **2.4 Profit Warning**

### **2.4.1 Effects of Profit Warning on Share Price**

Profit warnings are defined as earnings forecasts made by management that warns of an expected earnings shortfall in relation to a relevant standard in this research. Management profit warnings may be released at any time prior to the announcement

of actual earnings report. The earnings shortfalls may be in terms of net profits, sales, earnings before interest and taxes (EBIT), and earnings per share (EPS), etc. these warnings are typically made around the end of a financial period, but prior to the required quarterly or annual earnings report. The forecast earnings may differ from the figures later disclosed in the formal earnings report.

Firm managers, who determine that it is necessary to issue a profit warning whether driven by concerns about shareholder lawsuits or for other reasons, presumably do so because they believe this is material and important information (Skinner, 1994, 1997); and (Kasznik and Lev, 1995). Thus, a voluntary warning that earnings will be less than those expected by previous analyst forecasts is clearly an announcement with negative implications from the market's perspective.

According to the efficient market hypothesis as described by (Fama, 1970) stock prices fully reflect all available information and change when new information arrives in the market. A firm that issues a profit warning discloses public information to investors that earnings will fall below expectation. If investors perceive this information as new and value relevant there should be a negative stock price reaction at the time of the announcement. Moreover the relevance of a profit warning is underlined by several studies (Jackson and Madura, 2003); (Bulkley and Herrerias, 2005); (Church and Donker, 2010), who provide evidence of strong negative abnormal returns at the time of a profit warning announcement.

The semi-strong efficient market hypothesis suggests that stock prices react quickly in an unbiased manner to public announcements. However, in the literature a vast amount

of researchers (Ball and Brown, 1968; Bernard and Thomas, 1989, 1990 among others) provide evidence that stock returns continue to drift downward after a negative earnings surprise reported at the scheduled earnings announcement date. The predominant explanation for this phenomenon is that markets underreact to new information. Since profit warnings can be classified as unscheduled earnings information containing a surprise it is interesting to see whether there is a similar drift.

Various past studies have associated issuance of profit warnings with negative stock price reaction at the time of the announcement. Extensive research conducted on profit warnings and its impact in UK and US stock markets in the 1990s and in the early 2000s reveal similar findings. (Skinner, 1994), (Kasznik and Lev, 1995) and (Bulkley and Herrerias, 2004) investigated the event of disclosure of profit warning in the US market. (Clare, 2001), (Helbok and Walker, 2003) and (Collett, 2004) 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 warning in 1994. They compared the companies' performances and market reactions before and after the new rule. Through these studies, negative market reactions were found.

Moreover, the impact of the profit warning was found to be different based on firm specific factors, such as size. (Kasznik and Lev, 1995), (Bulkley and Herrerias, 2004), (Jackson and Madura, 2003), (Collett, 2004), (Francoeur, Labelle, and Martinez, 2008), and (Elayan and Pukthuanthong, 2009) compared the different effects for



large versus small firms following the profit warning. They divided the companies into large or small according to the total assets. All of them found that small firms were beaten more than the large firms. The market reactions following the profit warning is a complicated issue.

Additional studies have validated past studies on the same thematic area. For instance, Ernst & Young in their report of Analysis of profit warnings issued by UK quoted companies 2013, showed that packaging manufacturers and miners sit in a vulnerable position in the supply chain, stuck between powerful suppliers and customers with strong resistance to price rises and the compounding effect of vulnerability to low share prices resulting from profit warnings. (Jackson and Madura, 2003) found that profit-warning announcements elicit a strong negative market response that is not sensitive to timing the warning in advance of the earnings announcement. According to (Jackson and Madura, 2003), share prices begin to adjust about five days before a profit warning, and the market response is not complete until about five days after the warning. The accumulated response over the 11-day period ending five days after the announcement is  $-21.7\%$ .

The profit warning effect over the two-day announcement period is 32 times the valuation effect upon subsequent release of the actual earnings. There is no evidence of a reversal after this period, and therefore no sign that the market response is excessive. These researchers both examined the same time period from 1998 to 2000 in US and got similar results about share price responses to the profit warnings. The results were similar rather than the same because the samples they selected do not exactly same. One of them chose earnings warnings by US companies as the sample

from CNN site, another collected profit warnings by any companies in the Wall Street Journal.

(Bulkley and Herrerias, 2004) examined the abnormal returns for stocks bought two days after a profit warning and held for the succeeding six months following qualitative and quantitative profit warnings respectively. In the beginning of this test, they preferred to choose the next twelve months after releasing profit warnings as the observation period. After tracing the abnormal returns over one year, they did not find significant abnormal returns between the sixth and twelfth months. No matter which methods they adopt, they found more negative abnormal returns following qualitative profit warnings than following quantitative ones. (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.

Indeed, 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. Elayan & Pukthuanthong (2009) did research on US market from 1997 to 2002 and also found the market had negative respond for the profit warning, -16.59% cumulative average abnormal return over the two-day announcement period. The reason was these warning announcements would probably be explained as bad news by the market participants. That resulted in significantly negative reaction from the market.

(Jackson and Madura, 2003) tested the mean two-day cumulative abnormal return (CAR) following profit warnings and obtained the -14.72% of CAR which was 32

times of CAR following the succeeding earnings announcement. It proves the profit warning can reduce the blow of earnings surprises to the market before the earnings announcements are released. Moreover, Jackson & Madura found the profit warnings were under reacted by the market at the announcement day since substantially negative CARs occurred till a four-day period after the announcement day.

Francoeur et al. (2008) did research on Canadian firms from 2000 to 2004 and also found averagely profit warnings from high-tech or large firms are more than that ones from traditional industries or small firms. (Bulkley and Herrerias, 2004) discovered initially small firms got larger effect following profit warnings than large firms and also obtained a much greater effect than large firms when they release qualitative warnings rather than quantitative ones in the announcement window.

A study in Iran by (Pourheydari, Aflaton and Nikbakhat, 2008) compared the relevance of book value and dividends versus book value and reported earnings in the Tehran Stock Exchange from 1996 to 2004. The results indicated that there was a positive relationship between dividends, book value and earning, with stock market value in the Tehran Stock Exchange.

(Kasznik and Lev, 1995) found in general firms issued the profit warnings would obtain more negative stock returns than non-warning firms. There are some different existing factors to impact the stock price following the profit warnings, for example, the firm's size and the character and nature of the companies. Kasznik and Lev claimed the feasibility that companies issue profit warnings is definitely related with the firm size and the industries in which the companies are. For instant, the companies

in high tech industry have more motivation to issue profit warnings because they want to avert investors' suspicion and litigation. They found large companies probably warn investor to the bad news because they are more exposed to litigation than small companies.

(Jackson and Madura, 2003) also found smaller companies are hit more by negative effects during the information announcement and the post-warning period. (Collett, 2004) the listed companies in London Stock Exchange and found the market reaction for small company announcements was greater than for large companies. (Elayan and Pukthuanthong, 2009) detected there are many factors impacted the extent of market reaction following the profit warning, such as the difference between the analyst previous expectation and the company revised earnings forecast and firm size. The companies in high-tech industry and with high percentage of intangible assets will probably be influenced from the profit warning more negatively. Moreover, (Elayan and Pukthuanthong, 2009) claimed that the higher information asymmetry companies have the larger price decline they will suffer after warning announcement.

On the contrary, the shortcomings of frequent financial reporting are widely known. From directors' point of view, disclosing financial information more frequently brings its own problems. (Polk, 2013) notes some of these shortcomings that, Firstly, these disclosures in turn create market expectations including the expectation that any material deviations will be corrected which the directors must continue to manage. Moreover, each public announcement is a potential liability document for the company and its directors. (Polk, 2013) notes that if profit warnings became routine,

or the disclosure too vague or formulaic, they would be less meaningful to the market. (Basu, 1997) found out that bad news has a smaller impact on prices than good news.

On the continental front, South Africa BT (a listed company) shocked investors by warning on profits and ousting the head of its underperforming IT services operation in a move that sent shares in the telecoms company to their lowest since it was floated by Margaret Thatcher's government in 1984.(The Guardian,31 October 2008). The fear caused a dramatic fall in BT's shares price, which plunged under the 130p level at which the company listed over two decades ago. The 19% fall - the most dramatic in the company's history - wiped more than £2bn off BT's value.

Similarly, empirical reports indicate that profit warnings have a negative effect on stock prices. (Oyerinde, 2009) carried out an investigation to find out the relevance of accounting information in Nigeria and found that there is a relationship between market price and the accounting information. Further the study concluded that without confidence in accounting information investors will not invest in stocks.

Various studies conducted in Kenya have focused more on the role of firm dividend policy in determining share prices. (Aduda and Kimathi, 2011) in their study of a sample of 18 listed companies that paid dividend consistently from 2002-2008 found that the relationship between stock market prices and dividends paid was uneven from year to year and where there was a relationship it was insignificant. This study examined dividend- being accounting information and is related to this research since earnings affect dividends pay out and hence the value of stock price. (Wandeto, 2005) in an empirical investigation of the relationship between dividend changes and

earnings found that there was a strong positive relationship between Dividend per Share and Earning per share.

In addition, studies by (Nyabundi, 2013) in respect to value relevance of financial information conclude that there is a significantly positive relationship between share prices and earnings. Nyabundi states that the same can be seen by the positive results exhibited when share prices are regressed together with earnings which can usually be seen by the reaction of investors to positive earnings announcements by firms. For instance, Nyabundi explains that when firms announce positive results Kenyan investors immediately rush to buy the same in anticipation of favorable dividend payouts at the close of books for dividend payments. To that end, Nyabundi concluded that there was a positive relationship between share prices and book values.

## **2.5 Chapter Summary and Conclusion**

This chapter focused on review of literature, theoretical review, empirical review and relationship between profit warning and share price. It also laid out inherent effects of profit warning announcement on stock prices by sharing different examples of past studies both locally and foreign on the subject that indicated a negative impact of profit warning announcements on share price. In addition, it also highlighted two previous studies by (Basu, 1997) and (Polk, 2013) who respectively found out that bad news has a smaller impact on prices than good news while acknowledging the fact that routine issuance of profit warnings would be less meaningful to the market. To this extent, it is plausible to state that profit warning has a negative impact on the share prices of companies

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter has discussed the design and methodology that was used in this study. This entails the methods and procedures that assisted the researcher in identifying the sources of data, the sampling method that was used, the sampling design and sample size. It further shows the data collection methods that were used, techniques, instruments and procedures.

#### **3.2 Research Design**

The study adopted a descriptive research design in determining how profit warning affects segmental share prices of listed companies at NSE. A descriptive research design determines and reports the way things are (Mugenda and Mugenda, 2003). (Creswell, 2003) observes that a descriptive research design is used when data is collected to describe persons, organizations, settings or phenomena. The design also has enough provision for protection of bias and maximized reliability (Kothari, 2008). The design was used to obtain information concerning the current status of the phenomena to describe what existed, with respect to variables or conditions in a situation (Mugenda and Mugenda, 2003).

#### **3.3 Target Population**

Target population is that population that which the research wishes to generate the study (Mugenda and Mugenda, 2003). The target population of this study consisted of

all Nairobi Securities Exchange listed companies which issued profit warning between 2009 and 2013. For data collection and analysis purpose, the companies listed at NSE were considered according to their NSE segment.

### **3.4 Sampling Size and Sampling Techniques**

According to (Babbie, 1995) sampling procedure is the process of selecting a number of individuals for a study in such a way that the selected individuals represent the larger group from which they were selected. On the other hand, a sample is a set of all individuals selected to participate in a study (Mugenda and Mugenda, 2003). (Cooper and Schindler, 2003) argue that a well-chosen sample of about 10% of a population can often give good reliability. For this study, the population was all the listed companies at NSE. To obtain a study sample, purposive sampling technique was applied and all the 12 (100%) listed companies that issued profit warning from 2009 to 2013 were selected. According to (Campbell, 1955), purposive sampling is applied when the sample being investigated is quite small and the main goal is to focus on particular characteristics of a population that are of interest, which will best enable the researcher to answer the research questions (Bernard,2002). The list of sampled companies and the dates when they issued profit warning is shown in Appendix I.

### **3.5 Data Collection**

The study relied on secondary data. The share price data for the sampled companies, 90 trading days before and after the profit warning was obtained from the respective sampled listed companies as well as the Nairobi Securities Exchange.



### **3.6 Data Processing and Data Analysis**

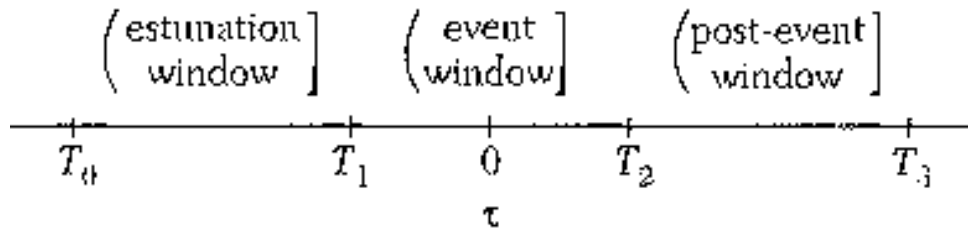
The data collected was analyzed according to NSE sector segment using SPSS version 21 and presented in the form of tables and graphs. To analyze the data and answer the research questions, event study models was used and the results' significance tested using t-tests and z-tests at 95% significance level and ANOVA.

#### **3.6.1 Event Study Analysis**

The first step of the event study was defining the event of interest and the event window. The study event of interest was the profit warning 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 85 days before the profit warning announcement; from  $T_1$  to  $T_2$  is the event window consisting of pre-event 5 days, actual day of announcement was 0, and from 0- $T_2$  will 5 days after the announcement.  $T_2$  to  $T_3$  is the post event window, consisting of the next 85 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

From the data obtained, normal and abnormal prices were calculated. Normal price is the price that would be expected if the profit warning event did not occur. Statistical models, (trend analysis and regression analysis) were used in computing normal prices for the estimation window. It is the period prior to the event window and in our research it is the 85 days before the event window. The event period should not be included in the estimation window to prevent from influence on the normal return model parameter estimates (MacKinlay, 1997). Abnormal price is as measure of the impact of the event on the share prices. Thus if abnormal price exists we will conclude that event had an impact on the value of the firm and is computed as shown below:

$$AR_t = MR_t - NR_t \tag{1}$$

Where  $AR_t$  is the abnormal returns at time  $t$ ,  $MR_t$  is the stock returns at  $t$ ,  $NR_t$  is the normal returns at time  $t$  as estimated using statistical models.

Single event observations are not very useful thus they was not used in making conclusions but they were aggregated and their significance determined by using

statistical inferences in making conclusions. The use cumulative abnormal return concept will be 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:

$$CAR(t_1, t_2) = \sum_{t=t_1}^{t_2} AR_t \quad (2)$$

Where CAR is the cumulative abnormal returns and  $AR_t$  is the abnormal returns.

After defining the individual stock abnormal prices and Cumulative Abnormal Returns, using the statistical techniques to compare the groups, the Z-tests, T-tests and One-way analysis of variance (ANOVA), were used to test the significance of the results. Multivariate regression analysis was used to derive a model of predicting expected market prices after the profit warning ( $EMR_a$ ) by relating the market prices before the warning ( $MR_b$ ) and Normal Prices expected after the profit warnings (NP) and whose significance was tested by using ANOVA, T-tests and Z-tests.

The model used was similar to that applied by Heesters (2011). The model is based on the knowledge that expected market returns (price) can be determined after the price warning if market returns before the warnings are known and normal returns have been determined through event analysis. From the reviewed literature and previous studies, the model signs were expected to be positive or negative and differing as per industry according to the efficiency of the market (MacKinlay, 1997).

The model took the following format;

$$EMP_a = \beta_0 + \beta_1 MP_b + \beta_2 NP + \varepsilon \quad (3)$$

Where;

$\beta_0$ ,  $\beta_1$  and  $\beta_2$  are hypothesized coefficients, which illustrate the relationship between the independent and dependent variables

$EMP_a$  is the expected market returns/prices after the profit warning

$MP_b$  is the market returns/ prices before the profit warning

NP is the Normal Returns/Price as determined by simple linear regression time series method

$\varepsilon$  is the margin of error

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter contains detailed research findings and discussion on the study subject. The data was analyzed in reference to the research objectives and findings presented using tables, percentages, figures and graphs. As discussed in chapter three, share prices data was obtained from secondary sources for years 2009 to 2013. The data collected was analyzed and interpreted in line with the objective of the study mentioned in chapter one which was to determine the segmental effect of profit warning on the share price of listed companies at the Nairobi Securities Exchange in Kenya. The chapter has been divided into section 4.2 covering summary of findings, section 4.3 covering the empirical model developed to achieve the study objective, section 4.4 on key discussions from the study findings.

#### **4.2 Descriptive Statistics**

The data was analyzed per NSE segment 90 days before the profit warning and 90 days after the issue of profit warning to determine the effect of event profit warning on segmental market prices. Data on the event window (from 5 day before to 5 days after) was excluded so as to achieve consistency in the results. To achieve the study objectives, trend analysis was used to determine the normal prices from which Cumulative Normal Returns (CAR) were obtained and analyzed to determine the effect of profit warning on share prices. The market prices and expected prices after the profit warnings for 90 days were also compared and using hypothesis testing and statistical inference, the significance of their difference was determined to enable

making conclusions. The summary of key statistics and findings are discussed in this section.

#### **4.2.1 Effect of Profit warning on Agricultural Segment Market Prices**

The model used to determine the normal prices expected after the profit warnings was derived using trend analysis and regression analysis and its significance determined using coefficient of determination, ANOVA and z tests. As shown in table 4.1 below, the model used to predict normal or expected returns after the profit warnings could be relied for up to 82% as shown by the coefficient of determination.

**Table 4.1: Agricultural Segment Model Summary**

R	R Square	Std. Error of the Estimate
0.90	0.82	5.04

Table 4.2 below shows the results of ANOVA test which reveal that the model used in prediction was significant since z-value at 95% level of significant was 0.00 since it is less than p value of 0.05. Hence the normal prices predicted after the profit warning was significant and could be relied upon.

**Table 4.2: Agriculture Segment Prediction Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9493.27	1	9493.27	373.77	0.00
	Residual	2108.11	83	25.40		
	Total	11601.38	84			

The prediction equation used to predict normal returns using trend analysis was assumed to take a linear equation form taking the form of  $Y = a + bx$  and the coefficients used as shown in table 4.3 below.

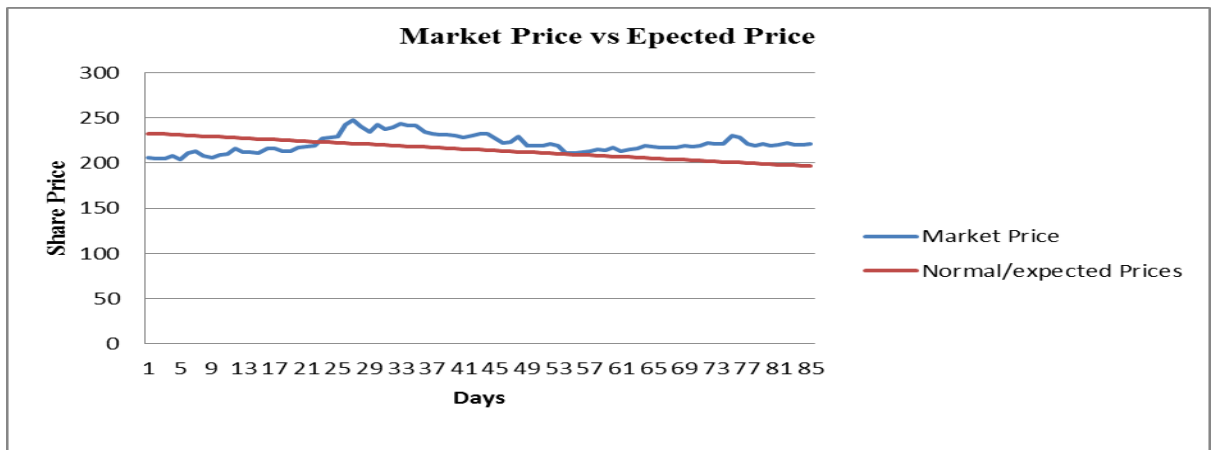
**Table 4.3: Agricultural Segment Normal Returns Prediction Coefficients**

model		Coefficients	Std. Error	t	Sig
1	Constant	233.341	1.10	211.55	0.00
	Day	-0.431	0.02	-19.33	0.00

Parametric test was used to test the first hypothesis that mean Abnormal Return or Cumulative Abnormal Return was equal to zero and hence profit warning had no effect on agricultural sector share prices. The study found that profit warning had significant negative effect respective firms' market prices at 5% confidence level with a z value of 2.8771. A test of the whether the market prices for 90 days after the profit warning at 5% confidence level were different from the expected market prices existing after the profit warning indicated that the two prices were significantly different hence further confirming that profit warnings had significant effect on share prices of the agricultural segment. As Pallant (2007) mentioned that if the sample size is above 30, the normality of distribution is not issue, thus the analysis ignored the normality assumptions of the parametric test since the sample size used was 85.

As shown in graph 4.1 below, the expected market prices (normal prices) were observed to differ substantially with the actual market prices for the first 30 days after the profit warning. The effect of profit warning on share prices was noted to reduce after 30 days of profit warnings.

**Graph 4.1: Agriculture Segment Market Prices and Expected Market Prices**



#### 4.2.2 Effect of Profit warning on Automobile and Accessories Segment

The model used to determine the normal prices expected after the profit warnings for automobile and accessories segment was derived using trend analysis techniques and linear regression analysis and the significance of the model determined prior to its application.

As shown in table 4.4 below the model used to predict normal returns could be relied upon up to 88%.

Model	R	R Square	Std. Error of the Estimate
1	0.9360	0.8761	1.9618

**Table 4.4: Automobile and Accessories Segment Model Summary**

As Table 4.5 below on the results of ANOVA test, the model used in prediction was significant since z-value at 95% level of significant was 0.00 since it is less than 0.05. Hence the normal prices predicted after the profit warning was significant and could be relied upon in to for analysis.



**Table 4.5: Automobile and Accessories Segment Prediction Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.88	1.00	2.88	33.45	0.00
	Residual	7.14	83.00	0.09		
	Total	10.02	84.00			

The prediction equation used to predict normal returns using trend analysis was assumed to take a linear equation form taking the form of  $Y = a + bx$  and the coefficients used as shown in table 4.6 below.

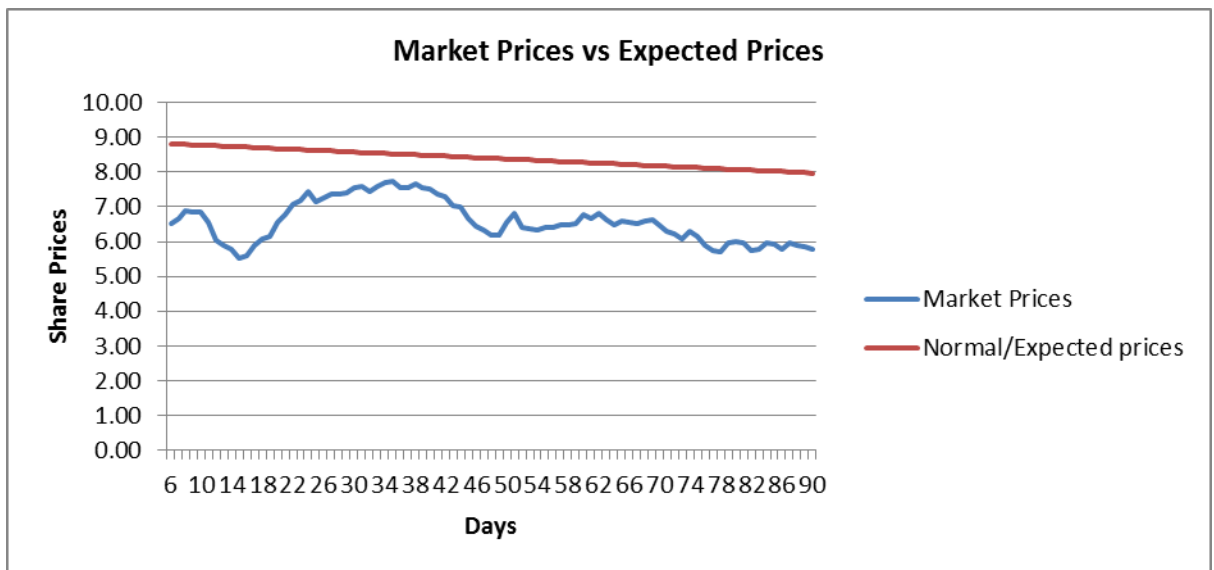
**Table 4.6: Automobile and Accessories Segment Normal Returns Model Coefficients**

	B	Coefficients	Std. Error	t	Sig.
1	(Constant)	8.87	0.06	138.21	0.00
	Day	-0.01	0.00	-5.78	0.00

At 5% confidence interval, the effect of profit warning on automobile and accessories segment was observed to be significant with a z value of 3.6010 and hence the hypothesis that the Cumulative Abnormal Returns (CAR) were equal to zero rejected. The market prices after the profit warnings were statistically tested to be different from expected and hence the profit warnings had negative effect on the market prices for listed firms under Automobile and Accessories Segment.

As shown in the table in the graph 4.2 below, as a result of profit warnings, the share prices for the automobile and accessories segment were considerably low than the

expected and hence confirming the finding that profit warnings had significant negative effect on market share prices.



**Graph 4.2: Automobile and Accessories Segment Market and Expected prices**

### 4.2.3 Effect of Profit warning on Commercial Segment

The model used to determine the normal prices expected after the profit warnings for Commercial segment was derived using trend analysis techniques and regression analysis and the significance of the model determined prior to its application.

As shown in table 4.7 below the model used to predict normal returns could be relied upon up to 83%.

**Table 4.7: Commercial Segment Model Summary**

Model Summary			
Model	R	R Square	Std. Error of the Estimate
1	0.91	0.83	0.5451

As Table 4.8 below on the results of ANOVA test, the model used in prediction was significant since z-value at 95% level of significant was 0.00 since it is less than 0.05.

Hence the normal prices predicted after the profit warning was significant and could be relied upon in to for analysis.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.9565	1	117.956	396.938	0.000
	Residual	24.66476	83	0.297		
	Total	142.6212	84			

**Table 4.8: Commercial Segment Prediction Model ANOVA**

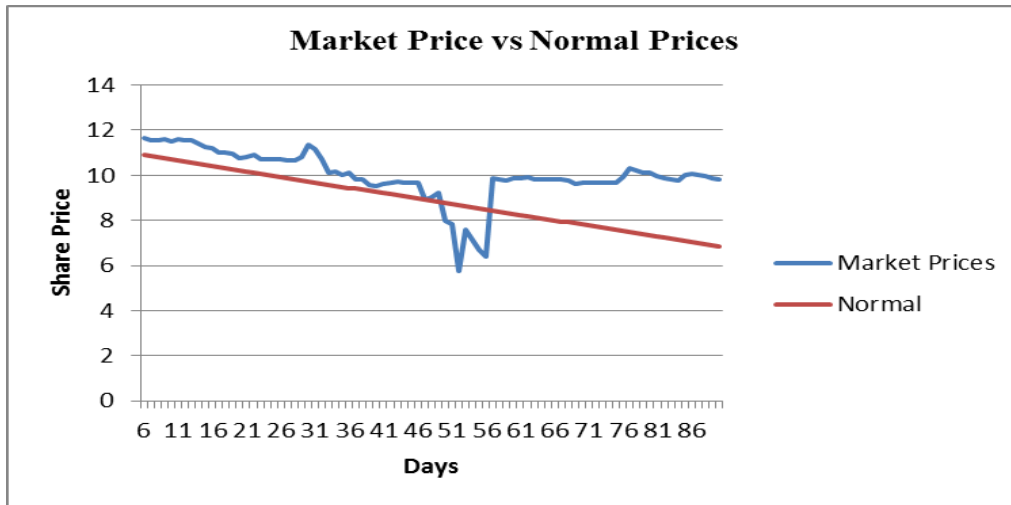
The prediction equation used to predict normal returns used the coefficient shown in table 4.9 below.

**Table 4.9: Commercial Segment Normal Returns Model Coefficients**

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	15.2066	0.1193	127.4586	0.0000
	Days	-0.0480	0.0024	-19.9233	0.0000

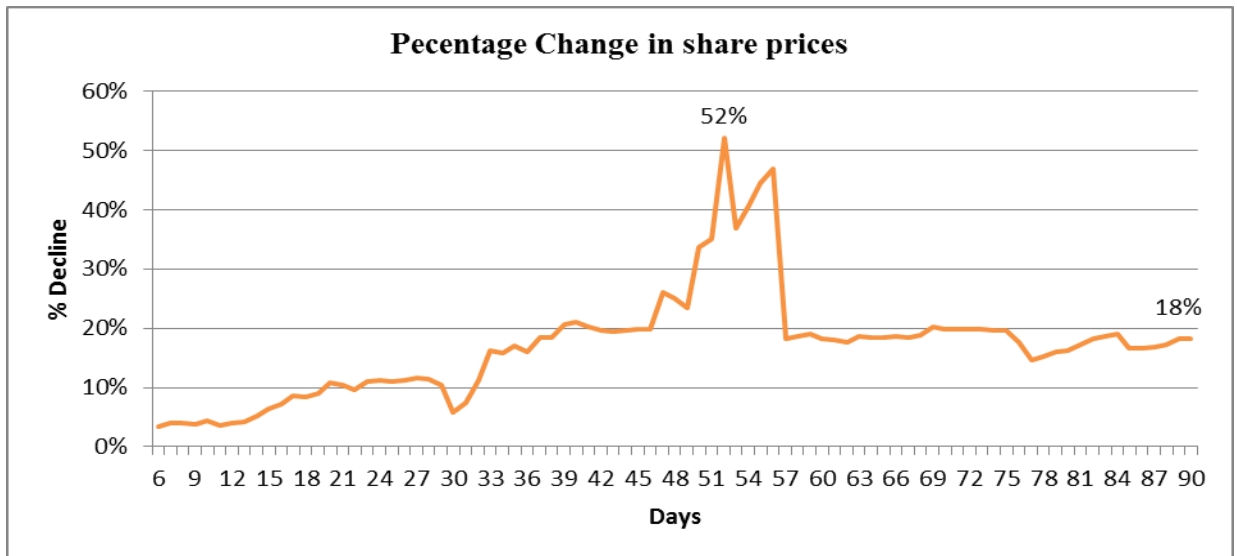
The study found that over 90 days period after the event, profit warnings had no statistically significant effect on market prices of commercial sector at 95% with a z value of 1.1916 by testing the hypothesis that the cumulative abnormal returns were equals to zero. By testing the hypothesis that the normal returns were not different from the market prices for a period of 90 days after the profit issue showed that the difference between the two prices were insignificant with a z value of 1.1880; hence the conclusion that profit warnings had no significant effect on the market prices for commercial segment. However, as seen in the graph 4.3 below that share prices

remained slightly higher than expected prices, market prices were observed to reduce by up to 52% 90 days the profit warning as shown in graph 4.4 below.



**Graph 4.3: Commercial Segment Market and Expected prices**

Considering the high percentage decline in share prices as shown in table 4.4 below, the study concluded that profit warning had negative effect on market prices even though not statistically significant at 5% confidence levels. As shown in the graph 4.4 below, profit warnings had an effect of reducing market prices by 52% on the 50 days before after the profit warning indicating delays on the market response to the information.



**Graph 4.4: Commercial Segment after Event Market Price Declin**

#### **4.2.4 Effect of Profit warning on Construction and Allied**

The model used to determine the normal prices expected after the profit warnings for Construction and Allied segment could be relied upon up to 52% as shown in table 4.10 as shown below.

**Table 4.10: Construction and Allied Segment Model Summary**

Model	R	R Square	Std. Error of the Estimate
1	0.72	0.52	0.7184

As shown in the Table 4.11 below on the results of ANOVA test, the model used in prediction was significant since z-value at 95% level of significant was 0.00 since it is less than 0.05. Hence the normal prices predicted after the profit warning was significant and could be relied upon in to for analysis.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.1861	1	47.1861	91.4191	0.0000
	Residual	42.8406	83	0.5162		
	Total	90.0266	84			

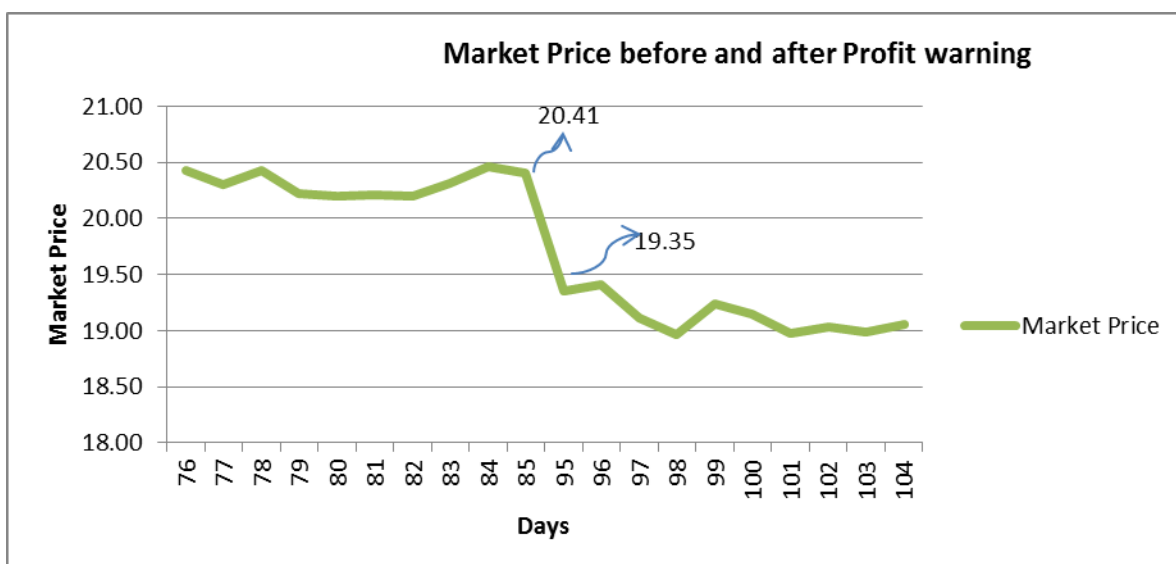
**Table 4.11: Construction and Allied Segment Prediction Model ANOVA**

The prediction equation used to predict normal returns used the coefficient shown in table 4.12 below.

**Table 4.12: Construction and Allied Normal Returns Model Coefficients**

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	22.6540	0.1572	144.0763	0.0000
	Days	-0.0304	0.0032	-9.5613	0.0000

The study found that profit warnings had no statistically significant effect on market prices of Construction and Allied Segment at 95% with a z value of 0.01463 by testing the hypothesis that the cumulative abnormal returns were equals to zero. By testing the hypothesis that the normal returns were not different from the market prices for a period of 90 days after the profit issue should that the two the difference between the two were insignificant with a z value of 0.01226. However, the profit warning events were observed to have negative effect on market prices even though not statistically significant at 5% confidence levels. As shown in the graph 4.5 below, profit warnings had an effect of reducing the market prices 5 days before the announcement and 5 days after the announcement event from Sh. 20.41 to Sh. 19.35 (5.2%).



**Graph 4.5: Commercial Segment Event Window Market Prices Movements**

#### 4.2.5 Effect of Profit warning on Energy and Petroleum

The model used to determine the normal prices expected after the profit warnings for Energy and Petroleum segment could be relied upon up to 95% as shown in table 4.13 as shown below.

**Table 4.13: Energy and Petroleum Segment Model Summary**

Model	R	R Square	Std. Error of the Estimate
1	0.9727	0.9462	0.2270

Table 4.14 below on the results of ANOVA test shows that the model used in predicting normal prices was significant since z-value at 95% level of significant was 0.00 which is less than 0.05.

**Table 4.14: Energy and Petroleum Segment Prediction Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.2324	1	75.2324	1459.6539	0.0000
	Residual	4.2779	83	0.0515		
	Total	79.5103	84			

The prediction equation used to predict normal returns used the coefficient shown in table 4.15 below.

**Table 4.15: Energy and Petroleum Normal Returns Model Coefficients**

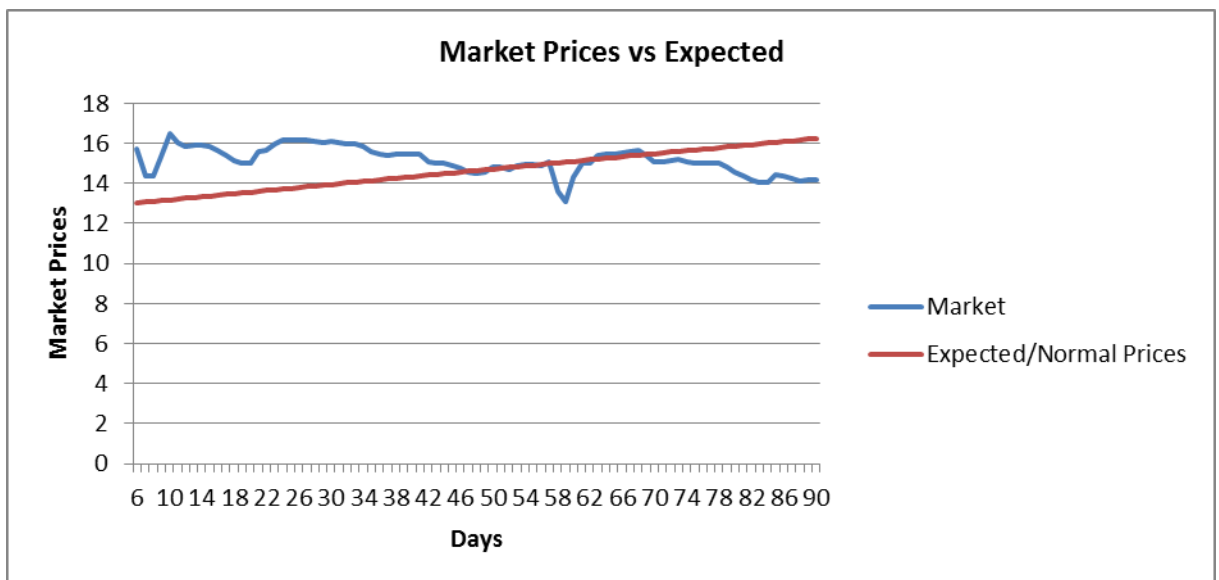
Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	9.3909	0.0497	189.0011	0.0000
	Days	0.0383	0.0010	38.2054	0.0000

To determine whether the profit warning had significant effect on share prices for energy and petroleum Segment, a hypothesis test that the cumulative abnormal returns (CAR) were equal to zero revealed that the mean was not significantly different from zero hence the profit warnings did not have statistically significant effect on share prices at 5% confidence interval (z value 0.5395). The finding was also confirmed by testing the hypothesis that the normal prices for 90 days after profit warnings were the same to the market prices. The difference between them was not statistically significant with a z value of 0.5395 at 5% confidence interval hence the two prices were the same. However, when considering 45 days after the profit warning, the market price were observed to be different from expected prices implying that the



profit warnings had an significant effect on market prices at 5% confidence interval with a z value of 2.4472.

The graphical representation of the prevailing market prices after the profit warnings against the expected prices is shown in the graph 4.6 below. As it can be seen in the graph 4.6 below, an abnormality was observed with the energy and petroleum segment where after the profit warning, other than the market prices falling, they were observed to be raising by a higher rate than expected. This was indicative of mixed interpretation of the information by the investors and also because the profit warnings were issued in the first half of the financial year; implying that the effect of profit warnings is usually less when profit warning is issued early enough.



**Graph 4.6: Energy and Petroleum Segment Market and Expected prices**

#### **4.2.6 Effect of Profit Warning on Manufacturing and Allied Segment**

The model used to determine the normal prices expected after the profit warnings for Energy and Petroleum segment could be relied upon up to 95% as shown in table 4.16 as shown below.

**Table 4.16: Manufacturing and Allied Segment Model Summary**

Model	R	R Square	Std. Error of the Estimate
1	0.8653	0.7487	10.0069

Table 4.17 below on shows that the model used in predicting normal prices was significant since z-value at 95% level of significant was 0.00 which is less than 0.05.

**Table 4.17: Manufacturing and Allied Segment Prediction Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2296.86	1	2296.86	22.94	0.00
	Residual	8311.43	83	100.14		
	Total	10608.29	84			

The prediction equation used to predict normal returns used the coefficient shown in table 4.18 below.

**Table 4.18: Manufacturing and Allied Normal Returns Model Coefficients**

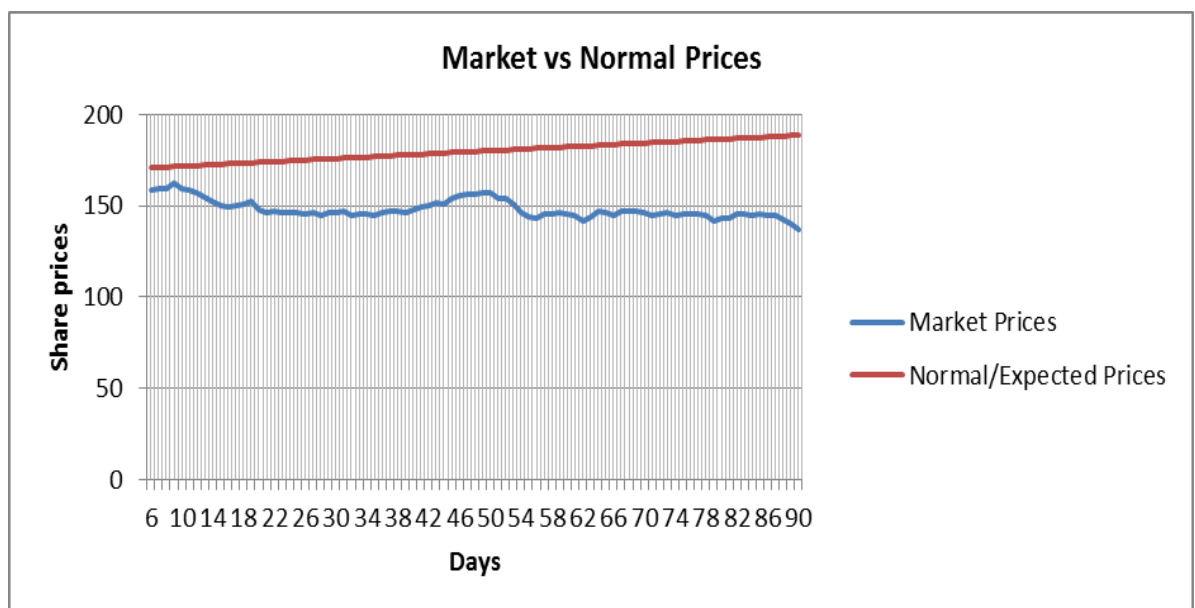
Model		Coefficients	Std. Error	Coefficients t	Sig.	
1	(Constant)	150.6875	2.1901	68.8041	0.0000	
	Days	0.2119	0.0442	0.4653	4.7893	0.0000

To determine whether the profit warning had significant effect on share prices for Manufacturing and Allied Segment, a hypothesis test that the cumulative abnormal

returns (CAR) were equal to zero revealed that the CAR mean was significantly different from zero hence the profit warnings had significant effect on share prices at 5% confidence interval with a z value 3.3174. The finding was confirmed by testing the hypothesis that the normal prices for 90 days after profit warnings were the same to the market prices and which revealed that difference between the actual market price and expected were statistically significant with a z value of 6.0296 at 5% confidence interval; hence the two prices were not the same indicating that profit warnings had significant effect on the share prices.

As it can be observed from the graph 4.7 below, the profit warnings had a negative effect on the share prices where the market prices were found to be consistently below the expected prices over 90 days of trading after the profit warning.

**Graph 4.7: Manufacturing and Allied Segment Market and Expected prices**



### 4.3 Estimated Empirical Models

The study objective was to determine the effect of profit warning on the share price of listed companies at the Nairobi Securities Exchange in Kenya. To accomplish this objective, data was analyzed per NSE segment to develop a model which could be used to predict the share market prices any day after the announcement of profit warning by using the share market prices before the announcement (MPb), Normal prices as determined by trend analysis (NP) and time after the profit warning.

#### 4.3.1 Agriculture Segment Estimated Model

The estimated model that could be used to predict the expected market prices for agricultural segment was  $EMP = 86.3022 - 0.7986MPb + 0.2053NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 54% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.19 below.

**Table 4.19: Agriculture Segment Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.7380	0.5447	0.4375

### Model Coefficients

Model		Coefficients	t	Sig.
1	(Constant)	86.3022	20.0463	0.0000
	Market Price before announcement	-0.7986	-9.8572	0.0000
	Expected Normal price	0.2053	5.4444	0.0000

### Model ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.88	1.00	2.88	33.45	0.00
	Residual	7.14	83.00	0.09		
	Total	10.02	84.00			

### 4.3.2 Automobile and Accessories Segment Estimated Model

The estimated model that could be used to predict the expected market prices for Automobile and Accessories segment was  $EMP = -6.0552 + 1.4033MPb + 0.0723NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 64.55% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.20 below.

**Table 4.20: Automobile and Accessories Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.8034	0.6455	0.3631

**Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.6856	2	9.8428	74.6605	0.0000
	Residual	10.8104	82	0.1318		
	Total	30.4960	84			

**Model Coefficients**

Model	B	Coefficients	Std. Error	t	Sig.
1	(Constant)	-6.0552	4.0604	-1.4913	0.1397
	Market Price Before	1.4033	0.1151	12.1881	0.0000
	Normal Prices	0.0723	0.4385	0.1650	0.8694

**4.3.3 Commercial Segment Estimated Model**

The estimated model that could be used to predict the expected market prices for Commercial segment was  $EMP = 2.5058 + 0.7806 MPb + -0.3235NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 81.14% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.21 below.

**Table 4.21: Automobile and Accessories Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.9094	0.8114	0.90497

**Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	39.6877	2	19.8439	24.2305	0.0000
	Residual	67.1549	82	0.8190		
	Total	106.8427	84			

**Model Coefficients**

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	2.505799	1.100418	2.277134	0.025383
	Market price before	0.780642	0.182219	4.284084	0.00000
	Normal Prices	-0.323522	0.200418	-1.614235	0.110318

**4.3.4 Construction and Allied Estimated Model**

The estimated model that could be used to predict the expected market prices for Automobile Construction and Allied segment was  $EMP = 9.9918 + -0.1015 MPb + 0.5763 NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 59.6% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.22 below.

**Table 4.22: Construction and Allied Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.7720	0.5960	0.3030

**Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.1102	2	5.5551	60.4937	0.0000
	Residual	7.5300	82	0.0918		
	Total	18.6403	84			

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	9.9918	0.8262	12.0930	0.0000
	Market Price before	-0.1015	0.0463	-2.1915	0.0313
	Normal Prices	0.5763	0.0639	9.0222	0.0000

**4.3.5 Energy and Petroleum Segment Estimated Model**

The estimated model that could be used to predict the expected market prices for energy and petroleum segment was  $EMP = 1.6326 + 0.8954 MPb + -0.2442 NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 96.38% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.23 below.



**Table 4.23: Energy and Petroleum Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.9817	0.9638	0.1873

**Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.63254	2	38.31627	1091.803	8.01E-60
	Residual	2.877749	82	0.0350945		
	Total	79.51029	84			

**Model Coefficients**

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	1.6326	0.8893	1.8359	0.0700
	Market Prices	0.8954	0.0273	32.7455	0.0000
	Normal Prices	-0.2442	0.0387	-6.3164	0.0000

**4.3.6 Manufacturing and Allied Segment Estimated Model**

The estimated model that could be used to predict the expected market prices for manufacturing and allied segment was  $EMP = 258.91 + -0.7986 MPb + 0.2053 NP$ ; where MPb is the market prices before the announcement, NP is the Normal prices as determined by trend analysis. The model was found to be 54.47% accurate with all the model variables being observed to be significant. The model specifications are shown in table 4.24 below.

**Table 4.24: Manufacturing and Allied Empirical Model Details**

Model	R	R Square	Std. Error of the Estimate
1	0.738043	0.544708	3.437488

**Model ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1159.23	2	579.6154	49.0521	0.0000
	Residual	968.94	82	11.8163		
	Total	2128.17	84			

**Model Coefficients**

Model		Coefficients	Std. Error	t	Sig.
1	(Constant)	258.9067	12.9154	20.0463	0.0000
	Normal Prices	-0.7986	0.0810	-9.8572	0.0000
	Market Prices Before	0.2053	0.0377	5.4444	0.0000

**4.4 Discussion**

Profit warnings are announcement made by firms disclosing management's expectation that earnings will be less than those expected. The market reaction to these announcements have been found to be highly negative as one would expect from news that market participants will presumably interpret as being bad. The

magnitude of this negative market reaction suggests that this event is not only statistically, but economically significant as well. Given such an adverse effect on shareholder welfare this research attempted to develop the evidence on the effect of such announcements on share prices and how the effect can be minimized. It was observed that the market reaction is less negative when management makes the warning relatively earlier and when management has made more than one warning. The effect was observed to be highest where the announcement was made near the period of releasing financial statements.

Profit warning is complex in nature as it is issued regardless of its significant negative impact on the stock price since it is a requirement for listed companies in Kenya to issue the same if they expect that the earnings will be lower by more than 25% from the expected. Due to its negative significant effect on the share prices, the subject of discussion on the timings of such announcements to minimize its effect. In addition, there are several market incentives that exist that determine the issue of profit warning. First is to avoid from the legal liability and lawsuit by not issuing the profit warning from the investors and fines imposed by the Capital Market Authority. Secondly, the willingness to have good reputation with investors and maintain good relationship with banks, institutional investors as they appreciate the transparency from the firms. Thirdly, if firms fail to disclose the bad news they take the risk of confronting the high cost of capital through share price decrease and liquidity reduction. To this extent this research validates previous studies by Nyabundi (2013) and Jackson & Madura (2003) who studied profit warnings at different time periods and in the same market and then found the similar result that profit warnings lead to a strong negative market response around the period of announcement.

## **CHAPTER FIVE**

### **SUMMARY AND CONCLUSION**

#### **5.1 Summary**

This chapter presents a summary of the important elements of the study, discussion of major findings and interpretation of the results. This chapter further presents the conclusions drawn from the research findings as well as recommendations for improvement and suggestions for further research.

The study sought to find out the effect of profit warning on the share price of listed companies at the Nairobi Securities Exchange in Kenya. To achieve this objective, secondary data for years 2009 to 2013 was obtained. The analysis was done per NSE segment by recognizing the fact that market segments have different characteristics and hence are affected differently by profit warning information.

The study found that profit warning had a negative effect on the share prices of the segments studied except for the energy and petroleum segment where the effect was observed to be positive; this was found to be as a result of the profit warning being issued earlier than six months before the end of the financial year and the optimism that came with the profit warning. The Energy and Petroleum Sector is also affected by other conditions like world prices. The magnitude of the effect was found to differ with the segment and the period in which the warning was released in relation to the firms' end of financial year with the magnitude of the effect being less where the warning was issued early in the financial year. In addition, issuing of more than one profit warning in a financial year was observed to reduce the effect.

Further, the study found that profit warning had significant negative effect on agricultural segment market prices at 5% confidence level with a z statistic of 2.8771. Also, at 5% confidence interval, the effect of profit warning on automobile and accessories, segment was observed to be significant with a z statistic of 3.6010. On Manufacturing and Allied Segment, profit warning was observed to have negative significant effect on share prices with a z value 3.3174 at 5% confidence level.

Profit warnings had much less negative effect on market prices of commercial sector at 5% confidence level with a z value of 1.1916. This was attributed to the issue of multiple price warnings where Kenya airways was observed to issue two profit warnings in the same year in January and November 2012; and the fact that the other company that issued the warning in that segment (Express Kenya) issued the warning as early six months to the end of the financial year. The same results were obtained on Construction and Allied Segment with a z value of 0.01463 at 95%; this was attributed to early profit warnings by the two companies studied under the segment where they made the announcement seven months and six months before the end of the financial year.

## **5.2 Conclusions**

One of the price sensitive information disclosures required by the law to be issued by listed companies in Kenya is the profit warning. The firms that fail to meet the market expectation regarding the expected earnings issue the profit warning. Since it is a requirement for all listed companies, the only way to reduce the negative effect on share prices and hence prevention of erosion of shareholders' value is by timing of the warning. The management must decide when and how to reveal such price sensitive information as it indicates that the actual earnings will be lower than the expected one

hence leading to reduced market prices. However, the complexity and the influence on the stock price make the profit warning, to remain being one of the important corporate events that attract the attention of the researchers and firms.

The findings of this research indicates that profit warning has negative effect on the stock prices in Kenya with only exemptions where it is released earlier in the financial year and is accompanied with an optimistic information that things may be better towards the end of the year. The more significant is impact is noticed during the even period from five days before to five days after the profit warning and after the announcement but that may not show the actual effect and hence they were removed when analysing data in this study. To this extent this research validates previous studies by (Nyabundi, 2013) and (Jackson & Madura, 2003) that studied profit warnings at different time periods and in the same market and then found the similar result that profit warnings lead to a strong negative market response around the period of announcement.

The general economic condition of the country also affects share price irrespective of whether a company issues a profit warning announcement or not. For instance, high inflation rates experienced in the last half of year 2012 that made the Kenya Shilling lose value to the US dollar by trading at an all-time high of Ksh 107 against the US dollar affected the share price of listed companies in the commercial segment. This in turn might have had an effect on the investment decisions of the shareholders who were not only concentrating on the profit warning announcement to make their decision.

### **5.3 Policy recommendations**

Based on the research findings, following recommendations have been made. First, to the listed companies' management whose goal will be to protect shareholders wealth by reducing the negative effect of profit warning, it is recommended that they should be issuing profit warnings as early as possible and where circumstances change, they can also issue additional profit warnings. This is because, as found by this study, early profit earnings has the effect of reducing the negative effect on share prices significantly. In addition, their profit warning announcement should be followed with a statement detailing the management actions to manage the situation and the future prospects of the company so as to change the perception of investors on the announcement.

The second recommendation is to the shareholders of the listed companies. They need to understand that profit warning signals the financial performance of the company that they have invested in. They need to take into consideration such information as it may have negative returns of their investments in the future. Nevertheless this is may be a short term effect that will change in the long run

The third recommendation is to the financial regulator of the stock market (Capital Markets Authority). It is good to ensure that information is available to the public in general and specifically to investors; however, there is need for the companies who make such announcement to include a detailed statement explaining the cause of the profit being much lower than expected and what the company is doing to avert the same in future. The capital Markets Authority need to take into consideration the overall effect of profit warning announcement and if this may deter future investors

from the stock market. Providing information is positive but there is a possibility that some investors may overreact to profit warning announcement.

Fourth, is to investors whose firms are operating or considering operating in Kenya who need to be aware that a profit warning has a significant negative impact on the stock prices in Kenya and hence they should pay attention to such announcements and take appropriate measures so as to minimize the effect on the share prices.

#### **5.4 Limitations of the study**

This study had some limitations. First of all there were other economic factors prevailing at the time of the profit warning for example high inflation and interest rates in the year 2012 and the government policy of floating several treasury bonds at attractive interest rate that made investment in treasury bonds more lucrative especially for foreign investors who also trade highly in shares thus affecting the demand for shares.

The study focussed on five year period from the year 2009 to 2013, therefore prior year were excluded from the study. As a result the study is limited to the companies listed at the Nairobi Securities Exchange over the five years under study

This study focuses on effect of profit warning in Kenya alone which may limit the findings to the geographical areas as opposed to studying other African markets other than Kenya which would clarify whether or not the findings are sample specific or robust across all countries.



In addition, this study narrowed itself to the effect of profit warning on share prices and not all other significant items that may have an effect to share prices example dividend announcement, regional expansion or diversification of operations which would assist in determining whether investors react to other information whether positive or negatively.

## **5.5 Recommendations for Further Research**

There are several interesting areas for future research on profit warnings. First, studying other African markets other than Kenya would clarify whether or not the findings are sample specific or robust across all countries. Some studies have been done on the South African market but more studies need to be done on other parts of the continent.

Secondly, further research could be conducted to determine the effect of timing of profit warning announcement so as to determine the effect of issuing profit warning earlier on in the financial year and issuing the warning towards the end of the financial year. Such studies would assist in determining whether investors react differently when their expectations about profit are managed earlier on in the financial year.

Thirdly, this study used segmental analysis of NSE, it would be important for a study to be carried out to determine the combined effect of profit warnings on share prices without narrowing down to the NSE segments. This would give a wholesome effect of profit warning on share price.

Finally, a study needs to be done to determine the effect of other information for example dividend announcement, regional expansion or diversification of operations on share prices. This would assist in determining whether investors react to other information whether positive or negatively.

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**APPENDIX I: SAMPLE FRAME**

	<b>Company</b>	<b>NSE Segment</b>	<b>Date warning iss</b>
1	Kakuzi Ltd	Agricultural	November 27, 20
2	Kakuzi Ltd	Agricultural	November 30, 20
3	Kapchorua Ltd	Agricultural	March 2013, 2014
4	Kakuzi Ltd -November 29, 2012	Agricultural	November 29, 20
5	Sasini Ltd	Agricultural	August 3, 2012
6	Sameer Africa	Automobile & Accessories	November 12, 20
7	CMC Holdings Ltd	Automobile & Accessories	September 29, 20
8	Kenya Airways Ltd	Commercial	Novemer 6, 2012
9	Express Kenya Ltd	Commercial	July 3, 2012
10	Kenya Airways Ltd	Commercial	January 27,2012
11	East Africa Portland Cement Ltd (EAPC)	Construction and Allied	May 18,2009
12	East Africa Cables	Construction and Allied	July 17, 2010
13	Total Kenya Ltd	Energy and Petroleum	March 26, 2013
14	KenolKobil Ltd	Energy and Petroleum	June 19, 2012
15	British American Investment	Insurance	Jan 2012
16	Centum Limited	Investment	April 2,2009
17	Eveready Ltd	Manufacturing & Allied	November 19, 20
18	East Africa Breweries Ltd (EABL)	Manufacturing & Allied	July 30, 2013
19	BOC Gases	Manufacturing & Allied	December 19,201
20	Eveready Ltd	Manufacturing & Allied	November 29, 20
21	Access Kenya Ltd	Telecommunications & Technology	December 16, 20