THE EFFECT OF BONUS SHARE ISSUE ON STOCK PRICES ON COMPANIES QUOTED AT NAIROBI SECURITIES EXCHANGE

PRESENTED BY

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DECLARATION

This management research proposal is my original work and to the best of my knowledge has not been presented for the award of a degree in any other University.

Signed.................................... Date...09|11|2012........................

Ndiang'ui Bancy Wangui

D61/60453/2011

I hereby certify that this project has been presented for examination with my approval as the University of Nairobi supervisor.

Signed.................................... Date.....8|11|12........................

Dr. Josiah O. Aduda

Senior Lecturer and Chairman Department of Finance and Accounting

DEDICATION

This project is dedicated to my loving parents Mr. and Mrs. Jidraph Ndiang'ui Waithaka and Jane Waithera Ndiang'ui, brothers Wilfred, Hudson, Samuel, sisters Nancy and the late Ann, sisters' in-law, nephews and niece. God bless you.

ACKNOWLEDGMENTS

ABSTRACT

This study focuses on the effect of bonus share issues on stock prices of companies quoted at the Nairobi Securities Exchange. The objectives of this study were to determine whether there are abnormal returns surrounding the bonus issues announcement and to establish the direction and magnitude of the stock price adjustment on announcement of bonus issue. The population consisted of all the companies quoted at NSE. A sample of 10 companies which declared bonus issues between the period of interest, 2006 to 2011, and were drawn from all the segments of the Nairobi securities exchange. In order to achieve this objectives secondary data obtained from the NSE Secretariat informational database and the companies' financial statements were used.

Further, this study entailed the determination of the precise day of the bonus share issue announcement and this day was made to be day zero; definition of the period to be studied; in this study the study period was +30 to -30 days surrounding the announcement date. The magnitude of bonus issue announcement was expected to vary across the firms because the announcements were made by companies in different industries and at different times. It was hence useful to examine the behavior of each company independently. Data was presented using tables and graphs. Significance has been tested using the t-test.

The findings of the analysis indicate that indeed bonus issue has an effect on stock prices. Immediately after the announcement of the bonus, there is increase in the number of shares traded. However there are other factors like stock split that affect stock prices. Hence the study recommends that further research need to be carried out with more variables being considered.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

1.1.1 Bonus Share Issue

A bonus share is a free share of stock given to current shareholders in a company, based upon the number of shares that the shareholder already owns. While the issue of bonus shares increases the total number of shares issued and owned, it does not increase the value of the company, although the total number of issued shares increases, the ratio of number of shares held by each shareholder remains constant. An issue of bonus shares is referred to as a bonus issue. (Jacqueline, 2006).

According to Kendely (2006) bonus issue enable companies to increase liquidity since there is no cash outgoing, the capital as per balance sheet will be more realistic than it would be otherwise, Profits remaining the same, the company cannot declare high dividend on expanded capital. By not declaring high dividend, it can avoid the tall claims of the employees and regulations by the government and the capitalization of reserves increases substantially the credit worthiness of company. From the view point of shareholders, the shareholders can dispose off shares and realize cash. Sometimes they can be sold even at a premium, as only successful companies can issue bonus shares. The shareholders can receive dividend on the increase of shareholding. As it is very difficult to buy shares of successful companies from the market, the issue of bonus share will enable the shareholder to increase his holding. In due course he will also have capital appreciation and increased dividend.

1.1.2 Share Prices

According to Huang (2004) a share price is the price of a single share of a number of saleable stocks of a company. Once the stock is purchased, the owner becomes a shareholder of the company that issued the share. In economics and financial theory, analysts use random walk techniques to model behavior of asset prices, in particular share prices on stock markets, currency exchange rates and commodity prices. This practice has its basis in the presumption that investors act rationally and without bias, and that at any moment they estimate the value of an asset based on future expectations. Under these conditions, all existing information affects the price, which changes only when new information comes out. By definition, new information appears randomly and influences the asset price randomly.

Fama (1995) found that some of the biggest price deviations from random walks result from seasonal and temporal patterns. In particular, returns in January significantly exceed those in other months (January effect) and on Monday's stock prices go down more than on any other day. Observers have noted these effects in many different markets for more than half a century, but without succeeding in giving a completely satisfactory explanation for their persistence.

When viewed over long periods, the share price is directly related to the earnings and dividends of the firm (Grinblatt et al. 1984). Over short periods, especially for younger or smaller firms, the relationship between share price and dividends can be quite unmatched.

1.1.3 Theoretical Expected Impact of Bonus Issue on Stock Prices

The theoretical perspective suggests that the share price of a company issuing bonus shares should adjust so that the total shareholder wealth remains unchanged. In the practical world, stock prices rarely follow this theoretical prescription in bonuses. Not only does the share price of a company run-up on announcement of bonus or stock splits, but even the ex-bonus prices usually add-up to more than the pre-bonus price. Bonus, therefore, appear to be a good way of boosting stock price. But if that is so, why do companies issue bonus shares at the first place? Because, firstly, it leads to a pro-rata decline in the share price, which may be desirable if the share price is too high that makes its pricey for small investors. Secondly, the bonus issue raises

the supply of shares and thus improves the liquidity in the counter. But, too much supply of shares may actually hurt a company's share price if the trading volume fails to catch-up.

1.2 Statement of the Problem

The relationship between the share issue and stock prices of companies quoted in stock exchange markets remain understudied area up to date thus a major challenge to investors in the local and international stock markets. Bonus shares are issued by cashing in on the free reserves of the company. The assets of a company also consist of cash reserves. A company builds up its reserves by retaining part of its profit over the years (the part that is not paid out as dividend). After a while, these free reserves increase, and the company wanting to issue bonus shares converts part of the reserves into capital (Irving, 2002).

A bonus issue is a signal that the company is in a position to service its larger equity. The management would not have given these shares if it was not confident of being able to increase its profits and distribute dividends on all these shares in the future (Charles, 2006). According to Kendely (2006) bonus share issue enable companies to increase liquidity since there is no cash outgoing, the capital as per balance sheet will be more realistic than it would be otherwise, Profits remaining the same, the company cannot declare high dividend on expanded capital. By not declaring high dividend, it can avoid the tall claims of the employees and regulations by the government and the capitalization of reserves increases substantially the credit worthiness of company.

Related studies that have been carried out in Kenya concerning share issue and stock prices of companies quoted in Nairobi stock exchange market include Kibuthu (2005) who did a study on Capital Markets in Emerging Economies a case Study of the Nairobi Stock Exchange and Gitobu (2000) who did a study on determining the Influence of Macro Economic Indicators on Stock Market Indicators, clearly indicate that there is positive relationship between share issue and Stock Prices, Exchange Rates, Interest Rates, Money Supply and Inflation. It is clearly evident that share issue affects stock prices in the market thus resulting to an increase or a decrease in the firms 'earnings from shares sold in the stock exchange market.

However, it is evident from the findings of the above studies that the researcher did not focus on the impact of bonus issue on stock prices of companies quoted in the Nairobi Securities Exchange market. It is for this reason that the study seeks to establish the impact of bonus share issue on stock prices of companies quoted at Nairobi Securities Exchange market. Therefore, this study will be guided by the following research questions;

i.   What is the effect of bonus share issue on stock prices in the market?

ii.   What are the abnormal returns surrounding the bonus issue announcement?

1.3 Objective of The Study

i. To determine the effect of bonus share issue on stock prices in the Nairobi Securities Exchange

ii. To determine whether there are abnormal returns after announcement of bonus issue

1.4 Significance of the Study

Investors: Investors at the Nairobi Securities Exchange Market will use the information from this study to make decisions regarding investing in the area. The findings of the research will expose some of the challenges they are likely to be encounter in their investment in shares. As a result, the investors will be more endowed with knowledge and prepared to fit in the prevailing stock exchange market.

The Government: The Government will find the information useful in diagnosing the problems affecting the stock prices thus formulating policies that enhance the investment in the country hence economic growth and stability.

Customers: The findings of the study will be beneficial to members of the public based on accurate decision making during the buying and selling of share in the Nairobi Securities Exchange Market.

Scholars: Scholars in the field of strategic management and marketing will use the information to understand the state of the sector better. They will also use the information as a reference point to research on the strategy formulation and innovations in other industries.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter analyses the role of stock exchange market, the Theories of finance and their relationship to bonus issue and stock prices in the Nairobi Securities Exchange Market. The theories discussed in this section include; Modern Portfolio Theory, The Efficient Market Hypothesis Theory, Stock Liquidity and Price Efficiency Theory

2.2 The Role of the Stock Market

A stock market is an institution that deals in exchange of securities issued by publicly quoted companies and the government. The stock market is part of the broader market referred to as financial market. The major role that the stock markets have played, and continues to play in many economies is that they promote a culture of thrift, or saving. The very fact that institutions exist where savers can safely invest their money and in addition earn a return is an incentive to investors to consume less and save more (Reilly, 1997).

During times of financial crisis, investors seek shares that can provide stable returns, i.e. shares that withstand the shocks of market volatility. More specifically, investors desire shares with a history of stable earnings, good yields and slow, but dependable growth (Goodspeed, 2009). These non-cyclical shares are commonly referred to as defensive shares. (Bellehumeur, 2008) argues that defensive stocks act defensively for one of two reasons. Either they are basic necessities that we cannot live without; or their prices are regulated by the government, protecting them against shocks in the business cycle.

The growth of related financial services sector such as unit trusts investments clubs, pension and provident fund schemes have extensively contributed towards the deepening of the stock market. It should be appreciated that in as much as an economy can have savings, there is usually lack of established mechanisms for channeling those savings into activities that create wealth. Therefore encouraging a culture of saving in less developed financial markets may first track economic growth (www.nse.co.ke).

An efficient stock market sector will have the expertise, the institution and the means to priorities access to capital by competing users so that an economy manages to realize maximum output at least cost. This is what economist refers to as the optimum production level. If an economy does not have efficient financial markets there is always the risk that scarce capital could be channeled to non-productive investments as opposed to productive ones, leading to wastage of resources and economic decline (Lee, 1998).

The existence of stock markets promotes higher standards of accounting, resource management and transparency in the management of business. This is because financial markets encourage the separation of owners' capital from managers of capital. This separation is important because people who have money may not have the best business ideas and people who have the best ideas may not have money to invest. The Stock Exchange thus becomes an important link. A private company in need of capital for expansion can therefore raise funds through the stock market. This arrangement benefits both those with excess funds and the company that raises funds because the manager of capital, who is the entrepreneur, is able to access capital to turn his idea into a reality, while the owners of capital, who are the shareholders, receive a return on their investment (www.nse.co.ke).

According to Fabozzi (1995) stock markets provide investors with an efficient mechanism to liquidate their investments. The very fact that investors are certain of the possibility of selling out what they hold as and when they want, is a major incentive for investment as it guarantees mobility of capital in the purchase of assets .The interactions of buyers and sellers in a stock market determine the price of traded assets; or equivalently the required return that investors demand and is this feature of stock market that signals how funds in the economy should be allocated among financial assets. The presence of an organized stock market also reduces search and information costs.

Through the stock market, companies can raise equity through initial public offers and secondary offers of rights issues and can further raise funds through the issue of debt. Avenues for public floatation of private companies and government owned entities which in turn allow

greater growth in case of the supply of assets available for long term investment are available at the stock market. This also leads to wealth redistribution from state and private companies to the investing public since they can share in the returns of the privatized entities. The establishment of an efficient stock market is therefore indispensable for any economy that is keen on using scarce capital resources to achieve economic growth. (www.nse .co.ke).

2.3 Review of Theories

2.3.1 Modern Portfolio Theory (MPT)

Modern Portfolio Theory is based on Markowitz's (1959) and Kasten (2005) proposition that investors require compensation for taking on additional risk. Such compensation would be in the form of increased returns. Where greater returns are not possible, investors require the minimum level of risk attached to a given investment. Bodie *et al* (2005) share the view that investment decisions are subject to a trade-off between risk and return, stating that it has been proven over time that less-risky assets provide lower average returns.

Howells and Bain (2008) define risk as "the probability that the actual return may differ from the expected return." Risk includes both upside risk, whereby the actual return exceeds the expected return, and downside risk, whereby the actual return falls below that which is expected. This definition of risk, which they refer to as 'actual risk', thus assumes that risk is symmetrical. Individuals' attitudes to risk may however be asymmetrical. A risk averse investor may be more concerned about the possibility of a loss than that of a gain (Edmans *et al.* 2011).

Markowitz further proposed that risk can be reduced through diversification. By investing in a variety of assets, diversification limits an investor's exposure to the risk of any individual asset. Bodie *et al* (2005) in fact argue that "by placing one's eggs in many baskets, overall portfolio risk actually may be less than the risk of any component security considered in isolation." If two assets in a portfolio are negatively correlated, their individual returns offset each other to reduce the overall risk of the portfolio.

According to Bowen (1994), a diversified portfolio is expected to be both profitable and unlikely to diverge from expectations. When constructing a portfolio, the purchase of an asset should be evaluated with reference to the portfolio. An asset should only be added to a portfolio if its

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purchase increases the overall level of satisfaction that an individual receives from that portfolio. This can be achieved in three ways: from an increase in overall return; from a reduction in exposure to risk; or from a satisfactory trade-off between risk and return.

Such a trade-off would depend on an investor's tolerance or appetite for risk. It is important to note that diversification cannot reduce all types of risk. Howells and Bain, (2008) suggest that a fully diversified portfolio only eliminates specific, unsystematic risk which stems from events unique to securities or industries. Such a portfolio is only subject to systematic, market risk stemming from economy wide events. Market risk is inherent in any security and thus cannot be reduced through diversification.

A Rosenberg (1991) points out that the more diversified a portfolio is, the lower the level of unsystematic risk. (Ball, 2009) argue that while a portfolio of thirty shares can reduce market risk by almost ninety percent, combining even a few shares in a portfolio can achieve considerable diversification benefits. Markowitz's theory is based on analyzing the risk and return of portfolios on an *ex-ante* basis. In other words, it derives from the expectations about the future as opposed to looking at past data in a retrospective, ex-post manner. Markowitz relied on several assumptions in building his theory.

Firstly, all capital markets are efficient. In an efficient market, security prices reflect all information available in the market. The implications of market efficiency will be discussed in the next section. The second assumption made by Markowitz (1959), is that individuals are both risk averse and rational decision makers. An investor that is averse to risk will choose an asset with the least risk attached to it for a given level of return. A rational investor maximizes expected utility. Thirdly, Markowitz believed that this utility is based exclusively on mean returns and the standard deviations of such returns.

According to Bowen (1984), Markowitz opted for standard deviation due to its ease of calculation. While its statistical properties make it a good proxy for risk, there are certain elements of risk that it ignores. If risk is defined as "a known probability distribution of possible

outcomes", then variance fails to explain the chance of loss or complete insolvency. This limitation in Markowitz' theory could theoretically lead to poor investment decisions.

Finally, with the use of indifference curves, investors can rank individual portfolios based on their risk and return. According to Rosenberg (1991), an indifference curves represents a trade-off that an investor is willing to make between risk and return. In other words, these curves connect all portfolios with the same level of utility. They are upward sloping as a result of the positive relationship between expected risk and return.

The position of a portfolio on an indifference curve depends on the nature of the assets making up the portfolio. An increase in the riskiness of a portfolio's constituent assets would be represented by a movement up an indifference curve, whereas a move to less risky assets would be indicated by a move down the curve. A major benefit of diversification is that portfolio risk can be reduced without moving down an indifference curve. Howells and Bain (2008) argue that by combining assets in a portfolio, an investor can reduce risk without the sacrifice to return that would accompany a change to less risky assets.

The optimal portfolio for an investor is the efficient portfolio with the highest utility. This point, which can be found where an investor's highest indifference curve intersects with the Efficient Frontier, depends on an investor's level of tolerance to risk. This can be determined by a number of factors, including: the investor's knowledge of investments; the investor's emotional reactions to an adverse outcome; the financial position of the investor and reliance on the portfolio; and the time scale over which the investor expects to make a certain return (Rosenberg,1991).

2.3.2 The Efficient Market Hypothesis Theory

The Efficient Market Hypothesis (EMH) states that efficient, competitive markets "ruthlessly exploit all available information when setting security prices" (Ball, 2009). Fama (1995) defines an efficient market as one in which actual security prices represent precise estimates of their intrinsic values at all times. In other words, in an efficient market, asset prices must fully reflect all information available in the market. Bodie *et al* (2005) identifies three forms of market

efficiency: weak, semi-strong and strong. The weak form of efficiency implies that security prices reflect all information that can be derived from past trading data. According to Bodie *et al* (2005), this is because all historical data on security prices is freely available to the public. This form stems from the Random Walk Hypothesis (RWH), which states that current changes in share prices cannot be explained by previous price changes. Fama (1995) argues that the RWH does not state that historical information on share prices is of no value in predicting future returns. It merely says that the chronological order of past returns has no effect on the distribution of future returns.

The semi-strong form of efficiency occurs if share prices reflect, and adjust, to all publicly available information in the market (Bodie *et al*, 2005). In addition to price data, public information includes any particulars regarding company management, balance sheet composition, sales figures or future earnings. Since all public information is freely available to market participants, investors cannot make excess returns from trading with such information. Investors can only make excess returns on inside information such as trade secrets. In contrast, the strong form of efficiency requires share prices to reflect both public and private information, making it impossible for investors to make excess returns on inside information.

Grossman and Stiglitz (1995) argue that a perfectly efficient market cannot exist. Investors require a return for gathering information, which is impossible if all available information is already included in share prices. Without an incentive to gather information, there would be no reason to trade and the market would collapse. According to Grossman and Ball, (2009) the level of inefficiency in a market will determine the time and money spent in gathering and trading on information. Sustainable market equilibrium thus requires sufficient arbitrage opportunities to reward investors for finding and acting on new information.

The EMH builds on from MPT in that for the EMH to hold, certain market conditions should be Present. Firstly, there should be no transaction costs or taxes on the trading of shares (Fama, 1970). Secondly, any new information should be costless and immediately available to all market participants. Thirdly, investors should have homogenous expectations about the effect of current information on future share prices.

Ball (2009) argues that even if these assumptions do not hold in practice, efficiency can still be obtained in a market Transaction costs do not prevent share prices from reflecting all available information. As long as a sufficient number of market participants have immediate access to new information, the market can still be considered efficient. Finally, investors are bound to disagree on the implications of certain information on future prices. A market will only be deemed inefficient if investors can consistently predict the effect of new information better than that included in share prices (Fama, 2008). Stated differently, Strebel (1995) argues that market inefficiency will only occur if "statistical non-randomness can be utilized to beat the market."

The EMH has a number of practical limitations. According to Ball (2009), its most obvious limitation is that it focuses exclusively on monetary exchange and the demand side of the market. The EMH simply states that investors will trade on new information until a new equilibrium is obtained and no additional gains can be made from trading. It says nothing about supply side factors such as how much information is available, how reliable it is or where it came from. While real factors such as these are no doubt important, he argues that finance literature has made its greatest breakthroughs by ignoring them. A second limitation of the EMH is that it treats information as an objective commodity. The reality is that investors have varying beliefs and thus interpret new information differently. Furthermore, investors do not only act on their own beliefs, but also on their beliefs about the beliefs of others. Since complete, timely information is not available during periods of rapid price change, investors must instead speculate and base their decisions on incomplete information. Speculation about others' motives for trading is thus a major cause of rapid price changes. The EMH has received a large amount of blame for the recent global financial crisis.

Passive investment involves a buy-and-hold strategy with a diversified portfolio, without trying to beat the market. Since securities are correctly priced under the EMH, there are theoretically no arbitrage opportunities to justify using an active investment strategy. The majority of investment funds are actively managed, despite overwhelming evidence that very few active managers are

able to consistently outperform the market. The EMH thus cannot be blamed for an investment strategy that it does not advocate (Bodie *et al*, 2005).

Weaknesses in the EMH in explaining market anomalies (such as asset bubbles) have led to increased support of behavioral finance. In contrast to the EMH, which assumes that investors are rational, behavioral finance acknowledges the effect of investor sentiment on the formation of stock prices (Chuang, 2010). In other words, behavioral finance theory uses psychological factors to explain errors in decision-making. Such factors include overconfidence, optimism and regret aversion, whereby investors are reluctant to realize losses.

2.3.3 Stock Liquidity and Price Efficiency Theory

Prices are formed through market mechanisms, aggregate information possessed by market participants about the value of traded assets. Specifically, in stock markets investors with diverse pieces of information trade with each other and endeavor to profit from their private information. Arising from trades between investors, stock prices aggregate these different pieces of information and reflect investors' overall expectations of the value of firms' stocks. Moreover, there exist wide variations, both cross-sectional and inter-temporal, in the efficiency of stock prices (Boehmer and Kelley 2009).

Stock price efficiency refers to the extent to which stock prices are informative about the economic fundamentals of traded stocks (Chordia *et al.* 2008). The microstructure of stock markets significantly influences stock price efficiency (Hara 2003). Liquidity is among the most important aspects of stock market microstructure that have first-order effects on price efficiency (Holmstrom, 2003).

The research in economics and finance has identified a variety of closely related channels through which stock liquidity contributes to stock price efficiency. First, improvement in stock liquidity increases the marginal value of information and thus motivates market participants to acquire private information about firms' fundamental value (Madhavan, 2000). The most direct effect of improvement in stock liquidity is the reduction in trading costs and hence increases trading profits from private information.

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Furthermore, improvement in liquidity makes it easier for an informed investor to disguise his private information and profit from it regardless of whether his private information is strategic (i.e. intervention-related) or is simply speculative. Moreover, improvement in stock liquidity lowers the threshold for the value of information upon which investors can profitably trade (Liu 2006). In summary, the improvement in stock liquidity not only results in the increase in trading profits from private information and therefore incites more market participants to become privately informed, but also enlarges the set of information that can be impounded into prices through trading. (Liu 2006) show that price efficiency increases as the number of informed investors and/or the quality of information increase. In addition, stock liquidity facilitates trading between investors and thus accelerates the impounding of private information into stock prices. Second, several theoretical papers suggest that stock liquidity encourages the formation of block holdings (Edmans, 2009).

During takeover bids, block holders that initiate takeover bids face potential free-ride on the improvement after acquisition from existing shareholders if existing shareholders are aware that they are selling to raiders (Edmans, 2009). Kyle and Vila (1991) show that liquidity allows block holders to camouflage their purchases by pooling with noise traders and therefore acquire large block of shares at favorable prices. Similarly, Muga (1974) shows that liquidity encourages investors to intervene because a liquid stock market makes it less costly to hold large stakes and makes it easier to purchase additional shares at prices that do not incorporate the full gains from intervention. In a trading model, Edmans (2009) shows that block holders optimally choose higher initial stakes if stock liquidity is higher because higher stock liquidity offers block holders greater ability to sell shares upon negative information.

According to Boehmer and Kelley (2009) Block holders generally have superior information. Because of the large amount that block holders can sell upon negative information, block holders have incentives to become informed. In other words, the utility of information is higher to block holders because block holders can make greater use of it. Because quality information acquisition incurs fixed costs such as investment in research databases, block holders will only acquire information on large ownership stake). Moreover, block holders have greater access to

management and/or have better abilities to acquire information and conduct quality fundamental analysis due to economies of scale and resources at their discretion (Bhushee and Goodman 2007).

2.4 Review of Empirical Studies

Empirical studies have shown that the market generally reacts positively to the announcement of a bonus issue. The hypothesis that has received strongest support in explaining the positive market reaction to bonus issue announcements is the signaling hypothesis, which suggests that 'the announcement of a bonus issue conveys new information to the market in instances where managers have asymmetric information'. This hypothesis has received almost unequivocal support with few exceptions for example, Papaioannou, et. al, (2002). As per the signaling hypothesis, the declarations of bonus issues convey favorable private information about the future earnings to the investors. Managers have superior information about the future earnings, because there may be asymmetric information between managers and investors.

In practice, there may be an increase in share price following the announcement of a bonus issue. Such an increase can occur because the announcement of a bonus issue may have beneficial informational content (Peterson 1971). Shareholders are aware that, after the bonus issue, companies usually increase total dividend payout. This, in turn, indicates the confidence of management in the company's future. Consequently, the share price may increase in response to this information and affect shareholders' wealth. The informational link between dividends and earnings is supported empirically by Healy and Palepu (1988). They show that firms that initiate dividends have significant increases in earnings for at least one year after the announcement.

Numerous other studies estimate the effects of announcements related to bonus issues on the stock prices of the firms involved in the process. In the present study the impact of bonus issue announcement is analyzed & the pertinent literature in this context is as follows:

Ball, Brown & Finn (1977) examined stock price reaction around the announcement of 'stock capitalization changes' (bonus, stock issues, stock splits & right issues) in Australia for the period between 1960 &1969 using monthly data. They found 20.2% abnormal return for 13 months up to & including the month of bonus issue announcement.

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Lakonishok & Lev (1987) studied the trading volume changes after the announcement of stock dividend. They researched the characteristics of the companies with stock dividends & without stock dividends. They concluded that there is no significant increase in trading volume as a result of stock dividends & no significant difference in the prices of two groups.

Balachandran Bala Singham (2001) examines the share price reaction to announcement of bonus share issues of Australian companies. They concluded that the magnititude of price reaction to bonus issue announcements is statistically related to the size of bonus issues & pre-announcement effect.

Malhotra Madhuri *et al* (2003) provided evidence to support signaling hypotheses by examining the relationship between bonus issue announcement & stock price reaction. The study concluded that there is a negative reaction after the bonus issue announcement conveying that the market under reacts after the announcement.

Empirical evidence on prior studies of Stock Liquidity and Price Efficiency Theory confirms the information superiority of block holders. Block holders are generally institutional investors. Bhushee and Goodman (2007) find that the private information content of trades by institutional investors does increase with institutional investors' stakes in a firm. Event-related studies show that institutional investors sell their stakes in advance of events associated with poor performance such as value-destructive mergers (Chen et al. 2007). The transient institutional investors exploit the post-earnings announcement drift; Collins *et al.* (2003) show that the presence of institutional investors mitigates the magnitude of negative returns associated with accruals. More importantly, liquidity enables and even encourages block holders to trade on their private information (Edmans, 2009).

Third, liquidity stimulates speculation-based arbitrage. Speculation-based arbitrage involves taking a long-position in undervalued stocks and/or a short-position in overvalued stocks. Arbitrage traders are generally well-informed (Boehmer *et al.* 2008). For instance, Karpoff and Lou (2010) find that abnormal short interest increases steadily in the nineteen months before financial misrepresentation is publicly revealed, suggesting that short sellers can detect firms that

misrepresent their financial statements. Therefore, arbitrage trading contributes to the convergence of prices and fundamental values and improves price efficiency.

However, arbitrage trading is both costly and risky (Hara 2003). By directly reducing trading costs and enabling investors to change holding positions at prices that do not fully reflect their private information, liquidity increases the profits of arbitrage trading. In practice, taking a short-position in overvalued stocks is generally more costly than taking a long-position in undervalued stocks. By encouraging the formation of block holdings and thus increasing the availability of shares for borrowing by short arbitrageurs (Hirshleifer *et al.* 2011), liquidity can reduce costs associated with short arbitrage. By facilitating trading and speeding the convergence of stock prices and fundamental values, liquidity can reduce risks associated with arbitrage such as liquidity risk. Chordia et al. (2008) provide micro-level evidence that stock liquidity contributes to stock price efficiency. Market microstructure research shows that reduction in the minimum tick size leads to improvement in stock liquidity (Bessembinder 2003)

Summary of Literature Review

From the studies reviewed, it is clear that many scholars have researched on the impact of bonus issue on stock prices all over the world. Of particular importance is the fact that many studies have been done in the developed economies. This topic remains understudied in Kenya and for this reason the research will serve to bring out a clear view of the impact of bonus issue on stock prices.

A study period of 6 years (2006-2011) is deemed adequate to support well thought out findings and capture any details that may have been overlooked by earlier studies. The study will provide more information to other scholars who may be keenly interested in the topic and point out any knowledge gaps that may need further research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlines the methods, tools and sources of research data, targeted groups and sample from which data was collected in order to attain the objective of the study, which was used to investigate the impact of bonus share issue on stock prices of companies quoted at Nairobi Securities Exchange market. It further discusses how the data was processed and tools used in analyzing and presentation

3.2 Research Design

To examine the impact of bonus share issue on stock prices event study methodology was used. The event is what the researcher would like to study. To construct an event study the event, event date, event window, estimation window & estimation model was determined. The events defined for this study was the announcements of bonus shares. The event date is the date of announcement of bonus issue by the sample firm. It can be expressed as t_o. The event window comprised some period before & after the event day. The event window in this study was 30 days before & 30 days after right issue. It can be expressed as -30 to +30. The estimation period is the period prior to the occurrence of the event.

This method clearly showed the impact of bonus share issue on stock prices before and after the announcement.

3.3 Target Population

The population under study comprised all companies quoted in the Nairobi Securities Exchange Market which are currently 59 in number.

3.4 Sample and Sampling Procedure

A sample of 10 companies from the Nairobi Securities Exchange from various sectors which have issued bonus were selected. The study covered the period between 2006 and 2011.

3.5 Data Collection

Secondary method of data collection was used. Through an event-study approach, patterns of price changes for the periods proceeding public announcements could yield interesting evidence about market efficiency. The study utilized the event-study approach where the transaction date,

report date, and publication date as reported in the Nairobi Securities Exchange Market were adopted.

3.6 Data Analysis

Data was analyzed using ordinary least square (OLS) market model which measured the estimation of abnormal return on stock prices. Following is the formula for OLS market model to compute abnormal returns:-

$$AR_{jt} = R_{jt} - Er_{jt}$$

Where
t=0

ARjt = Abnormal return of security j on day t

Rjt = Actual return on security j on day t

ERjt = Expected return on security j on day t

Actual return on security j in period t was computed as follows:-

$$R_{jt} = \frac{P_{jt} - P_{jt-1}}{P_{jt-1}}$$

Where

Pjt = Price of security j on day t

Pjt-1 = Price of security j on day prior to day t

Expected return on security j in period t was computed as follows:-
$$ER_{jt} = a_j + b_j R_{mt}$$

Where

a_j = Risk free rate of return

b_j = Relative riskiness of the security to market index

Rmt = The rate of return on market index on the day t

After computation of abnormal returns of all the securities the average abnormal returns (AARs) was computed during event period (-30 to +30). AARs was computed as follows:

$$AAR_t = \frac{1}{N} \sum_{j=1}^{N} AR_{jt}$$

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Where

AARt = Average of abnormal return for day t

N = Number of securities in the sample

The abnormal returns are aggregated trading day –wise and then divided by number of securities. Thus cross-sectional and time- series aggregation was done. After this cumulative average abnormal return (CAARs) was computed. The formula for CAARt:

$$CAAR_t = \sum_{t-k}^{t} AAR_i$$

Where

k = Number of event days before day t

T test was used to determine the statistical significance of CAARt & AARt. For computation of t statistics the aggregate pre- event standard deviation of abnormal returns of all the securities was computed. Individual company's pre- event standard deviation i.e. (from -90 to -31) was computed & then aggregation done. The formula for estimation of pre- event standard deviation of daily abnormal returns is as follows:

$$S_{i,\,pre} = \sqrt{\frac{\sum^{-30} (AR_{it} - AAR_{it\,pre})^2}{n}}$$

Where

i, pre s = Standard deviation of abnormal returns of security i estimated from pre- event measurement period.

n = Number of days in pre- measurement period

AARpre = Average of abnormal return of security i estimated from pre- event measurement period

Aggregate pre- event standard deviation was computed as follows:-

$$S_{N,\,pre} = \sqrt{\frac{\sum_{I=1}^{N} \partial^2_{I\,pre)}}{N^2}}$$

i, pre s was applied on AAR of each day. The t- test for AARs was as follows:-

AAR₁t stat = $\dfrac{AAR_t}{sN,_{pre}}$

For testing CAARs, The t –test formula is:-

CAAR₁t stat = $\dfrac{CAAR_t}{sN,_{pre}\sqrt{N_t}}$

Where Nt = the absolute value of event day t plus 1 (e.g. for event day -30, the absolute value was 30 and Nt = 31)

A testable hypothesis was set. H1: The null hypothesis being tested was that abnormal returns on & around bonus issues are less than or equal to zero. If AARt or CAARt are greater than zero and statistically significant it indicates that the stock prices on an average reacted positively to bonus issue. Thus lead to increase the wealth of shareholders. If the t-test statistic was larger in absolute value than 1.96 or 2.58, the relevant abnormal return was statistically non zero at 5% or 1% significance level respectively.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the data findings on stock market reaction to announcement of company's bonus issues by analyzing the share/stock prices and market return around bonus issues announcement. These data were collected from the NSE offices. Analysis involved evaluation of abnormal return and security variability around bonus issue. The study covered a period of 2006 to 2001; the study sampled 10 companies that have had bonus issue in the study period.

4.2 Data Presentation

4.2 .1Analysis and Interpretation

The study analysed the returns of the shares and compared the same with the market returns so as to establish the abnormality of returns following bonus shares. The analysed data was presented in Table 4.1 , which shows the abnormal returns for the entire market following the stocks bonus issues announcements. It shows that t-2 to t1 had a positive abnormal returns of values greater than 1; 1.0894, 2.3329, 4.5166 and 3.2317 respectively. The period between t2 to t10 had average abnormal return of less than 1 which means that no investor benefitted from above normal returns pointing at market adjusting to the bonus issue. This implies that the market do not react fast to bonus issues which could point to efficiency, but not perfectly efficient. However, period between between t-15 to t1 had above normal returns meaning that the investors enjoyed above normal returns. This could point at insider trading just before the bonus issues anouncement or management using bonus issue to adjust stock price to a more marketable range.

4.2.2 Security Returns Variability (SRV)

The study sought to establish the variability of the stock return following bonus issue announcements thus determine the market reaction to bonus issue. The information presented in table 4.2 shows that that the variability in stock prices does increase erratically with time though there is more variability in the days preceding and after bonus issue announcement. In 2007, the security return variability rose to 11.1829, in 2006 the SVR rose to 6.0276 while in 2011 the

SRV was 0. However, the t-significance shows 15 of the statistics were significant; 10 of which were in the post-announcement period. 6 out of the 10 were between t0 and t15. The announcement day had an average ASRV of 3.9164 at 95% confidence level. Apart from day t1, t11, t15, t12, t15, t16, t22, t24, t26, t28 and t29, other periods had ASVR of less than 1. Results support the semi-strong form efficient market hypothesis since stock prices adjust so fast to public information that no investor can earn an above normal return by trading on the announcement day and period thereafter.

4.2.3 Average Value of ASRV for Bonus Issues Announcement

Table 4.1

Estimation Period	Security Return Variability
From day -15 to day +15	4.3362
From day -15 to day -1	1.0607
From day 0 to day +15	3.4875
From day 0 to day +1	3.8742
From day -1 to day 1	3.3604
Form day -3 to day +3	1.8787
From day -7 to day +7	1.0753

To analyze the speed at which the stock market absorbs the bonus issue announcement in its prices, the study presented the average security return variability across the announcement periods. As indicated by the table, stock variability was more in post announcement period than pre-announcement period; while t-15 to t-1 had ASRV of 1.0607, t0 to t15 had ASRV of 3.4875. Between t0 and t1 the ASRV was 3.8742, t-1 to t1 had a variability of 3.3604. Day t-3 to t3 had ASRV of 1.8787 and t-7 to t7 had ASRV of 1.0753. Therefore, the stock market positively absorbed bonus issues contained information positively.

4.2.4 CAR Across the Event Windows

Table 4.2

Days	Mean of CAR	Variance
t-30 to t-21	3.200135	2.698851
t-20 to t-1	11.606	54.117
t0 to t1	30.50557	16.91172
t-1 to t1	29.065	26.12547
t+2 to t+20	22.383	1.745567
t+20 to t+30	29.035	57.56523

t-30 to t+30	16.28562	98.38799

To track abnormal returns over a number of trading days, cumulative abnormal return (CAR) is computed through out the event period for the bonus issues as presented in table 4.3. from the table, it can be noted that CAAR for the sampled stocks are positive during entire event window.

Figure 4.1: Average CAAR for all the companies
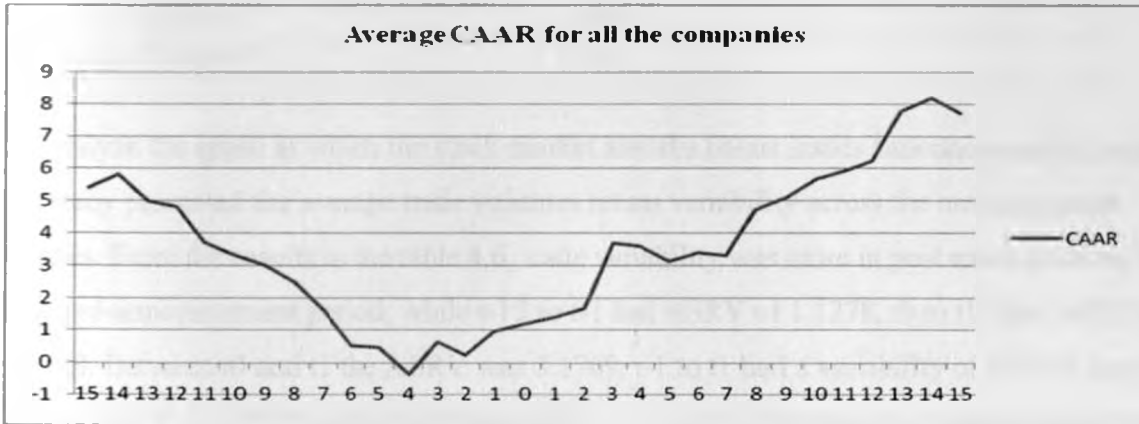
Figure 4.1 above shows a plotted graph trading volume activity ratio against days around bonus issues for 10 companies listed in NSE that had issued bonus. It shows how the market reacted on days before and after bonus issue. The graph shows that there was generally an increase in shares traded when bonus issue was announced. This can be shown by the increase in trading activity before and after bonus issue. Trading activity after the bonus issues date was however found to be more than that before bonus issue. The trading activity was found to be especially high from day 2 to day 15 after bonus issues.

4.2.5 One-Sample Statistics

From the results shown in table 4.5 the mean CAAR was found to be positive in the period after bonus issues an indication that the trading volume reacted positively towards the bonus issues, in the period before bonus the mean CAAR was found to have both negative value and indication the market was not sensitive to bonus issues, in the results on t- value the study found that period surrounding the event date the value of t was close to 2 an indication that trade volume were very sensitive to bonus issues by the companies.

Table 4.3: Average Value of ASRV for bonus issue

Estimation Period	Security Return Variability
From day -15 to day +15	4.3532
From day -15 to day -1	1.1278
From day 0 to day +15	3.1148
From day 0 to day +1	3.1769
From day -1 to day 1	3.1439
Form day -3 to day +3	1.9787
From day -7 to day +7	1.2353

To analyze the speed at which the stock market absorbs bonus issues announcement in its prices, the study presented the average trade volumes return variability across the announcement periods. From the results in the table 4.6, trade variability was more in post announcement period than pre-announcement period; while t-15 to t-1 had ASRV of 1.1278, t0 to t15 had ASRV of 3.1148. Between t0 and t1 the ASRV was 3.1769, t-1 to t1 had a variability of 3.1439. Day t-3 to t3 had ASRV of 1.9787 and t-7 to t7 had ASRV of 1.2353. Therefore, the trade volumes in the stock market positively absorbed bonus issue contained information positively.

4.2.6 Hypothesis Testing

Table 4.4: Hypothesis testing

	-15 to 0 days			0 to 15 days			Testing hypothesis
	$T=\mu 1$	Sig.	Mean	$T2=\mu 2$	Sig.	Mean	$\mu 1 - \mu 2 \geq 0$
Barclays Bank	5.797	.000	82805.73	4.967	.000	671106.5	0.83
City Trust	4.918	.000	59074.73	4.866	.000	585842.9	0.052
CMC Holdings	5.681	.000	62236.07	4.003	.000	579875.8	1.678
Diamond Trust Bank Kenya	9.129	.000	165923	8.684	.000	185018.1	0.445
Eaagads	5.207	.000	289960.7	4.631	.000	224383.3	0.576
East African Breweries	6.684	.001	143452.1	4.28	.000	185018.1	2.404
Jubilee Insurance Co.	6.199	.000	63113.67	3.912	.002	23145.73	2.287
Kenya Power & Lighting	7.628	.000	237790	5.33	.000	143938.3	2.298
Nation Media Group	6.189	.000	63079.47	3.454	.004	30191.33	2.735
NIC Bank	5.564	.001	243403.9	4.079	.000	233210.5	1.485

In order to test the hypothesis that $\mu 1 - \mu 2 \geq 0$, the mean for each company was calculated pre and post bonus issue period, the t test was done on the same data for pre and post bonus issue, from the results the study found that the mean of the pre bonus issue was less than that of post bonus issue an indication that there positive response by trading volume to the bonus issue, it was also revealed that in all the companies the value of t in pre issue period was higher than the t value in the post bonus issue an indication that all the companies satisfied the condition that $\mu 1 - \mu 2 \geq 0$ which implies that the trade volume reacted positively to bonus issue in the NSE. The p-value was found to be less than 0.05 an indication that they were statistically significant.

4.3 Summary and Interpretation of Findings

The study found that abnormal return were experienced around t2 to t10 following a bonus issue announcements meaning that the investors enjoyed above normal returns which could be attributed to insider trading just before bonus issue anouncement or management using bonus issue to adjust stock price to a more marketable range. Bonus shares are issued by cashing in on the free reserves of the company. The assets of a company also consist of cash reserves. A company builds up its reserves by retaining part of its profit over the years (the part that is not paid out as dividend). After a while, these free reserves increase, and the company wanting to issue bonus shares converts part of the reserves into capital (Irving, 2002). The study also found

that was an increase in the volumes of shares traded when bonus issue were announced. This was especially so in the days around the bonus issue. Trading activity was also seen to generally increase after bonus issue as compared to that before bonus issue. The disparity in trading activity before and after bonus issue was found not to be very big except. A bonus issue is a signal that the company is in a position to service its larger equity. The management would not have given these shares if it was not confident of being able to increase its profits and distribute dividends on all these shares in the future (Charles, 2006). According to Kendely (2006) bonus share issue enable companies to increase liquidity since there is no cash outgoing, the capital as per balance sheet will be more realistic than it would be otherwise, Profits remaining the same, the company cannot declare high dividend on expanded capital. By not declaring high dividend, it can avoid the tall claims of the employees and regulations by the government and the capitalization of reserves increases substantially the credit worthiness of company.

The study found that generally, the Kenyan market reacted positively to bonus issue announcements. Papaioannou, et. al, (2002) states that the signaling hypothesis, the declarations of bonus issues convey favorable private information about the future earnings to the investors. Managers have superior information about the future earnings, because there may be asymmetric information between managers and investors. Peterson (1971) states that an increase in share price following the announcement of a bonus issue occur because the announcement of a bonus issue may have beneficial informational content, shareholders are aware that, after the bonus issue, companies usually increase total dividend payout, this in turn, indicates the confidence of management in the company's future. Consequently, the share price increase in response to this information and affect shareholders' wealth.

The informational link between dividends and earnings is supported empirically by Healy and Palepu (1988). They show that firms that initiate dividends have significant increases in earnings for at least one year after the announcement.

There was an increase in volumes of shares traded after bonus issue as compared to those before bonus issue. This was found to be in agreement with the study by Copeland (1979) which suggested that management of companies uses bonus issue to bring it back to an optimal price,

which in turn increased demand. Managers of the companies sought to issue bonus shares to encourage investors to purchase their stock which appeared cheaper as they increase their liquidity, Kendely (2006) states that bonus issue enable companies to increase liquidity since there is no cash outgoing, the capital as per balance sheet will be more realistic than it would be otherwise, Profits remaining the same, the company cannot declare high dividend on expanded capital. By not declaring high dividend, it can avoid the tall claims of the employees and regulations by the government and the capitalization of reserves increases substantially the credit worthiness of company. The theoretical perspective suggests that the share price of a company issuing bonus shares should adjust so that the total shareholder wealth remains unchanged. In the practical world, stock prices rarely follow this theoretical prescription in bonuses.This study showed that there were positive mean returns with respect to bonus issue.

According to the Efficient Market Hypothesis (EMH) efficient markets, competitive markets "ruthlessly exploit all available information when setting security prices" (Ball, 2009). Fama (1995) defines an efficient market as one in which actual security prices represent precise estimates of their intrinsic values at all times. In an efficient market, asset prices must fully reflect all information available in the market. Grossman and Stiglitz (1995) argue investors require a return for gathering information, which is impossible if all available information is already included in share prices, this accounts for the market reaction to share issues without an incentive to gather information, there would be no reason to trade and the market would collapse.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This chapter presents discussions of the summary of key findings presented in chapter four, conclusions drawn based on such findings and recommendations there-to. This chapter will thus be structured into summary, conclusion, recommendations and areas for further research. From the findings in chapter 4, it implies that the market do not react fast to bonus issue which could point to efficiency, but not perfectly efficient. In the period between between t-15 to t1 had above normal returns meaning that the investors enjoyed above normal returns. This could point at insider trading just before bonus issue anouncement or management using bonus issue to adjust stock price to a more marketable range.

The study establish the variability of the stock return following bonus issue announcements thus determine the market reaction to bonus issue. Results support the semi-strong form efficient market hypothesis since stock prices adjust so fast to public information that no investor can earn an above normal return by trading on the announcement day and period thereafter.
From the findings, the results indicated that generally, there was an increase in the volumes of shares traded when bonus issue were announced. This was especially so in the days around the bonus issue. Trading activity was also seen to generally increase after bonus issue as compared to that before bonus issue.

The disparity in trading activity before and after bonus issue was found not to be very big except. All the companies showed increases in trading activities but not with disparities. The results showed there was a positive announcement effect on shares traded as a result of bonus issue. On the issue date, there was a positive average abnormal return which was very significant at 0.05% level. To track abnormal returns over a number of trading days, the cumulative abnormal return was computed throughout the event period.

5.2 Conclusion

This study examined the stock market reaction around the bonus issue announcement of companies quoted at the Nairobi Securities Exchange. The period under study ranged from 2006 to 2011. From the findings the study concludes that the Kenyan market reacts positively to bonus issue announcements. There was an increase in volumes of shares traded after bonus issue as compared to those before the bonus issue. The study also concludes that managers of the companies sought issues bonus shares to encourage investors to purchase their stock which appeared cheaper. This study showed that there were positive mean returns with respect to bonus issue, this was in agreement with the signaling hypothesis which stated that managers of companies' issues bonus shares to act as a means of passing information to stock holders and potential investors.

The analysis shows that bonus issues have a signaling effect but the effect is inversely related to stock price changes. The findings are similar with Papaioannou et al. (2002) while it differs from the findings of Peterson (1971), et al. (1997). The change in the abnormal returns due to bonus issue announcement is significantly influenced by size of bonus issue and the Pre cumulative abnormal return. However, the Pre cumulative abnormal returns are having an inverse effect and hence, there is no leakage of information prior to the bonus issue announcement in the Kenyan market.

The findings suggest that firms need to consider the over reaction of the stock market after the bonus issue. The results obtained may help the financial policy decision makers to assess the effect of their bonus issue decisions on the companies' profitability. This finding is also useful to investors while making their trading decisions.

5.3 Policy Recommendations

A number of recommendations emerge from the findings of the study, ranging from proper dissemination of information to safeguarding the market from insider abuse, providing funds for capital market research, improving the communication infrastructure.

The key recommendations are:

Provide funding for capital market research. The government and the NSE should fund research into the capital market. This will help to improve the efficiency of the market, and provide more information to the public so that they can make informed decisions when making investment decisions.

Discourage insider abuse. The NSE can promote the efficiency of the Kenyan stock market through increased surveillance. There is a need for NSE to further monitor the market activities at the NSE to prevent insider abuse and ensure that those caught are prosecuted. Insider trading has the effect of some traders

Improve the communication infrastructure. Efforts are being made to improve the communication infrastructure in Kenya and these should be encouraged. Information about the stock market should be disseminated on a daily basis, as is done in developed markets. Most Kenyan newspapers and television stations now disseminate stock market information during the weekdays, and this can be extended to weekends.

Provide the necessary education to promote the growth and development of the stock market. NSE can do this through a public enlightenment programme, seminars, workshops, symposiums and publications. This is necessary because many Kenyans still need to be educated about the prospect of investing in the stock market. NSE can also stimulate public dialogue on topical issues, initiate policy changes and support prudent innovation for growth of the stock market.

5.4 Limitations of the study

The study was limited to determine the effect of share issue on stock prices in the Stock Exchange market, in attaining its objective the study was limited to 10 firms listed companies in the NSE that have had bonus issues for the period of six years starting from year 2006 to 2011. Secondary data was collected from the firm financial reports and daily trading data in the NSE. The study was also limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from the Nairobi Securities Exchange publications, it nonetheless could still be prone to these shortcomings.

The study was based on a six year study period from the year 2006 to 2011. A longer duration of the study will have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem. Nevertheless the study had to be conducted for the period stated.

Bonus share issue is not very popular in the Kenyan securities market. This made it difficult on how many companies could be selected for the study. Hence only a few number of companies could be selected for the purpose of the study.

This study was also limited to the fact that the public is not well informed on the bonus issue. There is need for NSE to enlighten the public through programme, seminars, workshops, symposiums and publications. This is necessary because many Kenyans still need to be educated about the prospect of investing in the stock market. NSE can also stimulate public dialogue on topical issues, initiate policy changes and support prudent innovation for growth of the stock market.

5.5 Suggestions for Further Research

Bonus issues were found to be relatively new in the Nairobi Stock Exchange. However, many companies intending to distribute their shares do so by use of bonus issues. A study can be done to investigate the impact of investor behaviors on the Nairobi Securities Exchange.

Bonus issues are not so different from stock splits. There is need to find out how the market reacts to stock splits especially for splits with higher ratio. This can be done so that to know how different they are from issues of shares.

This study made use of a simple methodology based on the market model to determine abnormal returns. There is need for further study in this area and a need to include more independent variables such as those relating to firm size, growth and profitability of the firms so as to determine whether when other factors are considered there market would still react positively to bonus issue announcements.

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APPENDICES

Appendix I: Summary of B_0 and B_1

Company	β_0	β_1
Barclays Bank	2.338	-4.373
City Trust	1.710	8.482
CMC Holdings	0.330	2.123
Diamond Trust Bank Kenya	0.301	-0.142
Eaagads	3.207	1.556
East African Breweries	1.392	7.871
Jubilee Insurance Co.	3.068	2.984
Kenya Power & Lighting	0.847	23.508
Nation Media Group	1.686	339.371
NIC Bank	0.402	19.475

Appendix II: List of Companies

Company	Ratio	Date of announcement
1. Barclays Bank	Bonus of 3:1	11/8/2006
2. City Trust	Bonus of 1:4	9/14/2007
3. CMC Holdings	Bonus of 1:5	1/10/2008
4. Diamond Trust Bank Kenya	Bonus of 1:5	3/10/2011
5. Eaagads	Bonus of 1:1	11/26/2008
6. East African Breweries	Bonus of 1:5	8/31/2007
7. Jubilee Insurance Co.	Bonus of 1:4	4/26/2007
8. Kenya Power & Lighting	Bonus of 1:8	10/19/2011
9. Nation Media Group	Bonus of 1:10	3/22/2010
10. NIC Bank	Bonus of 1:10	2/24/2010

Appendix III: Abnormal Returns

Days	AR1	AR2	AR3	AR4	AR5	AR6	AR7	AR8	AR9	AR10
-30	1.633676	2.647319	-0.06387	0.3355	1.564492	10.01986	1.340963	-2.43902	1.533117	-0.69235
-29	0.014931	2.649236	1.058538	5.2935	0.32102	8.760828	1.431102	0.483271	-0.48102	2.525606
-28	-0.20155	2.516361	-0.82326	0.2086	-1.28418	5.682791	1.04742	0.497323	-0.48056	2.632543
-27	1.916979	1.533117	-0.12927	0.8486	8.7493	-9.5022	1.652566	0.611906	1.324178	-4.46763
-26	-0.31529	-0.48102	-0.34477	8.9059	1.859112	-10.0969	0.585437	0.733117	-0.21264	-2.88783
-25	-0.01286	-0.48056	0.340963	7.9916	0.608916	-4.13626	4.366805	1.106283	0.67674	4.366805
-24	-0.60933	1.324178	0.431102	8.7493	1.578489	1.73913	-3.10815	0.515061	1.675297	0.953145
-23	0.66847	-0.21264	1.04742	17.1150	1.716197	-0.89217	2.249538	0.70306	-0.71415	-3.17568
-22	-0.66572	0.67674	1.652566	-9.6685	-0.24138	2.139255	-3.10078	-2.08764	8.337653	1.666842
-21	0.308791	1.675297	0.585437	-6.9338	-0.97852	-1.16298	-0.41673	-0.9626	9.290955	-0.25357
-20	-2.03511	-0.71415	1.707296	-1.0709	0.485452	2.603876	0.497323	-0.57455	16.59	0.941164
-19	-2.30662	8.337653	0.766252	0.6506	0.398028	2.647319	0.256615	-3.27825	8.7493	-1.31237
-18	-0.5017	9.290955	2.233711	1.0512	0.671074	2.649236	1.533117	-0.15226	17.1150	1.498529
-17	2.453121	16.59	-0.04896	0.9658	0.33591	2.516361	-0.48102	-2.34812	-9.6685	2.057896
-16	0.829885	1.564492	-0.84131	6.3801	0.634511	-3.10815	-0.48056	1.203999	-6.9338	1.187148
-15	0.565715	0.032102	-0.68867	1.5937	7.381128	2.249538	16.59	0.028158	-1.0709	-2.6366
-14	1.419975	-1.28418	-3.11047	9.6908	1.818868	-3.10078	-8.66689	-0.36956	0.6506	2.029145
-13	0.69597	-0.60049	-0.33223	4.8184	-8.28166	-0.41673	-7.9119	0.175852	1.0512	0.231966
-12	0.576904	2.342468	1.859112	1.2146	-2.42081	0.497323	-2.46047	0.945922	0.9658	0.881085
-11	-0.22251	2.027601	0.608916	1.5346	4.036926	0.256615	-7.34285	1.065884	6.3801	0.379378
-10	5.704819	8.7493	1.578489	3.0800	5.041318	1.533117	6.230985	0.676545	1.5937	8.014109
-9	1.85343	17.1150	1.716197	4.4681	5.114603	-0.48102	-2.10993	5.1628	9.6908	2.410634
-8	-0.41793	-9.6685	-0.24138	-1.7449	2.516361	-0.48056	0.64148	6.443027	-2.8379	7.381128
-7	2.246783	-6.9338	-0.97852	2.6021	-6.9338	1.324178	-1.31393	5.077105	-1.3952	1.818868
-6	0.241633	-1.0709	0.485452	0.0000	-1.0709	-0.21264	-4.17691	8.534305	-1.8892	-8.28166
-5	-0.16178	0.6506	0.398028	-2.9566	0.6506	0.67674	4.962135	6.669853	2.7584	-2.42081
-4	0.248034	1.0512	0.671074	-0.4988	1.0512	1.675297	-4.91933	1.280162	-1.3775	4.036926
-3	2.724903	0.9658	0.33591	-1.9882	0.9658	-0.71415	-4.72982	4.177041	-2.8636	5.041318
-2	-0.00738	6.3801	0.634511	9.6540	6.3801	8.337653	3.403391	2.287123	-2.8213	5.114603
-1	2.098819	1.5937	-0.5846	9.3449	1.5937	9.290955	1.876808	6.336738	-2.1211	-2.2834
0	0.220663	9.6908	4.498691	41.6693	9.6908	16.59	2.255889	8.190233	-0.8481	-0.01045
1	0.117165	7.9916	-2.43963	-10.7226	-2.8379	-8.66689	-0.04539	-22.6723	-1.3250	2.684908
2	0.165933	8.7493	-0.09723	-10.2900	-1.3952	-7.9119	3.942903	-5.21637	-2.2481	-4.78321
3	0.826796	1.1150	-0.31932	-11.4779	-1.8892	-2.46047	-8.13389	-2.36052	0.0000	-1.97004
4	0.752702	9.6685	0.247653	-2.8379	2.7584	-7.34285	3.273187	-2.03494	1.8535	0.838407
5	-0.46636	6.9338	0.001844	-1.3952	8.7493	6.230985	1.564179	0.17529	-0.04896	-0.12704
6	0.22237	1.0709	-0.09997	-1.8892	17.1150	-2.10993	-0.59506	-1.41767	-0.84131	1.109287
7	0.684292	0.6506	0.691759	2.7584	-9.6685	0.64148	-2.09818	-3.09043	-0.68867	0.01212
8	1.280162	1.0512	-0.63014	-1.3775	-6.9338	-1.31393	1.564492	-0.54818	-3.11047	0.69758
9	0.096027	0.9658	0.129069	-2.8636	-1.0709	-4.17691	-4.72982	0.721757	-0.33223	-0.52395
10	0.019376	6.3801	0.150283	-2.8213	0.6506	4.962135	3.403391	-2.52687	1.859112	-0.68445
11	1197.593	1.5937	0.341983	-2.1211	1.0512	-4.91933	1.876808	0.267423	0.608916	-0.17303
12	4.936943	9.6908	0.854926	-0.8481	0.9658	-4.72982	2.255889	1.830045	1.578489	-0.69407
13	0.725433	4.8184	0.742546	-1.3250	6.3801	3.403391	-0.04539	-0.81074	1.716197	1.256485
14	-2.03968	1.2146	-0.19608	-2.2481	1.5937	1.876808	3.942903	0.549333	-0.24138	-1.37649
15	-4.1921	-6.9338	0.174217	0.0000	9.6908	2.255889	-8.13389	-3.80994	-0.97852	-3.76148
16	-6.77611	-1.0709	0.260495	1.8535	4.8184	-0.04539	3.273187	1.313806	0.150283	2.530041
17	-2.75409	0.6506	-0.08996	-8.3178	1.2146	3.942903	1.564179	-7.56209	0.341983	0.632102
18	0.051245	1.0512	0.32102	0.8153	2.603876	-8.13389	-0.59506	3.228614	0.854926	-1.01974
19	-1.5757	0.9658	0.256787	-0.2601	2.647319	3.273187	0.671074	3.893262	0.742546	-1.27931
20	-2.43618	6.3801	-0.33658	3.7428	2.649236	1.564179	0.33591	1.858134	-8.66689	0.858525
21	0.980385	1.5937	-0.07811	8.1972	2.516361	-0.59506	0.634511	-2.43904	-7.9119	-1.90591
22	-3.45149	9.6908	0.361577	-4.4118	-3.10815	-2.09818	-0.5846	-4.20044	-2.46047	1.842583
23	-0.84131	-2.8379	0.121729	-1.6719	2.249538	1.564492	4.498691	-0.99123	-7.34285	-1.65568
24	-3.18304	-1.3952	2.329027	1.4352	-3.10078	0.32102	-2.43963	-1.05061	6.230985	0.825644
25	0.638266	-1.8892	0.378788	-1.7995	-0.41673	-1.28418	-0.09723	1.748459	-2.10993	-0.21613
26	-1.17139	2.7584	3.515441	0.6011	0.497323	-0.60049	-0.31932	-4.05511	0.64148	1.556085
27	1.624772	-0.48056	1.367844	-3.5843	0.256615	2.342468	0.247653	-0.0685	-1.31393	-3.01783
28	3.387063	1.324178	-0.54829	-1.0941	1.533117	2.027601	0.001844	1.801298	-4.17691	2.609697
29	2.061251	-0.21264	-16.7381	-0.6367	-0.48102	-1.13555	-0.09997	-0.78629	4.962135	73.70185
30	1.445107	2.249538	-0.51657	2.4952	-0.48056	-3.67577	2.516361	-0.94207	-4.91933	-0.26942

Table 4.5: Average Abnormal Returns

KDays	AAR	t	Sig. (2-tailed)
-30	.4375	.816	.451
-29	1.3938	2.180	.081
-28	.5875	1.342	.237
-27	.7102	-1.000	.363
-26	1.0529	-.267	.800
-25	.3839	.951	.385
-24	.2612	1.410	.218
-23	.4774	.866	.426
-22	.3698	-.635	.554
-21	.3845	-1.230	.273
-20	.6196	.361	.733
-19	.4158	-.523	.623
-18	.3621	2.191	.080
-17	.4290	1.210	.280
-16	.2057	.735	.495
-15	.1673	.261	.805
-14	1.0176	.565	.596
-13	1.7646	1.066	.335
-12	1.2849	4.912	.004
-11	.3819	2.378	.063
-10	2.6129	2.938	.032
-9	.5799	3.022	.029
-8	1.4308	1.120	.314
-7	.5264	2.515	.053
-6	1.2743	.059	.955
-5	.3490	.262	.804
-4	.2696	1.926	.112
-3	.8296	1.390	.223
-2	1.0894	2.629	.047
-1	2.3329	1.967	.106
0	4.5166	1.834	.126
1	3.2317	-1.841	.125
2	.8559	-2.758	.040
3	.2945	-1.660	.158
4	.2251	-1.346	.236
5	.1447	.656	.541
6	.0607	-1.318	.245
7	.1299	.365	.730
8	.0411	-1.637	.163
9	.0692	-1.380	.226
10	.1885	-.131	.901
11	43.0224	.993	.366
12	1.5179	.171	.871
13	.1160	.974	.375
14	.2478	-.869	.424
15	1.1385	-1.404	.219
16	2.3328	-.104	.921
17	.7888	-1.196	.285
18	.2792	-.537	.614
19	.2432	.756	.483

20	.3464	1.020	.355	
21	.2046	.438	.680	
22	.7916	-1.897	.116	
23	.1092	-1.144	.304	
24	.8801	.081	.939	
25	.0676	-.167	.874	
26	.9100	-.024	.981	
27	.4095	-.217	.837	
28	1.2688	1.869	.121	
29	17.2388	.716	.506	
30	.2198	-.280	.790	

Table 4.6: Average Security Returns Variability

Day	2006	2007	2008	2010	2011	Mean (ASRV)	STDEV	T-stat	Sig
-30	0.6486	1.3738	0.1320	0.0006	0.0323	0.4375	0.5234	2.047	0.096
-29	0.3331	1.1696	0.0052	5.0313	0.4296	1.3938	1.8582	1.837	0.126
-28	0.2113	0.4419	0.0055	1.8121	0.4668	0.5875	0.6349	2.267	0.073
-27	0.8964	1.2381	0.0083	0.0640	1.3443	0.7102	0.5702	3.051	0.028
-26	0.0594	1.7334	0.0119	2.8981	0.5617	1.0529	1.1117	2.320	0.068
-25	0.0346	0.5069	0.0272	0.0663	1.2843	0.3839	0.4850	1.939	0.110
-24	0.1453	0.3684	0.0059	0.7253	0.0612	0.2612	0.2629	2.434	0.059
-23	0.4345	1.2624	0.0110	0.0000	0.6792	0.4774	0.4699	2.488	0.055
-22	0.9193	0.4620	0.0967	0.1838	0.1871	0.3698	0.3010	3.009	0.030
-21	0.1250	0.2239	0.0206	1.5485	0.0043	0.3845	0.5874	1.603	0.170
-20	1.8711	0.0976	0.0073	1.0621	0.0597	0.6196	0.7380	2.057	0.095
-19	1.4651	0.0977	0.2385	0.1619	0.1160	0.4158	0.5269	1.933	0.111
-18	1.5442	0.1007	0.0005	0.0140	0.1512	0.3621	0.5936	1.494	0.195
-17	1.4605	0.0906	0.1224	0.1863	0.2852	0.4290	0.5200	2.021	0.099
-16	0.3775	0.3061	0.0322	0.2179	0.0949	0.2057	0.1282	3.932	0.011
-15	0.2186	0.0801	0.0000	0.0698	0.4682	0.1673	0.1663	2.465	0.057
-14	3.3650	0.5328	0.0030	0.9100	0.2773	1.0176	1.2111	2.058	0.095
-13	0.1503	0.1016	0.0007	8.5670	0.0036	1.7646	3.4017	1.271	0.260
-12	1.1081	0.0097	0.0199	5.2345	0.0523	1.2849	2.0187	1.559	0.180
-11	0.1222	0.0110	0.0252	1.7412	0.0097	0.3819	0.6810	1.374	0.228
-10	8.6351	0.0727	0.0102	0.0206	4.3257	2.6129	3.4394	1.861	0.122
-9	1.7088	0.0885	0.5916	0.1192	0.3914	0.5799	0.5939	2.392	0.062
-8	0.0597	0.0162	0.9214	2.4875	3.6694	1.4308	1.4331	2.446	0.058
-7	1.5091	0.0529	0.5722	0.2748	0.2228	0.5264	0.5191	2.484	0.056
-6	0.0842	0.0006	1.6167	0.0506	4.6194	1.2743	1.7801	1.754	0.140
-5	0.0534	0.0436	0.9875	0.2656	0.3947	0.3490	0.3457	2.473	0.056
-4	0.1488	0.0395	0.0364	0.0256	1.0976	0.2696	0.4164	1.586	0.174
-3	1.8347	0.0239	0.3873	0.1905	1.7117	0.8296	0.7799	2.605	0.048
-2	0.1197	1.3491	0.1161	2.1002	1.7619	1.0894	0.8281	3.222	0.023
-1	1.1701	1.5539	0.8913	7.6982	0.3512	2.3329	2.7111	2.108	0.089
0	6.0276	11.1829	1.4889	3.8835	0.0000	4.5166	3.9164	2.825	0.037
1	1.7725	1.5187	11.4097	0.9723	0.4855	3.2318	4.1131	1.925	0.112
2	0.0095	1.3087	0.6040	0.8164	1.5409	0.8559	0.5396	3.886	0.012
3	0.1961	0.6457	0.1237	0.2454	0.2614	0.2945	0.1820	3.962	0.011
4	0.1557	0.7719	0.0919	0.0585	0.0473	0.2251	0.2760	1.997	0.102
5	0.0528	0.5394	0.0007	0.1295	0.0011	0.1447	0.2029	1.747	0.141
6	0.0150	0.0761	0.0446	0.0850	0.0829	0.0607	0.0271	5.491	0.003
7	0.2558	0.0381	0.2120	0.1435	0.0000	0.1299	0.0981	3.244	0.023
8	0.1180	0.0317	0.0067	0.0164	0.0328	0.0411	0.0397	2.540	0.052
9	0.0072	0.2737	0.0116	0.0351	0.0185	0.0692	0.1027	1.651	0.160
10	0.0068	0.3708	0.1417	0.3916	0.0316	0.1885	0.1639	2.817	0.037
11	1.6492	0.3502	0.0016	0.1090	0.0020	43.0224	85.8135	1.228	0.274

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12	6.1295	0.3091	0.0743	1.0443	0.0324	1.5179	2.3342	1.593	0.172
13	0.2915	0.1659	0.0146	0.0015	0.1063	0.1160	0.1066	2.666	0.045
14	1.0206	0.0698	0.0067	0.0145	0.1276	0.2478	0.3888	1.561	0.179
15	4.2719	0.0696	0.3222	0.0757	0.9529	1.1385	1.5994	1.744	0.142
16	1.1580	0.0147	0.0383	0.0217	0.4311	2.3328	4.4154	1.294	0.252
17	1.8423	0.5083	1.2693	0.2973	0.0269	0.7888	0.6696	2.886	0.034
18	0.0006	0.9078	0.2314	0.1860	0.0700	0.2792	0.3248	2.105	0.089
19	0.6219	0.1468	0.3364	0.0009	0.1102	0.2432	0.2181	2.732	0.041
20	1.4733	0.0933	0.0766	0.0390	0.0496	0.3464	0.5638	1.505	0.193
21	0.2350	0.2919	0.1320	0.1195	0.2447	0.2046	0.0673	7.444	0.001
22	2.9286	0.1434	0.3916	0.2655	0.2287	0.7916	1.0715	1.810	0.130
23	0.1761	0.0454	0.0218	0.1182	0.1846	0.1092	0.0663	4.038	0.010
24	4.0701	0.0088	0.0245	0.2514	0.0459	0.8801	1.5974	1.350	0.235
25	0.1415	0.0364	0.0679	0.0890	0.0031	0.0676	0.0470	3.521	0.017
26	4.0063	0.0065	0.3650	0.0089	0.1631	0.9100	1.5537	1.435	0.211
27	1.1965	0.1299	0.0001	0.1074	0.6134	0.4095	0.4468	2.245	0.075
28	2.8722	0.0613	0.0720	2.8798	0.4587	1.2688	1.3201	2.354	0.065
29	84.3086	0.0194	0.0137	1.0001	0.8521	17.2388	33.5374	1.259	0.264
30	0.5859	0.2114	0.0197	0.2769	0.0049	0.2198	0.2115	2.546	0.052

Table 4.7: One-Sample Statistics

	T	Mean CAAR	Sig. (2-tailed)
15	-.008	-.0375	.994
14	.128	.5876	.901
13	.126	.5119	.902
12	.158	.5993	.878
11	-.092	-.2818	.929
10	-.157	-.4655	.879
9	-.195	-.5942	.850
8	-.212	-.6714	.837
7	-.277	-.8767	.787
6	-.674	-1.8009	.516
5	-.653	-1.6090	.528
4	2.023	-2.2557	.330
3	2.495	-.9429	.631
2	2.461	-.7805	.655
1	1.277	.3476	.787
0	1.985	.9602	.348
1	2.150	.9728	.277
2	.845	.9259	.418
3	2.953	2.8412	.079
4	2.660	2.4830	.128
5	.995	1.7084	.343
6	.931	1.7262	.374
7	.684	1.3705	.510
8	1.122	2.4945	.288
9	1.119	2.6855	.289
10	1.127	3.0673	.286

11	.938	3.0849	.370
12	.841	3.1002	.420
13	1.093	4.4908	.300
14	1.068	4.6181	.311
15	.776	3.8150	.456