

THE RELATIONSHIP BETWEEN EARNINGS ANNOUNCEMENTS AND STOCK PRICES AT THE NAIROBI SECURITIES EXCHANGE, KENYA

Fredrick Kalui

Senior Lecturer, Department of Accounting, Finance & Management Science,
Egerton University, Kenya

Gabriel Chol Garang 

Student, Department of Accounting, Finance and Management Science,
Egerton University, Kenya

garangcholg@gmail.com, 0074813@student.egerton.ac.ke

Abstract

The purpose of this study was to establish the relationship between earnings announcements and stock prices at the NSE. The specific objectives of the study were to determine the impact of interim earnings announcements on stock prices at the NSE, to determine the impact of annual earnings announcements on stock prices at the NSE and to determine the relationship between the interim and annual earnings announcements on stock prices at the NSE. The study found inefficiency in the stock market and therefore recommended the government to strive towards attaining sustainable levels of market efficiency. Policy makers are recommended to act as a key to determining a clear policy framework for the Kenyan stock market. The government through its regulatory bodies; Capital Market Authority and Nairobi Securities Exchange are recommended to ensure that laws governing insider trading are adhered to by all participants in the stocks market. The study also recommended the government to design training programs to create more awareness in stock markets activities. The study further suggested more research to be done on the efficiency of Nairobi Securities Exchange by incorporating more companies, lengthening the study duration, lengthening the event window, and incorporating more emerging markets in Africa.

Keywords: Earnings, Efficiency, Securities, Stock and Earnings announcement

INTRODUCTION

The theory of stock market efficiency and how stock prices adjust to reflect new information in the market has been one of the fundamental arguments in finance literature. Fama (1970) examined efficient market hypothesis (EMH) concept and states that a market is efficient if security prices immediately and fully adjust to reflect all available information. Stock market response to information disclosure is immense and covers a wide range of information disclosures such as dividend announcements, stock splits, merger announcements and macroeconomic policy changes. The influence of earnings information release on security prices has received considerable attention. There is however consistency with the EMH amongst researchers that earnings announcements do contain value-relevant information and the stock markets react quickly and efficiently to this information.

Statement of the Problem

The stock market reaction to information disclosure has been tested in many occasions in developed markets such as the USA and UK. The evidence reported in these studies is largely consistent with the information content hypothesis and efficient market hypothesis (EMH), which is that earnings announcements contained value-relevant information and that stock markets react quickly and efficiently to this information. Capital markets play an important role in facilitating economic development by allocating resources within the economy. In Kenya, available evidence documents a few of related studies. These include. Rono (2013) examined stock market reaction to annual earnings announcements using the data from the Nairobi Securities Exchange (Kenya) and JSE Securities exchange (South Africa). The results showed positive and significant returns on the announcement month for JSE, whereas the returns for NSE were negative and significant on the second month after announcement. Koech (2010) studied the effects of stock splits announcements on stock prices of publicly quoted firms in Kenya. It was concluded that these events (stock splits announcements) cause a general increase in stock prices. Therefore, there is need to conduct an empirical study to fill the void in the knowledge gap by providing information to both investors and managers on the information content of interim and annual earnings announcement that will enable them make informed investment decisions.

General objective of the Study

The main objective of this study was to determine the relationship between earnings announcements and stock prices at the Nairobi Security Exchange.

Specific objectives of the Study

- (i) To determine the impact of interim earnings announcements on stock prices at the NSE
- (ii) To determine the impact of annual earnings announcements on stock prices at the NSE.
- (iii) To determine the relationship between interim and annual earnings announcements at the NSE

Scope of the Study

The study was only limited to firms that were listed at the NSE and which were continuously listed throughout the study period from 2012 to 2016. Listed firms were preferred because they are required by the Capital markets Authority (CMA) to publish their annual and interim financial statements and thus this information was available at the NSE.

Significance of the Study

The main objective for providing financial statements is to help investors make investment decisions. Investors do use these interim and annual reports in their buy-hold –sell decisions. The findings of this research are important to investors, portfolio managers, decision makers and other stock market players who use earnings announcements to measure their trading expectations. Particularly, it is vital to note that investor expectations of company earnings are reflected in stock prices. Also, evidence from analyzing stock price reaction to earnings announcements in a developing and emerging market respectively casts more light on whether the theory of efficient markets is supported, or contradicted by the various empirical findings. The study would contribute to existing knowledge by providing evidence regarding the price effect of the information contained in interim and annual earnings announcements around the day of release.

REVIEW OF LITERATURE

Interim and annual earnings announcements constitute an informational event. When a listed company announces its interim and annual earnings, investors use this information to make their buy and sell decisions. According to the semi strong-form EMH, security prices adjust rapidly to the release of all public information. Therefore depending on the economic significance of that information, price will rise or fall to a new level. The movement in share prices is brought about by either normal market reaction or abnormal market reaction that further leads to increased returns, above the expected market return. Keen investors are able to outdo the market from the abnormal returns observed proving inefficiencies in the market. The

stock prices will be influenced by social and political factors, firm specific factors, economic factors and regulations of the Nairobi Stock Exchange players including listing requirement.

Empirical Studies on Stock Market

Firth (1976) did a study on the effect of earnings announcements on the share prices of similar type firms. It was the first study made on the effects of company earnings announcements on share prices in the D. K. Firths sample consisted of 87 firms classified into four groups namely breweries, retailers, shipping and banks. The impacts of earnings announcement of each firm on the share prices of the other members of the group were examined. Firth found out that on the day of the announcement of positive results, firms in the industry as a whole made abnormal gains of 2.1%, i.e. average price of securities of similar type firms rose by 2.1%. Similarly where the results announced were less than predicted by the market, the industry as a whole experienced abnormal loss of 3.7%---a poor reception by the market. Firth concludes therefore that financial reports have information content and this information is used by the market in evaluating the firm making this particular announcement as well as similar type firms. He concludes also from the study that the market reaction to the announcements of earnings is fairly rapid and lasts about two days but no profitable mechanical trading strategy can be evolved from the announcement of earnings.

Kiger (1972) examined the markets volume and price reaction to the announcement of quarterly earnings- His sample consisted of firms listed on the NYSE who met the criteria that there were no price or volume sensitive information about any firm in the sample around the time of the study- Such market sensitive information includes dividends announcements, secondary distribution or dividends announcements. Kiger used as a control in the study a five day period during which no information about the shares in the study was released to the market- The time period of interest in the study was the five days around the time of the announcement of quarterly earnings in the Wall Street Journal Kiger's reported results indicate that the market reacts to quarterly earnings.

May (1971), using Beaver's methodology examined the price reaction of quarterly earnings of firms listed on the American Stock Exchange- The sample included 105 firms and covered the period June 1966 to April 1968. May's reported results indicate that weekly price changes at the time of the release of quarterly earnings reports are higher than the average weekly price changes for other times of the year- The reported results indicate also that the price reaction to the announcement of earnings was swift. Price change accompanies announcement of earnings but this settles quickly leaving no room for post announcement abnormal returns.

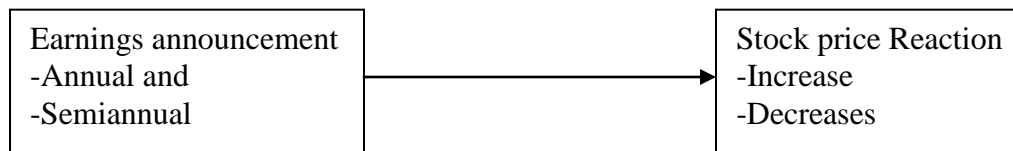
Mohamed (2006) conducted a study on the effect of the earnings announcements on the stock prices of companies listed at the Nairobi stock exchange. The population of interest is all companies quoted in the Nairobi Stock Exchange that had been listed in the NSE as at 1st January 2004 till 31st December 2008. This being the most recent period, it is believed that the result based on the period would be reflective of the current development in the stock market. Secondary data is used in the research which was obtained from Nairobi Stock Exchange database. Forms are designed to collect the data for the period of interest. The study finds that investors do not benefit from earnings announcement. Over the period starting from 30 days prior to earnings announcement to 30 days after the announcement of earnings payment, investors incurred losses up to 52.14 percent of stock value on average.

Nyamosi (2015) conducted a research on a Review of Pricing Efficiency after Earnings Announcements at NSE. The study targeted all 56 public listed companies whose stocks are traded at the NSE. A sample of 20 listed companies was selected from the population. The NSE has categorized listed companies into five sectors: the agricultural, commercial and services, finance and investment, industrial and allied, and the alternative investment sectors. The NSE 20-Share Index companies represent the five categories of listed firms. Only actively traded stocks are usually selected into the index. For each firm in the sample, the researchers identified and recorded as t_0 the day on which the earnings report was approved by the board of directors. We also recorded the percentage change in after-tax profit. This was easily obtained from annual financial reports available at the CMA library. The stocks' closing prices on the day of announcement and on the 1st, 3rd, 7th, 14th, 21st, and 28th day before and after announcement were recorded. The corresponding NSE 20-Share share index was also recorded. The percentage change in earnings from the previous year was also recorded. Of the 20 firms that were sampled, 11 reported increased earnings while nine reported decreased earnings, relative to previous earnings. While an increase is expected to lead to positive excess returns, a decrease is likely to result in negative excess returns. For each set of firms, the average excess returns for the periods before and after announcements were calculated. The study found that excess returns were realized whenever the firms announced their earnings. Excess returns were realized for each return window from $t-28$ to $t28$. The excess returns were analyzed during the pre-announcement and the post-announcement period. The pre-announcement period covered the period from $t-28$ to $t-1$. There were excess returns realized in the pre-announcement period. Of the 11 firms with increased earnings, six had negative mean excess returns in the pre-announcement period, ranging from -0.7% to -7.9%. The remaining five had positive mean excess returns in the range of 1.32% to 16.2%. The average pre-

announcement excess return is positive at 0.35%, but the average is negative after announcement, that is -0.58%.

Kaniel (2007) studied the behavior of individual and institutional investors around earnings announcement on NYSE stocks between January 2000 and December 2003. They obtained their daily abnormal net individual trading series by computing an imbalance measure: subtracting the value of shares by individuals from the value of shares bought and dividing by the average daily dollar volume from CRSP in the calendar year. It was realized that individual buying or selling prior to announcement is associated with significant positive or negative abnormal returns in three months following the event, with most abnormal returns generated by stocks that experience extreme earning surprise. The authors maintained that naïve investors would trade in the opposite direction and therefore slowing down adjustment of prices to the information. The study did not observe the strategies of specific individuals and institutions and hence unable to definitively answer the question whether trading by individuals after the event is naïve or rather it is part of profit taking strategy.

Figure 1. Conceptual Framework



RESEARCH METHODOLOGY

Target Population

The target population for this study was all the 64 companies listed at the Nairobi Securities exchange from the year 2012 to 2016 study period. Listed firms were preferred because they are required by the Capital markets Authority (CMA) to publish their interim and yearly financial statements and thus this information was available at the NSE.

Sample Design

The sample consists of 7 companies that continuously announced interim and annual earnings during the study period that was from 2012 to 2016. A purposeful sampling method was employed for the study. The companies were to have daily stock prices throughout the entire study period and had to announce both interim and annual earnings announcements during the study period. The sample selection was based primarily on the criteria that only firms

continuously announced interim and annual earnings were considered during the period 2012 to 2016 were included in the study.

Data Collection

This study used secondary data from the Nairobi Securities Exchange database. The stock prices and earnings were obtained from the NSE five year. The data was found from published annual and interim reports of the NSE that provide listed company's financial performance information for a period of five years.

Data Analysis and Presentation

The market model was used to calculate the daily abnormal returns. The study considered an event window of 21 days focusing on 10 days before the event ($t = -10$) and 10 days after the event date ($t = 10$) with the event day represent by $t = 0$. The 21 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.

The return of securities at day t was computed by using the following formula;

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}} \dots \dots \dots \text{Equation 1}$$

where;

R_{it} = daily return for security i on trading day t

P_{it} = closing price of share i on trading day t

P_{it-1} = closing price of share on trading day $t-1$

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

$$AAR_t = \sum \frac{AR_{jt}}{N} \dots \dots \dots \text{Equation 2}$$

where:

N = Number of earnings announcements in the sample at day t

AR_{jt} = abnormal return security j at day t .

The actual abnormal returns were aggregated to draw an overall conclusion on the earnings announcement. To accommodate a multiple period event window, the study made use of the cumulative average abnormal return {CAAR t }. The cumulative average abnormal returns {CAAR t } for all the firms for 21 days were then cumulative as the sum of the abnormal returns.

$$CAAR_t = \sum_{t=-10,+10} AAR_t \dots \dots \dots \text{Equation 3}$$

FINDINGS

Stock Prices Reaction to Interim 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 7 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.

The AAR and CAAR were calculated for the entire study period. The findings are presented in the table 1.

Table 1. Abnormal and cumulative abnormal returns following Interim Returns Announcement

DAY	AARs	CAARs
-10	-0.02178	-0.02178
-9	-0.01971	-0.04148
-8	-0.02552	-0.067
-7	-0.02283	-0.08983
-6	-0.02269	-0.11252
-5	-0.02183	-0.13435
-4	-0.02266	-0.15701
-3	-0.02451	-0.18152
-2	-0.02154	-0.20306
-1	-0.02207	-0.22512
0	-0.02771	-0.25283
1	-0.02598	-0.27881
2	-0.02012	-0.29893
3	-0.02952	-0.32845
4	-0.01962	-0.34807
5	-0.0239	-0.37197
6	-0.02852	-0.40048
7	-0.02318	-0.42367
8	-0.02848	-0.45215
9	-0.02812	-0.48027
10	-0.02713	-0.5074

Table 2. T test statistics for the averaged AARs at 5% significance level

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	T	Df	Sig.	Mean	Std. Error
					(2-tailed)	Difference	Difference
Equal variances assumed	8.844	.008	2.37	18	.029	.0029430	.0012407

The hypothesis which stated that interim earnings announcements have no impact on stock prices at the NSE was rejected. From the t statistics table, it can be observed that the Sig. (2-tailed=0.029) is less than 0.05. This implies that ARs are statistically significantly different. A conclusion can therefore be drawn that interim earnings announcements have an effect on stock prices.

Relationship between interim stock returns and annual stock returns following earnings announcements

Correlation analysis was conducted to test the relationship between interim stocks returns and annual stock returns following announcement. This was achieved using correlation analysis. The following hypotheses were tested at 95% confidence level.

HO: There was no statistically significant relationship between interim stock returns and annual stock returns.

HA: There was statistically significant relationship between interim stock returns and annual stock returns. Reject the null hypothesis if p- value<0.05. The correlation analysis findings are presented in the table 3 below.

Table 3. Correlations

		Annual	Interim
Annual	Pearson Correlation	1	.425
	Sig. (2-tailed)		.049
	N	21	21
Interim	Pearson Correlation	.425	1
	Sig. (2-tailed)	.049	
	N	21	21

The hypothesis which stated that there was no relationship between interim and annual earnings announcements was rejected. The Pearson correlation coefficient obtained was 0.425. This implies that there was weak positive relationship between interim stocks returns and annual stock returns following announcement.

The Sig. (2-tailed) obtained was 0.49. It was less than 0.05 implying that the association between interim stocks returns and annual stock returns following announcement was not statistically significant. These results are consistent with those of Gajewski and Quéré (2001) who found out that there is a significant market reaction to both half-year and annual earnings announcements.

CONCLUSION

The results from this study showed that both interim and annual returns announcements had statistically significant effect on stock prices of the companies studied. This suggests that both interim and annual earnings announcement provide valuable information which the market uses to adjust share prices. The critical t-statistics for interim earnings was 0.029 and annual earnings were 0.039. This showed interim earnings announcement carried critical information then annual earnings announcement. It could be because stock prices impound annual earnings information at an earlier point in time when interim reporting is more frequent, annual earnings announcements are likely to be less informative in countries with more frequent interim financial reporting.

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