

**THE EFFECT OF CROSS LISTING ON THE VALUE OF FIRMS
LISTED AT THE NAIROBI SECURITIES EXCHANGE**

BY

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DECLARATION

This research project is my original work and has never been presented for a degree at any other university for examination.

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This research project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

This project is my dedication to my Mother, Dinah Akal, you showed me the way and this is the following. My Father Maurice Achuodho for the support and the sacrifices they had to make together to give me Education.

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LIST OF ABBREVIATIONS

CEO	-	Chief Executive Officer
DSE	-	Dar salaam Securities Exchange
EAC	-	East Africa Community
NSE	-	Nairobi Securities Exchange
OTC	-	Over the Counter
PV	-	Present Value
ROA	-	Return on Assets
RSE	-	Rwanda Securities Exchange
SOX	-	Sarbanes-Oxley Act
UK	-	United Kingdom
US	-	United States
USE	-	Uganda Securities Exchange

ABSTRACT

Cross listing is meant to improve informativeness of the firm's stock price and also enabling firm's managers to get precise information on the best future opportunities for investment purposes. In Kenya, several Kenyan firms have cross-listed in markets that have better investor protection such as Rwanda, which has better regulations in terms of investor protection in the region. However, there is very limited secondary trading in cross-listed companies in all the East Africa Community Partner State owing to different levels of market development and the capital adequacy requirements for the different EAC Partners. There is also lack of harmonized legal regimes, which is one of the major hindrances to secondary trading of shares in cross-listed companies. This study aimed at establishing the effects of cross-listing on the value of cross-listed firms at Nairobi Security Exchange. Employing an event study methodology, the study carried out a census of the 8 cross listed firms at the Nairobi Securities Exchange. The secondary data covered a period 4 years before cross listing and a period of 4 years after cross listing of each cross-listed firm. The study used the paired t- test method to determine whether cross listing affects the value of the cross-listed firms. The finding of the study established that t statistic for EABL, KCB, Centum Investments and the Nation Media Group (NMG) before and after cross listing was insignificant at 95% confidence level. The finding of the study established that t statistic for Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing was significant at 95% confidence level. The study concluded that cross listing had no significant effect on the value of EABL, KCB, Centum Investments and the Nation Media Group and that cross listing had a significant effect on the value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets. The study recommended that the NSE should encourage firms to cross listing since cross listing affects the value of listed firms.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial policies like cross listing has been adopted by many firms in order to overcome market segmentation. Costs that are related to equity capital have been reduced with the help of Cross listing. Through cross listing, systematic riskiness of firm's shares is highly reduced for investors. This is done by increasing shares' liquidity and improvement of informational environment (Chouinard & D'Souza, 2004). The main motive of cross listing of the firm's shares is the low cost of capital and taking the advantage of an increased integration and globalization of financial market around the world (Chung, Cho & Kim, 2011). In addition, activities around cross-borders enable most firms to go global (O'connor & Phylaktis, 2011).

Theoretically, the investor recognition hypothesis supports that managers of firms have the power to increase investor's base of the firm through cross- listing of the firm's shares on other exchanges apart from the home country exchanges. This cross-listing enables the firm to go a high notch in terms of awareness to the firm's investors (Baker, Nofsinger & Weaver, 1998). The bonding hypothesis affirms that cross-listing to other foreign exchanges around the world is a good act of bonding mechanism. This is mostly used by those firms which are not in a well-off jurisdiction as far as investors' protection is concerned (Chisadza, 2013). The market segmentation theory suggests that cross-listing breaks barriers of investment since it allows investors to access stocks from different jurisdiction (Makanga & Gateri, 2015). Asset pricing models have predicted a price increase of stocks after cross listing of firm's stocks (Olatundun, 2009).

Listing a cross borders has earned a significant recognition over some few years now (Muheirwe, Memba & Kule, 2015). The emergence of cross listing and its development a cross Kenya, Tanzania, Rwanda and Uganda is a great achievement for East African Community (EAC) for regional integration (Onyuma, Mugo & Karuiya, 2012). Cross border listings has been one of the strategies for facilitating cross border activity within the EAC capital market. So far, 7 Kenyan firms are cross-listed in Uganda, 2 Kenyan firms are cross-listed in Rwanda and 4 Kenyan firms are cross-listed in Tanzania (Katto, 2012). Some of Kenyan firms like Kenya Airways and Equity Bank are listed in other east African countries like Tanzania and Uganda (Makau, Onyuma & Okumu, 2015).

1.1.1 Cross-Listing

Cross listing basically refers to offering a firm's ordinary shares to other investors through a different exchange from its home exchange. A good example is where Kenyan firms get its shares listed in a Tanzanian stock exchange, or entail a single stock being listed on more than one exchange (Chisadza, 2013). Cross listing is a corporate decision to apply for a secondary listing of shares on a foreign exchange (host exchange). It materializes in the issuance, on a secondary international capital market, of securities that are representative of the underlying home equity (Carrieri, Mouchette & Muller, 2014). Cross listing enabled most firms to access external financing that is likely to be at a lower cost as compared to what the firms would have got from their home exchanges. As such, these firms can easily invest in projects that have more potential as far as profitability is concerned (Onyuma, Mugo & Karuiya, 2012).

Cross listing has the potential of helping a firm to grow at a very high rate. It is a good strategic decision for a firm to cross list its stocks. Cross listing is seen as a crucial

avenue that most firms from different countries can alleviate their constraints as far as financing is concerned from their home markets, and enable them to access some external financial from foreign markets for investment purposes (Kusnadi, 2014). Cross-listing is regarded as a cost of capital lowering mechanism since it enable firms to get more financing from investors who buy their stocks in a public market (Chisadza, 2013). Cross listing has plenty of benefits to both the economy of a home country as well as to the firm itself. When firms get more money for investments, it can easily introduce a new product in the market (Peng & Su, 2013).

Cross listing enable the firm to diversify their portfolios. Cross listing is also beneficial to the secondary country in which the foreign firm is listing its stocks since it provides an avenue for investments. Cross listing has the potential of increasing stock market liquidity as well as increasing employment opportunities for the secondary country where the listing by a foreign firm is being done (Olatundun, 2009).

1.1.2 Value of the Firm

The value of the firm is the present value of the future expected flow of cash (Ayako & Wamalwa, 2015). Firm's value must equal to that of assets' stream cash flows. Firm's value is usually expressed as total discounted value of future profits. Firm value is depended on the expected future dividend stream that shareholders anticipate to receive from a firm during the going concern life cycle of that firm, which is discounted back to present (Rajni & Kawalpreet, 2013). The greater the firm value the better the position of the firm financially and better is the prospects for prospective investors (Rajni & Kawalpreet, 2013).

The value creation of a firm indicates an improvement in firm's worthiness to its stakeholders. Managers of any given firm will always desire to enhance its firm's market value. As such, managers have no choice other than making some critical decisions especially concerning development of a superior product, a thorough marketing strategy, serious investment portfolios, finance strategy as well as how the firms earning will be distributed or utilized (Sudiyatno, Puspitasari & Kartika, 2012). Value of the firm is determined by market price of firm's stock (Rajni & Kawalpreet, 2013). Tobin's Q is widely utilized as a measure of the firm's value. Under Tobin's Q, firm's value is arrived at by dividing the market value of the firm by asset's replacement value. Its wide use makes it the best measure for valuation and comparison of cross-listed firms' value (Makanga & Gateri, 2015).

1.1.3 The Effect of Cross- listing on Value of Firms

Cross- listing enables firms to make wise investment decisions as well as enhancing informativeness of stock price. Theoretically, managers in cross-listed firms make more efficient investment decisions since their firm's stock price are more informative. Cross listing also enhances the firm's value (Foucault & Gehrig, 2006). The bonding asserts that the value of a firm increases from cross listing because cross-listed companies are required to uphold higher standards of governance and disclosure than their home markets require (Silvers & Elgers, 2011).

Empirically, Olatundun (2009) studied effects of regional cross listing on stock prices in sub- Saharan African firms and showed that a positive public announcement, together with a post cross- listing performance, indicates that a regional cross-listing enhances a firm's value. A study by Jong, Mertens and Poel (2010) investigated how forecast by

managements affects the Dutch firms cross-listed in UK and US and found that the relationship between shareholder wealth and the net effect on cross listing is positive when a management forecast is announcement.

In their study, Hail & Leuz (2008) examined if cross-listing in U.S. has a potential to reduce foreign firms' cost of capital and established that with cross-listings, firm's cost of capital reduces significantly and a reduction in cost of capital increases firm value. Kusnadi (2014) examined foreign firms whether cross-listed in U.S. exchange exhibit corporate cash savings. The study found out that cross-listed firms usually exhibit high cash savings sensitivity to stock price than their counterparts who are not cross-listed.

1.1.4 Nairobi Securities Exchange

NSE is a sole exchange that presently exists in Kenya with 64 listed companies in 2016. It is also among the most vibrant in Africa and the leading in Eastern Africa. However, N.S.E is relatively a small market as compared to other exchanges in United States and United Kingdom that have more than 5,000 and 2,000 companies listed respectively (Muiruri, 2014). NSE was initially registered as a private company in the year 1991 by shares with the floor - based open outcry system in place, it was later replaced by the central depository system that was commissioned in 2004 (Rono, 2013). The cross listed firms at the NSE include East African Breweries-USE/DSE, Kenya Airways-USE/DSE, Jubilee Holding Ltd- USE/DSE, KCB- USE/RSE, Equity-USE, Centum-RSE, Umeme-NSE, Uchumi and- USE/RSE Nation Media Group USE/RSE/DSE.

According to the NSE website, its market capitalization has tremendously improved hitting Kshs. 1,930.58 billion as of September 2016. Turnover at the NSE increased

phenomenally from Kshs. 2.90 billion in the year 2002 to Kshs. 95 billion in the year 2006. The number of CDSC accounts that were opened increased from 80,000 in the year 2005 to over 1,000,000 investors to date (NSE, 2015).

There are two indices that are used in measurement of the performance at NSE. NSE 20 share index is a yardstick that is used to track the best performing 20 companies in Kenya that are listed at the NSE. Although it is widely watched and cited because it is comprised of select 20 large companies, it cannot gauge fluctuations in smaller companies. The Nairobi Securities Exchange all share index (NASI) that is usually used to measure Market Capitalization other than the movements in price of few selected counters.

Firms listed at NSE are classified into different sectors such as; Agricultural, Banking, insurance, investment and investment services, Allied and Construction, Commercial and service, Energy and Petroleum, Automobiles and Accessories, Manufacturing, Telecommunication and Technology and Real Estate Sector (NSE, 2016). As at December 2016, NSE had 65 listed companies in the different sectors. Financial firms at the NSE comprise of commercial banks and insurance firms, which provide financial intermediation functions while the Non-financial firms are those companies that are not involved in the provision of financial intermediary services. Financial services companies are excluded since they are the companies that provide leverage and other debt services to the non-financial firms. The NSE is at the time one of the most promising and attractive markets in Africa by which the bulwark of investors wants to invest and benefit more especially due to the high growth as well as the more promising Kenyan economic outlook (Muiruri, 2014).

1.2 Research Problem

Cross listing is meant to improve informativeness of the firm's stock price. It also enables firm's managers to get precise information on the best future opportunities for investment purposes (Kusnadi, 2014). Bonding hypothesis affirms that, cross-listed firms can easily improve on their governance especially if they list their stocks in countries where good governance is paramount to any firm's survival and where investors are more protected (Chouinard & D'Souza, 2004). Segmentation of market hypothesis suggests that cross-listing improves stock investability which in turn enhances shareholder base. It also makes it possible to share risk and, thus lowering the cost of capital and higher stock valuation (Dodd, 2013). However, there exists a disagreement on valuation gains for listing in a foreign exchange, or more precisely, the durability of valuation gains from listing in a foreign exchange (O'connor & Phylaktis, 2011).

In Kenya, several Kenyan firms have cross-listed in markets that have better investor protection such as Rwanda, which has better regulations in terms of investor protection in the region (Omanyo, 2016). However, there is very limited secondary trading in cross-listed companies in all the East Africa Community Partner State due to different levels of market development and different capital adequacy requirements for the different EAC Partners. There is also lack of harmonized legal regimes, which is one of the major bottlenecks to secondary trading of shares in cross-listed companies (Katto, 2012). In addition, there are 65 firms listed at the NSE however only 9 of them have cross-listed their shares which necessitates an investigation on effects of firms cross listing on the value of the firm at NSE.

Several local and international empirical studies on cross listing have been extensively studied by different scholars on different perspectives. Ma'aji and Sadiq (2014) examined market reaction to international dual listings and established that market positively reacts to cross-listing program and that the stock prices reaction is depended on exchange, geography and ways of raising equity capital. Khurana, Xiumin and Periera (2008) explored the relationship that exist between the growth of firms and cross listing and found out that a positive relationship exists between firms' growth and cross listing for externally financed firms.

A study by Ndiritu and Mugivane (2015) examined the factors that are likely to lead a slow growth for the firms that are listed in East Africa Region and found that institutional factors, environmental factors, regulatory factors, historical factors, informational factors were the major factors leading to slow growth of cross listed firms but the study focused on growth challenges. Ndirangu and Iraya (2016) examined effects associated with cross-listing on accounting quality of firms cross-listed in East African stock exchanges and concluded that cross listing has no effect on the quality of accounts reporting of cross-listed firms however, the study focused on accounting quality. From the reviewed studies local and global studies it is evident that the concept of cross listing has been extensively studied however few studies have done to establish if there is a relation of any sought between cross listing and the firm's value specifically in Kenya. Many challenges have been reported for cross listed firms such as Uchumi, Kenya Airways with little consideration given to cross-listing effect yet the firms represent 23% of the firms out of 9. Thus, the question: What are the effects of cross- listing on the value of firms cross-listed at NSE?

1.3 Research Objective

To establish the effects of cross- listing on the value of cross listed firms at Nairobi Security Exchange.

1.4 Value of the Study

The study will help managers of cross listed firms or those considering to be listed to evaluate pre and post cross listing effects on firm's value. Post cross listing valuation effects would help managers come up with strategies needed to be applied by firms, which predicts either fall or rise in the firm value thus making this study important for both the Managers in such firms or the board of directors while acting on behalf of the shareholders.

The study will be significant to policymaking organizations like the East African Member States Securities and Regulation Authorities, alongside other regulating authorities such as the Capital Market Authority of Kenya who may document the research or advance it to come up with regulations and policies that would address the effects brought forth from this study. Such policies would ensure that smooth running the cross-listed securities and firms and ensure that the investors are caution appropriately against any adverse effects identified from this study.

The study adds on to the existing knowledge on investment analysis, market analysis and in the general finance literature. The study will also contribute to the past studies as an empirical information base for the past study and or contribute to the established fact by giving a concurrency or in-concurrency of cross listing.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter looks at available literature on cross- listing and firm's value as explored by various authors around the globe. The chapter outlines the theoretical foundation of the study, the determinants of value of firms, the empirical literature review, the conceptual framework and finally a summary of the literature reviewed.

2.2 Theoretical Review

This study explores the investor recognition hypothesis, bonding hypothesis and market segmentation hypothesis as main theories to explain the relation that exist between cross listing and value of firms that are cross-listed.

2.2.1 Investor Recognition Hypothesis

The hypothesis of investor recognition was first proposed by Merton (1987). The hypothesis explains that when visibility or recognition by investors caused by cross-listing enhances investors' base which in turn results in an increased value of the firm (Waweru, Pokhariyal & Mwaura, 2012). The theory of investor recognition also presupposes that firms are able to increase their shareholders' base through extensive marketing, good public relation as well as through cross listing, which enhances visibility or firm's value (Berg, 2012).

The investor recognition hypothesis also suggests that accessibility and free flow of information about any firm has the potential of increasing the firm's visibility, hence increased firm's recognition by investors (Baker, Nofsinger & Weaver, 1998). In

addition, the investor recognition hypothesis states that abnormal returns caused by cross-listing are related to an enhanced investors, who are mainly institutional based holding the shares or stock, the equity analysts and media coverage of the firm (King & Segal, 2006).

2.2.2 Bonding Hypothesis

The bonding hypothesis was proposed by (Coffee & Stulz, 1999). This hypothesis affirms that cross-listings help capital markets to foster good corporate governance and protection of interests of shareholders especially the minority shareholders through reduction of agency costs related to shareholders controlling (Chisadza, 2013). According to this hypothesis, cross listed firms in major stock exchanges are better placed as far as corporate governance is concerned in comparison to those which are none cross-listed from the same jurisdiction. This is mainly because cross- listed firms are subject to a very strong investor protection. The protections may include but not limited to corporate disclosures and enhanced law enforcement (Lel and Miller, 2006).

The bonding hypothesis also assumes that firms from countries that's has a weak investor protection policies could likely enhance their valuation through cross-listing (Waweru, Pokhariyal & Mwaura, 2012). According to this hypothesis, cross- listed firms are mostly subject to a more improved scrutiny from other intermediaries like debt rating agencies and financial analysts. Therefore, cross listed firms are able to bond with one another, this bonding has the ability to enhance a better corporate governance (Lel and Miller, 2006).

2.2.3 Market Segmentation Hypothesis

Segmentation of markets hypothesis was first proposed by (Alexander, Eun & Janakiramanan, 1987). Segmentation of market hypothesis affirms that stock prices will increase due to integration of markets. As such, capitalization will go up before cross-listing is done and after cross-listing, assets of the firm will increase (Waweru, Pokhariyal & Mwaura, 2012). The theory emphasizes that market segmentation can be caused by some market imperfections like taxes, regulatory restriction on investments and so on (Dodd, 2013). According to the segmentation hypothesis, cross-listing of firms stock could easily reduce segmentation of markets (Berg, 2012).

The theory of market segmentation suggests risks are shared when investor base is enhanced through cross-listing which in turn leads to a low risk and low cost of capital. Therefore, cross-listings of stock to more developed markets have the potential to increase prices charged by domestic firms (Chisadza, 2013). The market segmentation hypothesis explains that cross listing presents an investment opportunity to a broader class of investors who were previously unaware of the firm. This awareness increases access to capital and widens a firm's shareholder base, thus promoting risk sharing via better dispersion of securities, and thereby lowering the cost of capital which in both short- and long-run increases in value (Silvers & Elgers, 2011).

2.3 Determinants of the Value of Firms

This study will examine profitability, leverage and liquidity as the determinants of value of cross-listed firms at NSE.

2.3.1 Profitability

Profitability refers to the ability of a firm to generate income and avoid losses. Profitability is a good indicator of how well the managers of a firm are as far as running and generation of firms earning is concerned given the resources at their disposal. Profitability is crucial in development and structure of a firm since it measures success as well as the performance of a firm. With profitability, a firm's performance is assessed and measured in relation to what the shareholders put in as far as investment is concerned or the capital employed (Bashar & Islam, 2014). Most firms are more concerned with the profits the firm makes. Profitability itself is a function of performance and a prerequisite for value creation and the strongest determinant of total shareholder returns (Rajni & Kawalpreet, 2013).

Profitability is important to both the firm's managers and the owners. Profitability ratios are used to determine if the firm is growing well. Profitability is a measure of a successful investment (Sivathaasan et al., 2013). Profitability is seen by many as a very important value driver, which can be improved by achieving relevant economies of scale. Profitability is seen by many as a very important value driver which can be improved by achieving relevant economies of scale. The profitability of a firm is an essential criterion to measure the effectiveness and success of firm operations (Bashar & Islam, 2014).

2.3.2 Leverage

Leverage is the extent to which firms are able and willing to borrow (debt finance) and make good investment to increase their profitability (Ayako & Wamalwa, 2015). Leverage is a source of firm's finance. Leverage is mostly defined by the debt (or liability)

to asset ratio. Greater financial leverage is expected to generally induce a higher shortfall risk and thus higher financial distress costs. debt can have a negative influence on firm value since high debt prevents firms from taking on investment opportunities with positive net present value. Accordingly, leverage ratio has significant positive relationships with firm value and companies using large borrowings face higher risks while those using more equity tend to operate more conservatively, relying on internal funds (Sekerci, 2013).

Profitable firms are likely to earn more and make a lesser use of debt financing in their capital structure compared to firms that make little profit (Ayako & Wamalwa, 2015). During business recession, firms that may borrow a huge some of funds are likely to default in paying off such debts when they fall due; they are likely to end up with a high level of leverage and likely to end up with a potential risk of bankruptcy (Alkhatib, 2012). According to Sekerci (2013), debt can mitigate agency cost of free cash flow by reducing the cash flow available to managers because debt increases firm value to the extent that managerial discretion decreases

2.3.3 Liquidity

Liquidity refers to available funds that can be easily used for an investment and or expenditure. It is also an indicator of the ability of the firm meet its obligations when they fall due (Alkhatib, 2012). Liquidity is a firm's ability to fulfill both expected and unexpected demands of cash on an ongoing basis. In order for a firm to sustain its activities and remain in existence for a long time, it must be liquid and able to meet its obligations at any time (Kumar & Agarwal, 2012). Working capital management is crucial to any successful business. With poor management of working capital, the firm's

funds are likely to be tied up in idle assets. This may reduce the firm's liquidity and the firm will not be able to invest in more profitable projects that may arise (Bashar & Islam, 2014).

A firm in order to remain in existence and sustain its activities as a going concern must remain liquid and meet its obligations as and when they become due. The existence of an adequate liquidity and its careful management can make substantial difference between the success and failure of an enterprise (Kumar & Agarwal, 2012). Excessive liquidity indicates accumulated idle funds, which do not earn any profit for the firm, and inadequate liquidity not only adversely affect the credit worthiness of the firm, but also interrupts the production process and hampers its earning capacity to a great extent (Alkhatib, 2012).

2.4 Empirical Review

Omanyo (2016) studied effects of cross border listing on volatility of return on shares of companies cross-listed within east Africa. The study used a descriptive research design and questionnaires to collect data from a sample of 7 cross listed firms at NSE. The results revealed that financial performance, price of shares, liquidity of shares and transactions cost greatly affect the volatility of shares in cross listed firms. The study concluded that Inter-listing of stocks plays a great role in reducing the firm's cost of capital as well as a reduction in risks that are related to their stocks. The study recommended that cross-listed firms should embrace competition to cause exchanges to continuously improve trading processes so as to enhance the quality of the market.

Muheirwe, Memba and Kule (2015) carried out a study on factors that are likely to affect the financial performance of firms cross-listed in Rwanda exchange. The study used a descriptive survey design and data was collected using questionnaires from a sample size of 67 participants. Using Multiple Regression technique the result of study established a negative correlation between awareness and financial performance of the firms, regulation framework was positive and significant. The study also found that market capitalization of the domestic companies was larger than that of cross-listed, and return on equity of the domestic firms was better than for the cross-listed companies.

Brockman, Salas and Zagorchev (2015) examined effects associated with cross- listing on corporate governance quality utilizing a set of 454 involuntary cross- listings in the year 2004 to the year 2008. The study results showed that governance quality of cross – listed firms converges to the one of domestically listed in a statistically significant manner. The finding of the study also showed that governance quality of cross-listed firms diverges from their home market counterparts and the simultaneous convergence of governance quality toward the cross-listed market and divergence from the home market provide strong evidence in favor of governance-bonding hypothesis.

Makanga and Gateri (2015) examined the impacts of regional cross-listing on the firm's value and financial performance using an event study methodology where time series was employed for the analysis to examine evolution of different variables over time and univariate analysis using the paired t-test for the periods before and after comparison was used. The study also employed correlation analysis to measure the degree of relationship between Tobin's Q, liquidity and leverage, profitability and growth, and operational

performance. The study's results revealed that cross listing yielded a valuation premia but was not sustained two years after cross listing.

Makau, Onyuma and Okumu (2015) examined the effects associated with cross- listing on share liquidity for cross-listed firms. A census of Kenyan cross-listed firm's secondary data was used. Using the paired t test, the results of the study established that stock liquidity of some firms like Equity Bank and Centum Investments had improved and was statistically significant. The study found that stock liquidity after cross-listing for Kenya Commercial Bank Limited had declined, though the decline was insignificant. The study revealed that cross-listing enhances the firm's stock liquidity.

Kamotho (2013) investigated whether cross- listing and cross-listed firm's liquidity on the shares of the firm are related in any way at East African Securities Exchanges (EASE). The study employed an event study design, the study employed daily traded volumes of shares 6 months before and 6 months after cross listing. The study revealed an increase in volume of traded stocks and an increased market capitalization of firms' cross- listed as well as an improvement in market capitalization of the bourses where the firms had cross listed. However, the results showed insignificant improvement in liquidity of the cross-listed firm's securities.

Prasad, Brusa and Camacho (2012) investigated effects of cross listing on CEO's compensation scheme. The study used a sample firms from Canada cross-listed in U.S. exchanges. The study results established a positive significant relationship between CEO's compensation and cross-listing. This was merely because the CEO receives a high compensation after cross listing in comparison to what they had been receiving prior to

cross-listing. The study also established that firm's size and independence of firm's board has a positive significance influence the CEO's compensation, though the CEO's duality has insignificant influence on CEO's pay.

2.5 Conceptual Framework

The conceptual framework contains an abstract blocks that are usually used to represent observational, experimental and analytical aspects, process, or system being considered. The independent variable for the study will cross listing while the dependent variables will be firm value before and after cross listing. Market Value of Equity and the Book Value of Equity will form the control variables. The conceptual model is developed on the based on growth opportunity hypothesis which states that cross-listing firm have higher growth opportunities than their peers that do not cross-list. The Conceptual framework will be developed as follows:-

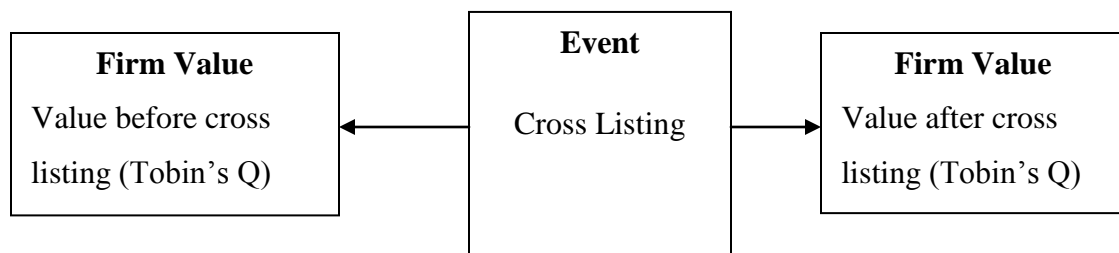


Figure 2.1 Conceptual Model

Source: Researcher

2.6 Summary of the Literature Review

From the reviewed theories, investors view cross listing of stocks as a firm's action to circumvent many regulatory restrictions, costs, and information problems. The investor

recognition hypothesis supports that greater flow of information and coverage enhances the value or visibility of the firm. The bonding hypothesis suggests that firms that are cross-listed have better corporate governance, which enhances performance and the firm's value. The market segmentation theory supports that cross listing is an effective way to reduce market segment and enhances market integration. The growth opportunity hypothesis explains that cross listing is a mean of enhancing a firm's growth. According to the theories, cross listing has many advantages as well as disadvantages. Disadvantages may be like listing fees which are usually charged.

The reviewed empirical studies agree that cross listing enable firms to access lower cost external financing. For example, Brockman, Salas and Zagorchev (2015) governance quality of cross-listed firms diverges from their home market counterparts. Cetorelli and Peristiani (2015) established that firms cross listing in a more prestigious market enjoy significant valuation gains while Prasad, Brusa and Camacho (2012) found that found that cross-listing had a significant positive influence on CEO compensation. In Kenya, Omanyo (2016) concluded that stock Inter-listing allows firms to reduce the cost of their equity capital. Makanga and Gateri (2015) found a significant difference in financial performance before and after cross listing while Makau, Onyuma and Okumu (2015) found cross listing improves a firm's stock liquidity. From the reviewed empirical studies, it is clear that most of the studies examine the effect of cross listing on other variables like CEO compensation, governance quality, liquidity with few studying the effect of cross listing on firm performance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, the population of the study, the data collection methods and the methods of data analysis.

3.2 Research Design

A research design is plan, which specifies the methods and procedures for collecting and analyzing data (Zikmund et al., 2011). A research design is also defined as a conceptual structure in which a research is conducted. It constitutes a blueprint for data collection, measurement and data analysis. This study employed an event study methodology which compares performance of a group of firms that have undergone a particular event. In the context of this study, there was cross listing, which was compared with value of the firm and other performance metrics 48 months before and 48 months after cross listing.

3.3 Population of the Study

Population refers to all people or items with the similar characteristics that one wishes to study (Zikmund et al., 2011). The population of this study consisted of 8 cross listed firm at the Nairobi Securities Exchange as at 31/12/2015 hence the study carried out a census of the 8 cross listed firms at the Nairobi securities exchange. The population had the potential to provide adequate data for the research.

3.4 Data Collection

This research utilized secondary data which was obtained from the cross listed firm's financial statements; the income statement and the balance sheet of firms cross-listed to obtain information on value of the firms. The secondary data covered a period of 4 years before cross listing and a period of 4 years after cross-listing of each cross-listed firm. The financial statements were obtained from the Capital Market Authority, Kenya.

3.5 Data Analysis

The study used statistical data analysis to establish the relationship between cross listing and the value of firms listed at the NSE. The study used paired correlation analysis to establish the strength of the relationship between the paired samples and the paired t- test method used in the determination to whether cross listing affects the value of firms listed at NSE.

3.5.1 Analytical Model

The study used the paired t- test model. The paired t- test model was derived mathematically as follows

$$\text{Paired } t - \text{test} = \frac{x - \mu}{\frac{s}{\sqrt{n}}}$$

Where; x = Population mean

 μ = t critical value

 S =Sample mean

 n = Sample size

In the finance literature, Event study methodology has become a standard methodology in evaluating the stock price reaction to a specific event (McWilliams and Siegel 1997). This methodology of study was used to investigate the market's response to Cross Listing four years before and from the cross listing event by examining the Market Value of Equity divided by the Book Value of Equity as per Tobin's Q formula around such event.

The study variables included

Firm value measure using the Tobin Q = Market value of equity /Book value of equity

$$Y = \frac{a}{b}$$

Where; Y = Firm Value

a = Market Value of Equity

b = Book Value of Equity

3.5.2 Test of Significance

The study used P-values to establish the statistical significance of the study variables where p value of less than 0.05 (P<0.05) was considered as significant while p value greater than 0.05(P>0.05) was considered insignificant.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

Chapter four highlights the study findings from analyzed data and also discuss the findings. The chapter entails the descriptive summarized statistics, paired samples correlations, paired samples test and the findings interpretation.

4.2 Descriptive Statistics

The descriptive statistics entails the paired samples statistics on the Tobin Q before cross listing and after cross listing. Table 4.1 illustrates the findings

Table 4.1: Paired Summary Statistics

	Mean	N	Std. Deviation	Std. Error Mean
EABL Tobin Q before cross listing	95.000	4	84.793	42.3969
Tobin Q after cross listing	75.750	4	5.6050	2.8025
KQ Tobin Q before cross listing	1.525	4	0.15067	0.07533
Tobin Q after cross listing	14.325	4	7.2669	3.63350
Jubilee Tobin Q before cross listing	10.325	4	5.5769	2.78848
Tobin Q after cross listing	31.750	4	9.5028	4.75140
KCB Tobin Q before cross listing	107.000	4	111.8130	55.9065
Tobin Q after cross listing	28.900	4	13.3387	6.66940
Equity Tobin Q before cross listing	275.500	4	193.9097	96.9548
Tobin Q after cross listing	48.575	4	12.1719	6.08596

Centum listing	Tobin Q before cross listing	50.500	4	26.1916	13.0958
	Tobin Q after cross listing	59.925	4	45.5158	22.7579
NMG	Tobin Q before cross listing	94.900	4	49.5885	24.7942
	Tobin Q after cross listing	93.900	4	29.4108	14.7054
Uchumi listing	Tobin Q before cross listing	2.772	4	0.97061	0.48531
	Tobin Q after cross listing	1.415	4	0.79542	0.39771

Source: Research findings

The paired summary statistics on table 4.1 shows that the average Tobin Q value of East Africa Breweries Ltd (EABL) before cross listing was 95. Thereafter cross listing, it declined to 75.75, indicating that the value of EABL was higher before cross listing and lower after cross listing. The Kenya Airways (KQ) results indicate that average Tobin Q value for KQ before cross listing was 1.525 but after closing listing it rose to 14.325, an indication that the value of KQ shares was lower before cross listing and higher after cross listing. In addition, the results indicates that average Tobin Q value for Jubilee insurance before cross listing was 10.325 while the average Tobin Q value after cross listing was 31.75 which is an indication that the value of Jubilee insurance shares was higher after cross listing than before cross listing. The findings of the KCB group indicate that the average Tobin Q for KCB before cross listing was 107.00 and 28.90 after cross listing hence an indication that the value of KCB was higher before cross listing than after cross listing.

The findings on Equity bank indicates that the average Tobin Q for Equity bank before cross listing was 275.50 while the average value after cross listing was 48.575 which indicates that Equity banks value was higher before cross listing. The results on Centum Investments indicates that the average Tobin Q for Centum Investments before cross listing was 50.50 but the value after cross listing was 59.925 which indicates the average value of the firm increased after cross listing. The findings on the Nation Media Group (NMG) indicate that the average Tobin Q for the firm before cross listing was 94.90 while after cross listing the average value was 93.90 which indicates that the average NMG was higher before cross listing than after cross listing. Finally, Uchumi supermarkets results shows that the average Tobin Q value of the firm before cross listing was 2.772 while the average Tobin Q value after cross listing was 1.415 indicating a decline in value after the cross listing.

4.3 Correlation Analysis

The paired samples correlations were undertaken to determine the correlations before and after cross listing for the firms. Table 4.2 shows the results

Table 4.2: Paired Samples Correlation

		N	Correlation	Significance
EABL	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.376	0.624
KQ	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.600	0.400
Jubilee	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.349	0.651
KCB	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.787	0.213

Equity	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.448	0.552
Centum	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.891	0.109
NMG	Tobin Q before cross listing & Tobin Q after cross listing	4	-0.864	0.136
Uchumi	Tobin Q before cross listing & Tobin Q after cross listing	4	0.110	0.900

Source: Research findings

The paired samples correlations on table 4.2 indicate that the paired samples correlations for EABL, KQ, Jubilee insurance, KCB group, Equity Group, Centum and the Nation Media group Tobin Q before and after cross listing were negative. However, the paired samples correlation for Uchumi supermarkets Tobin Q before and after cross listing was positive.

4.4 Paired Samples Tests

The paired t- test method used to determine whether cross listing affects the value of firms listed at NSE. Table 4.3 shows the obtained results

Table 4.3: Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Dev	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Value before cross listing – Value after cross listing	19.250	87.054	43.527	-119.272	157.772	0.442	3	0.688

KQ	Value before cross listing – Value after cross listing	-12.800	7.358	3.679	-24.508	-1.091	-3.479	3	0.040
Jubilee	Value before cross listing – Value after cross listing	-21.425	12.586	6.293	-41.453	-1.396	-3.404	3	0.042
KCB	Value before cross listing – Value after cross listing	78.100	122.588	61.294	-116.965	273.165	1.274	3	0.292
Equity	Value before cross listing – Value after cross listing	226.925	199.658	99.829	-90.776	544.626	2.273	3	0.018
Centum	Value before cross listing – Value after cross listing	-9.425	69.877	34.938	-120.615	101.765	-0.270	3	0.805
NMG	Value before cross listing – Value after cross listing	1.000	76.439	38.219	-120.632	122.632	0.026	3	0.981
Uchumi	Value before cross listing – value after cross listing	1.357	1.191	0.595	-0.538	3.253	2.278	3	0.017

Source: Research findings

The results of EABL indicates that the t statistics value for EABL before and after cross listing is 0.442 and the P value is 0.688 being insignificant at 95% confidence level while the t statistics value for KQ before and after cross listing is – 3.479 and the P value is 0.040, being significant at 95% confidence level. The Jubilee insurance findings indicates that the t statistics value for the firm before and after cross listing is -3.404 and the P value is 0.042 respectively and significant at 95% confidence level while the t statistics

value for KCB groups was 1.274 while the p value is 0.292 thus being insignificant. The findings further indicate that the t statistics value for Equity bank before and after cross listing is 2.273 and the P value is 0.018 hence significant at 95% confidence level whereas the t statistics value for Centum investments is -0.270 and the value is 0.805, so it is insignificant. Additionally, the findings indicate the t statistics value for NMG is 0.026 and the P value is 0.981 while the t statistics value for Uchumi is 2.278 and the P value is 0.017 hence significant at 95% confidence level.

4.5 Interpretation of the Findings

The finding of the study established that t statistic for EABL, KCB, Centum Investments and the Nation Media Group (NMG) before and after cross listing was insignificant at 95% confidence level, meaning that there is an insignificant variation on value of EABL, KCB, Centum Investments and the Nation Media Group (NMG) before and after cross listing hence an indication that cross listing had no significant effect on the value of these four firms.

The finding of the study established that t statistic for Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing was significant at 95% confidence level. This means that there is significant variation on value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing which is an indication that cross listing had a significant effect on the value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets.

The findings of significance agrees with those of Omanyo (2016) who revealed that financial performance, price of shares, liquidity of shares and transactions cost greatly affect the volatility of shares in cross listed firms. Muheirwe, Memba and Kule (2015) found that market capitalization of the domestic companies was larger than that of cross-listed, and return on equity of the domestic firms was better than for the cross-listed companies. Brockman, Salas and Zagorchev (2015) also established that that governance quality of cross – listed firms converges to the one of domestically listed in a statistically significant manner.

The insignificant findings concur with that of Makanga and Gateri (2015) revealed that cross listing yielded a valuation premia but were not sustained two years after cross listing. Kamotho (2013) also established an insignificant improvement in liquidity of the cross-listed firm's securities. Hail & Leuz (2008) established that with cross-listings, firm's cost of capital reduces significantly and a reduction in cost of capital increases firm value.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the results of the research, provides its conclusions and gives recommendations to that effect while indicating limitations and suggests areas for further research.

5.2 Summary

The objective of this study was to assess the effects of cross-listing on the value of cross-listed firms at Nairobi Security Exchange. The study explored the investor recognition hypothesis, bonding hypothesis and market segmentation hypothesis as main theories to explain the relations between cross listing and value of firms that are cross-listed. The value of the firm was determined using the Tobin Q, which is the ratio of Market Value of Equity and the Book Value of Equity. The study employed an event study methodology and carried out a census of the 8 cross listed firms at the Nairobi securities exchange. The study utilized secondary data which covered a period of 4 years before cross listing and 4 years after cross-listing of each cross-listed firm. The paired samples and the paired t- test method used to determine whether cross listing affects the value of firms listed at NSE.

The paired summary statistics established that the average Tobin Q value of East Africa Breweries Ltd (EABL) was higher before cross listing and lower after cross listing while the average Tobin Q value for KQ before cross listing was lower before cross listing and

higher after cross listing. The findings also revealed that the average Tobin Q value for Jubilee insurance was higher after cross listing than before cross listing while that of the KCB group was higher before cross listing than after cross listing. The findings further revealed that the average Tobin Q for Equity bank was higher before cross listing while the average Tobin Q for Centum Investments increased after cross listing. The findings further established that the average Tobin Q value for NMG was higher before cross listing than after cross listing while the average Tobin Q value of Uchumi supermarkets was higher before cross listing than after cross listing.

The paired samples correlations revealed that the paired samples correlations for EABL, KQ, Jubilee insurance, KCB group, Equity Group, Centum and the Nation Media group Tobin Q before and after cross listing were negative but the paired samples correlation for Uchumi supermarkets Tobin Q before and after cross listing was positive. The finding of the study established that t statistic for EABL, KCB, Centum Investments and the Nation Media Group (NMG) before and after cross listing was insignificant at 95% confidence level. The finding of the study established that t statistic for Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing was significant at 95% confidence level

5.3 Conclusions

Based on the revelation of the findings that the t statistic for EABL, KCB, Centum Investments and the Nation Media Group (NMG) before and after cross listing was insignificant at 95% confidence level, the study concludes that there is an insignificant variation on value of EABL, KCB, Centum Investments and the Nation Media Group

(NMG) before and after cross listing hence an indication that cross listing had no significant effect on the value of EABL, KCB, Centum Investments and the Nation Media Group.

On the other hand, it was founded from this research that the t statistic for Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing was significant at 95% confidence level and on this basis, this finding concludes that there is a significant variation on value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets before and after cross listing hence an indication that cross listing had a significant effect on the value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets.

5.4 Recommendations for Policy and Practice

This research having concluded that cross listing had a significant effect on the value of Kenya airways (KQ), Jubilee insurance, Equity bank and Uchumi supermarkets, this study recommends that the NSE should encourage firms to cross list in other securities exchanges as this may significantly impact on the firm value positively.

However, with the other conclusion of the study that cross listing had no significant effect on the value of EABL, KCB, Centum Investments and the Nation Media Group. This study nevertheless recommends that the management of listed firms should not be discouraged from cross listing their firms since cross listing brings about other benefits to the firms yet they were not covered in the objective of this study.

5.5 Limitations of the Study

This study assessed the effects of cross-listing on the value of cross-listed firms at Nairobi Security Exchange using secondary data for a period of four years before and after cross listing. The study findings and recommendations thus are applicable to the sampled firms and are applicable to the considered study period.

The study also used annual data on market value of equity, however, share prices are available on daily basis hence the findings are based on the annual closing share price of the sampled firms, which had cross-listed at the Nairobi Securities Exchange. The study also sampled the firms, which had carried out cross listing from the year 2000 up to 2017.

5.6 Suggestion for Further Research

The study considered firms, which had been cross-listed at the Nairobi securities exchange in Kenya for the period between 2000 and 2017 and used annual secondary data hence, the study therefore a similar study using monthly secondary data on share prices. This study used the Tobin Q to measure the value of the cross listed firms hence the study also recommends a similar study using other measures of firm value.

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APPENDICES

Appendix I: List of Cross Listed Firms at the NSE

Company	Primary listing	Year of listing	Cross listed Exchange
1. East Africa Breweries Ltd (EABL)	NSE	2005	USE/DSE
2. Kenya Airways (KQ)	NSE	2004	USE/DSE
3. Jubilee Holding Ltd	NSE	2006	USE/DSE
4. KCB Group	NSE	2009	USE/RSE
5. Equity Group	NSE	2009	USE
6. Centum Investment Group	NSE	2010	RSE
7. Nation Media Group	NSE	2010	USE/DSE/RSE
8. Uchumi	NSE	2013	USE/RSA

Source: NSE (2017)

Appendix II: Research data

Firm	Year	MVE	BVE	Tobin Q
EABL	2001	74.00	2.00	37.00
	2002	128.00	2.00	64.00
	2003	442.00	2.00	221.00
	2004	116.00	2.00	58.00
	2005	135.00	2.00	67.50
	2006	149.00	2.00	74.50
	2007	168.00	2.00	84.00
	2008	144.00	2.00	72.00
	2009	145.00	2.00	72.50
	KQ	2000	7.60	5.00
2001		7.40	5.00	1.48
2002		6.85	5.00	1.37
2003		8.65	5.00	1.73
2004		16.90	5.00	3.38
2005		82.00	5.00	16.40
2006		114.00	5.00	22.80
2007		63.50	5.00	12.70
2008		27.00	5.00	5.40
Jubilee		2002	15.50	5.00
	2003	50.00	5.00	10.00
	2004	58.00	5.00	11.60
	2005	83.00	5.00	16.60
	2006	338.00	5.00	67.60
	2007	213.00	5.00	42.60
	2008	123.00	5.00	24.60
	2009	115.00	5.00	23.00
	2010	184.00	5.00	36.80

KCB	2005	113.00	1.00	113.00
	2006	263.00	1.00	263.00
	2007	28.50	1.00	28.50
	2008	23.50	1.00	23.50
	2009	20.50	1.00	20.50
	2010	21.75	1.00	21.75
	2011	16.85	1.00	16.85
	2012	29.75	1.00	29.75
	2013	47.25	1.00	47.25
Equity	2005	0.00	0.00	0.00
	2006	225.00	0.50	450.00
	2007	150.00	0.50	300.00
	2008	176.00	0.50	352.00
	2009	14.35	0.50	28.70
	2010	26.75	0.50	53.50
	2011	16.40	0.50	32.80
	2012	23.25	0.50	46.50
	2013	30.75	0.50	61.50
Centum	2006	41.25	0.50	82.50
	2007	29.75	0.50	59.50
	2008	18.75	0.50	37.50
	2009	11.25	0.50	22.50
	2010	23.00	0.50	46.00
	2011	13.50	0.50	27.00
	2012	12.35	0.50	24.70
	2013	33.00	0.50	66.00
	2014	61.00	0.50	122.00
NMG	2006	361.00	2.50	144.40
	2007	326.00	2.50	130.40
	2008	144.00	2.50	57.60

	2009	118.00	2.50	47.20
	2010	167.00	2.50	66.80
	2011	140.00	2.50	56.00
	2012	222.00	2.50	88.80
	2013	314.00	2.50	125.60
	2014	263.00	2.50	105.20
Uchumi	2009	14.50	5.00	2.90
	2010	14.50	5.00	2.90
	2011	7.35	5.00	1.47
	2012	19.10	5.00	3.82
	2013	19.45	5.00	3.89
	2014	10.05	5.00	2.01
	2015	10.95	5.00	2.19
	2016	3.90	5.00	0.78
	2017	3.40	5.00	0.68

Source: Research Findings