Stock Price and Volumes Reaction to Annual Earnings Announcement: A Case of the Nairobi Securities Exchange

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Abstract

Modern corporate organizations listed in the security markets periodically communicate their financial performance to stakeholders through earnings announcements. Efficient markets immediately absorb and reflect the new information into the share prices. This paper examines the effect of annual earnings announcement at the Nairobi Securities Exchange (NSE) by analyzing changes in share prices and trading volumes for the period from 2006 to 2010. Abnormal returns during the event window of 91 days were determined using the event study methodology employing the market model on data from 5 listed companies. Further, the volume reactions were examined by use of the trading activity ratio (TAR). Inferential and descriptive statistics were used to test for significant effect on TAR and price changes. The results obtained indicate that the abnormal returns and TAR were not significant at 5% probability level. Thus the NSE is of semi-strong efficiency, whereby it is not possible to earn abnormal returns in the NSE using the publicly available information.

Key Words: Event, Event window, illiquidity, Market efficiency, Securities exchange, thin trading

1.0. Introduction

The value-relevance of earnings announcements has been an important topic in financial accounting over the last four decades (Booth, Kallunki, Sahlstro, & Tyynela, 2011). Financial statements act as tools of communication on a firms' performance especially during the period under review. Publicly quoted companies are obliged to publish their audited financial statement at the end of every financial year (CMA, 2011). A Firm's performance is of great importance to investors since it has a direct impact on returns to investment. It is therefore expected that upon release of financial reports, an efficient market should immediately absorb the information and adjust the stock prices accordingly.

A number of empirical researches have been carried out on the impact of accounting information on share prices (Afego, 2011). Some have sought to establish the value of the information in forecasting future financial performance while others have attempted to measure its impact on share prices (Booth *et al,* 2011; Ball & Brown, 1968).

Although very crucial the bulk of these studies have been carried out in developed markets such as the United States of America and the UK. The present study investigated the reaction of Kenyan stock market to annual earnings announcement.

1.0 Market Response to Earnings Announcements

There is a general consensus that common stock prices and volumes traded react to information contained in accounting based earning disclosures (Arriff, Loh, & Chew, 1997; Beaver, 1968). Similarly, Morse (1981) reported a significant change in trading volumes and prices the day before the event, extending up to the third day after the announcement for volume and the second day for price fluctuations. The British share prices were also found to be significantly affected by financial disclosures (Clubb, 1995). The announcements of accounting and financial results are very useful because they do not only give information on the firm itself but they also give indications of performance of similar companies. This is often achieved by analyzing financial returns from closely competing firms to guide in forecasting the forthcoming results of a company.

The interpretation of the evidence that annual earnings announcements initiate a strong share market response has been questioned (Bamber, Christensen, & Gaver, 2000). He further asserts that most earnings announcements are not associated with unusual share price reactions. This is because annual financial disclosures are largely pre-empted by more timely sources of information such as the interim accounts, business news about a specific firm and financial results of closely competing firms thus the release of annual earnings has very little or no impact on share prices of the firm (Ball and Brown 1968).

Some researchers argue that stock prices at the time of the announcement follow the direction and magnitude of the unexpected portion of the earnings disclosed in annual and interim financial reports (Ball, 1992). This effect on stock prices continues even after the announcement is made (Ball, 1992). The latter phenomenon is referred to as the "post-announcement drift" and was first formally documented by Ball and Brown in (1968) and Jones and Litzenberger in (1970). The presence of the drift has been attributed to several reasons. First, it is caused by investors under-reacting to news and second, the news induce an unobservable transitory risk factor that then influence the price and finally, the drift is merely a byproduct of a particular research design. The evidence that has been produced thus tends to support the under-reaction story (Bernard and Thomas, 1990; Chan *et al*., 1996). This is further supported by Fama (1998) who states that the drift is the "granddaddy of all under reaction events". The presence of the drift should be eliminated by the arbitrage process. (Jacob, Lys, & Sabino, 2000). This is however prevented from happening due to the presence of arbitrage risks (Mendenhall, 2005).

Under-reaction and the accompanying drift are not limited to earnings announcements. For example, under-reaction has been found to be associated with stock splits (Desai and Jain, 1997), seasoned equity offerings (Kadiyala and Rau, 2004), analyst recommendations (Womack, 1996), and tender offer and open market re-purchases (Ikenberry, Lakonishok, & Vermaelen, 1995). This is attributed to the fact that these types of news events require significant information processing by investors.

1.1 Market Efficiency

Recent evidence suggests that stock markets give a big boost to economic development through creation of liquidity (Levine, 1996). Most profitable investments require long-term commitment of capital, yet investors are often reluctant to commit their savings for long periods. Liquid equity markets make investment less risky thus making them more attractive because they allow savers to acquire an asset or equity and dispose it quickly and cheaply in order to access savings or alter their portfolios. Conversely, companies enjoy permanent access to capital raised through equity issues. Liquid markets boost long-term economic growth through improved capital allocation to long-term and profitable investments. In an efficient market, security prices reflect in totality all publicly available information thus eliminating any opportunity to make excess profits from available information because it is already captured in the market prices (Fox and Opong, 1999; Fama, 1970). EMH assumes that investors are out to maximize their utility, that agents have rational expectations, and that whenever new relevant information appears, the agents update their expectations appropriately. There are three forms of efficiency namely; the weak, semi-strong and the strong form. In the weak form of efficiency, future returns cannot be predicted from past returns or any other market-based indicator because the securities reflect all the past information regarding price movement making it impossible for an investor to use the same information to earn abnormal returns, (Pandey, 2005).

There are two ways of testing this form of efficiency, namely the tests of independence also known as the random walk method and trading rules test. In the semi-strong form of efficiency the security prices reflect all publicly available information including the data in weak form. In the semi-strong form of efficiency high level of fundamental analysis is required for the prices to fully reflect all publicly available information, Fama (1970). There are three models of calculating abnormal returns namely: the market model, the mean adjusted returns model, and the market adjusted returns model. Of the three, the market model, which is based on the capital asset pricing model-CAPM (Markowitz, 1952; Sharpe, 1964), is the best specified model since it controls for the both systematic and the unsystematic risk of the stock. The strong form of efficiency is the highest level of market efficiency whereby security prices reflect all public and private information both published and the unpublished. Efficient markets attract more investors translating into increased market liquidity (Osei, 1998).

3.0. Methodology

The Nairobi Stock Exchange (NSE) was constituted in 1954 and is a member of the African Stock Exchanges Association. Before independence in 1963, it had only 10 listed companies, a number that rapidly rose after independence, the 1970s saw 20 more companies listed while 5 new companies were listed in the 1980s, a number that doubled in the 1990s (Mala & White, 2006). The NSE is the principal stock exchange of Kenya and had 58 listed companies as at February 2012. It is the fourth largest stock exchange in Africa in terms of trading volumes, and fifth in terms of market capitalization as a percentage of the Gross Domestic Product (GDP) (www.kenya-advisor.com/nairobi-stock-exchange.html). It has successfully facilitated the privatization of some government owned corporations. One of the most successful privatization was that of Kenya Airways in 1996 which earned the privatization team the World Bank Award of Excellence for being a model success story in the divestiture of state-owned enterprises, (www.nse.co.ke).

Research Design and Sampling Procedures

The research was carried out as an event study. The event study starts with the hypothesis on how a particular event affects the value of a firm (Serra, 2002). Abnormal returns are calculated around the event date using the market model and used to determine the level of the market's efficiency. The concept of abnormal returns coupled with the notion that information is readily impounded into security prices is the central key of event study methods (Serra, 2002). The purpose of the study was to evaluate the market reaction to annual earnings announcements by companies listed at the NSE from 2006 to 2010. In the present study, the daily closing stock prices were analyzed to measure the impact of earnings announcements on stock prices.

Data on public announcement of annual earnings by the 58 listed companies was collected from the NSE daily trading information. To eliminate the non trading phenomenon which arises when some securities do not trade on a daily basis giving rise to zero returns, only companies that had been listed and actively trading throughout the study period were selected. Further, all companies whose event date could not be obtained were eliminated from the study. To eliminate the problem of confounding effects, all companies that had a major event during the event window were eliminated from the study. Confounding effects occurs when multiple noteworthy events occur on the same announcement dates making it impossible to determine the event that caused the after announcement stock price (Mc Williams *et al*, 1997). The earnings announcement dates and major events were identified by carefully studying the NSE hand book, the NSE daily trading information and the companies' newsletters. Since most companies announce their earnings and dividends during the same period, only companies with positive correlation between dividend announcement and earnings announcement were selected. This assisted in neutralizing the effects of dividend announcements. This criterion gave a sample of 5 companies for the five years translating to 25 annual earnings announcements.

3.1. Data Collection and Analysis

The study used secondary data from the NSE relating to annual earnings announcements, daily share prices, daily traded volumes and NSE 20 share index covering all the days in the event window for the period from 2006 to 2010. The study sample was arrived at as follows. 20 companies out of the 58 listed companies had other major events during the event window and were therefore eliminated from the study. Of the remaining companies, 27 companies had one or more of the annual earnings announcement dates during the period under study missing while one company had been suspended from trading at the NSE during the same period. This narrowed down the sample to 11 companies whose annual announcement dates were available for the 5 years under study.

Since most companies make annual earnings announcement along with dividend announcement only companies whose dividend and earnings had a positive correlation were selected, this was aimed at eliminating the effects of the dividends announcement. 2 companies did not have a positive correlation between earnings and dividends announced and were therefore eliminated. A negative correlation between earnings per share (EPS) and dividend per share (DPS) indicates that the earnings and dividends distributed did not move in the same direction thus an increase in earnings led to a decrease in dividends distributed to shareholders. Further 2 companies were eliminated since their shares were illiquid due to thin trading and this reduced the companies to six. Out of the remaining six companies, one company did not have trading data relating to year 2005 which was necessary for calculating the market model's constants. Thus it was eliminated leaving only five companies which met the criteria for inclusion in the sample.

The market model was used to calculate the daily abnormal returns. The constants in the model were calculated over an estimation period of one calendar year prior to the event window.

The study considered an event window of 91 days focusing on 45 days before the event (t =-45) and 45 days after the event date (t = 45) with the event day represent by t = 0. The 91 days period was considered to be sufficient for the estimation of the abnormal return of the model with good level of accuracy based on previous studies that carried out research on a similar period. For instance, Aduda & Chemarum (2010) studied the daily adjusted stock prices for an event period of 101 days, while Savitri and Martani, (2008) made use of daily adjusted stock prices 105 trading days and Dhar and Chhaochharia, (2008) used 81 days. The event was the earnings announcement while the event date was the date of announcement and the event window included the event date. The period around the event date was used to aggregate abnormal returns on the individual stock.

The abnormal return data was analysed by Statistical Package for Social Sciences (SPSS) version 17.0. Data was analysed by descriptive and inferential statistics and significance tested by T-test. The level of significance was set at 5%.

The trading activity ratio (TAR) was used to test the volume changes during the event window. It is calculated as follows

$$TAR = \frac{Number\ of\ shares\ traded}{Number\ of\ tradable\ shares\ issued} \quad \text{.....Equation 1}$$

To test for efficiency, the market model was used to calculate abnormal returns around the event date. It hypothesizes a linear relation between stock returns and market returns:

$$R_{jt} = \alpha_j + \beta_j Rm_t + \varepsilon_{jt} \quad \text{.....Equation 2}$$

Where;

R_{jt} = the actual daily return on security j at day t

Rm_t = the daily market return at the NSE on day t

α_j = ordinary least squares intercept; the average rate of return of stock when the market return is neutral which can be expressed as $E(R_j) - \beta E(Rm_t)$

β_j = stock sensitivity to market return $\frac{Cov\ R_{jt}, Rm_t}{Var\ Rm_t}$ (The slope coefficient)

ε_{jt} = the error term for security j at day t

$Var\ \varepsilon_{jt} = \sigma^2$

The test of significance of abnormal return was done using the hypothesis

H_0: $AR_{jt} = 0$

H_1: $AR_{jt} \neq 0$

The normal return is the expected return without conditioning on the event taking place. For firm j and event date t, the abnormal return was calculated as;

$$AR_{jt} = R_{jt} - E(R_{jt}) \quad \text{Equation 3}$$

Where; AR_{jt}, R_{jt} and $E(R_{jt})$ are the abnormal, actual and expected returns for the duration of study.

The NSE 20 share Index was used as a proxy for computing market return. To avoid the influence of extreme values, the logarithm of the daily market return was used.
The market return was computed as,

$$\mathrm{Rm_t} = Log \frac{I_t}{I_{t-1}} \quad \text{Equation 4}$$

Where; I_t = is the 20 share index on day t
I_{t-1} = is the 20 share index on day t-1

The daily return for security j was calculated by the equation:

$$R_{jt} = Log\left(\frac{R_t}{R_{t-1}}\right) \quad \text{Equation 5}$$

Where; R_t = is the stock price on day t
R_{t-1} = is the daily stock price on day t-1

The α_j and β_j were calculated for each share in the sample by regressing the share's daily log-function share price return against the daily market returns over one year prior to the event window.

The expected returns for security j at day t was defined as

$$ER_{jt} = \alpha_j + \beta_j Rm_t \quad \text{Equation 6}$$

The abnormal returns were summed and averaged cross-sectionally for each day t as follows:

$$AAR_t = \frac{\sum ARjt}{N} \quad \text{Equation 7}$$

Where;
N = Number of earnings announcements in the sample at day t
AR_{jt} = Abnormal return for security j at day t

The calculated abnormal returns were aggregated to draw an overall conclusion on the earnings announcement event. To accommodate a multiple period event window, the study made use of the Cumulative Average Abnormal Return (CAAR). The cumulative average abnormal returns ($CAAR_t$) for all firms for 91days were then calculated as the sum of the abnormal returns.

$$CAAR_t = \sum_{\tau=\tau_1}^{t_2} \mathrm{AAR_t} \quad \text{Equation 8}$$

t= -45 to +45

To test for significance of the average abnormal returns Brown & Warner, (1985) procedure was followed. It is formulated as follows;

$$tAAR = \frac{AARt}{\sigma AAR/\sqrt{n}} \quad \text{Equation 9}$$

The statistical significance for the cumulative abnormal returns was calculated as;

$$tCAAR = \frac{CAARt}{\sigma(AAR)\sqrt{d}} \quad \text{Equation 10}$$

Where;

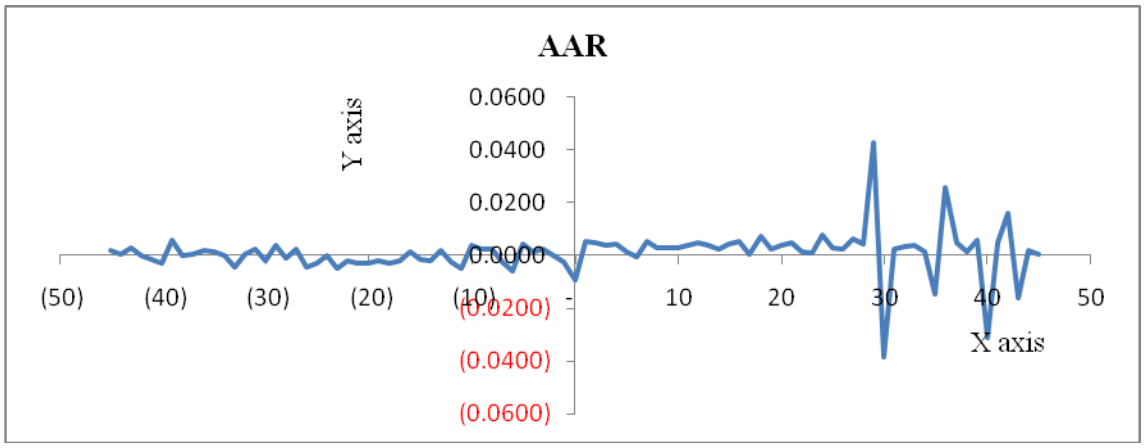
σAAR = the estimated standard deviation
d = is the total number of days that AAR is cumulative and
n = number of earnings announcement in the sample on day t.

4.1. Market Reaction to the Annual Earnings Announcement

This study sought to establish how the NSE responds to annual earnings announcement by testing how the share price and trading volumes respond to the announcement as well as establish the efficiency of the market response to the announcement. This was achieved by analyzing AAR and CAAR during the event window.

4.2.1.The Stock Prices Reaction to Annual Earnings Announcement

The market model was used to calculate the AAR and CAAR during the event window. The markets AAR and CAAR, was obtained by calculating the daily average AAR and CAAR for the 25 observations. To test for significance, the t-statistic for the AAR and CAAR were obtained and compared to the t-table values at 5% level of significance. The calculated AAR was fitted in a time plot to establish the trends (Figure 2)



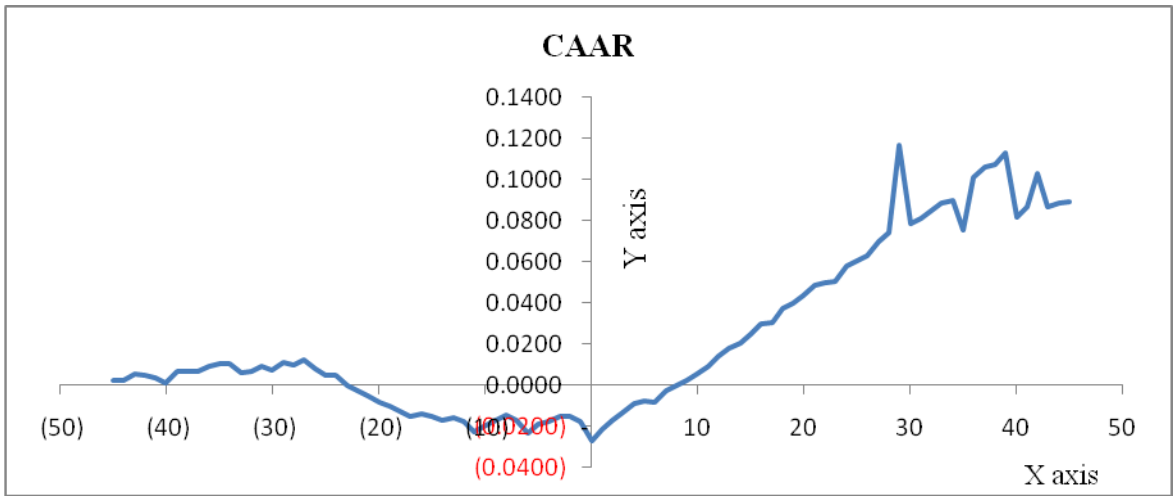
Key: X axis- Event day; Y axis – AAR

Figure 1. Graphical representation of AAR trend over the 91-day event window

The impact of an event is measured by use of abnormal returns at the moment the information is introduced into the market. The abnormal returns for each firm are calculated during the event window and statistical significance is used to determine the impact of the newly released information (Bodie *et al*, 2008). Most of the AAR before the event date were negative while the AAR after the event date was positive (Figure 2). It was also observed that the AAR before and after the announcement did not vary significantly except for days -39 and 24. There was no significant change in AAR on the days surrounding the earnings announcement except for days -39 and day 24 whose results indicated high positive and significant abnormal returns (P=0.05). On day 29, 36, 42 there were high positive abnormal returns that were however not significant. Surprisingly the high AAR was followed by high negative abnormal returns that were not significant on day 30, 35, 40 and 43. This is probably due to investors disposing shares on days subsequent to the day with high positive AAR so as to cash in on the high abnormal returns which would cause the AAR to drop. Although these results are in contrast with Afego (2011), who found significant AAR during the event window, they are in agreement with Das, Pattanayak & Pathak (2008), who found insignificant abnormal returns around the event irrespective of the quality of announcement. The results of this study suggest that for Kenyan scenario, the information contained in the annul earnings announcement is efficiently absorbed in the stocks prices.

Leakage of information complicates the event studies (Bodie *et al*, 2008). He further clarifies that this happens especially when information concerning a relevant event is released to a small group of investors before official public announcement which causes the stock prices to change prior to the announcement causing any abnormal returns on the event date to be a poor indicator of the total impact of the event. When this happens, cumulative abnormal returns are a better indicator of the impact (Bodie *et al*, 2008).

In accordance with this scenario, we summed the calculated AAR for all the firms during the 91 days event window so as to obtain the CAAR. This was used to draw an overall conclusion on the annual earnings announcement event Figure 3.



Key: X axis- Event day; Y axis – CAAR

Figure 2. Graphical Representation of CAAR for the 91- Day Event Window

It was observed that the CAAR starts declining steadily from day -23 up to day 0 (the event date) Figure 3. This could be attributed to the fact that the AAR earned during this period was mostly negative. However, the CAAR starts rising steadily after the event date up to day 24, probably because most of the AAR after the event day was positive. On day 24 there was a steep rise in abnormal returns which may be attributed to the high and significant positive abnormal return earned on this day.

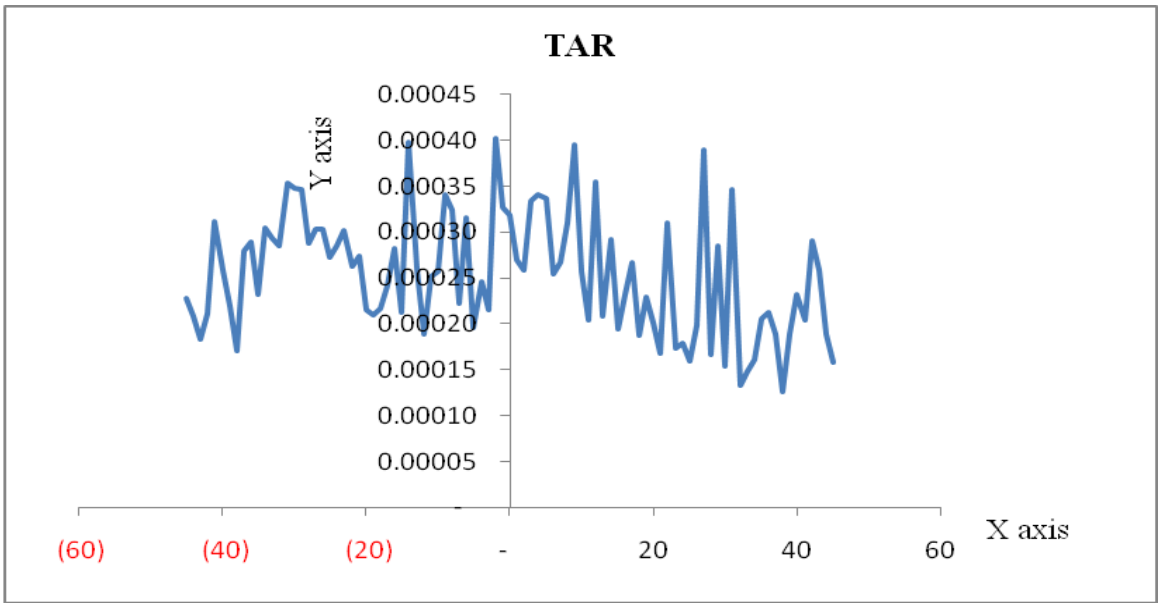
This trend could be interpreted to indicate that on the days before the earnings announcement date, the public anticipated that the announcement will contain some negative information. This is reflected by the decreasing CAAR on the days preceding the announcement. The CAAR however rose steadily after event day up to day 24 which implies that upon the announcement, the suspicions were eliminated leading to an increase in share price as reflected by the positive abnormal returns. We also observed a sharp drop in CAAR on day 45 and 40 due to the high negative abnormal returns that characterizing those days.

These results show that there is an insignificant negative share price reaction to annual earnings announcement from day -23 to day 0. There is however an insignificant share price appreciation from day 0 to day 8 as is presented by the positive but not significant CAAR during that period. These results are contrary to those of Afego, (2011) who found the Nigerian Stock Market to be inefficient around earnings announcement dates.

These results are consistent with those of Das *et al*, (2008) who studied the effect of quarterly earnings announcements on the stock price movement of the firms constituting the BSE-Sensex and found the abnormal returns around the event date to be not significant irrespective of the quality of announcement. Thus the results of this study indicate that investors at the NSE cannot earn abnormal returns around the annual earnings announcement date. This is because the information is already contained in the share prices giving no undue advantage to any investor, indicating that the market is semi-strong efficient in relation to annual earnings announcement.

4.2.2.The Trading Volume Reaction to the Annual Earnings Announcement

The results of Trading Activity Ratio (TAR) presented in Figure 4.



Key: X axis – Observation day, Y axis - TAR

Figure 3. Graphical Representation of TAR for the 91 Days Event Window

The trend in Figure 4 shows indicates no major difference in volumes traded around the earnings announcement date. This suggests that the announcement does not influence the volumes traded around the annual announcement date. This is probably because the information contained in earnings announcements is already contained in the shares around the event date.

The average TAR before the event date was 0.0514 and the standard deviation within that period was 0.01462, the standard deviation was very low indicating that the variability in TAR before the event date was very low. The average TAR after the event date was 0.0508 while the standard deviation was 0.02192 indicating that the variation in the TAR was very little. The t-statistic of -0.146 was less than the p value of 0.884 meaning that the TAR before and after the event date was not significant. Since the difference in the TAR before and after the event date is not significant, it indicates that the annual earnings announcement did not spark a significant change in volumes traded during the event window. These results are contrary to the findings of (Aduda & Chemarum, 2010) who found a significant increase in TAR on the days surrounding the stock split indicating that the NSE was not semi strong efficient.

4.2.3.The NSE Efficiency in Relation to Annual Earnings Announcements

According to the semi-strong form of EMH, stock prices reflect all publicly available information, and trading on the basis of this information should not be profitable (Afego, 2011) This means that trading on information that is already publicly available should not result in significant abnormal gains or losses. From the results of the study it was observed that the calculated AAR and CAAR during the event window were not significant. This implies that investors at the NSE cannot trade with the publicly available information around the annual earnings date to earn significant abnormal returns. Thus the NSE is semi strong efficient in relation to annual earnings announcement. This is contrary to the findings of (Aduda & Chemarum, 2010) who found a positive and significant CAAR on the split date and on days around the stock split

5.1. Conclusions and Recommendations

The study sought to find out how the NSE reacts to annual earnings announcement. This was achieved by determining the share price behavior and volumes traded during the event date to determine if there was any significant change due to the announcement. The results of the study indicate that the AAR, CAAR and the TAR around the event date were not significant. This implies that the information contained in the annual earnings announcement is absorbed efficiently in the share prices eliminating any chances of traders earning abnormal returns around the event date. This is consistent with the EMH which states that upon the event the price reaction to new information must be instantaneous and unbiased leaving no room for investors to earn abnormal returns.

5.2. Recommendations

Based on the findings in this study, the following recommendations are made.

1. A number of stocks at the NSE were found to be illiquid due to thin trading. This is associated with the fact that most investors in the developing markets are poorly-informed. To counter this problem, educational programmes should be implemented especially to the general public in order to increase awareness about stock market activity. This will not only attract an increased number of participants, but it will also boost liquidity (Mlonzi *et al*, 2011)
2. Large institutional and foreign investors should be attracted and encouraged to participate at the NSE. This would be achieved by increasing investor confidence through establishing relevant policies to enhance the efficiency of the stock market. Since Institutional and international investors have a greater capacity to conduct extensive security analyses they will help improve availability of relevant financial information and the overall quality of the information environment of the NSE.
3. Policy makers and regulators at the NSE are encouraged to; Encourage more research on the NSE form of efficiency, this will provide a forum for investors to get the information on the form of efficiency of the market and boost their confidence when investing at the NSE
4. The stock market should also be encouraged to maintain a record of the various event dates in a way that they are easily accessible so as to aid in event studies as opposed to the current way where these are not kept in a summarized form and a researcher has to rummage through so much information to extract the announcement dates.
5. The regulatory authorities should 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. Reduction in unequal access to information not only boosts investor confidence but it also helps improve the competiveness and informational efficiency of emerging stock markets (Mlonzi, Kruger, & Nthoesane, 2011).
6. Further studies should be conducted to establish the nature of the market reaction to good and bad news and interim reports

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Appendix 1: Table Showing the Abnormal Returns and the T-Statistics for the 91 Days Event Window

Observation Day	AAR	STDEV	t-Statistic AAR	CAAR	t-Statistic CAAR
(45)	0.0019	0.0316	0.2955	0.0019	0.0591
(44)	0.0004	0.0091	0.1934	0.0022	0.1720
(43)	0.0028	0.0104	1.3615	0.0051	0.2803
(42)	(0.0001)	0.0119	(0.0614)	0.0049	0.2065
(41)	(0.0015)	0.0076	(0.9595)	0.0035	0.2034
(40)	(0.0028)	0.0119	(1.1824)	0.0006	0.0215
(39)	0.0056	0.0118	2.3852	0.0062	0.2005
(38)	0.0001	0.0115	0.0387	0.0063	0.1940
(37)	0.0005	0.0103	0.2269	0.0068	0.2203
(36)	0.0021	0.0125	0.8282	0.0089	0.2247
(35)	0.0012	0.0118	0.5017	0.0101	0.2574
(34)	(0.0001)	0.0117	(0.0286)	0.0100	0.2460
(33)	(0.0043)	0.0122	(1.7690)	0.0057	0.1292
(32)	0.0007	0.0143	0.2357	0.0063	0.1189
(31)	0.0025	0.0159	0.7807	0.0088	0.1432
(30)	(0.0019)	0.0160	(0.6055)	0.0069	0.1081
(29)	0.0037	0.0161	1.1463	0.0106	0.1594
(28)	(0.0010)	0.0135	(0.3691)	0.0096	0.1672
(27)	0.0023	0.0127	0.8844	0.0119	0.2137
(26)	(0.0042)	0.0125	(1.6929)	0.0076	0.1367
(25)	(0.0030)	0.0175	(0.8556)	0.0046	0.0575
(24)	(0.0003)	0.0144	(0.0955)	0.0044	0.0645
(23)	(0.0050)	0.0121	(2.0492)	(0.0006)	(0.0105)
(22)	(0.0021)	0.0128	(0.8116)	(0.0027)	(0.0428)
(21)	(0.0027)	0.0098	(1.3907)	(0.0054)	(0.1103)
(20)	(0.0029)	0.0128	(1.1446)	(0.0083)	(0.1280)
(19)	(0.0019)	0.0108	(0.8820)	(0.0103)	(0.1828)
(18)	(0.0029)	0.0094	(1.5349)	(0.0131)	(0.2650)
(17)	(0.0021)	0.0143	(0.7357)	(0.0152)	(0.1984)
(16)	0.0013	0.0123	0.5183	(0.0140)	(0.2080)
(15)	(0.0015)	0.0091	(0.8050)	(0.0154)	(0.3051)
(14)	(0.0021)	0.0133	(0.7962)	(0.0175)	(0.2335)
(13)	0.0018	0.0117	0.7780	(0.0157)	(0.2344)
(12)	(0.0024)	0.0085	(1.4020)	(0.0181)	(0.3646)
(11)	(0.0051)	0.0161	(1.5708)	(0.0232)	(0.2432)
(10)	0.0037	0.0117	1.5888	(0.0194)	(0.2767)
(9)	0.0025	0.0173	0.7137	(0.0170)	(0.1611)
(8)	0.0022	0.0107	1.0329	(0.0148)	(0.2245)
(7)	(0.0026)	0.0134	(0.9826)	(0.0174)	(0.2080)
(6)	(0.0060)	0.0152	(1.9613)	(0.0234)	(0.2425)
(5)	0.0044	0.0148	1.4816	(0.0190)	(0.2002)
(4)	0.0014	0.0113	0.6114	(0.0176)	(0.2406)
(3)	0.0024	0.0158	0.7691	(0.0152)	(0.1463)
(2)	(0.0000)	0.0146	(0.0119)	(0.0152)	(0.1571)
(1)	(0.0026)	0.0156	(0.8352)	(0.0178)	(0.1703)
0	(0.0094)	0.0269	(1.7539)	(0.0272)	(0.1494)
1	0.0054	0.0202	1.3336	(0.0219)	(0.1581)
2	0.0046	0.0191	1.2037	(0.0172)	(0.1301)
3	0.0037	0.0200	0.9174	(0.0136)	(0.0969)

4	0.0042	0.0202	1.0427	(0.0094)	(0.0658)
5	0.0016	0.0220	0.3591	(0.0078)	(0.0495)
6	(0.0005)	0.0189	(0.1234)	(0.0083)	(0.0606)
7	0.0053	0.0213	1.2370	(0.0030)	(0.0192)
8	0.0026	0.0217	0.6084	(0.0003)	(0.0021)
9	0.0028	0.0246	0.5648	0.0024	0.0134
10	0.0027	0.0250	0.5364	0.0051	0.0274
11	0.0038	0.0254	0.7465	0.0089	0.0465
12	0.0050	0.0245	1.0143	0.0139	0.0743
13	0.0039	0.0260	0.7441	0.0178	0.0889
14	0.0022	0.0255	0.4396	0.0200	0.1014
15	0.0045	0.0261	0.8659	0.0245	0.1201
16	0.0052	0.0230	1.1358	0.0298	0.1641
17	0.0005	0.0272	0.0873	0.0302	0.1401
18	0.0071	0.0266	1.3306	0.0373	0.1751
19	0.0022	0.0196	0.5502	0.0395	0.2494
20	0.0040	0.0138	1.4416	0.0435	0.3877
21	0.0047	0.0165	1.4410	0.0482	0.3579
22	0.0012	0.0205	0.2965	0.0494	0.2930
23	0.0009	0.0199	0.2162	0.0503	0.3036
24	0.0075	0.0181	2.0863	0.0578	0.3827
25	0.0028	0.0172	0.8084	0.0606	0.4186
26	0.0025	0.0224	0.5584	0.0631	0.3316
27	0.0064	0.0158	2.0297	0.0695	0.5158
28	0.0045	0.0153	1.4759	0.0740	0.5632
29	0.0426	0.2054	1.0367	0.1166	0.0656
30	(0.0383)	0.2073	(0.9241)	0.0783	0.0433
31	0.0026	0.0141	0.9202	0.0809	0.6544
32	0.0035	0.0117	1.5201	0.0844	0.8189
33	0.0040	0.0126	1.5640	0.0884	0.7864
34	0.0015	0.0123	0.6108	0.0899	0.8189
35	(0.0147)	0.1090	(0.6738)	0.0752	0.0767
36	0.0257	0.1089	1.1808	0.1009	0.1023
37	0.0048	0.0132	1.8103	0.1057	0.8786
38	0.0014	0.0143	0.4934	0.1071	0.8189
39	0.0058	0.0168	1.7083	0.1128	0.7264
40	(0.0312)	0.1827	(0.8551)	0.0816	0.0482
41	0.0050	0.0165	1.5213	0.0866	0.5630
42	0.0160	0.0705	1.1356	0.1026	0.1551
43	(0.0162)	0.0718	(1.1267)	0.0865	0.1277
44	0.0021	0.0194	0.5283	0.0885	0.4806
45	0.0005	0.0148	0.1545	0.0890	0.6304