

EFFECTS OF PROFIT WARNINGS ANNOUNCEMENT ON PERFORMANCE OF STOCKS IN THE NAIROBI SECURITIES EXCHANGE

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ABSTRACT

This study examined share returns following unexpected corporate announcements that are described as profit warnings. The study tested whether there are abnormal returns on share prices after the announcement of profit warnings. The report is based on the 56 companies quoted on the Nairobi Securities Exchange (NSE) and samples drawn from companies that have issued profit warnings. The research design used was the event study which assessed the impact of an event on the value of a firm. This research used the one hundred and fifty days event window where twenty days are prior and twenty days are after the profit warning announcement. Event study methodology, student T-test before event date and Average Abnormal Return (AAR) significance from zero were used to analyze data collected on daily stock prices. The result of this research indicates that profit warning has impact on the stock return in the NSE and the impact is negative and significant for the period of pre-warning and post-warning and on the day of actual announcement. There are also indications of information leakages where there were negative abnormal returns days before the profit warning announcements. Based on this research, the recommendation to the investors or practitioners in the NSE is that profit warning announcements are information events that influence the investment decision and should thus expect negative abnormal responses of share prices following such announcements but further studies may be commissioned to confirm or disapprove our findings.

Key Words: Investor; Stock market; Insider Trading; Market Anomaly; Efficient Market Hypothesis; Post earnings announcement drift

1.0 INTRODUCTION

1.1 Introduction

The profit warning is considered as bad news by the market because it reveals the company's adverse future profitability and competitiveness. Therefore, it results insignificant negative returns in the stock markets. The profit warning disclosure reduces the impact of surprise at the time of the real earnings announcement, because the profit warning prepares the market for the bad news.

A profit warning is a public announcement saying that earnings for a reported period will not meet expectations. Firm managers tend to issue a profit warning when previous forecasts are believed to be too optimistic or unforeseen changes in economic or operational conditions have occurred. Such a statement is an extremely visible signal to investors declaring a significant negative change in the performance of a firm.

The general explanation for this phenomenon is market under reaction. Since profit warnings are similar earnings surprises except for the fact they are unexpected it is interesting to see whether there is a similar drift. Profit warnings are related to earning announcements containing surprises. The only difference is that earnings announcements have a predetermined date and profit warnings are unexpected (Bhana, 2005). The semi-strong efficient market hypothesis, stock prices react quickly in an unbiased manner to new public information. Over the years many researchers studied the market reaction in response to earnings information. This led to the discovery of one of the most robust anomaly in finance and accounting literature: post-earnings-announcement drift (hereafter PEAD). PEAD is the phenomenon that stock returns continue to drift downward following a negative earnings signal reported at the scheduled earnings announcement date (Louhichi, 2008).

An efficient market should incorporate all information (factual or predicted) into prices in a quick and unbiased way. Post Earnings Announcement Drift in this study is the continuous downward drift in prices due to a profit warning announcement and hence that future returns are somewhat predictable. If the market is weak form efficient, then stock prices should incorporate relevant information instantaneously but if occurrence of profit warnings causes abnormal returns due to under reaction to information by investors hence the downward drift or return continuation behavior, a price drift then indicates that the market fails to translate the information into prices. If profit warnings lead to negative abnormal returns, this will contradict the randomness of stock prices expected in efficient markets and hence the need for this research as past researches have not addressed the phenomenon.

1.2 Purpose of the Study

The purpose of the study was to investigate whether profit warnings announcement have a significant effect on the performance of stocks in the Nairobi securities exchanges. The study was undertaken to achieve the following specific objectives:

- i. To investigate whether profit warnings generate negative abnormal returns in the Nairobi Securities Exchange
- ii. Establish the existence of anticipated returns attributed to profit warnings announcement
- iii. Identify the existence of earnings surprises due to profit warnings announcement

2.0 LITERATURE REVIEW

2.1 An overview of the Nairobi Securities Exchange (NSE)

The Nairobi Securities Exchange is the only stock exchange operating in Kenya. It was established in the 1920's by the British as an informal market for dealing in shares and stocks, with no rules and regulations to oversee stock broking activities. The Kenyan stock market, then named the Nairobi Stock Exchange, was founded in 1954 as a voluntary association of brokers registered under the Societies Act. It was through the NSE that saw the first ever privatization in the country of a 20% government stake in the Kenya Commercial Bank (KCB). Since 1994, there have been significant changes to the NSE in terms of structure, trading premises and its operations (www.nse.co.ke).

Trading is carried out via the Automated Trading System (ATS) which was commissioned in 2006 and it marked the significant step in the efforts to ease the speed of the execution of orders on a first come first serve basis thus enhancing market liquidity. The ATS system is linked to the Central Bank of Kenya (CBK) and the electronic Central Depository System (CDS) allowing trading of government bonds. The daily price movement for any security in a single trading session is not allowed to be more than 10% except during major corporate announcements (kestrelcapital.com).

The ATS is customized in order to uphold the spirit of the Open Outcry Trading rules in an automated trading environment (www.nse.co.ke). The NSE All Share Index (NASI) was introduced in 2008, as an alternative index, which is an overall indicator of market performance. The index incorporates all the traded shares of the day; therefore it provides the overall overview of the market value rather than the price movements of select stocks. The Nairobi Securities Exchange is licensed and regulated by the Capital Markets Authority of Kenya (CMA-K). It has the mandate of providing a trading platform for listed securities and overseeing its member firms. It also approves public offers and listings of securities traded at the exchange (www.nse.co.ke).

The Nairobi Stock Exchange changed its name to the Nairobi Securities Exchange in July 2011 as a reflection of its strategic plan to evolve into a full service securities exchange which supports trading, clearing and settlement of equities, debt, derivatives and other associated instruments. It is also part of the East African Securities Exchanges Association comprising of the Dar-salaam Stock Exchange and the Uganda Securities Exchange including the various cross-listing of various equities (www.nse.co.ke).

The exchange comprises of approximately 63 active listed companies with a daily trading volume of over US \$5 million and a total market capitalization of approximately US \$15billion. Apart from equities, government and corporate bonds are also traded on the exchange with an average of daily bond trading of US \$60 million. Automated bond trading commenced in late 2009. Short selling and same day turn-around transactions are not permitted on the NSE. Almost all NSE listed companies are open to additional foreign investment, including multinational subsidiaries.

Table 1: Basic Data - Nairobi Securities Exchange

YEAR	LISTED COMPANIES	MARKET CAPITALIZATION (KShs "000")	TOTAL VOLUME OF SHARES TRADED	EQUITY TURN OVER (Kshs "000")
2011	58	952,150,059.00	5,722,036,800.00	77,796,279,185.00
2010	55	1,194,917,184.00	5,918,921,900.00	89,713,453,278.00
2009	55	761,983,851.00	3,159,558,527.00	38,152,734,018.00
2008	55	931,885,741.00	5,835,858,270.00	97,601,977,685.00
2007	53	802,039,996.00	1,924,262,247.00	88,650,556,648.00
2006	49	778,442,065.00	1,463,481,161.00	95,386,387,106.00
2005	46	782,494,844.00	776,971,725.00	36,562,616,982.00
		6,203,913,740.00	24,801,090,630.00	523,864,004,902.00

Source: NSE Handbook (2006, 2012)

2.2 Post Earnings Announcements Drift

The post earnings announcement drift (PEAD) was first documented by Ball and Brown (1968) and defined it as the tendency for stock prices to continue to move in the direction of the earnings surprise up to a year even after the earnings announcement. That is, if a firm's announced earnings exceed (or fall below) the market expectation, the subsequent abnormal returns to its stocks are usually above (below) normal returns for months. The EMH holds that stock prices adjust instantaneously to new information. Empirical evidence, however, suggests that price changes persist for some time after the initial announcement (White, Sondhi, & Fried, 2012).

This predictability of stock returns after earnings announcements has attracted extensive researches from (Livnat & Mendenhall, 2006) and (Ball, Sadka, & Sadka, 2009). They also conclude that the drift is significantly larger when using the analysts' forecasts, and that those investors who view the drift as a violation of market efficiency and hope to exploit it should also use the earnings surprise signal, or combination of signals that maximize the drift. (Cready & Gurun, 2010) found that the market returns continue to persist for some time beyond the announcement period leaving room for profitable trading activities. This finding is consistent with the post earnings announcement drift (PEAD) phenomenon, which relates to the tendency for stock prices to continually drift after the earnings announcements.

2.3 Abnormal Returns Following Earnings Announcement

(Srinivasan, 2002) documents the existence of extremely large positive abnormal returns on ex-bonus and ex-rights dates for equity in Indian capital market. He argues that tax regime can motivate trading strategies around the ex-dates. He concludes that the tax regime can lead to significant positive abnormal performance if long-term investors are the equilibrium price determining investors.

(Uddin, 2003) conducted a study to establish the effect of dividend announcements on shareholders' value using Dhaka stock exchange (DSE) as a case study. This empirical study was based on 137 samples of dividend paying companies listed on the DSE. These are companies that announced dividends between October 2002 and September 2002. He chose this period following immediately after the change of political power in Bangladesh to avoid high market volatility. The choice of companies that were included in the sample depended on the sector to which they belonged and the overall included stocks from all sectors. From each sector, (Uddin, 2003) selected 10 to 20 stocks except in Paper, Jute and the services sectors.

The event study methodology was used to calculate the security return, expected return, market adjusted abnormal return and the daily cumulative abnormal return. The research also used the DSE all-share price index as the proxy for average market price. The event window was identified as -30 through day + 30.

To study the impact of dividend announcement on firm value, (Uddin, 2003) used two measures; Daily market adjusted abnormal return (MAAR) and Daily cumulative abnormal return (CAR).

The MAAR shows the change in the individual stocks value due to the dividend announcement. As the percentage change in market index (average market price) is deducted the remainder gives the unsystematic portion of the value change, which is specific to that particular stock resulting from its dividend announcement.

(Uddin, 2003) used a 61 day window period, starting from -30 day to + 30 day relative to the dividend announcement day (0-day). He also used a parametric test to determine the statistical significance of market adjusted average abnormal return of dividend paying stocks over the event window. The t statistics were calculated cross sectionally by using the standard deviation of abnormal returns of the portfolio of 137 dividend paying stocks. The t- statistic suggested in (Brown & Warner, 1980) was applied to test the significance of the cumulative abnormal returns.

Based on the 137 (DSE) listed companies declaring dividends during October 2001 and September 2002, (Uddin, 2003) found that investors do not benefit from a dividend announcement. Over the period starting from 30 days prior to the dividend announcement, investors lost up to 19.52 percent of their stock value. The CAR curve had a humps hope indicating the persistence of abnormal returns even though they were insignificant. The results therefore supported the (Miller & Modigliani, 1961) hypothesis of dividend announcement irrelevancy in determining stock value.

(Ikenberry & Sundares, 2002) applied cumulative average residual error (CARE) methodology to examine the New York Stock Exchange's reaction to stock splits and found evidence in support of the proposition that the New York Stock Exchange was semi-strong efficient. Using the methodology of (Fama, 1998), (Loughran & Jay, 2000), developed an abnormal performance index (API) methodology and examined the market reaction to earnings announcements. They divided their sample into those firms which announced earnings above expectations and those which announced earnings below expectations. Their conclusions supported semi-strong form of efficiency of the market.

In the Indian environment (Chatuverdi, 2000) studied the behavior of stock prices around half yearly financial announcements. His study documented that the abnormal returns were not only statistically but also economically significant. The findings suggest that the earnings information is not assimilated rapidly.

2.4 Existence of Anticipated Returns attributed to Earnings Announcement

A study done by (Mashra, 2005) on 46 bonus issues (made between June 1988 and August 2004) on companies listed on the Nairobi Securities Exchange, found that in line with the developed markets, Indian capital market exhibited significant abnormal returns for a five day period prior to bonus announcement. The behavior of the Average Abnormal Returns (AAR) and Cumulative Average Abnormal Returns (CAAR) is found to be in accordance with the expectations, thereby lending support to the hypothesis that Indian stock market is semi-strong efficient.

(Mecagni & Sourial, 1999) used the dividend expectation model and the market model to determine the effect of dividend announcements on stock price on securities listed on the Egyptian stock market. To empirically examine the adjustment of common stock prices to quarterly dividend announcements, a measure of unexpected change in dividends was first derived. Justification for the naïve expectation model was derived from the reluctance change dividend assertion, which states that managers do not change dividends payments unless they have reasons to expect a significant change in the future prospects of the firm. In order to isolate possible dividends effects from those of earnings, the study examined only those quarterly dividend and earnings announcements conveyed to the public on different dates within any quarter.

The measurement of the abnormal performance was done by use of the market model. This study attempted to resolve the empirical issue as to whether or not, quarterly dividend announcements convey useful information beyond that provided by quarterly earnings numbers. Cumulative abnormal returns were found to be significant and the CAR was found to be spike shaped meaning that CARs rose sharply and then fell sharply in the event period. This implies non-persistence of CAR (Mecagni & Sourial, 1999).

Findings about the capital market reaction to dividend announcements studies therefore strongly supported the hypothesis that changes in quarterly cash dividends provide useful information beyond that provided by corresponding quarterly earnings numbers. In addition the results also supported the semi-strong efficient capital market hypothesis, that on average, the stock prices adjust in an efficient manner to new quarterly dividend information.

2.5 Existence of earnings surprises due to earnings announcement

(Barkoulas, Baum, & Travlos, 2000) examined the existence of different price reactions to the implementation of stock dividends and rights offerings in the Greek stock market. Since individual investors, who are attracted by lower relative prices are not expected to be prompt in timing, excess returns persists over longer event windows and are accompanied by increasing trading volumes

(Palmrose, Richardson, & Scholz, 2004) investigated the relevance of signaling hypothesis by examining market reaction and operating performance around bonus issues for a large sample of 464 companies listed on the Istanbul Stock Exchange. Their study documents a cumulative abnormal return of 12.73% for an 11 day period surrounding bonus announcements. They also found that the abnormal returns are positively related to bonus ratio and negatively related to the size of the firm, which is consistent with the signaling hypothesis

As stated by (Fame, 1998), behavioral models face the “daunting task of specifying biases in information processing that cause the same investors to under-react to some types of events and over-react to others.” This criticism points to an important research gap that the researcher hopes to fill with the current study.

2.6 Theoretical Literature Review

2.6.1 Cash Flow Signaling Hypothesis (CFSH)

The pioneer of this theory was (Kalay, 1980), who developed a model on what signals, is sent to market when there is an unexpected dividend announcement that leads to a cut in actual dividend. He argued that, managers are reluctant to cut dividends as a necessary condition for dividends to convey information.

This hypothesis contends that unexpected dividend announcement that suggest increases in dividends signals the fact that the firm's financial position is favorable and that it has good investment projects in its portfolio, and therefore is able to generate positive cash flows in the long term. This would lead to an increase in the stock prices of the firm. Similarly, investors view an unexpected announcement that leads to a cut in dividends relative to the previous period level as an indictment of the firm as having bleak future.

According to (Kalay, 1980) this negative signal would lead to a fall of the firm's stock price. Consistent with (Kalay, 1980) hypothesis, (Aharony & Swary, 2000) found that announcing firms experience substantial abnormal returns at the time of their dividend announcement. According to them the abnormal returns are larger in absolute value for dividend decreases, and this would lead to a market fall of the firm's stock

2.6.2 The Coarse Dividend Signaling Theory (CDST)

This theory was developed by (DeAngelo, DeAngelo, & Skinner, 1996) who was interested in establishing the impact of a dividend announcement resulting from a cut in the dividend level. In his analysis, he predicted that dividends are more likely to have information when they are decreased than when they are increased. According to him, if a company has been making losses in the past an announcement resulting from a cut in dividend turns market sentiments against the holding of shares of such a firm leading to a fall in the stock price of that firm.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The standard event-study methodology is employed in this study to determine how the NSE reacts to firms' profit warnings announcement. Event study methodology is viewed as a powerful tool in efficient market hypothesis research and many researchers; (Aga & Kocaman, 2008); (Cox & Weirich, 2002) and (Lyroudi, Dasilas, & Varnas, 2006) have successfully utilized the event study methodology to determine how share prices react to new information releases in the market. (Mushidzi & Ward, 2004) emphasizes that event methodology is often used to determine whether there is a statistical difference between actual stock returns and expected returns surrounding an event. The research design adopted in this study was a census survey which entailed a complete enumeration of all the items under study.

3.2 Instruments and Procedures

The event study methodology is employed to test for abnormal performance. The event of interest is the public announcement of earnings, and the event date is the first day on which such an announcement is made. This day is denoted 'Day0', herein referred to as t_0 . The impact on the security's daily closing price is measured over a period of twenty trading days prior to the announcement day, and twenty trading days after the announcement day (referred to as $t-20 \dots t+20$, the event window). This study applied the event study methodology that was adopted by (Darrell, 2010) which included the following procedures:

The holding period arithmetic returns of the profit warning issuing companies and the corresponding NSE 20 share index for each day in this study period was computed as follows (Reilly & Brown, 2009):

$$\text{Arithmetic returns } (R_i) = (P_1 - P_0) / P_0$$

Where: P_1 = today's closing stock price and P_0 = yesterday's closing stock price

A regression analysis is carried out using the actual daily return of each company as the dependent variable and the corresponding NSE 20 share index daily return as the independent variable over the event period of 40 days: prior to the event period of 20 days before and 20 days after the profit warning announcements. This is done with the objective of obtaining the intercept alpha and the standardized coefficient beta.

In order to obtain the predicted or estimated returns for each day of the event period from day -20 to day + 20, the risk-adjusted market model was employed:

$$\text{Estimated Return} = \alpha + \text{Beta} (R_m)$$

Where: R_m is the return on the market given by NSE 20 share index and $E(R)$ is the estimated return.

The Abnormal return (AR) or Excess Return was computed:

$$\text{Abnormal Return} = \text{the Actual Return} (R) - \text{Estimated Return} E(R)$$

Average Abnormal Returns (AAR) was calculated for each day from -20 to +20 by averaging the excess returns as follows:

$$\text{Average Abnormal Return (AAR)} = \text{Total Abnormal Return} / n$$

Where n = number of firms in sample

Cumulative Average Abnormal Return (CAAR) for the event period (Day -20 to Day +20) was computed as the sum of the AAR.

$$\text{Cumulative Average Abnormal Return (CAAR)} = \sum \text{AAR}$$

Student T-test before event date and Average Abnormal Return (AAR) significance from zero will be used to analyze data collected on daily stock prices. The method used for calculating the expected returns is the Capital Asset Pricing Model (CAPM).

3.3 Population, sample and Sampling method

During the study period of year 2000 to 2013 there were 56 listed companies the very actively traded being listed under the main investment market (MIM) while those affected by the problem of thin trading being listed under the alternative investment market (AIM). Only a sample of 20 that had issued profit warning during the study period from year 2000 to 2013 was studied. A purposeful and judgmental sampling method was employed for the study. The data used in this research is mainly share price data and market indexes sourced from their database and their official handbooks

4.0 EMPIRICAL RESULTS AND DISCUSSION

4.1 Statistical Measures

The stock returns are not normally distributed but follow Paretian or student t- distributions occasionally. This was the reason why some tests of normality were done for the abnormal returns and they revealed the results as per table 4.1 of skewness test result of -0.23524, and kurtosis test result of -0.39828. It can further be observed that over the entire 40-day event window, the mean return was -2.84% and the median return was -2.77%. It can also be observed that the average returns were negatively skewed and the distribution of the AAR was platykurtic. Most of the returns in the event window were in the range of -2.9829504% and -2.0857985, which is also where the median lies. These results are shown in table 2.

Table 2: Statistical Measure of AAR

Statistical measure	Value
Skewness	-0.23524
Mean	-2.84%
Median	-2.77%
Kurtosis	-0.39828
Mode	-2.9829504 to -2.0857985
Observations	40

4.2 Hypothesis Testing

Table 3 presents the results of the stock price response to profit warning announcement in NSE for the event window (a 40-day event window). As can be seen, average abnormal returns for each of the 40 event days were negative. All the results were statistically significant at the 5% level of significance;

Table 3 also presents the cumulative average abnormal return results for the entire 40-day event window. Interestingly, the results of only days $t-20$ (-0.70887) and $t-19$ (-1.30372) were not statistically significant. Day $t-18$ was statistically significant at 10% while days $t-17$ were statistically significant at 5% confidence interval, $t-16$ up to $t+20$ were statistically significant at 1% confidence interval. It can also be noted that the sample showed an average cumulative loss of 113.1089% during the entire event period.

Table 3: Stock Performance Reaction to Profit Warning Announcement in NSE

EVENT DAY	AAR	AAR t statistics (2 tailed)	CAAR	CAAR t statistics (2 tailed)	S.D
DAY -20	-3.2134582	-0.8278	-3.2134582%	-0.70887	3.98751
DAY -19	-2.7699394	-0.61695**	-5.9833976%	-1.30372	4.48975
DAY -18	-2.7537682	-0.67229**	-8.7371658%	-1.8951*	4.0961
DAY -17	-2.6902147	-0.55866**	-11.427381%	-2.47284**	4.81551
DAY -16	-3.3906625	-0.67579**	-14.818043%	-3.20099***	5.01736
DAY -15	-4.0694676	-0.75331**	-18.887511%	-4.07492***	5.40211
DAY -14	-1.6960245	-0.44812***	-20.583535%	-4.43915***	3.78478
DAY -13	-2.6443197	-0.65058**	-23.227855%	-5.00703***	4.06457
DAY -12	-2.0857985	-0.45621***	-25.313653%	-5.45496***	4.57197
DAY -11	-1.7792532	-0.3788**	-27.092907%	-5.83706***	4.69713
DAY -10	-2.5008683	-0.55374**	-29.593775%	-6.37413***	4.5163
DAY -9	-2.3171745	-0.62983**	-31.910949%	-6.87175***	3.67903
DAY -8	-2.4388784	-0.54534**	-34.349828%	-7.39551***	4.47226
DAY -7	-3.5359716	-0.66297**	-37.885799%	-8.15487***	5.33351
DAY -6	-2.7931973	-0.66335**	-40.678997%	-8.75471***	4.21073
DAY -5	-2.9325043	-0.59813**	-43.611501%	-9.38448***	4.9028
DAY -4	-2.9829504	-0.62224**	-46.594451%	-10.0251***	4.79389
DAY -3	-3.0657311	-0.61674**	-49.660182%	-10.6835***	4.97085
DAY -2	-2.2154287	-0.49123**	-51.875611%	-11.1592***	4.51
DAY -1	-3.7663197	-0.89929**	-55.641931%	-11.9681***	4.18809
DAY 0	-4.0285854	-0.83449**	-59.670516%	-12.8332***	4.82759
DAY 1	-4.9194786	-0.59354**	-64.589995%	-13.8897***	8.28833
DAY 2	-3.1153328	-0.58611**	-67.705328%	-14.5587***	5.31529
DAY 3	-1.3688275	-0.33725**	-69.074155%	-14.8527***	4.0588
DAY 4	-1.2665185	-0.36404**	-70.340674%	-15.1247***	3.47904
DAY 5	-1.5293477	-0.30355**	-71.870021%	-15.4531***	5.03818
DAY 6	-3.0435272	-0.65274**	-74.913549%	-16.1067***	4.6627
DAY 7	-3.1713455	-0.77278**	-78.084894%	-16.7878***	4.1038
DAY 8	-2.3168718	-0.65049**	-80.401766%	-17.2853***	3.56172
DAY 9	-2.8084275	-0.6871**	-83.210193%	-17.8884***	4.08738
DAY 10	-3.239574	-0.57444**	-86.449767%	-18.5841***	5.63952
DAY 11	-1.7385571	-0.49433**	-88.188325%	-18.9575***	3.517
DAY 12	-2.957714	-0.67472**	-91.146039%	-19.5927***	4.38363
DAY 13	-2.9432024	-0.76186**	-94.089241%	-20.2247***	3.86318
DAY 14	-2.551796	-0.51641**	-96.641037%	-20.7727***	4.9414
DAY 15	-3.193062	-0.69446**	-99.834099%	-21.4585***	4.59789
DAY 16	-2.0859382	-0.42659**	-101.92004%	-21.9064***	4.88978
DAY 17	-2.4484307	-0.55527**	-104.36847%	-22.4322***	4.40944
DAY 18	-2.7378718	-0.67007**	-107.10634%	-23.0202***	4.08596
DAY 19	-3.3172699	-0.55419**	-110.42361%	-23.7326***	5.98581
DAY 20	-2.6852926	-0.45242**	-113.1089%	-24.3093***	5.93538

4.2.1 Investigate whether profit warnings generate negative abnormal returns in the Nairobi Securities Exchange

Table 3 indicates that under Market adjusted model Average abnormal returns (AARs) are statistically significant at 5% level. The average abnormal returns were plotted on Figure 1 based on the average abnormal returns expressed in percentage against the event period days. From a general point of view, the results indicate that the abnormal returns were fluctuating mainly away from zero. During the event announcement date, the returns deviate furthest away from zero. All the rest of the days during the event period exhibited negative average abnormal returns away from zero.

The AAR curve generally appears to be lowest just after the profit warning announcement date than during the event period perhaps an indicator that the warning announcement was negative news hence the low negative abnormal returns. However, when the announcement was made public, there was encouragement as the majority of the firms announced that they were still in a position to pay dividends an indication that led to the rise in abnormal returns and adjustment after day zero and rise of abnormal return rates with its peak at days 3, 4 and 5 as displayed in Figure 1.

More over one of the reasons for negative abnormal returns incidence in the period just prior to the announcement day can be that firms have to inform the stock exchanges in advance about the agenda of the board meeting before the formal announcement of events such as profit warnings, dividend declaration, bonus issue, stock splits. Therefore, information about profit warning announcement is officially disclosed only after the formal board meeting, while information, about the agenda of profit warning announcement comes to the market prior to the meeting itself. This also triggers some speculative activity in the market during the period of board communicating its agenda to the stock exchanges and the time when they make formal communication about the profit warning announcement after the board meeting is over.

This confirms to the fact that investors initially under react due to information leakage. This tendency subsides around the announcement time and rebounds in the post announcement period in form of over expectation regarding corporate performance. The analysis shows that there are negative abnormal returns. This implies that stock prices tend to perform negatively before the profit warning announcements. The null hypothesis; "the Average Abnormal Return (AAR) relating to profit warnings announcement are not significantly different from zero" is thus rejected

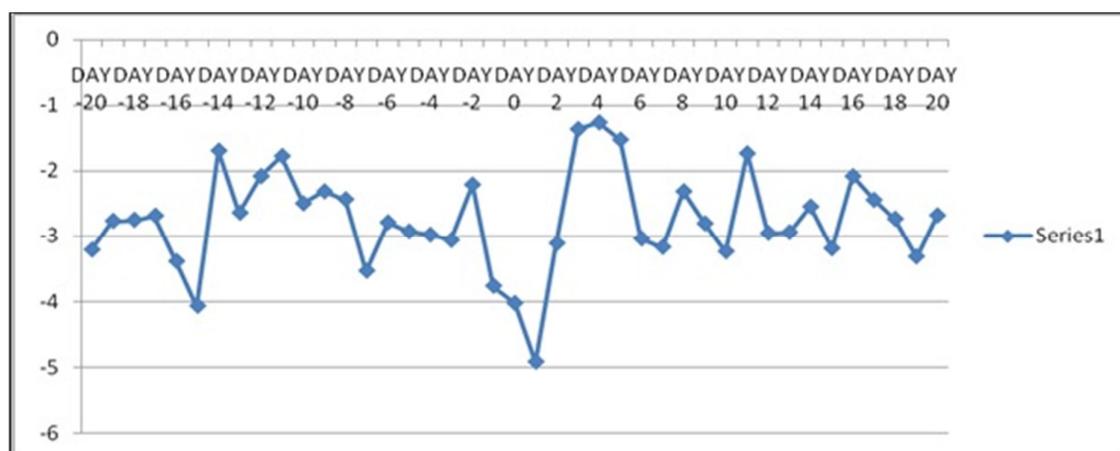


Figure 1: Stock performance reaction to Profit warning announcement in NSE (AAR) curve

The Figure 1 shows negative abnormal returns are generated prior to profit warning announcement day as well as after the profit warning announcements. Following the results of Market adjusted model it can be concluded that profit warning announcements do cause negative abnormal returns in the Nairobi Securities Exchange. The findings can be validated on account of statistical significance of AARs. Markets deemed to be efficient would be one where all information contained in a shock is incorporated immediately in equity prices and no return reversal is observed on the day following the particular event

4.2.2 Establish the existence of anticipated returns attributed to profit warning announcement

Graphically the results of cumulative average abnormal returns as shown in Figure 2 revealed that there was decreased market activity in the form of decreasing CAAR significantly from day -20 before the warning announcement date which decreased throughout the entire event period.

The decline in return prior to the announcement signifies presence of anticipated return. T-test significance of AAR before the event day as presented in Table 5 reveals that AAR is significantly different (negative) from zero. This implies that the profit warning event deemed to have been anticipated.

Table 4: Statistical Significance of Anticipated Returns

Event days	AAR	AAR t-statistics (2 tailed)
DAY -5	-2.9325043	-0.59813**
DAY -4	-2.9829504	-0.62224**
DAY -3	-3.0657311	-0.61674**
DAY -2	-2.2154287	-0.49123**
DAY -1	-3.7663197	-0.89929**
DAY 0	-4.0285854	-0.83449**
DAY 1	-4.9194786	-0.59354**
DAY 2	-3.1153328	-0.58611**
DAY 3	-1.3688275	-0.33725**
DAY 4	-1.2665185	-0.36404**
DAY 5	-1.5293477	-0.30355**

Key: **, denote statistical significance at the 5% levels (two-tailed test)

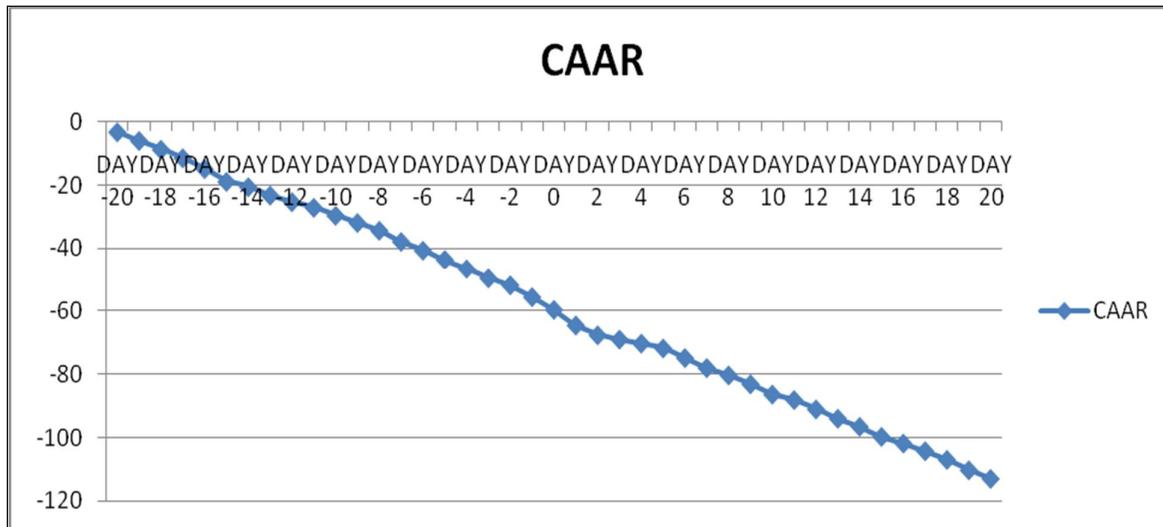


Figure 2: Stock performance reaction to Profit warning announcement in NSE (CAAR) curve

Figure 2 the decline in return prior to the announcement signifies presence of anticipated return. Graphically the results of cumulative average abnormal returns as shown in figure 2 revealed that there was decreased market activity in the form of decreasing CAAR significantly from day -20 before the warning announcement date which decreased throughout the entire event period. Consequently, the null hypothesis; “Average Abnormal Return relating to profit warnings announcement do not significantly display anticipated returns behavior” is rejected

4.2.3 Identify the existence of earnings surprises due to profit warning announcement

The researcher primarily attempts to measure the surprise in the announced earnings number. This surprise is the difference between the realized earnings and an estimate of the investors’ expectation of earnings, either from a time series model of earnings or from analyst forecasts. After standardizing this surprise by a measure of earnings uncertainty, this measure is typically referred to as Standardized Unexpected Earnings (SUE). The Standardized Unexpected Earnings for a firm in a given quarter is constructed by dividing the earnings surprise by the standard deviation of earnings surprises

$$SUE = \frac{X_{iq} - E(X_{iq})}{\Omega_{iq}}$$

Ω_{iq}

Where X_{iq} - is the average of the actual earnings number for firm i

$E(X_{iq})$ - Actual earnings number

Ω_{iq} - Standard deviation of earnings surprises

Table 5: Standardized Unexpected Earnings data T-test statistics

	AAR	SUE		CAAR	SUE	T-test statistics 2 tailed
DAY 1	-4.91948	1.757051036	DAY 1	-64.59	-1.663480445	1***
DAY 2	-3.11533	0.478617027	DAY 2	-67.7053	-0.407483043	0.259470354730477**
DAY 3	-1.36883	-0.758972347	DAY 3	-69.0742	0.144382185	0.0393915042208142***
DAY 4	-1.26652	-0.831469435	DAY 4	-70.3407	0.65499986	0.0800744860476023**
DAY 5	-1.52935	-0.645226281	DAY 5	-71.87	1.271581436	0.5**
	AVERAGE	-2.439901023		AVERAGE	-68.71603448	
	Std. Dev.	1.411215437		Std. Dev.	2.480365608	

Key: *, **, and * denote statistical significance at the 10%, 5% and 1% levels (two-tailed test) respectively for the 5-day event period**

Table 5 presents the post announcement average abnormal stock returns and the cumulative average abnormal returns data over five days sorted for SUE. SUE is the earnings surprise measure computed as the seasonally average of the actual earnings scaled by the standard deviation of the Actual earnings

SUE analysis reveals statistical significance at the 5% and 1% levels. The price drift on the 2nd day of profit warning announcement signifies existence of earnings surprises. This drift constitutes a violation of Efficient Market Hypothesis, whereby if the market is deemed efficient all information contained in a shock should be incorporated in equity prices in a quick and unbiased manner. T-test results presented in table 5 on the 2nd day of profit warning announcement in particular revealed that CAAR t-test results were significant at the 1% level of significance. This leads to the rejection of the null hypothesis; “Average Abnormal Return relating to profit warning announcement do not significantly display earnings surprises”.

4.3 Results of t-test

Table 6: One Sample Student T-Test Results for AAR & CAAR

ONE-SAMPLE T-TEST :Average Abnormal Returns						
Test Value= 0						
	t	df	Sig.(2-tailed)	Mean Difference	95%ConfidenceIntervalofthe Difference	
					Lower	Upper
AAR	8.501	40	.000	.29353	.1903	.4.008
CAAR	12.119	40	.000	.632	.611	.689

The results of t-test of average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) revealed a p-value of 0.000 at 95% confidence interval. This is displayed in table 6. Since the p-value dictates statistical significance, it follows that null hypothesis of the average abnormal returns being statistically equal to zero should be rejected, as argued earlier in the section.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

5.1.1 Investigate whether profit warnings generate negative abnormal returns in the Nairobi Securities Exchange

It has been proved in this study that the null hypothesis is invalid. Therefore, in line with the findings, the null hypothesis is rejected in favor of the alternate hypothesis. Empirical evidence demonstrates that there is substantial negative share price reaction to profit warning announcement on the Nairobi Securities Exchange. It was also observed that 40-day event period led to significant cumulative loss of 113.1089%. A market is said to be efficient if the share prices fully and instantaneously reflects all the available information. One implication of an efficient market is that no abnormal returns can be gained by trading on this information because current prices already reflect the information (Adelegan, 2009).

The results show that the average abnormal returns and cumulative average abnormal returns for Nairobi Securities Exchange are negative and significant. The significant CAARs suggest that earnings announcement provide valuable information which the market uses to adjust share prices. The findings of inefficiency of the NSE from observing the significant and negative returns on the period prior and after announcement and thereafter post earnings announcement drift may be attributed to lack of massive capital investments, and lack of an attempt to bring this market to being internationally competitive and create modern electronic infrastructures for trading. The results are in line also with the study by (Sponholtz, 2005) of the Danish stock market, with evidence suggesting that there are significant abnormal price reactions surrounding the announcement date.

The results suggest that the share price reactions to profit warning announcements are systematic and are inconsistent with the efficient market hypothesis (EMH), as there are continual observations of significant abnormal returns thereafter. Negative abnormal returns are generated prior to profit warning announcement day as well as after the profit warning announcements. Following the results of Market adjusted model it can be concluded that profit warning announcements do cause negative abnormal returns in the Nairobi Securities Exchange. The findings can be validated on account of statistical significance of AARs. The study concludes that, it was proved that profit warning announcement result in negative share price reaction, and subsequently, share market erosion.

5.1.2 Establish the existence of anticipated returns attributed to profit warning announcement

One thing that influence stock returns is the leakages of information, which occurs when information regarding profit warning announcements is known to a small group of investors before the same is officially announced. In such a case, the stock price might start to decrease in case of a “bad news” announcement days before the official announcement date implying that the upcoming event of a profit warning announcement is anticipated by the market. Any abnormal return on the announcement date is then a poor indicator of the total impact of the information release. The cumulative abnormal returns thus capture the firm specific stock movement for an entire period when the market might be responding to new information. A higher negative incidence of cumulative abnormal returns in post event period reflects over expectation and irrational reaction to the new information disclosure concerning profit warning announcement

Graphically the results of cumulative average abnormal returns revealed that there was decreased market activity in the form of decreasing CAAR significantly from day -20 before the warning announcement date which decreased throughout the entire event period. The continued decrease in CAAR after the profit warning announcement date indicated that the investors appeared to receive the profit warning announcement information as an eye opener to minimize investing in the companies for fear of future loss from their investment which is consistent with the signaling hypothesis (Copeland, 2005).

In this study, the researcher investigates the effects on information processing when news is publicly released. The theoretical predictions regarding information processing are conditioned on whether the timing of the news release is known ex ante. Liquidity and volume decreases before the event and price volatility decline after the announcement. This reaction is consistent with a transition period during which information is impounded into prices and portfolios are rebalanced. After the transition period, market conditions return to normal, which is generally consistent with the traditional asymmetric information models.

The study has indicated that the information content of profit warning announcements is quite anticipated. No price recovery was observed in this study. It can therefore be argued that market efficiency, at least in its strong form, is not observed in the Nairobi Securities Exchange. The Nairobi Securities Exchange thus shows the weak form of market efficiency and stock prices tend to drift down ward after the negative earnings announcement

5.1.3 Identify the existence of earnings surprises due to profit warning announcement

The results show that an earnings surprise is significantly correlated with a decrease in volatility in the trading period immediately following the earnings announcement, and there is bias indicating which directions prices will go. With “surprise”, the announcement tends to be followed by this decrease in volatility. The findings suggest the importance of earnings on equity price valuation. SUE analysis reveals statistical significance at the 5% and 1% levels. The price drift on the 2nd day of profit warning announcement signifies existence of earnings surprises. This is an indication of investors’ apparent inability to fully process the time-series properties of earnings which is a plausible explanation for the drift. That is, investors fail to fully recognize the serial correlation in quarterly earnings shocks, and, as such, systematically misestimate future expected earnings.

Consequently, when subsequent quarterly earnings are announced, stock prices respond to a component of the earnings that is a surprise even though it should have been predictable based on the past time series of earnings. This drift constitutes a violation of Efficient Market Hypothesis, whereby if the market is deemed efficient all information contained in a shock should be incorporated in equity prices in a quick and unbiased manner. T-test results on the 2nd day of profit warning announcement in particular revealed that CAAR t-test results were significant at the 1% level of significance. The results also show there was post earnings announcement drift observed in NSE, therefore the market was not able to adjust instantaneously without bias to earnings announcements by sample firms in the study. There by implying that profitable trading opportunities created by post earnings announcement drift can be exploited which contradicts with EMH.

There is also an anomaly regarding the semi strong form efficiency status of the Nairobi Securities Exchange and it is possible for investors to exploit this anomaly by avoiding stocks that have a negative earnings surprise due to the momentum that is expected. These study findings coincide with those of (Louhichi, 2008), (Lakhal, 2008) and (Gajewski & Quere, 2001), in that earnings announcement of bad news gave rise to negative share price reaction.

5.2 Implications and Recommendations

The following are the recommendations based on this study;

This study suggests that there is a weak form of capital market efficiency, as supported by the significant negative abnormal returns after the announcements. The findings are useful to researchers, practitioners and investors with an interest in the strategic decision-making of firms listed on the NSE. It is observed that once returns are on a down-slide, they do not seem to recover quickly, and invested capital can be eroded. It is recommended that the study be conducted again with an extended event period and that other asset pricing models also be applied.

The researcher recommends that firms that operating or considering operating in the Nairobi securities exchange, to be aware that a profit warning has a significant impact on the stock returns in this capital market, especially during the period prior to and after the actual announcement. The study finds evidence of inefficient adjustment of stock prices to information contained in profit warning announcement for the sample of firms in the study as prices continued to drift days after the announcement date.

The researcher recommends that the regulatory authorities should intensify efforts to ensure compliance to insider trading laws by market participants. The authorities need to strengthen their capacity to effectively monitor activities in the market, and to effectively deal with offenders. The researcher found out that liquidity deteriorates before and after anticipated announcements. The study identifies both timing and content effects, and the results generally imply that news announcements reduce information asymmetry. Before the anticipated event, there is evidence consistent with the existence of informed trading that is recognized and addressed by the market maker. A result worth highlighting is the finding that information processing in financial markets is affected by whether the timing of a news release is known in advance.

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