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The Determinants of long run share price performance of initial public offerings - A Case of firms listed at the Nairobi Stock Exchange - time frame - 2000-2015

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THE DETERMINANTS OF LONG RUN SHARE PRICE PERFORMANCE OF INITIAL PUBLIC OFFERINGS: A CASE OF FIRMS LISTED AT THE NAIROBI STOCK EXCHANGE - TIME FRAME: 2000-2015

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DECLARATION

This thesis is my original work and has not been submitted for any other degree of this or any other university or institution of learning.

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This thesis has been submitted for examination with my approval as the university supervisor.

PROF. ROBERT MUDIDA

ABSTRACT

The main objective of this study was to investigate the determinants of long run share price performance of initial public offerings of companies listed at Nairobi Securities Exchange (NSE), Kenya. This study adopted the explanatory research design to understand the influence of financial and non-financial factors on share prices. The study focussed on the efficient markets hypothesis (EMH) as well as the fundamental theory of capital markets. The target population was all firms listed at the Nairobi Stock Exchange in Kenya that issued IPOs from 2000-2015. The study used secondary data obtained from the annual reports of the firms. Stata software was used to analyse the data using descriptive and inferential statistics technique. The model used, the Random effects model, was significant at 10% level of significance. However, looking at the predictors, for the financial factors, the log of profits and log of Equity were all not significant. For the Non- financial factors, the Number of shares was significant whereas Age was not significant in the prediction of share prices. The implication of this is that the number of shares issued should be a key factor to be considered by investors analysing IPOs as well as in making decisions on what shares to invest in. This is important factor for companies issuing shares, as well as for the regulator to pay keen attention on number of shares on offer as this is generally determined arbitrarily by issuing companies.

The study was limited in so far as looking at only companies at the Nairobi Stock Exchange that issued shares between 2000 and 2015, hence a relatively small sample. Additionally, the independent variables looked at only resulted into the model with an R-Squared value which only partially explained the movement in share prices. Further research needs to be undertaken to consider additional factors that may have been omitted.

LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA: Analysis of Variance

CMA: Capital Markets Authority

IPO: Initial Public Offering

NSE: Nairobi Securities Exchange

P/E: Price Earnings ratio

R-SQ: R-Squared (Coefficient of determination)

ROE: Return on Equity

SPSS: Statistical Package of Social Sciences

VIF: Variance Inflation Factors

EMH: Efficient Markets Hypothesis

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CHAPTER ONE: INTRODUCTION

1.1 Background to the study

An IPO (Initial Public Offering) is defined as a process where a company issues shares to the public for the first time (Bisseswar, 2015). IPOs are generally issued by small firms seeking capital to expand but also can be done by large privately owned firms looking to become publicly traded (Ritter, 1991). Initial Public Offering involves having the shares of a company quoted on a stock exchange. Stock exchanges serve two purposes: to facilitate raising of new capital , and to make it possible for shares of the company and any other securities to trade (Jenkinson and Ljungqvist, 2001).

Corporate organizations are generally stimulated to experience rapid growth in order to meet the overall corporate objective of shareholders' wealth maximization. The rapid growth by the firm could be attained by investing in value creating investments. Hence, a firm needs to acquire funds for these investments at the best price in order to maximize their returns and value creation over the long-term (Pagano, Panetta, and Zingales, 1998).

IPO is a major source of funding for firms that desire rapid growth. The primary reason for firms going public is to raise funds to finance this growth and also to create a public market in which shareholders can have a possibility to convert some of their wealth into cash a some point in the future (Ritter and Welch, 2002).

Recent trends in Kenya has shown that firms have been issuing shares in order to raise funds after exhausting all internal funds (Kinyua, Gakure, Gekara, and Orwa, 2015). We will be looking at IPOs that were issued between 2001 and 2011 as shown in Table 1. Out of the ten firms that issued shares through IPO over this period, all experienced oversubscription except Mumias Sugar, Co-op Bank and British American.

The study will seek to understand if observed oversubscriptions in the shares were justified based on post IPO performance and specifically look at pricing of the offers and how the offer prices relate to the financial information of the companies involved. That is, are investors well informed while making the investing decisions and are they driven by fundamentals or could there be other motivations behind the eagerness to invest in company stocks.

A review of the price of shares over time compared to IPO prices for the Kenyan firms under study shows that the share prices have remained relatively flat, and in certain instances market prices have become lower than IPO prices. Except for one outlier, the performance of other companies has not been very remarkable considering the time that has elapsed since the IPOs were issued and also considering the oversubscription levels experienced during the IPO offers. The graph below depicts the trend.

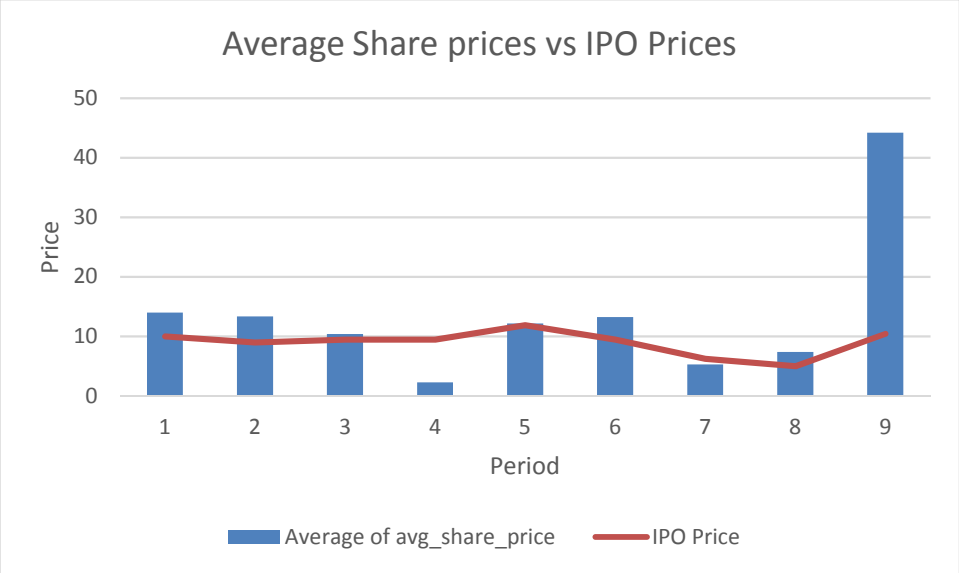

Figure 1.1: Average Share Prices vs IPO prices (*Source: Author, 2018)*.

Except for one outlier which is Scan Group, the graph shows that the share prices have either been almost at the level of IPO or below the IPO price. The share trading above IPO price are only marginally above, meaning that since the IPOs, prices have

not really improved, indicating that investors have not realised returns after several years of investment, implying an underperformance of the IPOs.

1.1.1 Initial Public Offering (IPOs)

Ritter (1991) states that an initial public offer is a type of public share sale where a portion of the equity of a privately held company is sold to the public with the expectation that a liquid market will develop. Firms look to IPOs as a key source of capital that can be used to expand or diversify operations, build new facilities, and develop new technologies and products (Brigham and Ehrhardt, 2013)). For investors, the IPO market has other attractions: Initial public offerings, though risky, presents an opportunity to invest in forward-looking firms with the potential for high growth (Peristiani and Hong, 2004).

When going public, firms are faced with the difficult decision of how to determine the offer price for their shares. This continues to be a considerable practical and theoretical importance for investors and academicians. However, despite considerable research efforts, IPO valuations are still largely mysterious (Giordano, Stephano, and Silvo, 2008).

IPO usually converts a business from one that is privately owned to one that is publicly owned. Going public has various advantages, the primary advantage being that it helps a company raise capital that it may then use to fund research and development, capital expenditure or even to pay off existing expensive debt in its books. It also helps to increase public awareness of the company and this may generate publicity for their products and help increase their market share (Ernst and Young, 2012).

Table 1: List of IPO companies

Company	No of shares on issue	Year/Month	Issue Price per share	Sum Raised	Subscription Level
African Lakes (Delisted in 2003)	4,000,000	2000/03	94.5	378,000,000	150%
Mumias Sugar Company Ltd	3,000,000,000	2001/11	6.25	1,125,000,000	60%
Kengen Ltd	658,900,000	2006/04	11.9	7,840,910,000	333%
Scangroup Ltd	69,000,000	2006/06	10.45	721,050,000	620%
Eveready East Africa Ltd	63,000,000	2006/08	9.5	598,500,000	830%
Access Kenya Ltd	80,000,000	2007/03	10	800,000,000	363%
Kenya Re-Insurance Corporation	240,000,000	2007/07	9.5	2,280,000,000	334%
Safaricom Ltd	10,000,000,000	2008/06	5	50,000,000,000	532%
Co-operative Bank	701,000,000	2008/10	9.5	5,400,000,000	81%
British American Insurance Kenya Ltd	660,000,000	2011/09	9	3,515,103,000	60%

Company Data (*Source: Author, 2018, u*sing data Retrieved from *http://live.mystocks.co.ke/*)

1.1.2 Long run Initial Public Offering (IPOs) Share Performance

Different scholars have looked at the long run performance of IPOs. Mikkelson, Partch, and Shah (1997) noted decline in post IPO performance but concluded that this is due to the fact that IPOs generally are issued after periods of highest performance to drive up demand for the offer. (Jain and Kini, 1994), (Coakley, Hadass, and Wood, 2007) also made similar observation in the USA. Outside the US, (Pagano et al., 1998) for the Italian market, (Coakley et al., 2007) for the UK market, (Wang, Wang, and Lu, 2003a) for the Singaporean market and (Cai and Wei, 1997), (Kutsuna, Okamura,

and Cowling, 2002a) and (Yan and Cai, 2003) for the Japanese market all observe long time decline in performance.

The general explanation for the declines in the post-issue operating performance is the timing of offering. Issues are timed to coincide with periods of unusually good performance levels, which they know cannot be sustained in the future. Thus, issuers take advantage of temporary improvements in performance to issue new shares when investors have overly optimistic expectations about the firms' prospects. This is identified as window of opportunity by (Ritter, 1991).

1.1.3 Nairobi Securities Exchange and Recent IPOs in Kenya

The history of Nairobi Securities Exchange (formerly Nairobi Stock Exchange) can be traced back to the 1920's when it started trading in shares while Kenya was still a British colony (IFC/CBK, 1984). In addition, while share trading was initially conducted in an informal market, there was a growing desire to have a formal market that would facilitate access to long-term capital by private enterprises and allow commencement of floating of local registered Government loans. The NSE was constituted in 1954 as a voluntary association of stockbrokers registered under the Societies Act (NSE, 1997).

As of the time of the study, the NSE comprised 55 listed companies with a daily trading volume of over USD 5 million and a total market capitalization of approximately USD 15 billion. Listed companies fell into two main segments, the main market segment and the alternative investment market segment (NSE, 2015). The NSE had classified the 55 listed companies into ten sectors: Agriculture, commercial and services, telecommunication and technology, automobiles and accessories,

banking, insurance, investment, manufacturing and allied; construction and allied, energy and petroleum. In addition, aside from equities, Government and corporate bonds are also traded on the Nairobi Securities Exchange and automated bond trading started in November 2009 with the KES 25 billion KenGen bond (Kestrel Capital (East Africa) Ltd, 2006; NSE, 2013). The average bond daily trading is USD 60m. Also, trading hours are from 09:00 to 15:00 and delivery and settlement is done scrip-less via an electronic Central Depository System (CDS) which was installed in 2005. Settlement is T+3 (trade or transaction date plus three days) on a delivery-vs-payment basis.

1.2 Statement of the Research Problem

It is important to understand the extent to which financial and non-financial information can be relied upon by investors in assessing the IPO pricing. This is necessary so that investing decisions in IPOs can be made from objective and verifiable data.

Anecdotal evidence from the Nairobi Stock Exchange reveals that most of the IPOs are usually under-priced more so if the share price value at the end of first day of trading is checked against the offer price (Njuguna, Wabwire, Owuor and Onyuma, 2013). In their first market debut after listing, the KenGen shares closed at nearly four times the issue price of Kshs. l1.90. Safaricom issued its shares at a price of 5/=. The shares rose 50% on the first day of trading. These two examples underscore the fact that IPO shares are usually under-priced but their performance in the short-run, medium term and the long-run still require further investigation.

Other studies that have documented a significant systematic increase from the offer price to the closing share price on the first day of trading. For example, Stoll and

Curley (1970), Reilly (1973), and Ibbotson (1975) provide early evidence of systematic under-pricing of Initial Public Offerings (IPOs). Related to this is the 'hot issue' market phenomenon, in which issues in certain time periods display abnormally higher short-run aftermarket performance than during other periods (first documented by Ibbotson and Jaffe (1975))

Inconsistency in the performance of IPOs over the long-run and short-term periods continues to elicit a number of studies in this area. Ritter (1991) in his study of the USA firms suggests that over-optimism on the part of investors is the most likely reason for the long run under performance of IPOs.

In Kenya, similar optimism is observed especially gauging by the level of oversubscriptions as seen in the background to this study.

This study sought to determine firstly if key financial and non-financial factors have a significant effect on share prices. This is important to be able to predict the value of shares based on company fundamentals, and for investors to be able to make informed decisions not driven by emotions. Investors would be able to determine if IPOs are correctly valued and this would prevent any possibilities of the public being misled to invest in firms that may not give adequate returns in future.

1.3 Research Objectives

The overall objective of this study will be to assess the influence of financial and non-financial factors on share prices for companies that issued IPOs over the review period.

The specific objectives are;

i. To assess the influence of financial factors (profitability, equity and assets) on share price performance

ii. To assess the influence of non-financial factors (number of shares and age of firm) on share price performance

1.4 Research Questions

i. To what extent do financial factors influence the average price of shares?

ii. To what extent do non-financial factors influence the average price of shares?

1.5 Significance of the Study

The study will be useful from the academic perspective in that the information obtained would be useful to future researchers who want to advance the knowledge and literature in the market values after IPO's. It will also add to the debate on the subject as reference material and stimulate further research in the area. The study will add mainly to the fundamental and technical analysis theories of share price determination specifically to what extent can fundamental analysis be relied upon in the prediction of share prices.

To the investing public, this study will give guidelines to investors on what key factors inform the price of shares and this would assist the investors in making viable decisions while investing in the stock market.

From a policy perspective, the study will be useful to the market regulators namely the Capital Markets Authority (CMA) and the NSE would gain knowledge on how to handle future IPO's regarding the regulations and making of policies around IPOs. Specifically, the policy makers would ensure that IPO information is supported by verifiable fundamental data supported by history and performance of similar entities. Due to making sound regulations and policies, this would result into improved confidence in investors in investing in the stock market

The companies will be able to appreciate the fundamentals surrounding the performance of IPOs and this would assist them in making sound decisions on when and how to float their shares through IPO's. They would make viable decisions when setting the offer price of shares during IPOs.

1.6 Scope of the Study

The study focussed on the effect of financial and non-financial factors on the long run share price performance of initial public offerings in the last 10 years. The study target population was ten (10) firms that have issued IPOs in the last ten years 2006-2015 (table 1.1). These companies were used as a convenient sample to represent all companies at the NSE. The companies were picked because they had the most recent information on IPO prices that would be used to compare to subsequent market prices. Additionally, the period over which the information was collected was manageable as opposed to taking the whole NSE companies which would have yielded very large data that would have been difficult to analyse. The study focussed on post-IPO long run performance. The study used secondary data from secondary sources for the last fifteen years 2000-2015. This study used information available on the websites, NSE, paper articles and Communications Authority of Kenya which is easily available for public scrutiny. This study was quantitative in nature as opposed to qualitative since it relied more on numerical data and little non-numerical data.

1.7 Organization of the Study

This study is divided into five chapters and the rest of this study is organized as follows: Chapter 2 provides a comprehensive and critical review of literature relevant

to the topic of local content under the factors listed in objectives. In chapter 3, the research design and approach of inquiry that grounded the study are discussed. In chapter 4, detailed findings of the study are discussed. In chapter 5, conclusions and recommendations are provided. The recommendations for action and for further studies has also been discussed.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter begins firstly by review of the relevant theoretical literature followed by a section on IPOs and financial performance. Thereafter a review of the empirical review is carried out, research gap identified and finally summary of literature. Thus, the chapter carries out synthesis of past literature in relation to research objectives and discusses several key empirical studies with other supporting researches on subject under study.

2.2 Theoretical Review

There are several theories in IPO literature such as the pecking order hypothesis, agency theory, prospect theory, fundamental analysis, technical analysis, random walk, efficient market hypothesis, information asymmetry, the winner's curse hypothesis, the bandwagon hypothesis, the investment banker's monopsony's power hypothesis, the lawsuit avoidance hypothesis, the signalling hypothesis and the market incompleteness hypothesis. This study narrowed down on efficient market hypothesis and fundamental analysis given the objective of the study to rely on fundamental data to predict share prices, implying indirectly that the market is efficient and takes in these data in share price movements.

Under the market efficiency hypothesis (EHM), prices of stocks reflects all relevant information affecting the stocks at any point in time (Lumby and Jones, 2003). Therefore, the share prices can be relied upon to reflect the true worth of the stock.

In general, the ideal capital market is one in which security prices provide accurate signals to resource allocation, where firms can make production-investment decisions and investors can choose among securities that represent ownership of firms' activities

under assumption that security prices at any time fully reflect all available information (Fama, 1970).

The efficient markets hypothesis is one of the mostly hotly contested propositions – even after several decades of research, economists have not yet reached a consensus about whether financial markets are efficient or not (Lo, 2007). The underlying assumption in this theory is that market participants are rational economic beings, acting in their own self-interest and making decisions in in an optimal fashion by trading off costs and benefits (Lo, 2007).

Although alternative theories have been proposed, no single theory has managed to supplant the EMH in either academic or industry forums. This is partly due to the enormous impact that modern financial economics has had on theory and practice over the last half century. The theory is the bedrock of other theories such as portfolio optimization, the Capital Asset Pricing Model, the Arbitrage Pricing Theory, the Cox-Ingersoll-Ross theory of the term structure of interest rates, and the Black-Scholes/Merton option pricing model (Lo, 2005).

There are three forms of market efficiency: weak form, semi-strong form and strong form. In the weak form, the share prices reflect past information affecting prices like returns. In the semi-strong form market efficiency, the share prices reflect all publicly available information. In the strong form, security prices reflect both publicly and privately available information (Fama, 1970).

As such, under the efficient market hypothesis, asset prices or share prices are in some sense assumed to be rationally related to economic realities (Summers, 1986). However, despite this widespread notion, a number of authors have suggested that certain asset prices are not rationally related to economic realities (Summers, 1986).

The second theory building on the foundation of the efficient markets hypothesis is the Fundamental theory. Fundamentalists go in depth into the determination of share price and hold that the stock price is a function of expected earnings and capitalisation rates (Fisher and Jordan, 1995). A stock value is determined by discounting the expected income streams of the security by the capitalisation rate. The stock value changes when there is different expectation and this occurs when there is new information (Jensen and Meckling, 1976). Earnings, dividends, asset values and quality of management are the key influences in determining the value of the security. This value is the theoretical value and if it is higher than the current market value, investors will buy the security in the market. If the market value is higher that the discounted value then the stock is sold.

2.3 Post-issue Long-run Performance of IPOs

Past literature on IPO defines the long run as typically being in the region of three years and above (Ritter, 1991). The stock market consists of both the primary and secondary markets. In the primary or new issue market, shares of stock are first brought to the market and sold to investors. In the secondary market, existing shares are traded among investors. Many researchers have documented a long-run decline in companies' post-IPO operating performance. Jain and Kini (1994) were the first to investigate the operating performance of US IPOs in the first three years after going public and found declines in the post-issue operating performance compared to pre-IPO level. They suggest that the decline in performance of companies that go public is explained in part by weakened incentives of managers. Moreover, they found a positive relation

between performance changes and the portion of shares retained by pre-offering owners.

Under-pricing is often used as a proxy of the ex-ante uncertainty (based on forecasts rather than actual results) (Fabrizio, 2000). Ex-ante, derived from the Latin for "before the event," is a term that refers to future events, such as future returns or prospects of a company. Ex-ante analysis helps to give an idea of future movements in price or the future impact of a newly implemented policy.

2.4. IPO Pricing

From research, it has been shown that IPO pricing displays certain important anomalies – such as the positive first day returns (under-pricing) and long-run underperformance. Hence, the under-pricing of IPOs is one of the most studied anomalies (Ritter and Welch, 2002). It is argued that IPOs are deliberately under-priced on the day of listing, leading to exploitable opportunities for investors. Thus, IPOs with upward offer price adjustments have higher levels of under-pricing. Therefore, the high demands of IPO shares initially are attributed to information asymmetry between the investors and the firm going public. While the company wants to maximize subscription levels, the investor wants to maximize returns. The company thus under-prices its IPO. However Miller (1977) finds that divergence of investors' opinions drives the IPO price higher than its intrinsic value due to optimistic investors.

Thus, the investors can make use of this missing information, provided they have access to it, hence abnormal returns are possible (Ritter, 1991; Purnanandam and Swaminathan, 2004). Further, the time period for which this under-pricing can persist is also quite long from one year to up to five years (Ritter and Welch, 2002).

2.5 Non-Financial variables in IPO performance

2.5.1 Firm Age

Older firms are likely to have successful IPOs and subsequent performance of the share price after IPO (Chi and Padgett, 2006). “It is very important for a company to look at the life cycle stage that it is in; firms in the maturity life cycle stage will perform better than firms in the introduction part of the life cycle stage when raising IPOs in the securities exchange” (Mushtaq, 2016).

2.5.2 Number of shares issued

Studies such as Bisseswar (2015) have investigated the effect of number of shares issued on price of a share indicating that the higher the shares in issue, the lower the price of a share. The announcement of equity offerings reduces stock prices significantly and price reduction is significantly and negatively related to the size of the equity offering (Asquith & Mullins, 1986).

2.6 Financial variables

The main objective of shareholders in investing in a business is to increase their wealth (Borad, 2009). Thus, the measurement of performance of the business must give an indication of how wealthier the shareholder has become because of the investment over a specific time.

The key measures of financial performance are sales revenue and profitability and these determine if an investment is worthwhile or not. This study looks at Profitability, asset value and Equity as the financial variables affecting IPO shares performance in the long-run.

2.6.1 Firm Size (Measured by Asset Value)

According to Chemmanur, He, and Nandy (2010) only large old public firms with adequate cash flows and private limited firms that have accumulated a track record of successful performance find it optimal to go public by issuing IPO. Consequently, firms that issue IPO are regarded by investors as having very high chance of success, hence, the high demand during the first day of trading. Existing research shows that firm size has a significant impact on IPO pricing.

Ritter (1991) argue that larger firms are easier to value because of ease of forecasting cash flows. Teker and Ekit (2003) posit that a firm with larger values of total assets experience less uncertainty regarding its perpetuity, and hence commanding less under-pricing, and hence higher offer price.

The size of the IPO firm has important implication for pricing as it is an important determinant of stability of the firm. Firm size measured by total assets (the natural log of total assets before going public) and large companies have fewer risks than small companies, respectively, because there is more information about them and because they are likely to be more closely monitored by government and regulatory agencies.

2.6.2 Profitability

In looking at profitability, analysis of performance both prior to and post IPO is important. Jain and Kini (1994) observed that firms report better profitability prior to IPO to achieve greater valuations. They found a significant decline in performance of firms after IPO issuance. This is an indication of possibility of window dressing.

Stock markets temporarily overvalue issuing firms and disappointment comes when earnings decline after share issue (Rangan, 1998).

2.6.3 Equity Value

Firms are interested in the value of equity because if equity is overvalued, firms would not be able to deliver the financial performance that the market requires to justify that valuation (Jensen, n.d.). In the short term however, overvalued equity may enable firms to access funds below the cost of capital as well as increase compensation of managers who have equity based compensation such as options (Jensen, n.d.). Because of the contractor long term versus short term effects of equity overvaluation and undervaluation, equity valuation becomes a very key component in share price determination for firms.

2.7 Empirical Literature Review

This section will start with a look at the literature from developed markets, followed by developing markets, then Africa and finally narrowing down into the Kenyan context.

Ritter (1991) examined 1,526 USA firms which went public between 1975 and 1984 and found that the average return on a firm's stock over the three years following its IPO was significantly lower than the average on firms matched by size and industry. He suggested that over optimism on part of investors was the most likely explanation for long-run underperformance, contending that investors in the IPO market are systematically fooled into paying too high a price. He observed short run under-pricing which ultimately turn into long run over pricing.

Another study done in the US market by Jain and Kini (1994) investigated the change in operating performance of firms as they transition from private to public ownership and noted a significant decline in the post issue operating performance. They further observed a significant positive relation between post issue operating performance and

equity retention by the original shareholders. However, no relation was observed between post issue operating performance and the level of under-pricing.

Mikkelson et al. (1997) looked at 283 IPOs in the US between 1980 and 1983 focusing on ownership and operating performance of companies that go public. They observed that the median ownership stake of officers and directors declines significantly from year before going public to ten years later. They further conclude that the median return on assets also declines from year before offering to the end of the first year but performance declines no further after ten years. The operating performance generally is unrelated to ownership of officers both within the first year and ten years of post-issue trading. This contradicts Jensen and Meckling (1976) that the interests of managers and other stakeholders become less closely aligned as managers' stake decrease and ownership becomes more disperse.

Khurshed, Paleari, and Vismara (2005) studied the post issue operating performance of UK firms and found that the performance of firms going public on the official list significantly deteriorates after the issue. Contrary to the studies in the US above, they found that IPO firms on the Alternative Investment Market (AIM) do not experience deteriorating performance after the issue but rather experience growth post IPO. The reasons for the general decline in the post issue performance is explained by these hypothesis: windows of opportunity (the offer is scheduled when the company is performing well and the stock market is overconfident), window dressing (earnings management prior to IPO) and agency theory (change of ownership).

Coakley et al. (2007) also analysed the post-issue operating performance of UK initial public offerings at London Stock Exchange and found significant declines after the offerings. Their results are consistent with the market timing theory of capital structure and the prediction that entrepreneurs undertake IPOs only when operating

performance is about to deteriorate. They concluded that the bubble years point to the influence of both market timing and investor sentiment on long-run operating performance.

Another study in the Europe was by Pagano et al. (1998) who looked at a large number of private companies in Italy to explore the determinants of IPOs by comparing the ex-ante and ex post characteristics of IPO firms with those of private firms. He observed that going public was not a stage in a company's growth cycle but rather a matter of choice. The authors found that the main factor affecting the probability of going public is the market to book ratio at which firms in the same industry trade. The odds of an IPO increase by 25% for a 1% change in the market to book ratio. The second most important determinant is the size of the IPO, that is larger firms are likely to go public as opposed to smaller firms. The paper observes that investors are less informed about the true value of the companies going public than the issuers. This is due to information asymmetry which affects the quality of firms going public as well the price of the IPO and goes further to determine the level of under-pricing needed to sell the shares.

Outside the US and the UK, Cai and Wei (1997) found that the post-issue deterioration in operating performance of initial public offerings listed on the Tokyo Stock Exchange cannot be attributed to the reduced managerial ownership. They insisted that their evidence provides strong support for the windows of opportunity explanations for the new issue puzzle by (Loughran and Ritter, 2002). They concluded that the decline in profitability is not related to the changes in the ownership level. Therefore, they claimed that the post-issue deterioration of performance for Japanese IPO firms cannot be attributed to the effects of moving from private to public ownership. Besides, they reached a conclusion that their evidence does not support the agency hypothesis of (Jensen and Meckling, 1976).

Kutsuna, Okamura, and Cowling (2002b) also did a study in Japan looking at how operating performance of post issue firms is affected by the ownership structure pre and post IPOs. They found that operating performance varies according to managerial ownership in addition to age and size of the firm. This contradicts with Cai and Wei (1997) above who concluded that post IPO decline in performance cannot be attributed to reduced managerial ownership.

Wang, Wang, and Lu (2003b) studied the effects of venture capitalists' participation in listed companies in Singapore and found that the post-IPO operating performance of venture backed companies is inferior but those IPOs are less under-priced. They also observed that IPOs backed by older venture capital firms show better performance suggesting that younger venture capital firms list companies prematurely.

Anderson, Chi, and Wang (2015) studied IPO under-pricing and long run performance of ChiNext stock market in China. Their findings supported information asymmetry hypothesis and the behaviour theory (market sentiment) on under-pricing. They also found that ChiNext underperformances are consistent with significant deterioration of performance post IPO.

In Africa, Neneh and Smit (2013) studied the under-pricing of IPOs during hot and cold market periods on the South African stock exchange (JSE). They observed that IPOs in South Africa are significantly under-priced with an average market adjusted first day return of 62.9% and hot market IPO are more under-priced than cold market IPOs. The hot issue market is defined by periods of rising initial returns and increasing numbers of IPOs whereas the cold issue markets have less under-pricing, low issues, few oversubscriptions and larger offerings and generally involve low quality IPOs

companies with low offer price. Only few companies are willing to go public in cold issue markets.

A number of studies have also been carried in Kenya on the subject of IPOs. Wachira (2012) study was to determine whether a company's relative value is higher than that of its industry peers after going public. He observed that 75% of the IPO companies studied had higher relative value than the industry peers in the same sector. IPO is generally under-priced since in most of the cases the share price on the first day of trading was higher than the offer price. But the apparent under-pricing in the short run turn out to be overpricing in the long run. It appears therefore that the focus should be on the long-term performance of the IPO.

Njoroge (2004) analysed the initial returns and long run performance of IPOs at the Nairobi Stock Exchange to establish some of the factors that may influence the performance of IPOs. The hypothesis was that IPOs are usually under-priced in the short term but they underperform in the long term. The average first day returns of firms studied was 22.57%. But in the long run the IPOs underperformed. All the IPOs recorded an overall negative cumulative growth of 68.46% compared to NSE index growth of 12%. Factors such as dividends, capital gains and just passion for investing in shares could be the main reasons why investors hold shares for the long term despite the negative long run returns.

Jumba (2002) investigated the long run performance of IPOs in Kenya to determine if there was existence of hot issues phenomenon or any other patterns. Similar to the earlier studies above, the findings showed that IPOs earned high returns in the short term. Contrary to the first scholars, her studies showed that the period of IPO issuance was important. Stocks which were issued when the market index was high registered

high returns on the first day of trading. In the long run, the IPO underperformed but generally registered positive returns in the after-market. The study found the existence of hot issues phenomenon in the market indicating that issuers are able to take advantage of windows of opportunity phenomenon and time the issues when the market is buoyant.

Ndatimana (2008) also sought to prove that there was under-pricing associated with issues in the Nairobi Stock Exchange. Like other researchers, he observes the general under-pricing in the short term but on the long terms make a small departure from other studies in that he observes that the long run performance is mixed: IPOs underperform the market on their 3rd anniversary however the underperformance dissipates and in the fifth year the IPOs are doing just as well if not better than the market benchmark.

Ochenge (2011) also reassessed the evidence of under-pricing at the Nairobi Stock Exchange and noted that the level of under-pricing in Kenya is influenced by listing delays, offer size, oversubscription rate and the tyre of issue. He observes that the level of under-pricing is driven by irrational investors seeking for short term capital gains.

Karitie (2010) in his study of IPOs at the NSE using market adjusted buy and hold returns (MABHR) methodology found that there was long run underperformance. However, using the cumulative abnormal returns (CAR) methodology, the IPOs over performed. Hence, it demonstrated that the methodology used can give different results.

Koech (2011) also did a similar study to understand the short and Long-term performance of IPOs in Kenya and found that IPOs were under-priced by an average of 57% in the short run. In the long run the stocks underperformed. The study

investigated how IPO performed relative to market both in the short term and long term. The study did not however attempt to investigate the relationship between financial variables like profitability and the share price, the essence of this study.

Gatua (2013) conducted a similar study but her focus was mainly on how the macro variables like interest rate, Currency exchange rate, Stock Exchange index etc affect the share price. This study will look more into the firm specific factors and how they inform the share prices. The model produced by Gatua was very weak, with an R-squared of only 3%.

Another study that looked at long run performance of shares was by Simiyu (2015) using the market model to determine abnormal returns (AR) and Cumulative Abnormal Returns (CAR) but did not determine the effect of financial and non-financial factors predicted these returns.

Bisseswar (2015) also carried out a close study looking at whether or not there was IPO underperformance in the short term as well as long term and also investigated the effects of certain IPO characteristics like age of the firm, initial return and offer size, on long term share price performance. The difference with the current study is that initial return is excluded but profitability, Assets and Equity are included as these are company specific drivers that should influence financial performance.

Mushtaq (2016) study is probably the closest to the current study. He studied the influence of sales volume turnover, profitability and asset base on the performance of initial public offerings. His study only left out the number of shares issued, age and equity which are included in the current study. His study indicated that only 6.5% of the variation in share price performance could be explained by the independent

variables, clearly suggesting that the factors he used were not adequate. The current study expands the factors and we will see what the outcome is.

Other researchers that have looked at IPOs in Kenya are Njuguna et al. (2013), Kiptoo (2010), Buigut, Soi, Koskei, and Kibet (2013), Karani (2008), Kuria, (2014), Leshore (2008), and Maina (2015) among many others and all generally point to the existence of short term under-pricing of IPOs and long run underperformance.

2.8 Summary of Literature

Most of empirical research on the IPOs is based on US data and to a lesser extent on data from other large developed countries (Germany, United Kingdom). There have been other studies in other emerging markets economies such as Brazil, China and others but with varying results. More importantly, whereas past literature dwells on over and under-pricing including reasons why firms go public, the area of determinants of long-run IPO performance has been neglected. The overall conclusion of the literature is that IPOs are under-priced, that is the offer price of IPOs is on average lower than the corresponding first-day market closing price and exhibit long-run underperformance (Ritter, 1991).

Studies in Europe and Asia by researchers such as (Coakley et al. (2007), Wang et al. (2003b) and Mikkelson et al. (1997) demonstrated a positive link between initial public offer and overall organisation performance in the short term however the studies do not provide guidance on the long run underperformance of most IPOs firms.

In summary, the literature shared common views on the most observed IPO pricing performance anomaly, that is, under-pricing or over performance followed by underperformance for IPOs in the long run. The above review has shown the theories that relate to issuance of IPO. The theories explain better why firms issue IPO and why

there has been under performance of firms after IPO. The empirical literature shows a lot of focus on under or over pricing and time clustering. Time clustering is a phenomenon of multiple IPO's issued at the same time. While the clustering of IPO may be due to clustering of real investment opportunities, empirical findings suggest that this link is weak. Two issuing patterns in the IPO market have been identified: hot versus cold issue markets referring to periods of high versus low volume of IPO issues and "industry clustering" where disproportionate numbers of firms within an industry go public simultaneously. Thus, time clustering is a sequential process trigger leading to a high proportion of firms in the same industry going public within a relatively short period.

2.9 Research Gap

From the studies by Jumba (2002), Njoroge (2004) and Ndatimana (2008), they conclude that IPO's underperform the market in the long-run using MABHR, and that all IPOs underperform the market in the long-run. However, Karitie (2010) disputes this assertion from the study and posits that the methodology used determines whether IPOs will underperform in the long-run. Hence, the inconsistencies and mixed results in past studies forms the gap that this study will attempt to address by looking at the effect of both financial and non-financial factors on post-IPO performance in the long-run. For most countries, studies on IPOs pricing find significant under-pricing in the primary market and consequently substantial initial returns in the secondary market (Ritter and Welch, 2002). In contrast to the almost certain short-run outperformance of IPOs there is, on average, a substantial underperformance over longer periods.

2.10 Conceptual Framework

This presents the logical linkage between the independent variables split into financial and non-financial and the dependent variable, the post issue share price.

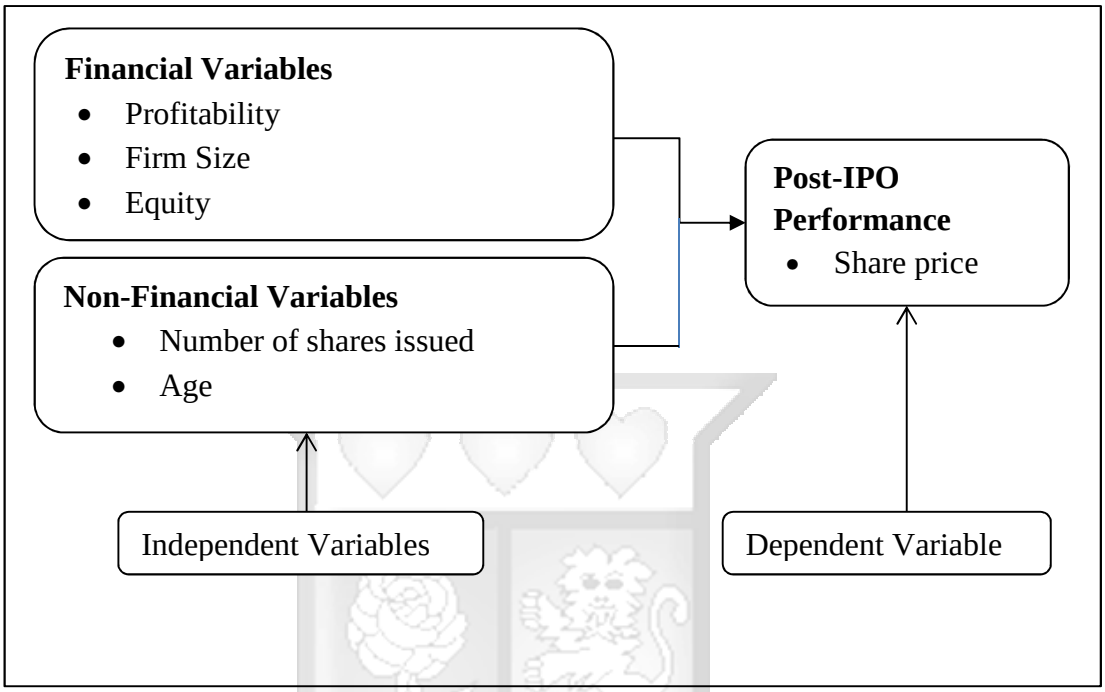

Figure 2.1: ***Conceptual Framework (Source: Author, 2018)***

The study investigated the effect of financial variables measured by profitability, asset value and Equity on the share price, and e Non-Financial variables measured by number of shares issued and age of the firm on share price.

2.10.1 Operationalization of the variables

Profitability: Profitability was measured by the natural log of net income/profit.

Firm Size: The natural log of a firm's total asset value.

Age: Was measured by the number of years since the date of incorporation to the last year of observations.

Equity: The natural log of a firm's equity value.

Number of shares offered: The natural log of the firm's shares outstanding.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The broad aim of this chapter is to provide the rationale for the research method that will be used to explore the topic under study. The chapter provides details of all information regarding the methods that will be used to carry out the research, the type of research design to be used, the data collection procedure, data collection instrument and data analysis.

3.2 Research design

This study adopted an explanatory research design to gain a better understanding by understanding the degree of the causal relationship between share prices and financial and non-financial variable using case study of the IPOs firms over the review period. The data that was analysed was quantitative in nature, encompassing share price data and the financial and non-financial data for the various companies over the review period.

3.3 Target population and sampling

The target population of this study was all firms listed at the NSE in Kenya. From the listed companies in NSE, the research focused on all the firms that had issued IPO in the last 16 years from 2000-2015. There were sixty-one firms listed at NSE as at end of year 2013. The sample was the number of firms that had issued IPOs in the period under study which was ten as shown in table 1.1 and of which one was delisted (CMA, 2015; NSE, 2015).

3.4 Data collection methods

This study is based on the IPOs taken to the public on the NSE over the 2000-2015 interval. Total 10 firms went public during this interval. This study considered Nine (9) IPOs since one firm African Lakes was delisted in 2003. Panel data (also known as longitudinal or cross-sectional time-series data) which is a dataset in which the behaviour of entities is observed across time was used (Torres-Reyna, 2007). The data to be used in this study will be obtained from the various publications prepared by NSE and individual firm's audited financial statements. The daily share prices were collected from the NSE information desk for all the stocks. This data was organized using MS Excel Spreadsheets. The secondary data set consisted of annual observations totalling to 144 observations of the variables under study. The study used panel data spanning 2000-2015 for IPO companies and all the data used will be annual variables. Eight years secondary data of share price, age, equity, asset values, profitability and number of shares will be used.

3.5 Data analysis

Data analysis incorporated both descriptive and inferential statistics. The collected data was coded, entered in a tool and a descriptive analysis was run to provide the descriptive statistics especially mean scores standard deviation, minimum, maximum and percentages on the key variables of the study interest. Findings are presented in tables, charts and graphs.

Data analysis as related to this research work involved statistically analysing the data collected to form a basis of accepting or rejecting the hypothesis. The study used both descriptive and empirical statistics. Descriptive statistics was the main method of data

analysis that was suitable for this study. The research is empirical in nature and was analysed using descriptive statistics such as charts, graphs, mean, and standard deviation, quartiles and regression analysis.

3.5.1 Analytical Model

This study conducted a multivariate regression analyses based on pooled techniques to examine determinants of the aftermarket performance of Kenya's IPOs from the aspect of the characteristic of a firm. Panel data regression was used to test the influence of the explanatory variables on the long-run performance of IPOs. Cross sectional and time series analysis was used to test unobserved heterogeneity. The panel dataset had data on n cases over t time periods, for a total of n × t observations. A typical regression model is of the form:

$Y= \beta 0 + \beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\varepsilon$……

Where:

Y= Average Share price

X_1= Profitability

X_2= Assets

X_3= Number of Shares

X_4= Equity

X_5= Age

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Coefficients of the independent variables

β_0 is the constant

ε = error/term or variable which represents all the factors that affects the dependent variable but not be included in the model because they were difficult to measure or not known.

With panel data we can tackle more broad and complex problems than is possible with pure time series or cross-sectional data alone. Secondly, panel data helps us examine how variables and the relationship between variables change between and overtime (dynamically). This is possible because combining both cross section and timeseries data gives more degrees of freedom and hence increases the power of the test. This also helps to reduce problems of multicollinearity that may arise if time series are modelled individually. Thirdly, structuring data in a panel format may remove the impact of certain forms of omitted variables bias in regression results (Brooks, 2008).

The general equation for a panel data model is as follows:

$$y_{it} = \alpha + \beta X_{it} + u_{it} \quad (4.1)$$

where y_{it} is the dependent variable, α is the intercept term, β is coefficient to be estimated of the explanatory variables, and x_{it} is the observations of the explanatory variables over the time horizon. u_{it} is the error term.

There are broadly two classes of panel data techniques that will be presented, the fixed effects model and the random effects model. Some of the transformations of the main broad techniques will also be presented for comparison purposes.

3.5.2 The Fixed Effects Model

The fixed effects model expands the error term such that we can isolate the term into individual specific effects (u_i) and the remainder the unexplained term that varies over time and entities (v_{it}). So the fixed effects model equation would be as follows.

$$y_{it} = \alpha + \beta X_{it} + u_i + v_{it}$$

u_i basically covers all variables that affect y_{it} cross-sectionally but not over time. In this project case the industry that the firm operates in would be the one factor that will be isolated and we will see how the results show. The model could be estimated using dummy variables.

It is important to note that the fixed effects model can be entity fixed models or time fixed models. Time-fixed effects model could be used where the average values of the dependent variables change over time but not cross-sectionally (Brooks, 2008).

3.5.2.1 The Within Transformation

If the units within the cross section are too many, the use of dummy variables to estimate the fixed effects would be very challenging. To avoid the use of too many variables, a transformation is done by subtracting the time mean of each entity away from the values of the variable then a regression is done for the demeaned variables. This is called the within transformation.

3.5.2.2 The Between Transformation

Another approach instead of demeaning the variables is to run cross sectional regression on the time averaged values of the variables. This is known as the between transformation (Brooks, 2008).

3.5.2.3 The First Difference Transformation

This approach explains the change in the dependent variable rather than its level. Variables that do not change over time drop off when the differences are taken. The within approach and first differences transformation will yield the same result if there are only two-time periods involved. For more period the choice of approach will depend on the assumed properties of the error term (Brooks, 2008).

3.5.3 Random Effects Model

This panel data model is sometimes known as the error components model. Like the fixed effects model, the random effects approach also generates different intercepts for each entity and the intercepts are constant over time and the relationship between the dependent and independent variables assumed to be the same both cross-sectionally and temporally.

The difference with the fixed model is that in the random effects model the intercepts for each cross-sectional unit are assumed to arise from a common intercept (which is the same for all cross-sectional units and overtime) plus a random variable that varies cross sectionally but is constant over time (Brooks, 2008).

3.5.4 Deciding which is the appropriate Model

To determine which of the above model would be a good fit for the data, two tests will be conducted. Firstly, The Breusch-Pagan LM test for random effects vs OLS will be carried out. This is a test of the random effects model based on the OLS residual. If the test is significant, then use the Random effects model instead of the OLS model. Secondly, The Hausman test will be carried out to determine whether the fixed effects or the random effects panel data model is the appropriate technique

to apply for this set of observations. Under this test, the null hypothesis is that RE (Random Effects) gives consistent estimate. So if the test is not significant, RE wound be used instead of Fixed Effects model.

3.5.5 Test of Significance

A key statistic is R^2 which shows the percentage variance in the dependent variable (post IPO performance) that can be explained by the independent variable. A panel data regression analysis was performed to test the relationship between the variables. T-tests was used to test the significance of the relationship between share price performance and independent variables. Also, the F-Statistic (ANOVA or Analysis of variance table) was used to show how independent variables significantly explain the variance in price of shares. The significance was tested at 5% to indicate if predictor variables strongly explain the variation in the dependent variable.

3.6 Diagnostic Tests

Different panel techniques were employed. Hausman test was be used to differentiate between fixed effects model and random effects model in panel data. Hausman test was used to identify the presence of endogeneity in the explanatory variables:

Problem of multicollinearity was tested using Variance Inflation Factors (VIFs). Multicollinearity problem exists when some independent variables are highly related. When using VIFs to detect for multicollinearity, any individual VIF greater than 10 indicates multicollinearity and average of all VIFs considerably greater than 1 also indicates multicollinearity (Hair, Black, Babin and Anderson, 2010).

3.7 Ethical Considerations

Since the data was freely available on the internet or other public forums, permission for further use and analysis was not sought from relevant authorities. Ownership of the original data was acknowledged.

CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the results of data collected. The findings were analyzed as per the research objectives which were to: determine the influence of financial factors (market capitalization, profitability, Return on Equity (ROE), Price Earnings ratio (P/E) and debt ratio) on initial public offerings share price performance and determine the influence of non-financial factors (firm size, age of firm and number of shares offered) on initial public offerings share price performance. Therefore, this section analyses and interprets data collected from secondary sources. The analysis is divided into three sections namely: section 4.2 Descriptive statistics, section 4.3 presents' trends in the variables over the years and section 4.4 presents' inferential statistics.

4.2 Descriptive Statistics

Descriptive statistics was used to reduce the data to a manageable size and to provide insights into the pattern of the trend of the data. The descriptive statistics techniques used in the study included sum, mean and standard deviations. Table 4.1 shows the results.

Table 4.1: Descriptive Statistics

Variable	No of Observations	Mean	Std. Deviation	Minimum Value	Maximum Value
Company	69	5.17	2.51	1	9
Time	69	2,011.39	2.29	2008	2015
Average Share Price	69	64.85	172.03	1.29	980
Log of Profit	69	8.30	2.90	0	10.50
Log of Assets Value	69	10.26	0.78	8.66	11.53
Log of No of Shares	69	8.99	0.78	8	10.60
Log of Equity	69	9.98	0.72	8.34	11.15
Age	69	35.58	23.12	1	81

Note: Std. Dev. = Standard Deviation

Table 4.1 shows the descriptive statistics for the variables under study with 69 observations each form the time series data. The yearly time series data covered a period of 8 years from 2008-2015. As indicated in table 4.1 above, share prices for the study period had a maximum value of 980 with a mean of 64.85058. Profitability of the firms ranged from (4.6) billion shillings to 32 billion shillings; Return on assets ranged from -69% to 41%.

Table 4.2: Industry Summary

Industry	Frequency	Percentage	Cummulative
Banking	8	11.59	11.59
Commercial and Services	8	11.59	23.19
Energy and Petroleum	8	11.59	34.78
Insurance	8	11.59	46.38
Manufacturing and Allied	24	34.78	81.16
Telecommunication and Technology	13	18.84	100

4.3 Trends in variables under study

The trend in share prices for the firms over the years is presented in figures 4.1.

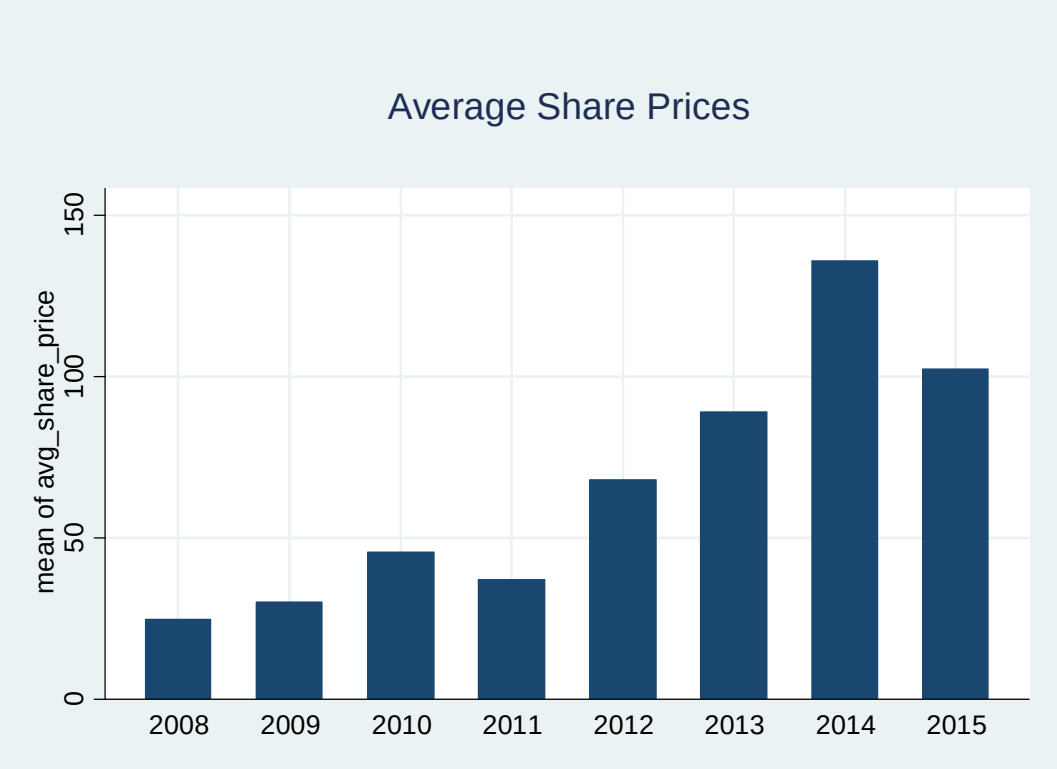

Figure 4.1: Average share price vs IPO price

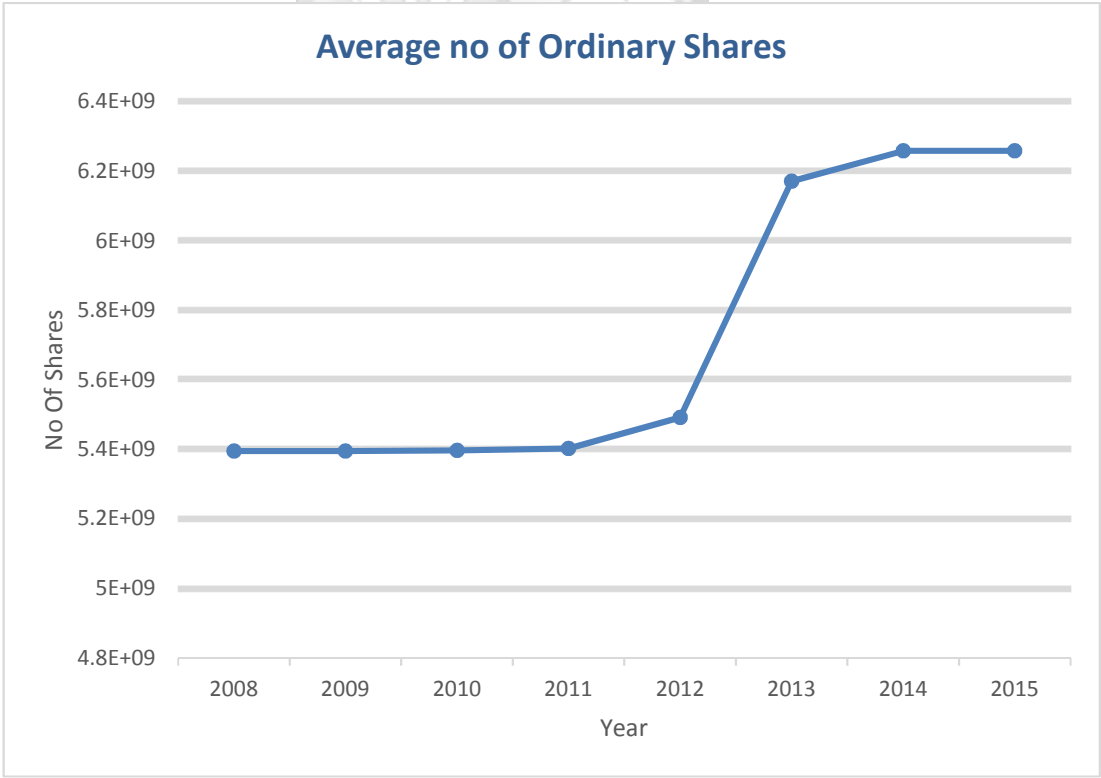

Figure 4.2: Average no of ordinary trends

As shown in figure 4.2, there was a steady rise in the number of shares issued to the public from 2008 to 2012. The shares issued were lowest in 2014 and 2015 and highest in 2012. Year 2010 and 2011 also saw an increase in shares issued by the firms studied.

Furthermore, figure 4.3 shows the total assets of the firms during the year under study.

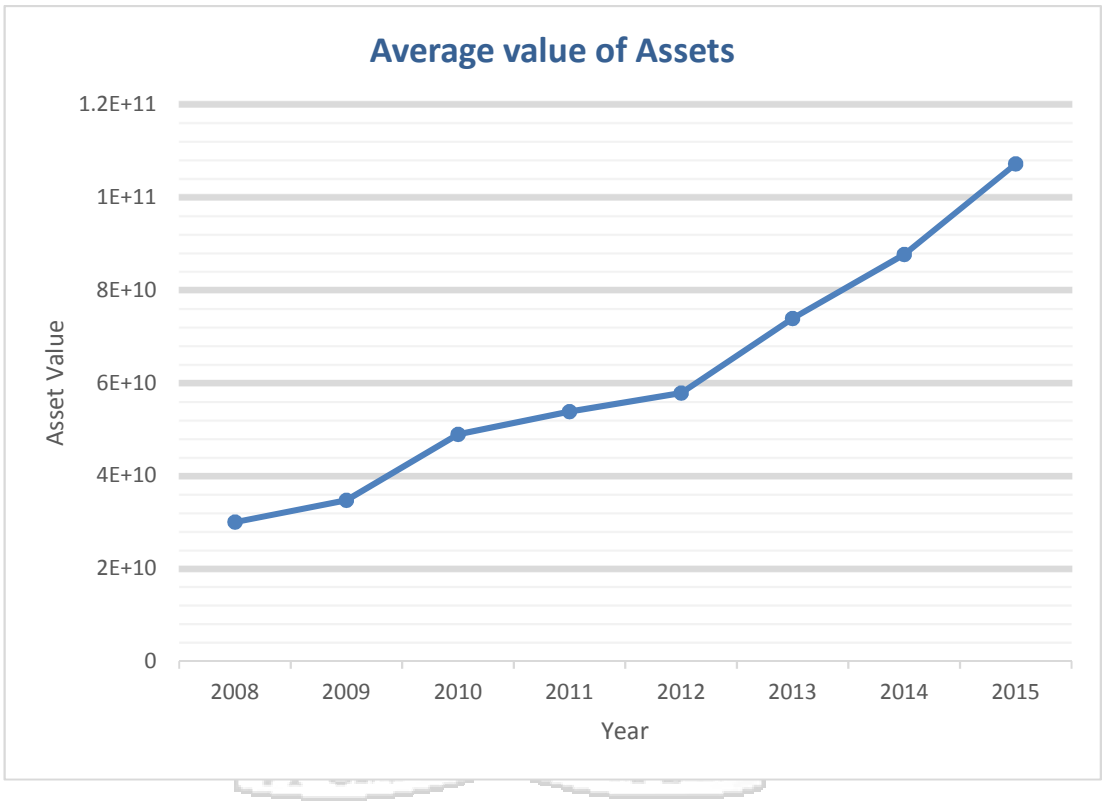

Figure 4.3: Total assets (2008-2015)

As shown in figure 4.3, the trend in total assets was not consistent during the period under study. Total assets were highest in year 2012 and lowest in 2008. The year when total assets was highest coincided with the year when ordinary shares was also highest i.e. 2012.

Figure 4.4: P/E ratio (2008-2015)

As shown in figure 4.4. there was a steady increase in P/E ratio from 2008 to 2010 with year 2010 recoding the highest ratio at 25.3% compared to other years. There was also a steady increase in P/E ratio from 2012 to 2015. Also, the study also sought to establish the influence of profitability on share prices among the firms during the study period. Results are shown in figure 4.5.

Figure 4.5: Profitability (2008-2015)

As shown in figure 4.5, there was a sharp decline in profitability among the firms in 2009. Profitability increased sharply in 2010 but there was a slight decline in 2011. Year 2015 experienced the highest profitability while 2009 the lowest. Lastly, the study also sought to establish the influence of Return on Equity on share prices among the firms during the study period. Results are shown in figure 4.5.

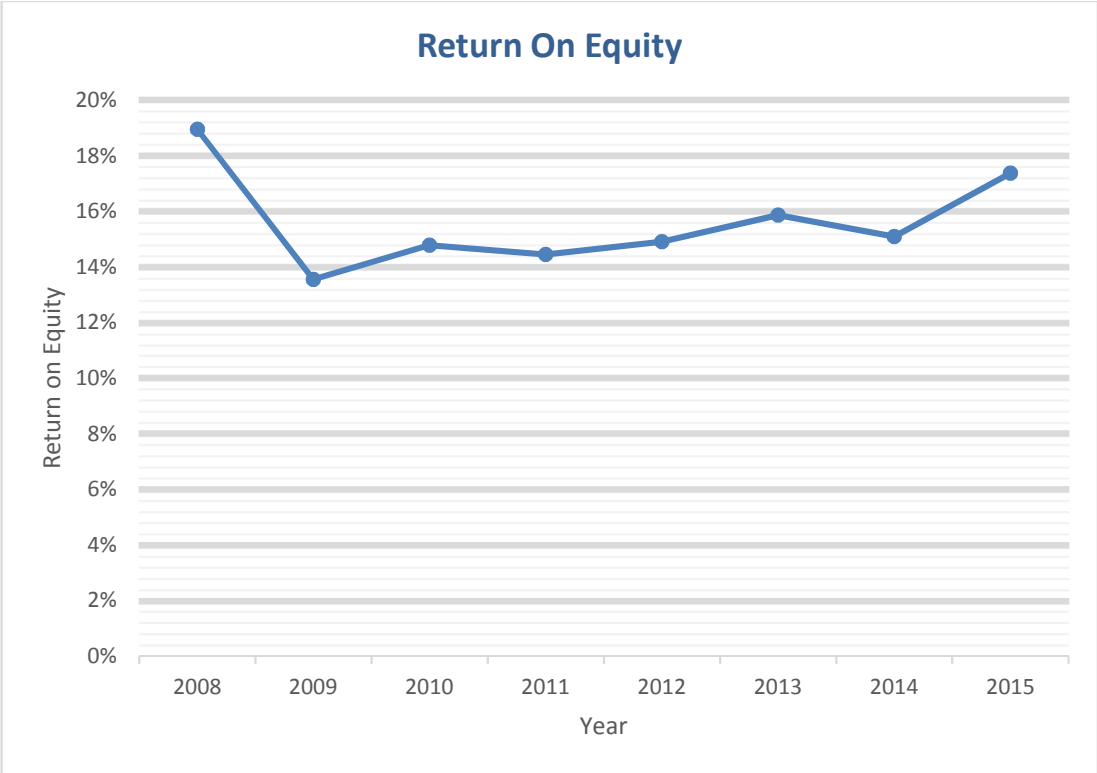

Figure 4.6: Return on Equity (2008-2015)

As shown in figure 4.5, there was steady increase in ROE for the firms from year 2010 to 2015. Previously, the firms which issued IPOs in 2008 to 2010 experienced a decline in ROE.

4.4 Results presentation

The data have been processed using panel data technique using STATA software. As the results entailed both cross-sectional unit, companies, and time series, panel data technique has been applied firstly because the data is panel in nature, comprising of yearly observations for a set of companies. Additionally, panel data method has the following advantages.

Table 4.1: Breusch-Pagan LM test for random effects vs OLS

Estimated Results	Var	sd = sqrt (Va
Average Share Price	194.10	13.93
e	50.53	7.11
u	123.70	11.12
Test: Var(u) = 0		
	chibar2 (01) = 35.79	
	Prob > chibar2 = 0.0000	

This is a test of the random effects model based on the OLS residual. If the test is significant, then use the Random effects model instead of the OLS model.

The p value shows that there is a significant difference in the model meaning we should not use the OLS model but instead we should use the random effects model.

Table 4.2: Hausman test for fixed versus random effects model

The first test has established that the OLS model is not appropriate for the data. However, a choice still needs to be made between the Random and the Fixed effects model. The Hausman test is used to determine this.

Under this test, the null hypothesis is that RE (Random Effects) gives consistent estimate. If the test is not significant, RE wound be used instead of Fixed Effects model.

Variable	(b) Fixed	(B) Random	(b-B) Difference	sqrt (diag (V_b-V_B)) S.E.
Log of Profit	0.42	0.45	-0.03	0.17
Log of Assets Value	4.34	6.11	-1.77	6.26
Log of No of Shares	36.10	-16.33	52.42	27.27
Log of Equity	4.65	8.50	-3.85	3.19
Age	-0.06	-0.19	0.13	0.64
b = consistent under Ho and Ha; obtained from xtreg				
B = inconsistent under Ha, efficient under Ho; obtained from xtreg				
Test: Ho: difference in coefficients not systematic				
chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 4.41				
Prob>chi2 = 0.4924				
(V_b-V_B is not positive definite)				

The p value is not significant at both 5% and 10% meaning that there is no significant difference between fixed and random effects model. Therefore we would not reject the null hypothesis and use the random effects model results to establish the model equation.

The results of the other models would also be shown for comparison purposes.

Table 4.3: Data Summary

Variable	Difference	Mean	Std. Deviation	Minimum	Maximum	Observations
Company	overall	5.173913	2.514409	1	9	N = 69
	between		2.738613	1	9	n = 9
	within		0	5.173913	5.173913	T-bar = 7.66667
Time	overall	2011.391	2.289473	2008	2015	N = 69
	between		0.5	2010	2011.5	n = 9
	within		2.255712	2007.891	2014.891	T-bar = 7.66667
Average Share Price	overall	64.85058	172.0251	1.29	980	N = 69
	between		147.8834	2.27375	455.75	n = 9
	within		95.4936	-259.8994	589.1006	T-bar = 7.66667
Log of Profit	overall	8.299896	2.901871	0	10.5034	N = 69
	between		2.027486	4.643148	10.20933	n = 9
	within		2.164026	1.760554	11.84397	T-bar = 7.66667
Log of Assets Value	overall	10.25928	0.7832906	8.656281	11.53469	N = 69
	between		0.8174041	8.947905	11.25467	n = 9
	within		0.169914	9.860072	10.5671	T-bar = 7.66667
Log of No of Shares	overall	8.988542	0.7793262	8	10.60277	N = 69
	between		0.8145388	8	10.60233	n = 9
	within		0.0413657	8.869532	9.104234	T-bar = 7.66667
Log of Equity	overall	9.984497	0.723995	8.339382	11.15104	N = 69
	between		0.7405229	8.581308	10.87256	n = 9
	within		0.1788858	9.632746	10.71127	T-bar = 7.66667
Age	overall	35.57971	23.12206	1	81	N = 69
	between		24.70464	3	77.5	n = 9
	within		2.255712	32.07971	39.07971	T-bar = 7.66667

Where:

lgprofit = log of profits

lgassets = log of assets

lgnshares = log of number of shares issued

lgequity = log of equity value

The number of companies for which observations has been made is nine with the time period ranging from 2008 to 2015, a total of eight years of observations.

The dependent variable, the share price, represented by avg_share_price has values ranging from 1.29 to 980. The standard deviation is higher between companies than for each company over time.

The assets, represented by log of assets shows much bigger variation between companies than for one company over time and this is with expectation as asset value for a company tends to be very stable over time unless there has been major investment.

Number of shares outstanding is also very stable for each company over the time horizon and variation is only big between companies due to different number of shares issued by each company which depends on the specific company's dynamics. The same observation applies to value of shares outstanding, that is, equity.

Looking at the age, the range is from 1 to 81 years. The age of age shows the company become public in 2008, the first year of our observation.

Table 4.4: Industry Breakdown

Industry	Frequency	Percentage	Cummulative
Banking	8	11.59	11.59
Commercial and Services	8	11.59	23.19
Energy and Petroleum	8	11.59	34.78
Insurance	8	11.59	46.38
Manufacturing and Allied	24	34.78	81.16
Telecommunication and Technology	13	18.84	100

Table 4.5: Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
Log of Profit	69	0	0.0003	32.98	0
Log of Assets Value	69	0.4173	0.0208	5.72	0.0573
Log of No of Shares	69	0.0142	0.7724	5.79	0.0554
Log of Equity	69	0.0463	0.5679	4.39	0.1114
Age	69	0.2461	0.0059	7.9	0.0192
Average Share Price	69	0	0	57.21	0

The p values for Log of Assets value, Log of No of shares and Log of Equity are all above 5% meaning we cannot reject the null hypothesis that these data are normally distributed.

For Log of Profit, Age and Average share price, the null hypothesis that the data is normally distributed is rejected as the p values are all below 5%.

Table 4.6: Random Effects Estimator

Random-effects GLS regression					
Number of obs = 66					
R-sq: within = 0.0904				Obs per group: min =	5
between = 0.4866				Average =	7.3
overall = 0.3954				maximum =	8
corr(u_i, X) = 0 (assumed)					
				Wald chi2(5) =	9.85
				Prob > chi2 =	0.0795
---------- theta ----------					
min 5% median 95% max					
0.7252 0.7252 0.7796 0.7796 0.7796					
Average Share Price	**Coefficient**	**Std. Error**	**Z**	**P>|z|**	**[95% Confidence Interval**
Log of Profit	0.4511795	0.358115	1.26	0.208	-0.250713 1.153072
Log of Assets Value	6.108834	6.951795	0.88	0.38	-7.516433 19.7341
Log of No of Shares	-16.32565	7.483473	-2.18	0.029	-30.99299 -32.651305
Log of Equity	8.504458	6.723695	1.26	0.206	-4.673742 21.68266
Age	-0.1932919	0.1653919	-1.17	0.243	-0.517454 0.1308703
Constant	17.64411	50.19784	0.35	0.725	-80.74186 116.0301
Sigma_u	11.121857				
Sigma_e	7.1084313				
rho	0.70997473	(Fraction of variance due to u_i)			

The Random effects model is significant at 10% level of significance, exact p value being 7.95%.

The log of profits is not significant with a p value of 20.8%. Log of Assets value is similarly not significant with a p value of 38%. Number of shares is the only significant predictor with a p value of 2.9%. Equity and Age are both not significant with p values of 20.6% and 24.3% respectively.

The R-Squared value for the model is 48.66%. This shows that only 48.66% of the change in share prices is explained by the changes in the predictor variables. The balance is due partly to variables that have been omitted, the omitted variables bias, and the error term.

4.5 Model Equation

As the diagnostic tests indicate that the Random effects model is the better model, the results of the Random effect are presented below.

$$Y= 17.64411 + 0.4511795X_1+6.108834X_2-16.32565X_3+8.504458X_4-0.1932919X_5+\varepsilon$$

The model shows that when all the predictor values are zero, the average share price will be sh 17.64411. A one-unit change in profitability results into a 0.4511795 change in share price. Assets and equity also have a positive relationship with the share price as shown in the equation. However, the number of shares issued and age inversely affect the share price. An additional unit of number of shares issued results into 16.32565 units drop in share price. A one-year increase in age of the firm results into reduction of share price by 0.1932919.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

In chapter one, background to the study was given highlighting the general trend of oversubscription for IPOs over the review period. Performance of share prices post IPO was also reviewed showing prices remained generally flat even though profits were generally upwards.

Chapter two looked in-depth into literature where it was seen that most studies show IPOs pricing anomaly where short run overperformance turns to underperformance in the long term. Hot versus cold issue markets and industry clustering of IPOs have been observed in the literature.

The Research methodology has been discussed in chapter 3. Data analysis was done using panel data technique looking at the different panel data estimator techniques.

In chapter four, the results of the study are presented. The diagnostic tests carried out indicated that the Random Effect panel data model was the most ideal for the data set. The Random Effects Model showed an R-Squared value of 39.54% indicating that the model the model was relatively very strong in the determination of share prices compared with similar studies, for example Mushtaq (2006) which had very low R-Squared. But it means that there is still a lot of factors that have not been captured, accounting for about 60%. the variation in share prices is explained by the independent variables under study. The model is significant at 10% level of significance. Looking at the specific predictors, the number of shares issued is very significant determinant in share prices prediction both from the value of the coefficient of determination as well as the P value showing it as significant at less than 10% level of significance.

The conclusion that is drawn in answer to the objectives is that financial factors (profitability, Equity and Asset value) are not significant determinants in the variation in share prices. For Non-financial factors, only number of shares issued was significant in determining the price of shares and age of the firm was not significant.

5.2 Recommendations

The one key factor, that is profitability, that can intuitively be considered as having a direct effect on share prices is shown in the study as not being significant in share price variation. Asset base is similarly not significant. This means that share price determination in the Kenyan market could perhaps be more driven by speculative tendencies and other non-fundamental factors that other studies need to investigate.

The variable that the study has revealed to be most significant in the performance of share prices is the number of shares in circulation. Considering that while issuing IPOs, the number of shares in issue is largely set arbitrarily by the issuing company, from an academic perspective, further research needs to be undertaken to come up with a scientific way of determining the number of shares on issue so that there can be some consistency with other fundamentals, both financial and non-financial, as well as across companies for objectivity and comparability purposes. This would ensure that investors do not lose value because of incorrect pricing of IPOs due to number of shares issued being out of sync with key variables. Further research still needs to be undertaken to also see what other predictors could be included in the determination to so that the S-Squared value increases to above 60% so that the model can be a more reliable predictor. The ideal position should be that the financial factors as well as other verifiable non-financial factors like age, which would indicate track record for a profitable company, should contribute more to the determination of share prices than other factors for example speculation.

From a policy perspective, regulators need to come up with guidelines that can be used by companies to determine the number of shares being offered so that share prices are not masked by either too much or too few shares in circulation that may direct prices in directions that are not consistent with key company fundamentals.

5.3 Limitations of the study

The study narrowed down the financial and non-financial variables to only a few. There are other factors that may have a direct or indirect effect on share prices that have not been analysed that if analysed may change the results, hence giving rise to omitted variables bias.

The sample selected was only those that had issued IPOs and this may not be fully representative of all firm factors at the Nairobi Stock Exchange. This may limit the extrapolation of the findings of this study to the entire market.

5.4 Results from Similar Studies

The closest study was carried out by Mushtaq (2016)and below his results.

5.4.1 Model Summary

Mode	R	R square	Adjusted R-Square	Standard error of estimate
	.370	.137	.065	.474

As mentioned above, the model summary shows only a 6.5% adjusted R-Square compared to the current study's pooled regression adjusted R-Square of 48.87, indicating the model in the current study better fits the problem.

5.4.2 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std error	Beta		
(Constant)	.526	.094		5.604	.000
Profitability	-0.000028	.000	-.400	-1.304	.200
Asset base	0.0000245	.000	.286	1.627	.113
Sales volume turnover	0.0000504	.000	.425	1.384	.175

$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$

Y= 0.526-0.000028 X1 +.0000245 X2+0.0000504 X3+0.094

Y= 0.62-0.000028X1+.0000245X2+0.0000504X3

5.4.2 Interpretation

This model offers very little predictive power in the determination of share prices compared to the current study.

Bisseswar (2015) study is also close to the current study and he similarly comes to the below conclusions.

Age has an inverse relationship to share prices, meaning that investors are more optimistic with younger companies than older companies. Similarly, he observes that the coefficients are not significant.

On the contrary, he observes that assets have a significant effect on share prices in the long run.

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Appendix

Industry	Company	Year	Profitability
Manufacturing and Allied	Mumias Sugar	2008	1,213,837,000
Energy and Petroleum	Kengen	2008	5,896,879,000
Manufacturing and Allied	Eveready	2008	17,840,000
Telecommunication and Technology	Access Kenya	2008	203,656,000
Insurance	Kenya Re	2008	1,499,111,000
Telecommunication and Technology	Safaricom	2008	13,853,286,000
Banking	Co-op Bank	2008	2,373,936,000
Insurance	British American	2008	
Commercial and Services	SCANGROUP LIMITED	2008	315,789,000
Manufacturing and Allied	Mumias Sugar	2009	1,609,972,000
Energy and Petroleum	Kengen	2009	2,070,913,000
Manufacturing and Allied	Eveready	2009	28,271,000
Telecommunication and Technology	Access Kenya	2009	147,909,000
Insurance	Kenya Re	2009	1,328,904,000
Telecommunication and Technology	Safaricom	2009	10,536,760,000
Banking	Co-op Bank	2009	2,967,962,000
Insurance	British American	2009	
Commercial and Services	SCANGROUP LIMITED	2009	401,148,000
Manufacturing and Allied	Mumias Sugar	2010	1,572,383,000
Energy and Petroleum	Kengen	2010	3,286,487,000
Manufacturing and Allied	Eveready	2010	8,703,000
Telecommunication and Technology	Access Kenya	2010	(7,951,000)
Insurance	Kenya Re	2010	1,541,391,000
Telecommunication and Technology	Safaricom	2010	15,148,038,000

Banking	Co-op Bank	2010	4,580,698,000
Insurance	British American	2010	
Commercial and Services	SCANGROUP LIMITED	2010	640,585,000
Manufacturing and Allied	Mumias Sugar	2011	1,933,225,000
Energy and Petroleum	Kengen	2011	2,080,121,000
Manufacturing and Allied	Eveready	2011	(123,994,000)
Telecommunication and Technology	Access Kenya	2011	109,084,000
Insurance	Kenya Re	2011	1,914,584,000
Telecommunication and Technology	Safaricom	2011	13,158,973,000
Banking	Co-op Bank	2011	5,362,602,000
Insurance	British American	2011	(1,957,305,000)
Commercial and Services	SCANGROUP LIMITED	2011	911,116,000
Manufacturing and Allied	Mumias Sugar	2012	2,012,679,000
Energy and Petroleum	Kengen	2012	2,822,600,000
Manufacturing and Allied	Eveready	2012	70,084,000
Telecommunication and Technology	Access Kenya	2012	151,377,000
Insurance	Kenya Re	2012	2,801,892,000
Telecommunication and Technology	Safaricom	2012	12,627,607,000
Banking	Co-op Bank	2012	7,723,858,000
Insurance	British American	2012	2,519,461,000
Commercial and Services	SCANGROUP LIMITED	2012	752,009,000
Manufacturing and Allied	Mumias Sugar	2013	(1,669,716,000)
Energy and Petroleum	Kengen	2013	5,250,136,000
Manufacturing and Allied	Eveready	2013	45,411,000
Insurance	Kenya Re	2013	3,000,431,000

Telecommunication and Technology	Safaricom	2013	17,539,810,000
Banking	Co-op Bank	2013	9,108,185,000
Insurance	British American	2013	1,812,903,000
Commercial and Services	SCANGROUP LIMITED	2013	867,358,000
Manufacturing and Allied	Mumias Sugar	2014	(2,706,595,000)
Energy and Petroleum	Kengen	2014	2,826,323,000
Manufacturing and Allied	Eveready	2014	(177,590,000)
Insurance	Kenya Re	2014	3,137,172,000
Telecommunication and Technology	Safaricom	2014	23,017,540,000
Banking	Co-op Bank	2014	8,014,997,000
Insurance	British American	2014	1,283,335,000
Commercial and Services	SCANGROUP LIMITED	2014	625,476,000
Manufacturing and Allied	Mumias Sugar	2015	(4,644,801,000)
Energy and Petroleum	Kengen	2015	11,517,327,000
Manufacturing and Allied	Eveready	2015	(77,710,000)
Insurance	Kenya Re	2015	3,433,619,000
Telecommunication and Technology	Safaricom	2015	31,871,303,000
Banking	Co-op Bank	2015	11,705,559,000
Insurance	British American	2015	(1,009,458,000)
Commercial and Services	SCANGROUP LIMITED	2015	478,672,000

Industy	**Company**	**Year**	**Total Assets**
Manufacturing and Allied	Mumias Sugar	2008	14,152,576,000
Energy and Petroleum	Kengen	2008	99,408,035,000
Manufacturing and Allied	Eveready	2008	453,190,000

Telecommunication and Technology	Access Kenya	2008	816,633,000
Insurance	Kenya Re	2008	13,941,110,000
Telecommunication and Technology	Safaricom	2008	49,122,593,000
Banking	Co-op Bank	2008	83,485,855,000
Insurance	British American	2008	
Commercial and Services	SCANGROUP LIMITED	2008	3,761,064,000
Manufacturing and Allied	Mumias Sugar	2009	17,475,715,000
Energy and Petroleum	Kengen	2009	102,736,136,000
Manufacturing and Allied	Eveready	2009	469,496,000
Telecommunication and Technology	Access Kenya	2009	1,771,307,000
Insurance	Kenya Re	2009	15,000,633,000
Telecommunication and Technology	Safaricom	2009	55,921,660,000
Banking	Co-op Bank	2009	110,678,091,000
Insurance	British American	2009	
Commercial and Services	SCANGROUP LIMITED	2009	3,933,148,000
Manufacturing and Allied	Mumias Sugar	2010	18,334,110,000
Energy and Petroleum	Kengen	2010	150,566,886,000
Manufacturing and Allied	Eveready	2010	1,169,732,000
Telecommunication and Technology	Access Kenya	2010	1,937,190,000
Insurance	Kenya Re	2010	17,240,929,000
Telecommunication and Technology	Safaricom	2010	81,948,569,000
Banking	Co-op Bank	2010	154,339,991,000
Insurance	British American	2010	
Commercial and Services	SCANGROUP LIMITED	2010	8,009,431,000
Manufacturing and Allied	Mumias Sugar	2011	23,176,516,000
Energy and Petroleum	Kengen	2011	160,993,290,000

Manufacturing and Allied	Eveready	2011	1,016,908,000
Telecommunication and Technology	Access Kenya	2011	2,415,111,000
Insurance	Kenya Re	2011	19,096,441,000
Telecommunication and Technology	Safaricom	2011	92,797,315,000
Banking	Co-op Bank	2011	168,311,639,000
Insurance	British American	2011	25,639,244,000
Commercial and Services	SCANGROUP LIMITED	2011	8,489,938,000
Manufacturing and Allied	Mumias Sugar	2012	27,400,113,000
Energy and Petroleum	Kengen	2012	163,144,873,000
Manufacturing and Allied	Eveready	2012	1,144,374,000
Telecommunication and Technology	Access Kenya	2012	2,265,714,000
Insurance	Kenya Re	2012	23,787,957,000
Telecommunication and Technology	Safaricom	2012	84,283,777,000
Banking	Co-op Bank	2012	200,886,582,000
Insurance	British American	2012	35,820,165,000
Commercial and Services	SCANGROUP LIMITED	2012	8,646,961,000
Manufacturing and Allied	Mumias Sugar	2013	27,148,393,000
Energy and Petroleum	Kengen	2013	188,673,282,000
Manufacturing and Allied	Eveready	2013	940,652,000
Insurance	Kenya Re	2013	28,222,587,000
Telecommunication and Technology	Safaricom	2013	92,265,128,000
Banking	Co-op Bank	2013	231,215,359,000
Insurance	British American	2013	38,570,316,000
Commercial and Services	SCANGROUP LIMITED	2013	12,949,665,000
Manufacturing and Allied	Mumias Sugar	2014	12,927,937,000

Energy and Petroleum	Kengen	2014	250,205,524,000
Manufacturing and Allied	Eveready	2014	930,057,000
Insurance	Kenya Re	2014	32,174,251,000
Telecommunication and Technology	Safaricom	2014	96,338,359,000.00
Banking	Co-op Bank	2014	285,396,067,000
Insurance	British American	2014	45,590,947,000
Commercial and Services	SCANGROUP LIMITED	2014	13,284,104,000
Manufacturing and Allied	Mumias Sugar	2015	6,762,973,000
Energy and Petroleum	Kengen	2015	342,519,995,000
Manufacturing and Allied	Eveready	2015	1,511,665,000
Insurance	Kenya Re	2015	35,572,195,000
Telecommunication and Technology	Safaricom	2015	104,767,293,000
Banking	Co-op Bank	2015	342,499,809,000
Insurance	British American	2015	77,632,352,000
Commercial and Services	SCANGROUP LIMITED	2015	12,468,479,000

Industy	**Company**	**Year**	**No Of Shares**
Manufacturing and Allied	Mumias Sugar	2008	1,530,000,000
Energy and Petroleum	Kengen	2008	2,198,361,456
Manufacturing and Allied	Eveready	2008	210,000,000
Telecommunication and Technology	Access Kenya	2008	207,656,000
Insurance	Kenya Re	2008	600,000,000
Telecommunication and Technology	Safaricom	2008	40,000,000,000
Banking	Co-op Bank	2008	3,492,370,900
Insurance	British American	2008	
Commercial and Services	SCANGROUP LIMITED	2008	220,689,655
Manufacturing and Allied	Mumias Sugar	2009	1,530,000,000

Energy and Petroleum	Kengen	2009	2,198,361,456
Manufacturing and Allied	Eveready	2009	210,000,000
Telecommunication and Technology	Access Kenya	2009	207,656,000
Insurance	Kenya Re	2009	600,000,000
Telecommunication and Technology	Safaricom	2009	40,000,000,000
Banking	Co-op Bank	2009	3,492,370,900
Insurance	British American	2009	
Commercial and Services	SCANGROUP LIMITED	2009	220,689,655
Manufacturing and Allied	Mumias Sugar	2010	1,530,000,000
Energy and Petroleum	Kengen	2010	2,198,361,456
Manufacturing and Allied	Eveready	2010	210,000,000
Telecommunication and Technology	Access Kenya	2010	207,656,000
Insurance	Kenya Re	2010	600,000,000
Telecommunication and Technology	Safaricom	2010	40,000,000,000
Banking	Co-op Bank	2010	3,492,370,900
Insurance	British American	2010	
Commercial and Services	SCANGROUP LIMITED	2010	234,570,024
Manufacturing and Allied	Mumias Sugar	2011	1,530,000,000
Energy and Petroleum	Kengen	2011	2,198,361,456
Manufacturing and Allied	Eveready	2011	210,000,000
Telecommunication and Technology	Access Kenya	2011	207,656,000
Insurance	Kenya Re	2011	600,000,000
Telecommunication and Technology	Safaricom	2011	40,000,000,000
Banking	Co-op Bank	2011	3,492,370,900
Insurance	British American	2011	1,891,451,850
Commercial and Services	SCANGROUP LIMITED	2011	284,789,128

Manufacturing and Allied	Mumias Sugar	2012	1,530,000,000
Energy and Petroleum	Kengen	2012	2,198,361,456
Manufacturing and Allied	Eveready	2012	210,000,000
Telecommunication and Technology	Access Kenya	2012	218,038,000
Insurance	Kenya Re	2012	699,949,068
Telecommunication and Technology	Safaricom	2012	40,000,000,000
Banking	Co-op Bank	2012	4,190,843,200
Insurance	British American	2012	1,891,451,850
Commercial and Services	SCANGROUP LIMITED	2012	284,789,128
Manufacturing and Allied	Mumias Sugar	2013	1,530,000,000
Energy and Petroleum	Kengen	2013	2,198,361,456
Manufacturing and Allied	Eveready	2013	210,000,000
Insurance	Kenya Re	2013	699,949,068
Telecommunication and Technology	Safaricom	2013	40,065,428,000
Banking	Co-op Bank	2013	4,190,843,200
Insurance	British American	2013	1,891,451,850
Commercial and Services	SCANGROUP LIMITED	2013	378,865,102
Manufacturing and Allied	Mumias Sugar	2014	1,530,000,000
Energy and Petroleum	Kengen	2014	2,198,361,456
Manufacturing and Allied	Eveready	2014	210,000,000
Insurance	Kenya Re	2014	699,949,068
Telecommunication and Technology	Safaricom	2014	40,065,428,000
Banking	Co-op Bank	2014	4,889,316,295
Insurance	British American	2014	1,891,451,850
Commercial and Services	SCANGROUP LIMITED	2014	378,865,102

Manufacturing and Allied	Mumias Sugar	2015	1,530,000,000
Energy and Petroleum	Kengen	2015	2,198,361,456
Manufacturing and Allied	Eveready	2015	210,000,000
Insurance	Kenya Re	2015	699,949,068
Telecommunication and Technology	Safaricom	2015	40,065,428,000
Banking	Co-op Bank	2015	4,889,316,295
Insurance	British American	2015	1,938,416,000
Commercial and Services	SCANGROUP LIMITED	2015	378,865,102

Industy	**Company**	**Year**	**age**
Manufacturing and Allied	Mumias Sugar	2008	37
Energy and Petroleum	Kengen	2008	54
Manufacturing and Allied	Eveready	2008	74
Telecommunication and Technology	Access Kenya	2008	1
Insurance	Kenya Re	2008	38
Telecommunication and Technology	Safaricom	2008	11
Banking	Co-op Bank	2008	43
Insurance	British American	2008	
Commercial and Services	SCANGROUP LIMITED	2008	9
Manufacturing and Allied	Mumias Sugar	2009	38
Energy and Petroleum	Kengen	2009	55
Manufacturing and Allied	Eveready	2009	75
Telecommunication and Technology	Access Kenya	2009	2
Insurance	Kenya Re	2009	39
Telecommunication and Technology	Safaricom	2009	12
Banking	Co-op Bank	2009	44
Insurance	British American	2009	
Commercial and Services	SCANGROUP LIMITED	2009	10
Manufacturing and Allied	Mumias Sugar	2010	39
Energy and Petroleum	Kengen	2010	56
Manufacturing and Allied	Eveready	2010	76
Telecommunication and Technology	Access Kenya	2010	3
Insurance	Kenya Re	2010	40
Telecommunication and Technology	Safaricom	2010	13
Banking	Co-op Bank	2010	45
Insurance	British American	2010	
Commercial and Services	SCANGROUP LIMITED	2010	11

Manufacturing and Allied	Mumias Sugar	2011	40
Energy and Petroleum	Kengen	2011	57
Manufacturing and Allied	Eveready	2011	77
Telecommunication and Technology	Access Kenya	2011	4
Insurance	Kenya Re	2011	41
Telecommunication and Technology	Safaricom	2011	14
Banking	Co-op Bank	2011	46
Insurance	British American	2011	16
Commercial and Services	SCANGROUP LIMITED	2011	12
Manufacturing and Allied	Mumias Sugar	2012	41
Energy and Petroleum	Kengen	2012	58
Manufacturing and Allied	Eveready	2012	78
Telecommunication and Technology	Access Kenya	2012	5
Insurance	Kenya Re	2012	42
Telecommunication and Technology	Safaricom	2012	15
Banking	Co-op Bank	2012	47
Insurance	British American	2012	17
Commercial and Services	SCANGROUP LIMITED	2012	13
Manufacturing and Allied	Mumias Sugar	2013	42
Energy and Petroleum	Kengen	2013	59
Manufacturing and Allied	Eveready	2013	79
Insurance	Kenya Re	2013	43
Telecommunication and Technology	Safaricom	2013	16
Banking	Co-op Bank	2013	48
Insurance	British American	2013	18
Commercial and Services	SCANGROUP LIMITED	2013	14
Manufacturing and Allied	Mumias Sugar	2014	43
Energy and Petroleum	Kengen	2014	60
Manufacturing and Allied	Eveready	2014	80
Insurance	Kenya Re	2014	44
Telecommunication and Technology	Safaricom	2014	17
Banking	Co-op Bank	2014	49
Insurance	British American	2014	19
Commercial and Services	SCANGROUP LIMITED	2014	15
Manufacturing and Allied	Mumias Sugar	2015	44
Energy and Petroleum	Kengen	2015	61
Manufacturing and Allied	Eveready	2015	81
Insurance	Kenya Re	2015	45
Telecommunication and Technology	Safaricom	2015	18
Banking	Co-op Bank	2015	50
Insurance	British American	2015	20
Commercial and Services	SCANGROUP LIMITED	2015	16

Industy	Company	Year	Equity
Manufacturing and Allied	Mumias Sugar	2008	9,041,497,000
Energy and Petroleum	Kengen	2008	60,928,152,000
Manufacturing and Allied	Eveready	2008	366,425,000
Telecommunication and Technology	Access Kenya	2008	1,006,227,000
Insurance	Kenya Re	2008	8,279,396,000
Telecommunication and Technology	Safaricom	2008	42,642,593,000
Banking	Co-op Bank	2008	13,609,141,000
Insurance	British American	2008	-
Commercial and Services	SCANGROUP LIMITED	2008	2,079,464,000
Manufacturing and Allied	Mumias Sugar	2009	10,039,469,000
Energy and Petroleum	Kengen	2009	56,718,143,000
Manufacturing and Allied	Eveready	2009	394,696,000
Telecommunication and Technology	Access Kenya	2009	1,154,136,000
Insurance	Kenya Re	2009	9,099,925,000
Telecommunication and Technology	Safaricom	2009	51,330,367,000
Banking	Co-op Bank	2009	16,291,592,000
Insurance	British American	2009	-
Commercial and Services	SCANGROUP LIMITED	2009	2,366,222,000
Manufacturing and Allied	Mumias Sugar	2010	10,999,852,000
Energy and Petroleum	Kengen	2010	70,530,868,000
Manufacturing and Allied	Eveready	2010	403,399,000
Telecommunication and Technology	Access Kenya	2010	9,091,974,000
Insurance	Kenya Re	2010	10,573,502,000
Telecommunication and Technology	Safaricom	2010	62,763,117,000

Banking	Co-op Bank	2010	19,980,498,000
Insurance	British American	2010	-
Commercial and Services	SCANGROUP LIMITED	2010	3,577,805,000
Manufacturing and Allied	Mumias Sugar	2011	14,476,007,000
Energy and Petroleum	Kengen	2011	69,418,587,000
Manufacturing and Allied	Eveready	2011	279,405,000
Telecommunication and Technology	Access Kenya	2011	1,096,002,000
Insurance	Kenya Re	2011	11,526,485,000
Telecommunication and Technology	Safaricom	2011	68,310,083,000
Banking	Co-op Bank	2011	20,951,498,000
Insurance	British American	2011	8,557,448,000
Commercial and Services	SCANGROUP LIMITED	2011	4,354,909,000
Manufacturing and Allied	Mumias Sugar	2012	15,723,686,000
Energy and Petroleum	Kengen	2012	70,179,554,000
Manufacturing and Allied	Eveready	2012	394,489,000
Telecommunication and Technology	Access Kenya	2012	1,247,379,000
Insurance	Kenya Re	2012	14,685,616,000
Telecommunication and Technology	Safaricom	2012	72,081,698,000
Banking	Co-op Bank	2012	29,812,845,000
Insurance	British American	2012	12,472,324,000
Commercial and Services	SCANGROUP LIMITED	2012	4,899,630,000
Manufacturing and Allied	Mumias Sugar	2013	13,288,970,000
Energy and Petroleum	Kengen	2013	74,128,739,000
Manufacturing and Allied	Eveready	2013	394,770,000
Insurance	Kenya Re	2013	17,922,382,000

Telecommunication and Technology	Safaricom	2013	80,265,128,000
Banking	Co-op Bank	2013	36,773,649,000
Insurance	British American	2013	6,867,978,000
Commercial and Services	SCANGROUP LIMITED	2013	8,251,785,000
Manufacturing and Allied	Mumias Sugar	2014	10,641,805,000
Energy and Petroleum	Kengen	2014	76,709,673,000
Manufacturing and Allied	Eveready	2014	218,465,000
Insurance	Kenya Re	2014	19,991,404,000
Telecommunication and Technology	Safaricom	2014	91,235,979,000
Banking	Co-op Bank	2014	42,877,119,000
Insurance	British American	2014	8,283,186,000
Commercial and Services	SCANGROUP LIMITED	2014	8,542,631,000
Manufacturing and Allied	Mumias Sugar	2015	5,932,044,000
Energy and Petroleum	Kengen	2015	141,594,091,000
Manufacturing and Allied	Eveready	2015	806,288,000
Insurance	Kenya Re	2015	21,812,234,000
Telecommunication and Technology	Safaricom	2015	104,276,531,000
Banking	Co-op Bank	2015	49,303,252,000
Insurance	British American	2015	17,674,448,000
Commercial and Services	SCANGROUP LIMITED	2015	8,604,260,000

Industy	**Company**	**Year**	**Average Share Price**
Manufacturing and Allied	Mumias Sugar	2008	7
Energy and Petroleum	Kengen	2008	15.72
Manufacturing and Allied	Eveready	2008	3
Telecommunication and Technology	Access Kenya	2008	20.24
Insurance	Kenya Re	2008	11.06

Telecommunication and Technology	Safaricom	2008	7.1
Banking	Co-op Bank	2008	6.82
Insurance	British American	2008	
Commercial and Services	SCANGROUP LIMITED	2008	21.87
Manufacturing and Allied	Mumias Sugar	2009	7.2
Energy and Petroleum	Kengen	2009	12.39
Manufacturing and Allied	Eveready	2009	2.54
Telecommunication and Technology	Access Kenya	2009	22.86
Insurance	Kenya Re	2009	10.29
Telecommunication and Technology	Safaricom	2009	3.55
Banking	Co-op Bank	2009	5.69
Insurance	British American	2009	
Commercial and Services	SCANGROUP LIMITED	2009	23.33
Manufacturing and Allied	Mumias Sugar	2010	10
Energy and Petroleum	Kengen	2010	16.72
Manufacturing and Allied	Eveready	2010	2.43
Telecommunication and Technology	Access Kenya	2010	15.43
Insurance	Kenya Re	2010	11.01
Telecommunication and Technology	Safaricom	2010	5.8
Banking	Co-op Bank	2010	11.58
Insurance	British American	2010	
Commercial and Services	SCANGROUP LIMITED	2010	54.17
Manufacturing and Allied	Mumias Sugar	2011	5.45
Energy and Petroleum	Kengen	2011	8.81
Manufacturing and Allied	Eveready	2011	1.29
Telecommunication and Technology	Access Kenya	2011	5.24
Insurance	Kenya Re	2011	6.81
Telecommunication and Technology	Safaricom	2011	3.9
Banking	Co-op Bank	2011	7.68
Insurance	British American	2011	4.95
Commercial and Services	SCANGROUP LIMITED	2011	45.5
Manufacturing and Allied	Mumias Sugar	2012	5.25
Energy and Petroleum	Kengen	2012	9.53
Manufacturing and Allied	Eveready	2012	1.79
Telecommunication and Technology	Access Kenya	2012	6.1
Insurance	Kenya Re	2012	11.35
Telecommunication and Technology	Safaricom	2012	3.45
Banking	Co-op Bank	2012	9.14
Insurance	British American	2012	5.75
Commercial and Services	SCANGROUP LIMITED	2012	71
Manufacturing and Allied	Mumias Sugar	2013	3.5
Energy and Petroleum	Kengen	2013	15.58
Manufacturing and Allied	Eveready	2013	2.21

Insurance	Kenya Re	2013	16
Telecommunication and Technology	Safaricom	2013	6.55
Banking	Co-op Bank	2013	13.25
Insurance	British American	2013	14.8
Commercial and Services	SCANGROUP LIMITED	2013	56
Manufacturing and Allied	Mumias Sugar	2014	2.05
Energy and Petroleum	Kengen	2014	10.77
Manufacturing and Allied	Eveready	2014	2.79
Insurance	Kenya Re	2014	17.5
Telecommunication and Technology	Safaricom	2014	12.45
Banking	Co-op Bank	2014	13.21
Insurance	British American	2014	27.25
Commercial and Services	SCANGROUP LIMITED	2014	48
Manufacturing and Allied	Mumias Sugar	2015	1.7
Energy and Petroleum	Kengen	2015	7.72
Manufacturing and Allied	Eveready	2015	2.14
Insurance	Kenya Re	2015	21.75
Telecommunication and Technology	Safaricom	2015	16.1
Banking	Co-op Bank	2015	15.83
Insurance	British American	2015	13.95
Commercial and Services	SCANGROUP LIMITED	2015	33.5