THE IMPACT OF EARNINGS ANNOUNCEMENTS ON STOCK RETURNS OF CROSS-LISTED STOCKS IN THE EAST AFRICAN SECURITY EXCHANGES

BY:

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DECLARATION

I declare that this research project is my original work and has not been presented for a degree in any other university or institution.

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DEDICATION

This project is dedicated to my family for according me with unwavering support throughout my study. I candidly thank you for your prayers, affection, and inspiration which kept me going. To my wife Salome, I am full of gratitude. I also appreciate in a special way my friend Charles Mutungi for your steadfast in this project. To all my other friends who came to my aid, I thank you.

ABSTRACT

The EMH theory has been built on the premise of the existence of an abundance of information in the stock markets which is costless, and there is an immediate absorption of this information into the security prices. Due to the critical role played by earnings announcements, it is considered a significant component which is utilized when testing the levels of efficiency of a security market. Stock markets in developing countries provide investors with portfolio diversification benefits and research on market efficiency in these developing markets is vital. If stock markets are efficient, asset allocation remains the key factor which influences the overall risk and return of an investor. The selection of securities is also irrelevant since there are no undervalued or overvalued stocks. Despite the benefits associated with an efficient market and financial liberalization, minimal studies which establish the level of efficiency of the East African Security Exchanges as a whole exist. The objective of the study, therefore, was to establish the impact of earning announcements on stock returns of cross-listed stocks at the East African Security Exchanges. Several studies which describe the correlation between earnings announcement and the stock returns have been documented. The study used event study methodology to establish how the East African Security markets react to earnings announcements over an event window of twenty (21) days. The study was a census of all East African firms that have cross-listed in the Security markets in East Africa. The study concludes that a strong form of market efficiency does not exist at East African Security Exchanges. The Nairobi Stock Exchange and Uganda Stock Exchange show a semi-strong level of market efficiency while Rwanda Stock Exchange and Dar-es-Salaam Stock Exchange have shown a weak form of market efficiency. This study adds to the prevailing literature on the behavior of the East African stock markets with an aim of ascertaining the efficiency of these markets.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAR: Average Abnormal Return

CAAR: Cumulative Average Abnormal Return

CAPM: Capital Asset Pricing Model

DSE: Dar-es-Salaam Stock Exchange

EAC: East Africa Community

EMH: Efficient Market Hypothesis

FTSE: Financial Times-Stock Exchange

GSE: Ghana Securities Exchange

NSE: Nairobi Securities Exchange

RSE: Rwanda Stock Exchange

USE: Uganda Securities Exchange

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The EMH theory has developed as the basis of modern-day finance, thus encouraging more studies to be carried out on the subject of traditional and behavioral finance. These studies have dominated the field of mainstream finance for many years (Ahmed, Hussin, &Ying, 2010). EMH theory is built on the premise that there is an abundance of information in the stock markets which is costless, and there is an immediate absorption of this information into the security prices(Aboagye, 2013).If a security market is efficient, the information is incorporated in security prices in a fast and an impartial manner (Kiminda, Githinji, &Riro, 2014).The capital markets respond to many corporate announcements, earnings announcements considered as one of the most important corporate announcements.

Earnings announcements are significant to both investors and the management since they act as a signal to the public on the performance of the company (Booth, Kallunki, Sahlstro & Tyynela, 2011).The effect of earnings announcements is a core research area in the capital markets since it has an influence on the prices of stocks and therefore, affects the shareholder's wealth. If there is efficiency in capital markets, stocks will incorporate the earnings information instantly. On the contrary, if the security markets are inefficient, the information gets to the stock market before a formal announcement to the public (Mittal, 2015). The early studies indicate that stock exchanges for developing economies have thin trading, lack complete and accurate data and that the stock officers lack awareness on the significance of

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upholding a centralized stock price records. However, recent studies have shown that the developing stock markets have greater informational efficiency in current years as a result of financial liberalization (Boughrara, 2013).

Globalization, as presented by Kasilingam (2014) has opened the financial markets, thereby attracting a lot of investors. This has led to many companies cross-listing in the foreign markets. The cross-listed firms end up gaining access to foreign financial markets and investors have increased recognition of the company's stocks. This study, therefore, examined the efficiency of East African Security exchanges. If a market is efficient, it offers a good investing environment for investors.

1.1.1 Earnings Announcements

Earnings announcement as described by Aboagye (2013) is the declaration of the financial performance of a company to the public. This is done through the trading, profit and loss account, the balance sheet and the statement of cash flow within a specified time period. Halsey and Robert (2000), discern that a company's earnings fluctuate in relation to the prevailing economic condition. Substantial empirical works prevail on how significant the earning announcements are to a company. The uncertainty of information about the future outlook of a company is a key concern in finance and accounting. Financial statements are therefore essential tools which provide information to investors about the future outlook of a company (Das et al. 2008)

Earnings announcements have an information power which is significant to investors and act as a major source of information (Aharony&Swary, 1980). Due to the critical role played by earnings announcements, it is considered a significant component

which is used to test the market efficiency. This information is also essential in ascertaining the strength of a security market and is relied upon for assessment of how efficient and effective a stock market is. Earnings information has value and helps investors to select investments portfolios and to estimate the performance of the company in the future (Mlonzi et al. 2011).The behavior of stock returns during earnings announcements period has shown varied results. Afego (2011), Odendaal (2014), and Mittal (2015) explain that expected returns increase within the earnings announcements period. Other researchers, Ball and Brown (1968) submit that abnormal return of stocks is high when there is positive earnings announcements and low during negative earnings announcements. However, Nyamolo (2010) maintain that the correlation between stock returns and earnings announcements is weak.

The information on earnings of a company is conveyed through the financial statements, and this is usually done through quarterly, semi-annually or annual financial reports. This study relied on the annual earnings announcements for selected companies in testing the efficiency of the East African Security Exchanges.

1.1.2 Stock Returns

The stock market returns have been defined by Brealey, Myers, and Allen (2006) as the yields the stockholders make from the stock market. Bodie, Kane, and Marcus (2004) posit that these returns are achieved through the dividends paid by a company or through trading the stocks in a secondary market which is the main form of making stock market returns. Positive returns are achieved through the purchase of shares at low and selling them upon the appreciation of the stock prices. Choi, Elyasiani, and Kopecky (1992) contend that investors can achieve a gain or loss upon trading on the stocks since the returns are not similar and vary from one investor to the other. This is

dependent upon the risk the investor is willing to take and expertise of the investor in using technical and fundamental analysis while making investments decisions.

In an efficient market, an investor cannot get better returns than the market average by relying on information contained in the earnings announcements since all these information is already conveyed in the stock prices (Gupta, 2006).Many documented studies have shown diverse results on how stock returns behave around the earnings announcements. Categorically, Odendaal(2014) and Mittal (2015) contend that expected returns increase within the earnings announcements period and the characteristics for forecasting the returns seem more precise within earnings announcements period. Shivakumar and Urcan (2014) submit that abnormal returns are high when there is positive earnings announcements and low during negative earnings surprises. On the contrary, Lev (1989) maintains that the weak association between the share returns in the securities markets and earnings announcements.

This study used CAPM in the calculation of the required returns and the abnormal and the cumulative abnormal returns in ascertaining the level of market efficiency. Although critics argue that it is not the best model for calculating returns since it is a one-factor model, Drew, Naughton, and Veeraragavan (2005) maintains that the stock beta can explain up to 61% of the share returns. The model has been widely used by researchers such as Ondendaal (2014), Kiremu (2013), Aboagye (2013), Aharony and Swary (1980), and Mlonzi, Kruger, and Nthoesane (2011).

1.1.3 Earnings Announcements and Stock Returns

Empirical evidence shows that the information which is contained in accounting disclosures determine share prices and volumes traded in the financial markets

(Beaver, 1968). According to Aharony and Swary (1980), earnings announcements have an information power which is of profound significance to investors. The information contained in earnings announcements is vital when ascertaining the strength of a security market and can be relied upon in assessment of how efficient and effective a stock market is. Earnings information has value and helps investors to select investments portfolios and to estimate the performance of the company in the future (Mlonzi et al, 2009).The shares which have greater trading volumes within earnings announcements period will have high premiums and will be highly sought by individual investors, a clear suggestion that trading volumes increases during the earnings announcement.

Empirical research in relation to the effects of earnings announcement and share returns have shown varied results on how stock returns behave around the earnings announcements. Studies carried by Dey and Radhakrishna(2008), Afego (2011), Odendaal (2014), and Mittal (2015) resulted in abnormal returns within the earnings announcements period. Other researchers, Ball and Brown (1968), submitted that during positive earnings announcements, abnormal returns will be high. On the contrary, the security returns are low during negative earnings announcements. However, other researchers Lev (1989), Aboagye and Opoku (2013), and Nyamolo (2010) argue that the association is weak.

1.1.4 Cross-Listed Stocks in the East African Security Exchanges

Due to greater integration of stock markets as a result of financial liberalization, many companies have resulted to cross-listing as an instrument which improves the amalgamation of developing security exchange markets with the global security markets. Empirical evidence indicates that cross-listing results in increased investor

interest and subsequently significant changes in the volume of traded stocks, stock turnover, and liquidity. As a result, cross-border listing within the East African region has gained more attention as companies strive to achieve the benefits associated with cross-listing. Many recognized companies have embraced Cross-listing in East African Security Exchanges as a way of increasing their prominence in the region. Currently, more companies have cross-listed in the EAC security markets with anticipation that this will entice more investors from the region and to enjoy the benefits related with cross-listing

There is established empirical work on the reaction of security markets to the information relating to the cross-listing announcement. Other studies have been pursued to ascertain the significance of cross-listing on the firm's value, liquidity, and performance in East African stock exchanges. However, there is insubstantial literature on the response of stock returns as a result of earnings announcements for cross-listed firms in the EAC market. This study, therefore, had an objective of determining the impact of earnings announcements on stock returns of cross-listed firms at the East African Security Exchanges.

The EAC has four security exchanges which are the NSE, DSE, USE, and RSE. The largest Securities Exchange in East Africa is the NSE. It has one company which has cross-listed from USE which is Umeme Limited Company and eight companies which have cross-listed in other securities exchanges in the EAC. The DSE, being the second largest in the East African region has five companies which have cross-listed from the NSE. These are; Kenya Airways, the East African Breweries, Nation Media Group Limited, Jubilee Holdings Limited, and the Kenya Commercial Bank. USE is the third biggest security exchange in the East African Region and has seven cross-

listed companies from the Nairobi Securities Exchange. These are Kenya Airways Limited, Jubilee Holdings Limited, Nation Media Group, Kenya Commercial Bank, East African Breweries Limited, Equity Bank, Uchumi Supermarkets and Centum Investment Limited. RSE has three companies cross-listed on the Nairobi Securities Exchange which is; Uchumi Supermarkets, Nation Media Group, and Kenya Commercial Bank. Many companies will seek to cross-list in the future once the integration of East African Security Exchange is undertaken.

1.2 Research Problem

The capital markets serve a vital function of enabling economic development through the allocation of funds in the economy. Various studies on market efficiency in established stock markets are documented, with a show of diverse results of how stock returns behave around the earnings announcements. A research by Dey and Radhakrishna (2008), Afego (2011), Odendaal (2014), and Mendenhall (1991) resulted in abnormal returns after the earnings announcement. Other researchers, Das, Pattanayak, and Pathak (2008) pointed out that for companies with broader analyst attention; there is an existence of a greater positive response of the security market to earnings announcements. However, Lev (1989) maintained there is a poor relationship linking the prices in the security markets to earnings announcements. Bhana (1996) submits that negative earnings announcement has a high responsiveness in the stock market than positive earnings announcement. Local researchers, such as Nyamolo (2010) found that earnings announcement do not have an effect on the share prices at the NSE. Wamweya (2012) found that earnings announcement drift exists at NSE. Maina (2009) found that stock prices and the transaction volumes of listed companies' stocks at NSE alter to reflect earnings report.

The efficiency of a stock market is a key motivator for domestic and foreign investors. Financial liberalization has led to increased investment in emerging markets in recent times across the world (Lingaraja, Selvam&Vasanth, 2014). If stock markets are efficient, Dolvin, Miller, & Jordan, (2012) present that asset allocation remains the key factor which influences the overall risk and return of an investor. The selection of securities is also irrelevant since there are no undervalued or overvalued stocks. Stocks are also cost less since investors do not have to incur expenditure on mutual funds, stock brokers, and financial analysts.

The emerging markets provide investors with portfolio diversification benefits. Research on market efficiency in these developing markets has thus become extremely vital in these markets (Harvey, 1994).Due to greater integration of stock markets as a result of financial liberalization, Alford, Jones, Leftwish, and Zmijewski (1993) consider studies on the efficiency of developing stock markets as crucial. Despite these benefits associated with an efficient market and financial liberalization, minimal studies which ascertain the level of efficiency of the East African Security Exchanges as a whole are present.

 The East African Security Exchanges have experienced tremendous changes in institutional strategy, financial and technological changes that have called for more research to be carried out to establish how efficient stock prices respond to earnings announcement statement. This study relied on day to day stock prices around earnings announcement period for cross-listed companies within the East African region to find out the reaction of stock returns to earnings announcements. This study sought to answer the question: What is the impact of earnings announcements on stock returns of the cross-listed stocks in the East African securities exchange?

1.3 Research Objectives

The objective of this study was to establish the impact of earnings announcements on stock returns of cross-listed stocks at the East African Security exchanges before and after the earnings announcements.

1.4 Value of the Study

This study will add value to the available literature and hence help scholars to understand how efficient the East African security market is, and generally the other developing financial markets. The results of the study will be useful in determining the level of efficiency of stock prices in response to information which is released to the public. The study will, therefore, act as a reference for academicians when carrying out further research on the efficiency of East African Security Exchanges.

The results of this research will also help investors in making more informed decisions regarding the likely stock returns performance before, during or after earnings announcements. This will assist them in making a decision on whether to hold, sell or buy the company's stock. As a result of globalization, the results of the study will help investors when they make decisions on investing in developing security markets and thus benefiting from portfolio diversification.

The study will also be useful to the government and stock market regulators. The information will enable them to formulate policies that will lead to greater capital market integration in the region and beyond. Well formulated policies will effectively create a more conducive investment atmosphere for both investors and the firms that are listed on the East African stock markets. The results of this study will be of value to the EAC which is also planning to set up a regional stock exchange.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The topic is a presentation of empirical theories which describe the behavior of the share returns in response to the earnings announcement information. This section also gives a submission of the empirical findings in various stock markets on the subject of the study. At the end of this topic, a summarized literature review is provided.

2.2 Theoretical Literature Review

Several studies which describe the correlation between earnings announcement and the stock returns have been documented. The examination of earnings announcement and stock returns is a test of the market efficiency. This section explains several theories that underline the earnings announcements of companies. These theories include; the random walk, the EMH, and the signaling theory as presented below.

2.2.1. Random Walk Theory

This theory can be associated with Regnault in 1863, a French stock broker in his study about the random behavior of stock prices. The study was later on used by Louis in 1900 in his study on the theory of speculation. Random walk theory was later developed by Kendall (1953), Cootner (1964) and Fama (1965). The theory, however, gained more attention through the work of Malkiel (1973). The researcher argued that stock and commodity prices follow a random behavior, meaning that a change in share prices are independent, just as it is the case of tossing a coin. He maintained that

any efforts to gain abnormal returns based on analysis of past data, financial statements analysis or other analysis is useless.

Proponents of random walk trust that there is a likelihood for an investor to achieve excess returns without incurring added risk. Analyzing the past market prices and data or analyzing the financial statements of a company after earnings announcements will mainly be a waste of time. Technical analysis will, therefore, be unnecessary since stock prices will adjust in a random manner. This theory was supported by Tahir (2011) and Rizwan and Nawaz (2014) who found that stock market prices behave in a random manner. However, Mobarek and Keasey (2000) found that the stock returns in Dhaka Stock Exchange do not follow a random walk model.

Critics of this theory argue that it is possible to predict the market to some extent and that investors can earn above-average returns Lo, Andrew (1999).These researchers have carried out several tests and studies in a bid to find the trends in the security exchange markets. The results of these studies indicate that movement patterns and other information can be applied to predict the security market and they argue that the random walk theory is wrong.

2.2.2. The Efficient Markets Hypothesis

This theory was established by Eugene Fama in the year 1970s. EMH has dominated studies and academic papers since 1970 and there is compact evidence in support of this theory (Jensen, 1978). This theory argues that a security market should be considered as efficient when the prices of securities instantly and entirely alter to replicate the information on hand. Securities completely, rapidly and impartially incorporate all information which is available to provide a true estimate of the

security prices (Basu, 1977).Fama subdivided the entire EMH to form three levels of stock market efficiency. These are the weak, the semi-strong and the strong form of EMH. He argued that those interested in investments can act with confidence that, the present market stock price entirely incorporates the information which exists in relation to a security, the return expected for the security and the underlying risk. Many studies have been carried out on market efficiency theory and the results have shown the evidence of weak forms such as Mobarek and Keasey (2000) and Tahir (2011). Other researchers have agreed on the semi-strong form of EMH such as Kiremuet al (2013) and Udhaya(2014). However, Subrahmanyam (2007) argue that the strong form of EMH is inconsistent due to anomalies and market imperfections.

According to Lingaraja, Selvam & Vasanth(2014), the efficiency of the stock market is a key motivator for domestic and foreign investors. If stock markets are efficient, asset allocation remains the key factor which influences the overall risk-return of an investor. The selection of securities also becomes irrelevant since there are no undervalued or overvalued stocks. Stocks will also be costless since investors will not have to incur expenditure on mutual funds, stock brokers and financial analysts (Jordan, Miller & Dolvin, 2012).If stock markets are efficient, the information on earnings announcements will be incorporated in the security pieces immediately upon release to the public and therefore no investor can achieve excess returns by relying on this information.

Critics of EMH argue that the stock prices can be predicted to some extent (Malkeil, 2003). EMH is also based on the premise that investors are rational (Bhana, 1996). However, behavioral theorists disagree on this assumption and contend that there is under reaction of investors to information (Blume &Durlauf, 2007). There are also

market anomalies, the best known are the January and the small firm effect (Odendaal, 2014). Seyhun (1986) argues that it is not easy for stock markets to be perfectly efficient since an insider can trade on public information unknown by the market and this information is not reflected in security prices.

2.2.3. Signaling Theory

There is an important principle underlying this theory, which is the fact that the strong form of EMH is unrealistic since companies have people who can access company information which investors and the public cannot possess. The theory is based on the assumption of unequal access to information by the participants, and therefore resulting in an existence of information unevenness. The Modigliani and Miller dividends irrelevance theory had the assumption that every participant has equal information concerning the firm's dividends and future. This, however, in certainty is not the case since investors have distinct interpretations on future dividend payments and the uncertainties intrinsic in the payment of the dividends. Generally, managers are more informed on future forecasts than public stakeholders.

Modigliani and Miller argued that stock price fluctuations after dividends announcements are basically an indication that earnings and dividends announcements have information signaling power. Studies have shown that dividends increment frequently results in an appreciation of the prices of stocks, whereas a fall of dividends pay-out results to the declining of stock prices. A dividend increment acts as an indicator that a company is in a stable economic position and undertaking viable investment projects. This brings about an increment of cash flows in the future thus leading to growth in stock prices of the company. A decreased dividend, on the

other hand, is an indication that the firm has a poor performance and has an unpleasant future. (Aharony&Swary, 2000)

Positive earnings surprises as submitted by Shivakumar and Urcan (2014) can also signify to management that there is a good market for its products and thus can undertake investments aimed at increasing the operational capacity. An increase in profits relieves the company of financial constraints and act as an internal source of funds for investment. Increased profits signify a low risk to the providers of capital who will be willing to provide funds to the company since the credit risk is low. A negative earnings announcement, on the other hand, will have an adverse effect. A profit warning, as stated by Kiminda, Githinji, and Riro (2014) in a company can also act as a signal, that a firm is unable to remain competitive and achieve set profit target. The resulting effect on the stock returns is therefore negative.

2.3 Determinants of Stock Returns

Previous studies have shown that stock returns are determined by the inflation rates, market return, exchange rates, and interest rates (Choi et al. 1992).

2.3.1 Interest Rates Exposure

Many studies have been carried out in recent times in the analysis of how the movements of interest rates affect common stock returns. Generally, these studies indicate that the behavior of stock returns derived from the variations in the rates of interest is determined by the nominal assets and terms of maturities of the nominal assets held by the firm (Flannery, 1981). A firm's common stocks return is affected more by changes in the interest rates if that firm is holding a high percentage of the

net nominal assets with longer maturities. The stock returns and interest rates are negatively correlated (Arango, Gonzalez, & Posada, 2002).

The interest-rate variable is more useful when valuing the shares of financial institutions since the incomes and costs are highly determined by interest rates prevailing at the market. Hence, a lot of research has focused on ascertaining how interest rate exposure affects stock returns of these companies (Mustafa & Chaherli, 2009). This exposure of interest rates in financial institutions primarily emanate as a result of divergence in the payment term of liabilities and assets. A financial institution eliminates these risks through hedging (Flannery, 1981).

Although many researchers have not studied on how the share returns of non-financial firms are influenced by interest rates, Bartram (2002), did a study on the same arguing that it can affect a firm directly as a result of variations in the worth of cash flow from financial liabilities and assets, or in an indirect way, such as a variation in the competitive age of the firm. However, Saunders and Yourougou (1990) maintain that the stocks of non-financial companies are not affected more by an unanticipated change in interest rates than it is the case with the stocks for financial institutions.

2.3.2 Inflation Rate Exposure

The study on how inflation affects stock returns is vital to investors and many studies have been carried out to determine its effect on stock returns in the world. Normally, empirical studies indicate that inflation impacts negatively on the stock returns. (Mahmood, Nazir, Junid & Javed, 2014). The capacity of a company to generate more profits in the future determines the prices of shares for these companies in the stock market. The share price, therefore, appreciates if the company is expected to

perform well in the future (Mogire, 2016). High inflation unfavorably affects the profits of a firm, resulting in a depreciation of share prices and stock returns (Vena, 2014).

The empirical review indicates that inflation adversely affects the stocks of financial institutions. However, stocks for nonfinancial companies are not highly affected by inflation since they signify claim to non-financial assets (Mustafa &Chaherli, 2009). Previous research on the effect of inflation on share returns indicates conflicting results. Lajeri and Dermine (1999) submit that when the inflation is high, the inflation risk and interest-rate risk have a different influence on the financial firms' share returns and non-financial stock returns.

2.3.3 Exchange Rates

The study of the behavior of the stock returns stemming from exchange rates has renewed a lot of attention from the investors. Due to globalization, extensive study has been carried out on the subject to ascertain how exchange rate exposure affects the share returns of a firm. Generally, exchange rates are determined by factors such as fiscal and monitory policies, and demand and supply. Interest rates respond to these factors accordingly depending on the prevailing economic conditions and the market expectation (Nshom, 2007).

Companies encounter economic and transaction exposure which are the two forms of currency risk. Transaction risk arises within a short-term period of time and it effects transactions which are dominated by a foreign currency. This exposure is hedged by use of derivative products, or by relying on the short-term instruments in the financial market. The operating exposure or Economic risk arises for a long duration. It shows

the extent to which a firm's worth is affected by unforeseen variations in the exchange rates. Companies generally minimize economic exposure by spreading transactions and matching of its cash flow. Jorion (1991) maintained that currency risk varies from one industry to the other.

Previous studies on this subject in developing and developed countries have shown diverse results. Nydahl (1998) determined that the share price of a company is more sensitive to variations in exchange rates. The results of this study were contrary to an earlier research which argued that exchange rates do not affect the value of a firm (Miller & Modigliani 1958). Other researchers, Richard, Joseph, and Seyed, (1998) demonstrate the existence of a causal correlation relationship between the share returns and the prevailing exchange rates.

2.4 Empirical Review

Past studies show that financial markets of countries which are underdeveloped and developing countries lack operational efficiency (Mobarek&Keasey, 2000). In significant U.S. securities markets, past studies uphold the existence of a weak form of efficiency. Afego (2011) and Osei (2002) determined that the Nigerian stock exchange and Ghana's stock exchange are not efficient in terms of reflecting information relating to earnings announcements on the security prices. Empirical studies do not support the presence of the strong form of EMH. Fama (1970) in his summary of the initial random walk theory made a conclusion that the existing evidence strongly supports the weak form of EMH.

Dey and Radhakrishna (2008) carried out a study to determine who benefits from the security exchange upon trading during earnings announcements period. The

researchers investigated to ascertain if trading on equity by individual investors and institutional investors around the earnings announcements created any profits for these groups. The results of the study showed that large organizations do not make above-average returns from trading of their securities within the announcements period. Individual investors, on the other hand, earn a minimal positive above-average returns for a short period before announcements but incur a considerably negative above-average return on the trading of securities after the announcement date. The results also indicated that Institutional investors incur losses when they trade on securities on the previous date of the earnings announcements and the immediate date after the announcement news. The study interpreted that those losses were as a result of the unfavorable stock price result of trading volume.

Lingaraja, Selvam, and Vasanth(2014) examined the stock market efficiency in developing security markets of the Asian countries. A sample of eight countries which are: Malaysia, Philippines, India, Indonesia, China, Thailand, Korea and Taiwan. Secondary time series data for daily transactions for a span of ten years from 2004 to 2013 relied on. The researcher used GARCH, Autocorrelation and Runs Test in testing the volatility and efficiency of these stock markets. The study indicated that Malaysia, India, Indonesia, and Philippines had high efficiency during the period under the study.

Odendaal (2014) observed how earnings announcement affects stock prices at the London Stock Exchange. The researcher used event study methodology on 44 firms listed on the FTSE 100 and an event period of 41 days between 2010 and 2012. To ascertain the presence or absence of abnormal returns, the study relied on the market model and the OLS technique. Testing the significance of the presence of abnormal

returns was conducted by use of the null and alternative hypothesis. The results of the study for the overall sample test showed an absence of abnormal returns. The study, therefore, supported the semi-strong level of the EMH. However, analysis of some sectors contradicted the EMH because of a presence of abnormal returns.

Mittal (2015) did a research with how Quarterly Earnings Announcement have an effect on the Price of Shares. The objective was to examine the stock price reaction emanating from the earnings announcements news for every quarter. This study was undertaken on a population which entailed leading 100 firms as per the Chartered Financial Analyst Survey ranking of 2008. The research period examined was from 2004 to 2013. Results of the study showed that the Dhaka Stock Exchange is a semi-strong level of efficiency. Conversely, the post-announcement results showed Indian Capital Market is not efficient perfectly since abnormal returns have been evident before and after the announcement.

Several studies on Efficient Market Hypothesis are documented in developing stock markets in attempting to study the usefulness of this theory in those markets. Kipronoh(2014) studied the reaction of the stock market as a result of earnings announcements. The researcher relied on daily stock price statistics from the NSE for the year 2012 and 2013. An event study methodology was used by the researcher in testing the behavior of stock prices arising from earnings announcements. Five firms from the NSE 20-share index were sampled. The researcher found substantial abnormal price reaction during earnings announcement times an indication of the relevance of earnings information. The researcher, however, noted a drift in the cumulative abnormal returns which occurred 25 days following the date of the announcement. This resulted in a contradiction to the EMH and signified that there is

no immediate price adjustment at the Nairobi securities market in response to earnings announcements.

Aboagye and Opoku(2013) carried out a study on response share prices to Earnings Announcement in Ghana. The researcher studied the impact of earnings announcement at the GSE through examining the changes in stock prices between the year 2010 and 2013. The study was comprised of a population all the listed firms on GSE with a sample of 10 companies chosen for the study. An event window of 21 days was selected and abnormal returns determined by use of the market model for selected companies. In testing the significance of the abnormal returns which could happen as a result of the earnings announcement news, inferential statistics and descriptive statistics were relied on. The study established that abnormal stock returns within the period of the announcement of the earnings of the firm's financial results as being statistically insignificant. The study pointed out that GSE does not adjust to information on earnings announcement efficiently.

Afego(2011) examined the share price adjustment to annual Earnings Announcement in Nigeria. Event study methodology was used and 16 companies sampled for testing at the Stock exchange. The study results indicated that there exist a high degree of share response and abnormal returns 20 days prior to the earnings announcements. The researcher observed that part of the market reaction may have resulted from a private acquisition or use of insider information. Due to the presence of above-average returns which drifted downwards for 20 days following the release of the financial results of the examined companies, the researcher concluded that security prices at the Nigerian Stock Exchange do not alter to reflect the information which is contained in earnings reports within the study period.

Kiremu, Galo, Wagala, and Mutegi(2013) examined the reaction of stocks prices and volumes as a result of Annual Earnings Announcement. The researchers carried out the study with an objective of establishing the response of the prices of stocks to annual announcements of the financial reports at NSE from 2006 to 2010. Event study methodology and an event window of 91 days were used to ascertain the presence of abnormal returns by use of market model data from 5 listed firms. The reaction of the trading stock volume was calculated using the trading activity ratio (TAR). In testing for significance of the effect of trading activity ratio and price changes, the researcher used descriptive and inferential statistics. The results of the study established that NSE has a semi-strong level of market efficiency.

Rizwan and Nawaz (2014) conducted a study on random walk behavior of emerging stock markets in Pakistan. The researcher had an objective of testing the presence of the weak form level of efficient market hypothesis theory at the Karachi Stock Exchange. The researcher used Index data and conducted Unit root, Runs test and Autocorrelation function test. The study determined that the Karachi stock market is weak form inefficient.

Mlonzi, Kruger, and Nthoesane(2011) carried out a studied about stock price reaction towards earnings announcements in South Africa. The research had an objective of examining whether abnormal returns can be realized from earnings announcement as a test of the efficient market theory for the small companies. A census of the firms listed on the JSE-ALtX was made. CAPM technique was relied on in computing of the expected returns. The researchers concluded that at times of recession, there is an erosion of shareholder's wealth in the small ALtX market; conversely, they argued that the weak level of stock market efficiency gives a chance to investors and

entrepreneurs to exploit the market and earning profits once the performance of the stock market is good.

2.5 Conceptual Framework

Empirical studies demonstrate that earnings announcement greatly affect the share returns in the stock market (Beaver, 1968).Information on earnings announcements aids investors when selecting the portfolios to invest in and also to evaluate how the firm will perform in the future (Mlonzi et al, 2009).The factors which affect stock returns and have been described in this study include the inflation rates, exchange rates, and the prevailing interest rates. The examination of earnings announcement and stock returns is a test of the security market efficiency. This study presented several theories that underline the earnings announcements of companies and the behavior of stock returns.

Determinants of stock returns

Control Variable

Inflation rates

Exchange rates

Interest rates

Independent Variable

Dependent Variable

| Earnings Announcements | | Stock returns |
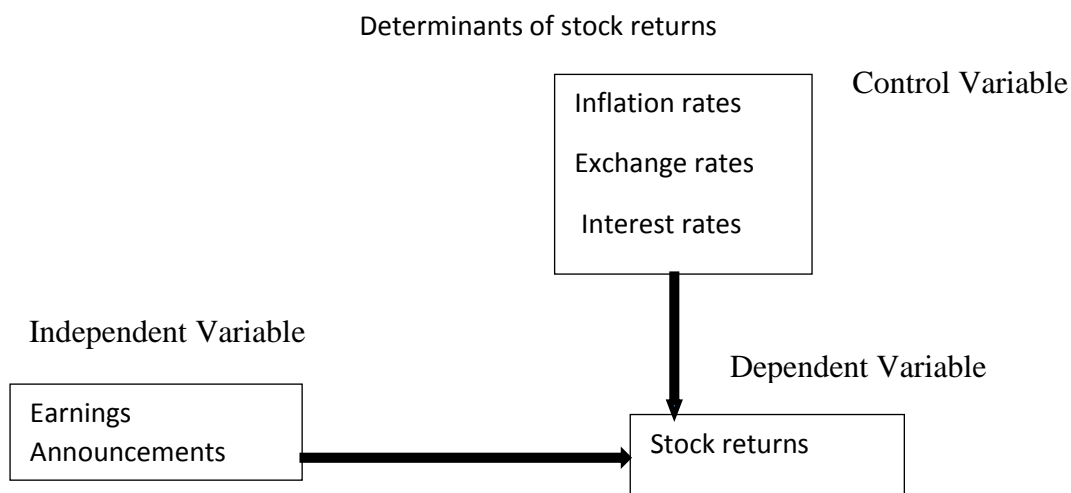
Fig 1. Conceptual framework

Source: Researcher.

2.6 Summary of Literature Review

Capital markets serve a vital function in the growth of the financial system through the allocation of economic resources in a nation. Empirical studies have shown inefficiency in the capital markets operations in developing and the underdeveloped countries. Although many studies have been carried out on market efficiency in east African Exchanges, the studies focus on the testing the stock market efficiency for the security markets in East Africa independently. This research used daily stock prices in examining if abnormal returns can be realized in the East African Security exchanges within the period of the earnings announcement. The objective of this research thus is filling the knowledge gap by establishing how the stock returns respond to earnings announcements, thus ascertaining the levels of market efficiency of the East African securities market.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section was designed with an aim of illustrating the research methodology adopted by the study. A description of the research design adopted by the study, the population of the study, methods employed for collecting data and the analysis procedure of the data is presented.

3.2 Research Design

The study employed an event study methodology. Mlonzi, Kruger, and Nthoesane (2011) indicate that an event study can be relied on to determine whether a significant variation of normal share returns and required returns exist after an event which is under study. Previous researchers such as Odendaal (2014), Udhaya (2014), Mobarek and Keasey(2000), and Dey and Radhakrishna (2008) and other researchers depended on the event study methodology to study how new information which is released to the market affects stock returns.

This study sought to establish how the East African Security markets react to earnings announcements over a short-term period. The study utilized the data on daily prices of stocks within an event period of twenty (21) days, ten days prior to the announcement and 10 days following the date of the earnings announcement. The event date is marked as day 0. (Ball &Kothari,1991). The 10 days period before the earnings announcement is made helped to ascertain if the information leaked to the public before the announcement.

3.3 Population of the Study

The population of this study entailed a census of all East African firms that have cross-listed at the East African Security Exchanges. At the moment there are nine (9) companies which have done cross-border listing at the USE, DSE, and RSE. These nine firms formed the target population.

3.4 Data Collection

In this study, secondary data from the East African Stock Exchanges was used. The data for the earnings results is the company's annual reports for the financial year 2015. The data sources for determining the effect of the announcement on the securities prices includes share indices for East African Security Exchanges during the earnings announcement period.

3.5 Data Analysis

The method used for data analysis was an event study. An event study can be described as being an empirical analysis which is generally relied on to determine the effect of an event on stock performance (Ronald & Bernard, 1995).This study used CAPM in the calculation of the required returns. The resulting average abnormal return and the CAAR from the study were tested in ascertaining the level of market efficiency. CAPM model works on the assumption is that any other information affecting the stock performance has been incorporated in the pricing of the security. This study, therefore, did not analyze the effect of inflation, interest rates and exchange rates. Although critics argue that it is not the best model for calculating returns since it is a one-factor model, Drew et al. (2005) maintains that stock returns can be determined up to 61% by their beta.

3.5.1 Normal and Abnormal Return

The daily share prices from the 9 firms considered in the study were relied on when calculating the daily stock returns within the event window. The companies' daily return was computed as

$$R_{it} = (P_{t+1} - P_t) / P_t) * 100\% \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(i).$$

Where: R_{it} is the actual return on share i on day t, P_t is the price of share i on date t and P_{t+1} is the price of share i on date t+1 .

The expected return was calculated as:

$$E(R_P) = R_{it} - AR_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(ii)$$

Where, R_{it} is the actual return on share i on day t and AR_{it} is the abnormal return for each share on date t.

Abnormal returns (AR) or the excess return was calculated before, during and after the announcement to test how the stock market reacted to the release of the earnings news. It was computed as:

$$AR_{it} = R_{it} - E(R_{it}) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(iii)$$

Where, AR_{it} is the abnormal stock returns on stock i at time period t, R_{it} is the actual return on share i on day t and $E(R_{it})$ is the expected returns for stock R_i the at time t. Abnormal return can be explained as the variance between the actual stock return within a specified time (t) during the event window and the returns in the market at time t. If an abnormal return is evident, then the conclusion is that earnings announcements affect the stock returns in the respective security exchange and that the respective security market is not efficient.

3.5.2 Cumulative Abnormal Return (CAR)

In order to improve the reliability of the analysis, Average Abnormal Returns was calculated.

$$AAR_{it} = \Sigma \frac{AR}{m} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (iv)$$

Where: m is the number of companies, AAR_{it} is the average abnormal return and AR is the total abnormal return.

The researcher uses CAR in determining the Cumulative Average Abnormal Return (CAR) for the event period (Day -10 to Day +10).

$$CAAR_{i,}(-_{T_2 T_3}) = \sum_{T2}^{T3} AARi, t \dots\dots\dots\dots\dots\dots\dots\dots\dots (v)$$

Where: $CAAR_{i,}$ is the cumulative Average abnormal return and $AARi, t$ = is the Average abnormal return for stock i at time t .

3.5.3 Testing the significance of CAAR

In order to determine the significance of the AAR, the study applied the parametric test of t-statistics. Nonparametric tests were also used in testing of the results. In testing the significance of abnormal returns of a specific Stock exchange, a t-test was determined by use of the formula below.

$$t_{AR} = \frac{\overline{AAR} - \mu}{Se} \dots\dots\dots\dots\dots\dots\dots\dots\dots (vi)$$

Where: $\overline{AAR}$ = is the mean average abnormal return over the event window and S_e

Is the standard error over the event window and μ is the population mean assumed to

be zero. Testing the Average returns helped in improving the analysis model.

To test the significance of the abnormal returns along the event window, the following

formulae was used to give the parametric test statistics, which was also used to

investigate if the cumulative average abnormal return is equal to zero.

$$t_{CAAR} = \frac{\overline{CAAR} - \mu}{Se} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(vii)$$

Where: $\overline{CAAR}$ Is the mean cumulative abnormal return over the event window and

Se is the standard error of the cumulative average abnormal return calculated over the

event window and μ is the mean of the population hypothesized to be zero. If the

results indicated that the cumulative or average abnormal return is not zero, a

significant abnormal return is evident; hence the conclusion that the East African

Security Exchanges are not efficient.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The topic outlines the methods which have been used for data presentation and the tools which have been relied on in the analysis of the research results of this study. This study used an event study methodology with an objective of determining how the stock returns respond after the release of the earnings announcements news for cross-listed companies at the East African security exchanges. The earnings announcements considered in this study relate to the annual earnings for the year 2015 for the cross-listed firms at the East African Security Exchanges. The study used secondary data for the daily prices of stocks which was retrieved from the four security exchanges over an event window of twenty (21) days. The analysis and the findings of this study have been presented by the use of figures, tables, percentages, and graphs in order to achieve the study objective.

4.2 Data Collection

This study used secondary data on daily prices of stocks of the cross-listed firms collected from the East African Security exchanges within the event window. A translation of the stock prices in foreign currencies was done using prevailing exchange rates from the CBK prevailing within the event window.

4.3 Descriptive Statistics

From table 1 below, the AAR and the CAAR are presented for the East African Security Exchanges. The EMH theory argues that when stock exchanges have

information efficiency, the security prices adjust instantly to absorb all the available information present at the stock market. The implication of stock prices adjusting fully to all the information available is that abnormal return is not attained by utilizing the information on earnings announcements (Fama, 1970).

Table 1: AAR and CAAR presentation at the East African Stock Exchange.								
	DSE		NSE		RSE		USE	
DAYS	AAR	CAAR	AAR	CAAR	AAR	CAAR	AAR	CAAR
-10	0.52%	0.52%	0.12%	0.12%	0.71%	0.71%	0.12%	0.12%
-9	0.58%	1.10%	0.10%	0.22%	0.80%	1.51%	0.06%	0.18%
-8	0.54%	1.64%	0.13%	0.35%	0.51%	2.02%	0.53%	0.71%
-7	0.57%	2.20%	0.02%	0.38%	0.82%	2.83%	0.07%	0.78%
-6	0.42%	2.62%	0.01%	0.38%	0.72%	3.55%	0.13%	0.92%
-5	0.68%	3.30%	-0.29%	0.09%	0.71%	4.26%	0.33%	1.24%
-4	0.53%	3.83%	0.11%	0.20%	0.64%	4.91%	0.09%	1.34%
-3	0.53%	4.36%	0.14%	0.33%	0.71%	5.62%	0.20%	1.54%
-2	0.55%	4.91%	0.11%	0.45%	0.74%	6.36%	0.01%	1.55%
-1	0.42%	5.33%	0.10%	0.54%	0.71%	7.07%	-0.33%	1.22%
0	0.35%	5.68%	0.59%	1.13%	0.98%	8.06%	0.14%	1.35%
1	0.33%	6.01%	-0.41%	0.72%	0.64%	8.70%	-0.22%	1.13%
2	0.39%	6.40%	0.18%	0.90%	0.56%	9.26%	-0.24%	0.90%
3	0.50%	6.90%	0.11%	1.01%	0.72%	9.97%	0.22%	1.12%
4	0.48%	7.38%	-0.17%	0.84%	0.71%	10.69%	0.02%	1.14%
5	0.52%	7.90%	0.44%	1.28%	0.73%	11.42%	0.05%	1.19%
6	0.57%	8.47%	-0.01%	1.27%	0.78%	12.20%	0.14%	1.33%
7	0.66%	9.13%	0.48%	1.75%	0.72%	12.92%	0.31%	1.65%
8	0.59%	9.71%	0.23%	1.98%	0.81%	13.73%	0.27%	1.91%
9	0.52%	10.24%	-0.73%	1.25%	0.45%	14.18%	0.20%	2.11%
10	0.64%	10.88%	-0.01%	1.24%	0.71%	14.90%	0.25%	2.36%

Source: Researcher.

From table 1 above, the results of this study showed the presence of both positive and negative average abnormal returns. The study also found that negative and positive cumulative average abnormal returns are present at the East African Security Exchanges within the earnings announcement period. The descriptive statistics for the East African Stock Exchanges are shown in table 2 below

Table 2: Presentation of AAR Statistical measures.

Statistical measure of AAR	NSE	USE	DSE	RSE
Mean	0.06%	0.11%	0.52%	0.71%
Median	0.11%	0.13%	0.53%	0.71%
Skewness	-0.74	-0.45	-0.36	-0.18
Kurtosis	1.88	0.91	-0.24	1.96
Mode	-	-	-	0.71%

Source: Researcher.

From the results presented in table 1 and 2 above, the study concludes that the East African security markets are not efficient. A market is said to be efficient in if abnormal returns cannot be attained by using earnings announcements news to trade in the stock market (Rono, 2013).

4.4 The AAR and CAAR at the East African Stock Exchanges.

This study computed the AARs and CAARs for the East African Security Exchanges as shown in table 1 above. The graphical and statistical presentation of the four Stock Exchanges was presented. This helped to observe the behavior of the stock returns within the announcements period and to analyze whether the AAR and the CAAR are significant from zero as theorized.

4.4.1 Statistical measures of AAR and CAAR at the NSE.

The mean average abnormal return within a twenty-one (21) day event period for the NSE is positive 0.06% and the median is positive 0.11%. The total cumulative average abnormal return is positive 1.24%. Figure 2 below also shows graphical presentation of the AAR and the CAAR for the NSE.

Figure 2: A Graph of AAR and CAAR at the NSE.
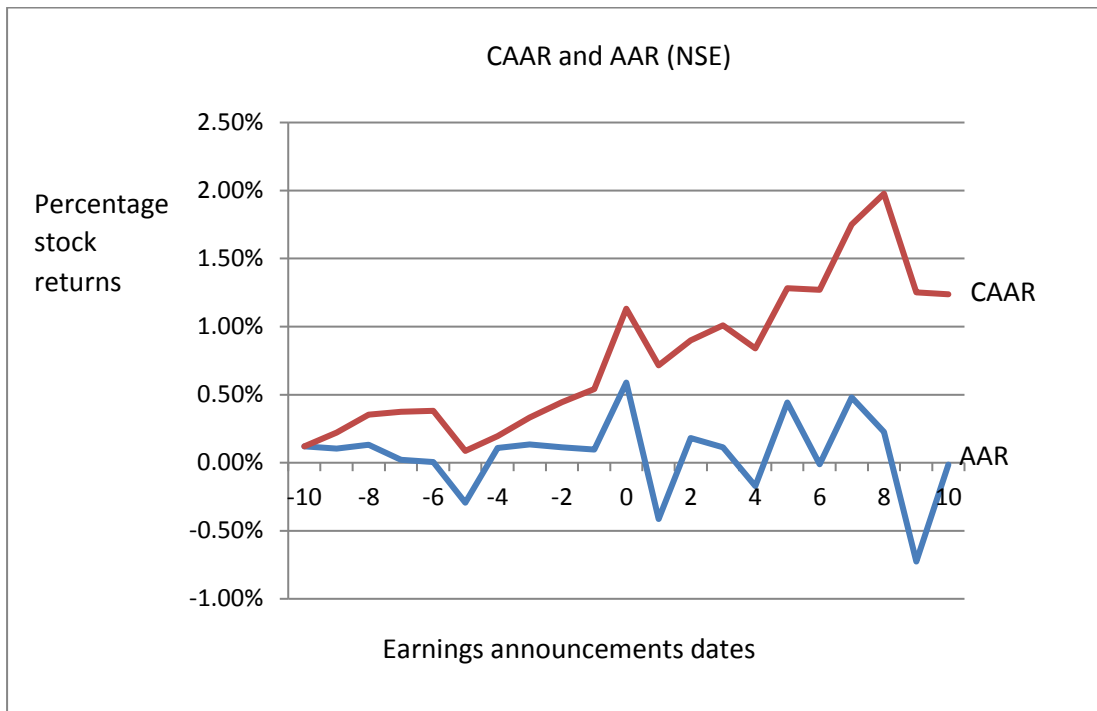
Source: Researcher.

The results in figure 2 above show the movement of the stock returns within the period of the study. The results indicate that there is a diverse movement of the AAR and the CAAR at the NSE. There are positive and negative abnormal returns and the cumulative abnormal returns within the period of the study. The AARs and the CAARs are tested at 1% significance level and the results submitted below.

Table 3: Significance test of AAR in NSE	
Mean	0.000589
Variance	8.54E-06
Observations	21
Hypothesized Mean Difference	0
df	20
t Stat	0.924365
P(T<=t) one-tail	0.183158
t Critical one-tail	2.527977
P(T<=t) two-tail	0.366315
t Critical two-tail	2.84534

Source: Researcher.

The mean AAR for NSE is positive 0.06%. This is not statistically significant at 1%

significance level.

| Table 4: Significance measure of CAAR at the NSE	
Mean	0.007818
Variance	2.97E-05
Observations	21
Hypothesized Mean Difference	0
df	20
t Stat	6.573667
P(T<=t) one-tail	1.05E-06
t Critical one-tail	2.527977
P(T<=t) two-tail	2.1E-06
t Critical two-tail	2.84534

Source: Researcher.

The mean of CAARs for NSE as presented in the table above is significant at 1%

significance level and ranges from zero to positive. Based on these results, the study,

therefore, concludes that there is the existence of abnormal returns during event

window and hence the CAAR cannot be zero. The theory of EMH states that a

security market has information efficiency if the prices of stocks adjust wholly and

immediately to reflect all the information available in the security market. This

implies that in an efficient market, abnormal returns cannot be realized by trading on

earnings information since the present prices of stocks reflect that information. The

stock markets instantly alter the share prices to appropriately absorb all the

information which is contained in the earnings announcement news of the earnings.

(Fama, 1970)

4.4.2 Measures of AAR and CAAR at the USE.

The movement of the AAR and the CAAR within the date of the earnings

announcements for USE is presented in figure 3 below.

Figure 3: A graph of AAR and CAAR at the USE
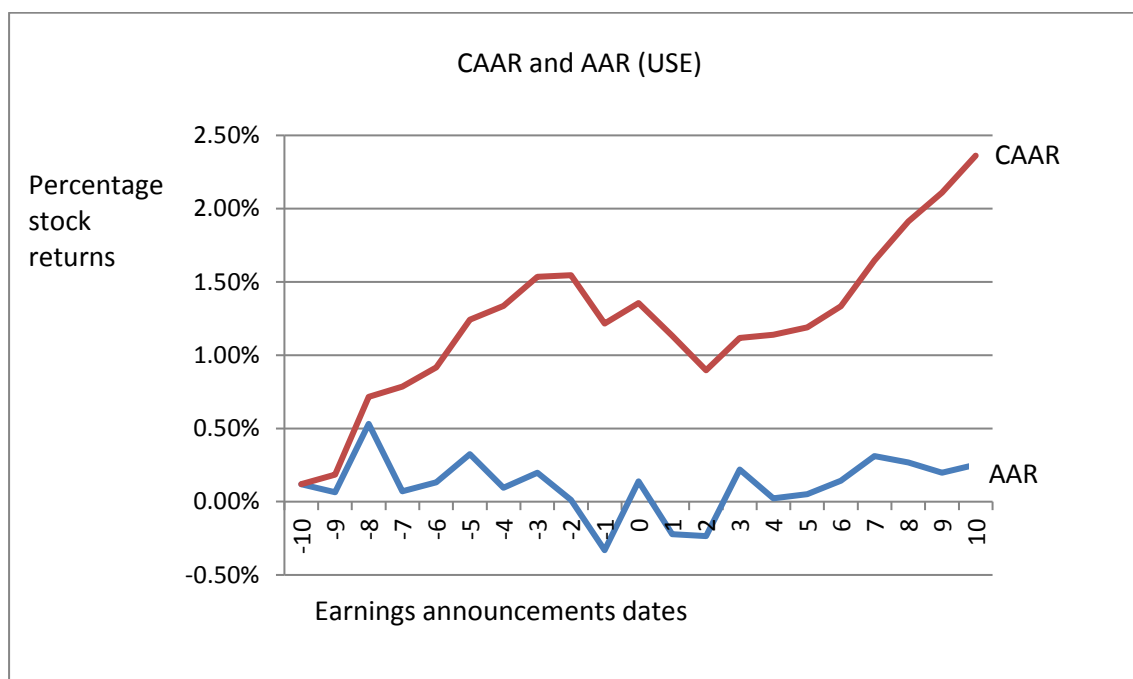
Source: Researcher.

The mean average abnormal return for the USE is positive 0.11% and the median is positive 0.13%. The total CAAR is positive 2.36%. The pattern of the movement of the stock returns in this stock exchange shows that there are both positive and negative AARs and the CAARs within the event window.

These AARs and the CAARs for the USE are tested at 1% significance level and the results presented below.

Table 5: Statistical test of AAR at the USE	
Mean	0.001125
Variance	3.94E-06
Observations	21
Hypothesized Mean Difference	0
Df	20
t Stat	2.596853
P(T<=t) one-tail	0.008622
t Critical one-tail	2.527977
P(T<=t) two-tail	0.017244
t Critical two-tail	2.84534

Source: Researcher.

The mean AAR for USE is positive 0.11%. This is not statistically significant at 1% significance level.

| Table 6: Statistic test of CAAR at the USE	
Mean	0.012280995
Variance	2.97823E-05
Observations	21
Hypothesized Mean Difference	0
Df	20
t Stat	10.31250674
P(T<=t) one-tail	9.4052E-10
t Critical one-tail	2.527977001
P(T<=t) two-tail	1.88104E-09
t Critical two-tail	2.845339707

Source: Researcher.

From the table (6) above, the mean CAARs at the USE ranges from zero to positive and is significant at 1% significance level within the event window. Hypothetically, a stock market is presumed to have information efficiency if abnormal returns cannot be achieved through trading on the basis of the information which is carried by the news for the announcements of earnings. This means the stock exchanges alter rapidly to reflect all the available information. Therefore, excess returns should not be present within the announcements dates given that the stock prices wholly include the entire information that is available.

4.4.3 Measures of AAR and CAAR at the DSE.

The behavior of AAR and the CAAR for the DSE is presented in the graph below. The EMH emphasize if a market is efficient, the existence of excess returns is not present for the period of the earnings announcements since the stock prices fully reflect the entire information available. Figure four (4) below is a graph which shows the presentation of the AAR and the CAAR at the DSE.

Figure 4: A graph of AAR and CAAR at the DSE.
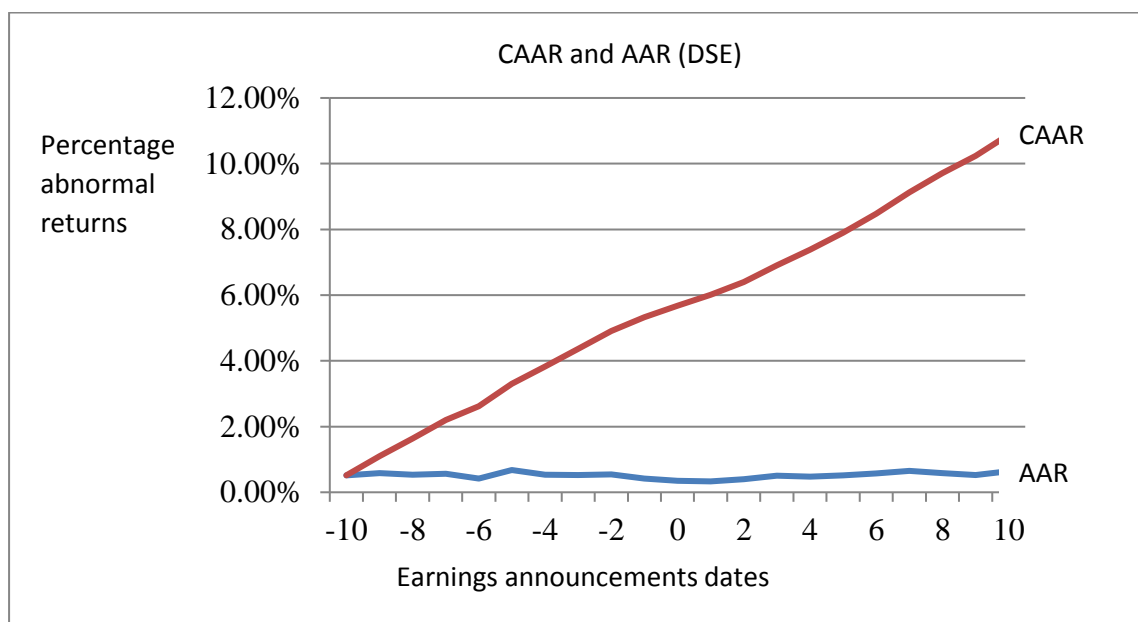
Source: Researcher.

The AAR at the DSE was positive throughout the event window and showed a similar pattern. The mean AAR was 0.52% and the median was positive 0.53%. The total cumulative average abnormal return is 10.88%.

The table below (7) shows the test of significance at 1% level for AAR and the CAAR for the DSE.

Table 7: Statistic test of AAR at the DSE	
Mean	0.005182
Variance	8.78E-07
Observations	21
Hypothesized Mean Difference	0
df	20
t Stat	25.33404
P(T<=t) one-tail	5.67E-17
t Critical one-tail	2.527977
P(T<=t) two-tail	1.13E-16
t Critical two-tail	2.84534

Source: Researcher.

The mean AAR for DSE is positive 0.52%. This is statistically significant at 1% level.

Table 8: Statistic test of CAAR at the DSE	
Mean	0.056433
Variance	0.000953
Observations	21
Hypothesized Mean Difference	0
df	20
t Stat	8.375338
P(T<=t) one-tail	2.85E-08
t Critical one-tail	2.527977
P(T<=t) two-tail	5.7E-08
t Critical two-tail	2.84534

Source: Researcher.

The mean CAARs for DSE as indicated in table 8 above ranges from zero to positive and is significant from zero. The study hence concludes that abnormal returns are present during the event window and thus the CAAR is not zero as theorized. The theory of the efficient market hypothesis present that when a stock market has efficiency, stock prices adjust instantly to reflect all the information present in the market and abnormal returns cannot be achieved (Fama, 1970).

4.4.4 Measures of AAR and CAAR at the RSE.

The movement of the AAR and the CAAR for DSE within the event window is presented below.

Figure 5: A graph of AAR and CAAR at the RSE.

CAAR and AAR (RSE)
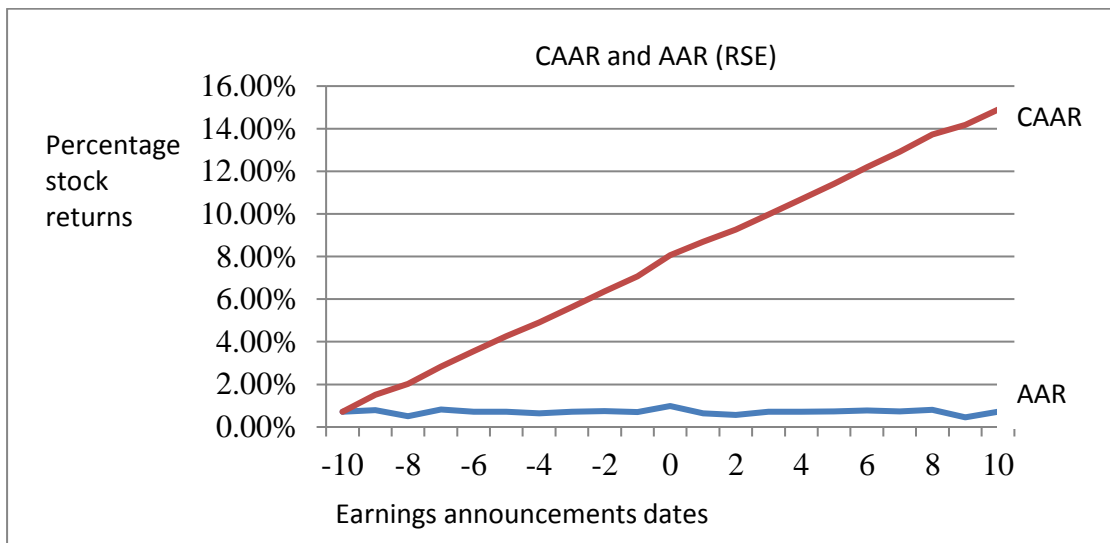
Source: Researcher.

The results indicate that the mean AAR is positive 0.71% and the median is 0.71%. The total CAAR is 14.90%. This study, therefore, concluded that RSE is not efficient since there are positive AARs and at the RSE within the earnings announcement period. Significance test for AAR and CAAR is presented below in table 9.

Table 9: Statistic test of AAR at the RSE	
Mean	0.007094
Variance	1.24E-06
Observations	21
Hypothesized Mean Difference	0
Df	20
t Stat	29.17184
P(T<=t) one-tail	3.63E-18
t Critical one-tail	2.527977
P(T<=t) two-tail	7.26E-18
t Critical two-tail	2.84534

Source: Researcher.

From the presented results for RSE, the AARs are significantly positive within the announcement date for the RSE. The test for CAAR is presented below.

| Table 10: Statistic test of CAAR at the RSE	
Mean	0.078518
Variance	0.001975
Observations	21
Hypothesized Mean Difference	0
Df	20
t Stat	8.096175
P(T<=t) one-tail	4.84E-08
t Critical one-tail	2.527977
P(T<=t) two-tail	9.69E-08
t Critical two-tail	2.84534

Source: Researcher

The mean CAARs for RSE as shown in table 10 above ranges from zero to positive and is significant from zero at 1% significance level. The study, therefore, concludes that abnormal returns are present during the event window and thus the CAAR is not zero as theorized. According to the EMH theory, the stock prices should change to portray all the available information which is present in the stock market and abnormal returns cannot be achieved by using the earnings announcement information. (Fama, 1970).

4.5 Research Findings

This study analyzed the behavior of different stock exchanges at the East African Stock Exchanges. The results for NSE showed that the mean AAR for the 21-day study period is positive 0.06% with a median of positive 0.11%. The total cumulative average abnormal return is positive 1.24%.The graphical presentation of AAR and the corresponding CAAR for NSE for the study window is shown in figure 2. The mean AAR for NSE is not significant at 1% level of significance while the mean CAARs for NSE significantly varies from zero at 1% level and lies from the ranges of zero to positive.

The results for USE showed that the mean average abnormal return is positive 0.11% and the median is positive 0.13%. The total CAAR is positive 2.36%. The AARs moved in diverse direction within the study period resulting in positive and negative returns. The CAARs also showed a similar behavior at the stock exchange returns within the event window. The results showing these patterns have been presented graphically in figure 3.The mean AAR for USE of positive 0.11% is not significant at 99% confidence level. The mean CAAR for the USE ranges from zero to positive and is significant statistically at 1% significance level within the event window.

The results for DSE showed that the AAR at the DSE was positive throughout the event window and showed a similar pattern. The mean AAR was 0.52% and the median was positive 0.53%. The total cumulative average abnormal return is 10.88%. These results are also presented graphically in figure 4. The mean AAR for DSE is 0.52% is significant at 1% significance level. The mean CAARs at the DSE is also significant from zero. The study hence concludes that abnormal returns are present during the event window and thus the CAAR is not zero as theorized.

The results for RSE showed that the mean AAR is positive 0.71% and the median is 0.71%. The total cumulative average abnormal return is 14.90%. These results are presented graphically in figure 5. The mean AARs and CAARs for RSE significantly different from zero and ranges between zero and positive. This study, therefore, concludes that abnormal returns are present during the event window and thus the CAAR is not zero as theorized.

The overall results from this study on the efficiency of the stock exchanges in East Africa indicate that positive and negative abnormal returns are present at the East African Security Exchanges within the earnings announcement period. Based on these

results, the study, therefore, concludes that there is the existence of abnormal returns during event window and hence the CAAR cannot be zero. The results from NSE and USE found that there is improved movement of stock prices within the earnings announcements period. This supports previous studies by Rono (2013) and Afego (2011) who submitted that the movement of the prices of stocks is improved in the earnings announcement month.

The study concludes that the East African security markets are not efficient. It is theoretically assumed that a stock market has efficiency when stock prices adjust wholly and immediately to reflect all the information available in the security market. This implies that abnormal returns cannot be realized by trading on earnings information since the present prices of stocks reflect the entire information. When a stock market is efficient, prices instantly alter to appropriately take up the information on earnings which is released to the market. (Fama, 1970).

Whereas the results of this study are not in agreement with the EMH theory which submits that, the absorption of new information and the reflection of this information on the stock prices is instant and impartial, the study supports the theory that earnings announcements information carries vital information which affects the stock prices. This has been clearly seen at the NSE and USE. The results of this study concur with similar studies carried out on the subject. Kiprono (2014) and Afego (2011) established that there is a significant abnormal reaction of stock prices within the earnings announcement period.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study was carried out with an objective of determining how earnings announcements affect stock returns of cross-listed stocks at the East African Security Exchanges. The study was undertaken with an aim of establishing whether an abnormal return is realizable within earnings period in these Stock Exchanges. A test of significance for the abnormal returns was also done as a way of testing the efficiency of these stock markets. To realize the objective of this study, the study used the null hypothesis which stated that CAAR is being not significant from zero.

5.2 Summary of Findings

Table one gives a presentation of the behavior of the AAR and CAAR within the earnings announcements. This study also analyzed the AAR and CAAR and presented these results for every stock exchange in the East African Security Exchanges. A security market is efficient if investors cannot utilize the information on earnings announcements to achieve abnormal returns. This means that the stock market adjusts the stock prices immediately to reflect information on earnings. As a result, abnormal returns cannot be attained within the earnings announcements window.

This study presented the results which observed that there was a diverse movement of CAAR and AAR at the East African Security Exchanges within the event window. This supports previous studies by Rono (2013) and Afego (2011) who submitted that the movement of the prices of stocks is improved in the earnings announcement

month. The study also notes that all the mean AARs for the stock exchanges are positive.

This study obtained results which showed that there is positive CAAR which is significant in all the four East African Stock Exchanges within the event window. The CAAR is also not zero as assumed in the EMH theory. This demonstrates earnings announcement present vital information to the security markets and this information is absorbed by the stock prices (Kipronoh, 2014). The results of the study also show that there are positive and negative AARs within the study period and the mean AAR is significant at the DSE and RSE but not significant at the NSE and the USE.

When a stock market is efficient, an investor cannot achieve abnormal returns. Given that there is a presence of positive CAARs which significantly vary from zero at 1% significance for all the East African Security Exchange within the earnings announcement period, the study concludes that the East African security markets are not strongly efficient. The theory of market efficiency holds that a market has efficiency if stock prices adjust wholly and immediately to reflect all the information available in the security market (Adelegan, 2009). It is, therefore, expected that the stock market instantly alters to appropriately incorporate the news carried by the earnings announcements to the prices of stocks. The theory implies that abnormal returns are not present when a market is efficient since excess returns cannot be realized by trading on earnings information since the present prices of stocks reflects that information (Rono, 2013).

5.3 Conclusions

The study submitted results which showed that positive CAARs are present and significant in the four East African Stock Exchanges within the event period, hence CAAR is not zero as hypothesized. This shows that earnings announcement news carry essential information which is absorbed by the stock markets and this information reflect on the stock prices (Afego, 2011). The study discovered that positive and negative AARs subsist within the study period and the mean AAR is significant at the DSE and RSE but not significant at the NSE and the USE. Since positive cumulative AAR, significant at 1% is present for all the East African Security Exchange during the earnings announcement period; the study concludes that the East African security markets are not strongly efficient

While the results of this study are not in agreement with the EMH theory on the impartial and immediate response of security prices in absorbing new information, the study supports the theory that earnings announcements information carries vital information which affects the stock prices. This can be clearly seen at the NSE and USE where there was a random behavior of stock prices and increased movement of the stock prices within the study period. This, however, was not the case for the DSE and RSE where the prices in RSE remained the same over the study period.

The study, therefore, concludes that a strong form of market efficiency does not exist at East African Security Exchanges. The NSE and USE show a semi-strong level of market efficiency while RSE and DSE have shown a weak form of market efficiency. This study adds to the prevailing literature on the performance of stock returns during the earnings announcements period in the East African stock markets with an aim of ascertaining the efficiency of these markets.

5.4 Recommendations

The conclusions is drawn from this study submits a weak form of EMH at the RSE and DSE. This is because of the presence of significant positive abnormal returns within the period of the public release of financial reports. This can be associated with the lack of movement of the stock prices for cross-listed stocks in these security exchanges. The findings also reveal that there are minimal abnormal returns at the NSE and USE. This can be associated with the fact that there was a movement of the prices of stocks in a random way in these markets. This shows that the markets have a semi-strong level of EMH in these markets.

The study is useful to investors, researchers, and policymakers who can help to improve the efficiency of the East African security markets. This will attract more investors in these markets and provide more capital to the firms listed on these exchanges and eventually help to spur the economic growth. The study recommends that further be carried out to improve the efficiency of the East African Stock markets. Active participation of investors from these countries can help in improving the stock markets levels of efficiency.

The security market should maintain a good record of the event dates for the listed companies such as earnings announcements dates so as to make this information easily available in a precise way. This can assist researchers who pursue studies on event studies. This is not the case in the meantime and accessing this information is difficult in all the security markets.

EMH theory is built on the premise that there is an abundance of information in the stock markets which is costless. This is not the case in NSE where historical information on the behavior is sold to researchers. NSE should, therefore, relay all the historical stock prices on their website without cost as it is the case with DSE and USE.

Policy makers and regulators at the RSE should promote more research on market efficiency. This will encourage more investors to participate in the security markets. This will encourage more companies to list on the RSE and to increase its liquidity. The firms will also benefit from capital which can be raised from the stock exchange. This will spur the country to more economic growth.

5.5 Limitations of the Study

This study experienced limitations as discussed in this section and that call for more research. The study focused only on annual earnings announcements and excluded all other public announcements. The results can be improved if quarterly and half-yearly announcements are considered. The reliability of the study can as well be improved if a distinction between positive and negative earnings announcements is done.

CAPM model was used in the study in determining the required returns. Critics of the model argue that it's a one-factor model and assumes that it is only the stock beta which has an effect on the stock returns. The study did not factor in other determinants of security returns such as the inflation rates, interest rates, and exchange rates at different markets. Three-factor model or the Market model can thus be used to generate results which can be relied on for comparison.

The sample of the study was limited since not many companies have done cross-listing at the East African Security markets. The researcher only observed the behavior of stock returns of these stocks in different stock exchanges and relied on the results in ascertaining the levels of efficiency in those exchanges.

The study used a short-term event window of 21 days. The results, therefore, can only be relied on to explain the behavior of stock returns after earnings announcements within a short period. The study can be done to ascertain the medium effect and also the long-term effect of earnings announcements on stock returns can be ascertained by use of a longer event period.

5.6 Suggestions for Further Research

The limitations experienced in this study can be used in carrying out further research which can improve the reliability of the study. Further research using quarterly and half-yearly earnings announcements can be done to find out their effects on stock returns of cross-listed stocks. A separation of positive and negative earnings announcements can also help in improvement of the results of the study.

The study utilized the CAPM model for computation of the required returns of the stocks. Further studies can employ the Market or the three-factor model for comparison. This can help to include other factors like interest rates, inflation, and exchange rates since all these affect the stock returns. The researcher also relied on a limited sample of study since few companies have cross-listed at the East African Security markets. The study observed the impact of earnings announcements in these stock exchanges to draw conclusions on levels of efficiency in those exchanges. Since the study showed that there were minimal movements of the stock prices of cross-

listed stocks especially in RSE and DSE, further research can be carried out to ascertain whether other stocks have the similar response to public announcements

This study was pursued with an aim of ascertaining the effect of earnings announcements on the returns of common stocks in the short run. Other studies can be pursued to determine the long-term effect or the medium effect of earnings announcements on stock returns. A longer event period window can, therefore, be used for this purpose.

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APPENDICES

Appendix 1: Cross listed companies in East African Stock Exchanges.

Company	Primary Listing	Cross-Listing Date	Exchange Market
KENYA AIRWAYS	NSE	28th March 2002	USE
KENYA AIRWAYS	NSE	1st October 2004	DSE
EAST AFRICA BREWERIES	NSE	28th March 2001	USE
EAST AFRICA BREWERIES	NSE	29th June 2005	DSE
JUBILEE INSURANCE	NSE	14th February 2006	USE
JUBILEE INSURANCE	NSE	20th December 2006	DSE
KENYA COMMERCIAL BANK	NSE	29th November 2008	USA
KENYA COMMERCIAL BANK	NSE	17th December 2008	DSA
KENYA COMMERCIAL BANK	NSE	18th June 2009	RSA
EQUITY	NSE	18th June 2009	USA
NATION MEDIA GROUP	NSE	19th October 2010	USE
NATION MEDIA GROUP	NSE	2nd November 2010	RSA
NATION MEDIA GROUP	NSE	21st February 2011	DSA
CENTUM INVESTMENT LTD	NSE	11th February 2010	USA
UMEME	USA	14th December 2012	NSE
UCHUMI LTD	NSE	October 14 2013	RSE
UCHUMI LTD	NSE	November 13 2013	USE
UCHUMI LTD	NSE	August 15 2014	DSA

Appendix 2: Date of earnings announcements.

Company	Date of earnings announcements
KENYA AIRWAYS	30th July 2015
EAST AFRICA BREWERIES	31st July 2015
JUBILEE INSURANCE	26th April 2016
KENYA COMMERCIAL BANK	2nd March 2016
EQUITY	8th March 2016
NATION MEDIA GROUP	22nd March 2016
CENTUM INVESTMENT LTD	16th June 2016
UMEME	21st March 2016
UCHUMI LTD	27th November 2015