THE EFFECT OF PROFIT WARNINGS ANNOUNCEMENT ON SHARE RETURNS OF LISTED COMPANIES IN EAST AFRICA

BY:

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SCHOOL OF BUSINESS

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DECLARATION

The management research project is my original work and has not been submitted for the award of a degree at any other university.

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The Research Project has been submitted for the examination with my approval as the University supervisor

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DEDICATION

I dedicate this project to my beloved wife for her unmatched support offered during this research project and the entire course.

I also dedicate this project to my parents who have been a great source of inspiration throughout the research project exercise.

May the Almighty God bless them abundantly.

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ABBREVIATIONS AND ACRONYMS

AR	Abnormal Returns
ASEA	African Stock Exchanges Association
BRITAM	British American Company Ltd
CAR	Cumulative Abnormal Returns
CMAC	Capital Markets Advisory Council
CMA	Capital Markets Authority
CDSC	Central Depository and Settlement Corporation
DSE	Dar es Salaam stock exchange
EMH	Efficient Market Hypothesis
MINECOFIN	Ministry of Finance and Economic Planning
NASI	NSE-All share Index
NMG	National Media Group
NSE	Nairobi Securities Exchange
NYSE	New York Stock Exchange
OLS	Ordinary Least Squares
RSE	Rwanda stock exchange
SCAR	Standardized Cumulative Abnormal Returns
STAT	Statistic
STD DEV	Standard Deviation
USE	Uganda Securities Exchange

ABSTRACT

Profit warning denotes an unforeseen corporate statement that current earnings expectations will fall short for a specified future period. The objective of the study was to find out the effects of profit warning announcements on share returns of companies listed in East Africa. For the purpose of analysis, the study used a population of 35 companies that issued profit warnings between the year 2011 and 2015. The study depended on secondary data that was obtained from the various East African Securities Exchange and Capital Market Authority reports. The data collected included particulars of profit warning announcements namely; the issuing company, the date of the warning, and the daily average share prices within a timeline of 15 days before the warning and 15 days after the warning. Event study methodology was used to analyse the data. The findings of the study established that profit warning announcements generally result in decrease in actual returns and expected returns of the companies making profit warning announcements. 73.5% of the companies studied had their returns decrease around the announcement date while 23.5% of the companies had their returns increase around the announcement date. Returns of 3% of the companies did not change with respect to profit warning announcements. The behaviour of abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns in relation to profit warning announcements was found to depict irregular patterns throughout the event window leading to a conclusion that the reaction of these returns to profit warning announcements may be dependent on a multiplicity of factors specific to the company issuing the profit warning. T-test analysis on these returns showed that the information content of profit warning announcements is not statistically significant. Since profit warning announcement should have negative effects on share returns under efficient market conditions, the study concludes that the (23.5%) where profit warning announcements had positive effects on stock returns could be explained by a situation where information on profit warning announcements is not freely available to all market players thus leading to inadequate action on the information. The research put emphasis on the effects of profit warning on the stock returns of listed companies at the NSE alone as it’s not a legal requirement in Uganda, Tanzania and Rwanda Capital Markets Act for companies to issue profit warning. For such countries, disclosure is on voluntary basis. This limited the scope of the project as only British American Tobacco Uganda issued a profit warning in the other East African countries compared to the 34 companies in Kenya.

CHAPTER ONE: INTRODUCTION

1.1Background of the study

Investors usually make investment decisions based on the information that is available to them. If a firm misinforms the investors about its future prospects, investors will find it tough to make such investment decisions (Bodie, et al., 2009). Many investors and analysts rely on the information on profit in determining whether to buy, hold or sell shares of a particular company. Profit warning gives an indication of how the firm is performing in the current year as compared to the previous year. It also gives an indication of earning that the investors are expected to make and general information about the financial performance of a given company.

This research draws footing from numerous research areas. It scrutinises hypothetical foundations on the Efficient market hypothesis (Fama 1970, Augustine K S 2011), the Random walk theory (Kendall 1953, Cowles 1937), Signaling theory (Arrow 1972, Spence 1973) and Agency theory (Ross 1973). According to Fama (1970), in cases of an efficient market, the security price should mirror all information accessible to the public and the value of the security will change the moment new information comes to the market. Founded on the Efficient Market Hypothesis (EMH), the marketplace reacts to the latest info quickly. Profitable firms benefit from announcing their competitive advantage by disclosure of important information to the market through more and better communication, this is in accordance with the signalling theory by Spence (1973). According to Ross (1973), agency relationship exists when two parties, one referred to as the agent acts on behalf of the other party referred to as the principal in matters requiring decision making. The activities that a firm engages in have a direct effect on its stock returns, as a result the agents are expected to release any information that will have an impact on the company's earnings to the principals immediately. The behavioural theory explains the under reaction (momentum) and over reaction (long-term reversal) from a behavioural point of view. It uses emotional, social and cognitive factors in an attempt to explain stock returns patterns.

In Kenya, unlike Tanzania, Uganda and Rwanda, it is a legal requirement by the Capital Markets Authority that listed companies disclose a profit warning when they expect the projected earnings to fall by 25% in comparison to the earnings of the previous year (Legal notice no.60 of May, 2002, CMA, page 199). Failure to do so may result in sanctions as some firms have been punished before. For example, in 2012 CMC Motors was penalized by CMA for failing to comply with some corporate governance requirements as required by the CMA Act.

1.1.1 Profit Warnings Announcement

Profit warning refers to a depiction that experts and reporters give to an unforeseen company announcement that earnings for a specific prospective quarter will fall short of current expectations (Bulkey and Herrerias, 2002). Management can issue the warning any time prior to the actual earnings announcement and the warning maybe in terms of Net profits or sales for the period, measures such as earnings before interest and tax (EBIT) and earnings per share(EPS) (Elayan and Pukthuanthog, 2009).

According to Bhana (2005), profit warnings are earnings that have surprises, difference being the announcement of earnings have a pre-set date while profit warnings are a surprise. Alves, Pope and Young (2009) in their study indicate that, profit warnings are received as bad news by investors both within the country where the firm is listed and in comparable foreign non-announcing firms.

Tserendash and Xiaojing (2010) in their study classified profit warnings into Qualitative and Quantitative. Quantitative warnings are involved with specific earnings estimate or interval while the qualitative warnings indicate that the firm's earnings will be less than the existing expectations devoid of a precise estimation of the new earnings. In such cases, companies tend to use words such as; "unlikely to reach estimates" and "significantly below estimate". Bulkey and Herrerias (2002) illustrate that the fall in stock price against the market was substantially more when the company used the qualitative warning (-24.7%) compared to when they used the quantitative warning (-20.7%).

Previous studies have identified various reasons why firms issue the profit warnings. Skinner (1994) identifies two main reasons why companies tend to issue profit warnings, one is to avoid shareholders lawsuits for failure to provide timely negative information and the second is to manage the reputational costs of the company. It also helps reduce the expectations gap that shareholders maybe having and also reduce the market impact in the security price (Kasznik and Lev, 1995).

1.1.2 Share Returns

In layman's terms, a share represents a unit of ownership in a corporation/Company. A share/stock price is simply the value of a single share in a number of commercial stocks of a trading company. A stock price is the maximum amount a person has agreed to pay for a stock, or the lowest amount it can be bought for.

Elayan (2009), stated that the goal of every investor is to obtain a fair to high return from their investment. These returns are measured in the form of dividends paid or capital gains/losses. In most cases, dividends are paid by firms at the end of the year and thus investors focus mainly on share price movements of the stocks they hold to assess their returns.

According to Jordan and Fischer (2002), stock return is defined as the stimulating force and the main incentive in the investment process and it is the fundamental method accessible to analysts in contrasting alternative investments. In addition, stock return is the compensation for the time, the expected rate of inflation and the uncertainty of the return after investing in stocks (Reilly and Brown, 2003).

Ross et al (2010) states that return of stock traded is composed of two parts; The normal or expected returns that is dependent on the information that shareholders have that bears on the stock and is based on the market understanding of the important factors that will influence the stock in the coming year and the return that is uncertain and risky. This risky portion comes from unexpected information revealed within the year among them being profit warning announcement.

According to Olowoniyi and Ojenike (2012), share prices and thus stock returns are affected by factors which are either micro or macro. From their research, they identified that issues of stock returns are the most important reason for business growth or failure. They identified a firms expected growth, size, inflation, stock return policies as well as legal regime as the determinants of stock returns. Although dividends rank highly as a measure of returns on stock, there has been numerous criticisms on dividend payments by firms as per Modigliani and Miller (1961) dividend irrelevance theory. Supporters of the bird in hand, signalling and agency theories believe that dividend payments increase shareholders wealth and value. The value of a firm is also expressed as a sum of all the future earnings less investment expenditures

1.1.3 Profit Warning and Share Returns

According to The Efficient Market Hypothesis by Fama (1970), stock prices fully reflect all information that is available in the market and moves when new information arrives in the market. A firm that issues a profit warning reveals public information to investors that earnings will fall below the expected. If investors notice this information as new and of value significance, there ought to be a negative stock price response at the time of the announcement. The significance of a profit warning is emphasized by studies such as: Jackson & Madura (2003), Bulkley & Herrerias (2005) and Church & Donker (2010), which have provided evidence of negative abnormal returns during the time of profit warning announcement.

Signaling theory (Arrow 1972, Spence 1973), on the other hand indicates that profit warnings just like dividend signaling theory, sends information to the investors that future expected or anticipated dividends will be less and thus indicate that this negative signal will lead to a decline in stock prices and hence in returns.

Studies in behavioural finance have found out that investors overreact or underreact in the market especially where new information sets in contrary to the EMH thus causing a more than appropriate effect on security prices. In so doing, Hede (2012) states that investors overreact to bad news driving the stocks prices down disproportionately.

Maarten (2011) and Dons and Sletness (2013), both agree that profit warnings serve as bad news and thus investors react in a stronger way to bad news than to good news. However, Herrerias et al (2003) argues that although the returns are negative around the time of the announcement, a drift is probable to happen six months following and will undo the adverse trend with some positive returns.

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

1.1.4 An Overview of East Africa Security Exchanges

Each country in East Africa has its own security/stock exchange which operate independently. NSE (Nairobi Securities Exchange) is the principle securities exchange in Kenya. In Uganda we have USE (Uganda Securities Exchange), Tanzania has DSE (Dar es Salaam Stock Exchange) and Rwanda has the RSE (Rwanda Stock Exchange). There are 65 listed companies in the NSE being the largest securities exchange. These companies are grouped according to the industry in which the company operates namely; Agricultural, Automobiles and Accessories, Banking, commercial and services, construction and Allied, Energy and petroleum, Insurance, Investment, Investment services, manufacturing and Allied, Telecommunication and Technology, Real Estate Investment Trust (NSE,2016). NSE is licensed and regulated by the Capital Markets Authority (CMA).

The Dar es Salaam Stock Exchange (DSE) is the second largest with 25 listed companies. It was incorporated on 19th September 1996 and trading started on 15th April 1998. The activities of the exchange are monitored and supervised by the Capital Markets and Securities Authority (CMSA). On 16th May 2016, DSE began trading its shares and became the third securities exchange in Africa continent after the Johannesburg Stock Exchange (2006) in South Africa and Nairobi Securities Exchange (2014) in Kenya to self-list. Uganda securities exchange (USE) has 16 listed companies and is the main stock exchange in Uganda. Founded in June 1997, it opened to trading in January 1998 upon licensing by the Capital Markets Authority in Uganda to operate as an approved securities exchange which in turn reports to the Bank of Uganda, Uganda's central bank.

The Rwanda Stock Exchange (RSE), is Rwanda's principal stock exchange and has 7 listed companies. Established in January 2011, operated under the Rwanda's Capital Market Authority (CMA) jurisdiction, formerly Capital Markets Advisory Council (CMAC). The institution then reports to the Ministry of Finance and Economic Planning (MINECOFIN). The Rwanda Stock Exchange operates closely with the Dar es Salaam Stock Exchange in Tanzania, the Uganda securities exchange in Uganda, and the Nairobi Security Exchange in Kenya. According to published reports in 2013, ideas are underway to amalgamate the four security exchanges in to one East African bourse.

In Kenya, it is a legal requirement by the Capital Markets Authority that listed companies disclose a profit warning when they expect the projected earnings to fall by 25% in comparison to the earnings of the previous year (Legal notice no.60 of May, 2002, CMA, page 199). Failure to do so may result in sanctions as some firms have been punished before. In other countries such as Tanzania, Uganda and Rwanda profit warning announcement is a voluntary disclosure.

1.2 Research Problem

Profit warnings constitute one of the substantial market information that shareholders, financial analysts and other market players need in making investment decisions. Profit warnings are deemed as bad news by the market since they indicate imminent decrease in earnings and competitiveness of a company. Consequently, profit warning announcements have adverse effect on the stock price of the respective companies (Don & Sletness, 2013). Perpetual profit warnings could also affect the liquidity of the shares in the stock market in which the poor performing companies' shares trade. The long run implication could be erosion of the investors' confidence in a particular stock market and probable exit from the market (Don & Sletness, 2013).

The Capital Markets Authority requires companies listed at the NSE to inform the public within a period of at least 24 hours in the event that it's full year results are likely to fall by more than 25%. Pursuant to the Act, a profit warning should be issued through publication of notices in local media of national reach. It is the mandate of the Capital Markets Authority to ensure that those companies adhere to this rule and impose penalties for violation. A maximum penalty of 10 million can be imposed (CMA, 2016). Nevertheless, whether the rule is complied with is arguable. In March 31st 2016 National Bank of Kenya reported a Ksh 1.2 billion loss short of a previous warning to the investors and shareholders as required by the CMA Act. The bank issued a profit warning on Wednesday midnight through a press release and then announced the results on the morning of Thursday, less than eight hours and far much away from the minimum 24 hours required by the law (Business Daily, 2016).

Extensive studies have been conducted in the UK and US stock markets to investigate the effects of profit warning announcements on stock returns. Church & Donker (2010) used a sample of 149 listed companies on the Euronext Amsterdam that had issued profit warnings between November 2002 and December 2002. Event study methodology and the ordinary least squares (OLS) regression analysis was used to measure and analyse abnormal returns around profit warning announcements. They found that there was a significantly negative average abnormal return on the day the profit warnings were announced. They also found that large firm size decreases the market effect of a profit warning. Their findings on the relationship between firm size and market reaction to profit warnings are consistent with previous findings by Jackson and Madura (2003), and Buckley and Herrerias (2005). Their findings are however, in conflict with findings by Jackson and Madura (2007) who found that the size of the firm was of no significant effect on market reaction to profit warnings.

Collet (2004) using conventional event study methodology and t-test studied the effects of profit warning announcements on share-returns of companies listed at the London Stock Exchange. He found that there were abnormal returns for the five days pre announcement and the ten days post announcement. He concluded that market reaction to profit warnings is considerable, and the reaction for small firms is more than for large companies.

In Kenya, numerous studies have been conducted to test various stock market reactions to information generating corporate events. These include; Jackson and Madura (2003), Aduda and Chemarun (2010), Mbugua (2004), Ndirangu (2008), Muragu (1994), Mohamed (2010), Augustine. K (2011), Otieno & Ochieng (2016), Onyango (2004), Kiio (2006), Otieno & Kunyula (2016) which tested various information content ranging from annual reports, rights issue, stock dividend announcements, stock splits, cash dividend announcements and general elections. Little is known about how the East African market responds to the profit warning announcement. This is the knowledge gap and this research seeks to bridge by analysing the reaction of share returns to profit warnings announcement.

These studies have concentrated on the more developed UK and US capital markets. We identify this as a research gap and a justification for a localized study, since, in view of the dissimilarities in efficiency of capital markets, the findings derived from the studies on foreign capital markets cannot be taken to form an absolute conclusion on the effect of profit warning announcements on stock returns in East Africa.

In Kenya, unlike Tanzania, Uganda and Rwanda, it is a legal requirement by the Capital Markets Authority that listed companies disclose a profit warning when they expect the projected earnings to fall by 25% in comparison to the earnings of the previous year (Legal notice no.60 of May, 2002, CMA, page 199). Failure to do so may result in sanctions as some firms have been punished before. In Tanzania, Uganda and Rwanda, announcement is not mandatory and thus companies disclose a profit warning on voluntary basis.

Thus, the question this research seeks to answer is: whether there are companies that voluntarily issue profit warnings even with no legal requirement and most importantly, what are the effects of profit warnings announcement on share returns in East Africa?

1.3 Objective of the Study

The objective of the study was to examine the effects of profit warning announcements on share returns for companies listed at the various East Africa securities exchange.

1.4 Value of the study

The research is of great benefit to the following stakeholders: Companies' managers, investors, researchers and academicians, regulatory body, financial analysts and fund managers.

The management personnel of the listed companies around East Africa are in a key position to understand the effects of Profit warnings on stock returns which in turn can play a bigger role in determining their operations and to know the methods used in gathering and applying profit warnings. They find the study invaluable in making decisions regarding capital raising through equity as well as how to increase investor confidence generally while increasing its returns.

Researchers and the academic community use the findings of this study as a reference for further studies and as a basis for discussions on listed companies around East Africa. It also forms a reference material for study and analysis. It also documents and makes available literature used by other scholars and researchers in assessing whether the findings are consistent with those in developing markets or not thus proving ground for further research.

Listed companies are subject to various regulatory requirements. The regulators are interested with the level of compliance by these firms to the regulations. The securities industry and capital markets practitioners can get an insight on the effects of profit warnings announcements on share price movement and returns of listed companies around the East Africa region. This should help them develop strategies and policies on how to deal with these effects and mitigate the challenges.

The ordinary investors find this study useful in formulating, selecting and implementing investment decisions despite of the market inefficiencies and anomalies. Dealers know which stocks to buy and which ones to sell while brokers on the other hand are able to know how to approach different buyers and sellers when they are buying and selling their stock

Commercial sector and to a larger extent other industries, which helps them understand the importance of profit warnings and how they can mitigate the risk due to the price warnings announcement.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This study draws its sources from numerous research areas. First, it assesses theoretical foundations on the Efficient market hypothesis (Fama 1970, Augustine K S 2011), the Random walk theory (Kendall 1953 , Cowles 1937), Signaling theory (Arrow 1972, Spence 1973) and Agency theory (Ross 1973). As well as various factors that determine the stock prices and returns in the market. This is aided by a diagrammatic representation on the conceptual framework.

Literature that documents earlier empirical studies on profit warning announcement is also discussed. Research work on insider trades around profit warning is also revealed. Conclusions from the literature review, identification of research gaps and a summary of how the study differs from the reviewed studies is made.

2.2 Theoretical Framework

Several theories concerning the relationship between profit warning and share prices variables have been advanced by scholars in various financial literatures. This section presents some of the theories such as the EMH (efficient market hypothesis), random walk theory, signalling theory and agency theory.

2.2.1 Efficient Market Hypothesis

The origin of efficient markets hypothesis dates back to 1965 when Samuelson (1965) published his proof that properly projected prices fluctuate randomly. The term efficient markets was first introduced in economics literature by Eugene Fama (1970).The study also known as the efficient market theory states that financial markets are “informationally efficient” or that prices on traded assets e.g. stocks, bonds or property already replicate known information. It supports that prices of the financial assets traded such as stocks, bond, derivatives, in a market, replicate and incorporate all the facts available and known to the public. In this respect the prices are mostly unbiased and reflect the aggregate beliefs that all investors have and share about future prospects of firms, industry, market segments and the market as a whole.

Accordingly, it’s thus difficult to constantly outdo the market through expert stock selection or timing of the market by utilising any information already publicly available. Therefore, an investor can possibly obtain higher returns by only purchasing riskier investments. According to EMH, stocks will frequently trade at fair value on stock markets, hence make it hard for stockholders to buy devalued stocks or sell stocks for exaggerated prices. Information in EMH is anything that could have an unknown impact on the prices currently and prospectively.

Efficiency in the market means stock prices change quickly and correctly to the arrival of new information and thus existing stock prices mirror all information on the stock, and there exists no doubt that the existing price is too low or too high. In an efficient market, information is extensively and reasonably accessible to all investors in the market and that all appropriate and attainable information is already reflected in the stock prices. EMH’s advocates argue that although inefficiencies may exist, they are quite small and rare. Fama classified the market efficiency in to three forms of market efficiency on the basis of the information:

In the weak form, **s**tock price will reflect historical information of past prices and returns. The trading prices reflect mostly historical values and only change due to the random walk i.e. when novel information reaches the market. Thus the value of a monetary asset at a given day can be forecasted by the stocks previous day’s price in addition to the expected return of the asset and an unpredictable random factor.

In a semi-strong market efficiency level, the price of a financial asset include all the historical values but also depicts all publicly available information. Public information is made up of macro and micro data which is company specific data.

In a strong form security prices mirror all information comprising public and private works common to all market participants’. Market prices reflects all information including inside information. In such a case, no single investor may have information advantage.

2.2.2 Random Walk Theory

The theory argues that share price movement are independent of one another and unrelated. This happens in an efficient market where the current prices of the securities represent unbiased estimates of their intrinsic values. The theory holds that the price move in a random manner hence impossible to forecast future prices. New information results to a price movement and given that investors cannot tell whether the information is good or bad, it is therefore difficult to forecast future price movement. The random walk theory is closely related to the EMH.

When Kendall (1953) studied 22 UK stock commodity price series, he concluded that in a series of price which are observed at fairly close intervals the random changes from one term to the next are so large as to swamp any systematic effect which may be present. The data behaves almost like wandering series.

This empirical observation came to be called “the Random Walk Model”. If the prices drift in a random manner, this poses as an obstacle to market experts who try to forecast stock prices; Deriving from earlier research by Kendall and Cowles (1937) showed that a time sequence generated from a series of arbitrary numbers was not distinguishable from a record of US security prices, the resource used by market experts to forecast price levels.

Despite the developing evidence on the random nature of security price movements, several cases of abnormal price behaviour were noted. This was where specific sequences seemed to pursue foreseeable trails. This comprises of a subset of the security price sequence studied by (Owler 1937) and (Kendall 1953). According to Fisher and Jordan (1979), the random walk theory is a special case of a more general EMH.

2.2.3 Signalling Theory

Signalling theory was evinced in early 1970 and is centred on two major research contributions of Arrow (1972) and Spence (1973). Spence (1973), with the purpose of coming up with general conclusions about information economics, studies the workforce market.

According to Connelly et al. (2011), signalling theory is used to explain actions between two parties who have access to different information. The sender (company) chooses how to relay information to the market which consists of the investors as the recipients and they choose how to interpret the signal. Merton and Rock (1985), suggested that announcement of dividend relays information to investors on the company's future prospects where an increase in dividend pay-out acts as an indicator of the firm possessing strong future prospects.

Profit warnings serve as signals to the market that stock returns shall be lower in the coming days and they influence the decisions of the investors. Signalling theory forms an important framework for our study since this study is aimed at revealing the effects of the signal (profit warning) to the market just before and after it is released which is revealed in the stock returns of the company that issues the profit warning.

2.2.4 Agency Theory

The agency theory was described eloquently by Ross (1973) in a paper published in a preceding issue that built in the theory of the firm. According to Ross (1973), agency relationship exists when two parties , one referred to as the agent acts on behalf of the other party referred to as the principal in matters requiring decision making. Agency problem arises when the agent acts in a manner not in conformity with the expectations of the principal. The existence of conflict of interest prompted the need to segregate ownership and control of the firm.

There are several justifications for the existence of principal-agency relationship. First, the principal (shareholders) could be too many and spread geographically thus they may not be able to take part in active management of the firm. Secondly, the shareholders may not have the requisite skills for effective operation of the firm and may therefore need to engage specialized personnel to manage the firm. In order to mitigate the risk of agency problem, Jensen and Meckling (1976) posit that firms must be willing to incur agency costs. Agency costs can mean the aggregate costs of preventing a firms agents (management) from pursuing their own personal goals or interests at the expense of their principals (shareholders).

The activities that a firm engages in have a direct effect on its stock returns because these activities can either lead to increase or decrease in the company's earnings expected by the investors. When investors engage agents, they expect that the agents will engage in activities that are consistent with the wealth maximization goal. In an effort to ensure that agents fulfil their duties without putting the interests of investors into jeopardy, the Kenyan Capital Markets Authority legal notice no.60 of year 2002 requires all agents (management) to inform the shareholders (principals) and the general market of any substantial changes in the firm that can potentially affect the returns expected. For instance, where there is a significant shortfall in the firm's profit by 25% from previous profit, the firm's management is required to make a profit warning announcement in fulfilment of their agency role and also in consistency with the principles of good corporate governance. This is only in the Kenyan Capital Market Acts but not a requirement in the Uganda, Tanzania and Rwanda Capital Markets Act. For such countries, disclosure is voluntarily.

2.3 Determinants of Share Returns

A number of factors have been studied and established to be the determinants of share returns of a company. Some of these factors are and not limited to; Inflation, Interest rates, economic growth and government regulation.

2.3.1 Inflation

Inflation is the general rise in the price of goods and services. Fama (1981), Green and Bhai (2008) along with Kamini (2013), in their researches observed that there exists an adverse relationship between stock returns and inflation. Crosby (2001) indicates that increases in price levels reduce the real level of the stock price index. Deflation, generally is bad for stocks as it indicates a loss in pricing power for companies.

Higher inflation can affect equity returns in two ways. First it can result in a weaker economic performance in the future, hence, reduced company returns. Second high inflation can cause a rise in the risk of assets resulting to a higher rate of return that investors expect on them as it is related to an increase in inflation uncertainty. According to International Finance Discussion papers, paper number 464, published on April 1994, Ceterius Paribus, an increase in future expected returns means the stock prices must drop now, leading to negative impact on current returns.

Although inflation negatively affects stock returns, Groenewold et al (2010) states that this is as a result of interactions in the whole economy. They further state that inflation indirectly affects stock returns via output and the interest-sensitivity of an investment strengthens the overall adverse effect while the income-sensitivity of the demand for money considerably weakens it.

2.3.2 Interest Rates

Interest denotes the price charged by commercial banks on loans. The interest rates materially influence the behaviour of existing and prospective investors as it is the major source of uncertainty for companies and thus a major area of concern to everyone. The relationship between interest rates and stock returns has received a considerable attention in the investment landscape as movement in interest rates is depicted as having influence on investors' behaviours (Green and Bhai, 2008 and Kamini, 2013)

Researches done by Green and Bhai (2008) and Kamini (2013) show that there is an inverse correlation between interest rates and security returns. This is because when interest rates are high, there are few money in circulation due to low borrowing by both individuals and institutions and savings become attractive as well thus this affects the trading activities at the capital markets and vice versa (Aroni, 2011). When demand for stock is low due to less money in circulation, it results to drop in share prices.

According to Fama (1981), there is a negative correlation between interest rates and stock returns. There are two rationales for this. First, when interest rates fall, stocks appear more attractive when compared to bonds. Investors feel that they can earn higher returns by investing in the stock market as opposed to bond market. The law of demand comes to play and pushes stock prices upwards as more investors enter the stock market (Nissim and Penman, 2003).

The other rationale arises from the consequences of reduced rates for the larger economy. When corporates and people can reasonably access loans, their spending increases; include spending on investment in the securities market. Similarly, the principle of demand pushes stock prices high (Nissim & Penman, 2003).

2.3.3 Economic Growth

Economic growth is computed in terms of gross domestic product (GDP) and is usually associated with changes in technology, increased personal savings and labour participation (Ritter, 2005). It is the rise in an economy's capacity to yield goods and services from one period to another.

Yao, Jakob and Dzhumashev (2011) in their research state that there exists a significantly positive correlation between share price and thus stock returns to economic growth. It's also argued that investors prefer investing in those countries that have the largest potential growth. When a country's economy is booming, spending and investments is more resulting in increased demand in stock markets. This results to a rise in share prices due to higher demand. However, other researches done by Ritter (2005) and Wade (2013) indicate that although stock returns have a relationship with economic growth, there is no express consensus since this relationship is more prevalent during times of high output volatility.

2.3.4 Government regulation

The stock market is a major financial entity with players both large and small. The market facilitates public ownership of corporations while also providing a trading industry with many different types of careers. Governments regulate the stock markets activity to a large extent in order to safeguard investors by guaranteeing a just exchange of stock holding on the open markets.

Anlin Chen and Eva H.TU (2002) in their research stated that a countries government can influence stock markets through monetary and fiscal policies, currency inflation, bailouts, subsidies and tariffs, corporate tax and through regulation like the Capital Markets Act. Such regulations include a compulsory announcement of profit warning in some countries as per the act.

Governments have the most influence in the monetary world because with a single regulation they cause huge reactions that destroy corporates. Therefore, most investors around the world consider governmental risk a major issue when assessing securities. An attractive stock can end up not to be excellent when the government policies under which it operates are considered.

2.4 Empirical Review

According to Elayan (2009), profit warnings are described as earnings forecasts made by management that warns the public of an anticipated reduction in earnings in relation to the applicable standard. The profit warnings are issued at any time before the pronouncement of actual earnings results. The deficit in returns may be in terms of sales, earnings before interest and taxes (EBIT), net profits and earnings per share (EPS), etc.

Previous research has shown that the timing of management disclosures affect the revision of subsequent analyst forecasts. Baginski and Hanssell (1990), show that analysts follow management forecasts more closely in the fourth quartet. These issues suggest that the differential timing of profit warnings have several implications for shareholder reaction.

In their investigation of management’s discretionary before a large earnings disappointment, Kasznik and Lev (1995), reported that the likelihood of forewarning increased with firm size, the presence of an earlier forecast and membership in the high technology industry. Warnings were also found to be associated with permanent earnings decreases. Helbok and Walker's (2003) findings in the less litigious UK environment where firms reported less frequently indicated that profit warnings are value-relevant events with firms experiencing an average 20% decline in share price in response to them. They also found profit warnings to signal a permanent earnings decline. Firms did not appear to be reprimanded for their honesty when issuing profit warnings where Tucker (2005), found that while in the short-term , their returns were more negative relative to firms with no warnings ,their long run returns were more positive. In terms of long term consequences, Bulkley, Harris and Herreiras (2002) also found strong reversal one to two years after the warnings, mainly in small firms

Mohamed (2010) studied the effect of earning announcements made on stock prices of companies listed at the NSE. He studied 45 companies declaring earnings between January 2004 and December 2008. The study found that earning announcement may carry some information for the market and stock prices may be adjusted accordingly. The findings showed that statistically significant negative abnormal returns were observed in the post and pre-earnings announcements period.

Onyango (2004) in his study covered 16 companies out of a population of 48 companies listed at NSE, discovering the period between 1998 and 2003. The study concluded that the earnings announcement contain significant information which is fully impounded in the stock prices prior to or almost instantaneously at the time of announcement. Secondary evidence resulting from the study showed that NSE depicts the presence of a semi-strong model of EMH. He suggested further research on information content to support his conclusion.

Jackson and Madura (2003) reported a strong negative reaction, starting five days to the announcement with the reaction complete within five days after the warning .While there was no overreaction to the announcement, small firms reacted more negatively in the announcement and post-announcement periods while in the pre-announcement period, more negative reactions were observed in large firms. Collet (2004), studied the accounting detail provided in profit warnings, in particular information on sales growth and operating margin changes and found only 35% and 42% of firms issuing warnings and upgrades respective provided quantitative information

Insider trading activity around profit warnings has not yet been studied though similarities exists with studies around financial distress (Seyhun and Bradley, 1197), breaks in earnings trends (Ke, Huddart and Petroni, 2003) and around management earnings forecasts (Noe, 1999; Cheng and Lo, 2006). Seyhun and Bradley (1997) reported insider selling beginning five years prior to a bankruptcy filing, escalating to the month of announcement. Top executives in the firm were more responsible for intense selling with insiders buying after prices have fallen and selling before they fall. Cheng and Lo (2006) provide additional evidence that when managers intend to buy, increase the number of bad news forecasts while delaying good news to decrease share price. However, they were unable to show that managers increased good news forecasts or avoid bad news forecasts when selling, possibly due to the risk of litigation

Prior literature has explored why firms pre-announce. One motivation for pre-announcing earnings is to pre-empt litigation. Skinner (1994) argues that announcing bad news early can mitigate litigation costs by lowering the number of prospective petitioners who could assert that they bought stock at a time when management had held negative undisclosed information. Consistent with this argument, Skinner (1994) documents that unlike firms with good news, companies with severe information are highly probable to voluntarily disclose earnings-related information preceding the official earnings pronouncement. Further, Kasznik and Lev (1995) find that companies in industries with eminent litigation have a greater probability of warnings before large earnings surprises.

A second motivation for pre-announcing earnings is to affect the overall market reaction to earnings news.

Bulkley, Harris and Herreiras (2002) noted that profit warnings are the optional disclosure of bad news by companies before making earnings announcement. They may be a specific revised earnings forecasts (quantitative warnings) or may take a qualitative form that simply states, or implies, that earnings will be significantly less than current expectations. Approximately half of all companies whose expected earnings announcements are going to be “bad news” warn in advance (Kasznik and Lev 1995).

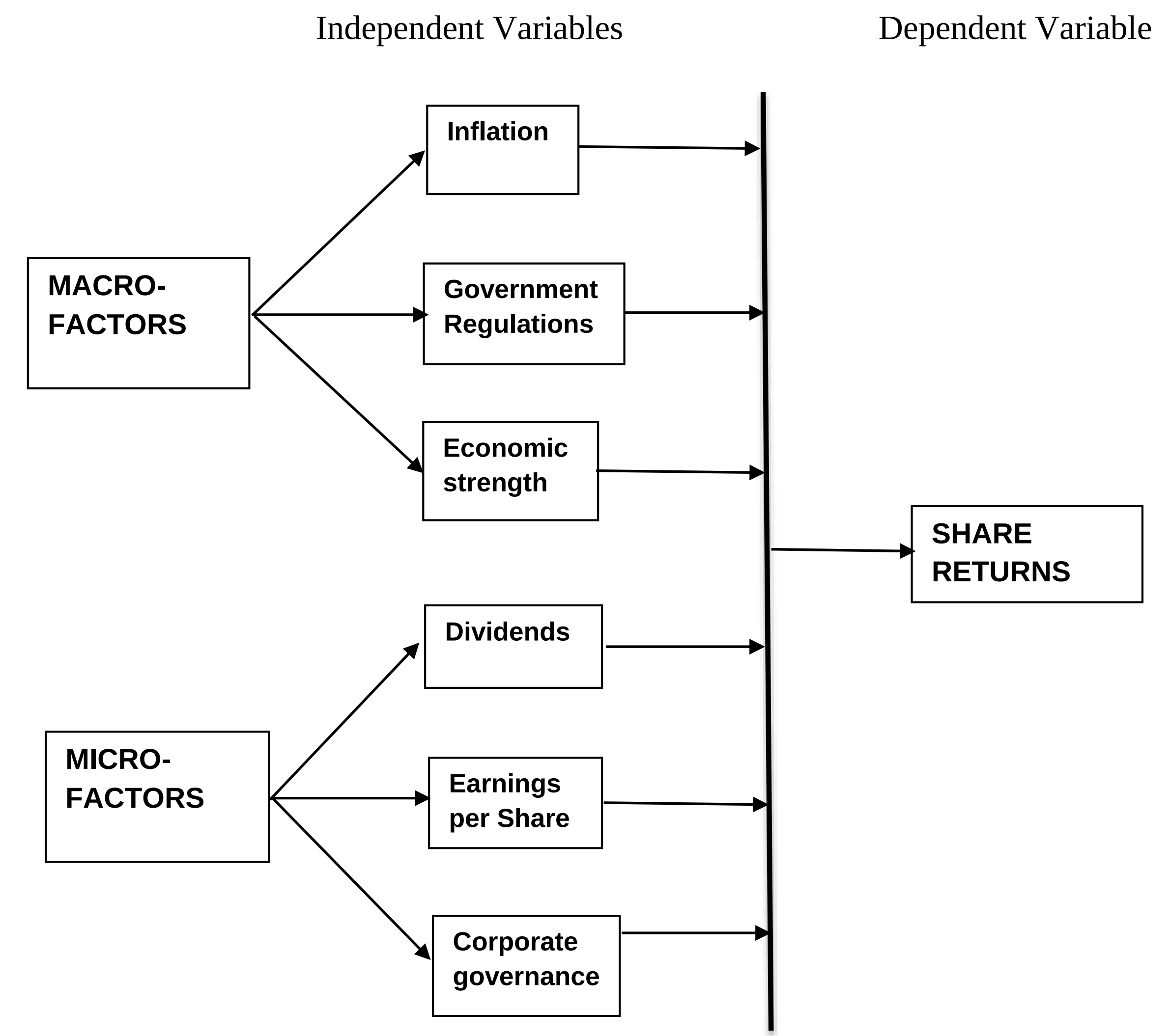
2.4.1 Insider trades around Profit Warnings

Seyhum (1988) states that collective insider trading is explicitly correlated to prospective market returns over the 1975 to 1981 period. Insider trading denotes the quantity and capacity of accessible market sales and purchases by a firm's own officers, directors, and large shareholders. Collective insider trading signifies the total of insider deals at every instant across all public companies. Aggregate information about insider trades successfully explains market-level returns in the near future. This is consistent with insiders collectively trading on macro-economic information that is not reflected in stock prices by the time their trades are publicly disclosed.

According to Bhattacharya and Daouk (2002), there are two major tenets of insider trading regulation in capital markets. The first one is that individuals should not trade on the basis of material and non-public information. While this restriction is not limited to senior officers of publicly listed corporations, they represent a primary target for insider trading regulation. This is due to their privileged access to private information – some of which directly results from their own decision making prerogatives – and their fiduciary duty towards the firm's shareholders. The U.S first restricted insider trading as part of the Securities Exchange Act of 1934. Other countries followed in 1990s.

The second pillar of insider trading regulation is the reporting requirement that corporate insiders are subject to. Again, the U.S. pioneered mandatory disclosure of insider transactions by senior executives and directors of publicly listed corporations, and those of major shareholders (holding 10% or more of a company's stock) under the Exchange Act of 1934. Capital Markets (Amendment) Bill, 2013 has enforced Kenyan regulations by Capital Market Authority on Insider trading and other market abuses (The East African, 2016).

2.5 Conceptual Framework



The macro factors includes variables that are not within the control of a firm such as interest rate movement, inflation, government regulation and economic growth. These will positively or negatively affect share returns of companies in a given country as further explained on the determinants of share returns above.

The micro factors are within the firms reach and include its dividend policy, earnings per share and whether it has a sound corporate governance structure in place. A firm has more control of these factors and these affect the share returns of companies in a favourable or unfavourable manner. A high or increasing EPS (earnings per share) and dividend pay-out may result in a rise in share price and thus increased share returns and vice visor.

The share return is the dependent variable as it is determined by the micro and macro factors which are the independent variables.

2.6 Chapter Summary

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

From a further review of literature, it emerges that profit warning is not only an area that has generated a lot of interest to investors and management of firms but also to other stakeholders. Although profit warnings are voluntary disclosures, previous studies show that firms disclose such information for diverse reasons key among them is to avoid being punished by the shareholders through law suits and overreaction to the information. Over time, most markets have seen an increased number of firms that continue to issue profit warnings despite studies revealing negative market reaction. To encourage disclosure, laws and regulations have been passed setting the criteria upon which firms can issue profit warnings. In Kenya, such regulations were issued by CMA which is the regulator of NSE. Firms which fail to issue profit warnings are likely to face sanctions from the regulators.

The timing of profit warning announcement is an important consideration by the management. If the management of a firm potentially wishes to reduce the negative response of the market to profit warnings then it's possible that the announcement will be done when the market reaction is deferred. The expectations under the reasoning above is that announcements that are made after Friday 4 p.m. will possibly generate a totally different market response compared to an announcement made at Tuesday 10 a.m. during a trading week.

Most of these studies cover markets in developed countries. There is lack of empirical evidence on magnitude of negative reaction of market to profit warning announcement in emerging equity markets generally and particularly in Africa. Earlier studies at the NSE point to the existence of some degree of market efficiency. This study builds on this foundation by seeking empirical evidence on extent of market reaction to profit warning announcement by companies listed in the various East Africa security exchanges.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design and methodology of the study. The main aspects of this chapter include the research design, population and sample size. The last section of the chapter has a description on data collection as well as data analysis.

3.2 Research Design

This study used descriptive design. The event study methodology was used. Event study methodology is a method which is used to measure the impact of an event on the value of a security. According to Craig MaCkinlay (1997), this methodology has many applications for example, in accounting and finance, event study has been used to study mergers and acquisitions, the issue of new debt or equity, investment decisions as well as warnings announcements.

The methodology operates on the assumption that in an efficient market, stock prices respond to new information immediately (MaCkinlay, 2009). The occurrence has an instantaneous effect on the stock price which can be gauged by study of short time periods compared to the absolute measure method which requires observation for longer time period.

3.3 Population

The population of the analysis comprised of all the listed companies around the East Africa region in the various securities exchange. There are 65 listed companies in Kenya, 25 in Tanzania, 16 in Uganda and 7 in Rwanda. The target population constituted only those companies that issued profit warning announcement between 2011 and 2015. This period is considered adequately long enough to capture incidences of profit warning

There were 35 companies around the East Africa region that issued profit warnings announcement between these periods as shown in appendix 1.

Due to the small size of the population, no sampling was done. The entire population was selected since the population size that has the specific set of characteristics being observed is very small.

3.4 Data Collection

The study relied on secondary data. The nature of data collected included corporate action in the form of well-publicized profit warning announcements, company details and the industry, date of the warning and the main reason for issuing the profit warning. The data will also include daily observed share prices for the sampled companies 15 trading days pre and 15 days post the profit warning was issued from the respective companies.

This data was obtained and extracted from the various security exchanges (NSE, DSE, USE and RSE) and Capital Market Authority daily market reports and websites. Secondary data available from stock broker departments on daily stock prices and corporate actions such as profit warning announcements as well as publicly published data in the internet and print media such as nation and standard media was obtained

3.5 Data analysis

The study used quantitative methods to analyse the effect of profit warnings on share price and stock returns. Information on daily average stock prices was collected and used to calculate the impact of profit warning announcement on security returns.

Through the event study methodology, the study identified the event (profit warning), calendar date of the event (profit warning announcement date, t=0), events window (-15, +15days). It is important to correctly identify the event date because missing it would lead to missing of important observations of the impact of the event.

To fully measure the impact of an event, MaCkinlay (2009), indicates that normal and abnormal returns need to be calculated. Actual returns are returns that would be anticipated in case the event does not happen while the abnormal returns are the actual returns minus the expected returns of the asset over the event window. In this study, the focus is to find out the effect of these warnings on stock returns. The Study used statistical methods to compute the abnormal returns (AR) after which the results are analysed to obtain the Cumulative Abnormal Returns (CAR).

3.5.1 Event Date Specification

If profit warning announcement is issued on a trading day, it is assigned day 0. If the announcement is issued on a day with no trading day taking place, the next trading day that is available will be assigned day 0.

The study was an analysis of an event period of thirty one days, consisting of 15 days before announcement of profit warning and 15 days after profit warning announcement, with the warning announcement date being day 0.

3.5.2 Measuring Daily Returns

The daily stock return at any given period is the market model residual. This is computed as below;

Actual Stock Returns = (actual stock price – previous stock price)/ previous stock price

Whereas the actual stock price is the average of the lowest and highest stock price at a given day as expressed from the securities exchange.

The study used the NSE 20 share index as a benchmark to compute the expected returns for companies listed in Kenya. Studies done by Wang & Tumurkhuu (2010), Bulkley & Herrerias (2005) and Jackson & Madura (2003) indicated that the market model was the most preferred and best tool. Abnormal returns (AR) will be computed using the market model to yield the CAR and SCAR.

3.5.3 Abnormal Returns

The following formula was used to calculate the abnormal returns

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

Where;

AR_{it} = Abnormal return of stock *i* at time *t*

R_{it} = Return of stock at time *t*

R_{mt} = market return at time *t*

α and β = constants

3.5.4 Cumulative abnormal returns

The cumulative abnormal returns was computed as:

$$\mathbf{CAR_{i,\,t}} = \sum_{t=1}^{n} \mathbf{AR_{it}}$$

Where;

$CAR_{i,t}$ – cumulative abnormal return on stock ***i*** obtained in the event window *n*, ***n*** – The event window

3.6.5 Standardized cumulative abnormal returns

Standardized cumulative abnormal returns (SCAR) was computed as:

$$\mathbf{SCAR_{iT}} = \frac{(\mathbf{CAR\ it})}{\sigma\ (\mathrm{CARit})}$$

Where;

σ (CARit) - The standard deviation of CAR's adjusted for forecast error.

T-test statistic was used to measure the statistical significance of the ARs and CARs, and SCARs reported during the event window at 5% significance level. T-test statistic assumes a normal distribution of data.

CHAPTER FOUR: DATA ANALYSIS AND INTEPRETATION

4.1 Introduction

This chapter presents the results of the analysis and findings of the study with reference to the study objectives. The first section presents a summary of the data analysis method used. The second section presents the findings of the study and it includes relevant tables and figures that help to explain the results of the data analysis. The last section of the chapter presents a summary of findings and interpretation of the results.

4.2 Descriptive Statistics

The aim of the analysis is to determine the impact of profit warnings announcement on stock returns at the various exchanges in East Africa. To achieve this objective, event study methodology was used for 34 profit warning events in Kenya and Uganda as attached in appendix one for the period 2011 to 2015. The study analyses the performance of the securities market and the company stock returns before and after the profit warnings announcements.

Secondary data obtained was compiled and analysed in Excel format. The study looked at how the various exchanges in East Africa and specific company stocks have been fairing on during profit warning announcements.

4.3 Return Trends on Profit warning Announcement

Figures 4.1 to 4.5 below represents the movements in actual return and expected return for specific companies that issued profit warning during the period. These are computed as follows:

Actual Returns = (Actual Price – Previous price)/ Previous price

Where;

Actual price = (Highest price + lowest price)/2

Expected Return is the NSE 20 share index return computed as:

$$\text{Expected Return} = \frac{(NSE_t - NSE_{t-1})}{NSE_{t-1}}$$

FIGURE 4.1 Return Trends on Profit warning Announcement Year 2011

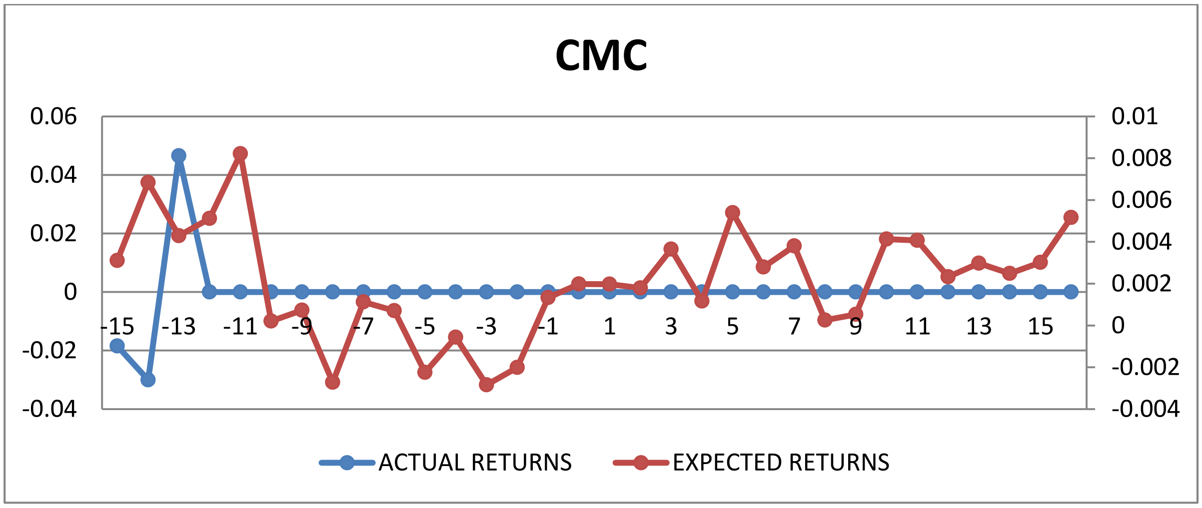


Figure 4.1.1 CMC returns on profit warning announcement

From figure 4.1 the actual returns shows a substantially constant trend through the event window. The expected returns rise two days to the announcement date assuming a positive value which falls slightly on the event date and later rises up to the third day after the announcement day.

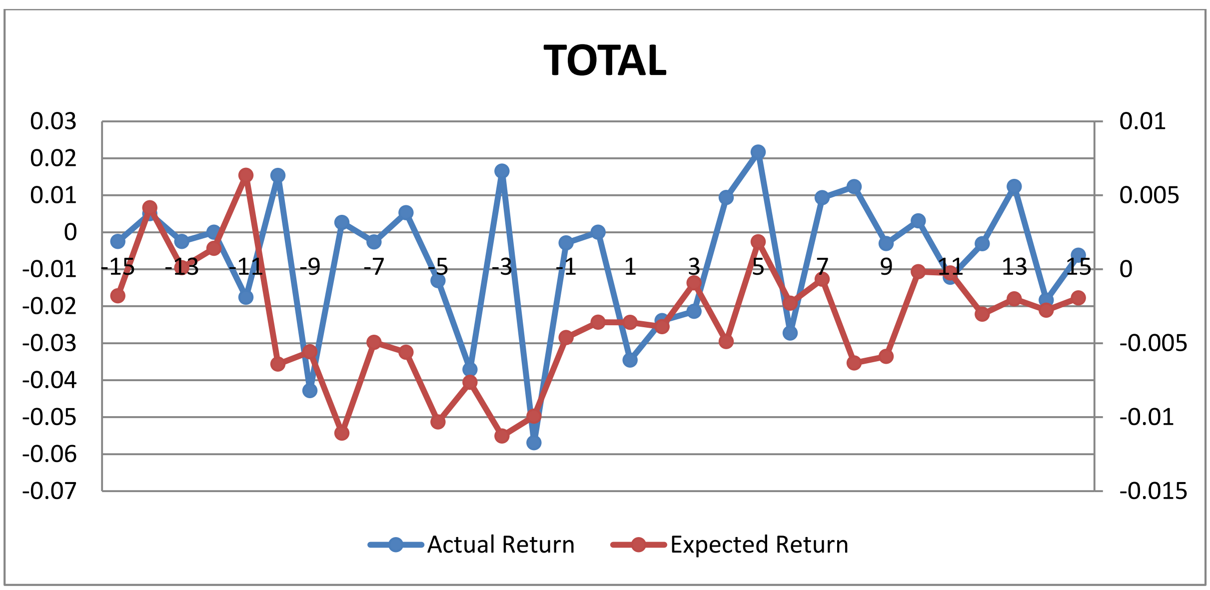


Figure 4.1.2 Total Kenya returns on profit warning announcement

The actual returns rise one day before the announcement and sharply fall on the event day, and rises one day after the announcement after which the returns assume a normal fluctuation trend.

The Expected return rise two days before the announcement maintains a slightly constant value and then rises on the second day after the announcement.

FIGURE 4.2 Return Trends on Profit warning Announcement Year 2012

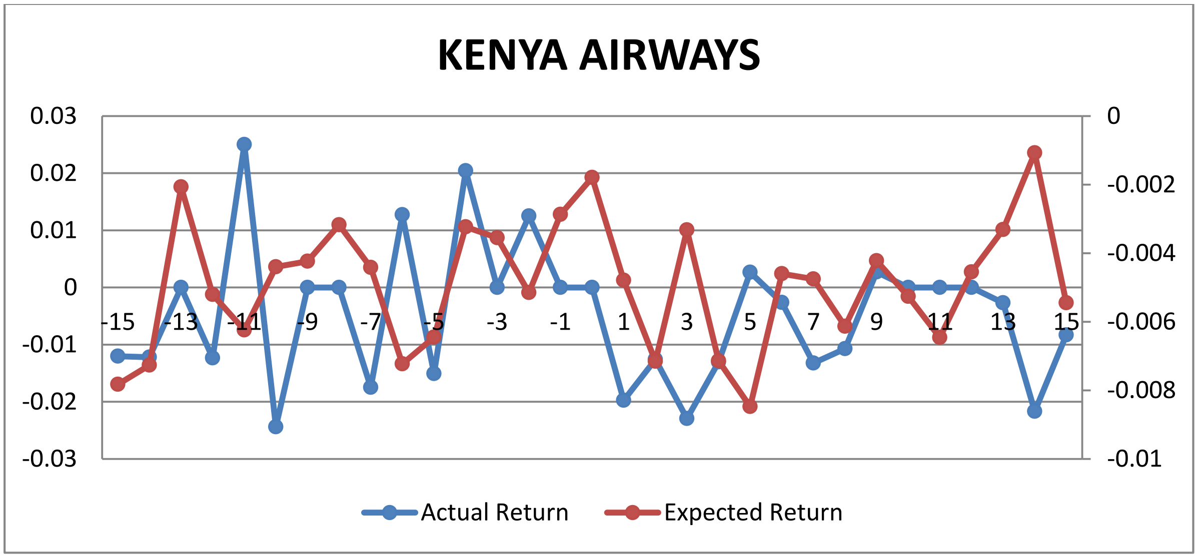


Figure 4.2.1 Kenya Airways returns on profit warning announcement

The actual returns falls two days to the announcement day then falls sharply on the event day assuming a negative value. The expected returns rise two days before the announcement then falls sharply on the announcement day then rises a day after the announcement.

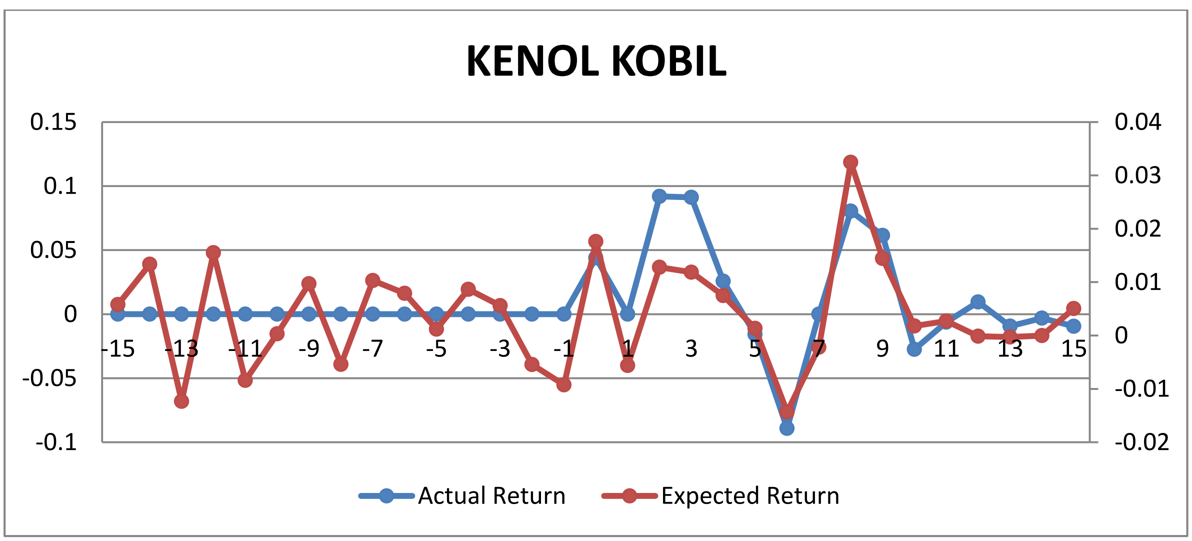


Figure 4.2.2 Kenol Kobil returns on profit warning announcement

The actual returns indicate a constant value up to the day preceding the pronouncement, then rises a day before, falls on the announcement day then maintains a varying trend across the event window. The expected returns fall three days preceding the pronouncement , rise a day before the pronouncement then rises sharply on the pronouncement day and then falls the next day after the pronouncement. Afterwards they rise and fall in an inconsistent trend.

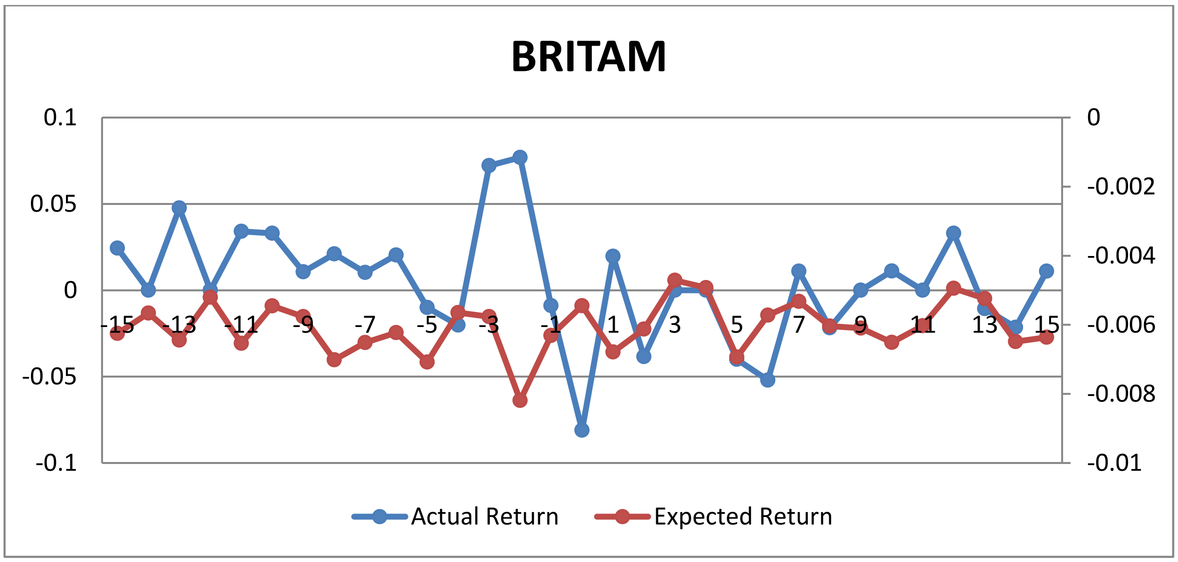


Figure 4.2.3 Britam returns on profit warning announcement

The actual returns falls sharply two days preceding the pronouncement, rises on the pronouncement day and drops the next day. The expected return rise two days to the announcement day, falls on the announcement day and later rise two days after the announcement.

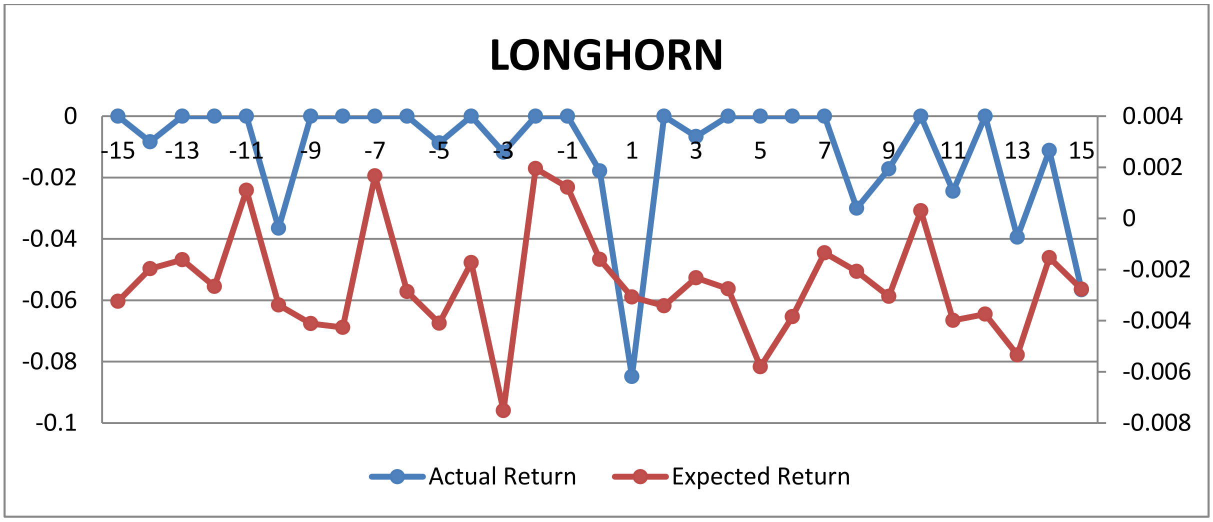


Figure 4.2.4 Longhorn returns on profit warning announcement

Actual returns fall sharply as from one day before the announcement to one day after the announcement. The returns rise sharply on the second day after the announcement, assume a constant trend after day three and later fluctuate irregularly.

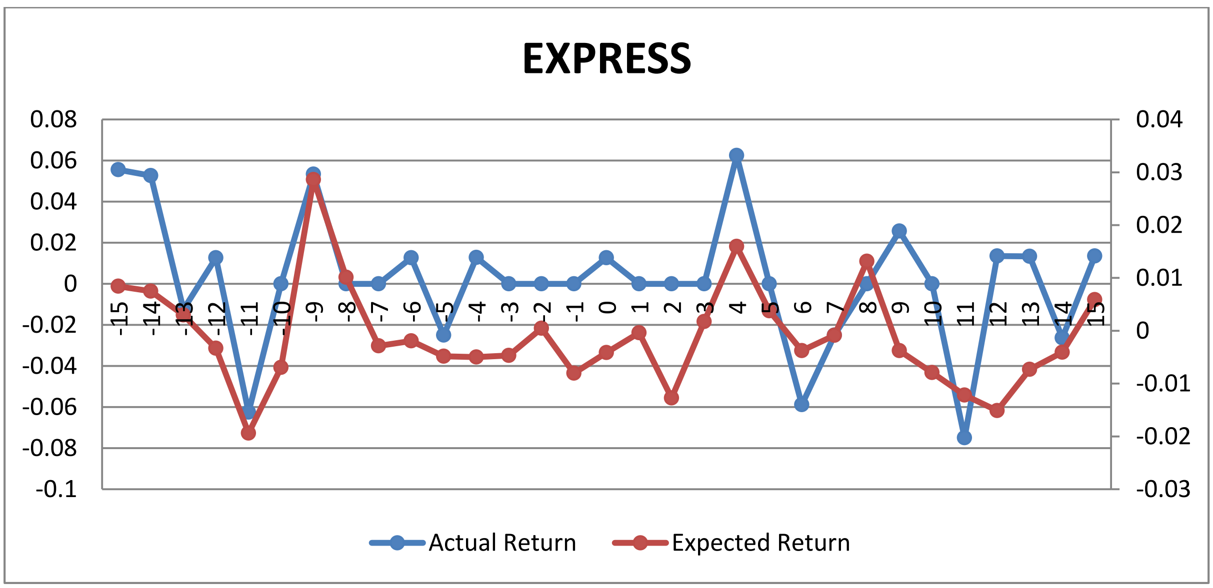


Figure 4.2.5 Express Kenya returns on profit warning announcement

The actual returns depict a constant trend three days before the announcement, rise slightly on the announcement and then resume the constant trend up to the third day from which they fluctuate irregularly. The expected returns rise on the second day to the announcement day and falls one day to the announcement. They then rise on the day of announcement and a day after.

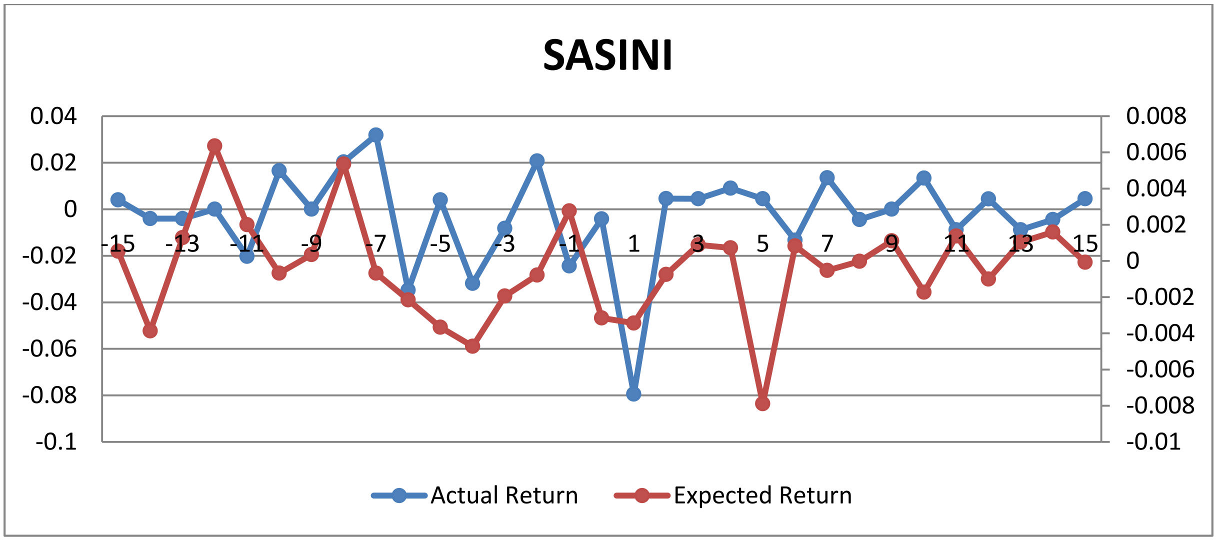


Figure 4.2.6 Sasini returns on profit warning announcement

The actual returns rise two days to the announcement and fall a day before the announcement. They then rise on the announcement day and fall sharply a day after. They then rise to assume an irregular trend thereafter. The expected returns rise from the third day before the announcement but fall on the announcement day. They then rise to day three after which they assume an irregular trend after a sharp fall on day five.

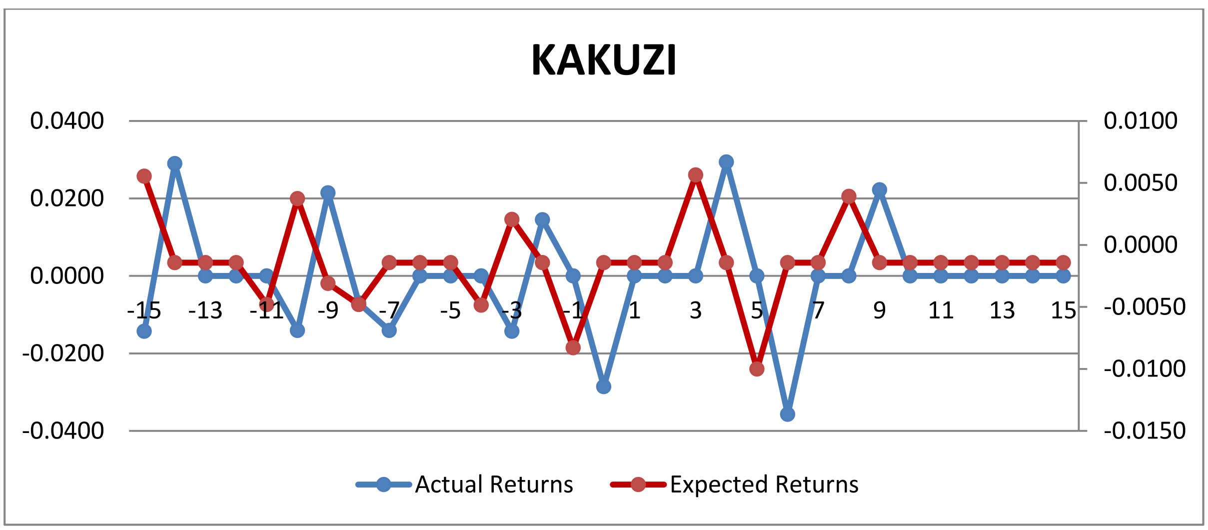


Figure 4.2.7 Kakuzi returns on profit warning announcement

The actual returns fall sharply two days preceding the pronouncement day and rise a day after the announcement. Afterwards, they depict a largely constant trend with few fluctuations throughout the event window. The expected returns fall sharply two days to the announcement but rise on the announcement day. They then show a generally constant trend.

FIGURE 4.3 Return Trends on Profit warning Announcement Year 2013

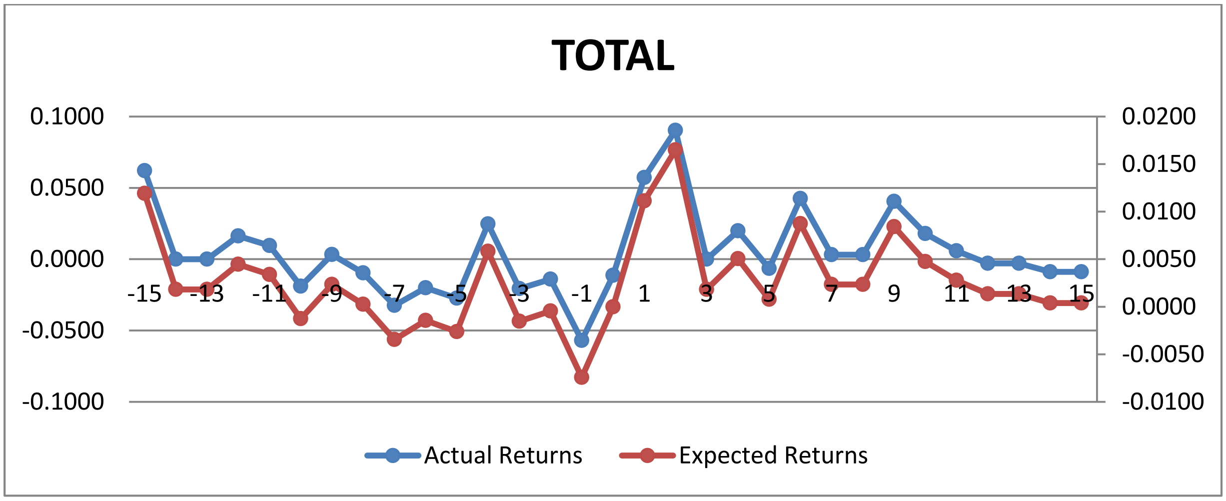


Figure 4.3.1 Total returns on profit warning announcement

The actual and expected returns fall two days before the announcements day, registering the highest fall one day to the announcement date. On the announcement date, the returns start rising and rises till two days after announcement.

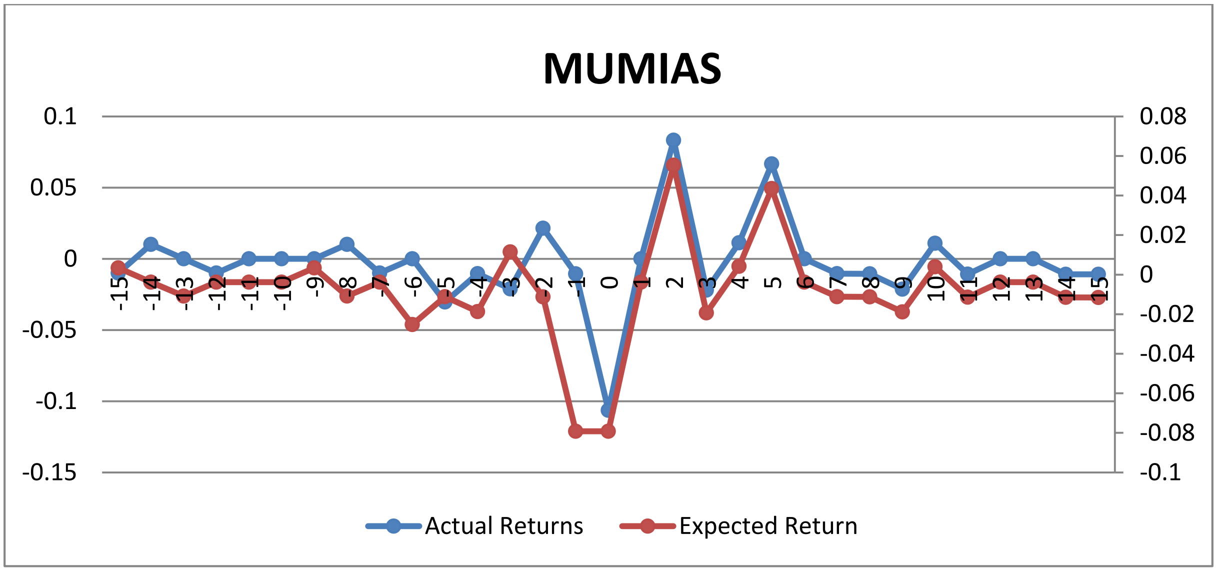


Figure 4.3.2 Mumias Sugar Company returns on profit warning announcement

From figure 4.11 above, the actual and expected returns seems to move in synchrony. Both decrease two days to the announcement day, dipping lowest on the announcement day. The returns start rising one day after the announcement day and maintain a variable trend thereafter.

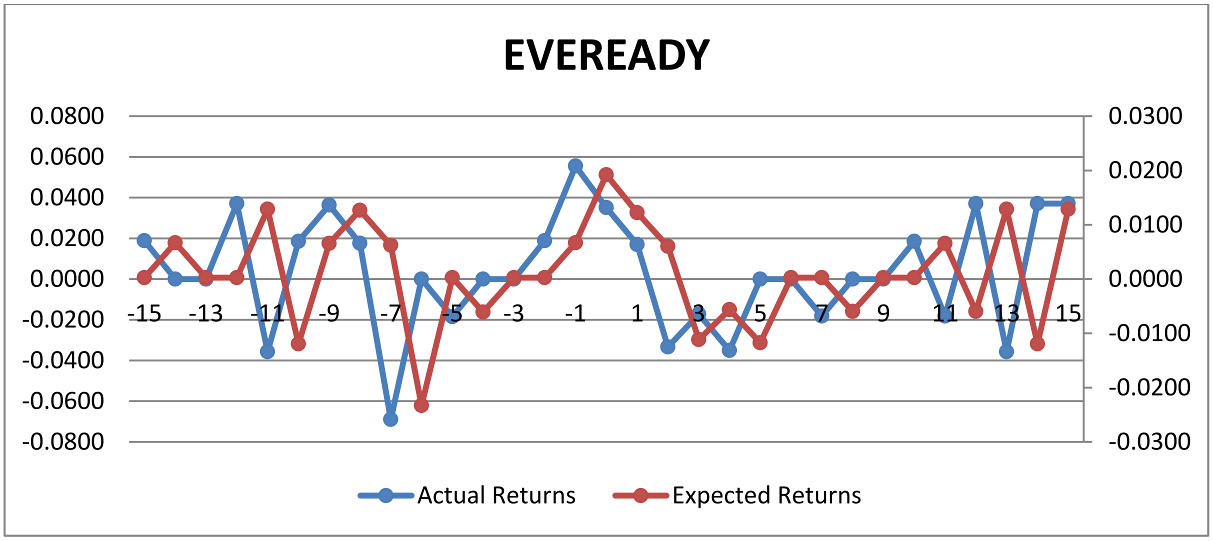


Figure 4.3.3 Eveready returns on profit warning announcement

The actual returns rise two days before the event but falls on the event day through to two days after the announcement from which the irregular trend of rise and fall sets in. The expected returns rise a day before the announcement through to the announcement day where it hits a peak and they fall steadily up to the third day after the announcement where they rise and fall irregularly.

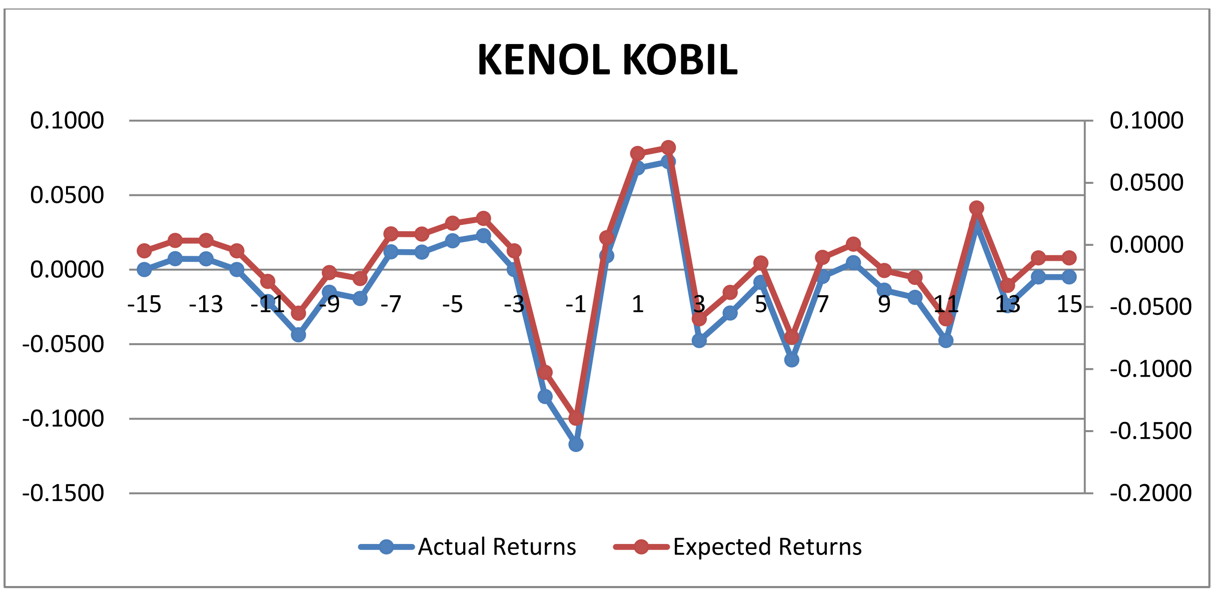


Figure 4.3.4 Kenol Kobil returns on profit warning announcement

The Actual Returns and expected returns start falling 3 days to the announcement date and register the highest fall one day before the profit warning announcement date. On the announcement date, they rise and keep on rising till the third day after the announcement when the returns fall sharply.

FIGURE 4.4 Return Trends on Profit warning Announcement Year 2014

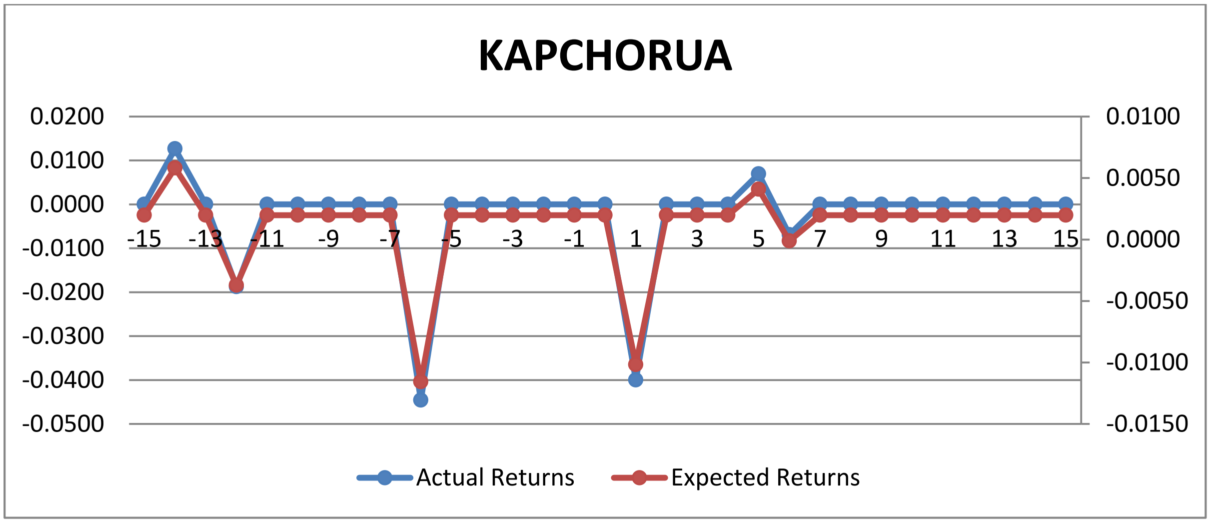


Figure 4.4.1 Kapchorua returns on profit warning announcement

Expected and actual returns move in synchrony. Both returns are constant at zero three days to the profit warning announcement date. On the announcement date, the return fall sharply, then rise two days after the announcements date and assumes a varying trend.

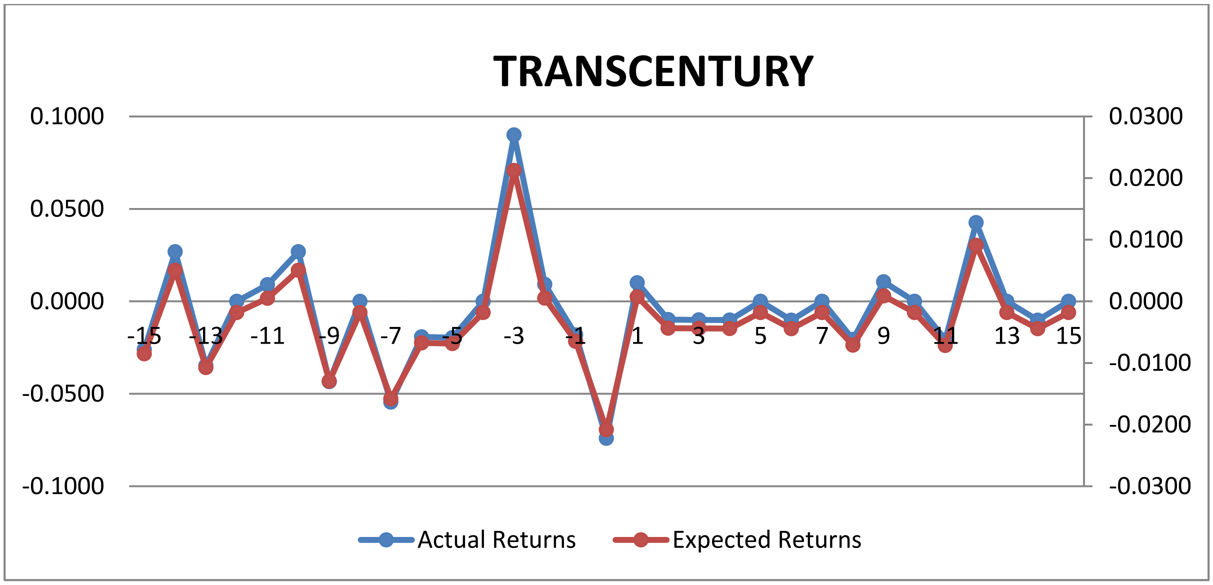


Figure 4.4.2 Transcentury returns on profit warning announcement

The expected and actual returns show similar trend. They register their highest mark 3 days to the profit warning announcement day, start falling two days to the announcement day. On the announcement date, they dip to the lowest and start rising one day after the announcement.

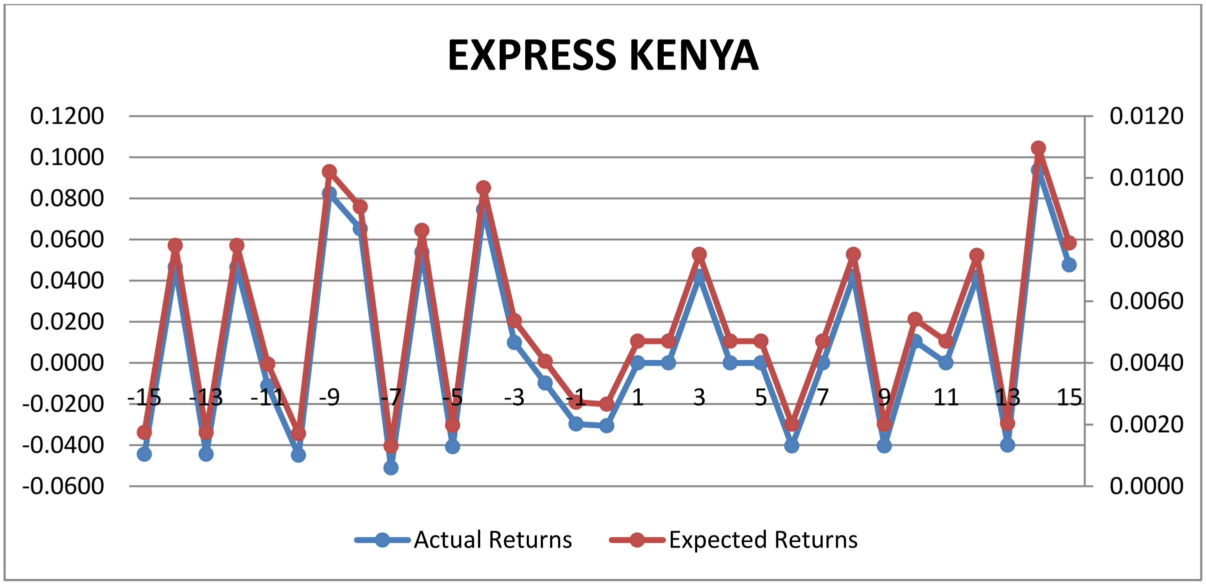


Figure 4.4.3 Express Kenya returns on profit warning announcement

The returns, both expected and actual starts falling three days to the announcement date, on the announcement date, they fall further and start rising one day after the announcement date, thereafter assuming a varying trend.

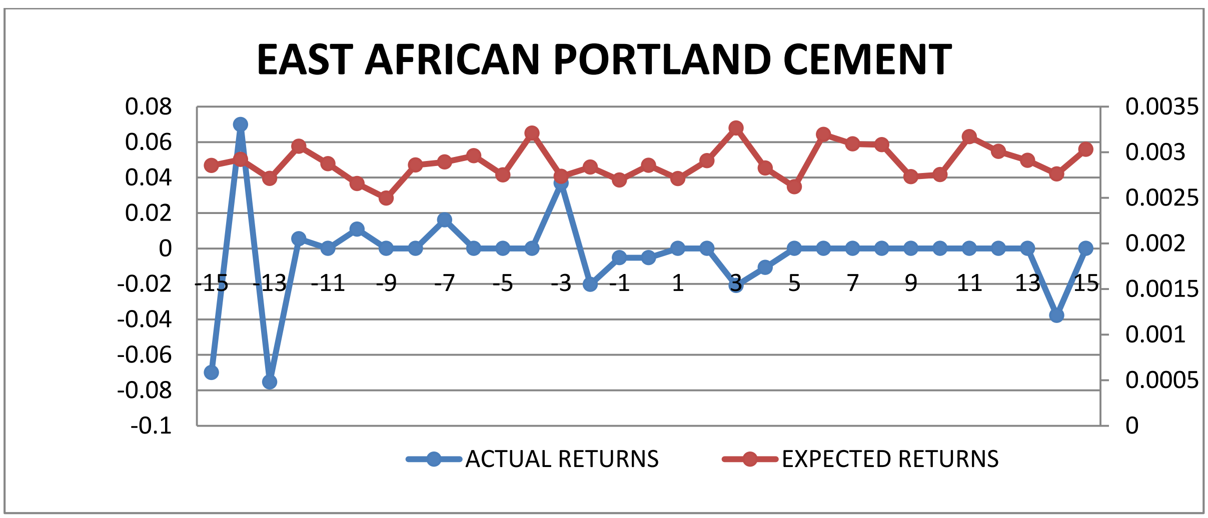


Figure 4.4.4 East African Portland Cement returns on profit warning announcement

The actual returns fall two days before the announcement then rise and stabilizes till the announcement day. The actual returns then rise slightly one day after announcement, fall on the third day and rises thereafter before assuming a constant trend for a couple of days. The expected returns remain above the actual returns for the period under consideration. Inconsistent fluctuations are observed three days to the announcement. The expected returns rise slightly on the announcement day, fall on the first day and rise thereafter.

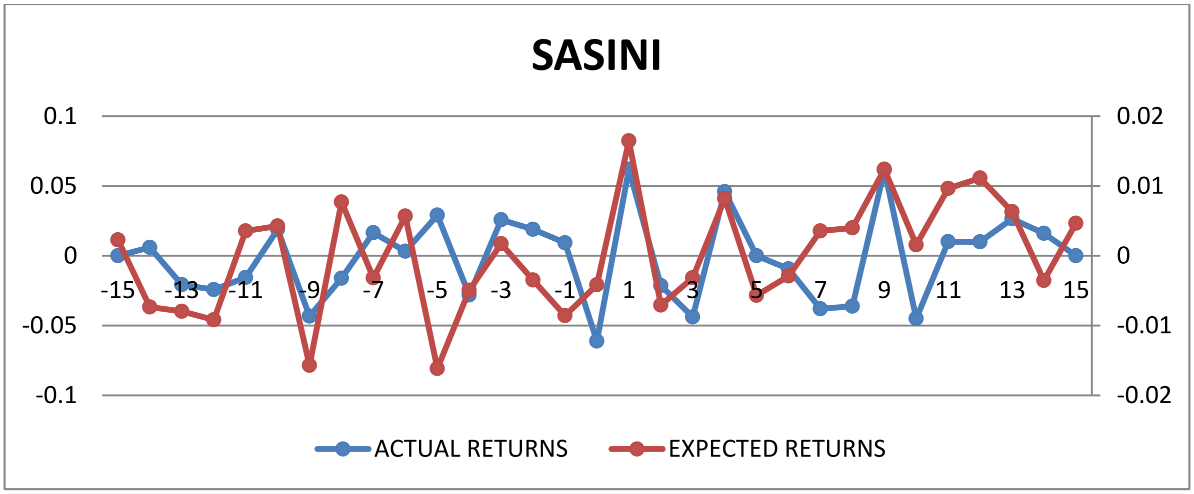


Figure 4.4.5 Sasini returns on profit warning announcement

The actual returns start to fall three days before the event day through to the announcement where it hits the least value. They rise a day after the announcement then fall the second and third day after the announcement. The expected returns fall three days to the event day through to the day preceding the announcement. They rise on the day of the event through to the first day after the announcement but fall on the second day following the announcement before rising again on the third and fourth day.

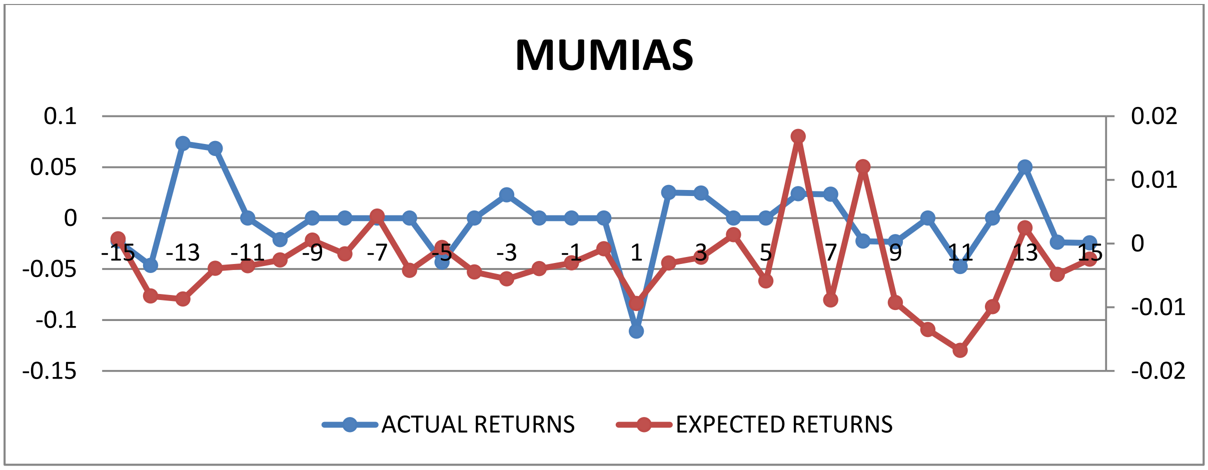


Figure 4.4.6 Mumias Sugar Co. returns on profit warning announcement

The actual returns fall slightly on the third day before announcement and remain constant up to the announcement day when they fall sharply and then rise again sharply one day after announcement up to the third day when they resume the normal fluctuations. Expected returns rise three days before the announcement day and fall on the announcement day then rise again one day after the announcement up to the third day after which they resume normal fluctuations.

FIGURE 4.5 Return Trends on Profit warning Announcement Year 2015

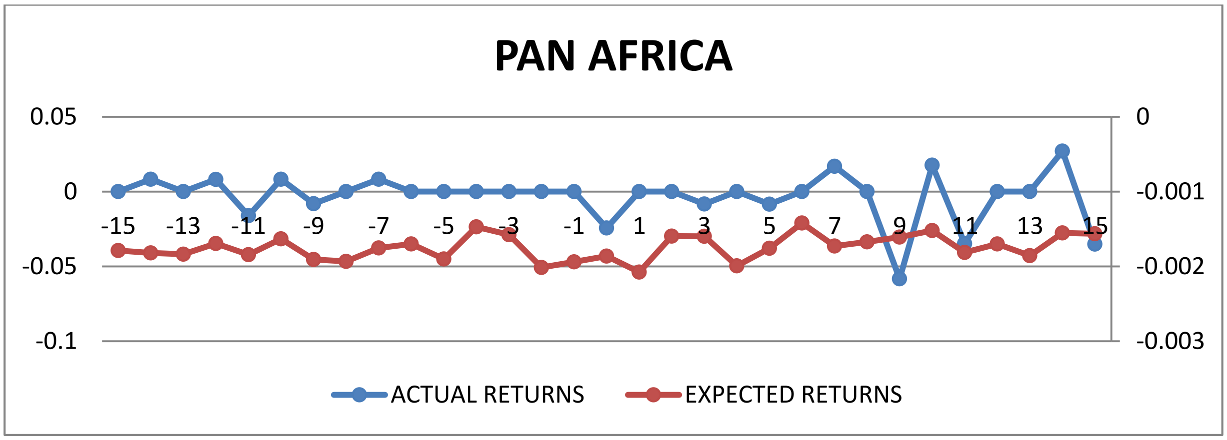


Figure 4.5.1 Pan Africa returns on profit warning announcement

The actual returns fall one day to the announcement day and rise on the announcement day then fall again two days after the announcement and rise on the third day after announcement after which they resume normal fluctuations. Expected returns maintain a negative value throughout the event window. They fall three days to the announcement day and rise slightly two days to the announcement day and then fall again on the announcement day then rise sharply up to the second day after announcement and then fall on the third day after announcement.

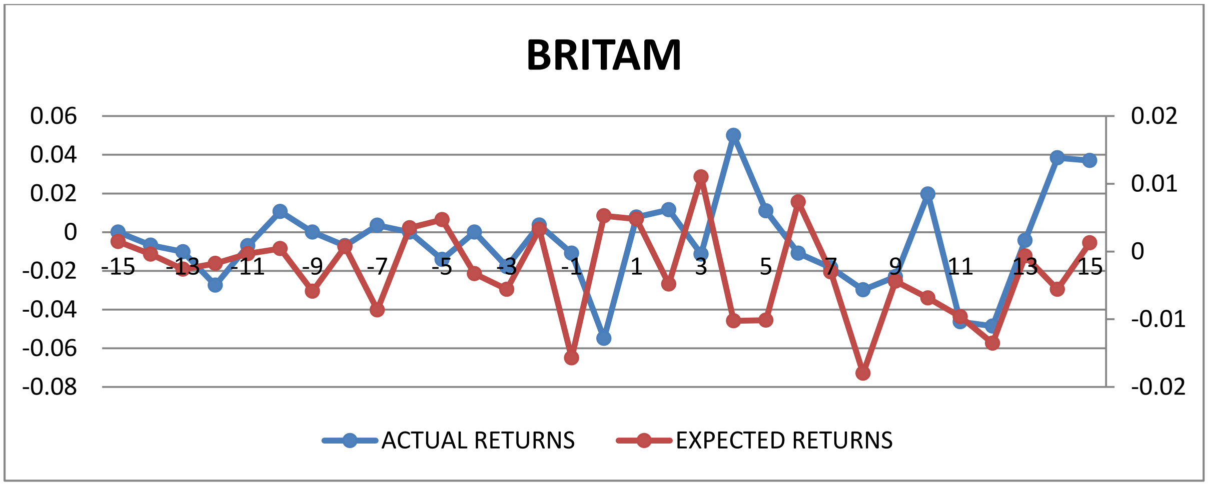


Figure 4.5.2 Britam returns on profit warning announcement

The actual returns fall two days to the announcement day and rise on the announcement day, fall on the second day after announcement and then resume the normal fluctuations. Expected returns rise three days to the announcement day, fall sharply two days to the announcement day then rise sharply one day before the announcement day. They indicate a fall again one day after the announcement and then rise again on the second day after the announcement.

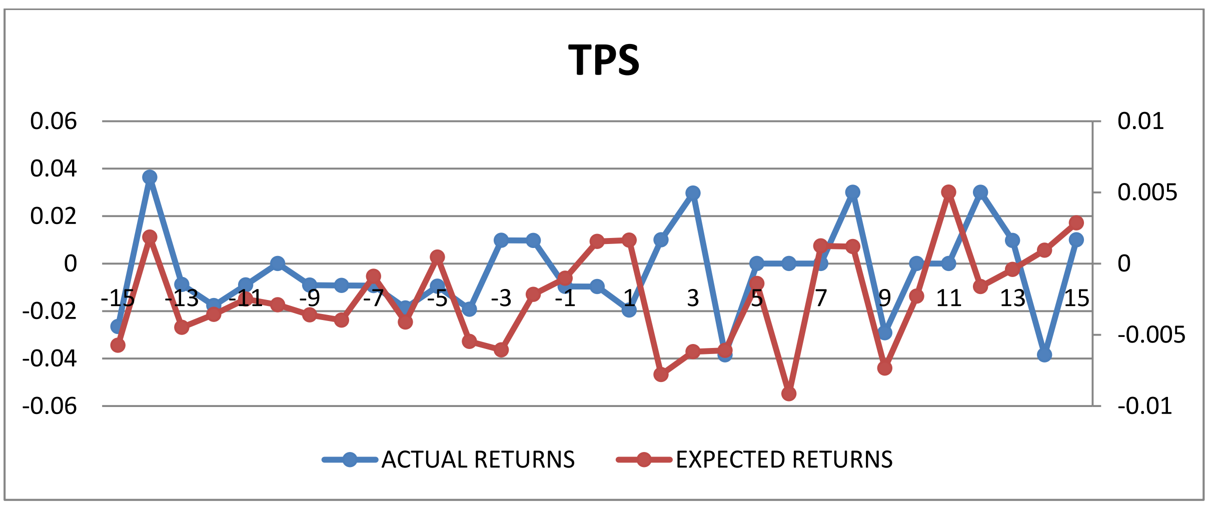


Figure 4.5.3 TPS returns on profit warning announcement

The actual returns fall two days to the announcement day up to the first day after announcement when they rise sharply up to the third day after announcement and then fall again on this day. Expected returns rise on the third day before announcement up to the announcement day when they fall sharply and then rise again two days after the announcement and maintain normal fluctuations for the rest of the period.

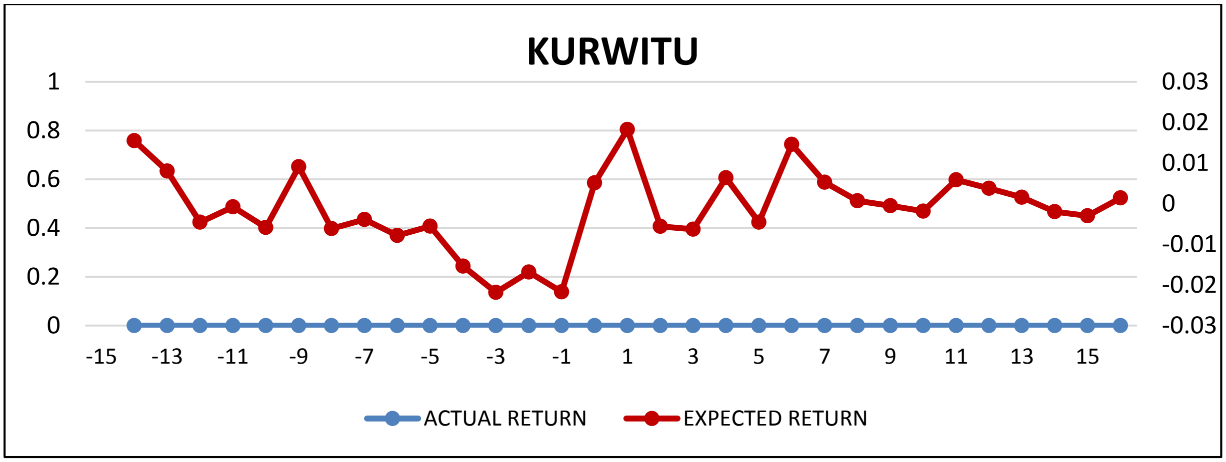


Figure 4.5.4 Kurwitu Ventures returns on profit warning announcement.

Actual returns for Kurwitu Ventures maintain a constant trend of zero returns during preannouncement and post announcement periods. Expected returns fall nine days to one day before announcement day and starts to rapidly rise until one day after announcement. It maintains normal fluctuations for the rest of the period.

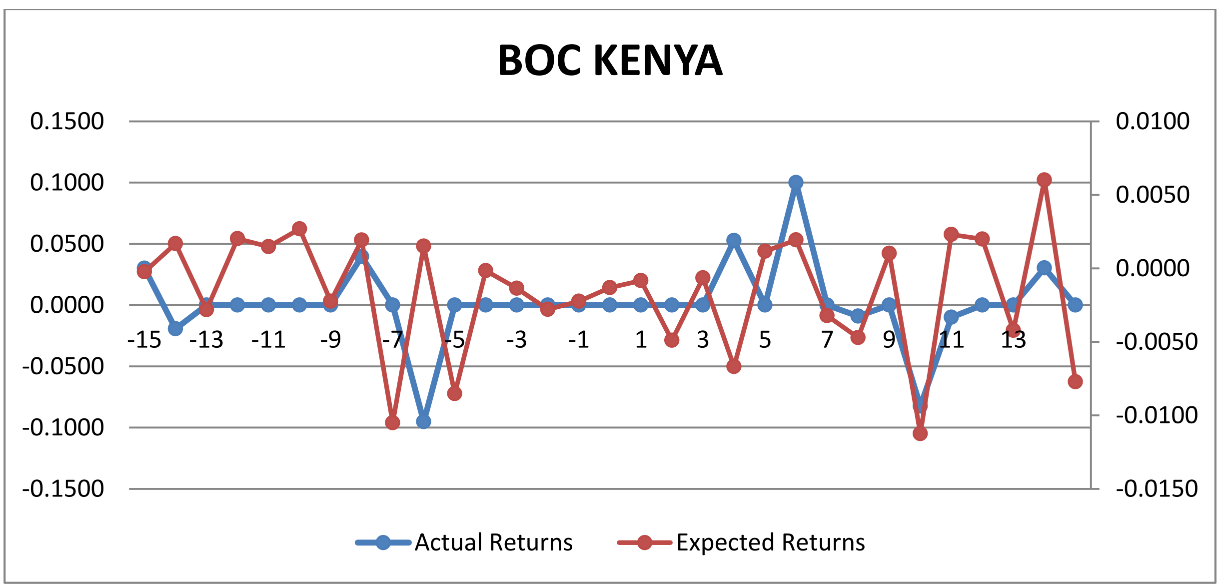


Figure 4.5.5: BOC Kenya returns on profit warning announcement

Actual returns maintain a constant value three days before announcement up to the third day after announcement and normal fluctuations for the rest of the period. Expected returns fall slightly three days before announcement and then rise slightly one day to the announcement day then fall one day after announcement after which they resume the normal fluctuations.

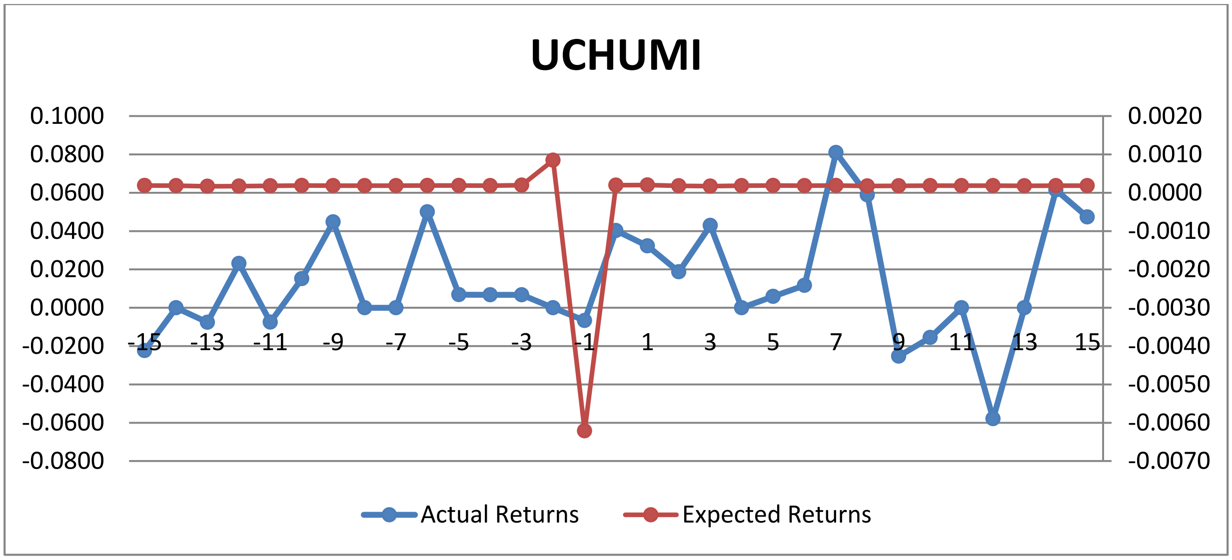


Figure 4.5.6 Uchumi returns on profit warning announcement

Actual returns fall slightly three days to announcement day then rise one day before announcement and fall on the announcement day up to the second day after announcement after which they resume the normal fluctuations. Expected returns remain constant during the event window but they fall sharply two days before announcement and rise again sharply one day before the announcement then remain constant for the rest of the period.

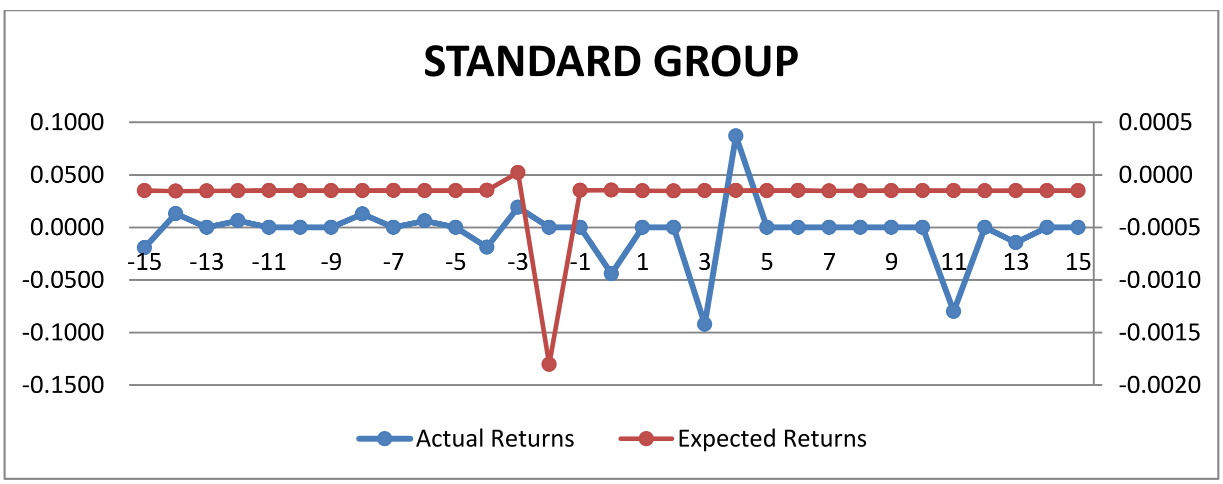


Figure 4.5.7 Standard Group returns on profit warning announcement

Actual returns fall three days to the announcement day up to the announcement day then rise on the announcement day and remain constant to the second day after announcement after which they fall again and rise sharply on the third day after announcement. Expected returns maintain a constant value during the event window but fall sharply three days before announcement and then rise sharply on the announcement day up to the first day after announcement after which the constant value is maintained.

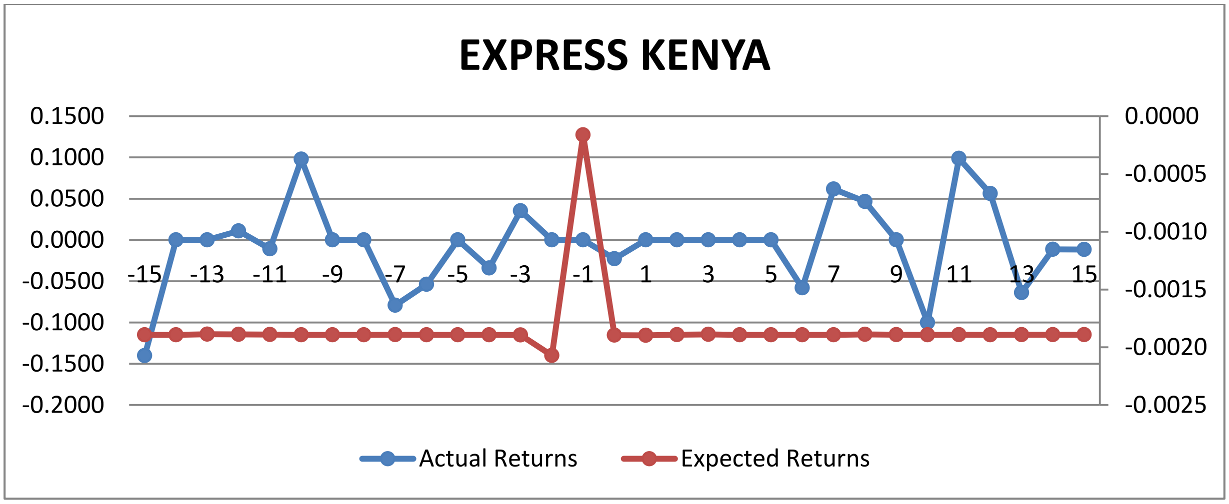


Figure 4.5.8 Express Kenya returns on profit warning announcement

The actual returns rise slightly two days to announcement then drop one day to announcement day and rise slightly on the announcement day after which they remain constant to the fifth day and then resume the normal fluctuations. Expected returns maintain a constant value throughout the period but they rise sharply two days to the announcement and then fall back to the constant value one day before the announcement day.

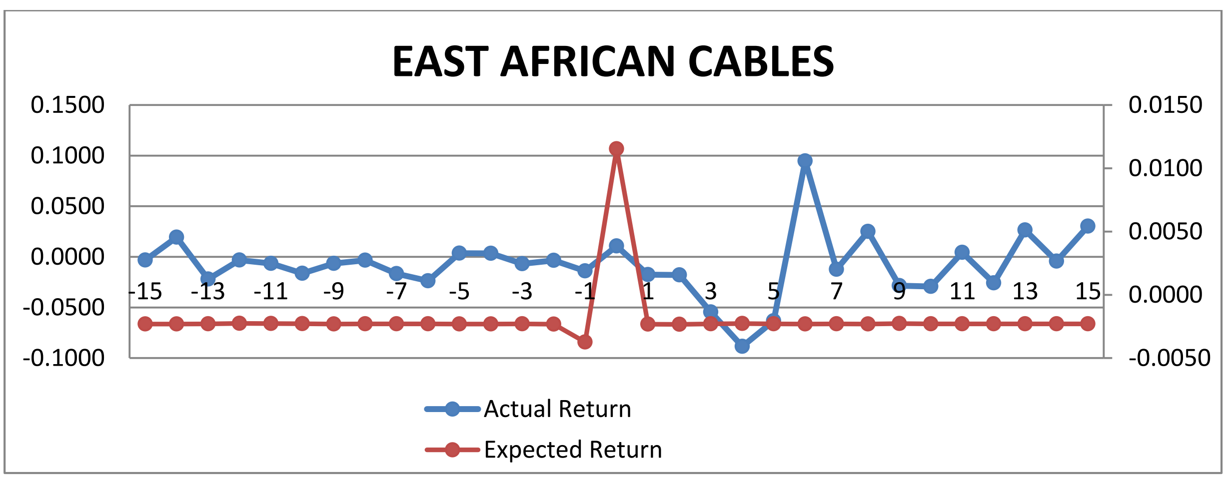


Figure 4.5.9 East African Cables returns on profit warning announcement

The actual returns fall five days to the announcement but rises one day before announcement day and falls on the announcement day up to the third day after announcement. The expected returns maintain a constant trend but rise one before announcement and decline on the announcement day up to one day after announcement.

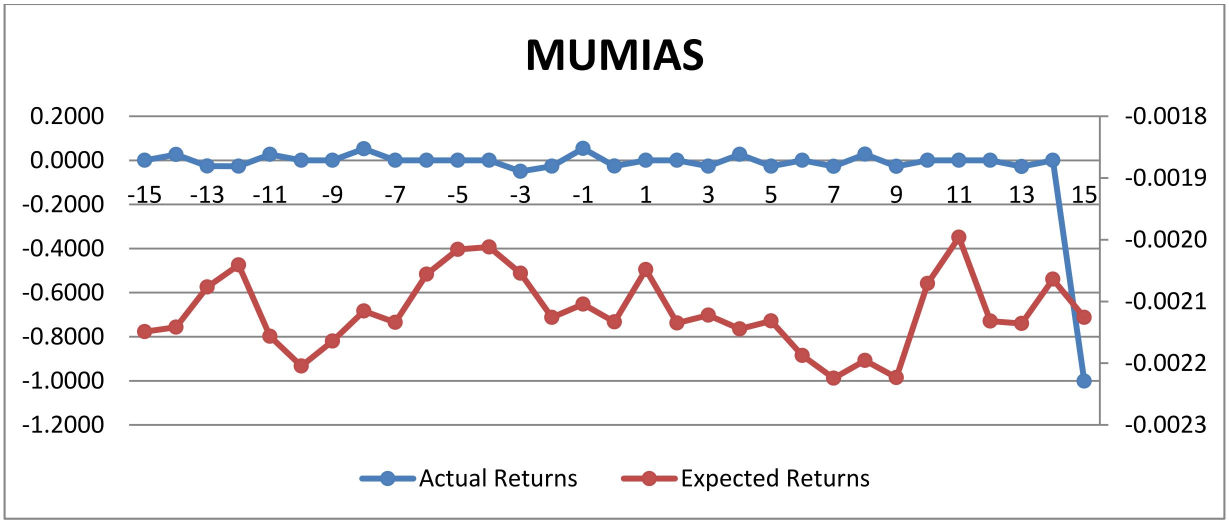


Figure 4.5.10 Mumias returns on profit warning announcement

The actual returns for Mumias Sugar swing above the expected returns during the entire pre-announcement period and for the substantial post-announcement period under consideration.

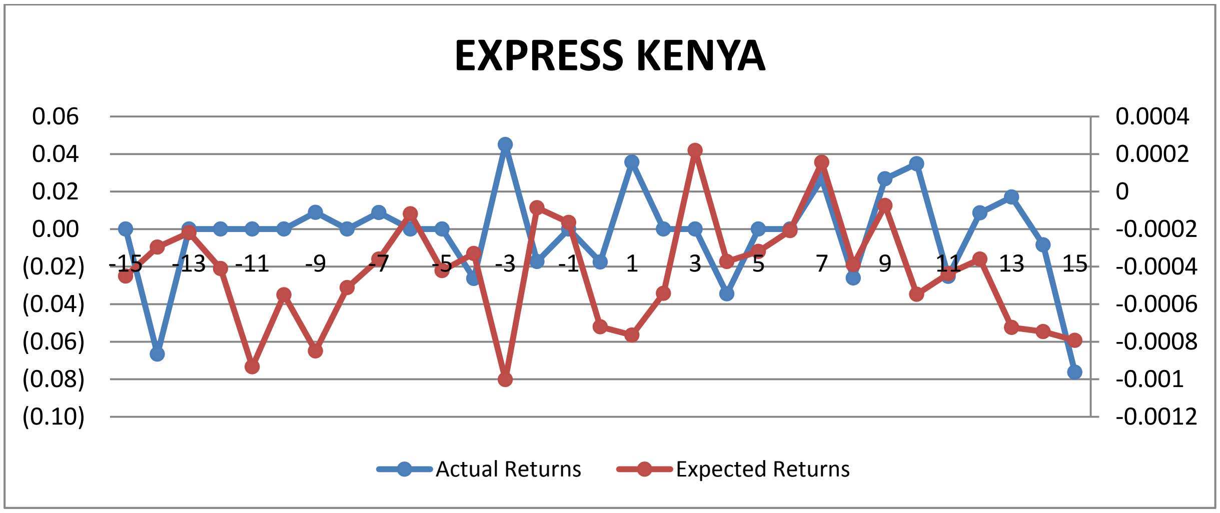


Figure 4.5.11 Express Kenya returns on profit warning announcement

Actual returns fall three days to the announcement, rise on the second day to announcement and fall again one day before the announcement then indicate a sharp rise on the announcement day and fall again one day after announcement. Normal fluctuations are maintained in the rest of the period. Expected returns rise sharply three days to announcement day, falls on the second day before announcement up to one day after announcement then rises sharply up to the third day after announcement.

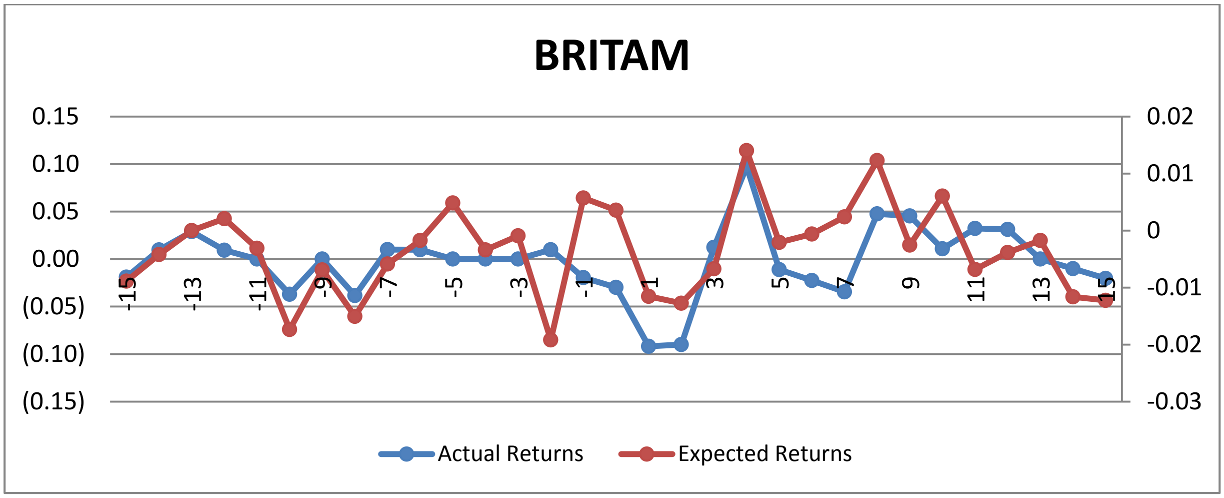


Figure 4.5.12 Britam returns on profit warning announcement

Actual returns fall two days before announcement up to the first day after announcement then rises sharply on the second day after announcement up to the fourth day. Normal fluctuations are maintained for the rest of the period. Expected returns rise sharply two days to announcement then sharply falls on the announcement day and rises two days after announcement up to the fourth day.

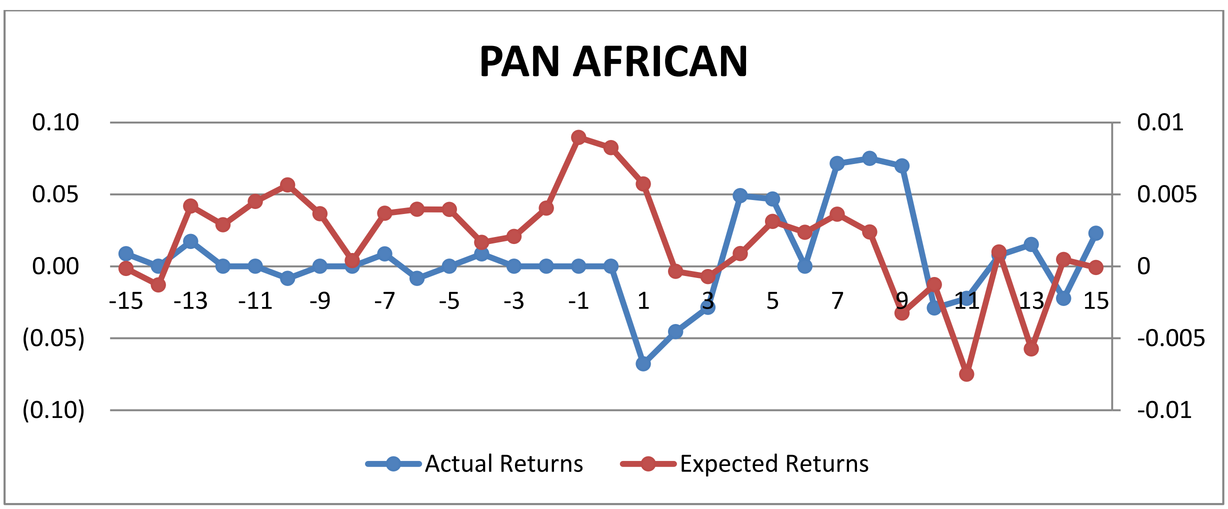


Figure 4.5.13 Pan African returns on profit warning announcement

Actual returns maintain a constant value of zero three days before announcement then falls sharply on the day of announcement and rises on the first day after announcement up to the fourth day then resumes normal fluctuations for the rest of the period. Expected returns rise three days before announcement then falls one day before announcement up to the second day after announcement then rises on the third day.

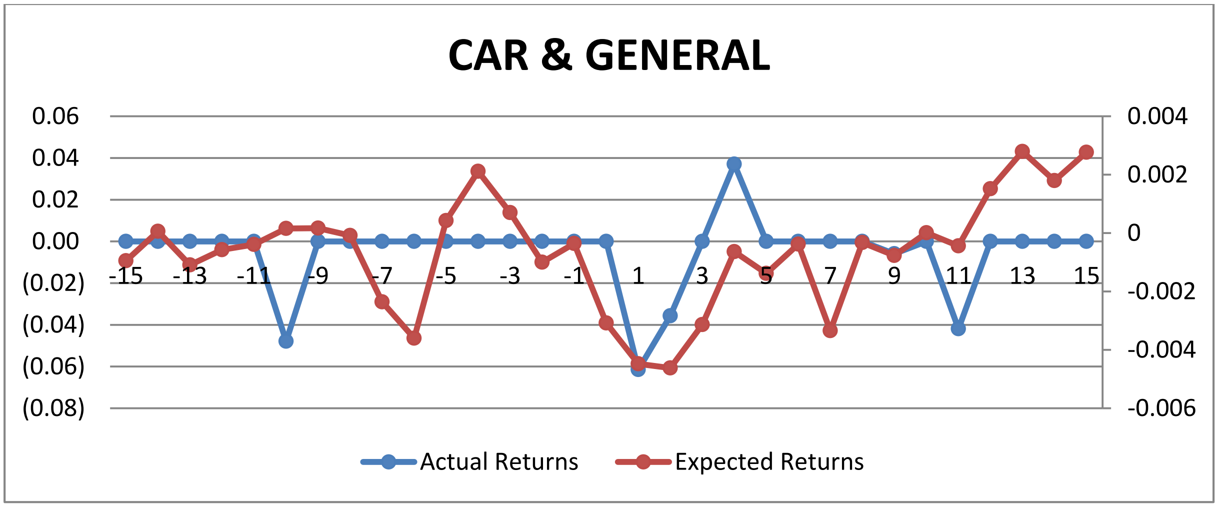


Figure 4.5.14: Car & General returns on profit warning announcement

Actual returns are constant at zero few days before the announcement then drop sharply on announcement day then rise sharply one day after the announcement up to the fourth day and then maintain a varying trend for the rest of the period. Expected returns fall one day before announcement and then rises two days after the announcement up to the fourth day.

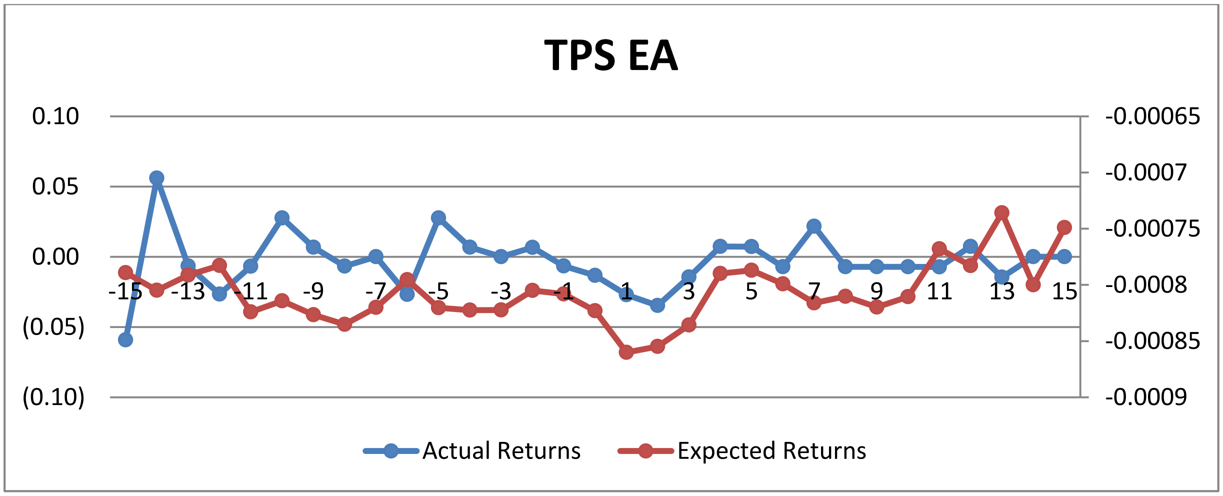


Figure 4.5.15 TPS East Africa returns on profit warning announcement

Actual returns falls two days before and next two days after announcement and assumes positive fluctuations thereafter. Expected returns assume negative values with the lowest value one day after the announcement and rises thereafter.

4.3 Tests of Significance

Parametric t-test is used to establish the statistical significance of the abnormal returns (AR), cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR) over the event window period.

This study tests the following hypothesis:

Null Hypothesis (H_0): Profit warnings announcement has no effect on returns at the various Securities Exchanges in East Africa.

Alternate Hypothesis (H_1): Profit warnings announcement has an effect on returns at the various Securities Exchanges in East Africa.

Table 4.1 Descriptive Analysis And T-Test For AR, CAR & SCAR For Year 2011

ABNORMAL RETURNS

		Descriptive statistics		**T-TEST**		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
CMC	31	-0.002	0.011	30	0.001	0.999
TOTAL	31	-0.004	0.019	30	0.002	0.998

CUMULATIVE ABNORMAL RETURNS

		Descriptive Statistics		**T-TEST**		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
CMC	31	-0.004	0.014	30	0.002	0.998
TOTAL	31	-0.007	0.021	30	0.004	0.997

STANDARDIZED CUMULATIVE ABNORMAL RETURNS

		Descriptive Statistics		**T-TEST**		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
CMC	31	-0.300	0.024	30	0.182	0.857
TOTAL	31	-0.324	0.031	30	0.195	0.847

For CMC and TOTAL in the year 2011, P values for abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns are all greater than 0.05 thus the null hypothesis is not rejected suggesting that at 5% level of significance, that event-day abnormal returns (AR), cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR) were not statistically significant for the profit warning announcement.

Table 4.2 Descriptive Analysis And T-Test For AR, CAR & SCAR For Year 2012

ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
KQ	31	0.000	0.012	30	0.000	1.000
KENOL	31	0.004	0.029	30	-0.002	0.998
EXPRESS	31	0.003	0.027	30	-0.002	0.999
SASINI	31	-0.003	0.020	30	0.002	0.999
LONGHORN	31	-0.016	0.027	30	0.005	0.996
BRITAM	31	0.010	0.033	30	-0.006	0.995
KAKUZI	31	0.001	0.015	30	-0.001	1.000

CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
KQ	31	0.001	0.015	30	-0.001	0.999
KENOL	31	0.009	0.049	30	-0.005	0.996
EXPRESS	31	0.006	0.037	30	-0.004	0.997
SASINI	31	-0.005	0.026	30	0.003	0.998
LONGHORN	31	-0.009	0.020	30	0.010	0.992
BRITAM	31	0.019	0.050	30	-0.012	0.991
KAKUZI	31	0.014	0.013	30	-0.009	0.990

STANDARDIZED CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
KQ	31	0.068	0.025	30	-0.043	0.966
KENOL	31	0.176	0.059	30	-0.106	0.916
EXPRESS	31	0.003	0.047	30	-0.097	0.923
SASINI	31	-0.181	0.036	30	0.111	0.912
LONGHORN	31	-0.591	0.030	30	0.376	0.709
BRITAM	31	0.384	0.012	30	-0.244	0.809
KAKUZI	31	0.071	0.025	30	-0.043	0.970

For KQ, KENOL, EXPRESS, SASINI, LONGHORN, BRITAM and KAKUZI in the year 2012, P values for abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns are all greater than 0.05 thus the null hypothesis is not rejected suggesting that at 5% level of significance, the event-day abnormal returns (AR), cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR) were not statistically significant for the profit warning announcement.

Table 4.3 Descriptive Analysis And T-Test For AR, CAR & SCAR For Year 2013

ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-STAT**	**P-VALUE**
MUMIAS	31	0.006	0.018	30	-0.003	0.997
KENOL KOBIL	31	0.006	0.006	30	-0.004	0.997
TOTAL KENYA	31	0.002	0.040	30	-0.001	0.999
EVEREADY	31	0.002	0.029	30	-0.001	0.999

CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-STAT**	**P-VALUE**
MUMIAS	31	0.081	0.061	30	-0.049	0.961
KENOL KOBIL	31	0.095	0.059	30	-0.060	0.953
TOTAL KENYA	31	0.027	0.055	30	-0.016	0.987
EVEREADY	31	0.029	0.027	30	-0.018	0.986

STANDARDIZED CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-STAT**	**P-VALUE**
MUMIAS	31	0.299	1.000	30	-0.181	0.857
KENOL KOBIL	31	1.088	1.000	30	-0.662	0.513
TOTAL KENYA	31	0.096	1.000	30	-0.058	0.954
EVEREADY	31	0.992	0.932	30	-0.596	0.556

For the four companies that issued profit warnings in the year 2013, P values for abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns are all greater than 0.05 thus the null hypothesis is not rejected suggesting that at 5% level of significance, the event-day abnormal returns (AR), cumulative abnormal returns (CAR) and standardized cumulative abnormal returns (SCAR) were not statistically significant for the profit warning announcement

Table 4.4 Descriptive Analysis And T-Test For AR, CAR & SCAR For Year 2014

ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
MUMIAS	31	0.001	0.035	30	-0.001	1.000
SASINI	31	-0.001	0.028	30	0.001	0.999
EAPC	31	-0.001	0.028	30	0.004	0.997
KAPCHORUA	31	-0.004	0.008	30	0.003	0.976
TRANSCENTURY	31	-0.002	0.021	30	-0.001	0.999
EXPRESS KENYA	31	0.002	0.040	30	-0.001	0.999

CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
MUMIAS	31	0.042	0.037	30	-0.026	0.980
SASINI	31	-0.028	0.032	30	0.017	0.987
EAPC	31	-0.028	0.032	30	0.063	0.950
KAPCHORUA	31	-0.070	0.043	30	0.308	0.760
TRANSCENTURY	31	-0.049	0.031	30	0.030	0.976
EXPRESS KENYA	31	-0.003	0.040	30	0.002	0.998

STANDARDISED CUMULATIVE ABNORMAL RETURNS

		Descriptive statistics		T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
MUMIAS	31	0.020	0.942	30	-0.012	0.990
SASINI	31	-0.045	0.899	30	0.027	0.978
EAPC	31	0.161	0.899	30	0.093	0.927
KAPCHORUA	31	-0.511	1.000	30	0.308	0.760
TRANSCENTURY	31	-0.091	1.000	30	0.055	0.957
EXPRESS KENYA	31	0.055	1.000	30	-0.033	0.974

This output gives the t-test value, the degrees of freedom and the two-tailed significance.
The P value for all the companies are above 0.05, thus the null hypothesis is not rejected suggesting that at 5% level of significance the event-day abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns were not statistically significant for the profit warning announcement. Inferring that the stock returns for these companies did not deviate significantly from their means on profit warning announcement.

Table 4.5 Descriptive Analysis And T-Test For AR, CAR & SCAR For Year 2015

ABNORMAL RETURNS

	Descriptive Statistic			**T-TEST**		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
PAN AFRICAN	31	-0.001	0.017	30	-0.001	0.999
BRITAM	31	-0.002	0.024	30	0.001	0.999
TPS	31	-0.001	0.019	30	0.001	0.999
BOC KENYA	31	0.003	0.032	30	-0.002	0.999
KURWITU VENTURES	31	0.000	0.000	30	0.000	1.000
STANDARD GROUP	31	-0.026	0.046	30	0.002	0.998
EXPRESS KENYA	31	-0.004	0.046	30	0.079	0.937
UCHUMI	31	0.175	0.146	30	-0.008	0.994
EASTAFRICAN CABLES	31	-0.006	0.031	30	0.004	0.997
MUMIAS	31	-0.033	0.181	30	0.020	0.984
CAR & GENERAL	31	-0.004	0.017	30	0.003	0.998

CUMULATIVE ABNORMAL RETURNS

	Descriptive Statistic			T-TEST		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
PAN AFRICAN	31	0.007	0.024	30	-0.004	0.997
BRITAM	31	0.042	0.037	30	-0.026	0.980
TPS	31	-0.034	0.023	30	0.021	0.984
BOC KENYA	31	0.030	0.056	30	-0.019	0.985
KURWITU VENTURES	31	0.000	0.000	30	0.000	1.000
STANDARD GROUP	31	-0.026	0.046	30	0.002	0.988
EXPRESS KENYA	31	-0.130	0.046	30	-15.169	0.000
UCHUMI	31	0.175	0.146	30	0.000	0.914
EAST AFRICA CABLES	31	-0.112	0.096	30	0.068	0.946
MUMIAS	31	-0.005	0.188	30	0.003	0.997
C&G	31	-0.007	0.029	30	0.004	0.997

STANDARDIZED CUMULATIVE ABNORMAL RETURNS

	Descriptive Statistic			T-test		
COMPANY	**N**	**MEAN**	**STD DEV**	**DF**	**T-stat**	**P Value**
PANAFRICAN INS.	31	-0.062	0.701	30	0.037	0.971
BRITAM	31	0.020	0.942	30	-0.012	0.990
TPS	31	-0.050	0.825	30	0.031	0.976
BOC KENYA	31	0.554	1.017	30	-0.360	0.722
KURWITU VENTURES	31	0.000	0.000	30	0.000	1.000
STANDARD GROUP	31	-0.559	1.016	30	0.316	0.754
EXPRESS KENYA	31	-2.769	1.016	30	1.667	0.106
UCHUMI	31	1.222	1.017	30	-0.839	0.408
EAST AFRICA CABLES	31	-1.184	1.017	30	0.657	0.516
MUMIAS	31	-0.029	1.017	30	0.017	0.986
C&G	31	-0.228	1.017	30	0.137	0.892

For the eleven companies that issued profit warning announcements in the 2015, P values for abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns are all more than 0.05. In this regard, the null hypothesis is not rejected, suggesting that at 5% level of significance, the information content of profit warning announcements is not statistically significant. In other words, there is no significant difference in abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns before and after the profit warning announcements.

4.4 Hypothesis Summary

Null Hypothesis (H_0): Profit warnings announcement has no effect on returns at the various Securities Exchanges in East Africa.

Alternate Hypothesis (H_1): Profit warnings announcement has an effect on returns at the various Securities Exchanges in East Africa.

The significance level for the t-test is 5% (95% confidence level). If the significance number is less than the critical value set at 5% (0.05), the conclusion would be that information content of profit warning is significant. This means that there exists substantial difference in abnormal returns before and after the profit warning announcement. Otherwise the study concludes that profit warning announcements does not influence stock returns.

Year	Company	AR	CAR	SCAR	Null Hypothesis Interpretation
2011	CMC Holdings	0.999	0.998	0.857	Not Rejected
	Total	0.998	0.997	0.847	Not Rejected
2012	KQ	1.000	0.999	0.996	Not Rejected
	Kenol Kobil	0.998	0.996	0.916	Not Rejected
	Express Kenya	0.999	0.997	0.923	Not Rejected
	Sasini	0.999	0.998	0.912	Not Rejected
	Longhorn Kenya	0.996	0.992	0.709	Not Rejected
	Britam	0.995	0.991	0.809	Not Rejected
	Kakuzi	1.000	0.990	0.970	Not Rejected
2013	Mumias Sugar	0.997	0.961	0.857	Not Rejected
	Kenol Kobil	0.997	0.953	0.513	Not Rejected
	Total	0.999	0.987	0.954	Not Rejected
	Eveready EA	0.999	0.986	0.556	Not Rejected
2014	Mumias Sugar	1.000	0.980	0.990	Not Rejected
	Sasini	0.999	0.987	0.978	Not Rejected
	EA Portland	0.997	0.950	0.927	Not Rejected
	Kapchorua	0.976	0.760	0.760	Not Rejected
	Transcentury	0.999	0.976	0.957	Not Rejected
	Express Kenya	0.999	0.998	0.974	Not Rejected
2015	Pan African Insurance Holdings	0.999	0.997	0.971	Not Rejected
	Britam	0.999	0.980	0.990	Not Rejected
	TPS EA	0.999	0.984	0.976	Not Rejected
	BOC Kenya	0.999	0.985	0.722	Not Rejected
	Kurwitu	1.000	1.000	1.000	Not Rejected
	Standard	0.998	0.988	0.754	Not Rejected
	Express Kenya	0.937	0.000	0.106	Not Rejected
	Uchumi-	0.994	0.914	0.408	Not Rejected
	East African Cables	0.997	0.946	0.516	Not Rejected
	Mumias Sugar	0.984	0.997	0.986	Not Rejected
	Car & General	0.998	0.997	0.892	Not Rejected

4.5 Summary and Interpretation of Findings

The aim of the study is to determine the effects of profit warning announcements on stock returns of firms listed at the various Securities Exchange in East Africa. From the graphical analysis presented in chapter four, actual returns and expected returns generally deviate from the common trend observed before the announcement. 73.5% of the companies' returns decrease around the announcement period while 23.5% of the companies' returns increased around the announcement period. Returns of Kurwitu ventures did not change with respect to the profit warning announcements. This forms 3% of all the companies that issued profit warnings for the period of study.

From the tabular analysis, the abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns increase or decrease in an irregular trend. The lack of a common observable movement of these returns indicates that the reaction of the returns to profit warnings announcement is influenced by a multiplicity of factors which are specific to the company making the announcement.

The T-test analysis on abnormal, cumulative abnormal and standardized cumulative returns showed that, at 5% level of significance, the information content of profit warnings announcements was not statistically significant. This means there is insignificant difference in abnormal, cumulative abnormal and standardized cumulative abnormal returns pre and post the profit warning announcements. In this regard, the null hypothesis is not rejected.

In Kenya, it is a legal requirement by the Capital Markets Authority that listed companies disclose a profit warning when they expect the projected earnings to fall by 25% in comparison to the earnings of the previous year (Legal notice no.60 of May, 2002, CMA, page 199). Failure to do so may result in sanctions as some firms have been punished before. In the other countries such as Tanzania, Uganda and Rwanda profit warning announcement is a voluntary disclosure. This has resulted in most companies not issuing profit warnings as it is not mandatory in these countries. For the period between 2011 and 2015, only one company, British American Tobacco Uganda, issued a profit warning in the other regions compared to 34 companies in Kenya.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This final chapter presents a summary of the findings from chapter four, conclusions and the recommendations obtained from the findings of the study. It also presents the limitations that were encountered in relation to the objective of the study, as well as suggestions for more research to be conducted.

5.2 Summary of Findings

This study sought to establish the effects of profit warning announcement on stock returns for listed companies around the East African region. The increase and decrease in returns of the companies as a result of profit warning announcements can be linked to decisions of investors as explained by the signalling theory. Under this theory, Connelly et al. (2011) posit that the sender (firms) chooses how to relay information to the market while the recipient (investors) chooses how to interpret the signal. In the study, 73.5% of the signals (profit warning announcements) were interpreted negatively, thus, resulting in decrease in returns.

The generally negative response of returns around the profit warning announcement date are consistent with the findings of Jackson and Madura (2003). They reached the conclusion that profit warnings lead to a strong negative market response around the period of announcement. They found that profit-warning announcements cause a strong negative market response that was insensitive to timing of the warning announcement. Since profit warning announcement should have negative effects on share returns under efficient market conditions, the study concludes that the 23.5% where profit warning announcements had positive effects on stock returns could be explained by a situation where information on profit warning announcements is not freely available to all market players thus leading to inadequate action on the information.

The lack of a common observable movement of abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns point towards a multiplicity of factors specific to the company, other than profit warnings, that interact to influence returns. According to Nyabundi (2013), profit warnings do not form the sole information in the market. He argues that stock prices reflect other types of information which could also have effects on returns, for example, dividend announcement (Merton and Rock, 1985).

This is further supported by the T-test analysis conducted on the three returns that showed, at 5% level of significance (95% confidence level), the information content of profit warnings announcements was not statistically significant. This means there is insignificant difference in abnormal returns, cumulative abnormal returns and standardized cumulative abnormal returns pre and post the profit warning announcements. In this regard, the null hypothesis is not rejected.

In Kenya, it is a legal requirement by the Capital Markets Authority that listed companies disclose a profit warning when they expect the projected earnings to fall by 25% in comparison to the earnings of the previous year (Legal notice no.60 of May, 2002, CMA, page 199). Failure to do so may result in sanctions as some firms have been punished before. In the other countries such as Tanzania, Uganda and Rwanda profit warning announcement is a voluntary disclosure. This has resulted in most companies not issuing profit warnings as it is not mandatory in these countries.

5.3 Conclusions

From the study, it is inferred that profit warnings announcements have an unfavourable effect on stock returns since 73.5% of the companies' actual and expected returns decreased after the announcement. The effect of profit warning announcements on abnormal, cumulative abnormal, and standardized cumulative abnormal returns depends on the specific company issuing the announcement. The rationale is that these returns depict inconsistent trends throughout the event window.

From the T-test analysis, it is concluded that there is no substantial variation in abnormal returns, cumulative abnormal returns, and standardized cumulative abnormal returns during the event window. Under efficient market conditions, profit warning announcements should have negative effects on stock returns. However, there may be instances where information on the profit warnings announcements is not freely available to all the market players, hence; the information is not acted upon sufficiently. This scenario explains the few instances (23.5%) where profit warning announcements had positive effects on stock returns.

5.4 Recommendations

It is recommend that regulators need to be keener in enforcing compliance among firms so as to ensure adequate disclosure is done by firms because firms are likely to shy from making complete disclosures due to the fear that the market will react negatively if they were to provide a detailed profit warning announcement. This is more so in Uganda, Tanzania and Rwanda where it's not a legal requirement for listed companies disclose a profit warning when they expect the projected earnings to fall.

Secondly, firms that have issued more than one profit warnings should re-evaluate themselves so as to establish the factors affecting their performance because a profit warning can act as a pointer to a deeper problem within the firm of which action may need to be taken.

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

Finally, shareholders of the listed companies in East Africa and especially Kenya need to understand that profit warning hints the financial performance of the company that they have invested in. They need to take into consideration such information as it may have negative returns of their investments in the future. Nevertheless this is may be a short term effect that will change in the long run

5.5 Limitations of the Study

The study had a number of constraints. First of all, there were other economic factors, both micro and macro factors, prevailing at the time of the profit warnings announcements such as inflation rates, unemployment rate, interest rates, economic growth rate, GDP (gross domestic product) and government regulation. These factors were not considered in the study yet they are important factors which would have had an effect on the stock returns.

Secondly, this study only focused solely on the companies that issued profit warnings between the period 2011 and 2015 only, leaving out the companies that did not issue the profit warning which would have given a comparison of the companies that issued the profit warnings. There is need to study the performance of the stock returns for the two scenarios for a better conclusion.

Thirdly, the study focused on a five year period from the year 2011 to 2015. Prior years were left out from the study. As a result, the study is limited to companies listed at the East African Securities Exchange over the five year period under study. The study focused on the effect of profit warning on the stock returns of listed companies at the NSE alone as it's not a legal requirement in Uganda, Tanzania and Rwanda Capital Markets Act for companies to issue profit warning. For such countries, disclosure is voluntarily. This limited the scope of the project as only British American Tobacco Uganda issued a profit warning in the other East African countries compared to the 34 companies in Kenya

In addition, this study constricted itself to one corporate action only, the effect of profit warning on stock returns, and not all other corporate actions that may have an effect to stock returns such as dividends announcement, stocks split, bonus issue, earnings announcement, change of management, regional expansion, corporate restructuring, new debt and diversification of operations which would assist in determining whether investors react to other information positively or negatively.

5.6 Suggestions for Further Research

There is a gap for numerous other areas of future research on profit warnings. First of all, further research could be conducted to determine the effect of timing of profit warning announcements so as to determine the effect of issuing profit warning earlier on in the financial year and issuing the warning towards the end of the financial year. Such studies would assist in determining whether investors react differently when their expectations about profits are managed earlier on in the financial year.

Secondly, this study used only one corporate action for the companies listed in East Africa. It would therefore be significant for a study to be carried out for all the corporate actions combined to be able to get a clearer analysis of which corporate action brings about more reaction in the market and hence design various ways to smoothen their effect.

Also it would be ideal for the research to consider other economic factors, both micro and macro factors, prevailing at the time of the profit warnings announcements such as inflation rates, unemployment rate, interest rates, economic growth rate and GDP (gross domestic product). These factors were not considered in the study yet they are important factors which would have had an effect on the stock returns.

It would be important for a study to be done comparing the stock returns and performance of companies that issued profit warning to those that did not disclose the expected fall in earnings. There is need to study the two scenarios for a better conclusion.

Finally, studying other African markets other than East Africa would explain if the findings are sample specific, or its spread across all countries. Some studies have been done on the South African market but more studies need to be done on other parts of the continent.

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APPENDICES

APPENDIX 1: LIST OF COMPANIES AND DATES OF PROFIT WARNING ANNOUNCEMENT

NO.	COMPANY	ANNOUNCEMENT DATE
1	CMC HOLDINGS	05 October 2011
2	TOTAL	01 October 2011
3	KENYA AIRWAYS	26 January 2012
4	KENO KOBIL	19 June 2012
5	BRITISH AMERICAN	1 January 2012
6	LONGHORN KENYA	12 September 2012
7	EXPRESS KENYA	12 July 2012
8	SASINI	03 August 2012
9	KAKUZI	29 November 2012
10	TOTAL KENYA	26 March 2013
11	MUMIAS SUGAR	27 February 2013
12	EVEREADY EAST AFRICA	20 November 2013
13	KENO KOBIL	07 March 2013
14	KAPCHORUA TEA	20 March 2014
15	TRASCENTURY	16 April 2014
16	EXPRESS KENYA	28 April 2014
17	EAST AFRICAN PORTLAND CEMENT	09 May 2014
18	SASINI	28 May 2014
19	MUMIAS SUGAR	09 September 2014
20	PAN AFRICAN INSURANCE HOLDINGS	29 December 2015
21	BRITAM	23 December 2015
22	TPS EA	21 December 2015
23	KURWITU	31 August 2015
24	BOC KENYA	09 December 2015
25	UCHUMI	26 August 2015
26	STANDARD	27 August 2015
27	EXPRESS KENYA	26 August 2015
28	EAST AFRICAN CABLES	25 August 2015
29	MUMIAS	14 August 2015
30	EXPRESS KENYA	21 April 2015
31	BRITAM	10 April 2015
32	PAN AFRICAN INSURANCE HOLDINGS	18 February 2015
33	CAR & GENERAL	06 August 2015

NO.	COMPANY	ANNOUNCEMENT DATE
34	TPS EA	16 February 2015
35	BRITISH AMERICAN TOBACCO UGANDA	4 December 2015

APPENDIX 2: SUMMARY OF PRICES AND RETURNS OF COMPANIES ISSUING PROFIT WARNINGS

APPENDIX 2.1: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR CMC 2011

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	-0.01845	-0.01845	3,398.66	0.003102	-0.02155	-0.01932	-1.43022
14	-0.03008	-0.04853	3,430.92	0.006837	-0.03691	-0.05846	-4.32898
13	0.046512	-0.00201	3,444.70	0.00429	0.042221	0.005309	0.39312
12	0	-0.00201	3,464.65	0.005116	-0.00512	0.037106	2.747481
11	0	-0.00201	3,507.77	0.008211	-0.00821	-0.01333	-0.98678
10	0	-0.00201	3,491.07	0.000208	-0.00021	-0.00842	-0.62335
9	0	-0.00201	3,478.35	0.000727	-0.00073	-0.00093	-0.06922
8	0	-0.00201	3,439.86	-0.00272	0.002725	0.001998	0.147923
7	0	-0.00201	3,430.27	0.001125	-0.00113	0.0016	0.118453
6	0	-0.00201	3,417.60	0.000704	-0.0007	-0.00183	-0.13545
5	0	-0.00201	3,383.27	-0.00225	0.00225	0.001546	0.114497
4	0	-0.00201	3,361.51	-0.00057	0.00057	0.00282	0.208799
3	0	-0.00201	3,323.44	-0.00285	0.002846	0.003415	0.25289
2	0	-0.00201	3,291.79	-0.00201	0.002008	0.004853	0.359368
1	0	-0.00201	3,284.06	0.00133	-0.00133	0.000678	0.050192
0	0	-0.00201	3,280.96	0.001983	-0.00198	-0.00331	-0.24529
-1	0	-0.00201	3,277.79	0.001973	-0.00197	-0.00396	-0.29289
-2	0	-0.00201	3,273.33	0.001789	-0.00179	-0.00376	-0.27853
-3	0	-0.00201	3,281.96	0.003648	-0.00365	-0.00544	-0.40261
-4	0	-0.00201	3,273.05	0.001159	-0.00116	-0.00481	-0.35597
-5	0	-0.00201	3,293.95	0.005392	-0.00539	-0.00655	-0.48509
-6	0	-0.00201	3,296.55	0.002789	-0.00279	-0.00818	-0.60578
-7	0	-0.00201	3,306.34	0.003803	-0.0038	-0.00659	-0.48814
-8	0	-0.00201	3,290.90	0.00025	-0.00025	-0.00405	-0.30012
-9	0	-0.00201	3,277.50	0.000528	-0.00053	-0.00078	-0.0576
-10	0	-0.00201	3,289.51	0.004126	-0.00413	-0.00465	-0.34464
-11	0	-0.00201	3,301.18	0.004072	-0.00407	-0.0082	-0.60706
-12	0	-0.00201	3,300.48	0.002323	-0.00232	-0.0064	-0.47355
-13	0	-0.00201	3,304.39	0.002973	-0.00297	-0.0053	-0.39217
-14	0	-0.00201	3,304.85	0.002487	-0.00249	-0.00546	-0.40427
-15	0	-0.00201	3,309.05	0.003013	-0.00301	-0.0055	-0.40724

APPENDIX 2.2: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR TOTAL 2011

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	-0.00251	-0.00251	3,398.66	-0.0018	-0.00072	0.003686	0.179368
14	0.005038	0.002525	3,430.92	0.004159	0.000879	0.000163	0.007915
13	-0.00251	1.9E-05	3,444.70	9.84E-05	-0.0026	-0.00173	-0.08398
12	0	1.9E-05	3,464.65	0.001415	-0.00141	-0.00402	-0.19561
11	-0.01759	-0.01757	3,507.77	0.006349	-0.02394	-0.02535	-1.23377
10	0.015345	-0.00222	3,491.07	-0.00641	0.021756	-0.00218	-0.10616
9	-0.04282	-0.04504	3,478.35	-0.00558	-0.03724	-0.01548	-0.75353
8	0.002632	-0.04241	3,439.86	-0.01109	0.013717	-0.02352	-1.14472
7	-0.00262	-0.04504	3,430.27	-0.00495	0.002323	0.01604	0.780604
6	0.005263	-0.03977	3,417.60	-0.00562	0.010882	0.013205	0.642629
5	-0.01309	-0.05286	3,383.27	-0.01033	-0.00276	0.008122	0.395269
4	-0.03714	-0.09	3,361.51	-0.00765	-0.02949	-0.03225	-1.56929
3	0.016529	-0.07347	3,323.44	-0.01128	0.027807	-0.00168	-0.0817
2	-0.05691	-0.13038	3,291.79	-0.00994	-0.04697	-0.01916	-0.93251
1	-0.00287	-0.13325	3,284.06	-0.00462	0.001748	-0.04522	-2.20072
0	0	-0.13325	3,280.96	-0.00358	0.00358	0.005328	0.259283
-1	-0.03458	-0.16784	3,277.79	-0.0036	-0.03099	-0.02741	-1.33373
-2	-0.02388	-0.19172	3,273.33	-0.00389	-0.01999	-0.05098	-2.48087
-3	-0.02141	-0.21312	3,281.96	-0.00092	-0.02048	-0.04047	-1.96968
-4	0.009375	-0.20375	3,273.05	-0.00489	0.014268	-0.00621	-0.30239
-5	0.021672	-0.18208	3,293.95	0.001855	0.019817	0.034085	1.658778
-6	-0.02727	-0.20935	3,296.55	-0.00229	-0.02498	-0.00516	-0.25118
-7	0.009346	-0.2	3,306.34	-0.00068	0.010024	-0.01495	-0.72778
-8	0.012346	-0.18766	3,290.90	-0.00634	0.018689	0.028712	1.397309
-9	-0.00305	-0.19071	3,277.50	-0.0059	0.002851	0.021539	1.048233
-10	0.003058	-0.18765	3,289.51	-0.00016	0.003221	0.006071	0.295475
-11	-0.0122	-0.19984	3,301.18	-0.00025	-0.01195	-0.00873	-0.42462
-12	-0.00309	-0.20293	3,300.48	-0.00304	-4.9E-05	-0.012	-0.58375
-13	0.012384	-0.19055	3,304.39	-0.002	0.014385	0.014336	0.697689
-14	-0.01835	-0.2089	3,304.85	-0.00278	-0.01557	-0.00119	-0.05774
-15	-0.00623	-0.21513	3,309.05	-0.00194	-0.00429	-0.01986	-0.96674

APPENDIX 2.3: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR KQ 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	-0.01205	-0.01205	3,200.46	-0.00783	-0.00422	0.012144	0.792401
14	-0.0122	-0.02424	3,180.55	-0.00727	-0.00493	-0.00915	-0.59691
13	0	-0.02424	3,200.80	-0.00207	0.00207	-0.00286	-0.18632
12	-0.01235	-0.03659	3,196.86	-0.00521	-0.00714	-0.00507	-0.33063
11	0.025	-0.01159	3,184.92	-0.00624	0.031243	0.024105	1.572938
10	-0.02439	-0.03598	3,187.22	-0.0044	-0.01999	0.011254	0.73436
9	0	-0.03598	3,190.78	-0.00424	0.004239	-0.01575	-1.02772
8	0	-0.03598	3,202.57	-0.00317	0.003174	0.007413	0.483691
7	-0.0175	-0.05348	3,204.76	-0.00442	-0.01308	-0.00991	-0.64656
6	0.012723	-0.04076	3,185.14	-0.00723	0.019951	0.006869	0.448206
5	-0.01508	-0.05583	3,171.63	-0.00645	-0.00862	0.011328	0.739161
4	0.020408	-0.03542	3,182.88	-0.00323	0.023643	0.01502	0.980072
3	0	-0.03542	3,191.72	-0.00355	0.003553	0.027196	1.774619
2	0.0125	-0.02292	3,188.23	-0.00515	0.017652	0.021205	1.383654
1	0	-0.02292	3,202.34	-0.00287	0.002872	0.020524	1.339231
0	0	-0.02292	3,224.89	-0.00179	0.001792	0.004664	0.304324
-1	-0.01975	-0.04268	3,224.18	-0.00479	-0.01496	-0.01317	-0.85941
-2	-0.01259	-0.05527	3,205.01	-0.00716	-0.00544	-0.0204	-1.33122
-3	-0.02296	-0.07823	3,215.70	-0.00332	-0.01964	-0.02508	-1.63625
-4	-0.01305	-0.09129	3,196.70	-0.00714	-0.00591	-0.02555	-1.66729
-5	0.002646	-0.08864	3,167.49	-0.00847	0.011119	0.005205	0.339637
-6	-0.00264	-0.09128	3,168.27	-0.0046	0.00196	0.013079	0.853457
-7	-0.01323	-0.10451	3,167.87	-0.00475	-0.00848	-0.00652	-0.42516
-8	-0.01072	-0.11523	3,156.87	-0.00613	-0.00459	-0.01307	-0.85253
-9	0.00271	-0.11252	3,160.51	-0.00422	0.006934	0.002344	0.152958
-10	0	-0.11252	3,156.19	-0.00526	0.005265	0.012198	0.795976
-11	0	-0.11252	3,142.74	-0.00646	0.00646	0.011725	0.765063
-12	0	-0.11252	3,143.90	-0.00455	0.004548	0.011008	0.718277
-13	-0.0027	-0.11522	3,154.46	-0.00331	0.00061	0.005158	0.336546
-14	-0.02168	-0.1369	3,182.14	-0.00108	-0.0206	-0.01999	-1.30469
-15	-0.00831	-0.14521	3,176.36	-0.00545	-0.00286	-0.02346	-1.53112

APPENDIX 2.4: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR KENOL 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL ETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	0	0	3,627.64	0.005794	-0.00579	0.002073	0.042623
14	0	0	3,650.85	0.013359	-0.01336	-0.01915	-0.39383
13	0	0	3,626.07	-0.01235	0.012346	-0.00101	-0.02083
12	0	0	3,653.29	0.01552	-0.01552	-0.00317	-0.06527
11	0	0	3,635.86	-0.00841	0.008415	-0.00711	-0.1461
10	0	0	3,634.82	0.000328	-0.00033	0.008086	0.166278
9	0	0	3,651.27	0.009709	-0.00971	-0.01004	-0.20638
8	0	0	3,639.46	-0.00542	0.005419	-0.00429	-0.08819
7	0	0	3,657.01	0.010286	-0.01029	-0.00487	-0.10008
6	0	0	3,670.18	0.007907	-0.00791	-0.01819	-0.37409
5	0	0	3,670.75	0.001189	-0.00119	-0.0091	-0.18702
4	0	0	3,685.36	0.008645	-0.00864	-0.00983	-0.20221
3	0	0	3,694.23	0.005578	-0.00558	-0.01422	-0.29246
2	0	0	3,682.23	-0.00545	0.005446	-0.00013	-0.00271
1	0	0	3,663.11	-0.00924	0.009236	0.014683	0.301917
0	0.044	0.044	3,694.55	0.017618	0.026382	0.035619	0.73241
-1	0	0.044	3,682.24	-0.00561	0.005609	0.031992	0.657828
-2	0.091954	0.135954	3,704.70	0.012777	0.079177	0.084787	1.743428
-3	0.091228	0.227182	3,725.55	0.011857	0.079371	0.158548	3.260144
-4	0.025723	0.252906	3,738.15	0.007479	0.018244	0.097615	2.00721
-5	-0.01567	0.237232	3,739.00	0.001329	-0.017	0.001241	0.02552
-6	-0.08917	0.14806	3,709.84	-0.01432	-0.07485	-0.09186	-1.88883
-7	0	0.14806	3,703.94	-0.00221	0.002214	-0.07264	-1.49366
-8	0.08042	0.228479	3,763.91	0.032449	0.04797	0.050185	1.031925
-9	0.061489	0.289968	3,790.07	0.014435	0.047054	0.095024	1.953934
-10	-0.02744	0.262529	3,791.79	0.001771	-0.02921	0.017844	0.366916
-11	-0.00627	0.256259	3,795.32	0.002701	-0.00897	-0.03818	-0.78508
-12	0.009464	0.265723	3,793.32	-0.00014	0.009605	0.000635	0.013048
-13	-0.00938	0.256348	3,791.06	-0.00028	-0.0091	0.000505	0.010393
-14	-0.00315	0.253193	3,789.33	-3.6E-06	-0.00315	-0.01225	-0.2519
-15	-0.00949	0.2437	3,797.40	0.005038	-0.01453	-0.01768	-0.36359

APPENDIX 2.5: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR EXPRESS 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	0	0	3,682.24	0.008422	0.047133	0.057579	1.565247
14	0.055556	0.055556	3,704.70	0.007479	0.045153	0.092286	2.508741
13	0.052632	0.108187	3,725.55	0.002986	-0.01549	0.029667	0.806477
12	-0.0125	0.095687	3,738.15	-0.00333	0.015983	0.000498	0.013525
11	0.012658	0.108345	3,739.00	-0.01938	-0.04312	-0.02713	-0.73765
10	-0.0625	0.045845	3,709.84	-0.00696	0.006962	-0.03616	-0.9829
9	0	0.045845	3,703.94	0.02861	0.024723	0.031685	0.861335
8	0.053333	0.099179	3,763.91	0.010124	-0.01012	0.014599	0.396876
7	0	0.099179	3,790.07	-0.00287	0.002872	-0.00725	-0.19714
6	0	0.099179	3,791.79	-0.00192	0.014576	0.017448	0.474312
5	0.012658	0.111837	3,795.32	-0.00483	-0.02017	-0.00559	-0.15196
4	-0.025	0.086837	3,793.32	-0.00497	0.017792	-0.00237	-0.06452
3	0.012821	0.099657	3,791.06	-0.00469	0.004693	0.022485	0.611249
2	0	0.099657	3,789.33	0.00048	-0.00048	0.004212	0.114514
1	0	0.099657	3,797.40	-0.00803	0.008031	0.007551	0.205268
0	0	0.099657	3,789.33	-0.00414	0.016803	0.024834	0.675093
-1	0.012658	0.112316	3,788.64	-0.00037	0.000369	0.017171	0.466795
-2	0	0.112316	3,795.10	-0.01274	0.012741	0.01311	0.356391
-3	0	0.112316	3,778.10	0.001737	-0.00174	0.011004	0.299131
-4	0	0.112316	3,788.52	0.015974	0.046526	0.044788	1.217546
-5	0.0625	0.174816	3,825.93	0.003765	-0.00377	0.042761	1.162422
-6	0	0.174816	3,840.36	-0.00378	-0.05504	-0.05881	-1.59868
-7	-0.05882	0.115992	3,840.36	-0.00088	-0.02412	-0.07917	-2.15205
-8	-0.025	0.090992	3,845.93	0.013156	-0.01316	-0.03728	-1.01338
-9	0	0.090992	3,878.49	-0.00376	0.029406	0.016249	0.441721
-10	0.025641	0.116633	3,878.52	-0.00791	0.007911	0.037317	1.01444
-11	0	0.116633	3,870.51	-0.01217	-0.06283	-0.05492	-1.49296
-12	-0.075	0.041633	3,854.28	-0.01513	0.02864	-0.03419	-0.92948
-13	0.013514	0.055147	3,832.42	-0.00731	0.020647	0.049287	1.339833
-14	0.013333	0.06848	3,825.65	-0.00408	-0.02224	-0.00159	-0.04324
-15	-0.02632	0.042164	3,825.08	0.005895	0.007618	-0.01462	-0.39743

APPENDIX 2.6: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR SASINI 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	0.004032	0.004032258	3,795.10	0.000535	0.003497	0.033353	1.303278
14	-0.00402	1.61938E-05	3,778.10	-0.00387	-0.00014	0.003353	0.131018
13	-0.00403	-0.00401606	3,788.52	0.001285	-0.00532	-0.00546	-0.21342
12	0	-0.00401606	3,825.93	0.006356	-0.00636	-0.01167	-0.45613
11	-0.02024	-0.02425898	3,840.36	0.002007	-0.02225	-0.02861	-1.11779
10	0.016529	-0.00773005	3,840.36	-0.00068	0.017209	-0.00504	-0.19699
9	0	-0.00773005	3,845.93	0.000353	-0.00035	0.016856	0.658639
8	0.020325	0.01259515	3,878.49	0.005352	0.014973	0.01462	0.571273
7	0.031873	0.04446766	3,878.52	-0.00067	0.032547	0.04752	1.856875
6	-0.03475	0.009718625	3,870.51	-0.00215	-0.0326	-5.1E-05	-0.00198
5	0.004	0.013718625	3,854.28	-0.00367	0.007668	-0.02493	-0.97415
4	-0.03187	-0.01815389	3,832.42	-0.00472	-0.02715	-0.01948	-0.76134
3	-0.00823	-0.02638434	3,825.65	-0.00194	-0.00629	-0.03344	-1.30682
2	0.020747	-0.00563745	3,825.08	-0.00079	0.021533	0.015241	0.59556
1	-0.02439	-0.03002769	3,843.58	0.002766	-0.02716	-0.00562	-0.21973
0	-0.00417	-0.03419436	3,830.24	-0.00315	-0.00101	-0.02817	-1.10076
-1	-0.0795	-0.11369227	3,815.44	-0.00343	-0.07606	-0.07708	-3.01189
-2	0.004545	-0.10914681	3,815.10	-0.00074	0.005289	-0.07078	-2.76561
-3	0.004525	-0.10462193	3,823.49	0.000887	0.003638	0.008927	0.348825
-4	0.009009	-0.09561292	3,831.01	0.000721	0.008288	0.011926	0.466002
-5	0.004464	-0.09114863	3,792.22	-0.00789	0.012359	0.020646	0.806764
-6	-0.01333	-0.10448197	3,800.23	0.000825	-0.01416	-0.0018	-0.07033
-7	0.013514	-0.09096845	3,801.03	-0.00053	0.014044	-0.00011	-0.00448
-8	-0.00444	-0.0954129	3,804.54	-2.2E-05	-0.00442	0.009621	0.375951
-9	0	-0.0954129	3,814.10	0.00111	-0.00111	-0.00553	-0.2162
-10	0.013393	-0.08202004	3,808.47	-0.00173	0.015125	0.014014	0.547614
-11	-0.00881	-0.09083061	3,819.45	0.001374	-0.01018	0.00494	0.193027
-12	0.004444	-0.08638617	3,817.70	-0.00101	0.005451	-0.00473	-0.18498
-13	-0.00885	-0.09523573	3,826.89	0.001035	-0.00988	-0.00443	-0.17325
-14	-0.00446	-0.09970001	3,839.12	0.001597	-0.00606	-0.01595	-0.6231
-15	0.004484	-0.09521571	3,842.38	-7.5E-05	0.004559	-0.0015	-0.05869

APPENDIX 2.7: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR LONGHORN 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	0	0	3,817.70	-0.00324	0.003244	0.013428	0.504609
14	-0.00836	-0.00836	3,826.89	-0.00197	-0.00639	-0.00314	-0.11815
13	0	-0.00836	3,839.12	-0.00162	0.001618	-0.00477	-0.17927
12	0	-0.00836	3,842.38	-0.00266	0.002662	0.00428	0.160826
11	0	-0.00836	3,878.13	0.001101	-0.0011	0.001561	0.058654
10	-0.03652	-0.04487	3,875.11	-0.00339	-0.03313	-0.03423	-1.28641
9	0	-0.04487	3,865.75	-0.00412	0.004115	-0.02902	-1.09038
8	0	-0.04487	3,855.14	-0.00426	0.004262	0.008377	0.314796
7	0	-0.04487	3,895.86	0.001661	-0.00166	0.0026	0.097717
6	0	-0.04487	3,897.45	-0.00286	0.002858	0.001197	0.044982
5	-0.00875	-0.05362	3,888.14	-0.0041	-0.00464	-0.00178	-0.06707
4	0	-0.05362	3,899.62	-0.00173	0.001726	-0.00292	-0.10963
3	-0.01176	-0.06538	3,860.41	-0.00752	-0.00425	-0.00252	-0.09483
2	0	-0.06538	3,903.72	0.001954	-0.00195	-0.0062	-0.2331
1	0	-0.06538	3,941.10	0.001222	-0.00122	-0.00318	-0.11934
0	-0.01786	-0.08324	3,953.84	-0.0016	-0.01626	-0.01748	-0.65682
-1	-0.08485	-0.16809	3,953.53	-0.00307	-0.08177	-0.09803	-3.68393
-2	0	-0.16809	3,950.18	-0.00342	0.003417	-0.07836	-2.94462
-3	-0.00662	-0.17471	3,956.54	-0.00232	-0.0043	-0.00088	-0.03315
-4	0	-0.17471	3,959.10	-0.00275	0.002752	-0.00155	-0.05814
-5	0	-0.17471	3,934.52	-0.0058	0.005803	0.008555	0.32151
-6	0	-0.17471	3,927.44	-0.00384	0.003841	0.009644	0.362432
-7	0	-0.17471	3,942.40	-0.00134	0.001345	0.005186	0.19487
-8	-0.03	-0.20471	3,950.97	-0.00207	-0.02793	-0.02658	-0.99898
-9	-0.01718	-0.22189	3,950.90	-0.00305	-0.01413	-0.04206	-1.58067
-10	0	-0.22189	3,980.53	0.000298	-0.0003	-0.01443	-0.54236
-11	-0.02448	-0.24637	3,972.03	-0.00399	-0.02049	-0.02078	-0.78103
-12	0	-0.24637	3,965.75	-0.00374	0.003744	-0.01674	-0.62914
-13	-0.03943	-0.2858	3,945.25	-0.00534	-0.03409	-0.03034	-1.14025
-14	-0.01119	-0.29699	3,958.62	-0.00153	-0.00966	-0.04375	-1.64405
-15	-0.0566	-0.35359	3,961.05	-0.00277	-0.05384	-0.0635	-2.3863

APPENDIX 2.8: TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR BRITAM 2012

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
15	0.02439	0.02439	3,115.64	-0.00625	0.030638	0.00286	0.05734
14	0	0.02439	3,110.64	-0.00566	0.005664	0.036302	0.727904
13	0.047619	0.072009	3,120.88	-0.00645	0.054065	0.059728	1.19763
12	0	0.072009	3,106.90	-0.0052	0.005205	0.059269	1.188427
11	0.034091	0.1061	3,118.92	-0.00654	0.040629	0.045833	0.919018
10	0.032967	0.139067	3,109.79	-0.00545	0.03842	0.079048	1.585018
9	0.010638	0.149706	3,106.72	-0.00576	0.016401	0.05482	1.099216
8	0.021053	0.170758	3,128.03	-0.00702	0.028068	0.044469	0.89165
7	0.010309	0.181067	3,139.67	-0.00651	0.016823	0.044891	0.900127
6	0.020408	0.201476	3,145.72	-0.00623	0.026636	0.043459	0.871413
5	-0.01	0.191476	3,168.55	-0.00708	-0.00292	0.023715	0.475509
4	-0.0202	0.171274	3,163.16	-0.00565	-0.01455	-0.01747	-0.35039
3	0.072165	0.243439	3,160.03	-0.00576	0.077927	0.063373	1.270715
2	0.076923	0.320362	3,205.02	-0.00819	0.085116	0.163043	3.269224
1	-0.00893	0.311433	3,212.86	-0.00631	-0.00262	0.082498	1.654196
0	-0.08108	0.230352	3,203.35	-0.00545	-0.07563	-0.07825	-1.56905
-1	0.019608	0.24996	3,220.74	-0.00679	0.026395	-0.04924	-0.98731
-2	-0.03846	0.211498	3,224.87	-0.00612	-0.03234	-0.00594	-0.11915
-3	0	0.211498	3,200.46	-0.00471	0.004711	-0.02763	-0.55392
-4	0	0.211498	3,180.55	-0.00493	0.004927	0.009638	0.193256
-5	-0.04	0.171498	3,200.80	-0.00694	-0.03306	-0.02814	-0.56418
-6	-0.05208	0.119415	3,196.86	-0.00572	-0.04636	-0.07942	-1.59254
-7	0.010989	0.130404	3,184.92	-0.00532	0.016313	-0.03005	-0.60248
-8	-0.02174	0.108665	3,187.22	-0.00604	-0.0157	0.000609	0.012208
-9	0	0.108665	3,190.78	-0.0061	0.006098	-0.00961	-0.1926
-10	0.011111	0.119776	3,202.57	-0.00651	0.017621	0.023719	0.475605
-11	0	0.119776	3,204.76	-0.00603	0.006029	0.02365	0.474218
-12	0.032967	0.152743	3,185.14	-0.00494	0.03791	0.043939	0.881026
-13	-0.01064	0.142105	3,171.63	-0.00524	-0.0054	0.032514	0.651946
-14	-0.02151	0.120599	3,182.88	-0.00649	-0.01502	-0.02041	-0.40934
-15	0.010989	0.131588	3,191.72	-0.00636	0.017352	0.002333	0.046789

APPENDIX 2.9 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR BOC KENYA 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0.0300	0.0300	3,950.97	0.00566	0.0302	0.0302	0.55368
-14	-0.0194	0.0106	3,946.99	-0.001	-0.0211	0.0091	0.16723
-13	0.0000	0.0106	3,971.30	0.00616	0.0028	0.0120	0.21888
-12	0.0000	0.0106	3,992.58	0.00536	-0.0020	0.0099	0.18193
-11	0.0000	0.0106	4,021.14	0.00715	-0.0015	0.0085	0.15489
-10	0.0000	0.0106	4,020.55	-0.0001	-0.0027	0.0058	0.10565
-9	0.0000	0.0106	4,044.72	0.00601	0.0022	0.0080	0.14666
-8	0.0396	0.0502	3,994.56	-0.0124	0.0377	0.0457	0.83688
-7	0.0000	0.0502	4,016.18	0.00541	0.0105	0.0562	1.02938
-6	-0.0952	-0.0451	3,978.17	-0.0095	-0.0968	-0.0405	-0.7426
-5	0.0000	-0.0451	3,989.87	0.00294	0.0085	-0.0320	-0.5864
-4	0.0000	-0.0451	3,994.49	0.00116	0.0002	-0.0319	-0.5836
-3	0.0000	-0.0451	3,990.64	-0.001	0.0014	-0.0305	-0.5587
-2	0.0000	-0.0451	3,990.02	-0.0002	0.0028	-0.0277	-0.5076
-1	0.0000	-0.0451	3,994.88	0.00122	0.0022	-0.0255	-0.4665
0	0.0000	-0.0451	4,002.63	0.00194	0.0013	-0.0242	-0.4423
1	0.0000	-0.0451	3,986.28	-0.0041	0.0008	-0.0233	-0.4271
2	0.0000	-0.0451	3,995.09	0.00221	0.0049	-0.0184	-0.3374
3	0.0000	-0.0451	3,968.20	-0.0067	0.0006	-0.0178	-0.3256
4	0.0526	0.0076	3,987.57	0.00488	0.0593	0.0415	0.76078
5	0.0000	0.0076	4,011.66	0.00604	-0.0012	0.0404	0.73963
6	0.1000	0.1076	4,005.22	-0.0016	0.0981	0.1384	2.53564
7	0.0000	0.1076	3,989.95	-0.0038	0.0032	0.1417	2.59468
8	-0.0091	0.0985	4,008.63	0.00468	-0.0044	0.1373	2.5145
9	0.0000	0.0985	3,954.54	-0.0135	-0.0010	0.1363	2.49582
10	-0.0826	0.0159	3,918.75	-0.0091	-0.0713	0.0650	1.18957
11	-0.0100	0.0059	3,955.73	0.00944	-0.0123	0.0526	0.96425
12	0.0000	0.0059	3,980.57	0.00628	-0.0020	0.0507	0.92785
13	0.0000	0.0059	4,004.91	0.00611	0.0042	0.0549	1.00513
14	0.0303	0.0362	3,992.57	-0.0031	0.0243	0.0792	1.45015
15	0.0000	0.0362	4,040.75	0.01207	0.0077	0.0869	1.59159

APPENDIX 2.10 TABLEON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR KURWITU 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0	0	4,483.58	0.015513	0	0	0
-14	0	0	4,519.63	0.00804	0	0	0
-13	0	0	4,499.06	-0.00455	0	0	0
-12	0	0	4,495.52	-0.00079	0	0	0
-11	0	0	4,469.23	-0.00585	0	0	0
-10	0	0	4,509.84	0.009087	0	0	0
-9	0	0	4,482.19	-0.00613	0	0	0
-8	0	0	4,464.74	-0.00389	0	0	0
-7	0	0	4,429.87	-0.00781	0	0	0
-6	0	0	4,405.29	-0.00555	0	0	0
-5	0	0	4,337.47	-0.0154	0	0	0
-4	0	0	4,242.73	-0.02184	0	0	0
-3	0	0	4,171.35	-0.01682	0	0	0
-2	0	0	4,080.83	-0.0217	0	0	0
-1	0	0	4,101.67	0.005107	0	0	0
0	0	0	4,176.59	0.018266	0	0	0
1	0	0	4,153.21	-0.0056	0	0	0
2	0	0	4,127.08	-0.00629	0	0	0
3	0	0	4,153.31	0.006356	0	0	0
4	0	0	4,134.41	-0.00455	0	0	0
5	0	0	4,194.73	0.01459	0	0	0
6	0	0	4,216.83	0.005269	0	0	0
7	0	0	4,219.89	0.000726	0	0	0
8	0	0	4,217.78	-0.0005	0	0	0
9	0	0	4,210.02	-0.00184	0	0	0
10	0	0	4,234.66	0.005853	0	0	0
11	0	0	4,250.60	0.003764	0	0	0
12	0	0	4,257.27	0.001569	0	0	0
13	0	0	4,248.95	-0.00195	0	0	0
14	0	0	4,236.26	-0.00299	0	0	0
15	0	0	4,242.26	0.001416	0	0	0

APPENDIX 2.11 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR STANDARD GROUP 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	-0.0192	-0.0192	4,350.70	0.007753	-0.0191	-0.0191	-0.4189
-14	0.0131	-0.0061	4,415.09	0.0148	0.0132	-0.0059	-0.1288
-13	0.0000	-0.0061	4,483.58	0.015513	0.0002	-0.0057	-0.1255
-12	0.0065	0.0003	4,519.63	0.00804	0.0066	0.0009	0.01935
-11	0.0000	0.0003	4,499.06	-0.00455	0.0001	0.0010	0.02262
-10	0.0000	0.0003	4,495.52	-0.00079	0.0001	0.0012	0.02591
-9	0.0000	0.0003	4,469.23	-0.00585	0.0002	0.0013	0.0292
-8	0.0128	0.0131	4,509.84	0.009087	0.0130	0.0143	0.31365
-7	0.0000	0.0131	4,482.19	-0.00613	0.0001	0.0145	0.31691
-6	0.0063	0.0195	4,464.74	-0.00389	0.0065	0.0209	0.45898
-5	0.0000	0.0195	4,429.87	-0.00781	0.0002	0.0211	0.46227
-4	-0.0189	0.0006	4,405.29	-0.00555	-0.0187	0.0024	0.05174
-3	0.0192	0.0198	4,337.47	-0.0154	0.0192	0.0216	0.473
-2	0.0000	0.0198	4,242.73	-0.02184	0.0018	0.0234	0.51253
-1	0.0000	0.0198	4,171.35	-0.01682	0.0001	0.0235	0.51575
0	-0.0440	-0.0242	4,080.83	-0.0217	-0.0439	-0.0204	-0.4465
1	0.0000	-0.0242	4,101.67	0.005107	0.0002	-0.0202	-0.4432
2	0.0000	-0.0242	4,176.59	0.018266	0.0002	-0.0201	-0.4398
3	-0.0921	-0.1163	4,153.21	-0.0056	-0.0920	-0.1120	-2.4564
4	0.0870	-0.0293	4,127.08	-0.00629	0.0871	-0.0249	-0.5462
5	0.0000	-0.0293	4,153.31	0.006356	0.0002	-0.0248	-0.5429
6	0.0000	-0.0293	4,134.41	-0.00455	0.0001	-0.0246	-0.5396
7	0.0000	-0.0293	4,194.73	0.01459	0.0002	-0.0245	-0.5363
8	0.0000	-0.0293	4,216.83	0.005269	0.0002	-0.0243	-0.533
9	0.0000	-0.0293	4,219.89	0.000726	0.0002	-0.0242	-0.5297
10	0.0000	-0.0293	4,217.78	-0.0005	0.0002	-0.0240	-0.5264
11	-0.0800	-0.1093	4,210.02	-0.00184	-0.0799	-0.1039	-2.2775
12	0.0000	-0.1093	4,234.66	0.005853	0.0002	-0.1037	-2.2742
13	-0.0145	-0.1238	4,250.60	0.003764	-0.0143	-0.1180	-2.5887
14	0.0000	-0.1238	4,257.27	0.001569	0.0002	-0.1179	-2.5854
15	0.0000	-0.1238	4,248.95	-0.00195	0.0001	-0.1177	-2.5821

APPENDIX 2.12 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR EXPRESS 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTE D RETURN	AR	CAR	SCAR
-15	-0.1402	-0.1402	4,317.23	-0.00597	-0.1383	-0.1383	-2.9551
-14	0.0000	-0.1402	4,350.70	0.007753	0.0019	-0.1364	-2.9147
-13	0.0000	-0.1402	4,415.09	0.0148	0.0019	-0.1345	-2.8744
-12	0.0109	-0.1293	4,483.58	0.015513	0.0128	-0.1218	-2.6017
-11	-0.0108	-0.1401	4,519.63	0.00804	-0.0089	-0.1306	-2.7911
-10	0.0978	-0.0423	4,499.06	-0.00455	0.0997	-0.0309	-0.6604
-9	0.0000	-0.0423	4,495.52	-0.00079	0.0019	-0.0290	-0.6199
-8	0.0000	-0.0423	4,469.23	-0.00585	0.0019	-0.0271	-0.5795
-7	-0.0792	-0.1215	4,509.84	0.009087	-0.0773	-0.1044	-2.2316
-6	-0.0538	-0.1752	4,482.19	-0.00613	-0.0519	-0.1563	-3.3399
-5	0.0000	-0.1752	4,464.74	-0.00389	0.0019	-0.1544	-3.2994
-4	-0.0341	-0.2093	4,429.87	-0.00781	-0.0322	-0.1866	-3.9875
-3	0.0353	-0.1740	4,405.29	-0.00555	0.0372	-0.1494	-3.1928
-2	0.0000	-0.1740	4,337.47	-0.0154	0.0021	-0.1474	-3.1486
-1	0.0000	-0.1740	4,242.73	-0.02184	0.0002	-0.1472	-3.1451
0	-0.0227	-0.1968	4,171.35	-0.01682	-0.0208	-0.1680	-3.5902
1	0.0000	-0.1968	4,080.83	-0.0217	0.0019	-0.1661	-3.5497
2	0.0000	-0.1968	4,101.67	0.005107	0.0019	-0.1642	-3.5093
3	0.0000	-0.1968	4,176.59	0.018266	0.0019	-0.1623	-3.4689
4	0.0000	-0.1968	4,153.21	-0.0056	0.0019	-0.1605	-3.4285
5	0.0000	-0.1968	4,127.08	-0.00629	0.0019	-0.1586	-3.3881
6	-0.0581	-0.2549	4,153.31	0.006356	-0.0562	-0.2148	-4.5899
7	0.0617	-0.1932	4,134.41	-0.00455	0.0636	-0.1512	-3.2305
8	0.0465	-0.1467	4,194.73	0.01459	0.0484	-0.1028	-2.1963
9	0.0000	-0.1467	4,216.83	0.005269	0.0019	-0.1009	-2.1559
10	-0.1000	-0.2467	4,219.89	0.000726	-0.0981	-0.1990	-4.2522
11	0.0988	-0.1479	4,217.78	-0.0005	0.1007	-0.0983	-2.1014
12	0.0562	-0.0917	4,210.02	-0.00184	0.0581	-0.0403	-0.8606
13	-0.0638	-0.1555	4,234.66	0.005853	-0.0619	-0.1022	-2.184
14	-0.0114	-0.1669	4,250.60	0.003764	-0.0095	-0.1117	-2.3864
15	-0.0115	-0.1784	4,257.27	0.001569	-0.0096	-0.1213	-2.5916

APPENDIX 2.13 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR UCHUMI 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	-0.0224	-0.0224	4,317.23	-0.00597	-0.0226	-0.0226	-0.1575
-14	0.0000	-0.0224	4,350.70	0.007753	-0.0002	-0.0228	-0.1588
-13	-0.0076	-0.0300	4,415.09	0.0148	-0.0078	-0.0306	-0.2132
-12	0.0231	-0.0070	4,483.58	0.015513	0.0229	-0.0077	-0.0536
-11	-0.0075	-0.0145	4,519.63	0.00804	-0.0077	-0.0154	-0.1072
-10	0.0152	0.0007	4,499.06	-0.00455	0.0150	-0.0004	-0.0029
-9	0.0448	0.0455	4,495.52	-0.00079	0.0446	0.0442	0.30778
-8	0.0000	0.0455	4,469.23	-0.00585	-0.0002	0.0440	0.30649
-7	0.0000	0.0455	4,509.84	0.009087	-0.0002	0.0438	0.30521
-6	0.0500	0.0955	4,482.19	-0.00613	0.0498	0.0936	0.65231
-5	0.0068	0.1023	4,464.74	-0.00389	0.0066	0.1002	0.6984
-4	0.0068	0.1090	4,429.87	-0.00781	0.0066	0.1068	0.74419
-3	0.0067	0.1157	4,405.29	-0.00555	0.0065	0.1133	0.7896
-2	0.0000	0.1157	4,337.47	-0.0154	-0.0008	0.1125	0.78369
-1	-0.0067	0.1091	4,242.73	-0.02184	-0.0005	0.1120	0.78051
0	0.0403	0.1493	4,171.35	-0.01682	0.0401	0.1521	1.05975
1	0.0323	0.1816	4,080.83	-0.0217	0.0321	0.1841	1.28314
2	0.0188	0.2003	4,101.67	0.005107	0.0186	0.2027	1.41253
3	0.0429	0.2433	4,176.59	0.018266	0.0428	0.2455	1.71059
4	0.0000	0.2433	4,153.21	-0.0056	-0.0002	0.2453	1.7093
5	0.0059	0.2492	4,127.08	-0.00629	0.0057	0.2510	1.74897
6	0.0117	0.2609	4,153.31	0.006356	0.0115	0.2625	1.82918
7	0.0809	0.3418	4,134.41	-0.00455	0.0807	0.3432	2.39179
8	0.0588	0.4006	4,194.73	0.01459	0.0586	0.4019	2.80049
9	-0.0253	0.3754	4,216.83	0.005269	-0.0254	0.3764	2.62325
10	-0.0155	0.3598	4,219.89	0.000726	-0.0157	0.3607	2.51363
11	0.0000	0.3598	4,217.78	-0.0005	-0.0002	0.3605	2.51234
12	-0.0579	0.3019	4,210.02	-0.00184	-0.0581	0.3024	2.10759
13	0.0000	0.3019	4,234.66	0.005853	-0.0002	0.3023	2.10632
14	0.0615	0.3634	4,250.60	0.003764	0.0613	0.3635	2.53328
15	0.0474	0.4107	4,257.27	0.001569	0.0472	0.4107	2.86209

APPENDIX 2.14 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR EA CABLES 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	-0.0032	-0.0032	4,343.16	-0.00272	-0.0009	-0.0009	-0.0094937
-14	0.0193	0.0161	4,317.23	-0.00597	0.0216	0.0207	0.2183766
-13	-0.0221	-0.0060	4,350.70	0.007753	-0.0198	0.0009	0.0097055
-12	-0.0032	-0.0092	4,415.09	0.0148	-0.0010	0.0000	-0.0004406
-11	-0.0065	-0.0157	4,483.58	0.015513	-0.0042	-0.0042	-0.0447144
-10	-0.0163	-0.0320	4,519.63	0.00804	-0.0140	-0.0182	-0.1923877
-9	-0.0066	-0.0386	4,499.06	-0.00455	-0.0043	-0.0226	-0.2379075
-8	-0.0033	-0.0419	4,495.52	-0.00079	-0.0010	-0.0236	-0.2487945
-7	-0.0167	-0.0587	4,469.23	-0.00585	-0.0144	-0.0380	-0.4009322
-6	-0.0238	-0.0825	4,509.84	0.009087	-0.0215	-0.0595	-0.6278767
-5	0.0035	-0.0790	4,482.19	-0.00613	0.0058	-0.0537	-0.5667579
-4	0.0035	-0.0755	4,464.74	-0.00389	0.0058	-0.0480	-0.5058041
-3	-0.0069	-0.0824	4,429.87	-0.00781	-0.0046	-0.0526	-0.5545427
-2	-0.0035	-0.0859	4,405.29	-0.00555	-0.0012	-0.0537	-0.5668122
-1	-0.0140	-0.0999	4,337.47	-0.0154	-0.0103	-0.0640	-0.6749758
0	0.0106	-0.0893	4,242.73	-0.02184	-0.0009	-0.0649	-0.6843856
1	-0.0175	-0.1068	4,171.35	-0.01682	-0.0152	-0.0801	-0.8449037
2	-0.0179	-0.1247	4,080.83	-0.0217	-0.0155	-0.0956	-1.0086446
3	-0.0545	-0.1792	4,101.67	0.005107	-0.0523	-0.1479	-1.5598426
4	-0.0885	-0.2677	4,176.59	0.018266	-0.0862	-0.2341	-2.469026
5	-0.0633	-0.3310	4,153.21	-0.0056	-0.0610	-0.2951	-3.1123924
6	0.0946	-0.2364	4,127.08	-0.00629	0.0969	-0.1982	-2.0902037
7	-0.0123	-0.2487	4,153.31	0.006356	-0.0100	-0.2082	-2.1961711
8	0.0250	-0.2237	4,134.41	-0.00455	0.0273	-0.1809	-1.9081201
9	-0.0285	-0.2522	4,194.73	0.01459	-0.0262	-0.2071	-2.1842645
10	-0.0293	-0.2815	4,216.83	0.005269	-0.0270	-0.2341	-2.4690438
11	0.0043	-0.2771	4,219.89	0.000726	0.0066	-0.2275	-2.3993144
12	-0.0258	-0.3029	4,217.78	-0.0005	-0.0235	-0.2509	-2.6466924
13	0.0264	-0.2765	4,210.02	-0.00184	0.0287	-0.2222	-2.3436152
14	-0.0043	-0.2808	4,234.66	0.005853	-0.0020	-0.2242	-2.3646933
15	0.0302	-0.2506	4,250.60	0.003764	0.0325	-0.1917	-2.0222205

APPENDIX 2.15 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR MUMIAS 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0.0000	0	4,500.43	-0.0086001	0.0021	0.0021	0.0113391
-14	0.0263	0.0263	4,467.36	-0.0073482	0.0285	0.0306	0.1649978
-13	-0.0256	0.0007	4,485.71	0.0041076	-0.0236	0.0070	0.0377603
-12	-0.0263	-0.0256	4,532.28	0.0103819	-0.0243	-0.0173	-0.093313
-11	0.0270	0.0014	4,487.38	-0.0099067	0.0292	0.0119	0.0642642
-10	0.0000	0.0014	4,404.72	-0.0184205	0.0022	0.0141	0.0761693
-9	0.0000	0.0014	4,354.99	-0.0112902	0.0022	0.0163	0.0878552
-8	0.0526	0.0540	4,343.16	-0.0027164	0.0547	0.0710	0.3834656
-7	0.0000	0.0540	4,317.23	-0.0059703	0.0021	0.0732	0.3949881
-6	0.0000	0.0540	4,350.70	0.0077527	0.0021	0.0752	0.406089
-5	0.0000	0.0540	4,415.09	0.0147999	0.0020	0.0772	0.4169734
-4	0.0000	0.0540	4,483.58	0.0155127	0.0020	0.0792	0.4278359
-3	-0.0500	0.0040	4,519.63	0.0080404	-0.0479	0.0313	0.1689495
-2	-0.0263	-0.0223	4,499.06	-0.0045513	-0.0242	0.0071	0.0383346
-1	0.0541	0.0318	4,495.52	-0.0007868	0.0562	0.0633	0.3415664
0	-0.0256	0.0061	4,469.23	-0.005848	-0.0235	0.0398	0.2146347
1	0.0000	0.0061	4,509.84	0.0090866	0.0020	0.0418	0.2256946
2	0.0000	0.0061	4,482.19	-0.006131	0.0021	0.0439	0.2372221
3	-0.0263	-0.0202	4,464.74	-0.0038932	-0.0242	0.0197	0.1065869
4	0.0270	0.0068	4,429.87	-0.0078101	0.0292	0.0489	0.2641002
5	-0.0263	-0.0195	4,405.29	-0.0055487	-0.0242	0.0247	0.1335159
6	0.0000	-0.0195	4,337.47	-0.0153951	0.0022	0.0269	0.145328
7	-0.0270	-0.0465	4,242.73	-0.0218422	-0.0248	0.0021	0.0114038
8	0.0278	-0.0187	4,171.35	-0.0168241	0.0300	0.0321	0.1732478
9	-0.0270	-0.0458	4,080.83	-0.0217004	-0.0248	0.0073	0.0393194
10	0.0000	-0.0458	4,101.67	0.0051068	0.0021	0.0094	0.0505016
11	0.0000	-0.0458	4,176.59	0.0182657	0.0020	0.0113	0.0612795
12	0.0000	-0.0458	4,153.21	-0.0055979	0.0021	0.0135	0.0727905
13	-0.0278	-0.0735	4,127.08	-0.0062915	-0.0256	-0.0122	-0.065665
14	0.0000	-0.0735	4,153.31	0.0063556	0.0021	-0.0101	-0.054521
15	-1.0012	-1.0747	4,134.41	-0.0045506	-0.9991	-1.0092	-5.448993

APPENDIX 2.16 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR EXPRESS 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0	0	5,242.35	-0.00198	0.000451	0.001073	0.035586
-14	-0.06667	-0.06666	5,242.62	5.15E-05	-0.06637	-0.06592	-2.18606
-13	0	-0.06666	5,248.16	0.001057	0.00022	-0.06615	-2.19372
-12	0	-0.06666	5,240.53	-0.00145	0.000411	0.00063	0.0209
-11	0	-0.06666	5,196.86	-0.00833	0.000934	0.001345	0.044596
-10	0	-0.06666	5,179.76	-0.00329	0.00055	0.001485	0.049231
-9	0.008929	-0.05773	5,142.35	-0.00722	0.009778	0.010329	0.34252
-8	0	-0.05773	5,128.03	-0.00278	0.000512	0.01029	0.341244
-7	0.00885	-0.04888	5,123.97	-0.00079	0.00921	0.009722	0.322395
-6	0	-0.04888	5,136.20	0.002387	0.000118	0.009328	0.309344
-5	0	-0.04888	5,128.02	-0.00159	0.000421	0.00054	0.017893
-4	-0.02632	-0.07520	5,126.02	-0.00039	-0.02599	-0.02556	-0.84779
-3	0.045045	-0.03015	5,078.74	-0.00922	0.046047	0.020061	0.665264
-2	-0.01724	-0.04740	5,093.00	0.002808	-0.01716	0.028892	0.958123
-1	0	-0.04740	5,102.04	0.001775	0.000165	-0.01699	-0.56343
0	-0.01754	-0.06494	5,073.86	-0.00552	-0.01682	-0.01666	-0.55244
1	0.035714	-0.02923	5,042.85	-0.00611	0.036479	0.019656	0.651834
2	0	-0.02923	5,026.79	-0.00318	0.000542	0.037022	1.227727
3	0	-0.02923	5,061.09	0.006823	-0.00022	0.000323	0.010714
4	-0.03448	-0.06371	5,056.27	-0.00095	-0.03411	-0.03433	-1.13845
5	0	-0.06371	5,055.00	-0.00025	0.000319	-0.03379	-1.12059
6	0	-0.06371	5,061.11	0.001209	0.000208	0.000527	0.017481
7	0.026786	-0.03692	5,091.43	0.005991	0.02663	0.026838	0.890005
8	-0.02609	-0.06301	5,085.40	-0.00118	-0.0257	0.000933	0.03094
9	0.026786	-0.03622	5,100.51	0.002971	0.02686	0.001163	0.03856
10	0.034783	-0.00144	5,083.94	-0.00325	0.03533	0.062189	2.062346
11	-0.02521	-0.02665	5,074.76	-0.00181	-0.02477	0.010557	0.3501
12	0.008621	-0.01803	5,070.75	-0.00079	0.008981	-0.01579	-0.52369
13	0.017094	-0.00094	5,042.52	-0.00557	0.017818	0.026799	0.888701
14	-0.0084	-0.00934	5,012.94	-0.00587	-0.00766	0.010161	0.336954
15	-0.07627	-0.08561	4,980.48	-0.00648	-0.07548	-0.08314	-2.75696

APPENDIX 2.17 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR BRITAM 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	-0.01905	-0.01905	5,342.36	0.0053671	-0.01017	-0.01815	-0.33794
-14	0.009709	-0.00934	5,346.56	0.0007862	0.013903	0.003728	0.069417
-13	0.028846	0.019507	5,304.41	-0.007884	0.02884	0.042742	0.795873
-12	0.009346	0.028853	5,265.67	-0.007303	0.007259	0.036098	0.672161
-11	0	0.028853	5,254.60	-0.002102	0.003109	0.010368	0.19305
-10	-0.03704	-0.00818	5,275.10	0.0039013	-0.01969	-0.01658	-0.30874
-9	0	-0.00818	5,252.74	-0.004239	0.00691	-0.01278	-0.23796
-8	-0.03846	-0.04665	5,242.35	-0.001978	-0.02341	-0.0165	-0.30729
-7	0.01	-0.03665	5,242.62	5.15E-05	0.015864	-0.00755	-0.14058
-6	0.009901	-0.02674	5,248.16	0.0010567	0.01164	0.027503	0.512117
-5	0	-0.02674	5,240.53	-0.001454	-0.00484	0.0068	0.126611
-4	0	-0.02674	5,196.86	-0.008333	0.003396	-0.00144	-0.02688
-3	0	-0.02674	5,179.76	-0.00329	0.000907	0.004303	0.080132
-2	0.009804	-0.01694	5,142.35	-0.007222	0.028994	0.029901	0.556767
-1	-0.01942	-0.03636	5,128.03	-0.002785	-0.02513	0.003865	0.07197
0	-0.0297	-0.06606	5,123.97	-0.000792	-0.03328	-0.05841	-1.08753
1	-0.09184	-0.1579	5,136.20	0.0023868	-0.08031	-0.11358	-2.11493
2	-0.08989	-0.24779	5,128.02	-0.001593	-0.07714	-0.15744	-2.93164
3	0.012346	-0.23544	5,126.02	-0.00039	0.019037	-0.0581	-1.08186
4	0.097561	-0.13788	5,078.74	-0.009224	0.083539	0.102576	1.909989
5	-0.01111	-0.14899	5,093.00	0.0028078	-0.00904	0.074498	1.387185
6	-0.02247	-0.17146	5,102.04	0.001775	-0.02185	-0.03089	-0.57522
7	-0.03448	-0.20594	5,073.86	-0.005523	-0.03688	-0.05874	-1.09369
8	0.047619	-0.15833	5,042.85	-0.006112	0.03532	-0.00156	-0.02913
9	0.045455	-0.11287	5,026.79	-0.003185	0.048006	0.083326	1.55155
10	0.01087	-0.102	5,061.09	0.0068234	0.00482	0.052826	0.983632
11	0.032258	-0.06974	5,056.27	-0.000952	0.039082	0.043902	0.817466
12	0.03125	-0.03849	5,055.00	-0.000251	0.035087	0.074169	1.381052
13	0	-0.03849	5,061.11	0.0012087	0.001735	0.036823	0.68565
14	-0.0101	-0.04859	5,091.43	0.0059908	0.001521	0.003257	0.060645
15	-0.02041	-0.069	5,085.40	-0.001184	-0.00817	-0.00665	-0.12374

APPENDIX 2.18 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR PANAFRICAN 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0.008696	0.008696	5,207.04	-0.001235	0.008853	0.007218	0.135986
-14	0	0.008696	5,194.21	-0.002464	0.001296	0.010149	0.19121
-13	0.017241	0.025937	5,212.11	0.0034461	0.01306	0.014356	0.270467
-12	0	0.025937	5,222.76	0.0020433	-0.00288	0.010179	0.191764
-11	0	0.025937	5,242.61	0.0038007	-0.00451	-0.00739	-0.13925
-10	-0.00847	0.017462	5,268.98	0.0050299	-0.01412	-0.01863	-0.35106
-9	0	0.017462	5,284.14	0.0028772	-0.00365	-0.01778	-0.33494
-8	0	0.017462	5,280.72	-0.000647	-0.00039	-0.00404	-0.07615
-7	0.008547	0.026009	5,296.07	0.0029068	0.004865	0.004478	0.084361
-6	-0.00847	0.017535	5,313.06	0.003208	-0.01244	-0.00757	-0.14262
-5	0	0.017535	5,330.01	0.0031903	-0.00394	-0.01638	-0.30859
-4	0.008547	0.026082	5,333.86	0.0007223	0.00689	0.002946	0.055497
-3	0	0.026082	5,340.08	0.0011661	-0.00207	0.004822	0.090841
-2	0	0.026082	5,357.69	0.0032977	-0.00404	-0.00611	-0.11515
-1	0	0.026082	5,403.72	0.0085914	-0.00895	-0.01299	-0.24481
0	0	0.026082	5,446.04	0.0078316	-0.00825	-0.0172	-0.32398
1	-0.0678	-0.04171	5,473.81	0.0050991	-0.07351	-0.08176	-1.54028
2	-0.04545	-0.08717	5,465.90	-0.001445	-0.0451	-0.11861	-2.23465
3	-0.02857	-0.11574	5,455.84	-0.001841	-0.02785	-0.07296	-1.37448
4	0.04902	-0.06672	5,455.23	-0.000112	0.048136	0.020283	0.382122
5	0.046729	-0.01999	5,467.78	0.0023005	0.043609	0.091745	1.728464
6	0	-0.01999	5,475.84	0.0014741	-0.00235	0.041256	0.777249
7	0.071429	0.051436	5,491.37	0.0028361	0.067813	0.065459	1.233235
8	0.075	0.126436	5,499.64	0.001506	0.072617	0.140429	2.645668
9	0.069767	0.196204	5,474.45	-0.00458	0.073025	0.145642	2.743872
10	-0.02899	0.167218	5,461.08	-0.002442	-0.02771	0.045316	0.85374
11	-0.02239	0.14483	5,411.05	-0.009161	-0.01488	-0.04259	-0.80247
12	0.007634	0.152464	5,411.05	0	0.006646	-0.00824	-0.15522
13	0.015152	0.167615	5,371.69	-0.007274	0.020906	0.027552	0.519073
14	-0.02239	0.145227	5,368.69	-0.000558	-0.02286	-0.00195	-0.03678
15	0.022901	0.168128	5,362.43	-0.001166	0.022994	0.000136	0.002563

APPENDIX 2.19 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR CAR & GEN 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	0	0	4,676.16	-0.00298	0.000949	0.064552	2.235832
-14	0	0	4,638.44	-0.00807	-6E-05	0.000889	0.030796
-13	0	0	4,627.90	-0.00227	0.00109	0.001031	0.035695
-12	0	0	4,605.25	-0.00489	0.00057	0.00166	0.057502
-11	0	0	4,578.62	-0.00578	0.000394	0.000963	0.033372
-10	-0.04787	-0.04787	4,539.47	-0.00855	-0.04803	-0.04763	-1.64988
-9	0	-0.04787	4,500.43	-0.0086	-0.00017	-0.04819	-1.66925
-8	0	-0.04787	4,467.36	-0.00735	8.29E-05	-8.3E-05	-0.00287
-7	0	-0.04787	4,485.71	0.004108	0.002357	0.002439	0.08449
-6	0	-0.04787	4,532.28	0.010382	0.003602	0.005958	0.206372
-5	0	-0.04787	4,487.38	-0.00991	-0.00042	0.003177	0.110034
-4	0	-0.04787	4,404.72	-0.01842	-0.00211	-0.00254	-0.08796
-3	0	-0.04787	4,354.99	-0.01129	-0.0007	-0.00281	-0.09747
-2	0	-0.04787	4,343.16	-0.00272	0.001002	0.000303	0.010481
-1	0	-0.04787	4,317.23	-0.00597	0.000356	0.001358	0.047052
0	0	-0.04787	4,350.70	0.007753	0.00308	0.003436	0.11902
1	-0.06145	-0.10932	4,415.09	0.0148	-0.05697	-0.05389	-1.86668
2	-0.03571	-0.14504	4,483.58	0.015513	-0.03109	-0.08807	-3.05034
3	0	-0.14504	4,519.63	0.00804	0.003137	-0.02796	-0.96833
4	0.037037	-0.108	4,499.06	-0.00455	0.037675	0.040812	1.413574
5	0	-0.108	4,495.52	-0.00079	0.001385	0.03906	1.352892
6	0	-0.108	4,469.23	-0.00585	0.000381	0.001766	0.061157
7	0	-0.108	4,509.84	0.009087	0.003345	0.003725	0.12903
8	0	-0.108	4,482.19	-0.00613	0.000324	0.003669	0.127085
9	-0.00595	-0.11395	4,464.74	-0.00389	-0.00518	-0.00486	-0.16831
10	0	-0.11395	4,429.87	-0.00781	-8.8E-06	-0.00519	-0.17985
11	-0.04192	-0.15587	4,405.29	-0.00555	-0.04148	-0.04148	-1.43688
12	0	-0.15587	4,337.47	-0.0154	-0.00151	-0.04299	-1.48902
13	0	-0.15587	4,242.73	-0.02184	-0.00279	-0.00431	-0.14921
14	0	-0.15587	4,171.35	-0.01682	-0.0018	-0.00459	-0.15904
15	0	-0.15587	4,080.83	-0.0217	-0.00277	-0.00456	-0.15806

APPENDIX 2.20 TABLE ON RETURNS ON PRICE WARNINGS ANNOUNCEMENT FOR TPS-EA 2015

DAYS	ACTUAL RETURN	CUMM. ACTUAL RETURN	NSE 20	EXPECTED RETURN	AR	CAR	SCAR
-15	-0.05921	-0.05921	5,209.84	-0.00154	-0.05842	-0.01646	-0.69234
-14	0.055944	-0.00327	5,213.48	0.000699	0.056749	-0.00167	-0.07032
-13	-0.00662	-0.00989	5,207.04	-0.00124	-0.00583	0.050918	2.141098
-12	-0.02667	-0.03656	5,194.21	-0.00246	-0.02588	-0.03172	-1.33362
-11	-0.00685	-0.0434	5,212.11	0.003446	-0.00603	-0.03191	-1.34178
-10	0.027586	-0.01582	5,222.76	0.002043	0.028401	0.022375	0.940885
-9	0.006711	-0.00911	5,242.61	0.003801	0.007538	0.035939	1.511219
-8	-0.00667	-0.01577	5,268.98	0.00503	-0.00583	0.001707	0.071761
-7	0	-0.01577	5,284.14	0.002877	0.00082	-0.00501	-0.21073
-6	-0.02685	-0.04262	5,280.72	-0.00065	-0.02605	-0.02523	-1.06093
-5	0.027586	-0.01503	5,296.07	0.002907	0.028407	0.002356	0.099086
-4	0.006711	-0.00832	5,313.06	0.003208	0.007534	0.03594	1.511299
-3	0	-0.00832	5,330.01	0.00319	0.000822	0.008356	0.351379
-2	0.006667	-0.00166	5,333.86	0.000722	0.007472	0.008294	0.348766
-1	-0.00662	-0.00828	5,340.08	0.001166	-0.00581	0.001657	0.069693
0	-0.01333	-0.02161	5,357.69	0.003298	-0.01251	-0.01832	-0.77055
1	-0.02703	-0.04864	5,403.72	0.008591	-0.02617	-0.03868	-1.62638
2	-0.03472	-0.08336	5,446.04	0.007832	-0.03387	-0.06003	-2.52445
3	-0.01439	-0.09775	5,473.81	0.005099	-0.01355	-0.04742	-1.99402
4	0.007299	-0.09045	5,465.90	-0.00145	0.008089	-0.00546	-0.22975
5	0.007246	-0.0832	5,455.84	-0.00184	0.008033	0.016123	0.677959
6	-0.00719	-0.0904	5,455.23	-0.00011	-0.0064	0.001638	0.068898
7	0.021739	-0.06866	5,467.78	0.002301	0.022555	0.01616	0.679538
8	-0.00709	-0.07575	5,475.84	0.001474	-0.00628	0.016273	0.684296
9	-0.00714	-0.08289	5,491.37	0.002836	-0.00632	-0.0126	-0.53004
10	-0.00719	-0.09009	5,499.64	0.001506	-0.00638	-0.01271	-0.53432
11	-0.00725	-0.09733	5,474.45	-0.00458	-0.00648	-0.01286	-0.54085
12	0.007299	-0.09003	5,461.08	-0.00244	0.008082	0.001604	0.067437
13	-0.01449	-0.10453	5,411.05	-0.00916	-0.01376	-0.00567	-0.23862
14	0	-0.10453	5,411.05	0	0.0008	-0.01296	-0.54484
15	0	-0.10453	5,371.69	-0.00727	0.000749	0.001549	0.065139