http://journals.uonbi.ac.ke/index.php/adfj
ISSN 2522-3186

African Development Finance Journal http://journals.uonbi.ac.ke/index.php/adfj
May Vol 3 No.2, 2022 PP 139-162 ISSN 2522-3186

Effect of Earnings Announcement on Share Price among Firms Listed at the Nairobi Securities Exchange

By: Bajaber Amina Swaleh[1] and Duncan Ochieng' Elly (Ph.D, CIFA, CPA)[2]

Abstract

The objective of this study is to determine whether an effect exists on share prices due to the announcement of earnings by individual companies listed on the Nairobi Stock. An event study research design was used. The data used incorporated daily share price data from 65 listed companies in the Nairobi Securities Exchange. The scope of the data was 2 years (2014 and 2015). For data analysis, the market model was used. The response variable was the actual return on stock and this return was compared to the general return in the market. The abnormal return (AR) was thus a difference between the actual return and the market return. To model the actual return, a regression model was used, with the market return as the main explanatory variable. For model testing, the t-model was used. This had been selected since it is the standard test used to analyze expected return based on a sample of stocks (the 65 listed companies in the NSE). This is opposed to the z-test, which requires data on the entire population. For additional model testing, the Chi-Square test was used and it had been selected due to its ease of implementation, especially for categorical data such as the ones used in this study (returns for stocks in different sectors). This investigation showed that earnings announcements are a significant factor that influence share prices. This was shown through t-tests and chi square tests. In addition, it showed that the market is more sensitive to announcements of a negative nature (earnings decline or loss) as compared to positive announcements (earnings increase). This investigation also led to the discovery that effects of earnings announcements are observed even before the announcement date and they continue to be felt even after the announcement.

Keywords: *Earnings Announcement, Share Price, Nairobi Securities Exchange*

1. Introduction

1.1 Background of the Study

Information relating to an entity's earnings has and still is a critical issue in the field of finance and accounting. Information influences every aspect of corporate businesses and the contemporary financial market (Demers & Vega, 2008). The management uses the various corporate announcements for instance, earnings announcements, dividend announcements among other corporate actions to relay information to the stakeholders and more specifically, the shareholders. Earnings announcements in particular, is a statement made publicly by an entity to report its profitability and performance over a given time duration usually on a quarterly, semiannual or annual basis. It may be expected that that share prices react to the released announcements. This however has been subject to diverse opinions from various finance scholars.

[1] Department of Finance and Accounting, University of Nairobi
[2] Senior Lecturer, Department of Finance and Accounting, University of Nairobi

Fama (1970) emphasizes that for markets to be efficient, stock prices should rapidly and accurately incorporate the available information. Kahneman and Travesky (1974) however posit that investors are influenced by behavioral biases when making investment decisions rendering the market inefficient. Consequently, investors decisions are influenced either positively or negatively, both directly and indirectly of course depending on how the information is perceived. This study seeks to investigate the effect of earnings announcements on share prices in the Nairobi Securities Exchange in light of new technological aspects that have emerged assuming rationality amongst investors.

1.1.1 Earnings Announcements

Earnings are essentially the amount of profits after tax that a company makes over a given time duration. Information on earnings of a company is usually contained in the statement of financial performance which basically entails the revenues and expenses of the company. Earnings announcements on the other hand is a statement made publicly by an entity to report its profitability and performance over a given time duration usually on a quarterly, semiannual or annual basis to aid in stakeholder's decision making process (Siegel & Chang, 2009). For instance, shareholders would want to ascertain the possibility of receiving dividends, potential investors would want to determine the possibility of a return on their investment while investment managers would want to assess the market for profitable investment opportunities to venture in (Booth et al., 2011).

Numerous studies on earnings announcements have generated mixed results across the globe. Aharony and Swary (1980) discovered that earnings announcements are used by managers as a signaling tool to convey information about the prospects of a firm. They further point out that just like dividends, this information is immediately reflected in the stock price following the public announcement. Oluoch (2003) in his research on the effect of earnings announcement on share prices at the Nairobi Stock Exchange concludes that timing of the release of annual reports do not correlate with firm's earnings. Generally, a company is viewed more favorably by the investors if it exhibits high earnings as opposed to low earnings (Barker & Imam, 2008). In this regard, the subject of earnings announcements has and will always be regarded as a riveting topic for research.

1.1.2 Stock Price

A share price is simply the price at which a stock trades at the securities exchange market. According to Fama (1970), the market price of a given stock should be equal to its intrinsic value. As such, a stock can be qualified as being undervalued, correctly valued or overvalued depending on the position of the market price relative to its intrinsic value. Malkiel (1973) further hypothesizes that stock prices movements are erratic and as such past stock price data cannot be used to predict future stock prices. Stock price movements have also been reported to vary contemporaneously with patterns in reported earnings in the long run (Halsey, 2001).

A stock price extensively reflects a company's value and its overall strength as a going concern and is usually driven by the earnings projections. A company that is doing well financially will post a rise in its share price and on the other hand a company in financial distress will post a falling share price. Shareholders normally make return by employing the strategy of buying low and selling when the stock prices go up. Share prices have however also been found to be influenced by other factors other than the performance of the firm (Peiro, 2016). Nyamute (1998) ascertained that macroeconomic variables such as inflation rate, money supply, treasury bill's rate and exchange rate influence the movement of stocks prices at the securities market.

1.2 Research Problem

Studies conducted at the NSE indicate the anomaly of post and pre earning announcement drift. Koech (2013) observed and concluded that stock split announcements are informational events which caused general increase in stock prices while Wamweya (2012) evidenced that companies that reported negative news for a period of a minimum of 60 days from the day of earning announcements posted the anomaly. This has greatly been attributed to the fact that investors are human beings and are often influenced by heuristic driven biases, frame dependence, social and emotional and market inefficiencies when making investment decisions (Kahneman & Tversky, 2002). This debate between behavioral finance and market efficiency proponents has led to numerous research indicating that the NSE is efficient in the strong form, evidence of the existence of market anomalies.

Global studies on earnings announcements and stock price have yielded diverse results. Thu (2014) studied the stock reaction to earning announcement at the Ho Chi Minh stock exchange. It was established that average abnormal return and cumulative abnormal return can be earned in some specific days which means earnings announcement had some impacts on stock performance. Aga and Kocaman (2008) studied reactions of stock behavior around earnings announcements. They evidenced positive market reaction to high earnings announcements and negative reaction to low earnings announcements. Mendenhall (1991) also arrived at the same conclusion but Das, Pattanayak and Pathak (2008) evidenced the nonexistence of visible abnormal returns encircling earnings announcements. A recent research conducted on this topic by Mlonzi et al. (2011) using a sample period of one year, tested the sample firms listed on the alternate exchange (ALtX) whereas our study tested all sample firms listed on the NSE securities exchange irrespective of exchange listing.

Local studies conducted at the NSE on the topic of earnings announcements and stock price have shown the presence of the PEAD anomaly. Koech (2013) observed and concluded that stock split announcements are informational events which caused general increase in stock prices while Wamweya (2012) evidenced that companies that reported negative news for a period of a minimum of 60 days from the day of earning announcements posted the anomaly. Francis (2013) found out that dividend payment increase announcements instigated an increase in stock prices while a dividend payment decrease announcement caused a decrease in stock prices. Clearly, there exists an interesting gap on earnings announcement in organizations listed in Nairobi Securities Exchange in Kenya due to the entrance of emerging trends in technology. Therefore, the research query became; what was the effect of earnings announcement on share price on Nairobi Securities Exchange?

1.3 Research Objective

This study sought to investigate the effect of earnings announcement on share prices at the Nairobi Securities Exchange.

2. Literature Review

2.1 Theoretical Review

The theoretical review will be based on three theories which will help explain how the earnings announcement and stock prices relate. These theories are the efficient market hypothesis, the random walk theory and signaling theory.

2.1.1 The Efficient Markets Hypothesis

The EMH was introduced by Professor Eugene Fama in 1970. He stipulated that the stock prices should be quoted at the intrinsic value and as such investors cannot purchase undervalued or overvalued stocks (Fama, 1970). This implies that outperforming the market is a matter of an impossibility regardless of whether one is an expert in selecting stocks or timing the market and as such the only way to obtain higher returns is by taking riskier investments. In summary, the efficient market hypothesis, rests on a slew of assumptions which have time and again been greatly criticized on the grounds that they are illogical and impractical: One, investors have equal access to market information and use the information to make investment and trading decision by evaluating individual securities, the markets and the economy at large. Two, major events in the market are random and are quickly broadcasted by the investors as soon as they happen e.g. major lawsuits, accidents, labor strikes etc. and of course cause major impacts on stock prices. Three, investors reaction to the new information is full and quick.

2.1.2. Random Walk Theory

Random walk theory posits that market stock prices depict a random trend and thus stock market predictions cannot be done in advance. That is, direction and past movements of the price of a given stock or rather the market cannot be used to project future movements. It further assumes that each and every change is autonomous of any previous changes and thus trends identified by technical analysts are not helpful. It is universally accepted that the random walk is clarified by Fama's (1970) Efficient Market Hypothesis. This theory was renown in 1973 upon the publication of the book 'A Random Walk Down Wall Street' by Barton Malkiel. Proponents of the random walk hypothesis believe that it is out rightly impossible to outperform the market without bearing extra risk. In this book, Malkiel explains that fundamental analysis and technical analysts are a complete waste of time and debatable literature exists as to whether assuredly these two can be used to outperform the market.

2.1.3. Signaling Theory

This is when insiders have information that is not available to the market and outside investors. Signaling theory is suitable for assessing information especially when describing the behavior of two distinct parties. Normally, the sender, one of the parties should choose first whether to communicate that information and if yes how to communicate and the receiver should decide how to interpret the received information. Akerlof (1970) highlighted this theory in his book "Lemon markets" and Spence (1973) talked about how educational credentials were entangled to the signaling theory.

Most management literatures such as strategic management, entrepreneurship and Human resource management highly rely on the signaling theory. Credible signals sent to the capital markets are highly accepted as they are the tools for drawing apart the excellent firms from the poorly performing ones as reiterated by the signaling theory. The indicator will only be plausible when the underperforming firm will be unable to retaliate the signals sent by the excellent performing firms. When the underperforming gets a higher cost it may find it unnecessary to imitate the good firm. Inferior companies may be motivated to temper with the signals in a bid to ingratiate themselves to investors (Johnstone & Grafen, 1993). The presence of false signalers has been integrated in many management studies.

2.2 Empirical Studies and Knowledge Gaps

Various scholars have conducted studies in the stock market to find out how stock price react to earnings announcement. These studies however, produced assorted results and hence the continuing debate on the validity of the EMH. However, there are studies that found different results. Inherent the studies the evidence supports weak-form of efficiency and semi-strong form of efficiency while no evidence supports the existence of strong form of efficiency.

A deeper experiment on the efficiency of markets conducted by Dickinson and Muragu (1994) for ten years that is (1979-1989) in the NSE declared that markets were efficient in the weak form, overruling one which was done earlier on by Parkinson which pointed out to markets as efficient in the strong form. To further on with their studies their conclusions gave staunch reasons on how the NSE was a weak form of market efficiency regardless of whether the bid-ask or market prices sequence is used to get on with the research phenomenon. (e.g. Stock market crash of October 1987). To fortify the weak form of efficiency, Reilly and Brown were also in the task force that took the research. They repudiated the fact that markets were efficient in the strong form giving evidences which factored on prices. They argued that markets would be efficient

in the strong form if prices were directly similar to the discharged information, howbeit as fore stated insiders have a tendency of retaining almost all pieces of information in a bid to gain surplus proceeds. (Reilly & Brown, 2011).

In a study done by Gupta (2006b) for 50 listed Indian companies comprising CNX Nifty index towards the response of earnings to announcements. The results supported the findings that earnings announcements had a great influence on stock prices such that negative news caused outstanding changes on the stock prices compared to positive news. Kong and Taghavi (2006) did an investigation which was consistent with both the Shanghai and Shenzhen. This study provided a Chinese view that stated abnormal returns increased significantly (through an overreaction) four days prior to announcements and declined (through rectification) four to six days' post announcements.

Two reputable scholars Worthington and Higgs (2004) did a probe on at least 20 markets in Europe, 4 of the markets were the upcoming ones. The data range spanned between (1988 -2003). They also varied the procedures at which they were using to conduct their extensive examination in order for them to come up with accurate results. Random walk specification was etched on five of the countries namely Britain, Germany, Ireland, Portugal and Sweden. Five of the nations met the semi-strong market efficiency those are Finland, France, Norway, Netherlands and Spain. Majority of the tested countries displayed the weak form of efficiency and those were the remaining 10 nations except Hungary which proved otherwise; some of the ten nations that supported the weak form of efficiency were Austria, Belgium, Denmark, Greece, Italy and Switzerland just to mention.

The weak form of efficiency was also operated on by Vitali and Mollah (2010). Their study took an overwhelming period of 10 years that is from (1999-2009). They were subject specific and thus they did this research targeting Africa's responsiveness to the weak form of market efficiency. They used the Random Walk Theory as their foundation. They subjected it to different approaches of auto-correlation unit root, run and variance ratio test on daily prices indices of some chosen countries. Kenya, Morocco, Nigeria, Tunisia, Mauritius, Egypt and South Africa. This study posted that South Africa in the second sub period (2007-2009) was the only weak form while the rest were in the otherwise form of efficiencies. They therefore rejected it in the other countries, howbeit. Dickinson and Muragu (1994) disputed their claims by portraying the Kenyan market as a weak form of market efficiency in their inference.

Nyamute (1998) argued that macro-economic factors like inflation rate, money supply, interest rates, and exchange rates affect the performance of stock prices. The findings by Njuru (2007) who decided to test for existence of under reaction anomaly at NSE using stock dividend announcement showed that there was a general decrease in abnormal and cumulative abnormal returns before dividend announcements for the 20 days and a general increase after announcements for the full sample analysis.

Information value (IV) was also put into context by Maina (2009), He proceeded to conduct a research that sought to investigate how yearly earnings reacted towards stock returns and trading activities. His cardinal reason for doing the research was hinged on the question of whether the information had any substantial value. He concluded that the average abnormal returns and average abnormal volume on the periods of announcements are observably greater than zero as compared to the non-event period. The research brought out a conclusion that summarized the share prices and trading activities of quoted companies reacted to the earnings announcements.

3. Research Methodology

3.1 Research Design

The study used event study method to test the stock prices response to earnings announcement. The event study methodology was usually used to show the effects of any type of event on the direction of stock price changes. The event study has many applications. In accounting and finance research, event studies have been applied to a variety of firm specific and economy wide events. Some examples include mergers and acquisitions, earnings announcements, issues of new debt or equity, and announcements of macroeconomic variables such as the trade deficit. MacKinlay (1997) explained the period of the announcements and how it affected the stock prices during the window period of 30 days before the announcements and 30 days after the announcements. The announcement day was represented by day 0.

-30, -29, -28, -27, -26…-3, -2, -1, 0, +1, +2, +3…+26, +27, +28, +29, +30

A broad event window of (-30 to +30) was selected with an aim to come up with market returns and to seize possible pre-event reaction. This was because of the abnormal nature of the information atmosphere in developing stock markets in emerging countries, where there was a possibility for the markets to start reacting prematurely prior to the announcements.

3.2 Data Analysis

The market model was applied to analyze the data collected. Market model, according to MacKinlay (1997) was preferred for its mathematical tractability and the realistic and reasonable assumptions on which it is based. It is a simple linear model described as:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where,
R_{it} = actual stock return/price of stock *i* at time *t*,
R_{mt} = market return at time *t*,
ε_{it} = error term.

4. Findings

4.1 Descriptive Statistics

For five of the 65 sampled companies (Kakuzi, Barclays Bank, Kenya Airways, Safaricom and KenGen), summary statistics for their daily share prices are presented in table 1. Statistics for all 65 companies are provided in Appendix II. These descriptive statistics include values for the minimum, maximum, mean, standard deviation and skewedness over the two-year period covered in this investigation. From the table it can be seen that for Kakuzi and Barclays Bank, the skewedness was markedly negative, with a skewedness statistic of -0.004 for Kakuzi and 0.927 for Barclays Bank. This is an indication that for these two securities, share return has a higher likelihood of being negative. In addition, Kenya Airways, Safaricom and Kengen displayed a skewedness statistic of 0.007,0.152 and 0.099 respectively. This is an indication that for these three securities, share return has a higher likelihood of being positive.

Table 1: Summary Statistics for Sampled Share Prices

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Kakuzi Ltd Ord.5.00	501	93	379	228.27	85.083	-.004	.109
Safaricom Ltd Ord 0.05	502	10.75	17.55	14.0759	1.66473	.152	.109
Kenya Airways Ltd Ord 5.00	502	4.45	13.85	8.8612	2.57944	.007	.109
KenGen Co. Ltd Ord. 2.50	502	6.40	13.85	10.0380	1.42649	.099	.109
Barclays Bank of Kenya Ltd	502	11.80	18.20	15.8587	1.56257	-.927	.109
Valid N (listwise)	501						

4.2 Analysis of Abnormal Returns

Theoretically, in an efficient market, share prices adjust quickly and accurately to all available information and hence, investors should not be able to generate excess risk adjusted returns by transacting based on new earnings information from subject firms. This also applies to information available prior to the announcement date. Based on this, share prices should generally reflect the feelings of the market on what the anticipated announcement will be. Share prices should thus adjust to this anticipation even before the announcement date.

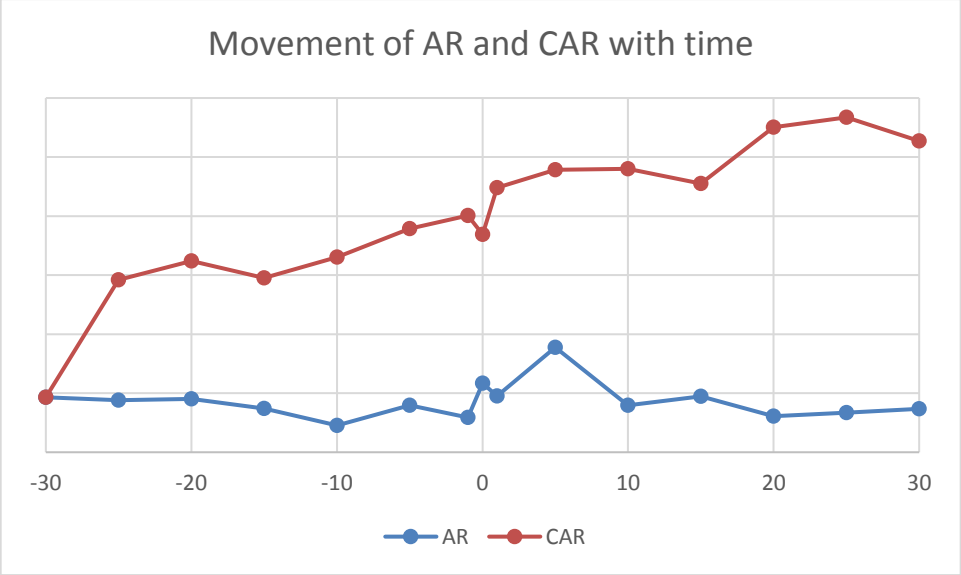
Table 2: Table of Abnormal Return and Cumulative Abnormal Return

Day	AR (%)	CAR (%)
-30	1.86%	1.86%
-25	1.76%	5.84%
-20	1.81%	6.48%
-15	1.48%	5.91%
-10	0.91%	6.61%
-5	1.58%	7.57%
-1	1.17%	8.02%
0	2.34%	7.38%
+1	1.91%	8.96%
+5	3.55%	9.57%
+10	1.59%	9.61%
+15	1.89%	9.10%
+20	1.22%	11.01%
+25	1.34%	11.34%
+30	1.47%	10.55%

From Table 2 above, the average ARs appear to be declining towards the announcement date (see graph 1 below). This shows adjustment of abnormal returns to informational expectations especially when close to the earnings announcement date. After the announcement date, abnormal returns decline steadily. This observation is also seen in the CAR which is generally positive and is mostly positive around the

http://journals.uonbi.ac.ke/index.php/adfj
ISSN 2522-3186

announcement date. From the table, a CAR of 7.38% is seen on announcement date and it hits a peak of 11.34% 25 days after announcement date. The CAR then falls in the days that follow. This shows some level of inefficiency where the market takes a considerable amount of time to adjust to the effects of earning announcements.



Graph 1: Graph of AR and CAR movement with time.

This also indicates that contrary to Efficient Markets Hypothesis, the market takes time to adjust security prices to reflect all available information, providing an opportunity for investors to generate risk adjusted positive returns by trading in these securities.

Table 4 below shows results of a t-test carried out to test the statistical significance of Abnormal Returns.

Table 3 Results of t-test for statistical significance of ARs

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Kakuzi Ltd Ord.5.00	-.269	14	.791	-.003557864701550	-.031875020642499	.024759291239399
Barclays Bank of Kenya Ltd	-.982	14	.343	-.001668963870567	-.005314604238335	.001976676497202
Safaricom Ltd Ord 0.05	1.243	14	.234	.002584100869524	-.001876310581523	.007044512320570

KenGen Co. Ltd Ord. 2.50	.506	14	.621	.005673156334567	-.018374276070362	.029720588739497
Kenya Airways Ltd Ord 5.00	-.540	14	.597	-.005631147364869	-.027976953955799	.016714659226062

For Kengen and Safaricom, a positive t-value indicates that earnings announcements have a significant effect on share prices. For Kengen, this might have been attributed to expansion in terms of capacity, with the launch of the Ol Karia Geothermal project around the time of the announcement. In addition, for Safaricom, market expectations might have been that the company would maintain its position as the country's most profitable company. This market sentiment might have led to excess positive returns around the time of the earnings announcement. Conversely for the other companies in the sample, earnings announcements showed no significant influence on stock returns.

4.3 ARs for Companies Announcing Earnings increase vs. Companies Announcing Earnings Decline

For further analysis, the sample was split between companies that announced an increase in earnings and those that announced a decline in earnings. Table 4 below shows the ARs obtained for the two categories.

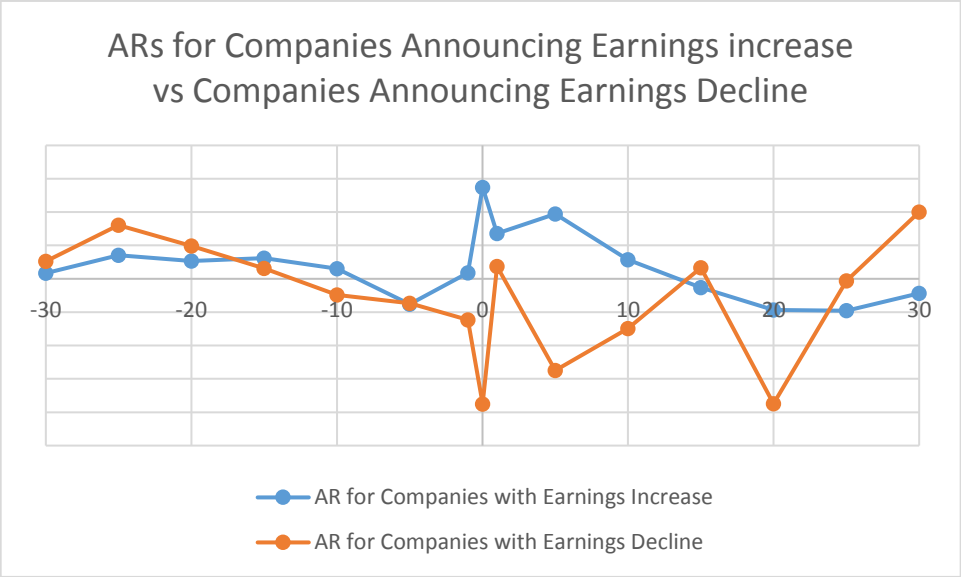
Table 4: ARs for Companies with increased earnings vs. companies with decreased earnings

Day	AR (Increased)	AR (Declined)
-30	0.08%	0.26%
-25	0.35%	0.81%
-20	0.27%	0.49%
-15	0.31%	0.16%
-10	0.15%	-0.24%
-5	-0.38%	-0.37%
-1	0.09%	-0.62%
0	1.37%	-1.87%
+1	0.68%	0.19%
+5	0.97%	-1.37%
+10	0.29%	-0.74%
+15	-0.13%	0.17%
+20	-0.47%	-1.87%

http://journals.uonbi.ac.ke/index.php/adfj
ISSN 2522-3186

+25	-0.48%	-0.03%
+30	-0.22%	1.00%

Under increased earnings, ARs were relatively closer to zero as compared to declined earnings. In addition, AR grew increasingly positive on the announcement day, recording a value of 1.37% on average. This indicates that markets did not adjust fully to anticipated earnings announcements up until the announcement date. Following announcement, the AR declined back, to a similar trend seen before announcement and even became negative from day +15. This shows possible overreaction to the earnings announcement. Under declined earnings, AR was negative for most data points, with absolute AR values being bigger on average than under increased earnings. During the observation period, AR values under declined earnings were in the range (-1.87% to 1.00%) while those under increased earnings were in the range (-0.48% to 1.37%). This indicates that reaction to declined earnings was more adverse/volatile as compared to reaction to increased earnings. In other words, the market reacts more when earnings decrease than when earnings increase. Below is a graph of ARs under increased earnings vs. under decreased earnings.



Graph 2: ARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline

4.4 CARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline

Further to the above analysis based on AR, analysis based on CAR was also performed. Table 5 below shows the CARs obtained for the two categories.

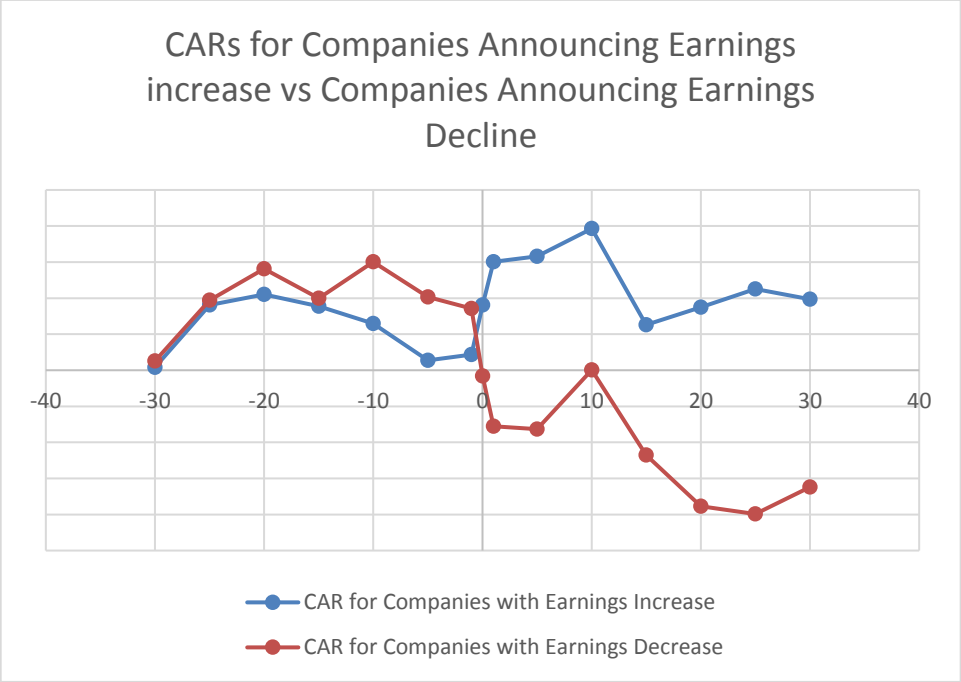
Table 5: CARs for Companies with increased earnings vs companies with decreased earnings

Day	CAR (Increased)	CAR (Declined)
-30	0.08%	0.26%
-25	1.81%	1.94%
-20	2.10%	2.82%
-15	1.77%	2.00%
-10	1.30%	3.00%
-5	0.27%	2.03%
-1	0.43%	1.71%
0	1.81%	-0.16%
+1	3.01%	-1.55%
+5	3.16%	-1.63%
+10	3.93%	0.00%
+15	1.26%	-2.36%
+20	1.75%	-3.78%
+25	2.26%	-3.99%
+30	1.97%	-3.24%

Under increased earnings, CAR appears to be dropping steadily with movement towards the announcement day. The CAR then suddenly moves more in the positive direction after the announcement day, where it starts falling again towards zero from around day +10. This indicates relative market inefficiency since share prices take relatively long to adjust to earnings information. Investors can thus exploit this and outperform the market albeit for a limited period of time.

http://journals.uonbi.ac.ke/index.php/adfj
ISSN 2522-3186

Under decreased earnings, CAR is initially positive at time -30 (0.26%) and appears to grow increasingly positive and it is at its most positive at time -10 (3.00%). Following the announcement, CAR suddenly moves in the negative direction and maintains its negative position, with CAR at time +30 being -3.24%. This shows a wider spread effect of decreased earnings announcements. It displays some kind of "hangover" effect, where the shares involved underperform as compared to the market for a relatively long period of time.



Graph 3: CARs for Companies Announcing Earnings increase vs Companies Announcing Earnings Decline

In addition to the one sample t-test, a chi square test was performed to test the significance of the abnormal returns. Table 6 shows the results of this test:

Table 6: Chi square test for significance of ARs

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	210.000[a]	196	.234
Likelihood Ratio	81.242	196	1.000

Linear-by-Linear Association	1.766	1	.184
N of Valid Cases	15		

a. 225 cells (100.0%) have expected count less than 5. The minimum expected count is .07.

From the observed p-value of 0.234, it may be concluded that there is a relatively weak association between actual returns and the market returns during periods of earnings announcements. This is consistent with other observations made where it was seen that ARs tend to change depending on the period to/ from the announcement date as well as the nature of the announcement (whether it is an earnings increase or an earnings decrease).

5. Summary, Conclusions and Recommendations

5.1 Summary

This investigation was done with theoretical knowledge of markets whereby efficient markets were expected to react quickly and accurately to new information. However, in realistic situations this may not have been the case and so the market may have reacted to information long before it was released and it is for this reason that the 60-day time horizon was selected. From share prices, abnormal returns were computed and also, cumulative abnormal returns were obtained by summing abnormal returns.

A one sample t-test was performed to test the significance of the ARs for each of the 65 sampled companies. Companies such as Safaricom and Kengen had positive t-values (1.243 and 0.506 respectively), an indication that earnings announcements had a significant influence on abnormal returns and share price. This could be attributed to market anticipation, where both companies were expected to announce significantly increased earnings. This market sentiment might have led to the excess positive returns observed around the time of the earnings announcement.

Further analysis was done to investigate whether earnings announcements had different effects on AR and CAR under conditions of increased earnings as well as decreased earnings. From the investigation of AR, the reaction or abnormal returns to earnings announcements under the conditions of decreased earnings showed greater volatility than under conditions of increased earnings. Generally, the market showed greater sensitivity to earnings decline than to earnings increase. Depending on the nature of the announcement, AR

followed a similar trend. From the investigation of CAR, it was observed that the market experienced extended effects of earnings announcements particularly where earnings declines were announced. This showed relative market's inefficiency, where share prices took a significant amount of time to adjust the abnormal returns back to average numbers.

A chi square test was also done to investigate the significance of the relationship between actual share returns and the market return during earnings announcements. From the observed p-value of 0.234, it showed that this relationship was not significant and it was concluded that the announcement itself had a greater influence on share price as compared to the market rate of return. Through observation of abnormal returns, it was seen that the market is not strong form efficient and that due to relative delays in market adjustments, investors might exploit such "inefficiencies" in order to generate excess risk adjusted returns. For the investor, the rationale behind such an action would be to sell poorly performing securities so as to buy high performing stocks which outperform the market for a certain length of time, even after an earnings announcement has been made. This would provide excess returns.

5.2 Conclusions

This investigation showed that earnings announcements are a significant factor that influence share prices. In addition, it showed that the market is more sensitive to announcements of a negative nature (earnings decline or loss) as compared to positive announcements (earnings increase).

This investigation also led to the discovery that effects of earnings announcements are observed even before the announcement date and they continue to be felt even after the announcement. This might reflect information asymmetry whereby investors lack sufficient information and insights needed to make accurate assumptions as to how earnings will affect share prices. It is very reactionary and this is seen where the market takes a relatively long period of time to adjust market prices back to their expected levels.

5.3 Recommendations

Following this investigation, the following recommendations are suggested:

Establishment of proper regulatory frameworks through regulatory bodies such as the Capital Markets Authority, whereby all relevant stakeholders have access to information that relevant and timely. This will improve informational efficiency and reduce chances of market exploitation. Also, proper measures need to be taken to curb insider trading, which is facilitated by an inefficient market. A legal framework needs

to be established and executed to limit insider trading and impose stiff punishments on individuals or firms that engage in insider trading.

In addition, industry regulators should set rules on reporting standards and deadlines where they set rules on disclosure and set standard deadlines for all players in each industry. This will ensure unbiased judgments by investors which may lead to abnormal returns observed in stock prices. The Capital Markets Authority should engage in investor sensitization and should provide technical support to enable investors make better informed decisions. This may be done even in institutions of learning, where young and prospective investors would get educated on good investment practices.

5.4 Limitations of the Study

The major challenge experienced was in the acquisition of data from the Nairobi Securities Exchange. Comprehensive data on all quoted shares was not easily available and hence only data over a period of two years (2014-2015) was obtained. The data obtained did not cover the entire spectrum of companies which would have been considered, especially companies not listed on the NSE. The disadvantage of basing the study on publicly traded companies is that the values of such companies are subject to bias from investors who may lack sufficient information for decision making.

Another limitation of this study was the exclusive consideration of earnings announcements as a factor affecting share prices. Other factors such as inflation and interest rates were not considered yet they are very important in determining the prices of shares. Also, stock price information for some firms is not available, especially for newly listed companies or companies whose stocks have been suspended. This limits the time scope over which the study may be done. The cost of acquiring data from the NSE was also a limitation to this study. Lastly, the earnings announcement dates considered were different for each firm. Significant prevailing market conditions may thus have been varied. However, it is difficult to quantify the effect of such factors on the share prices.

5.5 Suggestions for Further Studies

For further studies, it would be suggested that the scope of the investigation be enhanced. Firstly, the time range of the investigation should be extended from the 60-day period used in this research. This will enable capturing of insights which take effect long before and long after earnings announcements are made.

Second, this investigation should be extended to companies that are not listed on the Nairobi Securities Exchange, subject to availability of information. In addition, other factors affecting share prices should be included in such a study. This will enable a more holistic view of the market.

Due to requirements in certain industries to report semiannual and quarterly reports, investigations should be carried out based on such announcements to increase the granularity of the research. Findings will thus be more detailed and robust, facilitating better informed actions by different stake holders in the market. Also, methodology should be developed which allows for the differences in announcement dates by incorporating additional factors and variables which enable better comparisons between ARs of different companies. Lastly, similar investigations should be carried out, comparing Kenya to other emerging countries in Africa and beyond so as to draw solutions that are both generally applicable to developing markets and specifically applicable to the Kenyan Market.

References

Aga. M. & Kocaman, B. (2008). Efficient Market Hypothesis and Emerging Capital Markets: Empirical Evidence from Istanbul Stock Exchange. *International Research Journal of Finance and Economics, 13*, 131-144.

Akerlof, G. A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics, 84*(3), 488-450.

Aharony, J. & Swary, I. (1980). Quarterly dividend and earnings announcements and stockholders' returns: An empirical analysis. *Journal of Finance, 35*(1), 1–12.

Al-Deehani, T. M. (2005). Seasonality as an unobservable component: The case of Kuwait Stock Market. *Applied Financial Economics, 16*, 471–478.

Andrade, G., Mitchell, M, & Stafford, E. (2001). New Evidence and Perspectives on Mergers. *Journal of Economic Perspectives, 15*(2), 103-120.

Ayub Rioba (2003). Basic news reporting guide, Media Council of Tanzania, Dar es Salaam.

Ball, R. & Brown, P. (1968). An Empirical Evaluation of Accounting Income Numbers. *Journal of Accounting Research, 6*(2), 159-178.

Barker, R. & Imam, S. (2008). Analysts' perception of earnings quality. Accounting and Business Research, 38(4), 313–328.

Bernard V. L. & Thomas J. K. (1989). Post-Earnings- Announcement Drift: Delayed Price Response or Risk Premium? *Journal of Accounting Research, 27*(1989), 1-36.

Booth, G, Kallunki, J., Sahlstro, P., &Tyynela, J. (2011). Foreign vs Domestic Investors and the Post Announcement Drift. International Journal of Managerial Finance, 7(3), 220-237.

Brav, A., & Healton J. B. (2001). Competing Theories of Financial Anomalies. *Review of Financial Studies, 15*, 575-606.

Brick, I. E., Frierman, M. (1998). Asymmetric information concerning the variance of cash flows: The capital structure choice. *International Economic Review*, 745-761.

Cheol, E. S., Resnick. G. B., & Sabherwal, S. (2012). *International Finance* (Sixth Ed.). McGraw-Hill Companies, Inc. New York.

Cooper, C. R., & Schindler, P. S. (2008). *Business research method*s (10 ed.). Boston: McGraw-Hill.

Copeland T, L., E. F., & Mayers, D. (1987). Corporate Spin-Offs: Multiple Announcement and Ex-Date Abnormal Performance*: Modern Finance and Industrial Economics*, Chapter 7 T E Copeland, ed. New York: Basil Blackwell Press.

Clark, Colin, Islam, Sardar M.N. (2005). Are Emerging Financial Markets Efficient? Some evidence from models of Thai Stock Market. Centre for Strategic Economic Studies.

Das, S., Pattanayak, J. K. & Pathak, P. (2008). The effect of quarterly earnings announcements on Sensex: A case with clustering of events, ICFAI. University Journal of Accounting Research, 7(4), 64–78.

Demers, E. & Vega, C. (2008). Stock price reaction to private and public information. *Journal of Financial Economics 82* (1), 103-133.

Dickinson, J. P., Muragu, K. (1994). Market efficiency in developing countries: A case study of the Nairobi Stock Exchange. Journal of Business Finance and Accounting.

Fama, E. (1970). Efficient Capital Markets: A Review of Empirical Work. *Journal of Finance, 25*(2), 383–417.

Fama.E. (1970). Efficient Capital Markets: A Review of Theory and Empirical work *The Journal of Finance 25*(2), 384-417.

Fama, E. (1991). Efficient Capital Markets: II. *Journal of Finance, 46*

Francis, O. (2013). The influence of dividends and earnings Announcement on shareholders' value of Companies listed at the Nairobi Securities Exchange. *Unpublished MBA project, University of Nairobi.*

Gatua, F. K. (2013). Analysis of share price determinants at Nairobi Securities Exchange. *Unpublished MBA Thesis, University of Nairobi.*

George, A. (1970). The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics, 84*(3), 488-500.

Gupta, A. (2006). Impact of Earnings Announcements on Stock Prices: Some Empirical Evidences from India. *The ICFAI Journal of Applied Finance, 12*, 5-17.

Halsey, R. F. (2001). Using the Residual-Income Stock Price Valuation Model to Teach and Learn Ratio Analysis. *Issues in Accounting Education, 16*(2), 2001.

Holthausen W. R. & Verrecchia, R. E. (1990). The effect of informedness and Consensus on Price and Volume Behavior. *The Accounting Review, 65*(1), 191-208.

Johnstone, R. A., Grafen, A. (1993) Dishonesty and the handicap principle. *Animal Behaviour 46*, 759–764. Available at: http://users.ox.ac.uk/~grafen/cv/dishone**?** st.pdf. Accessed 11 September 2016.

Kahneman, D & Tversky, A. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185*(4157), 1124–1131.

Kausar, A. and Taffler, R. (2006). Testing behavioural finance models of market under- and overreaction: Do they really work? Working Paper (University of Edinburgh, 2006).

Kendall, M. (1953). The Analysis of Economic Time Series. *Journal of the Royal Statistical Society, (96)*, 11-25.

Koech, P. K. (2013). The effect of Stock Split announcements on stock prices on publicly listed firms in Kenya. *Published MBA project, University of Nairobi.*

Kong, S. & Taghavi, M. (2006). The effect of annual earnings announcements on the Chinese Stock Markets. *International Advances in Economic Research, 12*, 318–326.

Lonie, A. A., Abeyratna, G., Power, D. M. & Sinclair, C. D. (1996). The stock market reaction to dividend announcement. AUK study of complex market signals. *Journal of Economic Studies, 23*(1), 32–52.

Mabhunu, M. (2004). The market efficiency hypothesis and the behavior of stock returns on the JSE securities exchange. *Doctoral dissertation, Rhodes University.*

Mackinlay, A. C. (1997). On Multivariate Tests of the CAPM. *Journal of Financial Economics, 18*(2), 341–71.

Maina. (2009). An empirical investigation of stock returns reaction around Earnings announcements for quoted companies at NSE. *Unpublished MBA project, University of Nairobi.*

Malkiel, B.G. (2003). The efficient market hypothesis and its critics. *Journal of Economic Perspectives, 17*(1), 59–82.

Maurice K. (1953). The Analysis of Economic Time Series, Part I: Prices. *Journal of the Royal Statistical Society 96* (1953).

Mendenhall, R. (1991). Evidence of possible underweighting of earnings-related information. *Journal of Accounting Research, 29*, 394–417.

Mishra, P. K., & Pradhan, B. B. (2009), Capital Market Efficiency and Financial Innovation – A Perspective Analysis. *The Research Network, 4* (1), 1-5.

Mlonzi, V., Kruger, J., & Nthoesane, M. (2009). Share Price Reaction to Earnings Announcement on the JSE: A Test for Market Efficiency. *Southern African Business Review, 15*(3), 142-166.

Modigliani, F. and Miller, M. H. (1958). The cost of capital, corporate finance and the theory of Investment. *American Economic Review, 48*, 261-97

Mohammed, H. (2010). The Effects of Earnings Announcements on the Stock Prices of the Companies Listed in NSE. *Unpublished MBA Research Project, University of Nairobi.*

Njuru, N. (2007). Challenges in Implementing Electronic Banking Strategy by Commercial banks in Kenya. *Unpublished MBA Project, University of Nairobi.*

Nyamute, W. (1998). The Relationship between Stock Prices and Exchange Rates, Interest Rates, Money Supply and Inflation. *Unpublished MBA Project, University of Nairobi.*

Oluoch, W. O. (2003). The timing Effect of Earnings Announcement on Stock Returns of Companies quoted at the Nairobi Stock Exchange. *Unpublished MBA project, University of Nairobi.*

Peiro, A. (2016). Stock prices and macroeconomic factors: Some European evidence. International Review of Economics and Finance, 41(c), 287-294.

Reilly, F.K. and Brown, K.C. (2002). *Investment analysis and portfolio management* (7th ed). South-Western, Mason, Oh.

Rosenberg, B., Kenneth, R. & Lanstein, R. (1985). Persuasive evidence of market inefficiency. *Journal of portfolio management, 11*(3), 9-16.

Sharif A. S., Hosseinalifam, M. & Savard, G. (2015). The impact of customer behavior models on revenue management systems. *Computational Management Science 12*(1), 99-109.

Shleifer, A. (2000) *Inefficient Markets: An Introduction to Behavioral Finance*. Oxford: Oxford University Press.

Shivakumar, L. & Balla R. (2008). Earnings quality at initial public offerings. *Journal of Accounting and Economics, 45*(2008), 324-349.

Siegel, J. I., & Chang, J. J., *Samsung electronics*. Harvard Business School, 2009.

Spence M. (1973). Job Market Signaling. *The Quarterly Journal of Economics 87*(3), 355- 374.

Sponholtz, C. (2008). The information content of earnings announcements in Denmark. *International Journal of Managerial Finance, 4*(1), 4–36.

Thu, T. N. A. (2014). Stock price reaction to earnings announcement: Empirical study in Ho Chi Minh Stock Exchange. *Published Thesis, Vietnam National University HCMC.*

Vitali, F., & Mollah, S. (2010). Stock Market Efficiency in Africa, Evidence from Random Walk Hypothesis, *Mid-West Finance Association Annual Meeting, West Chicago River North,* March 2-5, 2011.

Wamweya, K. (2012). Test for post earnings announcement drift at the Nairobi Securities Exchange. *Unpublished MBA project, University of Nairobi.*

Worthington, A. and Higgs, H. (2004). Transmission of Equity Returns and Volatility in Asian Developed and Emerging Markets: A Multivariate GARCH Analysis. *International Journal of Finance and Economics, 9*, 71-80.

Zahir, M. A. (1992). Factors Affecting Equity Prices in India. *The Chartered Accountant, 40*(9), 743-748.

Zahir, M. A. & Khanna, Y. (1982). Determinants of Stock Prices in India. *The Chartered Accountant, 30*(8): 521-523.