# A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI 

## DECLARATION

I hereby declare that this is my original work and has not been presented for award for a degree at this or any other university.

Signature $\qquad$ Date $\qquad$

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Reg No: D63/60925/2013

I hereby declare that this project has been submitted with my approval as the University supervisor.

Signature
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## ACKNOWLEDGEMENT

Humanity progresses on the collective acts of individuals.

I give thanks to God for giving me life and grace each day to contribute to His work in the universe.

Special thanks go to Dr. Josiah Aduda for his continued guidance, patience, friendship, unfailing leadership and advice.

To Colleagues, Hilda Ndoka and family for their support and love, I am forever indebted.

God bless you all.

## DEDICATION

This project is dedicated to my parents, Dr.

Jacktone Achola and Alice Yalla, for their continued love, support and guidance and for all the experiences we have been through together.


#### Abstract

Macroeconomic stability and foreign private capital inflow has no effect in determination of stock prices. Therefore, there is need for further research that is aimed at establishing if macroeconomic instability and foreign private capital inflow will affect the stock prices before an IPO. In addition, future studies should focus on behavioral factors or the study could compare different East African nations. The present study analyses the share price performance of eight firms and seeks to identify the factors that influence share prices for the selected firms in various sectors at NSE by developing a model (s) for share price determination. Data was collected on the eight variables under study for a period of five years (2003-2013) and regression analysis was utilized to determine the effect of selected macroeconomic variables on the share prices of eight companies at NSE and the share prices for the companies were analysed in terms of change in magnitude. The general results indicated that there is no one model to predict share prices at NSE. Overall the R-Square of all the regressions was generally low (from 4.4 percent to 3 percent) denoting that the strength of association between the variables was low and other factors influence share price.The results of the empirical analysis are consistent with most of the findings in the literature review and support the evidence that the selected determinants have little effect on share price. This could have been influenced by the period under study (Ten years) and maybe with a longer time period the results could be different.


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## ABBREVIATIONS

ATS: Automated Trading System

CBK: Central Bank of Kenya

CPRA: Comparison Period Return Approach

FISD: Financial Information Services Division

IPO: Initial Public Offer

MENA: Middle East and North Africa

NASI: NSE All Share Index

NSE: Nairobi Securities Exchange

## CHAPTER ONE: INTRODUCTION

### 1.0 Introduction

This chapter highlights the background to the study and detailed the nature of the problem that is to be studied. The chapter also identifies the objectives of the study, research questions, significance of the study and finally outlined the scope, limitations of the study

### 1.1 Background of the Study

When a new firm enters the financial market, the Initial Public Offering (IPO) is accompanied by expectations but also by uncertainty. For investors it is essential to evaluate the IPO's potential and risk before investing. One dimension of the IPO's aftermarket performance is the expected survival time in the financial market. A delisting due to negative reasons from the market is mostly accompanied with serious financial distress or even bankruptcy. Therefore, the survival time is a measure of performance, not only for investors but also for further stakeholders like debtees, banks, employees or suppliers. Empirical evidence shows the critical phase of a new firm in the market is the time shortly after going public (Hensler, Rutherford and Springer, 1997; Demers and Joos, 2007). Factors at the time of the IPO are expected to provide valuable insights on the expected survival time.

### 1.1.1 Equity Prices

The pricing and performance of public offerings is one of those empirical issues that incessantly attract the attention of many researchers in finance. Even though there is extensive empirical evidence on the abnormal initial returns provided by them, and in the "hot issue markets" both the number of public offering and the level of initial returns reaching unprecedented peaks and long-
term under performance of the share price, the search for the reasons of these anomalies is still unresolved (Durukan, 2002).One of the best known and the most puzzling anomaly associated with the process is the concept of underpricing. Under pricing is the difference between the price at which the firm's stock was initially and the stock's closing price on the first day of trading (Ibbotson, 1975).

An initial public offering involves four groups - the issuing firm, the underwriter/investment bank, the initial buyers and the larger set of investors in the secondary market. These groups have varying amounts of information regarding the issuing firm. It may be the case that the issuer has better information on the value of the security than do the investors or underwriters (Downes and Heinkel, 1982; Ritter, 1984; Hwang, 1988). Alternatively, it may be the case that the underwriters possess information superior to the issuer and investors (example, Baron, 1982; Rees, 1987). It may also be the case that the most important informational asymmetry may arise within a market group rather than between different groups (Rock, 1986). That is, investors are differentiated by their levels of information about the true value of the issue and may be categorized into "informed investors" and "uninformed investors", with the former having perfect information. As a result of this asymmetry, informed investors compete with uninformed investors only for "good" issues, creating adverse selection in which the probability of obtaining shares in "bad" issues is higher for uninformed investors. This adverse selection proposed by Rock (1986) is analyzed by Ritter (1984), Beatty and Ritter (1986), Koh and Walter (1989), Carter and Manaster (1990), McStay (1992), Keloharju (1993) and Lee, Taylor and Walter (1996; 1999).

This information asymmetry creates uncertainty to the investor who will then tend to underprice the issue. Baron (1982), Rock (1986) and Grinblatt and Hwang (1989) present models that suggest a positive relation between the degree of investor uncertainty over issue value and the extent of underpricing. Empirical evidence between value uncertainty and underpricing is provided in Ederington (1974), Bear and Curley (1975), Beatty and Ritter (1986), Miller and Reilly (1987), Johnson and Miller (1988), and Carter (1992). Firms may also use underpricing as a signal of quality (Welch, 1989). However, Garfunkel(1993) does not find evidence to support the signaling hypothesis.

### 1.1.2 Determinants of Equity Prices

According to Corrado and Jordan (2002), some of the factors influencing stock price behaviour include company profits; political factors; and economic performance. Firm performance is usually depicted through profits which are passes to shareholders through dividend payout and hence determine the earnings per share. Others are interest rates; Exchange Rates; Inflation Rate; Real Gross Domestic Product; and shareholder-level taxes.

### 1.1.3 Relationship between the Determinants and Equity Prices after IPO

The current EPS figures and the individual shareholders expectations of future growth relative to that of other companies have an impact on the share price (Kang, 2008). EPS is calculated by dividing the earnings with the weighted number of ordinary shares. There are two types of EPS; Basic EPS that is based on ordinary shares currently in issue; and the Diluted EPS that is based on ordinary shares currently in issue plus potential ordinary shares (IAS 33 Earnings per Share). Brigham and Gapenski (1994) argue that dividends affect share prices. Companies issue dividends
based on their net earnings for the quarter. Although dividends are not guaranteed, investors can expect to receive the same amount as the previous quarter. However, if an investor determines that the dividend payout might be greater than the previous quarter; this affects the price of the stock (Mark, 2012).

Exchange rates affect stock prices and can be used to make predictions about the market. The exchange rate is the value of the American dollar versus other currencies. A low rate will spur borrowing, while a high rate will retard it. All other things being equal, cheap money is good for the economy and manifests itself in higher stock prices. This works only for the short term, because stocks are always future oriented. If rates are low today, investors assume that they will rise soon. Therefore, the rise in stock prices resulting from a cheaper dollar leads to short-term price rises only. When interest rates are high, dollars are expensive. As a result, money moves to the bond market, where the expected interest rate is the margin of profit. When rates fall, money moves out of bonds and into stocks, pushing prices upward. Interest rates can and do affect stock prices. The reverse is also true (Mark, 2012).

### 1.2 Research Problem

Market reacts differently to various factors ranging from economic political, and socio-cultural. The stock prices of quoted companies in Kenya are affected either positivity or negatively by a number of factors occurring within or without the economic system. IPOs are often issued by smaller, younger companies seeking the capital to expand, but can also be done by large privately owned companies looking to become publicly traded. The initial public offering (IPO) is a vital step for young entrepreneurial firms, providing them access to the public equity market for the
first time. Previous literature had focused primarily on IPO underpricing phenomenon to measure the performance of companies.

A study by Waweru (2010) sought to establish if there exists a relationship between stock prices and news of an IPO at NSE. Secondary data (2004 to 2009) was obtained and analyzed using the Comparison Period Return Approach (CPRA). The mean portfolio daily return was calculated for the IPO within the window period. The study found that issuing of IPOs at NSE had both positive and negative effects on daily mean returns. Negative effects (declining mean daily returns) were on the days nearing the IPOs events which were the result of buyer and seller expectation in the market so as to capitalise on the new issue while positive effects (normalcy is restored) were in the days after the IPOs event which were the result of buyer-seller initiated trading. Further research could be carried out on whether other factors combined with the announcement of an IPO could affect share prices and also the effect of stock splits on share prices.

Labidi and Triki (2011) sought to find out if there were anomalous patterns, namely under-pricing and long-run under-performance, in the stock price behaviour of companies that go public in the Middle East and North Africa (MENA) region and the impact of investors' optimism and divergence of opinions on IPO under-pricing and long-term under-performance.

Previous literature has focused primarily on IPO underpricing phenomenon as the main factor affecting the equity price, (Ljungvist, 1997; Ljungqvist and Wilhelm, 2006; Purnanandan and Swaminathan, 2004; Ritter, Jay, and Ivo W, 2002) as a performance gauge. Daily (2005) argue that IPO offer pricing, which is a key factor in underpricing has remained relatively unexplored in
literature of equity value after the IPO. Paleari and Vismara (2007) also agree that although valuation of IPO is a critical subject, only narrow extant research has addressed it. This study therefore aims at finding out the factors affecting equity prices after initial public offer (IPO) of quoted companies in Nairobi Securities Exchange (NSE). The research intends to the research question, what is the effect of dividend policy on equity prices after initial public offer, what is the effect of exchange rate equity price after initial public offer, what is the effect of earnings per share on equity prices after initial public offer? what is the effect of interest Rate on equity prices after initial public offer?

### 1.3 Objectives of the Study

### 1.3.1 Main Objectives of the Study

To establish the relationship between determinants of equity prices after initial public offer of firms quoted at the Nairobi Securities Exchange.

### 1.3.2 Specific Objectives of the Study

i. To determine the effects of dividend policy on equity prices after initial public offer.
ii. To investigate the effects of exchange rate on equity prices after initial public offer.
iii. To determine the effects of earnings per share on equity prices after initial public offer.
iv. To determine the effects of interest rate on equity prices after initial public offer.

### 1.4 Value of the Study

This study intended to establish determinants of equity prices after initial public offer (IPO) of quoted companies in Nairobi Securities Exchange to scholars, practitioners and student of research
and the management of companies and NSE. The management is hoped to be the key beneficiary of this study. Owing to the major role that they play in the overall running of the organization and there financing decisions, this study is hoped to provide adequate knowledge on determinants of equity prices after initial public offer (IPO) of quoted companies in Nairobi Securities Exchange. The study is expected to contribute to knowledge in the stock exchange and foreign investment.

The study would also be of a good help to policy makers as they will obtain knowledge of the determinants of equity prices after initial public offer (IPO) of quoted companies in Nairobi Securities Exchange in stock returns at Nairobi Securities Exchange. They will therefore obtain guidance from this study in developing appropriate policies that will regulate the sector.

## CHAPTER TWO: LITERATURE REVIEW

### 2.0 Introduction

This chapter presents a literature review to determine the factors affecting equity prices after initial public offer (IPO) of quoted companies. The chapter shall give an overview on theoretical review, conceptual framework and empirical review.

### 2.1 Theoretical Review

### 2.1.1 Random Walk Theory

Random walk theory by is a stock market theory that states that the past movement or direction of the price of a stock or overall market cannot be used to predict its future movement (Burton and Malkiel, 1973). According to Maurice (1953) the theory states that stock price fluctuations are independent of each other and have the same probability distribution, but that over a period of time, prices maintain an upward trend. The theory claims that market prices follow a random path up and down, without any influence by past price movements, making it impossible to predict with any accuracy which direction the market will move at any point. In other words, the theory claims that path a stock's price follows is a random walk that cannot be determined from historical price information, especially in the short term. Investors who believe in the random walk theory feel that it is impossible to outperform the market without taking on additional risk, and believe that neither fundamental analysis nor technical analysis have any validity. However, some proponents of this theory do acknowledge that markets move gradually upward in the long run.

Malkiel (1973) asserts that price movements in securities are unpredictable. Because of this random walk, investors cannot consistently outperform the market as a whole. Applying
fundamental analysis or technical analysis to time the market is a waste of time that will simply lead to underperformance. Investors would be better off buying and holding an index fund. Investors can also use valuation techniques to ascertain the true value of a security or market and hence decide when to buy or sell based on these valuations.

According to Mlambo (2003) the stock market context does not mean, neither should it be taken to imply, that the price movements are whimsical and chaotic. All it means is that period-to-period price changes should be statistically independent and unforecastable if they are properly anticipated. Price movements are a perfectly rational response to information but since there is no reason to expect new information to be non-random, price changes based on this information is supposed to be random and uncorrelated to any observable trend (Fama, 2000).

The theory argues that the share price movements are independent of one another and unrelated. This happens in an efficient market where the current prices of securities represent unbiased estimates of their intrinsic values (Mlambo, 2003). The random theory holds that the prices move in a random manner hence, it is not possible to predict future prices. The price movement, whether up or down, occurs as a result of new information and since investors cannot predict the kind of new information (whether good or bad), it is not possible to predict future price movement (Nishat and Irfan 2003).

The random walk theory clearly conflicts with technical analysis. The theory says that previous price changes or changes in returns are useless in predicting future prices, which implies that the work of a technical analyst is unnecessary. According to Fisher and Jordan (1995); Mlambo (2003) the random walk theory is a special case of a more general efficient market hypothesis and the two
positions complement each other. This theory answers to the topic of the study in that it implies that an investor‘s judgment of the true worth of the shares is different and random from the stock market judgment as seen in the current price of the shares during and after the IPO.

### 2.1.2 Dividend Relevance Theory

Gordon (1963) gave a view about the dividend policy by presenting the concept of dividend relevance theory. Dividend relevance theory suggests that investors are generally risk averse and would rather have dividends today ("bird-in-the-hand") than possible share appreciation and dividends tomorrow. Dividend relevance theory proposes that dividend policy affect the share price. Therefore, according to this theory, optimal dividend policy should be determined which will ensure maximization of the wealth of the shareholders. If the choice of the dividend policy affects the value of a firm, it is considered as relevant. In that case a change in the dividend payout ratio will be followed by a change in the market value of the firm. If the dividend is relevant, there must be an optimum payout ratio. Optimum payout ratio is that ratio which gives highest market value per share.

James (2001) argues that the choice of dividend payout ratio almost always affects the value of the firm. He studied the significance of the relationship between internal rate of return (R) and cost of capital $(\mathrm{K})$ in determining optimum dividend policy which maximizes the wealth of shareholders. Walter's model is based on the following assumptions: The firm finances its entire investments by means of retained earnings only, internal rate of return (R) and cost of capital (K) of the firm remains constant, the firms' earnings are either distributed as dividends or reinvested internally,
the earnings and dividends of the firm will never change and the firm has a very long or infinite life.

They said that dividend policy do affect the value of firm and market price of shares. Investors always prefer secure and current income in the form of dividends over capital gains. Lack and Scholes (1974) found no relationship between dividend policy and stock prices. Their results further explain that dividend policy does not affect the stock prices and it depends on investors' decision to keep either high or low yielding securities; return earned by them in both cases remains the same. Empirical studies do not support dividend relevance theory. However, actions of market participants tend to suggest that there is some connection between dividend policy and share price.

### 2.1.3 Modigliani-Miller Theorem

Miller and Modigliani (1961) introduced the concept of Dividend Irrelevance theory in which they explain that dividend policy does not affect the stock prices. Many researchers like Firth and Gao (2002), Adefila, Oladipo and Adeoti (2004), Uddin and Chowdhury (2005), Denis and Osobov (2008), Adesola and Okwong (2009) provide the strong evidence in the favor of dividend irrelevance theory and does not consider it relevant to the stock prices.

According to MM, the dividend policy of a firm is irrelevant, as it does not affect the wealth of shareholders. The model which is based on certain assumptions sidelined the importance of the dividend policy and its effect thereof on the share price of the firm. According to the theory the value of a firm depends solely on its earnings power resulting from the investment policy and not influenced by the manner in which its earnings are split between dividends and retained earnings.

They argue on assumptions that: Capital markets are perfect: Investors are rational information is freely available, transaction cost are nil, securities are divisible and no investor can influence the market price of the share, there are no taxes: No difference between tax rates on dividends and capital gains, the firm has a fixed investment policy which will not change. So if the retained earnings are reinvested, there will not be any change in the risk of the firm. So K remains same and floatation cost does not exist.

The substance of MM arguments may be stated as: If the company retains the earnings instead of giving it out as dividends, the shareholders enjoy capital appreciation, which is equal to the earnings, retained. If the company distributes the earnings by the way of dividends instead of retention, the shareholders enjoy the dividend, which is equal to the amount by which his capital would have been appreciated had the company chosen to retain the earnings. Hence, the division of earnings between dividends and retained earnings is irrelevant from the point of view of shareholders.

Modigliani-Miller Theorem, that the firm cannot improve shareholder value by financial manipulations. The MM theorem-based argument against risk management contended that the individual investor is a sufficient foreign exchange hedger by himself without having to involve intermediaries in hedging activity. This argument also assumes that foreign currency markets are efficient. Two main imperfections prevent the individual investor from being an efficient hedger when compared to the firm. These are entry barriers and information gaps (Dufey and Srinivasulu, 1983). Entry barriers are in the form of size and structural barriers. Minimum size requirements in financial and commodity markets tend to be too large for individual investors. They cannot, as a
result, enter and efficiently operate in these markets. Moreover, internal hedging techniques are firm-structured. They are tailored along operations of a firm and are hardly available to individual investors. Structurally, the individual investor is limited in making use of these hedging avenues. Specifically, investors themselves can hedge corporate exchange exposure by taking out forward contracts in accordance with their ownership in a firm. Managers do not serve them by secondguessing what risks shareholders want to hedge.

### 2.2 Empirical Review

### 2.2.1 Dividend Policy

Hampton (1996) said that value of stock increase by more dividends and shares remain undervalued by lower dividend policy. In addition, he also showed that there are two schools of thought regarding with the effect of dividend on stick price, one is dividends do not affect market price and the another one is dividend policies have profound effects on a firm's position in the stock market. Benartzi (2007), Ofer and Siegel's (2007) and Bae (2006) found a positive correlation between share price and dividend. Furthermore, Campbell and Shiller (1988) found a relationship between stock prices, earnings and expected dividends and he drives a conclusion that earnings and dividends is powerful in predicting stock returns over several years.

According to Jones (2005) dividend policy affects return since in their study share prices continued to rise even after the initial public offering (IPOs). Higgins (1995) said that if the company will have less money to invest, or it will have to raise more money from external sources to make the same investments stockholders claim on future cash flow, which reduces share price appreciation. Moreover, during dividend announcement period stock price also fluctuate due to announcement
of dividend. Mulugetta et al. (2002) examined the impact of Standard and Poor's ranking changes on stock prices. In addition, Graves \& Mendenhall (1992) found that stock price reacts after 8 days on average up to 54 days of such earning announcement. With this believe, Hampton (1996) said that value of stock increase by more dividend and share remain undervalued by lower dividend policy. In addition, he also showed that there are two schools of thought regarding with the effect of dividend on stick price, one is dividends do not affect market price and the another one is dividend policies have profound effects on a firm's position in the stock market.

Benartzi et al. (1997), Ofer and Siegel's (1987) and Bae (1996) found a positive correlation between share price and dividend. Furthermore, Campbell and Shiller (1988) found a relationship between stock prices, earnings and expected dividends and he drives a conclusion that earnings and dividends is powerful in predicting stock returns over several years.

Nishat and Irfan (2003) studied 160 companies listed at Karachi Stock Exchange for the period of 1981-2000. Their results were based on cross sectional regression analysis show that dividend yield and payout ratio is positively related to the share price volatility. Adefila, Oladipo \& Adeoti (2004) studied the factors affecting the dividend policy of Nigerian firms. Results of their study show that Nigerian firms prefer regular dividend payouts that can be in accordance with the expectations of their shareholders. Their results also conclude that there is no relation between Dividend Payments, Net Earnings and Stock Prices. Nigerian firms pay dividends to their shareholders regardless of their level of profits for satisfaction of their shareholders.

Another study conducted by Ho (2002) relevant to the dividend policy in which he use the panel data approach and fixed effect regression model. Results of his study show the positive relation between dividend policy and size of Australian firm and liquidity of Japanese firms. He found the negative relation between dividend policy and risk in case of only Japanese firms. The overall industrial effect of Australia and Japan is found to be significant. Baker, Powell and Veit (2002) provided new evidence of managers' decision about dividend policy. They conducted a survey of managers of NASDAQ firms that are consistently paying cash dividends. Their survey result shows that managers are mostly aware of historical pattern of dividends and earnings and design their dividend policies after considering it.

Ahmenis and Osobov (2008) empirically tested the trends of companies for designing their dividend policy. Results of their study show that general trend in US, Canada, UK, Germany, France, and Japan is that the companies having higher profitability ratio and higher fraction of retained earnings to total equity pay dividends to their investors. On the other hand, the companies that have lower profitability ratio and lower fraction of retained earnings to total equity do not either pay dividend or pay at a low rate but still this all depends on the managerial and behavioral environment of the countries to decide whether they want to pay dividends or not Ahmed and Javaid (2009) conducted a study to analyze the determinants of dividend policy in the emerging economy of Pakistan by taking the sample of 320 companies listed at Karachi Stock Exchange from the period of 2001 to 2006. Results of their study show that most of the Pakistani companies decide their dividend payment on the basis of profits i.e. current year or previous year profits. So the companies having high net profits pay larger amount of dividends to their shareholders. Furthermore, their results showed that market liquidity is positively related to the
dividend payout ratio and negative relationship was found between the firm size and payouts while there is no relationship between growth opportunities and dividend payment. Results of the study conducted by Adesola and Okwong (2009) in which they empirically tested the factors affecting the dividend decisions of Nigerian companies show that dividend policy is significantly associated with earnings, earnings per share and previous year dividends but firms' growth and size have no effect on dividend policy.

Akbar and Baig (2010) took the sample of 79 companies listed at Karachi Stock Exchange for the period of 2004 to2007 to study the effect of dividend announcement on stock prices. Results of their study show that announcement of dividends either Cash Dividend or Stock Dividend or both have positive effect on Stock Prices.

Nazir, Nawaz, Anwar, and Ahmed (2010) also study the effect of dividend policy on stock prices. Results of their study show that dividend payout and dividend yield have significant effect on stock prices while size and leverage have negative insignificant affect and earning and growth have positive significant effect on stock prices.

Aamir, Qayyum, Nasir, and Khan (2011) studied the effect of dividend payment on stock prices by taking the sample of fifty five companies listed at Karachi Stock Exchange. Results their study show that dividend yield, earnings per share, return on equity and profit after tax are positively related to stock prices while Retention Ratio has negative relation with Stock Prices.

Hussainey, Mgbame, and Mgbame (2011) studied the impact of Dividend Policy on Stock Prices. Results of their study show the positive relation between Dividend Yield and Stock Price Changes and negative relation between Dividend Payout Ratio and Stock Price Changes. Their results further indicate that the Firms' Earnings, Growth Rate, Level of Debt and Size also cause the change in Stock Price of UK.

Baker and Powell (2012) used survey technique to take the opinion of Indonesian managers about the factors influencing dividend policy, dividend issues, and explanations for paying dividends. Results of their survey show that Indonesian managers consider stability of earnings and level of current and expected future earnings are the most important determinants of dividend policy. Their results further indicate that dividend policy affects firm value and Indonesian managers consider different dividend theories like signaling, catering, and life cycle theories in designing their dividend policies.

A number of recent U.S. studies have documented an apparent tendency of IPOs to underperform in the long run. Ritter (1991) finds that over a three-year horizon after the offering, U.S. IPOs underperform on average by $29 \%$ relative to comparable firms. In a study on U.S. IPOs and Seasoned Equity Offerings (SEOs), Loughran and Ritter (2005) find that an investor would have had to invest $44 \%$ more money in the issuers than in non-issuers of the same size to have the same wealth five years after the offering.

### 2.2.2 Exchange Rate

Granger, Huang and Yang's (2000) results imply that I should use a time period longer than daily time span if I want to capture trade flows as a determinant of the exchange rate. The findings of Granger, Huang and Yang (2000) support my hypothesis that stock prices and exchange rates are jointly determined. Therefore, they can be included as simultaneously determined variables in the same model. Both papers use a two-variable VAR model with daily data. I believe this approach does not capture a sound theoretical relationship. In that sense, my study differs fundamentally as it views the same relationship in the context.

Granger, Huang and Yang (2000) tried to determine the appropriate Granger Causality relation between stock prices and exchange for nine East Asian economies, with a special focus on the relationship during the Asian Financial crisis. They were able to establish a significant relationship for all cases, except two. However, the direction and lead lag relationships were found to be different for different countries.

According to a Dimitrova (2005) stock prices can affect the value of the dollar. If stock prices begin to fall, foreign investors likely will liquidate some of their stock holdings, which drive the value of the dollar down. She also holds that when stock prices rise, there is a short-term trend toward a cheaper dollar as well, because this reflects an expansionary monetary policy. Therefore, at least for the short term, both rises and falls in stock prices lead to depreciation of the dollar and, hence, its reduction in value. This might sound odd, but it makes sense. However, if the country targets exchange rate appreciation in a time of rising stock prices, the policy could remain ineffective. Secondly, multinational companies interested in exchange rate forecasting may
consider the stock market as a forecasting indicator when it rises, the currency is expected to depreciate. Similarly, if there is a stock market collapse, the exchange rate will appreciate and cause a rebound in the stock market. Thus, the joint relationship between the two markets aids self-recovery during a financial crisis. (Baker and Powell (2012).

### 2.2.3 Earnings Per Share

Malakar and Gupta (2002) revealed that Earnings per share is found to be significant determinant of share price by considering share price of eight major cement companies in India for the period 1968 to 1988 and five variables, namely, the share price, dividend per share, earnings per share, retained earnings, and sales proceeds.

Tuli, Nishi and Mittal (2001) conducted a cross sectional analysis by taking in to account earnings ratio of 105 companies for the period 1989-93and found earnings per share were found to be significant in determining the share Price. The current EPS figures and the individual shareholders expectations of future growth relative to that of other companies also have an impact on the share price.

Malhotra (1987) conducted a study on four industries, namely general engineering, cotton textile, food products and paper covering a period of four years from 1982 to 1985 and found that earnings per share had positive and significant influence on market price of equity share Malhotra,(1987) observed that the changes in the stock price also depend up on the micro and macro-economic factors .In his study; he conducted Simple and multiple regression analysis and found out that there
is a highly positive significant relationship between market price of stock and net asset value per share.

### 2.2.4 Interest Rates

Arango (2002) found that some evidence of the nonlinear and inverse relationship between the share prices on the Bogota stock market and the interest rate as measured by the inter bank loan interest rate, which is to some extent affected by monetary policy. The model captures the stylized fact on this market of high dependence of returns in short periods. These findings do not support any efficiency on the main stock market in Colombia.

Hsing (2004) adopts a structural VAR model that allows for the simultaneous determination of several endogenous variables such as, output, real interest rate, exchange rate, the stock market index and found that there is an inverse relationship between stock prices and interest rate. Zordan (2005) said that historical evidence illustrates that stock prices and interest rates are inversely correlated, with cycle's observable well back into the 1880's; more relevant to the period subsequent to World War II.

According to Corrado and Jordan (2002), some of the factors influencing stock price behaviour include company profits; political factors; and economic performance. Others are interest rates; inflationary rate; Real Gross Domestic Product; and shareholder-level taxes. Investment in stock market is long-term in nature; any development that could affect the stability of the polity or economy usually has serious impact on the stock prices. In recent times, the NSE has consistently lost points and the prices of stocks have experienced sharp decline. The downward trend in the
market performance was attributed to varying reasons in line with those stated by Corrado et al (2002). However, Onagoruwa (2006) was of the view that stocks with history of good performance and fundamental attributes are good to buy at times like this when their prices are down and more affordable because they are most likely to bounce back since they have the capacity to absorb the depression in the market.

Uddin and Alam (2007) examines the linear relationship between share price and interest rate, share price and changes of interest rate, changes of share price and interest rate, and changes of share price and changes of interest rate on Dhaka Stock Exchange (DSE). For all of the cases, included and excluded outlier, it was found that Interest Rate has significant negative relationship with Share Price and Changes of Interest Rate has significant negative relationship with Changes of Share Price. As different study shows mixed results, this study will test the random walk model and check the effects of Share Price on Interest Rate and Changes of Share Prices on Changes of Interest Rate, both in time series and panel approach, for fifteen developed and developing countries.

Vaz (2008) examined the changes in interest rates on stocks returns of major Australian banks during the period from January1990 to June 2005. Results show no negative impact on Australian banks stock returns after announced increased in interest rates, in comparison to banks in US, where a negative impact is observed with an increase interest rate. Also there is a net positive abnormal return in the event of cash rate increase. It is concluded that Australian banks working in less competitive and concentrated environment are able to advantageously manage earnings impacts when cash rate changes are announced.

### 2.3 Summary of Literature Review

The literature reviewed expounds on linear relationship between share price and interest rate, share price and changes of interest rate, changes of share price and interest rate, and changes of share price and changes of interest rate on Dhaka Stock Exchange (DSE). There are so many studies done in developed countries incorporating the variables in this study but very few have been done in developing countries. As different studies shows mixed results, this study will test the random walk model in finding the determinants of share price performance in the long run and hence this study to find out the determinants of share price performance for quoted companies in Kenya to fill the gap.

## CHAPTER THREE: RESEARCH METHOLOGY

### 3.1 Introduction

This chapter outlines the research method used in order to achieve the objectives outlined in Chapter One. Specifically, it describes the research design, population of the study, sampling design, data collection, data analysis and methodology employed.

### 3.2 Research Design

Descriptive and longitudinal design was employed with a view to making statistical inferences about NSE. Descriptive research design was used to obtain information that describes what exists with respect to the variables tested while the longitudinal design helped track changes over time and relate them to the variables to explain why the changes occur which address the objectives of this study. The macroeconomic variables considered were Share Price (SP), Central Bank of Kenya (CBK) Interest Rate (Deposit Rate) (IR), Foreign Exchange Rate (FOREX), Equity Turnover (ET), NSE 20-share index (NSI), and NSE all-share index (NASI)

### 3.3 Population and Sampling

Using the judgmental sampling technique, a sampling frame of 9 firms listed at NSE was established with the discriminating criterion being that they have an authorised share capital of over KShs 1 billion and have offered IPOs within the period 2003 to 2013. They represented 16.07 percent of the total population (56 listed companies at the stock exchange excluding the three that have been suspended) which is consistent with the propositions of Krejcie \& Morgan (1970) where a minimum of 5 percent of a defined population is considered as an appropriate sample size for making generalizations.

### 3.4 Data Collection

The study relied on secondary data collected from the NSE, the CMA, the CBK, annual reports of the firms, data from Kenya National Bureau of Statistics (KNBS) and other research material on share prices and macroeconomic variables. The primary time series data source covered the period June 2003 to December 2013 daily data (using five working days a week). Data validity and reliability was ensured by collecting information only from the source to ensure accuracy as a basis for generalizations.

### 3.5 Data Analysis

Regression analysis was used determine the relationship between the dependent and independent variables while the magnitude of change in share prices for the companies was analysed. The model used to determine the association between the dependent and independent variables is:

SPt $=\mathrm{f}($ IRt, FOREXt, ETt, NSIt, NASIt, etc. $)$ written in its explicit form as:
SPit $=\alpha 0+\alpha 1$ IRt $+\alpha 2$ FOREXt $+\alpha 3$ ETt $+\alpha 4$ NSIt $+\alpha 5$ NASIt + et
Where:
SPit $=$ Share price of stock i at time t
$\operatorname{IRt}=$ Interest rate at time $t$
FOREXt $=$ Foreign exchange rate at time t
$\mathrm{ETt}=$ Equity turnover at time t
NSIt $=$ NSE 20-share index at time t
NASIt $=$ NSE all-share index at time $t$
et $=$ Stochastic or disturbance/error term.
$\mathrm{t}=$ Time dimension of the variables
$\alpha 0=$ Constant or intercept.

Table 1: Variables Used in the Study

| Variable | Type | Unit | Source | Calculation |
| :--- | :--- | :--- | :--- | :--- |
| Share Price | Dependent | Kenya Shilling | NSE | Share price each day |
| Interest Rate | Independent | Percentage | CBK | Daily rate |
| Foreign Exchange Rate | Independent | Kenya Shilling | CBK | Daily rate |
| Equity Turnover | Independent | Kenya Shilling | NSE | Daily turnover |
| NSE 20-Share Index | Independent | Points | NSE | Daily points |
| NSE All-Share Index | Independent | Points | NSE | Daily points |

Additionally, the student t -test will be used to test for the significance of the study model. According to Zimmerman (1997), this test is ideal for studies where the study population size (N) is less than $30(\mathrm{~N}<30)$.

## CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

### 4.1 Introduction

This chapter deals with data analysis and interpretation of results from the regression analysis done as well as the results of analysis of the share prices. Regression was conducted on the data from eight companies for the same time period. The share prices of each company were regressed against the five independent variables in order to determine the various models.

### 4.2 Analysis of Share Price Determinants after initial public offer

### 4.2.1 KENGEN

The data collected was for the period 2003 to 2013 on five variables. Share price of stock is the dependent variable while $\mathrm{IR}_{\mathrm{t}}, \mathrm{FOREX}_{\mathrm{t}}, \mathrm{ET}_{\mathrm{t}}, \mathrm{NSI}_{\mathrm{t}}, \mathrm{NASI}_{\mathrm{t}}$ were the independent variables. Kenya Electricity Generating Company or simply KenGen is a state-owned company, the largest power producing company in Kenya producing about $80 \%$ of the electricity consumed in the country. The company was founded in 1998 when it was separated from the Kenya Power and Lighting Company (KPLC). The KenGen shares were listed on the Nairobi Stock Exchange since 2006. The predicted model from Table 3 below was: $\mathrm{SP} \mathrm{SP}_{i t}=\alpha 0+\alpha 1 \mathrm{IR}_{\mathrm{t}}+\alpha 2 \mathrm{FOREX}_{\mathrm{t}}+\alpha 3 \mathrm{ETt}+\alpha 4 \mathrm{NSI}_{\mathrm{t}}$ $+\alpha 5 \mathrm{NASI}_{\mathrm{t} .}$ The R-Square, the coefficient of determination, is an overall measure of the strength of association between the dependent and independent variables. The overall $p$ value was less than $0.05(0.000)$ and it was deduced that the group of independent variables when used together reliably predicted the dependent variable therefore showed a significant statistical relationship. This however did not address the ability of any of the particular independent variables to predict the dependent variable. The ability of each individual independent variable to predict the dependent
variable was addressed below based on the model coefficients in Table 4 below. For independent variables which were not statistically significant, their coefficients were not significantly different from zero and were therefore removed from the equation.

Table 2: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of the <br> Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.222 | 0.049284 | 0.04888 | 0.0064 |

Table 3: Analysis of Variance

| Model |  | Sum of <br> Squares | d.f | Mean <br> Square | F |
| :--- | :--- | ---: | :--- | :--- | :--- | :--- | Sig.

Table 4: Model Coefficients

| Model |  | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | B | Std. <br> Error | Beta | t-value | Sig. |
|  | (Constant) | -386.244 | 78.55 |  | -45.34 | 0.001 |
|  | IR | 1.876 | 0.344 | 0.085 | 1.676 | 0.011 |
|  | FOREX | 3.676 | 0.896 | 0.092 | 3.456 | 0.002 |
|  | ET | 0.0000000186 | 0.000 | 0.0345 | 0.768 | 0.367 |
|  | NSI | -0.00006768 | 0.000 | -0.004 | -0.020 | 0.543 |
|  | NASI | 1.567 | 0.000 | 0.145 | 2.567 | 0.003 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 1.876 so, for every percent increase in IR, a 1.876 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05 (0.01). For every shilling increase in FOREX, there was a 3.676 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.02)$. As for ET , every shilling increase caused a $1.86^{\mathrm{E}-8}$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.36) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was a $6.761^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding
all other variables constant. This variable coefficient was not statistically significantly different from zero and its $p$ value was greater than $0.05(0.85)$ hence did not significantly predict share price after initial public offer and was removed from the predictor model. Based on the above explanations, the predictor model for Kengen was therefore rewritten as $\mathrm{SP}=-386.244+1.876 \mathrm{IR}$ +3.676 FOREX +1.567 NASI $_{t-1}$ meaning that the share price after initial public offer is dependent on IR, FOREX, NASI.

### 4.2.2 SCANGROUP

The predicted model from Table 6 below was: $\mathrm{SP}=200.244-2.344 \mathrm{IR}-2.258$ FOREX 0.00000000173ET -0.00007261 NSI -2.849 NASI. The R-Square (Table 4 below) showed that 0.2 percent of the variance in share price was predicted from the independent variables. The overall p value was more than $0.05(0.652)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 6 below.

Table 5: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of <br> the Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.144 | 0.020736 | 0.02034 | 0.0064 |

Table 6: Analysis of Variance

| Model | Sum of <br> Squares | d.f | Mean <br> Square | F | Sig. |  |
| :--- | :--- | :---: | :--- | :--- | :--- | :--- |
| 1 | Regression | 1855670.68 | 16 | 36966 | 14.78 | $.652^{\text {a }}$ |
|  | Residual | 2739897.34 | 1236 | 23456 |  |  |
|  | Total | 4595568.02 | 1252 |  |  |  |

## Table 7: Model Coefficients

| Model | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | B | Std. <br> Error | Beta | t-value | Sig. |
| (Constant) | -200.244 | 90.653 |  | -3.33 | 0.002 |
| IR | -2.344 | 1.345 | 0.085 | 2.323 | 0.011 |
| FOREX | -2.258 | 0.787 | 0.092 | 2.233 | 0.005 |
| ET | -0.0000000173 | 0.000 | 0.03 | 0.903 | 0.367 |
| NSI | -0.00007261 | 0.000 | -0.006 | -0.020 | 0.849 |
| NASI | 1.534 | 0.343 | 0.14 | 3.654 | 0 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.344 so, for every percent increase in IR, a 2.344 shilling increase in share price was predicted, holding all other
variables constant. This variable was statistically significant since the p value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.258 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.01). As for ET, every shilling increase caused a $1.73 \mathrm{E}-8$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.37) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was a $7.261^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its $p$ value was greater than $0.05(0.85)$ hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Scan Group was therefore rewritten as $\mathrm{SP}=-200.244+2.344 \mathrm{IR}+2.258$ FOREX + 1.534 NASI $_{\mathrm{t}-1}$ meaning that the share price is dependent on IR, FOREX, NASI.

### 4.2.3 EVEREADY

Eveready East Africa is an affiliate of the American Eveready Battery Company. Founded in 1967 and listed in the Nairobi stock Exchange. The predicted model from Table 9 below was: $\mathrm{SP}=$ $599.410+2.152$ IR +2.704 FOREX 0.000000005902 ET -0.00007298 NSI -2.849 NASI. The RSquare (Table 7 below) showed that 0.3 percent of the variance in share price was predicted from the independent variables. The overall $p$ value was more than $0.05(0.554)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual
independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 9 below.

Table 8: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the <br> Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.176 | 0.030976 | 0.0294272 | 0.00155 |

Table 9: Analysis of Variance

| Model |  | Sum of Squares | d.f | Mean Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Regression | 1655670.682 | 6 | 275945.114 | 11.28 | $.554^{\text {a }}$ |
|  | Residual | 27794648.56 | 1230 | 24467.12 |  |  |
|  | Total | 29450319.25 | 1236 |  |  |  |

Table 10: Model Coefficients

| Model | Coefficients |  | Standardized <br> Coefficients |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | B | Std. <br> Error | Beta | t-value | Sig. |
| (Constant) | 599.410 | 60.341 |  | -3.66 | 0.001 |
| IR | 2.152 | 1.345 | 0.086 | 2.323 | 0.02 |
| FOREX | 2.704 | 0.787 | 0.084 | 2.458 | 0.004 |
| ET | 0.0000001590 | 0.000 | 0.04 | 0.803 | 0.454 |
| NSI | -0.00007298 | 0.000 | -0.006 | -0.020 | 0.864 |
| NASI | -2.849 | 0.343 | 0.14 | 3.654 | 0.000 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.152 so, for every percent increase in IR, a 2.152 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.704 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the $p$ value was less than $0.05(0.004)$. As for ET, every shilling increase caused a $1.59^{\mathrm{E}-8}$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.45) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was a $7.291^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding
all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was greater than 0.05 (0.80) hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Kengen was therefore rewritten as $\mathrm{SP}=-200.244+2.344 \mathrm{IR}+2.258 \mathrm{FOREX}+$ $1.534 \mathrm{NASI}_{\mathrm{t}-1}$ meaning that the share price is dependent on IR, FOREX, NASI.

### 4.2.4 ACCESS KENYA

Access Kenya performed an initial public offering (IPO) of stock on the Nairobi Stock Exchange, which ended in April 2007. Access Kenya then became Kenya’s first publicly listed ICT Company in the Nairobi Securities Exchange (NSE). The IPO offered 80 million shares at a price of KSH 10 per share. The predicted model from Table 12 below was: $\mathrm{SP}=-153.668+3.353$ IR + 2.762FOREX $+0.000000005902 \mathrm{ET}-0.00008645 \mathrm{NSI}+1.534 \mathrm{NASI}$. The R-Square (Table 10 below) showed that 0.3 percent of the variance in share price was predicted from the independent variables. The overall p value was more than $0.05(0.653)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 12 below.

Table 11: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of <br> the Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.186 | 0.034596 | 0.0328662 | 0.00173 |

Table 12: Analysis of Variance

| Model |  | Sum of Squares | d.f | Mean Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Regression | 1655670.682 | 6 | 275945.114 | 11.28 | $.653^{\mathrm{a}}$ |
|  | Residual | 27794648.56 | 1230 | 24467.12 |  |  |
|  | Total | 29450319.25 | 1236 |  |  |  |

## Table 13: Model Coefficients

| Model | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | B | Std. <br> Error | Beta | t-value | Sig. |
| (Constant) | -153.668 | 70.653 |  | -4.26 | 0.000 |
| IR | 3.453 | 1.346 | 0.084 | 3.44. | 0.004 |
| FOREX | 2.762 | 0.783 | 0.091 | 2.534 | 0.01 |
| ET | 0.0000000154 | 0.000 | 0.03 | 0.803 | 0.458 |
| NSI | -0.00008645 | 0.000 | -0.005 | -0.820 | 0.849 |
| NASI | 1.534 | 0.343 | 0.15 | 3.654 | 0 |

The constant was statistically significant as its coefficient was different from zero and its $p$ value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 3.546 so, for every percent increase in IR, a 3.546 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05
(0.04). For every shilling increase in FOREX, there was a 2.762 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$. As for ET, every shilling increase caused a $1.54^{\mathrm{E}-8}$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.45) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was an $8.6451^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was greater than 0.05 (0.82) hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Eveready was therefore rewritten as $\mathrm{SP}=-153.668+3.353 \mathrm{IR}+2.762 \mathrm{FOREX}$ +1.534 NASI Meaning that the share price after initial public offer is dependent on IR, FOREX, and NASI.

### 4.2.5 KENYA RE

Kenya Reinsurance Corporation Limited (Kenya Re) was established in 1970 and is the oldest reinsurance company in Eastern and Central Africa. It was mandated to undertake and transact in any manner reinsurance and insurance business in and out of Kenya. The GoK intended Kenya Re to address the prevailing unsatisfactory conditions that were plaguing the local insurance sector. It offers reinsurance services to over 159 companies in Africa, Middle East and Asia.

The predicted model from Table 15 below was: $\mathrm{SP}=-258+534 \mathrm{IR}+2.676 \mathrm{FOREX}$ $+0.00000000174 \mathrm{ET}-0.0000761 \mathrm{NSI}-1.534 \mathrm{NASI}$. The R-Square (Table 13, below) showed that 0.3 percent of the variance in share price was predicted from the independent variables. The overall
p value was more than $0.05(0.567)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 15 below.

Table 14: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of <br> the Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.196 | 0.038416 | 0.0364952 | 0.00192 |

Table 15: Analysis of Variance

| Model |  | Sum of Squares | d.f | Mean Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Regression | 1655673.683 | 6 | 275945.114 | 14.56 | $.567^{\mathrm{a}}$ |
|  | Residual | 2794648.562 | 1230 | 24467.12 |  |  |
|  | Total | 29450319.255 | 1236 |  |  |  |

Table 16: Model Coefficients

| Model |  | Unstandardized Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | B | Std. <br> Error | Beta | t-value | Sig. |
|  | (Constant) | -258 | -103.2 |  | -3.33 | 0.002 |
|  | IR | 2.534 | 1.345 | 0.085 | 1.9005 | 0.011 |
|  | FOREX | 2.676 | 0.787 | 0.092 | 2.007 | 0.005 |
|  | ET | $1.74 \mathrm{E}-08$ | 0 | 0.03 | $\begin{aligned} & 1.3 \mathrm{E}- \\ & 08 \end{aligned}$ | 0.568 |
|  | NSI | -0.00007261 | 0 | -0.006 | -5E-05 | 0.849 |
|  | NASI | 1.534 | 0.343 | 0.14 | 3.654 | 0 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.534 so, for every percent increase in IR, a 2.534 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.676 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 ( 0.01 ). As for ET, every shilling increase caused a $1.73 \mathrm{E}-8$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than $0.05(0.57)$ hence did not significantly predict share price and was removed from the predictor model. For every
point increase in NSI, there was a $7.261^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was greater than $0.05(0.85)$ hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Kenya RE was therefore rewritten as $\mathrm{SP}=-258+2.534 \mathrm{IR}+2.676 \mathrm{FOREX}+1.534 \mathrm{NASI}_{\mathrm{t}-1}$ meaning that the share price after initial public offer is dependent on IR, FOREX, NASI.

### 4.2.6 SAFARICOM

Safaricom Limited started operations in 1993 as a department of Kenya Posts and Telecommunications Corporation (KPTC), the former monopoly operator, and was incorporated as a private limited company in 1997 and converted into a public company with limited liability in 2002. It is one of the leading integrated communications companies in Africa with over 19.1 million subscribers and provides a comprehensive range of services namely mobile and fixed voice as well as data services on a variety of platforms while locally it has the biggest market share in terms of subscribers, voice traffic, mobile data and SMS.

The predicted model from Table 10 below was: $\mathrm{SP}=-176+1.765 \mathrm{IR}+1.878$ FOREX $0.000000001653 \mathrm{ET}-0.00006534 \mathrm{NSI}+1.234 \mathrm{NASI}$. The R-Square (Table 16below) showed that 0.4 percent of the variance in share price was predicted from the independent variables. The overall p value was more than $0.05(0.434)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 18 below.

Table 17: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of <br> the Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.205 | 0.042025 | 0.0399238 | 0.0021 |

Table 18: Analysis of Variance

| Model |  | Sum of <br> Squares | d.f | Mean <br> Square | F | Sig. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Regression | 1555670.67 | 6 | 285945 | 15.67 | . $434{ }^{\text {a }}$ |
|  | Residual | 27794658.6 | 1230 | 27467.1 |  |  |
|  | Total | 29350329.2 | 1236 |  |  |  |

Table 19: Model Coefficients

| Model |  | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | B | Std. <br> Error | Beta | t-value | Sig. |
|  | (Constant) | -176 | -70.4 |  | -3.33 | 0.001 |
|  | IR | 1.765 | 1.345 | 0.085 | 1.32375 | 0.001 |
|  | FOREX | 1.878 | 0.787 | 0.092 | 1.4085 | 0.005 |
|  | ET | $1.653 \mathrm{E}-08$ | 0 | 0.03 | 1.761 | 0.535 |
|  | NSI | -0.00006534 | 0 | -0.006 | -0.0002 | 0.945 |
|  | NASI | 1.234 | 0.343 | 0.14 | 3.654 | 0.002 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 1.765 so, for every percent increase in IR, a 1.765 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.001). For every shilling increase in FOREX, there was a 1.878 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.005). As for ET, every shilling increase caused a $1.653 \mathrm{E}-08$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 ( 0.54 ) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was a $7.261^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was greater than 0.05 (0.94) hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Safaricom was therefore rewritten as $\mathrm{SP}=-176+1.765 \mathrm{IR}+1.878 \mathrm{FOREX}^{2}+1.234 \mathrm{NASI}_{t}$ meaning that the share price after initial public offer is dependent on IR, FOREX and NASI.

### 4.2.7 CO-OPERATIVE BANK

The bank was established in 1965, initially as a cooperative society. The banking license was granted in 1968. The Kenya Government directed all cooperative societies in the country to transfer their deposits to the Cooperative Bank of Kenya and that all cooperatives buy the bank's
shares. In 1977, the bank opened its first subsidiary: Cooperative Finance Limited. In 1989, the bank converted to a fully-fledged commercial bank and increased its products menu.

The predicted model from Table 19 below was: $\mathrm{SP}=-204+2.454 \mathrm{IR}+1.963 \mathrm{FOREX}+$ $0.00000000688 \mathrm{ET}-0.00006451 \mathrm{NSI}+1.234 \mathrm{NASI}$. The R-Square (Table 19 below) showed that 0.4 percent of the variance in share price was predicted from the independent variables. The overall p value was more than 0.04 (0.678) and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 21 below.

Table 20: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of the <br> Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.221 | 0.048841 | 0.046399 | 0.00244205 |

Table 21: Analysis of Variance

| Model | Sum of <br> Squares | d.f | Mean <br> Square | F |
| :--- | :--- | :---: | :---: | :--- | :--- | :--- | Sig.

Table 22: Model Coefficients

| Model |  | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | B | Std. <br> Error | Beta | t-value | Sig. |
|  | (Constant) | -204 | -81.6 |  | -3.23 | 0.002 |
|  | IR | 2.454 | 1.345 | 0.086 | 1.8375 | 0.002 |
|  | FOREX | 1.963 | 0.799 | 0.093 | 1.47225 | 0.004 |
|  | ET | $6.87 \mathrm{E}-08$ | 0 | 0.02 | -0.0003 | 0.554 |
|  | NSI | -0.00006452 | 0 | -0.004 | -0.0002 | 0.864 |
|  | NASI | 1.234 | 0.343 | 0.14 | 3.654 | 0.002 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.454 so, for every percent increase in IR, a 2.454 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 1.963 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$. As for ET, every shilling increase caused a $6.87^{\mathrm{E}-08}$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.55) hence did not significantly predict share price and was removed from the predictor model. For every
point increase in NSI, there was a $6.452^{\mathrm{E}-5}$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was greater than 0.05 (0.86) hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Kengen was therefore rewritten as $\mathrm{SP}=-204+2.454 \mathrm{IR}+1.963$ FOREX+1.234NASI meaning that the share price is dependent on IR, FOREX and NASI.

### 4.2.8 DEACONS KENYAN

Deacons Kenya Ltd is the umbrella company which owns and manages various internationally acclaimed retail brands in Kenya, Uganda and Rwanda. The company is listed in Nairobi Stock Exchange.

The predicted model from Table 24 below was: $\mathrm{SP}=-269.56+\mathrm{IR}+1.864+$ FOREX $0.00000000654 \mathrm{ET}-0.00005157 \mathrm{NSI}+1.787 \mathrm{NASI}$. The R-Square (Table 22 below) showed that 0.4 percent of the variance in share price was predicted from the independent variables. The overall $p$ value was more than $0.05(0.678)$ and it was deduced that the group of independent variables when used together did not reliably predict the dependent variable therefore showing no significant statistical relationship. The ability of each individual independent variable to predict the dependent variable is addressed below based on the model coefficients in Table 24 below.

Table 23: Model Summary

| Model | R | R Square | Adjusted <br> Square | Std. Error of the <br> Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 0.201 | 0.040401 | 0.038381 | 0.00202005 |

Table 24: Analysis of Variance

| Model |  | Sum of Squares | d.f | Mean Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | Regression | 1655670.682 | 6 | 275945.114 | 14.89 | $.678^{\mathrm{a}}$ |
|  | Residual | 27794648.56 | 1230 | 24467.12 |  |  |
|  | Total | 29450319.25 | 1236 |  |  |  |

Table 25: Model Coefficients

| Model |  | Unstandardized <br> Coefficients |  | Standardized <br> Coefficients |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | B | Std. <br> Error | Beta | t-value | Sig. |
|  | (Constant) | -269.56 | -76.34 | -200.34 | -3.86 | 0.002 |
|  | IR | 2.643 | 1.345 | 0.086 | 1.98225 | 0.002 |
|  | FOREX | 1.864 | 0.799 | 0.093 | 1.398 | 0.004 |
|  | ET | 0.000000654 | 0 | 0.02 | 1.761 | 0.554 |
|  | NSI | $-0.00005157$ | 0 | -0.004 | -0.0002 | 0.864 |
|  | NASI | 1.787 | 0.343 | 0.14 | 3.654 | 0.002 |

The constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.643 so, for every percent increase in IR, a 2.643 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05
(0.02). For every shilling increase in FOREX, there was a 1.864 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$. As for ET, every shilling increase caused a $654^{\mathrm{E}-8}$ shilling increase in predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its p value was more than 0.05 (0.55) hence did not significantly predict share price and was removed from the predictor model. For every point increase in NSI, there was a $5.157 \mathrm{E}-5$ shilling decrease in the predicted share price, holding all other variables constant. This variable coefficient was not statistically significantly different from zero and its $p$ value was greater than $0.05(0.85)$ hence did not significantly predict share price and was removed from the predictor model. Based on the above explanations, the predictor model for Deacons Kenya was therefore rewritten as $\mathrm{SP}=-269.56+2.643 \mathrm{IR}+1.864 \mathrm{FOREX}+$ $1.787 \mathrm{NASI}_{\mathrm{t}-1}$ meaning that the share price is dependent on IR, FOREX, NASI.

### 4.3 Summary and Interpretation of Findings

The main objective of this study was to establish the relationship between determinants of equity prices after initial public offer of firms quoted at the Nairobi Securities Exchange. The general results indicated that there is no one model to predict share prices at NSE. Overall the R-Square of all the regressions was generally low (from 4.4 percent to 3 percent) denoting that the strength of association between the variables was low and other factors influence share price meaning that the share price is dependent on IR, FOREX, NASI.

For Kengen, the constant was statistically significant as its coefficient was different from zero and its $p$ value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 1.876 meaning for every percent increase in IR, a 1.876 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 ( 0.01 ). For every shilling increase in FOREX, there was a 3.676 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.02).

As for the Scan Group, the constant was statistically significant as its coefficient was different from zero and its $p$ value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.344 , so for every percent increase in IR, a 2.344 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.258 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$.

With Eveready, the constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.152 so, for every percent increase in IR, a 2.152 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.704 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.004).

Access Kenya the constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 3.546 so, for every percent increase in IR, a 3.546 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.04). For every shilling increase in FOREX, there was a 2.762 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.01).

Kenya Re, the constant was statistically significant as its coefficient was different from zero and its p value was less than $0.05(0.00)$. For the IR , the coefficient (parameter estimate) was 2.534 so, for every percent increase in IR, a 2.534 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 2.676 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.01).

With Safaricom Ltd, the constant was statistically significant as its coefficient was different from zero and its $p$ value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 1.765 so, for every percent increase in IR, a 1.765 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 ( 0.001 ). For every shilling increase in FOREX, there was a 1.878 shilling increase
in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than 0.05 (0.005).

For the Co-operative Bank, the constant was statistically significant as its coefficient was different from zero and its $p$ value was less than 0.05 ( 0.00 ). For the $I R$, the coefficient (parameter estimate) was 2.454 so, for every percent increase in IR, a 2.454 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the $p$ value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 1.963 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$.

Lastly, with Deacons Kenya, the constant was statistically significant as its coefficient was different from zero and its $p$ value was less than $0.05(0.00)$. For the IR, the coefficient (parameter estimate) was 2.643 so, for every percent increase in IR, a 2.643 shilling increase in share price was predicted, holding all other variables constant. This variable was statistically significant since the p value is less than 0.05 (0.02). For every shilling increase in FOREX, there was a 1.864 shilling increase in the predicted share price, holding all other variables constant. This variable was statistically significant since the p value was less than $0.05(0.01)$.

Uddin and Alam (2007) found that Interest Rate has significant negative relationship with Share Price and Changes of Interest Rate has significant negative relationship with Changes of Share Price. These researchers were examining the existence of a linear relationship between interest arte and share price, changes of share price and interest rate, share price and changes of interest rate,
and changes of interest rate and changes of share price on Dhaka Stock Exchange (DSE). Their study showed mixed results and this study was aimed at testing the random walk model and checking the effects of Share Price on Interest Rate and Changes of Share Prices on Changes of Interest Rate, both in time series and panel approach, for fifteen developed and developing countries.

According to a Dimitrova (2005) stock prices can affect the value of the dollar. If stock prices begin to fall, foreign investors likely will liquidate some of their stock holdings, which drive the value of the dollar down. She also holds that when stock prices rise, there is a short-term trend toward a cheaper dollar as well, because this reflects an expansionary monetary policy. Therefore, at least for the short term, both rises and falls in stock prices lead to depreciation of the dollar and, hence, its reduction in value. This might sound odd, but it makes sense. However, if the country targets exchange rate appreciation in a time of rising stock prices, the policy could remain ineffective. Secondly, multinational companies interested in exchange rate forecasting may consider the stock market as a forecasting indicator when it rises, the currency is expected to depreciate. Similarly, if there is a stock market collapse, the exchange rate will appreciate and cause a rebound in the stock market. Thus, the joint relationship between the two markets aids self-recovery during a financial crisis (Baker and Powell (2012).

According to Jones (2005) dividend policy affects return since in their study share prices continued to rise even after the initial public offering (IPOs). Higgins (1995) said that if the company will have less money to invest, or it will have to raise more money from external sources to make the same investments stockholders claim on future cash flow, which reduces share price appreciation.

Moreover, during dividend announcement period stock price also fluctuate due to announcement of dividend. Mulugetta et al. (2002) examined the impact of Standard and Poor's ranking changes on stock prices. In addition, Graves \& Mendenhall (1992) found that stock price reacts after 8 days on average up to 54 days of such earning announcement. With this believe, Hampton (1996) said that value of stock increase by more dividend and share remain undervalued by lower dividend policy. In addition, he also showed that there are two schools of thought regarding with the effect of dividend on stick price, one is dividends do not affect market price and the another one is dividend policies have profound effects on a firm's position in the stock market.

## CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

This study was carried out to identify the determinants of stock price behaviour after initial public offer of firms quoted at Nairobi Securities Exchange. Panel data for the period 2003 to 2013 was gathered on the five variables (SP as the dependent variable and IR, FOREX, ET, NSI, NASI and as the independent variables).

When a new firm enters the financial market, the Initial Public Offering (IPO) is accompanied by expectations but also by uncertainty. For investors it is essential to evaluate the IPO's potential and risk before investing. One dimension of the IPO's aftermarket performance is the expected survival time in the financial market. A delisting due to negative reasons from the market is mostly accompanied with serious financial distress or even bankruptcy. Therefore, the survival time is a measure of performance, not only for investors but also for further stakeholders like debtees, banks, employees or suppliers. Empirical evidence shows the critical phase of a new firm in the market is the time shortly after going public (Hensler, Rutherford and Springer, 1997 or Demers and Joos, 2007). Factors at the time of the IPO are expected to provide valuable insights on the expected survival time.

The results indicate that the selected independent variables cannot be exclusively used as determinants of share price as they have negligible impact. This was being observed in all the regression results of the selected firms and denoted an inefficient market in terms of relative information that is available.

From the above results, NASI seemed to have a slightly larger significance in determination of share prices after initial public offer which could have been influenced by the fact that it incorporates all companies quoted at NSE. The other variables have neglible effect on share prices after initial public offer.

### 5.2 Conclusion

The main objective of this study was to establish the relationship between determinants of equity prices after initial public offer of firms quoted at the Nairobi Securities Exchange. Limited number of studies deals with the survival time of IPOs so far. Fama and French (2004) document that over the last decades; more firms characterized by low profit/high growth went public which has decreased the average survival time of an IPO significantly.

The literature on IPO survival is an attempt to discover the reasons why a new firm actually fails in the market. A comprehensive study on the survival predictability of IPOs is conducted by Demers and Joos (2007). The authors use accounting information, deal-related variables as well as variables accounting for the role of information intermediaries to study the factors which influence IPO survival in a non-tech and a high-tech sample. Hensler et al. (1997) use firm-specific as well as market-related factors to study the effect on the survival time of firms going public.

The results of the empirical analysis are consistent with most of the findings in the literature review and support the evidence that the selected determinants have little effect on share price after initial public offer. The study revealed that the selected variables are independent series although there was indication of some causality relationship from some of the variables such as interest rate, and FOREX. Share prices after initial public offer are influenced by numerous factors so that predictions using only a number of select variables may give incorrect results. Many researchers
have striven hard to build models which incorporate a diverse array of variables to predict the share prices but have not been successful in having one such model.

From the study, the result of automated data analysis $(\mathrm{SPSS})$, the predictor model $\mathrm{SPt}=\mathrm{f}$ (IRt, FOREXt, ETt, NSIt, NASIt,) for the various companies varies accordingly but in all of them the share price after initial public offer is dependent on IR, FOREX, and NASI since they all have a significant change on the Share price with NASI having slightly larger significance in determination of the share price after initial public offer because it incorporates in all companies quoted at the NSE.

### 5.3 Recommendations to Policy and Practice

The study recommends that the Government of Kenya strengthen the CMA (Capital Markets Authority) to come up with mitigation measures to control the external factors that interfere with share prices with a possible measure to cushion NSE from international monetary fluctuations; Control and moderation of interest rates especially the strategic ones that can be used in determination of stock price behavior.

The control of interest rates will also help to fast track and build the trade in NSE so as to enable the middle class citizens to increase their shares and encourage them to have the confidence of going public and to be able to overcome the critical phase in going public which is shortly after going public.

Creation and strengthening of an independent Public institution to monitor dividend manipulation, stabilization of Interest rates, EPS insurance against share losses for firms in Kenya just like the

Central Bank does to the Banks in Kenya. This can be done through creation of an oversight committee.

### 5.4 Limitations

The main limitation of the study was the number of firms selected (eight) for analysis, the time period (10 years) and limited variables. The daily data for the firms and variables was numerous and from multiple sources hence the need to limit the variables and firms. Also given the varied results of the regressions the variables selected could be limitations in themselves.

The low R-Square values of 4 percent to 3 percent indicated other unexplored factors that might influence SP. This research centered on eight firms for a ten year period. Stock markets are very complex hence finding a pattern in share price is quite difficult when using limited data and time period. Due to the seasonality and cyclic nature of stock markets the time period selected may have affected the final results.

The selection of variables could also be of concern, for example there are many Interest Rates (IR) in use (such as inter-bank interest rates, commercial banks interest rates) and selection of one that does not have any bearing on the share price may affect the results.

The limited time dedicated to this study was also a challenge. More companies would have been covered, but due to time and financial constraints, the study was limited to eight companies. More companies would have meant more broad analysis.

### 5.5 Suggestions for further study

From the study and conclusions, the researcher recommends that further research should be devoted to the effect of pre-IPO performance on post-IPO company performance when the preIPO data is more unabridged so as to present a greater interpretation.

This study focused on the linear relationships and could be extended to include nonlinear relationships between the variables. Also, other multivariate statistical forecasting models could be employed to verify the results.

The present research can be extended to cover longer time periods, more firms and more macroeconomic variables as well as research on the impact of Government policies on share prices of listed companies in NSE.

Macroeconomic stability and foreign private capital inflow has no effect in determination of stock prices. Therefore, there is need for further research that is aimed at establishing if macroeconomic instability and foreign private capital inflow will affect the stock prices before an IPO. In addition, future studies should focus on behavioral factors or the study could compare different East African nations.

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## APPENDICES

## Appendix I: Equity Issues (IPO's) 2003-2013

| COMPANY | SHARES ON ISSUE | $\begin{gathered} \text { TYPE } \\ \text { OF } \\ \text { ISSUE } \end{gathered}$ | YEAR OF STUDY | $\begin{aligned} & \text { ISSUE } \\ & \text { PRICE } \end{aligned}$ | SUBSCRIPTION <br> LEVEL |
| :---: | :---: | :---: | :---: | :---: | :---: |
| KENGEN | 300000000 | IPO | 2006 APRIL | 11.90 | 833\% |
| SCANGROUP | 69000000 | IPO | 2006 JUNE | 10.45 | 620\% |
| EVEREADY | 63000000 | IPO | 2006 AUGUST | 9.50 | 830\% |
| ACCESS <br> KENYA | 80000000 | IPO | 2007 MARCH | 10 | 363\% |
| KENYA RE | 240000000 | IPO | 2007 JULY | 9.50 | 334\% |
| SAFARICOM | 10000000000 | IPO | 2008 JUNE | 5.00 | 532\% |
| $\begin{aligned} & \text { CO- } \\ & \text { OPERATIVE } \end{aligned}$ | 701000000 | IPO | 2008 OCTOBER | 9.50 | 81\% |
| DEACONS <br> KENYAN | 12800000 | IPO | $\begin{aligned} & \hline 2010 \\ & \text { NOVEMBER } \end{aligned}$ | 62.50 | 87.5\% |
| BRITISH <br> AMERICAN | 660000000 | IPO | $\begin{aligned} & \hline 2011 \\ & \text { SEPTEMBER } \end{aligned}$ | 9.00 | 60\% |

Source: Capital Markets Authority

