

**THE EFFECT OF CROSS LISTING ON THE RETURNS OF STOCKS  
LISTED ON THE NAIROBI SECURITIES EXCHANGE**

**BY**

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**D63/80186/2012**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT  
FOR THE AWARD OF MASTERS OF SCIENCE IN FINANCE DEGREE**

**2015**

## **DECLARATION**

I declare that this is my original work and that it has not been presented in any other institution for academic credit.

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## **ACKNOWLEDGEMENT**

I would like to extend my sincere appreciation to all who contributed to the success of this work.

I thank my supervisor, Mrs. Winnie Nyamute for her dedicated guidance, advice, criticism and suggestions. Her tutelage has indeed seen me through the study.

I would also like to posthumously thank my late mother, Lucy A. Wanja Thuku, for teaching me the ways of this life. She continuously encouraged me and reminded me that everyone has a purpose in this life and with God this would definitely come to be. Thank you mama!

I also extend my gratitude to my lecturers who taught me in the MSC programme, thereby enriching my research with knowledge.

Finally, I thank The Almighty God for His mercies and unparalleled love for giving me the strength and seeing me through my studies.

## **DEDICATION**

I dedicate this work to my Dad, my spouse and my brothers and sisters for their unwavering support, financially or otherwise, throughout my school life. It is through their strict guidance that I have come this far you are truly pillars in my life and I am deeply indebted to them.

## ABSTRACT

It is perceived that cross-listing domestic stocks in foreign exchanges have significant valuation effects on a cross listed company's shares. The research study was based on the factors affecting stock returns of cross listed firms. The research questions sought to identify; the effects of firm size on value of stock of a firm, the effects of liquidity on value of stock of a firm and the effects of Investor base on value of stock of a firm. The study used an explanatory survey design. The target population comprised of seven cross listed Kenyan firms listed in the NSE namely: Equity bank, KCB, Kenya airways, Jubilee insurance, Centum Investment Ltd, Nation Media Company and the EABL. A census sampling technique was employed in selecting the companies from which the data was collected from in an effort to ensure that all the companies targeted were used to form the sample size. The researcher used documentary analysis as the main data collection method.

The data was obtained through analysis from company's annual reports, internet and NSE journals. The data collected was analyzed using descriptive methods and inferential statistics. The regression model was used to compute the overall effect of the changes in the stock returns for the cross listed firm. This study was of importance to management of both cross listed and none cross listed firms in understanding the benefits that a cross listed firm achieves and also firms were able to know the factors affecting the performance of a cross listed firm and improve on them in order to increase its operations and widen its market hence increasing it's the value of the stock.

The researcher found out that the firm size effect largely attributable to the difference in asset acquisition explained almost completely the changes that result from the changes in the value of stock with EPS and P/E ratios being significantly affected ( $p < 0.005$ ). The results also showed that liquidity has statistically significant impacts on the stock price evidenced through the P/E ratio ( $p < 0.005$ ). Lack of liquidity was explained as a friction form that may

have an adverse effect to the value of stocks. With regard to the investor base, no significant effects were identified ( $p > 0.005$ ). This was attributed to the inability of the cross listed firms to reduce their minimum trading significantly to increase the firm's base of individual investors. An increase in the investor base (trading volume) and a decrease in price noisiness could have had an effect on stock value positively. It was concluded that cross listed firms acquired a considerable amount of assets after cross listing an aspect attributed to the increase in operations as a result of the popularity and an increase in market share acquired by the company. This as a result influenced the liquidity ratios positively as was indicated by the P/E ratio and the EPS. The researcher recommended that in an effort to ensure that the cross listed companies were able to better influence their stock values; cross listed company's need to reduce their minimum trading units in order to attract more investors. This would increase their trading volumes hence increasing the value of their stocks, companies that cross list on the stock exchange need to also increase their scales of operations with an aim of reducing risks associated with asset acquisition with no fundamental increases in their operational scale and cross listed company's should ensure their financial statement reflect a strong financial position and good performances to influence investor decisions.

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## ABBREVIATIONS

<b>CMA</b>	Capital Markets Authority
<b>EMH</b>	Efficient-Market Hypothesis
<b>EPS</b>	Earnings per Share
<b>EABL</b>	East African Breweries Limited
<b>KCB</b>	Kenya Commercial Bank
<b>KQ</b>	Kenya Airways
<b>MST</b>	Market Segmentation Theory
<b>NMG</b>	Nation Media Group
<b>NSE</b>	Nairobi Stock Exchange
<b>P/E RATIO</b>	Price Earnings Ratio

# CHAPTER ONE

## INTRODUCTION

### *1.1 Background of the study*

Cross listing of shares is when a firm lists its equity shares on one or more foreign stock exchanges in addition to its domestic exchange. Due to globalization initiatives and deregulation of the financial landscape in the past decade, there has been a surge in cross-border listings by firms. In 2006, nearly 4700 firms cross listed on overseas exchanges globally, with the number of new foreign listings of around 1000 for that year (Hargis, 2008). Popular locations for foreign listing included the UK, the US and Japan. The financial performances of these companies have been able to improve as a result of cross listing.

Regional cross-listings in sub-Saharan Africa have been associated with expansion and the setting-up of operations in the host countries. In almost all cases, firms are large with a strong base in their home countries, and they first established operations in their host countries before deciding to cross-list. Most cross-listings are undertaken to expand operations in the host countries. Almost all the firms that are cross-listed (about 98 percent or 42 out of 43) have set up operations in the host countries. For instance; Eco bank Transnational has operations in the Cote D'Ivoire the home country and in Ghana and Nigeria, the host countries. Cross-listing in sub-Saharan Africa has been accompanied by an initial public offering and/or secondary market listing (Olatundun, 2009). These cross listed firms have enjoyed reduced cost of capital, and there has been improved available information to potential customers and suppliers due to increased media attention and higher quality accounting information. This has resulted to improved financial performance in these companies (Patell, 2006).

### **1.1.1 Cross listing**

Cross listing of shares is when a firm lists its equity shares in one or more foreign stock exchanges in addition to its domestic exchange. Companies choose to list on a foreign exchange with a view to improving stock visibility, investor base market segmentation, liquidity in that there is an additional place to buy and sell, more participants in the market and sometimes more time to trade the stock where the exchanges are in different time zones and helps to raise more capital in that investors are available from other markets and the company gets more exposure. Listing on a foreign exchange results in an enhanced information environment, due to the increased levels of information disclosure and better media awareness necessary to meet the mandatory listing and disclosure requirements.

An enhanced information environment should reduce adverse selection costs for investors and, thus, reduce the liquidity premium required. This in turn results in lower cost of capital. In the case of international cross-listing a foreign listing on an exchange with stricter disclosure requirements reduces investor's monitoring costs and improves stock valuation (Faruquee, 2007). Cross listed companies have been able to improve and broaden their shareholders base and gained a greater financial strength that has made them to increase their capital (Jayaraman, 2003).

### **1.1.2 Stock returns**

A stock return consists of the income and the capital gains relative on an investment. Stock returns can be affected by a number of things including volatility in the market, current economic conditions, and popularity of the company. The most common measure for stocks is the price to earnings ratio, known as the P/E.

This measure, available in stock tables, takes the share price and divides it by a company's annual net income. As a general rule of thumb, stocks with P/Es higher than the broader market P/E are considered expensive, while stocks with a below-market P/E are considered cheaper (Anderson, 2006).

Indexes can also be used to measure the overall progress of the market. An index is a statistical measure that represents the value of a batch of stocks. Investors use this measure like a barometer to track the overall progress of the market. Several kinds of indexes exist. i.e.; Price-weighted index: This kind of index tracks changes based on the change in the individual stock's return per share. Market-value weighted index: This kind of index tracks the proportion of a stock based on its market capitalization (or market value, also called market-cap). The broad-based index and composite index. Other popular measures include the dividend yield, price-to-book and, sometimes, price-to-sales (Paul, 2005).

### **1.1.3 Cross listing and Stock returns**

There is a vast academic literature on the impact of cross-listings on the returns of the stock. Most studies find that a cross-listing on a US stock market by a non-US firm is associated with a significantly positive stock return reaction in the home market. This finding suggests that the stock market expects the cross-listing to have a positive impact on firm value. (Brockman, 2003), shows that companies with a cross-listing in the U.S. have a higher valuation than non-cross-listed corporations, especially for firms with high growth opportunities domiciled in countries with relatively weak investor protection. The premium they find is larger for companies listed at official US stock exchanges than for over-the-counter listings and private placements.

(Brockman, 2003) argued that cross-listing reduces the extent to which controlling shareholders can engage in expropriation and thereby increases the firm's ability to take advantage of growth opportunities. (Brockman, 2003), analyze 526 cross-listings from 44 different countries on 8 major stock exchanges and document significant stock return reactions of 1.3% on average for cross-listings on US exchanges, 1.1% on London Stock Exchange, 0.6% on exchanges in continental Europe, and 0.5% on Tokyo Stock Exchange. These findings suggest that cross-listings create more value than on other exchanges and therefore there's a positive relationship between cross listing and stock returns.

#### **1.1.4 Nairobi Securities Exchange**

The Nairobi Securities Exchange (NSE) was constituted as Nairobi Stock Exchange in 1954 as a voluntary association of stockbrokers in the European community registered under the Societies Act, and is one of the active capital markets in Africa with 61 listed companies and more than 20 brokerage firms. The NSE is a member of the African Stock Exchanges Association. Nairobi Stock Exchange is Africa's fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP. The Exchange works in cooperation with the Uganda Securities Exchange and the Dar es Salaam Stock Exchange, including the cross-listing of various equities. Firms mainly from the Nairobi Stock Exchange have aggressively entered more than one market. Cross border listing has gained significance over the past few years since the signing of the East Africa Community treaty in 1999. The development of cross listing across national stock markets in Tanzania, Kenya, Uganda and Rwanda is a milestone in the EAC's drive for regional integration (Onyuma, 2012).

Share price movements at the NSE market are measured by Indices. An Index is a general price movement indicator based on a sample or all the security market companies. The NSE 20 share index has been used the longest and is based on 20 representative companies. It is calculated on a daily basis. In the last three years there has been an increase in the business in the Nairobi stock exchange and this has made prices of various stocks to increase substantially. Event based studies established direct relation between share prices change and earning (Ball and Brown 1968), (Baskin 1989). The assumption in this studies is that changes in share returns is as a result of changes in fundamental variables such as anticipated earnings, dividends and capital structure through stock splits (Arif and Khaw 2000).

## **1.2 Research Problem**

Cross-listing of stocks could expand a company's potential investor base more easily than if it was traded on a single market. Cross-listing brings foreign stocks closer to investors and offers several other straight forward advantages that stem from lower transaction costs. Cross-listing may contribute to share value by increasing stock liquidity through the numerous time zones and multiple currencies.

Expected returns positively correlate with liquidity, measured in terms of the bid-ask spread. Narrower spreads following cross-listing generate improved liquidity, which increases share value. Enhanced inter-market competition might lower the spread and therefore improve liquidity. As a result, cross listing of firms leads to improvement of financial performance of these firms (Parkinson, 2007).



Cross listing is one of several corporate policies, which has an impact on stock returns, Alexander, Eun and Janakiramanan, (1988). Also Amihud and Mendelson (2002) states that liquidity is a priced risk factor in the return generating process. Mittoo (1992) and Bancel and Mittoo (2001) report, on the basis a survey done with Canadian and European firms, that managers perceive that cross listings increase the total trading volume of the shares of a firm. Yet other studies report a negative impact for the home stock returns, Claessens, Kingebiel and Schmukler (2002); Moel (2001); Jaykumar (2002).

There was an analysis of monthly data starting 36 months before the first month of trading and ending 36 months after the first trading month to assess changes in expected returns. (Alexander *et al.*,1988). Since it analyses the stock price change at the date of listing and not the date of announcement, the high positive CARs before the event date may suggest that the cost of capital did decrease for cross listing firms.

A study on the short-term and long-term effects of cross-border listing announcements on companies listed at the NSE and their post listing performance reported that cross-listing announcements have statistically significant negative effects on stock returns. (Kuria, 2008). Moreover, (Mugo, 2010) and (Mugo *et al.*, 2011) reported that cross listing affects firm liquidity and P/E ratios. However, a closer look at these findings reveals fatal interpretational errors as the changes were never tested for significance. Unlike the developed market, studies on cross-listing on emerging markets are thin. (Kamotho, 2013) also carried out a research on the relationship between cross listing and liquidity and it revealed a positive relationship. He used regression analysis used to establish the relationship between cross listing and liquidity by use of the factors that affect the variables.

The results showed a correlation value (R) of 0.675 which depicts that there is a good linear dependence of cross listing on liquidity of the cross listed shares.

However, there is no study of effect and relationship of cross listing on stock returns on the NSE specifically looking at the volume of shares traded and turnover of the shares as a proxy for stock returns. This study sought to fill this gap by answering the question: Does cross listing in the Nairobi Securities Exchanges enhance the returns on the stocks?

### **1.3 Research Objective**

To determine the relationship between cross listing and returns of stocks listed on the Nairobi Securities Exchange.

### **1.4 Value of the study**

The findings of this study will be of benefit to:

Academicians as it will contribute to the understanding of the factors that drive cross listing specifically the stock returns and the extent of the importance of stock returns in cross listing. It also shows the gaps requiring the need for pursuing further studies in this area.

The management of both cross listed and non-cross listed firms in understanding the benefits that a cross listed firm achieves and also firms were able to know the factors affecting the performance of a cross listed firm and improve on them in order to increase its operations and widen its market hence increasing it's the value of the stock.

The Government will also use this study to be able to formulate strategies and policies concerning regional and international market also governments in coming up with ways of motivating firms into cross listing their shares.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section will seek to evaluate written and published literature revolving around cross listing and its relationship to the value of stocks and the market as well. The literature will cover cross listings all over the world with an emphasis on cross listing in Africa.

#### **2.2 Theoretical Review**

Scholars advance several independent theories on the reasons that might motivate companies to cross-list their securities on foreign markets (Allen, 2005).

The traditional argument for why firms seek a cross-listing is that they expect to benefit from a lower cost of capital that arises because their shares become more accessible to global investors whose access would otherwise be restricted because of international investment barriers. This in turn supports the market segmentation theory. A firm becomes more credible by providing information to the local capital market, and, in turn, this continuous flow of information allows the capital market to make faster, more accurate decisions (Cheng, 2007). This in turn supports the efficient market hypothesis theory. In addition the Dow Theory and Bonding Theory which relate to cross listing will also be discussed.

##### **2.2.1 Dow Theory**

This theory was formulated from a series of wall street journal editors (Dow,1900-1902) and it states that the market is in an upward trend if one of its averages (industrial or transportation) advances above a previous important high, it is accompanied or followed by a similar advance in the other (Bao, 2009).

Dow used his theory to create the Dow Jones Industrial Index and the Dow Jones Rail Index.

The Dow Theory on stock price movement is a form of technical analysis that includes some aspects of sector rotation. It is looked upon as a set of guidelines and principles to assist investors and traders with their own study of the market. The Dow Theory provides a mechanism for investors to use that will help remove some of the emotion. When analyzing the market, the theory ensures that firms are objective and see what is there, not what you want to see. If an investor is long, he or she may want to see only the bullish signs and ignore any bearish signals. Conversely, if an investor is out of the market or short, he or she may opt to focus on the negative aspects of the price auction and ignore any bullish developments. Dow Theory provides a mechanism to help make decisions less vague (Bao, 2009).

However, there is little academic support for the profitability of the Dow Theory. (Cremers, 2005), in a study in Econometrics showed that trading based upon the editorial advice would have resulted in earning less than a buy-and-hold strategy using a well-diversified portfolio. Cremers concluded that a buy-and-hold strategy produced 15.5% annualized returns from 1982–1999 while the Dow theory strategy produced annualized returns of 12%. After numerous studies supported Cremers over the following years, many academics stopped studying Dow Theory believing Cowles's results were conclusive.

### **2.2.2 Bonding Theory**

This theory was developed by Bowlby (1907 to 1990). The bonding theory has a growing empirical support. Firms from countries with weak investor protection regimes are more likely to cross-list in the large economies like US while firms that have a large controlling shareholder are less likely to cross-list.

Not only do cross-listed firms have higher valuations than non-cross listed firms subject to large stock market regulation have higher valuations than cross-listed firms not subject to regulation. Moreover, regulated cross-listed firms from countries with weak investor protection regimes enjoy higher premia. Cross-listed firms have lower private benefits of control, as proxied by voting premia in dual class shares. When firms cross list in large stock markets, their cost of capital will decline. (Han, 2007).

However, the criticism of the bonding hypothesis has also been growing. It stemmed from the observation that cross-listed firms can misbehave without suffering notable legal consequences which renders bonding largely toothless. The fact of cross-listing doesn't seem to change firms' earnings management, at least in some poorly governed countries (Lopes, 2007).

The bonding theory however has not paid enough attention to the potential negative influences of home country institutional factors (e.g., ownership structure) on cross listed firms' behavior. This is surprising because a cross listed firm is subject to the relevant laws and regulations of both its home country and cross listing host country (Benos, 2004) and (Brockman, 2003). The evidence in (Benos, 2004) and (Brockman, 2003) suggest that in the case of earnings management, home country institutional factors still exert a significant negative effect on the quality of cross listed firms' financial reporting.

### **2.2.3 Market Segmentation Theory**

This theory is also known as the segmented market hypothesis and was developed by Kotler, 1984. The Market Segmentation Theory tries to describe the relation of the yield of a debt instrument with its maturity period.

The Market Segmentation Theory explicates the reasons behind the prominence of normal yield curves over the other forms of yield curves.

Furthermore, short and long-term markets fall into two different categories. Therefore, the yield curve is shaped according to the supply and demand of securities within each maturity length (Cremers, 2005).

The Market segmentation theory states that most investors have set preferences regarding the length of maturities that they will invest in. Market segmentation theory maintains that the buyers and sellers in each of the different maturity lengths cannot be easily substituted for each other. An offshoot to this theory is that if an investor chooses to invest outside their term of preference, they must be compensated for taking on that additional risk. This is known as the Preferred Habitat Theory (Cremers, 2005).

In the Market segmentation theory, it is assumed that short term and long term rates are determined in separate or segmented markets. Some investors prefer short term securities. They invest in short term bonds while others prefer long term bonds. As a result bonds having different maturity periods are not perfect substitutes for one another. Such an argument implies that lenders and borrowers are interested in bonds of only one maturity and even if the return on a sequence of shorter bonds were considerably higher than the return on those bonds, they would not attempt to switch into shorter bonds. Therefore, expectation concerning short rates would have no role in determining long rates.

Thus even if short term rate increases in any period of time this theory implies that investors will not shift from long term bonds to short term bonds in order to enjoy higher rate in the short run. Thus even if the short run rate of interest increases it will not influence the long term rate of interest (Cremers, 2005).

Market segmentation theory is based on institutional practices followed by the commercial banks and insurance companies and investment trusts. While the commercial banks mostly deal in short term securities, insurance companies and investment trusts mostly deal in long term securities. Market segmentation theory is however not free from defect as it overlooks the fact that there is considerable degree of overlapping between different markets. Same institutions operate in different markets dealing in securities of different maturities (Cremers, 2005).

The choices of investors are an important part of the Market Segmentation Theory. According to this theory the investors need to make their choices beforehand. It has been seen that the investors normally want to invest in debt instruments that have shorter term periods. The main reason behind this is that the investors like to have investment portfolios that have a certain amount of liquidity. The short term debt instruments provide them with that luxury. Thus according to the Market Segmentation Theory, the financial market that deals in debt instruments of shorter terms would experience more demand. As per the Market Segmentation Theory if a particular debt instrument has higher demand it is supposed to cost more. The yield from the same would be relatively low. The fact that the yields of short-term debt instruments are lower than that of the long-term debt instruments could be understood from this explanation (Cremers, 2005).

It is also revealed that earlier demographic factors were considered as best basis of segmentation but they are no longer effective due to globalization (Amandeep, 2011). According to the Market Segmentation Theory the financial instruments that have separate term periods cannot be replaced with one another. This means that the demand as well as supply of debt instruments having long term periods and short term periods in the financial markets is ascertained separately.

#### **2.2.4 Efficient-Market Hypothesis**

This theory was created in the 1970s by Eugene Fama. In finance, the efficient-market hypothesis (EMH) assumes that financial markets are "informationally efficient". That is, one cannot consistently achieve returns in excess of average market returns on a risk-adjusted basis, given the information available at the time the investment is made (Karolyi, 2006). Fama defined an efficient market as a market: with a large numbers of rational profit maximizers actively competing against each other to predict future market values of individual securities; and in which important current information is almost freely available to all participants. "In an efficient market, on the average, competition will cause the full effects of new information on intrinsic values to be reflected instantaneously in actual prices" (Fama 1965).

There are three major versions of the hypothesis: "weak", "semi-strong", and "strong". The weak-form EMH claims that prices on traded assets already reflect all past publicly available information. The semi-strong-form EMH claims both that prices reflect all publicly available information and that prices instantly change to reflect new public information. The strong-form EMH additionally claims that prices instantly reflect even hidden or "insider" information. Critics have blamed the belief in rational markets for much of the late 2000s financial crisis. In



response, proponents of the hypothesis have stated that market efficiency does not mean having no uncertainty about the future, that market efficiency is a simplification of the world which may not always hold true, and that the market is practically efficient for investment purposes for most individuals (Karolyi, 2006).

In weak-form efficiency, it is implied that the market is efficient, reflecting all market information. It assumes that the rates of return on the market should be independent and that future prices cannot be predicted by analyzing prices from the past. Excess returns cannot be earned in the long run by using investment strategies based on historical share prices or other historical data. Technical analysis techniques will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide excess returns. Share prices exhibit no serial dependencies, meaning that there are no "patterns" to asset prices. This implies that future price movements are determined entirely by information not contained in the price series. Hence, prices must follow a random walk. This 'soft' efficient market hypothesis does not require that prices remain at or near equilibrium, but only that market participants not be able to systematically profit from market 'inefficiencies' (Karolyi, 2006).

To test for weak-form efficiency, one can use Statistical Tests for Independence for instance the autocorrelation tests (returns are not significantly correlated over time) and runs tests (stock price changes are independent over time) or the trading tests where the filter rule could be used, which shows that after transaction costs, an investor cannot earn an abnormal return. In semi-strong-form efficiency, it is implied that the market is efficient reflecting all publicly available information. Share prices adjust to publicly available new information very rapidly and in an unbiased fashion, such that no excess returns can be earned by trading on that information. Semi-

strong-form efficiency implies that neither fundamental analysis nor technical analysis techniques will be able to reliably produce excess returns. To test for semi-strong-form efficiency, the event test or the regression/time series tests can be used. The semi-strong-form efficiency incorporates the weak-form efficiency. (Fama, 1995)

In strong-form efficiency, it is implied that the market is efficient reflecting all information both public and private, building and incorporating both the weak-form EMH and the semi-strong form EMH. Since share prices reflect all information, public and private, no one can earn excess returns. If there are legal barriers to private information becoming public, as with insider trading laws, strong-form efficiency is impossible, except in the case where the laws are universally ignored. To test for strong-form efficiency, a market needs to exist where investors cannot consistently earn excess returns over a long period of time. Even if some money managers are consistently observed to beat the market, no refutation even of strong-form efficiency follows: with hundreds of thousands of fund managers worldwide, even a normal distribution of returns (as efficiency predicts) should be expected to produce a few dozen "star" performers (Karolyi, 2006). The strong-form efficiency can be tested using; Insiders, exchange specialists analysts and institutional money managers.

### **2.3 Determinants of stock returns**

There are forces that move a stock up or down. These forces fall into three categories: fundamental factors, technical factors and market sentiment.

### **2.3.1 Fundamental Factors**

In an efficient market, stock returns would be determined primarily by fundamentals, which, at the basic level, refer to a combination of two things. That is; an earnings base (earnings per share (EPS) and a valuation multiple (a P/E ratio, for example).

An owner of a common stock has a claim on earnings, and earnings per share (EPS) are the owner's return on his or her investment.

When you buy a stock, you are purchasing a proportional share of an entire future stream of earnings. That's the reason for the valuation multiple: it is the price you are willing to pay for the future stream of earnings.

Part of these earnings may be distributed as dividends, while the remainder will be retained by the company for reinvestment. We can think of the future earnings stream as a function of both the current level of earnings and the expected growth in this earnings base.

Although we are using EPS, an accounting measure, to illustrate the concept of earnings base, there are other measures of earnings power. Many argue that cash-flow based measures are superior. For example, free cash flow per share is used as an alternative measure of earnings power. (Siranga, 2013)

### **2.3.2 Technical Factors**

Things would be easier if only fundamental factors set stock returns. Technical factors are the mix of external conditions that alter the supply of and demand for a company's stock. Some of these indirectly affect fundamentals.

(For example, economic growth indirectly contributes to earnings growth.) Technical factors include the following:

**Inflation** - We mentioned inflation as an input into the valuation multiple, but inflation is a huge driver from a technical perspective as well. Historically, low inflation has had a strong inverse correlation with valuations (low inflation drives high multiples and high inflation drives low multiples). Deflation, on the other hand, is generally bad for stocks because it signifies a loss in pricing power for companies (Harper, 2013).

**Economic Strength of Market and Peers** - Company stocks tend to track with the market and with their sector or industry peers. Some prominent investment firms argue that the combination of overall market and sector movements as opposed to a company's individual performance, determines a majority of a stock's movement. (There has been research cited that suggests the economic/market factors account for 90 %) For example, a suddenly negative outlook for one retail stock often hurts other retail stocks as "guilt by association" drags down demand for the whole sector.

**Substitutes** - Companies compete for investment dollars with other asset classes on a global stage. These include corporate bonds, government bonds, commodities, real estate and foreign equities. The relation between demand for U.S. equities and their substitutes is hard to figure, but it plays an important role.

**Incidental Transactions** - Incidental transactions are purchases or sales of a stock that are motivated by something other than belief in the intrinsic value of the stock.

These transactions include executive insider transactions, which are often prescheduled or driven by portfolio objectives. Another example is an institution buying or shorting a stock to hedge some other investment. Although these transactions may not represent official "votes cast" for or against the stock, they do impact supply and demand and therefore can move the price.

Demographics - Some important research has been done about the demographics of investors. Much of it concerns these two dynamics: 1) middle-aged investors, who are peak earners that tend to invest in the stock market, and 2) older investors who tend to pull out of the market in order to meet the demands of retirement.

The hypothesis is that the greater the proportion of middle-aged investors among the investing population, the greater the demand for equities and the higher the valuation multiples (Harper, 2013).

Trends - Often a stock simply moves according to a short-term trend. On the one hand, a stock that is moving up can gather momentum, as "success breeds success" and popularity buoys the stock higher. On the other hand, a stock sometimes behaves the opposite way in a trend and does what is called reverting to the mean. Unfortunately, because trends cut both ways and are more obvious in hindsight, knowing that stocks are "trendy" does not help us predict the future. (Note: trends could also be classified under market sentiment.) (For more insight, check out Short-, Intermediate- and Long-Term Trends.)

Liquidity - Liquidity is an important and sometimes under-appreciated factor. It refers to how much investor interest and attention a specific stock has. Wal-Mart's stock is highly liquid and therefore highly responsive to material news; the average small-cap company is less so.

Trading volume is not only a proxy for liquidity, but it is also a function of corporate communications (that is, the degree to which the company is getting attention from the investor community). Large-cap stocks have high liquidity: they are well followed and heavily transacted. Many small-cap stocks suffer from an almost permanent "liquidity discount" because they simply are not on investors' radar screens. (Harper, 2013)

### **2.3.3 Market Sentiment**

Market sentiment refers to the psychology of market participants, individually and collectively. This is perhaps the most vexing category because we know it matters critically, but we are only beginning to understand it.

Market sentiment is often subjective, biased and obstinate. For example, you can make a solid judgment about a stock's future growth prospects, and the future may even confirm your projections, but in the meantime the market may myopically dwell on a single piece of news that keeps the stock artificially high or low. And you can sometimes wait a long time in the hope that other investors will notice the fundamentals.

Some investors claim to be able to capitalize on the theory of behavioral finance. For the majority, however, the field is new enough to serve as the "catch-all" category, where everything we cannot explain is deposited (Siranga, 2013).

### **2.4 Empirical Review**

A review of the impacts of a foreign stock listing on the returns of the shares on the domestic market using the standard event-time methodology was carried out by; (Howe and Kelm, 1987). First, they measured the impact of a firm's first, second and third overseas listings.

Secondly, they segregated the sample by listing location in order to discover whether or not listings on different exchanges have different price effects. The 'event' day taken in this research is the actual listing date. The time between application and approval ranged from one to nineteen days with an average of 7.5 days. The time between approval and actual listing date ranged between three and eighty- three days with an average of 11.7 days. According to their results, 'a firm's first overseas listing appears to be harmful to shareholder wealth'.

The CARs appeared to be negative 58 days prior to the actual listing date and remained negative forty days after the 'event'. The results from examining the listings on individual exchanges showed also negative effects. The cumulative average residual over the 131-day period was about -5.5%.

An analysis of monthly data starting 36 months before the first month of trading and ending 36 months after the first trading month to assess changes in expected returns was carried out by (Alexander *et al.*, 1988). Their empirical results indicated that non-Canadian companies experienced an expected return decline after a cross listing, while the result for Canadian companies was not significant. This could indicate that non-Canadian companies were based in partially segmented markets and that the Canadian market was more or less integrated with the American market (Perotti, 1997). This is because it analyzed the stock returns change at the date of listing and not the date of announcement, the high positive CARs before the event date may suggest that the cost of capital did decrease for cross listing firms.

Mittoo (1992) and Halling *et al.* (2004) argue that the foreign sales of a firm increase the trades of cross listed shares in the international markets. This stylized fact may reflect that foreign investors prefer, and trade more, assets of firms that have sales in the foreign country.

This is related with Merton's (1987) investor recognition hypothesis. This study examined the increase in the U.S. investor base conditional on ownership structure using a 16-year panel of 277 Canadian firms listed on U.S. stock exchanges between 1989 and 2004. The work is related to that of Bris, Cantale, and Nishiotis (2005) who used an event study of 21 dual-class firms that list one of their share classes in the U.S. to disentangle competing cross listing hypotheses. They find that improved liquidity and access to foreign investors are the most important effects, while the effects of improved investor protection are economically small. In this study they examine a broader group of firms, both firms that are closely- and widely-held and firms that are cross-listed and not cross listed, while controlling for liquidity effects.

This study is also related to Doidge et al. (2006) who find that foreign firms with concentrated ownership that cross-list on a U.S. exchange benefit more than widely-held firms in terms of increased valuation and analyst coverage.

Even though it concerns primarily the cross listed firms, foreign participation will also benefit the liquidity of shares traded only in the local market. If the returns of privatized and local companies are positively correlated, foreigners will share some of the risk borne only by domestic investors prior to privatization.

This reduces the required risk premium and thereby increases the value of domestic shares. Fernandes (2005) analyses the impact of the first ADR on the liquidity of non-cross listed home stocks and finds positive effect.



The few other studies that address the impact of cross listing on the non-cross listing home shares focus on the impact on returns Melvin and Valero-Tonone (2004); Bradford, Martin and Whyte (2002) and claim that the observed effects (positive or negative) are either information or competition-driven.

A survey on the economic implication of the decision to list a company's shares on a foreign exchange was carried out by (Karolyi, 1996). Karolyi focused on the valuation and liquidity effects of the listing decision, the impact of listing on the company's global risk exposure and its costs of equity capital. The survey consisted of 40 studies. The main findings were as follows: the impact on the stock returns around a cross listing was initially favourable after the listing date, however the post-listing period seemed to be associated with highly variable performances, depending on the home and listing market, the company's capitalisation and capital raising needs and other company-specific factors. After a company gets listed on a foreign stock exchange, its stock experiences on average an increase in trading volume.

The liquidity improves overall, but depends again on the market place and the scope of foreign ownership restrictions in the home market. Furthermore, firms will experience a decrease in exposure to domestic market risk (Perotti, 1997).

## **2.5 Summary of the Literature Review**

From the above theoretical and empirical studies, it's apparent and clear that cross listings have been widely researched on and empirically evaluated. This shows the great amount of interest in the area as the world gears to a global trade platform. The literature has clearly demonstrated the impact of cross listing on stock returns with much of it demonstrating a positive effect.

Previous studies document that cross-listing increases firm's market values, but the sources of such gains are not yet fully understood. One important question is whether and to what extent cross-listing affects firms' insiders to expropriate minority shareholders by trading on insider information. According to the bonding hypothesis, cross-listing strengthens outside investor protection (Adriana, 2007). Given that cross-listed companies are subject to the domestic and foreign country's legislations, the resulting stricter restrictions of insider trading the literature has not shown the likelihood to mitigate any potential private benefit of both insiders and controlling shareholders at the expense of the minority shareholders. According to (Stulz, 2009) cross listing helps provides protection to investors and there are studies that have been carried out on the perceptions of unfair practices, level the playing field for investors, and, as a result, attracts more capital and lowers the cost of capital. Insiders of cross-listed companies are also less likely to trade on insider information because cross-listing can improve investor recognition and enlarge a firm's investor base (Hargis, 2008).

In addition, since cross-listing decreases the level of information asymmetry and improves the firm's visibility through greater analyst coverage, increased disclosure requirements, a more thorough investor monitoring, a better accuracy and an increased media attention (Adriana, 2007).

All these studies have focused on a number of issues surrounding cross listing but there has been no known study carried out focusing on the value of stock of the cross listed firms in developing economies such as Kenya. This study will therefore bridge the gap of knowledge on the value of stock of cross listed firms in developing countries such as Kenya.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This section describes the methodology employed to carry out the study, the population and the sample of the study, the analytical model employed and the tests of significance.

#### **3.2 Research Design**

The study used an explanatory survey design. Explanatory research design helped to explain the cause and effect relationship of the study, data collection method and selection of subjects (Patton, 2000). Explanatory research identifies the cause and effect of a specific event or series of events. It typically seeks to identify a type of behavior occurring in a current market environment. It was a descriptive research study.

The basic idea behind this research design was to measure variables relating to the dependent and independent variable. The research design was chosen because it would enable the study to assess the impacts of the various factors affecting value of stock in a number of industries thereby excluding the extreme effects of other intervening factors that could be affecting a given company's value of stock.

#### **3.3 Population**

The population consisted of all the eight cross listed Kenyan firms listed in the NSE, therefore was a census study.

#### **3.4 Data collection**

Secondary source of data was employed in the data collection process because the research was a typically quantitative study.

The data was obtained from annual reports sourced from NSE. Yearly data was obtained from 1999 to 2013 for the target companies. This data covered 3 years before and after the respective company was cross listed. The data collected consisted of; the firm size, Stock Returns, liquidity and the shareholders base.

Variable	Measurement
Stock Returns	Total Stock Return = $\frac{(P_1 - P_0) + D}{P_0}$
Firm Size	Will be measured in terms of the company's assets base
Liquidity	Net income / Average assets
Investors Base	Percentage growth in the number of investors after cross listing.

### 3.5 Data Analysis

In order to establish the effect of cross listing on stock returns as the overall objective, the study used a regression analysis. Data collected was analyzed using descriptive methods and inferential statistics. Descriptive methods are normally used to analyze the data where frequencies and proportions were used in interpreting the results. Inferential methods such as Pearson chi square test of association were used to show the relationship between cross listing and stock returns.

#### 3.5.1 Analytical model

The regression model that was used to illustrate the effects of cross listing on stock returns was as below;

$$S_R = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + e$$

Where:  $S_R$  = Stock returns

$B_1, B_2, B_3, B_4, B_5$ , are slope coefficients.

$\alpha$  = Intercept

$X_1$  = Firm Size

$X_2$  = Liquidity

$X_3$  = Investors Base

$e$  – Error

### **3.5.2 Test of Significance**

T-tests were used to determine whether there was a significant difference between the two sets of means. Therefore t-tests using SPSS statistical program were employed in this study. The above relationship was tested for significance by use of a t-test at the 95% confidence level.

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents data analysis, interpretation and presentation. The objective of the study was to determine the effect of capital market imperfection on investment cash flow sensitivity of listed firms in Nairobi Securities Exchange. Data was collected from all the firms listed at the Nairobi Securities Exchange. The data sources were the published annual reports of the listed firms spanning fourteen years (1999-2013) as well as other publications from the NSE. Data was collected based on the variables of the study, that is, cross-listing and stock returns.

#### **4.2 Description of data**

The study looked at companies whose shares are cross listed as tabulated in Appendix 1, in order to determine the effect of cross listing on stock returns.

The data was collected over a six year period for each firm. The six year period was an equal split between the pre-cross listing period and the post-cross listing period. The significance level was tested at 0.05 confidence interval.

#### **Appendix 2: Trading volumes of shares before and after cross listing**

The findings as shown in Appendix 2, all the cross listed companies showed an increase in shares traded after cross listing except for and Kenya Airways in DSE and KCB in RSE. Only a few securities showed a decrease in the volume of shares traded with slight decreases in the volumes.

**Table 4.2.1 Period of data collection and analysis for firms cross listed in East Africa.**

Company	Period of Study	
	Pre Cross Listing Period	Post Cross Listing Period
Kenya Commercial Bank	2005 to 2007	2008 to 2010
Nation Media Group	2007 to 2009	2010 to 2012
Centum Investments Limited	2007 to 2009	2010 to 2012
Jubilee Holdings Limited	2003 to 2005	2006 to 2008
Equity Bank Limited	2006 to 2008	2009 to 2011
East Africa Breweries Limited	1998 to 2000	2001 to 2003
Kenya Airways	1999 to 2001	2002 to 2004
Uchumi	2010 to 2012	2013 to 2014

*Source: Research Data*

Table 4.2.1 indicates the years in which the study was carried out for each of the cross listed company.

**Table 4.2.2 Computed Industry Values**

Firms Value				
	N	Mean	Std. Deviation	Std. Error Mean
Computed Value	32	6.8211	1.2823	0.12455
Investor Base				
	N	Mean	Std. Deviation	Std. Error Mean
Computed Value	32	7.5211	1.7058	0.1442
Liquidity				
	N	Mean	Std. Deviation	Std. Error Mean
Computed Value	32	1.22	0.78674	0.07641
EPS Value				
	N	Mean	Std. Deviation	Std. Error Mean
Computed Value	32	7.55	1.24504	0.12093
P/E Value				
	N	Mean	Std. Deviation	Std. Error Mean
Computed Value	32	4.61	0.998834	0.09600

*Source: Research Data*

The values acquired from the means were employed as the theoretical means which would be used as a basis of measuring the significances in the variations values of stock after evaluating the changes in the factors identified to have been affecting the stocks. The means would be used to evaluate how each of the factors affected the EPS and the P/E ratios in each of the companies with an aim of trying to establish if either of the factors had any direct effects on the stock returns.

### **4.3 Interpretation of results**

To establish the relationship between cross listing and stock returns of the cross listed shares, the study adopted the model below:

$$S_R = \alpha + B_1X_1 + B_2X_2 + B_3X_3 + e$$

#### **4.3.1 Effect of Liquidity on the Stock Returns**

The study sought to establish the effects of liquidity on stock returns by examining the effects of the changes in the liquidity status of firms on the changes in the EPS and the PE ratios. This was done by comparing the changes to the average means of the transformed standardized values of the firm over the period of time for which the data had been collected. The means of the liquidity ratios and the EPS and P/E ratios after standardization were then calculated and evaluated.

Correlation was done to establish the direct relationships between the changes in the liquidity ratios and the stock returns indicators, that is, EPS and PE ratios.



### **Appendix 3: Correlation of Standardized Liquidity Ratios and the measures of Stock Value (Before and after Cross listing)**

The findings as shown in Appendix 3; The EABL company indicated a significant relationship between its standardized liquidity ratios both before and after cross listing with both EPS ( $p = 0.002$ ) and PE ratios ( $p = 0.003$ ). The relationship however was weak in both cases as was indicated by the person correlation values.

Equity bank indicated a significant relationship between the between the standardized liquidity ratios of the bank and EPS ( $p = 0.003$ ) and the P/E ratios ( $p = 0.000$ ). These values were found to be strongly correlated as was indicated by the person correlation values ( $p > 0.5$ )

The KCB bank standardized liquidity ratios indicated no significant relationship with the EPS values ( $p = 0.340$ ) but there was a significant relationship between the liquidity relations over the period over which the data was collected and the P/E ratio ( $p = 0.000$ ). The variation in the EPS and the PE ratio was regarded insignificant as the P/E ratio was derived from the EPS ratio.

KQ airline liquidity ratio also indicated significant relationships with the EPS ratio ( $p = 0.004$ ) and the P/E ratio ( $0.002$ ). The relationship correlation was also strong as was indicated by the person correlations values.

Jubilee Company also indicated a significant relationship between its liquidity ratios and the EPS ( $p = 0.000$ ) and the P/E ratios ( $p = 0.003$ ). These ratios were however negative which was attributed to the fact that the company's liquidity ratios below the industry values and showed very little trends of improvement before and after the cross listing.

The same case was evident for the Centum Company which indicated a significant relationship between its liquidity ratios and the EPS ( $p = 0.002$ ) and the P/E ratios ( $p = 0.000$ ). These ratios were however negative which was attributed to the fact that the company's liquidity ratios below the industry values and showed very little trends of improvement before and after the cross listing.

#### **4.3.2 Effect of Investor Base on the Stock Returns**

The study sought to establish how investor base affected the value of stock for the 8 cross listed companies before and after cross listing. This was in an effort to determine the companies that had cross listed.

#### **Appendix 4: Effect of Investor base on the Stock Returns**

The findings as shown in Appendix 4; among the data sets that were collected only two companies' indicated a significant effect after they had been cross listed on the stock exchange. This companies were the Equity bank  $p = 0.001$  and the KQ airline ( $p = 0.003$ ).

This significances after the cross listed companies were considered outliers in relation to the industry values and as such the study did not take much significances to the changes in the investor bases in this two companies.

This was interpreted to mean that there were insignificant changes in the investor bases both before and after the cross listing process. This could have been attributed to the company principles on the acquisition of more capital for operation.

**Table 4.3.3 Model summary for the regression Model**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.960 <sup>a</sup>	.922	.914	.13425
a. Predictors: (Constant), Investor Base, Liquidity, Firm Size				

**Source: Research Data**

The model summary indicated that about 92.2% (R Square 0.922) of the regression model could be accounted for in the study. This clearly indicates that there's a positive linear relationship between cross listing and stock returns. With the adjusted R Square of .914, the model showed that there are other factors that affect stock returns of cross listed firms which are not included in this model.

**Table 4.3.4 Overall regression model**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.809	.109		7.437	.000
	Firm Size	.423	.034	.835	12.393	.000
	Liquidity	-.098	.035	-.162	-2.802	.009
	Investor Base	.054	.033	.103	1.640	.112
a. Dependent Variable: Value of Stock						

**Stock returns** = 0.809 + 0.835 (Firm Size) – 0.162 (Liquidity) + (0.001) Investor base + 0.109 (Standard Error)

The equation above indicates the contribution of each of the factors identified to affect the stock returns for the cross listed companies. The regression model indicates that firm size has the greatest contribution ( $\beta = 0.835$ ) as a factor on the value of stock followed by liquidity ( $\beta = 0.162$ ) while the investor base was noted to have a negative contribution to the value of the stock beta ( $\beta = 0.103$ ). The coefficient values of the regression model were key determinants of the extent to which each of the determinants affected the value of stock for the cross listed companies. The values of the stock were standardized from the EPS and the P/E by noting the changes in the ratios and aggregating the values.

#### **4.4 Interpretation of Findings and Discussions**

The study collected data from seven companies that had cross listed on the stock exchange over the last fourteen years. This was done by examining changes in the firm size, liquidity and the investor base of the companies before and after the cross listing. The resulting effect of the change identified was correlated to the effect on the P/E and the EPS values to determine if there was any effect of either change on the two ratios. The significance of the changes were determined through a baseline value of the industry calculated by averaging data collected from the companies before and after the cross listing process.

From the companies data collected in relation to the base value, a number of companies indicated a significant effect in the changes in their asset base, ( $p < 0.05$ ) before and after cross listing. Results indicated a significant relationship between the changes in the EPS and the changes in firm size ( $F = 5.539$ ,  $p = 0.005$ ) and ( $F = 16.886$ ,  $p = 0.000$ ).

This was interpreted to mean that any form of change in the value of the firm had significant effect on the EPS of the firm which was considered one of the measures of the value of the firm. Results also indicated that there was no relationship between the firm size changes before cross listing of the firms ( $F = 1.838$ ,  $p = 0.178$ ) but indicated a significant relationship between the changes in the asset base of the companies and the P/E ratios of the companies under investigation ( $F = 3.7750$ ,  $p = 0.002$ ).

On the effect of liquidity on the stock returns, correlation was done by evaluating the relationships between the various indicators of liquidity of the firm on a yearly basis against the EPS and the PE ratios. A total of six of the possible 7 companies (6/7) indicated significant changes in the EPS, ( $p < 0.05$ ) as a result of the changes in the liquidity of these companies before and after cross listing. All the companies indicated that there was a significant change in the P/E ratio of the companies that had cross listed in the stock exchange, ( $p < 0.05$ ). This was a clear indication of the relationship between the liquidity of the company and the stock returns. The relationships strengths measured also were strong (person correlation values  $> 0.5$ ) to indicate that the relationship between liquidity of a firm and the stock returns was a strong one.

Among the data sets that were collected only two companies' indicated a significant effect after they had been cross listed on the stock exchange. This companies were the Equity bank  $p = 0.001$  and the KQ airline ( $p = 0.003$ ). This significances after the cross listed companies were considered outliers in relation to the industry values and as such the study did not take much significances to the changes in the investor bases in this two companies. This was interpreted to mean that there were insignificant changes in the investor bases both before and after the cross

listing process. This could have been attributed to the company principles on the acquisition of more capital for operation.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of the data findings on the effect of cross listing on the value of stocks. It summarizes the study and makes conclusion based on the results. The chapter is structured into summary of findings, conclusions, Limitations of the Study, recommendations and suggestions for further research.

#### **5.2 Summary of Findings**

This study investigated the effects of cross listing on stock returns by comparing these measures through a three year period prior to cross listing and the three year period after cross listing. The information was obtained from the financial reports as well as The Nairobi Securities Exchange for the seven cross listed companies whose information was completely available to carry out the analysis. The resulting effect of the change identified was correlated to the effect on the P/E and the EPS values to determine if there was any effect of either change on the two ratios. The significance of the changes were determined through a baseline value of the industry calculated by averaging data collected from the companies before and after the cross listing process.

Cross listed firms are acquire a considerable amount of assets after cross listing an aspect attributed to the increase in operations as a result of the popularity and increases in market share acquired by the company. This is true for all industry firms which have cross listed in the country over the last ten years. The increase in its assets which is a key indicator in the firm size of the company has an effect of managing company risks associated with perceptions and scale of operations.

This as a result manages significantly influences the P/E and EPS ratios which are used as the measures of the value of stock. This implies that investors are keen to evaluate the firm size before investing in a firm which in turn influences the stock returns of a firm.

Lack of liquidity is a friction form that may have an adverse effect to the stock returns. Investors are keen to evaluate the liquidity of a firm in an effort to determine if the company is able to meet its obligations. Liquidity of a firm is assessed as a risk by investors and therefore this considerably affects the stock returns. Cross listed company are viewed to be less risky to invest in due to their measured ability to meet their obligations especially after cross listing. A cross listed company indicates better liquidity ratios and as a result investors are more willing to invest in this companies. This could be attributed to a number of factors including the diversification of risks and better operational procedures.

Investor base on the other hand has no direct relationship with the stock returns. A cross listed company will only will only attract more investors if the company it reduces its stock minimum trading unit. A reduction in the minimum trading unit greatly increases a firm's base of individual investors and its stock liquidity, and is associated with a significant increase in the stock price. Companies that cross list therefore need to reduce their stock minimum trading units if they are to positively influence their stock returns. A decrease in price noisiness affect stock value positively through an increase in the investor base (trading volume).

### **5.3 Recommendations**

From the findings, the study established that cross listing of firms had a positive impact on the stock returns. Based on the findings in the study, the research recommended the following in an effort to ensure that the cross listed companies were able to better influence their stock returns;



Cross listed company's need to reduce their minimum trading units in order to attract more investors. This would increase their trading volumes hence increasing the stock returns.

Companies that cross list on the stock exchange need to also increase their scales of operations with an aim of reducing risks associated with asset acquisition with no fundamental increases in their operational scale.

Cross listed company's should ensure their financial statements reflect a strong financial position and good performances to influence investor decisions.

#### **5.4 Limitations of the Study**

The study was limited by access to information from firms listed in NSE due to limited availability and cost of information on cross listing and stock returns.

The study covered 8 companies and thus the results may have been affected by the sample size. A larger sample size would have enhanced the results of the study but there are only 8 cross listed firms whose primary listing is in the Nairobi Securities Exchanges. The lack of adequate information excluded one company from the study. The diverse dates of secondary listing meant that one of the companies did not meet the three year post cross listing period

The study was conducted in the context of the East African Region only; therefore the results do not represent the phenomena of cross listing in the emerging economies or the world at large but the East African region in particular.

The researcher could not accommodate all the factors that affect stock returns in the research model as a result of cross listing; therefore the final results were not very accurate due to the large error term.

Some of the data was collected from the financial analysts at the Nairobi Securities Exchanges. Therefore, the study faced limitations of lack of co-operation from some of the respondents owing to their busy work schedules during data collection.

There was also an issue of time within which the research was carried out. There was minimal time to carry out the research. This as a result, affected the amount of data collected for research purposes.

### **5.5 Suggestions for Further Research**

Since this study explored the effect of cross listing on the stock returns of firms listed in Nairobi Securities Exchange, the study recommends that; other researchers to investigate and highlight on the effects of firm size on the Stock Returns for Cross listed Companies, and also the effects of liquidity risks on the stock returns.

This study also recommends further studies on the importance of effects of cross listing on stock returns as one of the main factors considered while cross listing shares in the East African Exchanges.

Another possible area of research would be a study of why there are only a few number of firms have chosen to cross list in East Africa where as the advantages outweigh the disadvantages of cross listing.

Due to limitations of the sample size, a study covering firms cross listed all over the world would be recommended so that the results can represent the phenomena of cross listing in emerging economies.

The researcher also recommends a more advanced research model which would accommodate more research variables. This is to minimize the error rate hence generate more accurate results for future references.

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## APPENDICES

### Appendix I: Cross Listed Firms in East Africa

<b>Company</b>	<b>Primary Listing</b>	<b>Date of Cross Listing</b>	<b>Bourse where cross listed</b>
EABL	NSE	27th March 2001	USE
Kenya Airways	NSE	28th March 2002	USE
Kenya Airways	NSE	1st October 2004	DSE
EABL	NSE	29th June 2005	DSE
Jubilee Insurance Holdings	NSE	14th February 2006	USE
Jubilee Insurance Holdings	NSE	27th June 2006	DSE
KCB	NSE	29th Nov. 2008	USE
KCB	NSE	8th June 2009	RSE
Equity Bank Ltd	NSE	18th June 2009	USE
Centum Investments	NSE	11th February 2010	USE
Nation Media Group	NSE	2nd November 2010	RSE
Nation Media Group	NSE	19th October 2010	RSE
Nation Media Group	NSE	21st February 2011	RSE
Uchumi	NSE	13th October 2013	RSE
Uchumi	NSE	13th November 2013	USE

**Source: NSE**



**Appendix 2: Trading volumes of shares before and after cross listing**

<b>Company</b>	<b>Bourse where cross listed</b>	<b>Trades</b>	<b>Trades After</b>	<b>Change</b>
EABL	USE	250,000.00	427,324.00	177,324.00
EABL	DSE	609,885.00	703,904.00	94,019.00
KQ	USE	350,000.00	1,344,882.00	994,882.00
KQ	DSE	1,024,631.00	710,000.00	(314,631.00)
JHL	USE	123,400.00	281,000.00	157,600.00
JHL	DSE	146,997.00	293,518.00	146,521.00
KCB	USE	1,245,798.00	1,775,746.00	529,948.00
KCB	DSE	1,877,674.00	2,751,471.00	873,797.00
KCB	RSE	2,946,764.00	2,899,656.00	(47,108.00)
EQUITY	USE	325,670.00	459,060.00	133,390.00
NMG	USE	325,670.00	459,060.00	133,390.00
NMG	RSE	675,438.00	1,125,732.00	450,294.00
NMG	DSE	450,876.00	804,639.00	353,763.00
CENTUM	USE	890,432.00	966,222.00	75,790.00

### Appendix 3: Correlation of Standardized Liquidity Ratios and the measures of Stock Value

#### (Before and after Cross listing)

Correlations			
		EPS	P/E Ratios
EABL (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	-0.1629	-0.3437
	Sig. (2-tailed)	0.002	0.003
	N	32	32
EQTY (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	0.7806	0.7093
	Sig. (2-tailed)	0.003	0.000
	N	32	32
KCB (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	0.0920	0.8490
	Sig. (2-tailed)	0.340	0.000
	N	32	32
KQ (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	0.7875	0.7976
	Sig. (2-tailed)	0.004	0.0002
	N	32	32
NMG (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	0.119379	0.00121
	Sig. (2-tailed)	0.002	0.000
	N	32	32
JUBILEE (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	-0.02563	-0.01708
	Sig. (2-tailed)	0.000	0.003
	N	32	32
CENTUM (Standardized liquidity Ratios before and after cross listing)	Pearson Correlation	0.111528	-0.13255
	Sig. (2-tailed)	0.002	0.000
	N	32	32
**. Correlation is significant at the 0.01 level (2-tailed).			
*. Correlation is significant at the 0.05 level (2-tailed).			

#### Appendix 4: Effect of Investor base on the Stock Returns

One-Sample Test							
Test Value = 7.5211							
		t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
						Lower	Upper
EABL	Before	14.572	2	.202	1.91509	1.6545	2.1757
	After	17.679	2	.110	2.07547	1.8427	2.3082
EQTY	Before	12.072	2	.125	1.11321	.9304	1.2960
	After	35.203	2	.001	1.97170	1.8606	2.0828
KCB	Before	35.968	3	.124	1.81132	1.7115	1.9112
	After	14.735	3	.254	2.00943	1.7390	2.2798
KQ	Before	20.402	3	.124	2.08491	1.8823	2.2875
	After	34.709	3	.003	3.16038	2.9798	3.3409
NMG	Before	40.527	3	.254	3.14151	2.9878	3.2952
	After	29.533	3	.874	2.61321	2.4378	2.7887
JUBILEE	Before	23.686	2	.125	2.08491	1.9104	2.2594
	After	44.652	2	.354	3.20755	3.0651	3.3500
Centum	Before	52.222	1	.254	3.99057	3.8390	4.1421
	After	25.967	1	.321	2.85849	2.6402	3.0768