

Market Differential Reaction to Profit Warning Announcements and Dividend Decrease:
An Empirical Analysis of the Nairobi Securities Exchange

By

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Declaration

I declare that this work has not been submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, this research thesis contains no material previously published or written by any other person except where the reference is made in the research thesis itself.

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This research thesis has been submitted with my approval as the University Supervisor.

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Abstract

The main aim of the study was to investigate the market differential reaction to profit warning announcements and dividend decreases by carrying out an empirical analysis of the Nairobi Securities Exchange. To achieve this objective, an event study was employed over a window of 11 days consisting of 5 days before and 5 days after the announcement of both events. The sample consisted of 11 companies that had issued profit warning announcements and had dividend decreases over the period 2002 to 2012. There were 25 observations of companies that issued profit warnings and 55 observations of companies that had a decline in their final dividend between the periods 2002 to 2012. Abnormal returns were calculated using the market adjusted model and tests of significance conducted on them.

The study found that the average abnormal returns on the day before the profit warning announcement and the day of the announcement were statistically significant at the 5% level while those on the first day after announcement were significant at the 10% level. On the other hand, the average abnormal returns the day before the dividend decrease, the third day and were statistically significant at the 5% level while the rest were significant at the 10% level. The results showed that at the Nairobi Securities Exchange, profit warning announcements and dividend decreases are generally associated with negative average abnormal returns. The Mann-Whitney Rank Sum test was run so as to determine whether there is a statistical significant difference between the average abnormal returns elicited by the two events. The test concluded that there is no statistical significant difference in median average abnormal returns between profit warnings and dividend decreases.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Investors participate in the stock markets with the expectation of higher future returns (Tumurkhuu, Wang, & Lions, 2010). Capital markets are thereby required to function efficiently (Heesters, 2011) such that investors can make informed and rational decisions. A market is considered to be efficient if the share prices reflect all the relevant information to it (Fama, 1970). There are three types of efficiency according to Bauer (2004) allocative, operational and informational. Allocative efficiency means that the marginal rate of return is the same for all lenders and borrowers. Operational efficiency is concerned with transaction cost involved in the transfer of funds from a lender to a borrower. Lastly, a market is said to be informational efficient when the security prices incorporate all the relevant information to it.

In any economy, Fama(1970) states that the primary role of the capital market is that of allocation of capital stock. New information in the form of news, announcements, expectations, opinions, stories, and even lack of news which should be continuously incorporated in stock prices if the market is deemed to be efficient (Stefan, 2009). The adjustment of security prices to new information leads to three forms of market efficiency; efficiency in the weak form, efficiency in the semi-strong form and efficiency in the strong form of efficiency (Fama, 1970).

Efficiency in the weak form implies that the prices of securities reflect all information that is historical. In the in the semi-strong form of efficiency, security prices are said to reflect all the information that is publicly available. While in the in the strong form of efficiency, security prices are perceived to reflect all private and public information (Fama, 1970).

To achieve the primary goal of the capital markets, companies make various information disclosures for instance on the capital structure, dividend payments and key operating indicators (Tumurkhuu et al., 2010). According to Nyabundi (2013), capital markets tend to react to these corporate announcements, and one such significant announcement is the earnings announcement.

Earnings are considered essential in the determination of stock price as they signify the operational performance and future prospects of the firm therefore they should be disclosed (Tumurkhuu et al., 2010). It therefore follows that if the reported earnings are below or above the expected, it will come as a surprise by the markets (Tumurkhuu et al., 2010).

Investors by nature are considered to be risk averse (Kim & Verrecchia, 1991) consequently if this earnings surprise is positive the share price will usually increase and if negative the share price will decrease (Tumurkhuu et al., 2010). This reaction according to Elayan & Pukthuanthong (2009) can be attributed to conventional wisdom which purports that market participants especially shareholders do not like receiving bad news especially if it comes as a surprise. Company's therefore opt to warn the market participants of the unexpected level of earnings to mitigate a drastic change in the stock by issuing a profit warning (Tumurkhuu et al., 2010).

Elayan & Pukthuanthong (2009) define profit warnings as a voluntary announcement made by firms disclosing management's expectation that the earnings will fall short of those forecasted. Tumurkhuu et al. (2010) on the other hand define profit warnings as management's attempt to communicate their disappointment in earnings.

To protect shareholders, regulations have been established to enhance disclosure. In the US and the UK the announcement of profit warnings became mandatory in 2000 and 2004 respectively (Tumurkhuu et al., 2010). In Amsterdam, the issuing and listing rules (article 28H) demand that firms disclose price sensitive information. Price sensitive information is that information which will have a significant effect on the security price (Heesters, 2011).

In Kenya, the Capital Markets Authority (CMA) through legal notice number 60 of 2002 May in the Requirements, Public, Provisions, & Schedule (2002) issued a mandated disclosure requirement stipulating that, when a "material discrepancy" between the projected earnings for the current year to date and the earnings level in the previous financial year arises, an issuer shall disclose such information by making a public announcement. "Material discrepancy" here is

defined as, the earnings being at least 25% lower in the current year to date than the earnings level in the previous financial year.

In the Kenyan context therefore, a firm whose profits drops by more than 25 per cent is required to issue a profit warning through the mass media. The alert is to be sent to CMA, the NSE and the public at least 24 hours before the results are announce. If by any chance an issuer does not abide by the obligation within the time prescribed they become liable to pay a penalty at a rate prescribed by the authority. The expectation shortfall maybe in the form of net profit, sales, earnings before interest and earnings per share (Elayan & Pukthuanthong, 2009). Since profit warnings are a mandatory requirement, they can be used to indicate a change in future prospects and profitability hence have an effect on the share price and trading volume (Kearns, A., & Whitley, 2002).

Studies carried out in relation to profit warnings reveals that they tend to have a negative effect on returns. A study carried out by Elayan & Pukthuanthong (2009) on a sample of 3667 earnings per share warning announcements by 2393 listed firms on the United States Stock Exchange between May 1, 1997 to December 31, 2002 showed that price reactions to profit warnings is negative as expected. Analysis carried out by Elayan & Pukthuanthong (2009) support those of Jackson & Madura (2003), that market responses elicited by profit warnings over the 2-day period around the announcement are pronounced.

Jackson & Madura (2003), also conclude that for more small firms the market reaction is more pronounced during and after the announcement period while for large firms, the response was more negative 4 days prior to the announcement. Suka (2011) studied fourteen companies listed on the Nairobi Security Exchange that had issued profit warnings over the period 2002-2010 so as to the assess information content of profit warning announcements. The results were consistent with the hypothesis that profit warnings have information content which is associated with a negative revaluation of the firm.

Management also use the dividend policy to communicate to the public hence dividend policy is considered one of managements crucial issue (Shania Taneem & Ayse Yuce, 2011). Dividend

policy refers to the procedure used to determine the amount of profit a company should distribute to its shareholders as dividends (Deeptee & Roshan, 2009). Dividends are therefore a distribution of a company's profit to its shareholders. Most existing theories imply that there is information content in the announcement of dividends which consequently affects share prices (Andres, Bongard, Haesner, & Thiessen, 2011) this can be attributed to the fact that dividend payment requires cash which cannot be manipulated easily (Shania Taneem & Ayse Yuce, 2011). Miller & Rock (1985) suggest that the announcement of dividends provides the missing pieces of information on the firm allowing the market make the firm's current earnings estimate.

It is a stylized fact that dividend announcements convey information to market participants (Andres, C., A. Betzer, I. van den Bongard, 2013) and it affects share prices since the stock markets tend to digest information on corporate management and reflect it on the share prices (Nitta, 2006). According to the dividend signaling hypothesis, dividend change announcements trigger unexpected share returns as they convey information about managements' assessment of a firm's future prospects (Vieira, 2007). A dividend increase is thereby perceived by the market as good news conveying favorable prospects while a decrease is seen as bad news hence a gloomy future (Watson, & Head, 2004).

It is therefore not a surprise to find that an increase in dividend prompts an increase in price while a cut in dividend results in a fall in price (Brealey, Myers & Allen, 2008). However, Miller (1986 as cited by Watson, & Head, 2004) argues that it is not so much as the direction of the dividend change but rather the difference between the actual dividend paid and the expectations which is referred to as a dividend surprise.

Andres et al. (2011) defines a dividend surprise as the difference between the actual dividend announcement and the average analyst forecast. In a market considered to have informational efficiency, share prices do not react to the change in dividend but rather to the surprise as only the unexpected part of the dividend announcement is informative (Andres et al., 2011). Share prices react accordingly when a change in the dividend policy takes place if new information is hidden in the announcement (Capstaff, Klaeboe & Marshall, 2004).

Prior to the announcements, investors trade on what is known (Kim & Verrecchia, 1991) as such the prevailing share prices should therefore reflect all the available information about the asset (Bodie, Kane & Marcus, 2011). Public announcement however changes traders' beliefs and induces them to engage in a new round of trade (Kim & Verrecchia, 1991) which results in changes in price and trading volume. According to Beaver (1968, cited by Kim & Verrecchia, 1991) price changes reflect the average change in traders beliefs due to the announcement while trading volume reflects the sum of differences in traders' reactions. The changes in the share prices show the market participants expectations while volume reflects the individual market participants change in expectation following an announcement.

From the introduction above, we can see that both profit warnings and dividend decreases depict adverse events in a firm and have information content.

1.2 Problem Statement

The broad determinants of common stock prices are earnings, dividend policy, growth and risk (Elton Gruber, Brown & Goetzmann, 2003). However due to their nature, growth and risk are not as easy to deal with as they are not easy to interpret for investors. Investors are considered risk averse (Kim & Verrecchia, 1991) and are concerned about a company's competitive power in the long term and its profitability (Kearns & Whitley, 2002). It therefore follows that in an efficient market, any earnings or dividend announcement have information content that influences the stock prices positively or negatively (Nyabundi, 2013).

When a firm is of the opinion that the market holds unrealistic expectations of future earnings, they issue a profit warning (Jackson & Madura, 2003). Profit warnings signal that the company will not be able to meet the market expectations. On the other hand, when a firm experiences a drop in earnings; the result is a reduction in dividend (Kapoor, 2009). A decrease in dividends is perceived by investors as a negative signal about the firm (Altiok-Yilmaz & Selcuk, 2010).

The information content in profit warnings and dividend decreases is such that a profit warning announcement elicits a negative market response (Tumurkhuu et al., 2010; Jackson & Madura, 2003) and a dividend decrease is followed by negative market responses (Capstaff, Klaeboe &

Marshall, 2004; Shania & Yuce, 2011). Profit warning announcements and dividend decreases are therefore considered adverse events that have a negative effect on the share price. However, it is not clear which of the two events has a higher information content level thereby eliciting a more negative response. This therefore forms the basis of this study.

This study looked to examine the differential market reaction following a profit warning announcements and a dividend decrease in an attempt to establish which of the two has a higher level of information content than the other.

1.3 Research Objectives

The main objective of this study was to examine the differential market reaction of companies listed on the Nairobi Securities exchange to profit warning announcements and dividend decreases, in an attempt to establish which has higher information content than the other.

The specific objectives of this study were:

1. To examine profit warning announcements information content over the period 2002 to 2012.
2. To examine dividend decreases information content over the period 2002 to 2012.
3. To compare the level of information content between profit warning announcements and dividend decreases over the period 2002 to 2012.

1.4 Research Questions

1. What is the information content of a profit warning announcement?
2. What is the information content of a dividend decrease?
3. Which information content between profit warnings and dividend decrease is higher?

1.5 Significance of the Study

This study will make several contributions

Analysts

The disclosure of the profit warning and dividend decreases influences analysts' company evaluation. The results of this study will thereby inform analysts which of the two events will be more adverse hence help them revise their expectations based on the current operating

conditions. This revision will enable them to warn the company shareholders and potential shareholders.

Investors

Investors are generally concerned about a company's competitive power in the long term and its profitability. Having the knowledge on whether a profit warning or a dividend decrease has a more pronounced effect, they can reassess their investment decisions accordingly. Speculative investors especially will be in a position to benefit from knowing which position to take after the announcement of either.

Researchers

The results of this study will add to the literature on the issues that relate to profit warning announcements and dividend decreases thereby assist other researchers who wish to carry out research in either of the areas in future or look to enhance the study further.

Academics

This area of research is receiving growing interest from people dealing with academics therefore it will contribute to the existing literature on information content effect on dividend surprises and profit warning surprises.

1.6 Scope of the Study

Although the Nairobi Security Exchange was started in 1954, the scope of this study was limited to the period between 2002 and 2012. This time frame was chosen for comparative purposes due to the fact that the Capital Markets Authority (CMA) issued a mandated disclosure requirement through legal notice no. 60 of May 2002 stipulating that, an issuer shall disclose all material information and make a public announcement of any profit warning, where there is a material discrepancy between the projected earnings for the current financial year and the level of earnings in the previous financial year.

The Nairobi Securities Exchange (NSE) has two main market indices; the Nairobi Securities Exchange (NSE) 20 share index and the all-inclusive NSE All Share Index (NASI). Other indices

on the NSE include FTSE NSE Kenya 15 Index, FTSE NSE Kenya 25 Index, FTSE NSE Kenya Government Bond Index and the FTSE ASEA Pan African Index. For the purposes of this study, the NSE 20 share index will be used as the expected market return given it covers the entire period under study (2002-2012) and also as this particular index enjoys extensive coverage in the public media in Kenya thereby acting as a barometer that monitors changes in the economy (Dickinson & Muragu, 1994).

1.7 Summary of the Chapter

The objective of this chapter is to give a background and the problem statement for the study. The justification for the study has also been discussed; the research objectives and research questions that will be used have also been highlighted. The scope for the study has also been defined in this chapter.

The rest of this research thesis is organized as follows; chapter two reviews literature on profit warnings and dividend decreases. Both empirical and theoretical studies have been discussed in this chapter. Chapter three discusses the methodology of the study. This includes the companies included in the study and the statistical techniques that will be applied in investigating the phenomena. Chapter four presents the analysis of the study. Chapter five summarizes the key findings, gives a discussion of the study, and a conclusion for the study while making recommendations for areas for future research and limitations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to explore the literature on profit warnings and dividend decreases in relation to share prices and volume. This chapter will also discuss the model specification and the theories that underlie the study. Further, this chapter will define the variables in form of a conceptual framework.

2.2 Theoretical Framework

2.2.1 Information Asymmetry

There exists an agency relationship between the shareholders and the management of a corporation. Shareholders, who are the owners, employ managers as their agents and expect them to act in their best interest (Copeland et al, 2005). According to firm theory (Kapoor, 2009), managements' primary goal is considered to be that of shareholder wealth maximization which is maximizing the price per share equivalent to the discounted cash flows of the firm (Copeland et al, 2005). As agents, managers must make a decision as to whether to pay out earnings as dividends that may be used in present consumption or to retain the earnings and invest them in productive opportunities with the expectation of future consumption (Copeland et al, 2005).

Due to this separation of firm ownership from control, management tend to possess information different to other market participants and shareholders in the aspects of the firm's operations and future aspects (Elayan and Pukthuanthong, 2009). This information asymmetry could lead to either a moral hazard if they undertake actions not specified by the shareholders or adverse selection as managers can profit from the information advantage that they have over shareholders or (Francoeur, Labelle, & Martinez, 2008). It therefore goes without saying that if this information is advantageous then the shareholder will be at a disadvantage (Bodie, Kane & Marcus, 2011) hence management have to find a way to reduce the information asymmetry. Nyabundi (2013) states that management make use of earnings and dividends as

signaling device such that if useful information is contained therein it causes a change in share prices.

The prevailing share prices should therefore reflect all the available information about the asset (Bodie, et al, 2011). The market needs to have informational efficiency so that as a result of new information, the share prices change accordingly. Trading volume is proportional to the magnitude of price changes when a disclosure is made and the level of information asymmetry before disclosure (Kim & Verrecchia, 1991). The information content hypothesis is also referred to as the signaling theory (Nyabundi, 2013).

2.2.2 Market Efficiency

The concept of Efficient Market Hypothesis (EMH) in stock markets was first applied by Fama in 1970 and since then it has been generalized over all other asset markets over the years (Sheikhabahaei, Osman, & Rahman, 2012). According to Fama (1970), in any economy, the primary role of the capital market is to allocate the ownership of capital stock therefore a market where all prices fully reflect all relevant information is considered efficient. Hence under the Efficient Market Hypothesis (EMH), the stock price $P_{j,t}$ already incorporates all relevant information, and, the only reason for prices to change between time t and time $t-1$ is the arrival of ‘news’ or unanticipated events (Cuthbertson, 2005).

New information is in the form of news, announcements, expectations, opinions, stories, and even lack of news which should be continuously incorporated in stock prices if the market is deemed to be efficient (Stefan, 2009). News by definition is unpredictable and random hence uniformed investors buying a diversified portfolio in markets deemed to be efficient, at the prices given by the market should obtain the same rate of return as by the experts (Bodie et al, 2011). If the information flow is unimpeded, then it should immediately be reflected in the current stock prices so that a future period’s price change will only reflect news about that future period and will be independent of the past stock prices (Malkiel, 2003).

The intense competition among analysts also ensures that new information is reflected instantaneously in stock prices which make it difficult for any participant to possess comparative advantage in the acquisition of information that can outperform the market by generation of abnormal returns, which is an aspect that enhances stock market efficiency (Cuthbertson, 2005). The adjustment of security prices to relevant information leads to 3 different forms of stock market efficiency.

In the weak form of market efficiency, stock prices occur in a random fashion such that current prices are independent of past prices and the use of past information in the form of pattern or trend analysis should not generate abnormal returns unless there is an anomaly. In semi-strong form of market efficiency current stock prices fully reflect both publicly released and past information and any attempt to use such information will not generate abnormal profits unless there is an anomaly. Finally, efficiency in the strong form implies that the use of private or public or past information should not outperform the average performance of other investors as all such information is fully incorporated in the current stock prices. Hence Investors have monopolistic access to all the information relevant for price formation

Reilly & Brown (2006) state that the foundation of market efficiency is based on three main assumptions:

1. Assume a crowd of high-profit seeker participants' analyses and assess securities, each acting separately and independently. They are rational investors and adjust their portfolios rapidly to any new released information.
2. The timing and characteristic of information used to be randomly and there is independence for each announcement.
3. Security prices are adjusted rapidly by profit maximizing investors to imitate the consequences of new information.

A comparison of the degree of information content of profit warnings and dividend decreases has not been examined in the past on the NSE which displays efficiency in the weak form as is evidenced by (Olweny, 2012). He carried out an event study which involved the use of t-test of significance to find out the effect of cash dividend announcement on firm

value of 4 firms between 1999 and 2003. The results indicated that dividend announcements significantly affect firm value as such announcements convey useful information about the future value of a firm and that the NSE is not efficient in the semi strong form hence can allow abnormal returns to be made during dividend announcement.

This supports the findings of Dickinson & Muragu (1994) who studied market efficiency in developing Countries and focused on the Nairobi Securities Exchange. This study employed the use of serial correlation test of individual companies, correlation coefficient testing across lags of individual companies, Q statistics tests, binomial test of individual companies and Runs tests. The results showed that the NSE was efficient in the weak form.

Mlambo, C. & Biekpe (2001) studied the weak form of efficiency of African stock markets where in many of the markets, the random walk hypothesis was rejected except for Kenya, Namibia and Zimbabwe that were found to be relatively weak form efficient. In the case of Namibia, the weak form of efficiency was attributed to cross listings from JSE. The markets in Mauritania, Ghana, Egypt and Cote d'Ivoire, were found to be weak form inefficient which implies that past trends analysis can generate abnormal returns. According to a study carried out by Magnusson & Wydick (2002) on the efficiency of African stock markets, the results from the study indicate that none of the African stock markets conformed to random walk I and only the US markets met its requirements. The NSE, and 5 other African markets conformed to random walk II just like markets in south East Asia and Europe. This implies that even African markets are not inferior to those in other parts of the world.

2.2.3 Information Content

Several theories have been advanced to explain why companies issue profit warning announcements. 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 (Bulkley, G., & Herrerias, 2005a). The Capital Markets Authority (CMA) issued a mandated disclosure requirement through legal notice no. 60 of May 2002 stipulating that, an issuer shall disclose all material information and make a public announce-

ment of any profit warning, where there is a material discrepancy between the projected earnings for the current financial year and the level of earnings in the previous financial year.

There are two features of profit warnings that make them an interesting event to investigate apart from the sheer size of their initial impact on prices. The first is that they are signals about a specific realization, and one which will be observed in the very near future. Approximately 90% of profit warnings precede the earnings announcements by less than three months. If there is any under reaction then the correction should be a fairly short and sharp process. The second feature is that warnings fall into two classes, those that present a new earnings forecast, either a point estimate or a range, and those that offer only the qualitative guidance that earnings will be below current expectations. This offers an opportunity to test not only whether the market underreacts to the new information, but also whether the scale of any under reaction depends on the precision of the signal (Bulkley, G., & Herrerias, 2005).

A major reason advanced as motivation for issuing of profit warnings is the avoidance of shareholder lawsuits over failure by management to provide timely negative information. Other reasons include need to comply with regulatory requirements besides being used as a strategy by management to affect the overall market reaction to earnings news based on the assumed informational value (Suka, 2011). A common aspect of both UK and US firms is that they are more likely to make profit warnings if they perceive the change in earnings is permanent. It may be argued that, when firms are able to credibly communicate non-permanence of current earnings reductions to investors, expected reductions in profit are not PSI in that their impact on the expected value of future cash flows to the firm is not perceived to be 'material' (Dedman, 2004).

In the banking industry, bank profit warnings contain valuable information even though they represent a milder form of negative news than a bank failure. They represent a bank's effort to correct the prevailing market expectations of the future. This therefore means that the adjustment to earnings should reduce asymmetric information hence result in negative signals about the bank issuing the warning (Jackson, D. & Madura, J., 2004). The results of the study indicated that banks that issue profit warnings elicit a strong negative share price reaction

thereby causing a negative valuation effect.

The theory on the information content of dividends states that, management use dividend announcements as a signal of the prospects of a firm. Therefore, when the firm announces a decrease in dividends, investors perceive it as a negative signal on current and future prospects and an increase reflects good information (Altink-Yilmaz & Selcuk, 2010). Miller & Rock (1985) suggest that dividend announcements provide the missing pieces of information about the firm and allow the market to estimate the firm's current earnings. Pettit (1972) using quarterly data showed that dividend announcements convey information beyond that already revealed in simultaneous earnings number. Bhattacharya (1979) also proved that firms are likely to pay dividends as a signaling tool to convey the future cash expectations despite the tax disadvantages of paying dividends.

Shareholders however have to act in a predictable way so as to enhance the information value of dividend policy by applauding an increase and condemning a decrease. The reasoning behind this is that management uses an increase in dividend to demonstrate confidence in future earnings growth and recognition that shareholders will not tolerate a cut (Nitta, 2006). Theory and evidence from market reactions Bhattacharya (1979), Miller & Rock (1985) and John & Williams (1985) shows that dividend reductions convey bad news to the market indicating that when there is information asymmetry, managers can use dividend reductions to signal declines in subsequent earnings.

2.3 Empirical Framework

Investors consider earnings estimates important as they use them to assess the company's profitability and future prospects (Tumurkhuu et al., 2010). Profitability therefore is a key indicator of the company's health therefore profit warnings tend to give an indication of an unexpected event that will result in lower profitability (Kearns & Whitley, 2002). Profit warnings are considered pure events as they represent a specific and imminent realization on earnings which is backed by the size of the initial impact on the market. In the announcement window of a profit warning, the security prices drop on average by 22% which is considered an unusual initial impact in event studies (Bulkley, G., & Herrerias, 2005).

Profit warnings can be divided into two, where one set comprises those that give a prediction for the expected earnings and referred to as quantitative warnings. The other set only gives guidance that there will be a shortfall in the current expectations, these are referred to qualitative warnings (Bulkley & Herrerias, 2005). Church & Donker (2010) examine whether corporate officers should issue a quantitative or qualitative announcement on profit warnings so as to reduce the share price fall. The findings of their studies show significant average abnormal returns on the announcement day were negative at 6.12%. The regression analysis further revealed that for firms with multiple successive profit warnings, having a higher degree of disclosure impacts the abnormal returns in a significantly positive way unlike single profit warning announcements.

The division of profit warnings into qualitative or quantitative therefore gives an opportunity not only to examine if the market under reacts to news but also whether the magnitude of under reaction has a relationship with the information quality released. This in turn helps explain the reason for under reaction (Bulkley & Herrerias, 2005). Unlike earnings announcements, which have a predetermined and recurring release date, profit warnings are not announced in advance; thus, the element of surprise is greater, as are the accompanying negative abnormal returns (Church & Donker, 2010).

Previous research on profit warnings has focused on the impact of profit warnings on share price. Studies from Jackson & Madura (2003 and 2004) show a trend of strong negative abnormal returns both after and, to a lesser extent, before the issuance of the warning. Bulkley & Herrerias (2005) also observed this same trend of negative abnormal returns after profit warnings and differentiated these into two groups: those that only warn of lower-than-expected profits and those that add a revised forecast in addition. Negative market performance was greater where the warning did not include a new forecast.

Collett (2004) additionally looked at the trading volume activity before an announcement to find out whether any investor anticipated it by assessing the unexpected trading volume 5 days before and after the announcement period. The results revealed that the trading level was

high on the day of the announcement and 1 day after the announcement which was consistent with that of share price reactions. The rest of the window period did not reveal any evidence of abnormal trading period bringing Collet to the conclusion that then announcement was a surprise and that investors are able to absorb information fast.

Elayan & Pukthuanthong (2009) carried out study that looked at a sample of 3667 profit warning announcements made by 2393 listed firms from May 1 1997 to December 31, 2002. The results showed that price reaction to profit warnings is negative as expected and this is both statically and economically significant. The study showed that the two-day return following a profit warning was -16.59%. The study also went further ahead to show that the degree of reaction is affected by the size of the difference between the consensus analyst forecast and managements warning forecast, firm size and firm basic earning power. Firms with higher information asymmetry factors face larger price falls following warning announcements.

Tumurkhuu et al. (2010) carried out a study on 87 companies in the EU area from January 2008 to April 2010. The study examined the relationship between the profit warning and stock returns. The study concluded that profit warnings do influence stock returns in the EU area and also that qualitative warnings elicit more negative effect on stock returns of companies'. However the company size did not show results that were indicative of a different impact.

Bulkley & Herrerias (2005) carried out a study on stock returns following profit warnings which revealed that stock prices decreased cumulatively by approximately 22% over the event window period indicative of profit warning importance. The abnormal returns and average of the daily returns of the warning stocks were also collected and calculated. These showed that abnormal returns following a quantitative warning -20.7% were less negative than those of qualitative warnings which were -24.7%. They attributed this to the scarcity of disclosure brought about by qualitative warning leading market participants to interpret them consider as worse than quantitative warnings.

Suka (2011) examined the information content of profit warning announcements at the Nairobi Stock Exchange by studying fourteen companies that had issued profit warning between the periods 2002 to 2010. The study made use of daily adjusted prices for sample stocks for the event window of 31 days, consisting of 15 days before and 15 days after the profit warning announcement to determine whether profit warning announcement elicit any reaction in the Kenyan Stock Market. The results were consistent with the hypothesis that profit warnings have information content which is associated with a negative revaluation of the firm. The study equally found out that there were negative abnormal returns that were statistically significant at 5% level, around the profit warning announcement date. There is therefore provides evidence of investor reaction before and after the profit warning announcement.

Nyabundi (2013) following the information-signaling hypothesis argues that, information asymmetry between shareholders and management renders a change in dividend payout the only way for management to signal the future prospects thus. However, Shania & Yuce (2011) carried out a study on the Indian Stock Market to investigate the information content of dividend announcements. The study focused on 82 Bombay Stock Exchange listed companies that had announced dividends over the period 2004-2007. The results indicated that investors tend to have an unfavorable reaction towards dividend decreases and the reverse for increases. The study concluded that dividend announcements have information content and therefore stock prices move in the direction of the dividend change.

According to another study carried out by Sheikhabahaei, Osman, & Rahman (2012) on the Kuala Lumpur Stock Exchange (Bursa Malaysia), the results did not reflect consistency with the signaling hypothesis. The study covered a three day window period and consisted of 138 firms that had made an announcement over the years 2008-2011. The results revealed that no negative reaction followed a dividend decrease however an increase in dividend was followed by a positive reaction.

A study carried out by Altioek-Yilmaz & Selcuk (2010) on the Istanbul Stock Exchange to investigate market reaction to dividend change announcements, supported the signaling

hypothesis. The study covered the time period between 2005 and 2008, where 184 announcements were made by 46 firms. The results indicated that the market reacts negatively to dividend decreases and positively to dividend decreases which is consistent to the signaling hypothesis.

A study carried out by Capstaff, J., Klaeboe, A. & Marshall (2004) on the Oslo Stock exchange using data from 1993-1998 revealed that significant abnormal market returns are associated with announcements of both dividend increases and decreases. However the reaction was more pronounced for larger dividend changes and positive dividend changes followed by permanent cash flow increases. The results from this study although less compelling to the dividend signaling could be interpreted to mean that that dividend changes do indeed convey new information to market participants.

Dasilas (2011), carried out a study on the Greek stock market to investigate the stock market reaction to dividend change announcement for the period 200-2004. The results support the information content of dividends and support the dividend signaling hypothesis where reduction (increase) in dividends induces a negative (positive) price reaction. The results on the trading volume behavior on the other hand show that a there is a positive reaction to dividend change announcements which is similar to prices. Trading volume therefore moves in the same direction as the dividend change signals

Therefore when a listed company becomes aware of events that are significant in that they can cause the firm's share prices to change drastically, then they need to issue a trading announcement on the same (Kearns, A., & Whitley, 2002).

2.4 Description of variables

2.4.1 Market Reaction

The changes in the share prices show the market participants expectations while volume reflects the individual market participants change in expectation following an announcement (Beaver, 1968, cited by Kim & Verrecchia, 1991).

2.4.2 Profit Warning

A profit warning is a voluntary announcement made by firms disclosing management's expectation that the earnings will fall short of those forecasted (Asudi, 2012); Elayan & Pukthuanthong (2009). Profit warnings can be divided into two, where one set comprises those that give a prediction for the expected earnings and referred to as quantitative warnings. The other set only gives guidance that there will be a shortfall in the current expectations, these are referred to as qualitative warnings (Bulkley & Herrerias, 2005).

Previous research on profit warnings has focused on the impact of profit warnings on share price (Jackson & Madura, 2003 and 2004; Bulkley & Herrerias, 2005). Collett (2004) additionally looked at the trading volume activity elicited by a profit warning. This study will adopt measures used by Collett (2004) and Jackson & Madura (2003 and 2004) to establish the information content of profit warnings on share prices.

2.4.3 Dividend Decrease

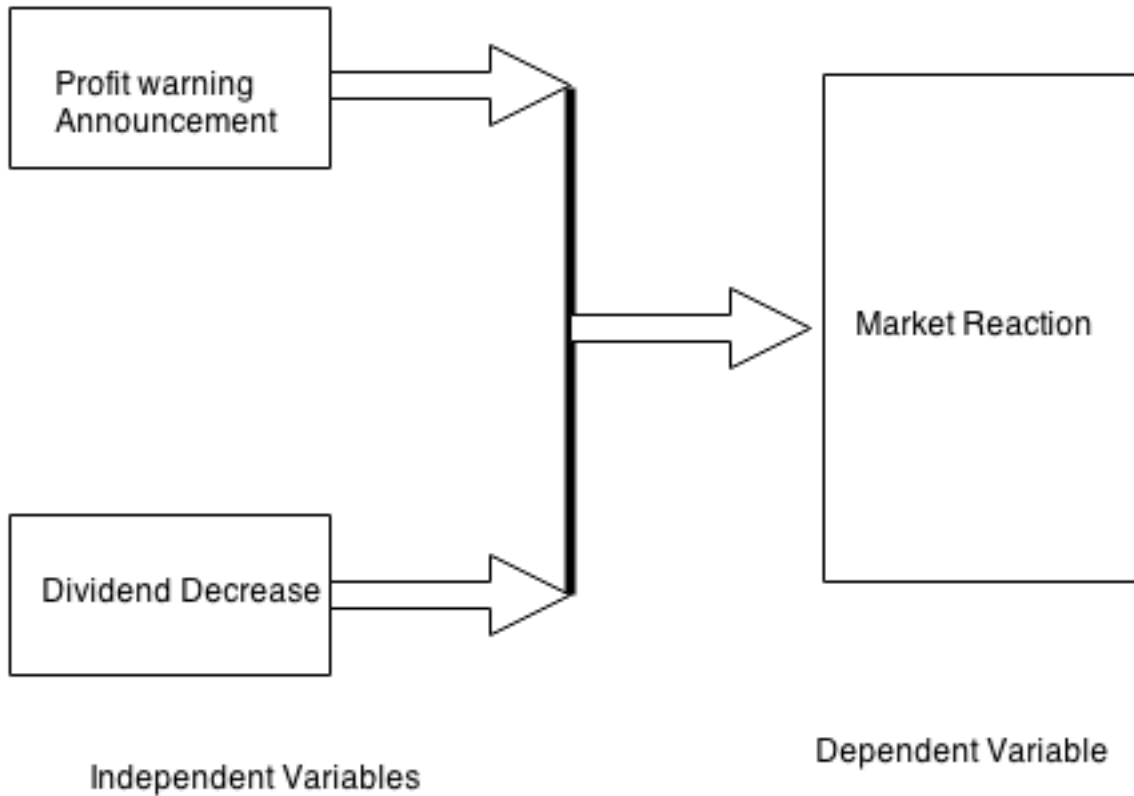
Dividends refer to the distribution of a company's profit to its shareholders (Deeptee & Roshan, 2009). The theory on the information content of dividends states that, management use dividend announcements as a signal of the prospects of a firm. Therefore, when the firm announces a decrease in dividends, investors perceive it as a negative signal on current and future prospects (Altiok-Yilmaz & Selcuk, 2010).

This study adopted measures used by Sheikhbahaei, Osman, & Rahman (2012), Collett (2004) and Dasilas (2011) to establish the information content of profit warnings on share prices.

2.5 Conceptual Framework

Conceptually, the study examines the information content contained within a profit warning announcement and a dividend decrease and how that information affects the share prices and the trading volume behavior and this has implications in terms of abnormal return. The conceptual framework on the market reaction (dependent variable) to profit warnings and dividend decrease (independent variables) will be examined as shown below on figure 2. 1.

Figure 2.1: The Conceptual Framework



2.6 Operationalization of Variables

2.6.1 Market Reaction

The study will employ share price as a proxy for market reaction. Public information elicits an adjustment in price which is followed by trading volume such that bad (good) news is followed by negative (positive) returns and large selling (buying) activity (Malinowska, 2010). The changes in the share prices show the market participants expectations (Beaver, 1968, cited by Kim & Verrecchia, 1991).

2.6.2 Profit Warning

A profit warning is a mandated disclosure requirement issued when the earnings in the current year to date are at least 25% lower than the earnings level in the previous financial year (Requirements, Public, Provisions, & Schedule, 2002). Profit warning announcement are

generally associated with negative abnormal stock return Asudi (2012) and a high trading activity Collett (2004).

2.6.3 Dividend Decrease

For this study, a dividend decrease is whereby the current year dividend $D_{i,t}$ is lower than the previous year dividend $D_{i,t-1}$. Dividend decreases induce negative price reactions and positive trading volume behavior (Dasilas, 2011).

2.7 Model specification

Ultimately, the objective of the study is to assign the abnormal returns to the two events (profit warning and dividend decrease) so as to establish which of the two has a higher magnitude than the other.

2.7.1 Share Price Reaction in the Event Window

The daily stock returns were calculated over the event window period following a profit warning announcement and a dividend decrease respectively. For the profit warning, a window period of 11 days $(-5,0,+5)$ around the announcement date will was used. According to Jackson & Madura (2003) share prices begin to adjust five days before the profit warning announcement and the market reaction is not complete until five days after the warning.

For the case of dividend decreases, a window period of 3 days $(-1,0,+1)$ around the announcement date is normally suggested. Kothari, Lewella & Walter (2006 as cited by Sheikhabaei, Osman, & Rahman, 2012) state that using a three day window period enables the study capture any probable leaked information that might have taken place in relation to the announcement day as well as the immediate effect of announcement on the share price on the day and a day after the event. However, for comparative purposes, an 11- day window was used.

The daily stock returns for the event period were calculated as:

$$R_{i,t} = \ln \left(\frac{P_{i,t}}{P_{i,t-1}} \right) \quad (1)$$

Where:

$R_{i,t}$ Represents the actual stock return for security i on day t

$\ln$ Represents the Natural Logarithm

$P_{i,t}$ Represents the closing price of stock of security i on day t

$P_{i,t-1}$ Represents the closing price of stock of security i on the previous day

The abnormal returns $AR_{i,t}$ will be obtained in the event window period by calculating the difference between the actual return $R_{i,t}$ and the expected or normal return. The normal return here refers to the return that would have been obtained if the event had not taken place (MacKinlay, 1997).

MacKinlay (1997) states that there are various models for calculating expected or normal returns; Constant mean return model and the Market model, which are categorized as statistical methods, and the Capital asset pricing model, CAPM, and the Arbitrage pricing model, APM, which are economic models. Although the Capital asset pricing model is widely used in the financial community (Bodie, Kane & Marcus, 2011), the market-adjusted return model was employed for this study. In situations with limited data, MacKinlay (1997) proposes the use of the market-adjusted return model. The market-adjusted return model can be viewed as a restricted market model with α_i constrained to be zero and β_i constrained to be one. Because the model coefficients are pre-specified, an estimation period is not required to obtain parameter estimates. To get abnormal returns using the market-adjusted model $R_{m,t}$ is subtracted from $R_{i,t}$.

The abnormal returns for the event period were calculated as:

$$AR_{i,t} = R_{i,t} - R_{m,t} \quad (2)$$

Where:

$AR_{i,t}$ Represents the daily abnormal returns for security i on day t

$R_{i,t}$ Represents the actual total return for security i on day t

$R_{m,t}$ Represents the return on the NSE 20 share index on day on day t

To get the average abnormal returns, the daily abnormal returns will be averaged across N firms, which are firms that issued a profit warning and dividend decrease. The average abnormal returns will be calculated as follows:

$$AAR_t = \frac{\sum_{i=1}^N AR_{i,t}}{N} \quad (3)$$

Where:

AAR_t Represents the average abnormal returns on day t

$\sum_{i=1}^N AR_{i,t}$ Represents the sum of the abnormal returns on day t

N Represents the number of firms that have issued profit warnings and dividends respectively

The abnormal return observations must be aggregated in order to draw overall inferences for the event of interest (MacKinlay, 1997). To obtain the cumulative average abnormal returns (CAAR), the average abnormal returns are summed up over the event window period following a profit warning and dividend decrease respectively. The cumulative abnormal returns (CAAR) were calculated as follows:

$$CAAR(T_1, T_2) = \sum_{\tau=T_1}^{T_2} AAR_{\tau} \quad (4)$$

Where:

$CAAR(T_1, T_2)$ Represents the cumulative average abnormal returns over the event window of $(-5, +5)$

$\sum_{\tau=T1}^{T2} AAR_{\tau}$ Represent the sum of the average abnormal returns over the event window of
 (-5,+5)

In relation to the dividend announcements, of interest for this study were the companies whose dividend in the current year $D_{j,t}$ was less than that paid in the previous year $D_{j,t-1}$ that is $D_{j,t} < D_{j,t-1}$.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The objective of this study was to examine the information content between a profit warning and dividend decrease on share prices. This chapter discusses the companies included in the study and the statistical techniques that will be applied in investigating the phenomena.

3.2 Research Design

The study adopted a descriptive design in an attempt to find out between a profit warning and dividend decrease which has higher information content. Both quantitative and qualitative data were collected. To achieve quantitative data, an event study was carried out. This is an empirical study performed on a security that has experienced a significant catalyst occurrence and subsequently changed in value as a result. Such a study will reveal important information about how a security is likely to react to a given event which can be either positive or negative (Kapoor, 2009). A questionnaire was issued to capture the qualitative data of the respondents perceptions.

3.3 Population and Sampling Frame

As of November 2013, there were 62 companies listed on the NSE and categorized into eleven sectors including: Agricultural, Commercial and Services, Telecommunication and Technology, Automobile and Accessories, Banking, Insurance, Investment, Manufacturing and Allied, Construction and Allied, Energy and Petroleum and Growth Enterprise Market Segment.

Although the Nairobi Securities Exchange was started in 1954, the target population for the study was companies that had been listed on the exchange by 2001 and remained so listed over the period 2002-2012. This time frame was chosen for comparative purposes due to the fact that the CMA issued a mandated disclosure requirement on profit warnings in 2002 through legal notice number 60.

For a company to be included in the sample, it had to meet the following criteria;

1. To be included in the sample, the company should have issued a profit warning over the period 2002-2012 and had a decrease in dividend over the same period.
2. No other corporate announcement should have been made by the company on the day the profit warning was issued or the dividend decrease took place as it would be difficult to disintegrate the effect of the events on the share price and trading volume.
3. To capture the dividend decrease, the company should have paid/declared an ordinary cash dividend in the current year and in the previous year.
4. The company is required to have been listed by the year 2001 and have remained so listed over the period 2002-2012. This criterion will ensure that the dividend policy of the firm will not be distorted by any recent official listing.

After data collection, the number of companies out of the 62 that satisfied the criteria above was 11 companies with 25 observations for profit warnings and 55 for dividend decreases.

3.4 Data Collection Methods

The data used in this study was both primary and secondary data. The data on dividends paid and the date was collected from the annual financial reports of companies. Data on the announcement dates on profit warnings was collected from the business daily newspaper. The Nairobi Securities Exchange and the daily official lists by the Nairobi Securities Exchange gave data on the share prices and The NSE 20 share index. Secondary sources were chosen for the study as the data the researcher sought already existent information. Primary data on the other hand was sought as the researcher queried the respondents on their perception on the two events.

3.5 Data Analysis and Presentation

The main objective of this study was to examine the differential market reaction of companies listed on the Nairobi Securities exchange to profit warning announcements and dividend decreases, in an attempt to establish which has higher information content than the other. The study adopted the event study so as to measure the impact of each specific event on the share price. The usefulness of such a study comes from the fact that, given rationality in the marketplace, the effects of an event will be reflected immediately in security prices.

The information content of each event was measured by calculating abnormal returns which is the difference between the actual and normal return which is what is expected in the absence of the event (MacKinlay, 1997). Normality tests of skewness of ideally zero and kurtosis of ideally three (Gujarati, 2003) were employed to test whether the abnormal returns from the sample companies were normally distributed. Normality is a condition that should exist before sample results can be generalized to the entire population (Gujarati, 2003).

Parametric tests were carried out by using the T-statistics to determine the statistical significance of the abnormal return $AR_{i,t}$ associated with a profit warning and a dividend decrease respectively. Once the T-statistics has been obtained, the P-value was also obtained. The P-value shows the actual probability of obtaining a value of the test statistic that is as much as or greater than that obtained by the test statistic.

For the information content of one event to be considered higher than the other, then the share price reaction elicited by the particular event, as captured by the abnormal returns, would need to be greater than the other. In order to compare the magnitudes of the share price in relation to the event period, a non-parametric Mann-Whitney Rank Sum test was run. This test is similar to the parametric Two-sample t-test.

Ultimately, the objective of this study is to assign the abnormal returns to profit warnings and dividend decreases respectively so as to establish which of the two has a higher magnitude. Comparing the share price movement triggered by the two events helped in finding out how much the market values the information content of either a dividend decrease or profit warning (Ryan & Taffler, 2004). This would thereby be indicative of which of the two events has a higher level of information content.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

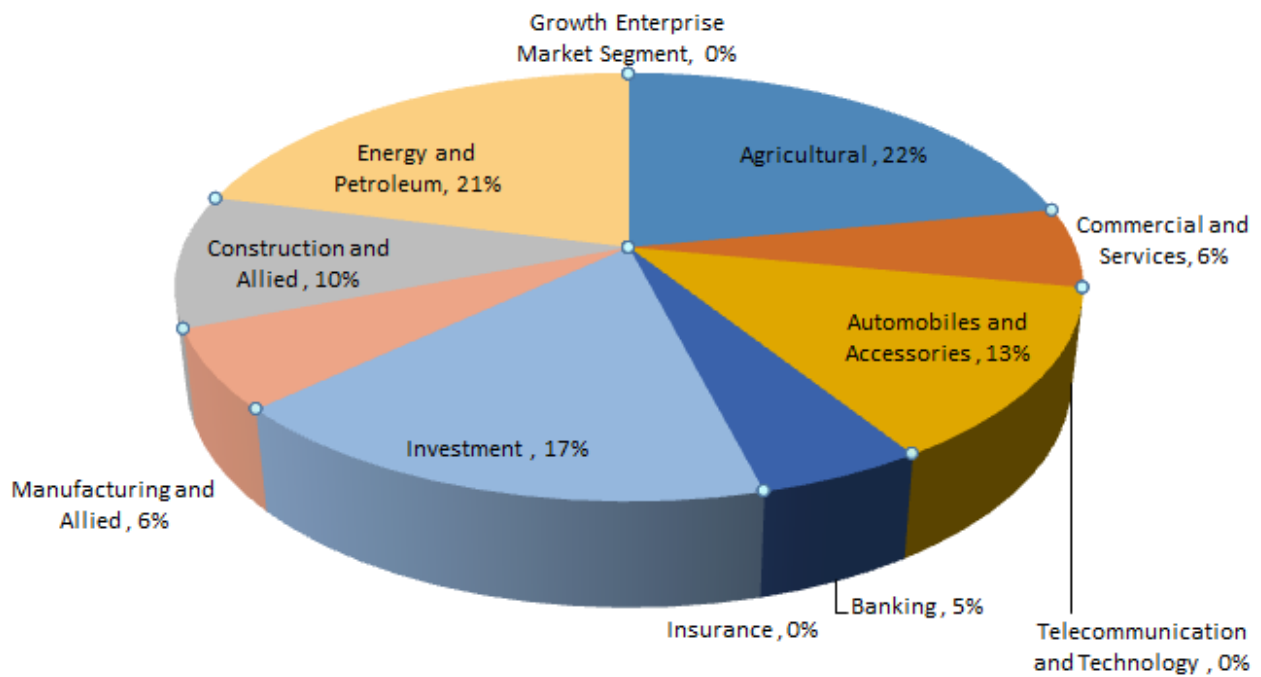
4.1 Introduction

In this chapter the results from the analysis are presented. The chapter is divided into sections where the distinct objectives are addressed. An overview of the sample companies in the various sectors has been provided. The abnormal and cumulative returns are presented over the event period to enable the patterns and different magnitudes of the respective announcements be captured.

4.2 Sector Breakdown of the Sample

Following the criteria for sample selection and the data collection process, the sample resulted in 11 companies. There were 25 observations of companies that issued profit warnings between 2002 and 2012 and 55 observations of companies that had a decrease in dividend over the same period. The Nairobi Securities exchange has categorized the listed firms into eleven sectors which include: Agricultural, Commercial and Services, Telecommunication and Technology, Automobile and Accessories, Banking, Insurance, Investment, Manufacturing and Allied, Construction and Allied, Energy and Petroleum and Growth Enterprise Market Segment. Table 4.1 and table 4.1 present the sample representation and the sectorial breakdown of the observations respectively.

Figure 4.1: Sector Breakdown of the Sample



A high share of the companies that were included in the sample was from the Agricultural sector which covered 22% of the total population. Telecommunication and Technology, Insurance and Growth Enterprise Market Segment sectors were under-represented at 0%. Companies under the Energy and Petroleum sector and the Investment sector were also highly represented at 21% and 17% respectively.

Table 4. 1: Sector Breakdown of Sample Firms

Sectors	Profit Warning Observations	% of Observation	Dividend Decreases Observations	% of Observation
Agricultural	5	20%	10	18%
Commercial and Services	5	20%	7	13%
Telecommunication and Technology	1	1%	0	0%
Automobiles and Accessories	3	12%	3	5%
Banking	1	4%	11	20%
Insurance	0	0%	1	2%
Investment	1	4%	1	2%
Manufacturing and Allied	3	12%	11	20%
Construction and Allied	3	12%	7	13%
Energy and Petroleum	3	12%	4	7%
Growth Enterprise Market Segment	0	0%	0	0%
Total	25	100%	55	100%

A substantial share of the companies that issued profit warnings are in the agricultural sector (43%) and the Energy and Petroleum sector (21%). Companies also in the Commercial and Services sector and the Automobiles and Accessories sector were highly represented in the sample at 14% each. In regards to the companies that had a decrease in dividends a substantial share was from the Banking sector (25%) and the Commercial and Services sector (16%). Companies that fell into the Telecommunication and Technology sector, the Insurance sector and the Growth Enterprise Market Segment were under presented with 0% for the entire sample.

4.3 Part 1: Share Price Reaction to Profit Warnings

Figure 4.2: AAR and CAAR by Event Day for all the profit warning Firms during the 11-event day window day window

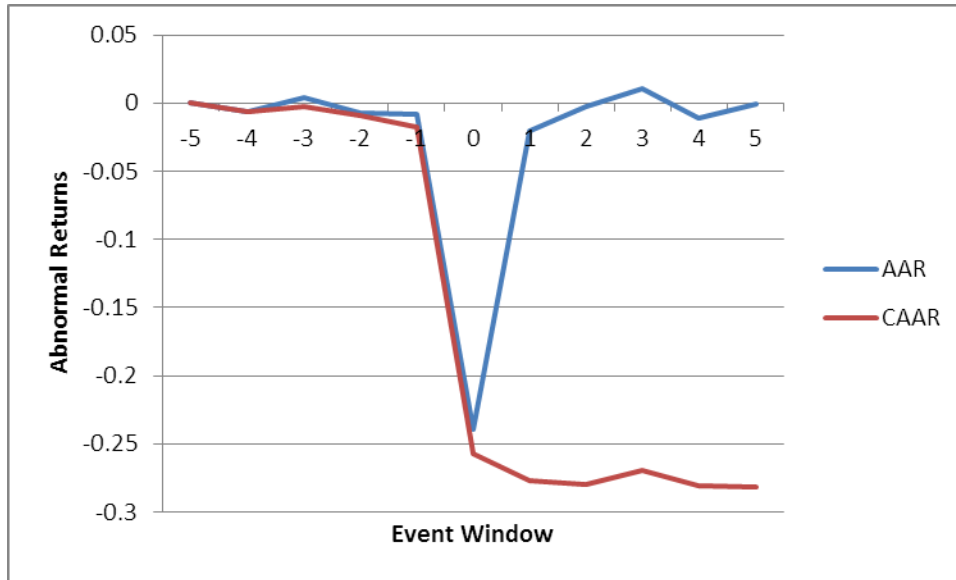


Figure 4.2 presents the Average Abnormal returns of the 25 observations of companies that issued profit warnings between the years 2002-2012. The time observed was $(-5,+5)$ around the announcement where day 0 is the day of announcement. The results in Figure 4.1 show that the average abnormal returns were lowest on the day of the announcement and highest three days after the announcement declining on day 4 before resuming the normal pattern on day 5.

Figure 4.2 presents the Cumulative Average Abnormal returns of the 25 observations of companies that issued profit warnings between the years 2002-2012. The time observed was $(-5,+5)$ around the announcement where day 0 is the day of announcement. The cumulative average abnormal returns decreased steadily from day -3 to day 2 where it increased but dropped again on day 3 and resumes a pattern from then to day 5.

Table 4.2: Daily Average Abnormal Returns by event day for all sampled firms

Day	N	Mean	Standard Deviation	t Value	P Value
-5	25	0.0004	0.0219	-0.25	0.8068
-4	25	-0.0042	0.0099	-1.06	0.3290
-3	25	0.0026	0.0215	1.48	0.1769
-2	25	-0.0061	0.0191	-1.74	0.1126
-1	25	-0.0077	0.0116	-2.74	0.0191**
0	25	-0.0245	0.0364	-3.92	0.0015**
+1	25	-0.0161	0.0392	-1.86	0.0901*
+2	25	-0.0029	0.0153	-0.21	0.8377
+3	25	0.0065	0.0119	1.92	0.1032
+4	25	-0.0107	0.0302	-1.50	0.1731
+5	25	-0.0008	0.0218	-0.38	0.0709*

Where N is the number of observations

***, **, * Statistically significant at the 1% level, 5% level and 10% level respectively

During the 5 days before the announcement of the profit warning ($-5, -1$), the average abnormal returns were negative except for day -5 and -3 where they were 0.0004 and 0.0026 respectively. The t statistics revealed that the average abnormal returns were not significant except for those of day -1 , $p=0.0191$, which were significant at the 5% level.

On the announcement day, the average abnormal returns were negative at -0.0245 with a t-statistic of -1.86 which was statistically significant at the 5% level.

In the days that followed the profit warning announcement ($+1, +5$), the average abnormal returns were all negative except for day $+3$ which was positive at 0.0065. The results however revealed the average abnormal returns were only statistically significant on day $+1$ and $+5$ at the 10% level.

The average abnormal returns are statistically significant on the prior to the announcement and on the day of the announcement.

4.4 Part 2: Share Price Reaction to Dividend Decreases

Figure 4.3: AAR and CAAR by Event Day for all the Dividend decreasing Firms during the 11-event day window

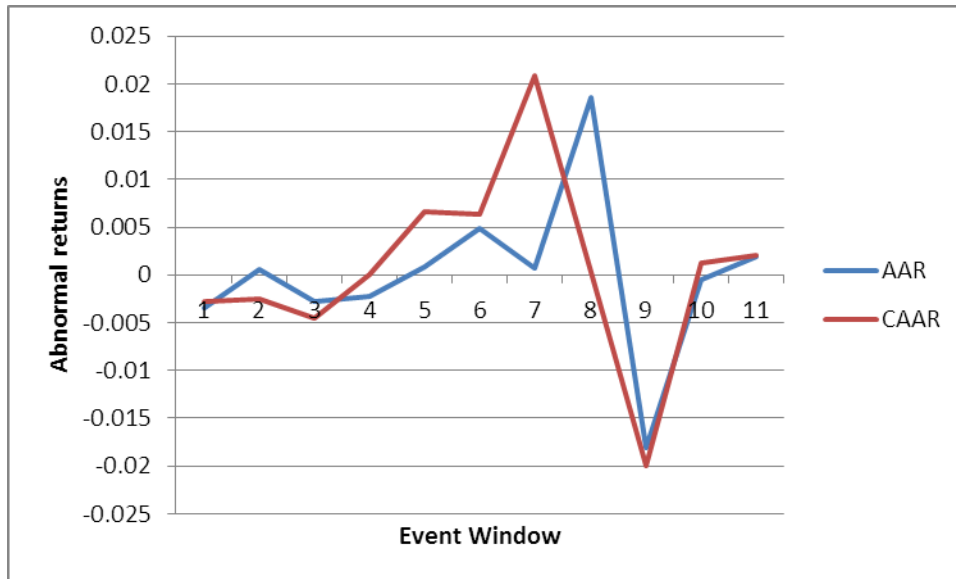


Figure 4.3 presents the Average Abnormal returns of the 55 listed companies that issued profit warnings between the years 2002-2012. The time observed was $(-5,+5)$ around the announcement where day 0 is the day of announcement. The positive average abnormal returns as depicted on figure 4.1 hit the highest level on day 2 and the lowest level on day 3 before going back to the normal pattern as is captured on day 4 and 5.

Figure 4.3 presents the Cumulative Average Abnormal returns of the 55 listed companies that had a decrease in dividend between the years 2002-2012. The time observed was $(-5,+5)$ around the announcement where day 0 is the day of announcement. The cumulative average abnormal returns are highest on day 2 and lowest a day before the dividend decrease takes place

Table 4.3: Daily Average Abnormal Returns by event day for all sampled firms

Day	N	Mean	Standard Deviation	t Value	P Value
-5	55	-0.00347	0.0120	-0.0062	0.066*
-4	55	0.00044	0.0136	-0.0026	0.0652*
-3	55	-0.00256	0.0139	-0.0057	0.0936*
-2	55	-0.00192	0.0146	-0.0052	0.0576*
-1	55	-0.00023	0.0116	-0.0029	0.0252**
0	55	0.004213	0.0221	-0.0008	0.0504*
1	55	0.000371	0.0137	-0.0027	0.0559*
2	55	0.017398	0.1362	-0.0133	0.0972*
3	55	-0.01677	0.1360	-0.0475	0.0105**
4	55	-0.00055	0.0085	-0.0025	0.0427**
5	55	0.001935	0.0157	-0.0016	0.0527*

Where N is the number of observations

***, **, * Statistically significant at the 1% level, 5% level and 10% level respectively

During the 5 days before the dividend decrease ($-5, -1$), the average abnormal returns were negative except for day -4 where they were 0.00044. The tests of significance revealed that the average abnormal returns were statistically significant at the 10% level for all the 5 days before the dividend decrease for those of day -1 , $p=0.0252$, which were significant at the 5% level.

On the announcement day, the average abnormal returns were positive at 0.004213 with a t-statistic of -0.0008 which was statistically significant at the 10% level.

In the days that followed the dividend decrease ($+1, +5$), the average abnormal returns were all positive except for those of day $+3$ and $+4$ which was positive at -0.01677 and -0.00055 respectively. Additionally the results showed that average abnormal returns were all statistically significant at the 10% level except for those on day $+3$ and $+4$ which were significant at the 5% level.

It is interesting to note that the average abnormal returns on the day of the dividend decrease takes place were positive. This could be attributed to the fact that a dividend announcement

elicits a positive market reaction however the market takes 2 days after the announcement to react to the decrease in the dividend.

4.5 Part 3: Comparison of Share Price Reaction to Profit Warnings and Dividend Decreases

Figure 4. 4: Profit warning AAR and Dividend decreases AAR

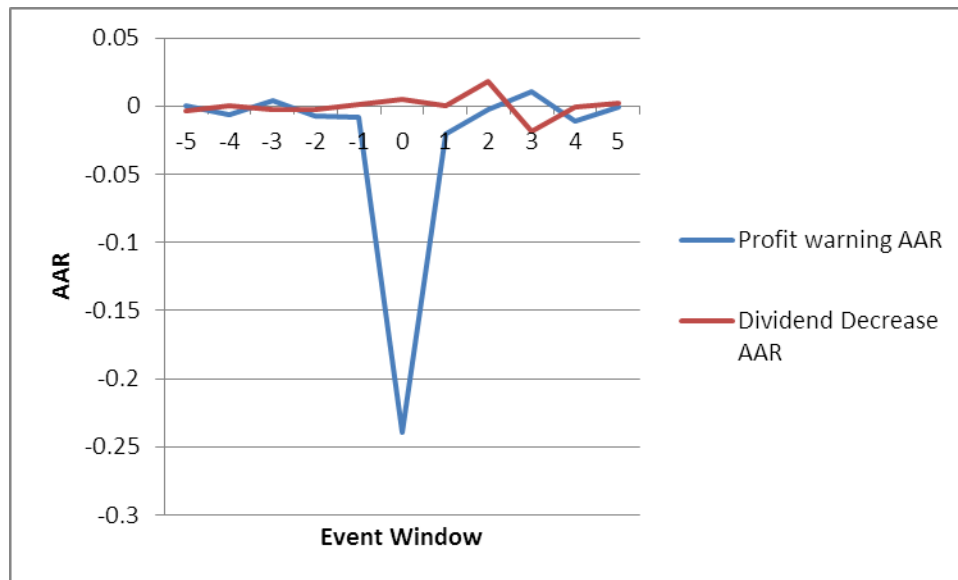


Figure 4.5 captures the average abnormal return elicited by the profit warnings and dividend decreases. From the results presented, abnormal returns elicited during the 5 days before the events $(-5, -1)$, seems to be on average similar. However a day prior to the profit warning announcement, there were high negative abnormal returns before the pattern went back to normal a day after the announcement. From the diagram above we cannot really tell which of the two events had higher information content therefore there was need to carry out a test to help compare the magnitudes of the share price reaction.

In order to compare the magnitudes of the share price in relation to the event period, a non-parametric Mann-Whitney Rank Sum test was run. The non-parametric Mann-Whitney Rank Sum test was used to analyze the mean average abnormal returns impact difference between a profit warning and a dividend decrease. The results were as discussed below.

4.5.1 Mann-Whitney Rank Sum Test And 90% Confidence Interval: Profit Warnings and Dividend Decreases

	N	Median
Profit warnings	11	-0.0042
Dividend decreases	11	-0.0002

Point estimate for ETA1-ETA2 is -0.00420

91.2 Percent CI for ETA1-ETA2 is (-0.01050, 0.00060)

W = 103.0

Test of ETA1 = ETA2 vs. ETA1 not = ETA2 is significant at 0.1310

The test is significant at 0.1305

The median column shows that the median average abnormal returns were higher for dividend decreases (-0.0002) compared to those of profit warnings (-0.0042). The median difference of the two events was -0.00420 with confidence interval 90% for the median difference in average abnormal returns of -0.01050 to 0.00060. The Wilcoxon test statistic, W was 103.0 with a statistical significance of 0.1310. The p-value was 0.1310 which was greater than greater than 0.1, so we rejected the null hypothesis and concluded that there was no statistical significant evidence that the average abnormal returns between profit warnings and dividend decreases were different.

4.5.2 Mann-Whitney Rank Sum Test And 95% Confidence Interval: Profit Warnings and Dividend Decreases

	N	Median
Profit warnings	11	-0.0042
Dividend decreases	11	-0.0002

Point estimate for ETA1-ETA2 is -0.00420

95.1 Percent CI for ETA1-ETA2 is (-0.01190, 0.00110)

W = 103.0

Test of ETA1 = ETA2 vs. ETA1 not = ETA2 is significant at 0.1310

The test is significant at 0.1305

The median column shows that the median average abnormal returns were higher for dividend decreases (-0.0002) compared to those of profit warnings (-0.0042). The median difference of the two events was -0.00420 with confidence interval 95% for the median difference in average abnormal returns of -0.01190 to 0.00110. The Wilcoxon test statistic, W was 103.0 with a statistical significance of 0.1310. The p-value was 0.1310 which was greater than greater than 0.05, so we rejected the null hypothesis and concluded that there was no statistical significant evidence that the average abnormal returns between profit warnings and dividend decreases were different.

4.5.3 Mann-Whitney Rank Sum Test And 99% Confidence Interval: Profit Warnings and Dividend Decreases

	N	Median
Profit warnings	11	-0.0042
Dividend decreases	11	-0.0002

Point estimate for ETA1-ETA2 is -0.00420

99.1 Percent CI for ETA1-ETA2 is (-0.01650, 0.00389)

W = 103.0

Test of ETA1 = ETA2 vs. ETA1 not = ETA2 is significant at 0.1310

The test is significant at 0.1305

The median column shows that the median average abnormal returns were higher for dividend decreases (-0.0002) compared to those of profit warnings (-0.0042). The median difference of the two events was -0.00420 with confidence interval 99% for the median difference in average abnormal returns of -0.01650 to 0.00389. The Wilcoxon test statistic, W was 103.0 with a statistical significance of 0.1310. The p-value was 0.1310 which was greater than greater than

0.01, so we rejected the null hypothesis and concluded that there was no statistical significant evidence that the average abnormal returns between profit warnings and dividend decreases were different.

4.6 Survey results and Interpretation

In an attempt to validate the quantitative data with players in the industry a survey was carried out. Out of the 150 questionnaires that were issued to respondents, only 107 were returned which was a 71% response rate. Table 4.6 below depicted the demographic information of the respondents as supported by the questionnaires.

Table 4.4: Demographic Information

	Number of Observations	% of observations
What type of investor are you?		
Individual investor	50	47%
Institutional investor	30	28%
Stock broker	7	7%
Potential investor	20	19%
Other-specify	0	0%
What is your highest level of qualification?		
Doctor of philosophy (PhD.)	8	7%
Masters' degree	14	13%
Bachelors' degree	66	62%
Other	19	18%
How many years of experience in investing do you have on the Nairobi Securities Exchange?		
Less than 1 year	8	7%
Between 1-5 years	70	65%
Between 6-10 years	26	24%
More than 10 years	3	3%
Do you have any industry focus when investing on the Nairobi Securities Exchange?		
Yes	68	64%
No	39	36%
If yes, what industry sector are you interested in?		
Agricultural sector	8	21%
Automobiles & Accessories sector	7	18%
Banking sector	10	26%
Commercial and Services sector	0	0%
Construction & Allied sector	0	0%

Energy & Petroleum sector	10	26%
Insurance sector	0	0%
Investment sector	1	3%
Manufacturing & Allied sector	0	0%
Telecommunication & Technology sector	3	8%
Growth Enterprise Market Segment (Gems) sector	0	0%
How much have you invested or are you planning on investing on the Nairobi Securities Exchange?		
Less than Ksh. 10,000	67	63%
Between Ksh. 10,000-Ksh. 24,999.99	30	28%
Between Ksh. 25,000-Ksh. 49,999.99	8	7%
Between Ksh. 50,000-Ksh. 99,999.99	2	2%
Over Ksh. 100,000	0	0%
What is your main aim in investing on the Nairobi Securities Exchange?		
Speculative gains	25	23%
Steady income	14	13%
Investment opportunities	58	54%
Capital safety	10	9%
Others (specify)	0	0%
What largely informs your investment decisions on the Nairobi Securities Exchange?		
Direct information from the company	60	56%
Market rumors	19	18%
Specialist advice/Stock brokers	15	14%
Own analysis	10	9%
Other investors	3	3%
Other (specify)	0	0%

Out of the 107 respondents, 47% constituted individual investors, 28% were institutional and 19% were potential investors. A majority of the investors regardless of the type held a bachelor's degree which was 62% of the respondents. Out of the 107 respondents, only 3% had more than 10 years of experience of investing in the Nairobi Securities Exchange while 65% had between 1 to 2 years of investing experience. For a majority of the investors, what largely informed their investment decision was direct information from the company (56%) with 64% having an industry focus when making investment decisions. The main aim of investing was deemed to be investment opportunities at 54% of the 107 respondents and the main industry focus being to the banking and Energy & Petroleum sectors both at 26%. A majority of the investors had invested less than Ksh. 10,000 in the Nairobi Securities Exchange while none had invested over Ksh. 100,000.

Additionally, the questionnaire included 4 questions designed to elicit perceptions investors have in regards to profit warnings and dividend decreases on their investments. The questions utilized are listed in Appendix 1. Responses to the questions are as indicated below in Table 4.5

Table 5.5: Investor Perceptions

	Number of Observations	% of observations
If a company had a decrease in dividend, would it affect your investment decision?		
strongly agree	85	79%
Agree	14	13%
Disagree	3	3%
Neither	4	4%
strongly disagree	1	1%
If a company issued a profit warning announcement, would it affect your investment decision?		
strongly agree	80	75%
Agree	20	19%
Disagree	2	2%
Neither	4	4%
strongly disagree	1	1%
Between a profit warning announcement and a dividend decrease which one would affect your investment decision more?		
Profit warning announcement	57	53%
Dividend decrease	50	47%

It appears from the results of the survey, investors strongly agree (79%) that a dividend decrease would affect their investment decision which agrees with the results quantitative data that had been collected. Also the investors held a strong opinion that if a company issued a profit warning announcement, it would affect their investment decision at 75% with 1% strongly disagreeing. However when it came a comparison of which of the two events would affect their investment more, 53% were of the opinion that a profit warning would affect their investment decision while the rest (47%) were of the opinion that a dividend decrease would affect their investment more.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This final section summarizes key findings, gives a discussion of the study, and gives a conclusion for the study while making recommendations for areas for future research and limitations of the study.

5.2 Summary of findings

This study sought to investigate the differential market reaction of companies listed on the Nairobi Securities exchange to profit warning announcements and dividend decreases. The event study methodology was used on the share reactions using an 11-day window period around the announcements. The study captured the average abnormal returns around the event dates of the two events respectively so as to establish the existence of information content. Additionally questionnaires were issued to 107 respondents to provide an investors perception of the two events.

In regards to profit warnings, the study found that the average abnormal returns were negative and statistically significant a day prior to the announcement and on the announcement day at the 5% level and at the 10% level, they were significant on day +1 and +5. The survey further supported this by indicating that investors were of the opinion that a profit warning affected their investment with 79% strongly agreeing to this preposition and 1% strongly disagreeing.

For the dividend decreasing sample, the average abnormal returns on the days prior to the dividend decrease were negative except for day -4 and those of day +3 and +4 were also negative. However, it is important to note that the average abnormal returns on the day of the dividend decrease takes place were positive. This could be attributed to the fact that a dividend announcement elicits a positive market reaction however the market takes 2 days after the announcement to react to the decrease in the dividend. These results thereby provided evidence of investor reaction before and after the profit warning and the dividend decrease, thus existence

of information content of both events. The results from the survey were in support of this indicating that investors were of the opinion that a profit warning affected their investment with 79% strongly agreeing to this preposition and 1% strongly disagreeing.

Given the evidence from the survey, 53% of the respondents were of the opinion that a profit warning would affect their investment decision while the rest (47%) were of the opinion that a dividend decrease would affect their investment more. In order to compare the magnitudes of the share price in relation to the event period, a non-parametric Mann-Whitney Rank Sum test was run. A Mann-Whitney U test was run on the 25 observations on companies that issued profit warnings and 55 observations on companies that had a decrease in dividends over the period 2002 to 2012 so as to establish which of the two events had a higher level of information content. The median average abnormal return values for profit warnings (-0.0042) and dividend decreases (-0.0002) was not statistically significantly different, $p=0.1310$.

5.3 Discussion

The main objective of this study was to establish market differential reaction to profit warning announcements and dividend decrease of companies listed on the Nairobi Securities Exchange. By estimating abnormal returns in the period around the event date, the study was able to examine the magnitude of the price reaction as a result of a profit warning or dividend decrease and thereby make a comparison.

5.3.1 Share Price Reaction to Profit Warnings

Table 4.3 presented the Daily Average Abnormal Returns by event day for all sampled firms in relation to profit warning announcement. The results indicated that profit warnings tend to have a negative effect on returns. This results were similar to those carried out by Bulkley & Herrerias (2005), Elayan & Pukthuanthong (2009), Church & Donker (2010) and Suka (2011). Elayan & Pukthuanthong (2009) who carried out a study on a sample of 3667 earnings per share warning announcements by 2393 listed firms on the United States Stock Exchange between May 1, 1997 to December 31, 2002 which showed that price reactions to profit warnings was negative. Suka (2011) studied fourteen companies listed on the Nairobi Security Exchange that had issued profit warnings over the period 2002-2010 so as to the assess information content of profit warning

announcements. These results were consistent with the hypothesis that profit warnings have information content which is associated with a negative revaluation of the firm.

Table 4.3 also showed that the average abnormal returns are statistically significant on the day prior to the announcement and on the day of the announcement. This supports the negative valuation of a firm that comes about due to a profit warning being issued. The valuation effect has taken place already prior to the actual announcement, which means information, might have leaked to the market or that the market was able to (partly) anticipate the profit decrease. On the days that follow, the average abnormal return were not significant at the 5% level, this was similar to the results of the study by Collett (2004) but in contrast to those by Jackson & Madura (2003). Jackson & Madura (2003) found in the 4 days period post announcement continues significant negative abnormal returns that continued ever beyond 4 days both conclude that the continued negative valuation is due to under-reaction of the market at day of announcement. Whereas in the UK Collett (2004) found no significant abnormal return immediately after the day of announcement except for small companies that experienced positive abnormal first day following the announcement, due to overreaction at day of announcement

Additionally, the results presented on Table 4.3 showed that the average abnormal returns were statistically significant a day prior to the announcement and on the announcement day at the 5% level. This supported the analysis by Elayan & Pukthuanthong (2009) and Jackson & Madura (2003) such that, market responses elicited by profit warnings over the 2-day period around the announcement were pronounced.

A closer look at the results presented in figure 4.2 shows that profit warnings seem to surprise the majority of investors with insignificant average abnormal returns prior to the announcement this is similar to Heesters (2011). However, this contradicts evidence in the United States where abnormal returns are significantly negative during many prior announcement days (Bulkley & Herrerias (2005); Elayan & Pukthuanthong, 2009).

Overall the results clearly support the notion that profit warnings are value relevant events that are followed by large negative abnormal returns in the announcement window.

5.3.2 Share Price Reaction to Dividend Decrease

For the dividend decreasing sample, the average abnormal returns on the days prior to the dividend decrease were negative except for day -4 and those of day $+3$ and $+4$ were also negative. However, it is important to note that the average abnormal returns on the day of the dividend decrease takes place were positive. This could be attributed to the fact that a dividend announcement elicits a positive market reaction. From the results of the study, the market takes 2 days after the announcement to react to the decrease in the dividend.

The results presented in table 4.4 showed that dividend decreases tend to elicit negative abnormal returns before as was captured by the average abnormal returns. This results support those by Altiok-Yilmaz & Selcuk (2010) and Shania & Yuce (2011), Dasilas (2011). A study carried out by Altiok-Yilmaz & Selcuk (2010) on the Istanbul Stock Exchange to investigate market reaction to dividend change announcements, supported the signaling hypothesis. The study covered the time period between 2005 and 2008, where 184 announcements were made by 46 firms. The results indicated that the market reacts negatively to dividend decreases and positively to dividend increases which is consistent to the signaling hypothesis. Dasilas (2011) on the other hand carried out a study on the Greek stock market to investigate the stock market reaction to dividend change announcement for the period 2000-2004. The results support the information content of dividends and support the dividend signaling hypothesis where reduction in dividends induces a negative price reaction. Similarly, Shania & Yuce (2011) carried out a study on the Indian Stock Market to investigate the information content of dividend announcements. The study focused on 82 Bombay Stock Exchange listed companies that had announced dividends over the period 2004-2007. The results indicated that investors tend to have an unfavorable reaction towards dividend decreases and the reverse for increases. The study concluded that dividend announcements have information content and therefore stock prices move in the direction of the dividend change.

However, it is important to note that the average abnormal returns on the day of the dividend decrease takes place were positive as depicted in table 4.3. This supports the results by Sheikhbahaei, Osman, & Rahman (2012). Sheikhbahaei, Osman, & Rahman (2012) carried out a

study on the Kuala Lumpur Stock Exchange (Bursa Malaysia); the results did not reflect consistency with the signaling hypothesis. The study covered a three day window period and consisted of 138 firms that had made an announcement over the years 2008-2011. The results revealed that no negative reaction followed a dividend decrease.

5.3.3 Comparison of Share Prices Reaction to Profit Warnings and Dividend Decreases

These results thereby provided evidence of investor reaction before and after the profit warning and the dividend decrease, thus existence of information content of both events. However the results did not present which of the two events had a higher information content level.

In order to compare the magnitudes of the share price reaction in relation to the event period, a non-parametric Mann-Whitney Rank Sum test was run. A Mann-Whitney U test was run on 25 companies that issued profit warnings and 55 companies that had a decrease in dividends over the period 2002 to 2012 so as to establish which of the two events had a higher level of information content. The median average abnormal return values for profit warnings (-0.0042) and dividend decreases (-0.0002) was not statistically significantly different, $p=0.1310$.

5.4 Conclusion

The objective of this research thesis was to examine market differential reaction to profit warning announcements and dividend decrease of companies listed on the Nairobi Securities Exchange.

From the study, we can conclude that profit warnings and dividend decreases have information content that results in negative returns. The results of the non-parametric Mann-Whitney Rank Sum test revealed that there is no statistical significant difference in median average abnormal returns between profit warnings and dividend decreases.

5.5 Recommendations and Limitations

There are several interesting extensions for future research. First, comparing the operating performance of firms that issue a profit warning and dividend decrease respectively should provide additional insight regarding which event is considered to be worse news. Secondly, this

study focuses on the share price reaction to a profit warning and a dividend decrease respectively. It would be interesting to see if trading volume would also support or contradict the findings seeing that share price changes reflect the average change in trader's beliefs due to the announcement while trading volume reflects the sum of differences in traders' reactions.

As in every study this research is subjected to limitations that might have biased the results. First of all the small sample of profit warnings could have influenced the results. Secondly, data unavailability on the announcement dates resulted in a few companies being eliminated from the dividend decrease. Thirdly, the two events do not take place on the same day therefore for investors it would be hard to know when to make investment decisions.

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APPENDICES

APPENDIX 1: Questionnaire

Dear Respondents: Thank you for your willingness to join this survey. Please respond to all the questions in this questionnaire. We understand that the interpretation of the questionnaire and the responding to the questionnaire require a high level of professional judgment. Please shade (☐) the appropriate parentheses.

1. What type of investor are you?

- ☐ Individual investor
- ☐ Institutional investor
- ☐ Potential investor
- ☐ Stock broker
- ☐ Other (specify)

2. What is your highest level of qualification?

- ☐ Doctor of philosophy (PhD)
- ☐ Masters' degree
- ☐ Bachelors' degree
- ☐ A level
- ☐ O level
- ☐ Other (specify)

3. How many years of experience in investing do you have on the Nairobi Securities Exchange?

- ☐ Less than 1 year
- ☐ Between 1-5 years
- ☐ Between 6-10 years
- ☐ More than 10 years

Do you have any industry focus when investing on the Nairobi Securities Exchange?

- ☐ Yes
- ☐ No

4. If yes, what industry sector are you interested in?

- ☐ Agricultural sector
- ☐ Automobiles & Accessories sector
- ☐ Banking sector
- ☐ Commercial and Services sector
- ☐ Construction & Allied sector
- ☐ Energy & Petroleum sector
- ☐ Insurance sector
- ☐ Investment sector
- ☐ Manufacturing & Allied sector
- ☐ Telecommunication & Technology sector
- ☐ Growth Enterprise Market Segment (Gems) sector

5. How much have you invested or are you planning on investing on the Nairobi Securities Exchange?

- ☐ Less than Ksh. 10,000
- ☐ Between Ksh. 10,000-Ksh. 24,999.99
- ☐ Between Ksh. 25,000-Ksh. 49,999.99
- ☐ Between Ksh. 50,000-Ksh. 99,999.99
- ☐ Over Ksh. 100,000

6. What is your main aim in investing on the Nairobi Securities Exchange?

- ☐ Speculative gains

- ☐ Steady income
- ☐ Investment opportunities
- ☐ Capital safety
- ☐ Others (Please specify)

7. What largely informs your investment decisions on the Nairobi Securities Exchange?

- ☐ Direct information from the company
- ☐ Market rumors
- ☐ Specialist advice
- ☐ Own analysis
- ☐ Other investors
- ☐ Other (Please specify)

8. If a company had a decrease in dividend, would it affect your investment decision?

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree
- ☐ Neither
- ☐ Strongly disagree

9. If a company issued a profit warning announcement, would it affect your investment decision?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neither

- ☐ Disagree
- ☐ Strongly disagree

10. In your own assessment, between a profit warning announcement and a dividend decrease which one is more informative than the other?

- ☐ Profit warning announcement
- ☐ Dividend decrease

11. Between a profit warning announcement and a dividend decrease which one would affect your investment decision more?

- ☐ Profit warning announcement
- ☐ Dividend decrease

APPENDIX 2: Listed Companies

Currently listed companies as of November, 2013

AGRICULTURAL

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd

COMMERCIAL AND SERVICES

8. Express Ltd
9. Kenya Airways Ltd
10. Nation Media Group
11. Standard Group Ltd
12. TPS Eastern Africa (Serena) Ltd
13. Scangroup Ltd
14. Uchumi Supermarket Ltd
15. Hutchings Biemer Ltd
16. Longhorn Kenya Ltd

TELECOMMUNICATION AND TECHNOLOGY

17. AccessKenya Group Ltd
18. Safaricom Ltd

AUTOMOBILES AND ACCESSORIES

19. Car and General (K) Ltd
20. CMC Holdings Ltd
21. Sameer Africa Ltd
22. Marshalls (E.A.) Ltd

BANKING

23. Barclays Bank Ltd
24. CFC Stanbic Holdings Ltd

- 25. I&M Holdings Ltd
- 26. Diamond Trust Bank Kenya Ltd
- 27. Housing Finance Co Ltd
- 28. Kenya Commercial Bank Ltd
- 29. National Bank of Kenya Ltd
- 30. NIC Bank Ltd
- 31. Standard Chartered Bank Ltd
- 32. Equity Bank Ltd
- 33. The Co-operative Bank of Kenya Ltd

INSURANCE

- 34. Jubilee Holdings Ltd
- 35. Pan Africa Insurance Holdings Ltd
- 36. Kenya Re-Insurance Corporation Ltd
- 37. Liberty Kenya Holdings Ltd
- 38. British-American Investments Company (Kenya)Ltd
- 39. CIC Insurance Group Ltd

INVESTMENT

- 40. Olympia Capital Holdings ltd
- 41. Centum Investment Co Ltd
- 42. Trans-Century Ltd

MANUFACTURING AND ALLIED

- 43. B.O.C Kenya Ltd
- 44. British American Tobacco Kenya Ltd
- 45. Carbacid Investments Ltd
- 46. East African Breweries Ltd
- 47. Mumias Sugar Co. Ltd
- 48. Unga Group Ltd
- 49. Eveready East Africa Ltd
- 50. Kenya Orchards Ltd
- 51. A.Baumann CO Ltd

CONSTRUCTION AND ALLIED

- 52. Athi River Mining
- 53. Bamburi Cement Ltd
- 54. Crown Berger Ltd
- 55. E.A.Cables Ltd
- 56. E.A.Portland Cement Ltd

ENERGY AND PETROLEUM

- 57. KenolKobil Ltd
- 58. Total Kenya Ltd
- 59. KenGen Ltd
- 60. Kenya Power & Lighting Co Ltd
- 61. Umeme Ltd

GROWTH ENTERPRISE MARKET SEGMENT

- 62. Home Afrika Ltd

APPENDIX 3: Sample List of Companies

AGRICULTURAL

1. Kapchorua Tea Co. Ltd
2. Rea Vipingo Plantations Ltd
3. Sasini Ltd

COMMERCIAL AND SERVICES

4. Kenya Airways Ltd

AUTOMOBILES AND ACCESSORIES

5. CMC Holdings Ltd

BANKING

6. CFC Stanbic Holdings Ltd

INVESTMENT

7. Centum Investment Co Ltd

MANUFACTURING AND ALLIED

8. B.O.C Kenya Ltd

CONSTRUCTION AND ALLIED

9. E.A.Cables Ltd

ENERGY AND PETROLEUM

10. KenolKobil Ltd
11. Total Kenya Ltd

APPENDIX 4: Abnormal Returns by Event Day for all profit warning sampled firms

Companies	-5	-4	-3	-2	-1	0	1	2	3	4	5
Access Kenya Group Ltd	-0.0394	.	.	.	-0.0444	-0.0078	-0.0079	-0.0365	.	.	-0.0338
B.O.C Kenya Ltd	.	.	0.0618	-0.0613	-0.0008	-0.0026	0.0005	.	.	.	-0.0011
Centum Investment Co Ltd	.	.	0.0169	0.0228	0.0015	-0.0600	-0.0606	.	.	-0.0219	0.0117
CFC Stanbic Holdings Ltd	-0.0362	-0.0088	.	.	.	-0.0476	0.0094	-0.0147	0.0307	.	.
CMC Holdings Ltd	0.0617	.	.	-0.0273	-0.0017	-0.0231	-0.0525	-0.0011	.	.	0.0113
E.A.Cables Ltd	-0.0060	-0.0046	0.0654	.	.	-0.1158	0.0251	0.0179	0.0204	-0.0367	.
E.A.Portland Cement Ltd	.	-0.0022	-0.0026	-0.0022	-0.0026	-0.0023	.	.	-0.0026	-0.0023	-0.0023

Eveready East Africa Ltd	0.0048	-0.0268	0.0121	-0.0267	0.0008	-0.0107	-0.1602	0.0191	0.0399	0.0284	-0.0039
Kenya Airways Ltd	0.0128	.	.	-0.0186	-0.0319	-0.0727	-0.0165	0.0145	.	.	0.0111
KenolKobil Ltd	0.0030	.	.	0.0021	-0.0134	-0.0019	-0.0107	-0.0410	.	.	-0.0606
Rea Vipingo Plantations Ltd	-0.0144	.	.	-0.0067	-0.0007	-0.0832	0.0103	0.0028	.	.	-0.0064
Sameer Africa Ltd	-0.0138	0.0098	0.0114	0.0149	-0.0159	-0.0213	-0.0820	.	0.0107	-0.0232	-0.0260
Uchumi Supermarket Ltd	.	.	-0.0297	-0.0535	-0.0106	-0.1063	.	.	.	-0.1066	-0.0091
UNGA	.	.	-0.0074	0.0029	-0.0170	-0.0455	0.0059	.	.	-0.0975	0.0680
CMC Holdings Ltd	0.0049	0.0042	0.0010	0.0004	0.0004	0.0006	-0.0011	0.0012	-0.0028	-0.0003	-0.0013
Total Kenya Ltd	-0.0107	-0.0226	0.0037	0.0042	-0.0143	-0.0101	-0.0090	0.0046	0.0082	-0.0108	0.0013

E.A.Portland Cement Ltd	-0.0012	-0.0053	-0.0013	-0.0023	-0.0037	-0.0011	-0.0022	-0.0019	-0.0024	-0.0023	-0.0018
Eaagads Ltd	-0.0008	-0.0106	0.0010	0.0129	-0.0041	0.0026	0.0011	-0.0401	0.0079	0.0022	-0.0041
Express Ltd	-0.0004	-0.0053	0.0058	0.0002	-0.0009	-0.0006	0.0071	-0.0007	0.0019	-0.0012	0.0221
Kakuzi Ord	0.0575	-0.0277	-0.0032	0.0011	0.0018	0.0059	0.0022	0.0007	0.0308	-0.0185	-0.0074
Kapchorua Tea Co. Ltd	-0.0205	0.0158	-0.0318	-0.0007	0.0019	0.0158	-0.0043	0.0050	-0.0004	0.0096	0.0090
KenolKobil Ltd	0.0169	-0.0018	-0.0202	-0.0101	0.0020	-0.0004	0.0036	0.0001	0.0142	0.0094	-0.0058
Kenya Airways Ltd	0.0002	-0.0015	-0.0143	-0.0077	-0.0212	-0.0162	0.0143	-0.0036	0.0088	0.0007	-0.0011
Longhorn Kenya Ltd	0.0010	-0.0051	-0.0007	-0.0049	-0.0041	-0.0092	-0.0385	0.0004	-0.0036	-0.0003	0.0027
Sasini Ltd	-0.0101	-0.0116	-0.0028	0.0090	-0.0128	0.0015	-0.0361	0.0020	0.0010	0.0030	0.0064
AAR	0.0005	-0.0065	0.0034	-0.0069	-0.0083	-0.0245	-0.0175	-0.0038	0.0102	-0.0149	-0.0009
CAAR	0.0005	-0.0060	-0.0026	-0.0095	-0.0178	-0.0423	-0.0598	-0.0636	-0.0534	-0.0683	-0.0692

APPENDIX 5: Abnormal Returns by Event Day for all dividend decrease sampled firms

Companies	-5	-4	-3	-2	-1	0	1	2	3	4	5
Barclays Bank Ltd	0.0024	0.0008	-0.0040	-0.0020	-0.0031	-0.0090	-0.0019	0.0017	0.0089	-0.0039	0.0077
Carbacid Investments Ltd	-0.0101	-0.0057	-0.0011	0.0081	-0.0034	-0.0076	0.0067	-0.0100	-0.0023	-0.0003	0.0001
E.A.Cables Ltd	-0.0015	-0.0013	0.0023	0.0000	-0.0457	0.0006	-0.0017	-0.0001	-0.0016	0.0009	0.0005
Kapchorua Tea Co. Ltd	-0.0038	-0.0006	0.0012	0.0002	-0.0010	0.0000	-0.0003	-0.0010	-0.0035	-0.0001	0.0017
Kenya Airways Ltd	-0.0176	-0.0038	0.0108	-0.0073	-0.0027	-0.0098	0.0030	-0.0213	-0.0041	-0.0035	- 0.0001
Sasini Ltd	-0.0025	-0.0016	-0.0013	-0.0335	-0.0240	0.0047	0.0005	0.0013	0.0010	-0.0102	- 0.0011
Bamburi Cement Ltd	0.0003	0.0054	-0.0071	0.0015	-0.0067	0.0134	-0.0175	0.0071	0.0102	0.0280	0.0011
Kenya Airways Ltd	-0.0023	0.0020	0.0018	0.0004	-0.0026	-0.0064	0.0039	-0.0009	0.0009	-0.0015	- 0.0042
Standard Chartered Bank Ltd	0.0015	-0.0032	-0.0051	0.0009	-0.0069	0.0063	0.0274	-0.0305	-0.0090	-0.0155	- 0.0108

British American Tobacco Kenya Ltd	0.0008	0.0024	-0.0355	-0.0160	-0.0120	0.0007	0.0001	-0.0008	0.0024	0.0013	0.0024
East African Breweries Ltd	-0.0020	-0.0001	-0.0073	0.0034	-0.0018	-0.0058	0.0016	-0.0137	-0.0001	0.0133	0.0003
Limuru Tea Co. Ltd	0.0009	0.0004	0.0033	-0.0026	-0.0005	0.0030	-0.0001	-0.0026	-0.0023	0.0015	0.0031
Barclays Bank Ltd	-0.0021	-0.0047	-0.0279	-0.0130	0.0065	-0.0024	0.0012	0.0001	0.0005	0.0018	0.0054
British American Tobacco Kenya Ltd	-0.0047	0.0022	0.0019	-0.0017	0.0001	-0.0001	0.0007	0.0013	-0.0029	0.0012	0.0001
E.A.Cables Ltd	-0.0415	-0.0456	-0.0433	-0.0425	-0.0109	0.0058	0.0345	0.0246	0.0325	0.0083	0.0007
Centum Investment Co Ltd	0.0029	0.0176	0.0204	0.0283	0.0138	-0.0014	-0.0144	-0.0139	-0.0031	0.0060	- 0.0073

CFC Stanbic Holdings Ltd	-0.0119	-0.0352	-0.0441	-0.0107	0.0033	0.1162	-0.0067	0.0228	-0.0010	-0.0029	- 0.0008
Crown Berger Ltd	-0.0179	-0.0030	0.0226	0.0019	-0.0112	0.0120	-0.0008	0.0057	0.0112	-0.0020	0.0031
Kapchorua Tea Co. Ltd	0.0062	-0.0024	-0.0011	-0.0060	-0.0225	0.0202	-0.0186	-0.0045	0.0095	-0.0037	0.0061
Kenya Commercial Bank Ltd	0.0302	0.0259	-0.0113	-0.0081	-0.0079	-0.0081	0.0069	1.0025	-1.0048	0.0007	- 0.0006
Limuru Tea Co. Ltd	-0.0007	0.0542	0.0033	-0.0002	-0.0002	-0.0010	0.0025	-0.0009	0.0007	0.0034	0.0025
Mumias Sugar Co. Ltd	0.0067	0.0128	0.0105	0.0235	0.0165	0.0212	0.0157	0.0024	0.0008	-0.0048	0.0094
Nation Media Group	-0.0270	0.0004	0.0269	0.0156	0.0247	0.0033	-0.0151	-0.0219	0.0050	0.0009	- 0.0017
NIC Bank Ltd	-0.0033	-0.0181	0.0026	-0.0018	0.0110	-0.0062	0.0009	0.0091	-0.0094	0.0082	0.0025
B.O.C Kenya Ltd	0.0023	-0.0017	0.0019	0.0005	-0.0008	0.0021	0.0046	0.0013	-0.0200	-0.0059	- 0.0105

CFC Stanbic Holdings Ltd	0.0129	0.0000	-0.0076	0.0020	-0.0105	-0.0036	0.0002	-0.0049	-0.0052	-0.0078	- 0.0057
Mumias Sugar Co. Ltd	-0.0004	0.0022	-0.0101	-0.0007	0.0025	-0.0033	-0.0006	-0.0038	-0.0069	-0.0007	- 0.0028
Nation Media Group	0.0078	0.0064	0.0154	-0.0045	-0.0101	-0.0039	-0.0019	0.0028	0.0000	0.0000	0.0023
NIC Bank Ltd	-0.0008	-0.0019	0.0046	0.0171	-0.0086	-0.0059	-0.0067	0.0270	-0.0127	0.0041	- 0.0113
Rea Vipingo Plantations Ltd	0.0000	-0.0140	-0.0232	0.0136	0.0203	0.0072	0.0072	0.0070	-0.0136	0.0046	- 0.0057
British American Tobacco Kenya Ltd	0.0181	0.0013	0.0052	0.0088	-0.0022	0.0019	-0.0003	0.0077	-0.0037	0.0015	0.0037
CMC Holdings Ltd	-0.0151	0.0007	-0.0153	0.0046	0.0066	-0.0016	-0.0014	0.0018	-0.0019	-0.0062	- 0.0012
KenolKobil Ltd	-0.0415	0.0069	-0.0079	-0.0014	0.0008	0.0089	-0.0075	-0.0242	0.0038	0.0293	0.0057

Kenya Airways Ltd	0.0112	0.0233	-0.0012	-0.0746	-0.0051	0.0008	-0.0023	-0.0016	0.0252	0.0141	0.0139
Limuru Tea Co. Ltd	0.0060	0.0057	0.0009	0.0055	-0.0023	-0.0014	-0.0004	-0.0025	-0.0037	-0.0034	- 0.0045
Standard Group Ltd	0.0011	0.0060	0.0057	0.0009	0.0055	-0.0023	-0.0111	0.0189	-0.0025	-0.0181	0.0110
Total Kenya Ltd	-0.0038	-0.0026	-0.0087	-0.0079	-0.0014	-0.0059	0.0104	0.0054	-0.0014	0.0011	0.0028
Bamburi Cement Ltd	-0.0021	-0.0010	-0.0041	-0.0046	0.0034	0.0049	0.0234	0.0100	0.0059	-0.0081	- 0.0037
Carbacid Investments Ltd	-0.0186	-0.0018	-0.0015	-0.0013	0.0011	-0.0195	0.0494	-0.0783	0.0100	-0.0044	- 0.0100
CMC Holdings Ltd	-0.0085	0.0003	-0.0098	0.0068	-0.0060	-0.0109	-0.0192	-0.0011	0.0094	-0.0125	- 0.0021
Kapchorua Tea Co. Ltd	0.0015	0.0028	0.0012	-0.0005	-0.0032	0.0013	0.0100	0.0009	0.0118	0.0055	- 0.0012
KenolKobil Ltd	-0.0180	0.0185	0.0148	-0.0039	-0.0022	-0.0008	0.0147	-0.0042	0.0027	-0.0030	- 0.0016

B.O.C Kenya Ltd	-0.0159	0.0005	0.0043	0.0016	0.0136	-0.0141	0.0053	-0.0076	0.0029	-0.0003	- 0.0005
Barclays Bank Ltd	0.0011	0.0016	0.0046	0.0017	0.0056	0.0386	0.0029	0.0028	0.0026	-0.0033	0.0010
Car and General (K) Ltd	0.0022	0.0012	0.0181	-0.0017	0.0047	-0.0029	0.0074	0.0324	0.0265	0.0013	0.0072
E.A.Cables Ltd	-0.0017	0.0074	-0.0015	-0.0009	-0.0035	0.0058	0.0040	-0.0004	0.0013	0.0021	0.0977
Kenya Power & Lighting Co Ltd	0.0000	-0.0018	0.0043	-0.0003	-0.0015	0.0026	-0.0031	-0.0001	-0.0006	-0.0013	0.0007
Pan Africa Insurance Holdings Ltd	0.0065	-0.0048	-0.0015	-0.0064	0.0268	0.0940	-0.0108	-0.0081	0.0090	-0.0069	0.0020
Athi River Mining	-0.0135	0.0096	0.0026	0.0034	0.0034	-0.0070	-0.0030	-0.0002	-0.0004	0.0002	0.0239
B.O.C Kenya Ltd	-0.0053	-0.0013	-0.0023	-0.0037	-0.0011	-0.0022	-0.0168	0.0088	-0.0023	-0.0018	0.0064
Barclays Bank Ltd	-0.0017	0.0015	-0.0059	0.0042	0.0107	0.0204	0.0035	-0.0021	0.0105	-0.0140	- 0.0023

Kenya Airways Ltd	-0.0049	-0.0136	-0.0113	0.0000	-0.0001	-0.0048	-0.0268	0.0096	0.0023	-0.0053	- 0.0018
National Bank of Kenya Ltd	-0.0099	-0.0210	-0.0133	-0.0003	0.0154	-0.0166	-0.0350	0.0051	-0.0063	-0.0050	0.0160
Sasini Ltd	0.0000	-0.0026	-0.0163	-0.0020	0.0092	-0.0004	0.0028	0.0010	-0.0014	0.0001	- 0.0011
Williamson Tea Kenya Ltd	-0.0026	-0.0024	-0.0015	-0.0001	0.0034	0.0007	-0.0070	-0.0030	-0.0033	-0.0131	- 0.0420
AAR	0.0005	-0.0065	0.0034	-0.0069	-0.0083	-0.0245	-0.0175	-0.0038	0.0102	-0.0149	- 0.0009
CAAR	0.0005	-0.0060	-0.0026	-0.0095	-0.0178	-0.0423	-0.0598	-0.0636	-0.0534	-0.0683	- 0.0692

Note: AAR represents the average abnormal returns

$$AAR_t = \frac{\sum_{i=1}^N AR_{i,t}}{N}$$

Where:

AAR_t Represents the average abnormal returns on day t

$\sum_{i=1}^N AR_{i,t}$ Represents the sum of the abnormal returns on day t

N Represents the number of firms that have issued profit warnings and dividends respectively

CAAR represents the cumulative average abnormal returns

$$CAAR(T_1, T_2) = \sum_{\tau=T1}^{T2} AAR_{\tau}$$

Where:

$CAAR(T_1, T_2)$ Represents the cumulative average abnormal returns over the event window of $(-5, +5)$

$\sum_{\tau=T1}^{T2} AAR_{\tau}$ Represent the sum of the average abnormal returns over the event window of $(-5, +5)$