ANALYSTS LONG-TERM EARNINGS GROWTH FORECASTS AND STOCK PRICE PERFORMANCE FOLLOWING EQUITY OFFERING . A SURVEY OF COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE

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D53/CE/10342/04

A Management Research Project Submitted to the School of Business in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Business Administration (Finance) of Kenyatta University.

SEPTEMBER: 2012

Declaration

This research project is my original work and has not been presented for award of a degree in any other university.

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Dedication

To my parents, Reuben Muema and Grace Muema, who instilled discipline in me and never compromised on education matters. You taught me to be independent and focus on education. Thank you.

Acknowledgement

I wish to acknowledge that this work would not have been a success without the enabling favor of the almighty God, the continuous and unwavering support of my supervisor Mr. D K Ngaba and the many that have influenced and helped shape my thinking on this and in many ways conceptually and with production. God bless you all.

Abstract

The study evaluated the role of sell-side analysts' long-term earnings growth forecasts in the Pricing of common equity offering. A survey was carried out in the Nairobi Stock Exchange Market (NSE) of newly listed firms which are characterized by stock price under- performance to establish the relationship between analysts LTG forecasts and the stock price underperformance shortly after Equity offering. The study investigated whether sell-side analysts produce overly optimistic forecasts at the time of equity offering and whether those optimistic expectations are reflected in the stock Prices.

The researcher reviewed research related to the role of sell-side financial analyst's long-term earnings growth forecasts in the pricing of common Equity offering. Two important papers published in the 1990s provided perspective on the literature in this area, one of the papers appearing in the *Journal of Finance* and the other appearing in the *financial analyst journal.* The main objective was to provide an organized look of the literature, with particular attention to the important research questions. The study employed a descriptive research design. A survey of the newly listed firms in the Nairobi Stock Exchange market was conducted, where census method was used to draw the target population of newly listed companies. The researcher used secondary data obtained from the NSE and CMA data bank, analysts report and library search. Tables and charts where used in data recordings and presentation for easy understanding and analysis. Finally descriptive statistic's where by non linear least squares regression was used in data analysis.

From the findings the study revealed that analyst's affiliation had positive effects on their long term earning growth forecasts reports, it was found that sell side analyst long term earning growth forecasts are overly optimistic around equity offering and that analysts employed by the lead managers/investment banks of the offerings make the most optimistic forecast. The results revealed that analyst's bias (optimism) was reflected in the stock prices of firms issuing equity, and finally the researcher found a positive relationship between the fees paid to the affiliated analysts' employers and the level of analysts' affiliation.

Table Of Contents

1.9 Definitions of terms

Sell side/Affiliated analysts	- Analysts employed by the lead investments banks.
Forecast Earnings Growth -	Analysts long-term forecast of earning growth obtained from CMA records.
Forecast Error -	The realized earning growth – Forecast Earnings
Realized earning growth -	Five year annualize growth rates calculated by fitting a Least square growth line to the logarithms of five annual Observations

List of tables

List of Figures

Abbreviations

NSE	-	Nairobi Securities Exchange Market
CMA	-	Capital Market Authority
IPO	-	Initial Public Offer
CAPM	-	Capital Asset Pricing Model
CDS	-	Central Depository System
IB	-	Investment Bank
LTG	_	Long-term growth
STE	_	Short term earning

CHAPTER ONE

INTRODUCTION

1.1 Background information

This study evaluated the role of sell-side analysts' long term growth forecast in the pricing of common Equity offerings. While it is well documented that firms experience unusually low stock returns in the five years following equity offerings (Loughran and Ritter 1995 and Spiess and Affleck-Graves 1995), the reason for this under performance is not well understood. Competing explanations include mismeasured risk-premia, research design biases, and overly optimistic expectations about future firm performance.

Compared to buy/sell recommendations and annual earnings forecasts, long-term growth forecasts provide a more powerful measure of market expectations useful for explaining the post-offering under performance. Since stock recommendations fall into only five categories, their ability to explain cross-sectional variation in post-offering returns is limited. The use of annual earnings forecasts as a measure of expectations is also limited because the long-run under performance in stock prices does not begin until several (usually six) months after the offerings and then continues for up to five years (Loughran and Ritter 1995). Revisions in expectations about currently reported annual earnings are therefore not likely to explain the long-run under performance. The use of long-term growth forecasts also increases the power of our tests since analysts are frequently evaluated on the accuracy of their buy/sell recommendations and annual earnings forecasts, but not their long-term growth forecasts. Thus, reputation effects are less likely to deter analysts from issuing overly optimistic long-term earnings growth forecasts.

Noting that studies focusing solely on near-term earnings forecasts cannot resolve the question of whether concern for reputation is sufficient to offset pressures from investment banking relationships, Lin and McNichols (1998) include an examination of analysts' long-term growth forecasts and stock recommendations. They document that affiliated analysts issue more optimistic long-term growth forecasts and stock

recommendations than unaffiliated analysts around seasoned equity offerings. Michaely and Womack (1996) and Lin and McNichols (1998b) provide similar evidence for initial public offerings. Finally, without distinguishing between affiliated and unaffiliated analysts, Rajan and Servaes (1997) also document over optimism in analysts' LTG forecasts around initial public offerings (IPOs) and find that the firms with the highest projected growth experience the greatest post-IPO under performance.

However, Rajan and Servaes do not attempt to explain the post-IPO under performance with the over optimism in analysts' growth forecasts. Existing evidence on the effects of analysts' forecasts on the pricing of equities is indirect and mixed. Several papers document that stock prices react to the release of analysts' forecasts and stock recommendations, including Lin and McNichols and Michaely and Womack, who find a significant difference in the stock price reaction to affiliated versus unaffiliated analysts' recommendations around equity offerings.

The researcher examined financial analysts' forecasts for all IPOs in the NSE market which has become a common phenomenon in Kenya. For example in the Nairobi stock exchange market when Kenya power generating company (KenGen) a strong parastatal went public in 2004 its stock at first seemed to live up to its name. The IPO managed by Dyer and Blair investment Bank did phenomenally well. KenGen stock priced at KShs 36 on the first week of trading but by the end of the year the stock prices had declined to KSh 22 and year 2006 it traded between KShs27-30. Other newly listed firms in the NSE market have shown the same trend. See table 1.1 below.

Table1.1 Averages of share price after offering

Company	Issue price	1st month	2nd month	3rd month	4th month	5th month	6th month
Kengen	5	60	48	36	34.5	35	32
Scangroup	9.5	17	28	34	34	33	21
Eveready		12	16	19	18.2	16	16.5
Mumias	49.5	50	51	50	36	36	31

.The concern that sell-side analysts compromise their objectivity and independence in order to win investment banking business is often discussed in the financial press, this concern arises because analyst's employers, (investment Banks) provide both brokerage services to investor clients and underwriting services to client firms. Conflict of interest arises when an analysts issues a negative recommendation for a stock that is simultaneously being solicited for underwriting business. This conflict of interest is intensified by the fact that analysts' earn large bonuses for bringing investment banking clients to his or her firm.

1.1.1 Nairobi Stock Exchange Market (NSE)

The NSE was constituted as a voluntary association of stock brokers in 1954 and has had remarkable development to become what it is today .Its market capitalization has tremendously improved to stand above Ksh 370 billion at the close of 2006 (NSE 2007). Turnover for the same period stood at Ksh 944.8 billion. It has also continued to play an important role in Kenyan Economic Development especially concerning its role in financial inter-mediation. Securities traded in the NSE are both bonds and shares that

constitute the markets two broad segments. The shares market is referred to as the Equity market, which is further divided into two segments:-the main investment market segment and the alternative investment market segment. The main investment market segment has four sectors namely, the Agriculture sector, commercial and services sector, financial sector and industry and allied sector (see table A)

Characterized by its liquidity, market capitalization and turn over it may be classified as both emerging and a frontier market (Muhanji 2002). Recently the NSE market went automated and currently the brokers are trading from their offices. This has been facilitated by the fully computerized central depository system (CDS) where all investors are supposed to open CDS accounts.

The NSE market is a model of an emerging market in view of its high returns, vibrancy and a well developed market structure (Ogum at al 2000). Most analysts' growth forecasts and stock price performance following Equity offerings studies have focused on Asia, Latin American countries and South Africa leaving the rest of African financial markets under researched. It is in this light that NSE is of particular interest with a size of 55 listed companies and an established fixed income securities segment. Being among the most vibrant browse and the most developed capital market in East Africa this raises interests and sets a procedure for comparison with other emerging markets both in Africa and the rest of the world.

1.1.2 Role of financial analysts in the capital market.

The analysts obtains /develops information from various sources including earnings and other information's from firms records such as proxy statements ,quarterly and annual reports, Industry reports and reports describing micro-economic conditions and conference calls. From this information the analyst produce earnings forecasts, target price forecasts and stock recommendations along with a conceptual report describing the firm's prospects. Investors use this output from analysts' research to make trading decisions that affect market prices. If the analysts forecasting process and capital markets

are efficient, then market prices and analysts forecasts immediately reflect the real value of the share.

Inefficiencies create predictable analysts forecast errors and stock price change. The decision processes and analysts research output depends on overall governing forces including regulatory and institutional factors that vary over time across countries and analysts economic incentives. Finally limitations associated with archival database and econometric/analytical research designs are issues that constrain our views of the forces that ultimately drive market prices.

Research suggests that analysts are more likely to cover well firms that provide them with more (better quality) information required for analysis. Lang and Lund Holm (1996) find that the quality of corporate disclosures affects analysts' coverage decisions and the accuracy of their forecasts.

1.2 Statement of the Problem

Prior research attributes the optimistic bias in LTG forecasts to analysts' incentives provided by underwriting activities. Lin and McNichols (1998) and Dechow *et al.* (2000) show that analysts who are employed by the lead manager during an equity offering (sample period mid 80s to mid 90s) issue more optimistic LTG forecasts to attract and retain investment business. Lin and McNichols (1998) and Dechow *et al.* (2000) argue that analysts' LTG forecasts are optimistically biased because the market places less emphasis on the accuracy of these forecasts, and LTG forecasts are more relevant for security valuation than STE forecasts.

Based on this finding, Ljungqvist *et al.* (2006) suggest that analyst optimism is not only influenced by conflict of interests through underwriting ties, but rather by the trade-off between career concerns (cost of jeopardizing reputation) and the incentives to generate trade. More reputable analysts (i.e. All-Star ranking) and more prestigious banks (underwriting market share) have less upwardly biased forecasts. But the authors argue also that analyst forecasts appear to be more upwardly biased when the potential benefits are large and the potential cost to reputation is small. Assuming that LTG forecasts is

harder to evaluate than STE forecasts (cost to reputation is small) but that LTG forecasts plays a significant role in stock valuation (potential benefits are large), analysts have incentives to follow their individual forecast agendas and may bias LTG forecasts upward when fee income is at stake. Thus, LTG forecasts upward bias is likely to differ among analysts, even within the same firm, and could be chosen optimally (i.e. endogenously) to inflate analyst stock valuations and generate trade.

An important aspect of efficient market is equity pricing, and analysts forecasts credibly transmits privately held information in to stock prices, but the prospects and value of any security cannot be that perceived. If competitive conditions in the market are lucking then management and investment banks seeking to cultivate better relation with management may successively pressure analysts to overstate their forecasts. Further if markets are not fully efficient, then investors will extrapolate prior analyst's impressive forecasts and management inflated reported earnings into over optimistic expectations. Thus analysts can use their forecasts reports and time their equity offering to exploit investors' over-reaction. If investors are rational then over optimistic expectations translate in to high stock prices, however newly listed firms in the NSE experiences unusually low returns (stock prices) a few months following equity offering. This affects investor's investment behavior and the performance of the market (NSE) in general.

In summary the researcher's problem is analysts LTG forecasts overly optimistic around equity offering, why post-offering under performance and how these forecasts affects investors investment behavior in the NSE market.

1.3 Study objectives

The general objective of the study was to examine the relationship between analyst's long-term earnings growth forecasts and stock price performance following equity offering. The researcher focuses the analysis on analyst's LTG forecasts and actual realized earnings, then directly relate the results in these forecasts to the post-offering underperformance.

The study was guided by the following specific objectives:-

i. To investigate whether analyst's affiliation affects their long term earning growth forecasts reports /optimism.

ii. To establish whether analysts bias (optimism) is reflected in the stock prices of firms issuing equity.

iii. To determine whether there is a relationship between affiliated analysts forecasts reports and fee paid to them or their employers.

iv. To determine whether there is any relationship between the value of shares (EPS) traded and their analysts

1.4 Research hypothesis

The research was guided by the following hypothesis:-

i. Equity issuing firms experiences big differences in their analysts LTG forecasts because of their affiliation.

H_1 Affiliated analysts provide overly optimistic forecasts of issuing firms long term growth in order to attract and retain underwriting business

Ho Affiliated analysts do not provide overly optimistic forecasts of issuing firms long term growth in order to attract and retain underwriting business

H_1 $bo = 0$ **H_0** $bo \neq 0$

ii. If analysts forecast are related to fee paid to them or their employers then there is a high chance of affiliated analysts issuing more favorable forecast reports to the issuing firms.

H_I Analysts employed by the investment bank acting as the lead underwriter of the offering offer stronger incentives to make overly optimistic forecast

H_0 Analysts employed by the investment bank acting as the lead underwriter of the offering do not offer stronger incentives to make overly optimistic forecast

H_1 b_0 or $b_2 = 0$ **Ho** b_0 or $b_1 \neq 0$

iii. If analysts forecast are related to fee paid to them or their employers then there is a high chance of affiliated analysts issuing more favorable forecast reports to the issuing firms.

H_1 Investors use information in analyst's long-term growth forecast to form expectations of future dividends

Ho Investors use information in analyst's long-term growth forecast to form expectations of future dividends

H_1 b_1 and $b_2 = 0$ **H_0** b_1 and $b_2 \neq 0$

iv. Analysts LTG forecasts may affect the value of the shares (EPS) traded in the securities exchange

1.5 Significance of the study

The findings of this study are important to the capital markets layers and especially the following:-

1.5.1 Investors and practitioners

The study is of great use to security analysts, stock brokers, investors and other parties whose knowledge of financial market will make them better market analysts and hence this will improve the NSE market performance.

1.5.2 Academic and researchers

This study provides a platform for quality discussions and debates amongst academicians, policy makers and professional, it also provides a basis for further research regarding analysts forecasting. In addition it will give more input into the study of financial market. The study will also be important to academicians and other professionals in finance in exploring other areas of interests for further research.

1.5.3 The government

National economics are strongly linked and heavily influenced by the performance of their stock markets and the market has become a more accessible investment tool not only for strategic investors but for common people as well. These markets are characterized by uncertainty and the best way that one can do is to try to reduce this uncertainty is by ensure ring that financial analysts produce unusually favorable forecasts to what can be regarded as normal forecasts. So the researcher's findings will assist analysts in making their forecasts.

1.5.4 The corporate world

The findings of the study will enables the firm seeking listing to determine the best issue price and also to make good timing of their issue.

1.6 Assumptions of the Study

The main assumptions include:-

i. Listed company's use similar accounting standards, policies and procedures when reporting their financial statements at the end of the year.
ii. No insiders are found in the NSE market and any new information is freely available to all investors.
iii. Transaction costs and terms are general to all stockbrokers and speculators in the NSE market.
iv. Stability in the Global Economies.
v. NSE is an efficient market.

1.7 Scope of the study

The study cover the Kenya capital market where by listed firm in the NSE market forms the population of the study from which a sample of newly listed firms between years 2000-2010 was selected. The period between year 2000-2010 was chosen because it's the period which NSE registered the highest number of IPOs.

1.8 Limitations of the Study

Although efforts will be made to ensure honest and accuracy of information (responses) given. There was some element of bias and falsehood, which is beyond the researchers' control. Unavailability of the officers of CMA, NSE, Brokerage Firms and Investment

Banks may be an obstacle during data collection. Due to poor storage or sensitivity, some data was incomplete, lost or was not located. But the researcher minimized this by assuring them that any information given was to be treated with confidentiality and for academic purpose only.

CHAPTER: TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this section is to highlight similar work carried out by researchers in relation to analyst's long-term earnings growth forecasts and stock price performance following equity offering. This section is divided into: - theoretical literature, empirical literature, finally conceptual frame work.

2.2 Theoretical Overview

An understanding of financial markets is crucial to both investors and potential investors. Financial markets consist of many players who include: - brokers, investors, Investment banks and portfolio managers among others. According to Richard Thaler (2002) finance professionals are primarily concerned with the outcome of the markets: - prices, shares traded volumes, dividend earnings and have given little attention to the agents who produce these outcomes such as analysts' behavior. The agents includes: - brokers, financial analysts, portfolios managers and pension fund managers. All these actors are modeled using the standard assumption of modern economies that they are assumed to make LTG forecasts that are unbiased and investors' carrying out their growth forecasts on investments thus makes conclusions in the face of uncertainty according to the axioms of expectations utility theory.

2.2.1 Utility theory

According to this theory, utility from wealth is distinct from the actual monetary value of wealth hence it analyses the satisfaction that a person would drive from his current wealth or a change in his wealth have diminishing marginal utility and investors have an irrational tendency to be less willing to gamble with profit than with losses.

2.2.2 Information asymmetry and Dividend Theory

The information content of dividends hypothesis formulated by Miller and Modigliani (1989) has been the subject of numerous studies in the last few decades. The validity of this hypothesis hinges on the belief that a firm's managers shape the dividend policy in a

manner that is consistent with their appraisal of the firm's future prospects in an environment characterized by asymmetric information. Two of the early extensive empirical studies that attempted testing this hypothesis and measuring the impact of dividends on stock prices were Pettit (1987), and Watts (1987).

Pettit (1987) found that market participants make considerable use of the information implicit in announcements of changes in dividend payments. However, Watts (1997), regressed year $_{t+1's}$ earnings on the year its dividends and concluded that examining the relationship between unexpected dividend changes and stock prices indicates that these changes communicate no information beyond that reflected in other contemporaneous variables (for example, earnings) Due to the importance of understanding the effect of dividend on share prices and future earnings, these dramatically opposed conclusions of these two studies led to a follow up by several researchers.

Although Charest (1978) found that announcing a dividend increase generates an excess return of about 1%, he concluded that his evidence does not necessarily reveal the presence of information in dividend announcements since he made no efforts to isolate the effect of contemporaneous earnings announcements. On the other hand, Aharony and Swary (1980), Kwan (1981) Eades (1982) and Woolridge (1982), using dividends announcements made apart from other firm news reports, found a significantly positive association between dividend changes and announcement day stock returns. In each case, these results were attributed to the information content of dividends.

The two most frequently cited studies in this area are Aharony and Swary (1980), Asquith and Mullings (1983). Both of these studies used a naïve dividend forecasting model (that is, next quarter's dividend is expected to be the same with last quarter's dividends). Aharony and Swary (1980) examined the effects of dividends announcements which were made at different dates before earnings announcements, and found them to have the same effects on stock prices as the entire sample of announcements. Thus, the effects of earnings announcement cannot explain the observed stock price behavior around dividends announcements.

Following similar lines of investigation, Asquith and Mullings (1983) tried to refine the credibility of Watts's results by re- examining the stock price reaction to dividend announcement, using daily stock data to control other contemporaneous information announcements. Their results show significant positive abnormal returns at dividends initial announcements.

Healy and Palepu (1988) focus on dividend initiations and omissions, the two dividend policy changes that have been documented in the literature as having the largest average announcement returns. Consistent with the dividend information hypothesis, their findings indicate that the information conveyed by dividend initiation and omissions are related to earnings changes following the announcements of these dividend policy changes. Investors therefore interpret dividend initiations and omissions as changes in management's earnings forecasts.

2.2.3 Dividend signaling theory

Dividend signaling theory postulates that dividends convey information about current and future levels of earnings to the market. Business risk is the uncertainty about current and future profitability. Greater business risk makes the expected direct relationship between current and expected future profitability less certain. Therefore, it is hypothesized that greater business risk will be associated with lower dividend payments. Business risk is considered as the proxy of uncertainty about current and future earnings for testing dividend signaling theory for this study. Mollah (2002) also used business risk as the proxy of uncertainty of profitability in their empirical studies.

2.2.4 Agency cost theory

Agency theory argues that firms pay higher amount of dividends as monitoring and bonding package when insiders hold a lower percentage of common stock and/or greater number of common stocks held by outsiders to reduce agency cost. If more percentage of common stocks is held by insiders then that leads to less protection of outsiders and in that case management usually expropriate funds by maximizing their own benefits rather than return the money to the outsiders (La Porta *et al.*, 2000), therefore, it is hypothesized a negative relationship between insider ownership and DPR and a positive relationship

between number of common stockholders and DPR. The proportion of stock held by insiders is considered as the proxy of insider ownership and log of common stockholders is considered as the proxy of dispersion of ownership for this study. Saxena (1999) used percentage of insider ownership as a proxy of insider ownership in their studies.

La Porta *et al.* (2000) view that even if the investors' protection improves but the firm has free cash flow then the insiders must engage in more distorted and wasteful diversionary practices but returning money to the outsiders and retiring the long-term debt reduces the agency cost of free cash flow. As payment of dividends reduces the agency cost of free cash flow (Jensen, 1986), therefore, it is hypothesized that a positive relationship between free cash flow and divided paid recently. Free cash flow is considered as the proxy of this variable in the study. Holder *et al.* (1998) also used the same proxy of free cash flow in their studies.

2.2.5 Security pricing and efficient market hypothesis

In a rational efficient market assets are priced at the true, intrinsic value, therefore prices only change when intrinsic value changes, that is when there is genuine news available in the market. But Richard Thater (2002) thinks of many instances of prices changing without any news, (for example in 1987 October prices changed rapidly and drastically all over the world) although the only real financial news was that prices were rapidly changing.

The first premise of the efficient market hypothesis is that it is impossible to predict future returns from past returns. If this were false then investors could make money by investing on the basis of this prediction and in so doing eliminate them. But stock prices are somewhat predictable and at times they over react or are overpriced by analyst's during the eve of the IPO's.

The capital asset pricing model (CAPM) tells us that if risk can be avoided through diversification then investors should not expect to be paid to bear it. However if the returns on an asset are correlated with its risk, the risk-averse investor will demand a higher return to bear this avoidable risk. For assets with higher beta should earn higher

returns. But in a series of studies, Fama and French have shown that beta has little ability to explain differences in returns across stocks.

2.3 Empirical Review

In this section the researcher starts by looking at two recent studies and then reviews literature concerning LTG optimism and mis-pricing, LTG forecasts optimism and analyst's characteristic and finally individual analysts LTG forecasts.

Two studies have directly examined the *ex-ante* accuracy of analysts' LTG forecasts. The first study is by Harris (1999), who finds that the accuracy of median analysts' consensus LTG forecasts is extremely low, with a naïve model in which earnings follow a martingale out performing them. In particular, the majority of LTG forecasts are optimistically biased by 7% compared to actual earnings growth, and forecast errors are correlated with the forecasts themselves.

Analyzing the source of analysts' forecast errors by decomposing the mean forecast error in systematic bias and inefficiency and random components, Harris (1999) finds that the sources of the mean-squared error are 7.5% bias, (ii) 4.1% inefficiency, and 88.4% random. When the mean-squared error is decomposed into the following:-

(i) Error in forecasting average LTG in the economy.

(ii) The deviation of average LTG in the industry from average LTG in the economy.

(iii) The deviation of LTG for individual firms from the average industry LTG.

An interesting result emerges. 55% of the LTG forecast error derives from analysts not being able to forecast deviations of individual firm LTG from industry LTG. Moreover, Harris finds that the proportion of LTG forecast error at the firm level is increasing over time, compared to decreasing forecast errors at the industry level. However, Harris does not analyze the sources of the firm-level LTG forecast error. He suggests that the LTG forecast error could be related to forecasting method changes by analysts, or changes in

accounting standards. Interestingly, the influence of analyst's ability and incentives (the contribution of this paper) is not addressed.

The second study which argues that analysts' consensus LTG forecasts do a poor job of predicting realized earnings growth rates is by Chan *et al.* (2003). The study offers some interesting evidence on the usefulness of analysts' LTG forecasts. They show that high earnings growth cannot be persistently achieved by firms and thus a prediction of earnings growth is a game of chance. However, Chan *et al.* (2003) show that analysts forecast a 16.4% higher LTG rate for firms in the top LTG quintile compared with firms in the bottom LTG quintile, even though the realized five-year growth rate has only a dispersion of 7.5%. They argue that the large dispersion in LTG suggests that while analysts believe LTG is predictable, they face significant uncertainty when estimating it.

2.3.1 Long-term earnings growth forecast optimism and mis-pricing

Sarin (1996) document that in general analysts' annual forecast errors around initial and seasoned equity offerings are not different than their forecast errors at other times Ali (1996). They also find no difference in the near-term forecasts of affiliated and unaffiliated analysts Lin and McNichols (1998) who confirm these results. Hansen and Sarin conclude that analysts are disciplined by reputation forces and consequently forecast credibly around equity offerings. Noting that studies focusing solely on near-term earnings forecasts cannot resolve the question of whether concern for reputation is sufficient to offset pressures from investment banking relationships, Lin and McNichols (1998) include an examination of analysts' long-term growth forecasts and stock recommendations. They document that affiliated analysts issue more optimistic long-term growth forecasts and stock recommendations than unaffiliated analysts around seasoned equity offerings.

Michaely and Womack (1996) and Lin and McNichols (1998b) provide similar evidence for initial public offerings. Finally, without distinguishing between affiliated and unaffiliated analysts, Rajan and Servaes (1997) also document over optimism in analysts'

long-term growth forecasts around initial public offerings (IPOs) and find that the firms with the highest projected growth experience the greatest post-IPO under performance.

However, Rajan and Servaes do not attempt to explain the post-IPO under performance with the over optimism in analysts' growth forecasts. Existing evidence on the effects of analysts' forecasts on the pricing of equities is indirect and mixed. Several papers document that stock prices react to the release of analysts' forecasts and stock recommendations, including Lin and McNichols and Michaely and Womack, who find a significant difference in the stock price reaction to affiliated versus unaffiliated analysts' recommendations around equity offerings. On the other hand, when the examination is not conditioned on an equity offering, Dugar and Nathan (1995) find no significant difference in the stock price reactions to investment organization and non investment firms analysts' stock recommendations. However, they present evidence consistent with the hypothesis that investors rely less on investment banking analysts' forecasts in forming their annual earnings expectations. In particular, they find that the strength of the relation between analysts' forecast errors and abnormal returns cumulated from the release of analysts' research reports to the next earnings announcement is stronger for non-investment organizations analysts.

2.3.2 Long-term earnings growth optimism and analyst characteristics

Prior research attributes the optimistic bias in LTG forecasts to analysts' incentives provided by underwriting activities. Lin and McNichols (1998) and Dechow *et al.* (2000) show that analysts who are employed by the lead manager during an equity offering (sample period mid 80s to mid 90s) issue more optimistic LTG forecasts to attract and retain investment business. Lin and McNichols (1998) and Dechow *et al.* (2000) argue that analysts' LTG forecasts are optimistically biased because the market places less emphasis on the accuracy of these forecasts, and LTG forecasts are more relevant for security valuation than STE forecasts.

In a recent paper, Ljungqvist, Marston and Wilhelm (2006) examine U.S. debt and equity issues over the period 1993 – 2002. Ljungqvist *et al.* (2006) find no evidence that aggressive analyst behavior helped banks to attract investment banking business

demonstrate causality). Aggressive analyst behavior is measured as a bank's stock recommendation level relative to the consensus stock recommendation level of other banks, and as a bank's stock recommendation change less the change in consensus stock recommendation of other banks. Cowen, Groysberg and Healy (2006) corroborate this finding by showing that investment firms that fund research through underwriting business actually issued less optimistic LTG forecasts. The authors collected 25,642 LTG forecasts between January 1996 and December 2002. They find that full-service investment banks, banks that provide underwriting and brokerage services (22,994 LTG forecasts), make on average LTG forecasts that are 1.5% lower than LTG forecasts made by analysts at non-full service firm, i.e. syndicate firms, brokerage firms and pure research firms.

Based on this finding, Ljungqvist *et al.* (2006) suggest that analyst optimism is not only influenced by conflict of interests through underwriting ties, but rather by the trade-off between career concerns (cost of jeopardizing reputation) and the incentives to generate trade. More reputable analysts (i.e. All-Star ranking) and more prestigious firm (i.e. underwriting market share) have less upwardly biased forecasts. But the authors also argue that analyst forecasts appear to be more upwardly biased when the potential benefits are large and the potential cost to reputation is small. Assuming that LTG is harder to evaluate than STE (cost to reputation is small), but that LTG plays a significant role in stock valuation (potential benefits are large) analysts have incentives to follow their individual forecast agendas and may bias LTG forecasts upward when fee income is at stake. Thus, LTG upward bias is likely to differ among analysts, even within the same firm, and could be chosen optimally (endogenously) to inflate analyst stock valuations and generate trade.

2.3.3 Individual analysts' long-term earnings growth forecasts

Limited understanding exists on the existence of analysts' individual LTG forecasts. An exception is Bradshaw (2002) who calculates "pseudo target prices" using the PEG heuristic (i.e. multiplying the analyst's expected LTG rate by one-year [two-year] ahead annual analyst earnings forecasts) and correlates them with actual target prices obtained

from analyst reports. He documents a correlation coefficient of 0.5 between actual target prices and "pseudo target prices". This suggests that on an individual analyst level, LTG forecasts may play an important role in analysts' stock valuation and subsequent stock recommendation process. Also, Sommers (2002) finds that individual analyst LTG forecasts have information content, as evidenced by a significant revision response coefficient for upward LTG forecast revisions. Sommers' finding opens the door for our second research question as it suggests that investors could benefit from following analysts that issue LTG forecasts.

2.4 Research gaps

If the weight placed on these forecasts overreaches the ability of analysts to predict
LTG forecast performance; the forecasts should be contrary indicators of future stock performance. Indeed, research shows that subsequent stock returns are negatively related to beginning-ofperiod LTG forecasts (Dechow *et al.* 2000; Dechow and Sloan 1997; La Porta 1996; Lakonishok *et al.* 1994). La Porta (1996) shows that analysts' systematic misestimation of future LTG explains returns to contrarian strategies (i.e. stocks with low (high) analysts' expectations of future LTG subsequently outperform (underperform) the market).

Intriguingly, Frankel and Lee (1998) show that investors do not seem to fully unravel the optimistic bias in LTG forecasts, although correcting for expected forecast bias can improve the accuracy of firm estimates and subsequent investment returns. However, if it is so easy to correct for the optimistic bias in LTG forecasts, why do analysts introduce it in the first place? None of the existing research directly links the over-optimism in analyst's forecasts around equity offering to the post-offering underperformance. The proposed study will contribute in proving a direct link.

2.5 Conceptual framework

In this section the research first discuses the variables included in the study, the predictions concerning analysts earning growth forecasts error and the bias in this forecasts and then develop hypothesis concerning the possible ways in which the stock market incorporates information about this biases in to stock prices using simple models.

2.5.1 Analysts forecast error

Financial analysts' forecasts are of substantial interest to investors and to researchers, whether or not analysts possess the ability to predict the future performance of firms. Thus it's assumed that financial analysts' expectations could represent or influence investors' expectations. If financial analysts are too pessimistic about the prospects of newly listed firm in the beginning of the process, and there is substantial upward revision in their expectations as documented in the previous section, then we should expect a negative relationship between long-term performance of the firm and analysts' predictions. In particular, following Dunkeas, Kim and Pantzaris (2002) analysts' forecasts error can be used to measure investors' optimism.

2.5.2 Stock prices

Every day we see prices of stock going up and down .When there is good news or high profit report the price of the company share price goes up. But if there is ill/unfavorable news or massive loss, the price goes down. Looking at the patterns, the share price is not directly determined by the company performance but it is directly determined by the balance between demand and supply. The share market price works something like inflation, when demand overwhelms the supply, the prices goes up and vice versa. More buyers than sellers, the buyer will offer a higher price in order to get the product (share). So when the price goes up the demand is the only factor that directly affects the price.

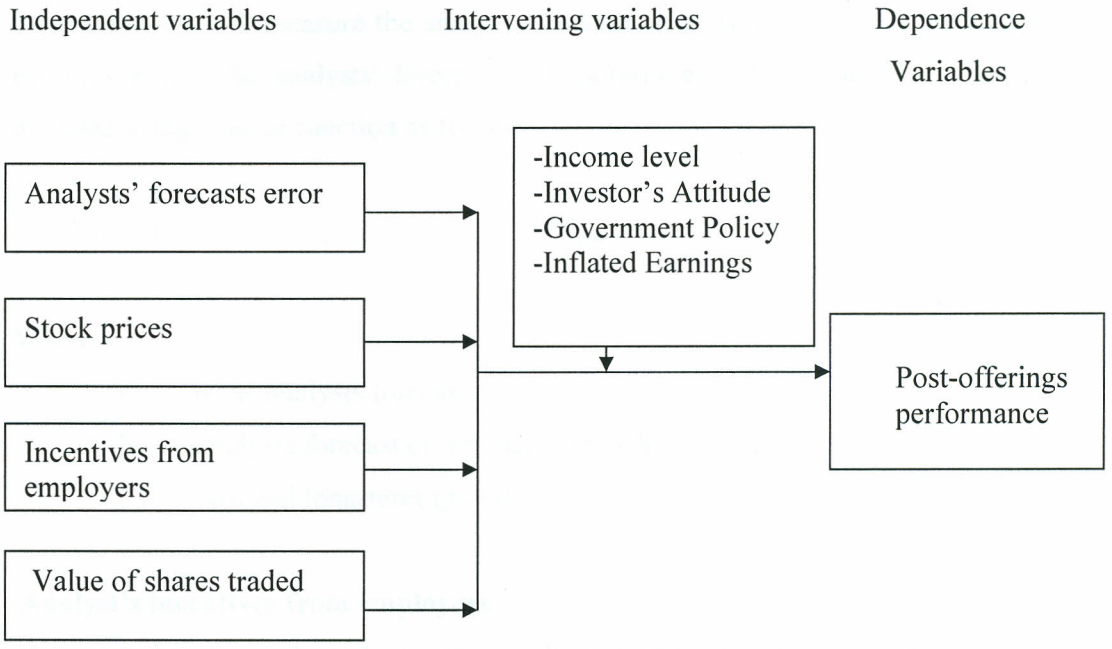
2.5.3 Analysts incentives from employers

Previous research indicate that analysts tent to issue impressive forecasts of firms earning prospects for firms with whom they have or wish to have underwriting relationship and seem to offer good package in terms of investment banking fees. As analysts are partly supported by their corporate finance departments, much of what they do is marketing and preparing IPOs. Thus analyst's worth depends on his or her ability to bring in deals.

2.5.4 Value of shares traded

Research suggests that analysts are more likely to cover well firms that provide them with more (better quality) information required for analysis. Lang and Lund Holm (1996) find that the value of equity traded in financial markets is influenced by analysts' behavior and the accuracy of their forecasts.

Figure 2.1 Conceptual frameworks



Source: researcher (2012)

The investors' decisions are influenced by all the independent variables and this affects the post-offering performance of the firm issuing equity. The researcher will determine how each independent variable affects post offering performance by holding or varying factors at a time using hypothesis developed models below concerning

(i) Analyst forecast error.

(ii) Analysts incentives from employers

(iii) Stock prices.

Analyst forecast errors

Of course, some money managers grumble that big emphasis on new-issue fees taints research results if the analysts try to avoid saying anything negative about their underwriting clients. Thus the researcher hypothesize that sell-side analysts, in general,

provide overly optimistic forecasts of issuing firms' long-term earnings growth in order to attract and retain underwriting business.

The researcher will measure the analysts' forecast error as realized long-term growth in earnings minus the analysts' forecast of long-term growth in earnings. This can be modeled using a linear function as follows:

$$Y_{t+1} = b_0 + \sum_{t+1} \ldots\ldots\ldots\ldots\ldots\ldots \text{ Equation 1}$$

Where:-

Y_{t+1} is the analysts forecast error.

b_0 analysts forecast of long-term growth in earning.

$\sum_{t+1}$ realized long-term growth in earnings.

Analyst's incentives from employers

The researcher further hypothesize that analysts employed by the investment bank acting as the lead underwriter of the offering have even stronger incentives to make overly optimistic forecasts to lowering the firms cost of capital or managers of the issuing firm may systematically select as their lead underwriter the investment bank employing the most optimistic analyst. Either way the researcher expects analysts employed by the lead underwriter to have the most optimistic forecast. Such analysts are referred to as affiliated and the researcher predicts that b_0 will be more negative for affiliated analysts than unaffiliated analyst. The researcher also predicts that firms receiving the highest long-term earning on average also have larger forecasts errors. Thus, the upward bias in analyst's forecasts appears to be driven primarily by the higher growth forecasts. This phenomenon can be modeled using a simple linear function.

$$Y_{t+1} = b_0 + b_1 G_{t+1} + \sum_{t+1} \ldots\ldots\ldots\ldots \text{equation 2}$$

Where G_{t+1} is the analysts forecast of long-term earnings growth and empirically lies

$-1 < b_1 < 1.5$

This more detail model of analyst forecast errors will enable the researcher to capture more of the predictable variation in the forecast errors. This in turn allowed him to conduct more powerful test of stock prices hypothesis. Equation 2 can also be used to investigate the nature of the incremental bias in affiliated analyst long-term earnings growth forecast. If the bias in affiliated analyst long-term growth forecast is unrelated to the level of forecast growth then this b_0 will be more negative for the affiliated analyst and b_1 was the same for the two groups.

However, if the incremental bias in the affiliated analysts forecast is related to the level of forecast growth then b_1 was more negative for the affiliated analyst than for the unaffiliated analysts. Finally if analyst overly optimistic forecast are motivated by their desire to generate underwriting business, then the researcher expects their forecast of long-term earnings growth to be positively related to the fee paid to their employers

Stock Prices

The researcher predictions concerning sock price behaviors under two competing hypothesis.

(i) The efficient market hypothesis.

(ii) A naïve expectation hypothesis.

Under both hypothesis, investors use information in analyst's long-term earnings growth forecasts to form expectations on future dividends. Under the efficient market hypothesis, investors fully anticipate, and therefore stock price fully reflects the predictable bias in analyst's long term earnings growth forecasts. Under the second hypothesis, investors neglects to adjust for the predictable bias in these forecasts when forming their expectations of further dividends. Thus stock prices fail to reflect the predictable bias in analyst's long term growth forecasts.

The researcher has developed a simple model for testing these competing hypotheses similar to compel (1991). He showed that using the traditional divided discounting model, abnormal stock returns can be approximated as linear function of the expected growth in current dividends and the changes in the expected growth of future dividends. By further invoking the common assumption that revision in dividend expectations are

correlated with revisions in earnings expectations, we can express abnormal returns as a linear function of unexpected growth in earnings.

$X_{t+1} = w_1 \sum_{t+1} + J_{t+1}$ ..... Eq. 3

Where:-

Xt+1 is the dependant variable – Measures the abnormal stock returns in three years following equity offerings

W_1 represent the valuation multiplier the market applies to unexpected earning growth.

J_{t+1} represent the market assessment of the expected earnings growth in the three years following equity offering.

$\sum_{t+1}$ represent the market assessment of the unexpected earning growth in the three years following equity offering.

Now substituting the unexpected earnings growth implied by the model of analysts forecast error in equation 1. For $(\sum_{t+1})$ in equation 3.

$X_{t+1} = w_1 (Y_{t+1} - b_0) + J_{t+1}$ ..... Eq. 4

Where;-

b_0 represents the market assessment of the average bias in analysts' long-term growth forecast.

In equation 4 the efficient market hypothesis predicts that b_0 will correspond to its counterparts in equation 1, b_1. Thus stock prices respond only to the unpredictable portion of the analyst's forecasts errors $\sum_{t+1}$.

The naive expectation hypothesis predicts that b_0 in equation 4 will be zero since investors naively believe that analysts long term growth forecasts are unbiased. Under this hypothesis, investor's expectations of further earnings growth equal the analyst's growth forecasts. Thus, stock prices respond to entire forecast error (Y_{t+1}).

The regression specification in equation 4 is non linear in the regression co-efficient w_1 and b_0 hence the researcher will conduct a statistical analysis using non linear weighted least squares.

$Y_{t+1} = b_0 + \sum_{t+1}$

$X_{t+1} = w_1 (Y_{t+1} - b_0) + J_{t+1}$ ..... Eq. 5

The market efficient hypothesis will be evaluated by testing the cross-equations restriction, that $b_0 = b_1$ while the naive expectation is evaluated by testing the restriction that $b_0 = 0$

The second set of stock prices tests examines the extent to which prices reflects information in the level of forecasts growth about future forecasts errors as the researcher predicts that forecast errors tend to be greater for firms with higher forecast growth.

Substituting the forecast error prediction model in equation 2 for $\sum_{t+1}$ in equation 3 gives

$X_{t+1} = w_1(Y_{t+1} - b_0 - b_1G_{t+1}) + J_{t+1}$..... Eq. 6

Where (b_0 and b_1G_{t+1}) represents the markets assessment of the average bias in analysts long term growth of forecast.

The efficient market hypothesis predicts that b_0 and b_1 will correspond in equation *2.* Investors expectations of future earnings growth while based on the analysts forecasts of future growth, rationally anticipate the average bias in analysts long-term growth

forecasts. Thus stock prices respond only to the unpredictable portion of the analysts forecast error, $\sum_{t+1}$ which is equal to $Y_{t+1} - b_0 - b_1 G_{t+1}$

The naive reliance hypothesis predicts that b_0 and b_1 in equation 6 is equal to zero since investors believe that analysts long term growth forecasts are without bias. Under these hypothesis investors of future earnings is equal to analysts growth forecasts. Thus stock prices respond to the entire forecast error, Y_{t+1}.

The researcher will conduct statistical test by estimating equation 2 and equation 6 simultaneously using non-linear least square method.

$$Y_{t+1} = b_0 + b_1 G_{t+1} + \sum_{t+1}$$

$$X_{t+1} = w_1(Y_{t+1} - b_0 - b_1 G_{t+1}) + J_{t+1} \ldots\ldots\ldots\ldots\ldots\ldots \text{Eq. 7}$$

The market efficiency hypothesis will be evaluated by testing the cross-equation restriction that $b_0 = b_0$ and $b_1 = b_1$

While the naïve expectation hypothesis is evaluated by testing the restriction that $b_0 = 0$ and $b_1 = 0$.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section gives a description of the methodology that the researcher used in conducting the study, the section was divided into four parts namely: - Research design, study population, data refinement and analysis techniques.

3.2 Research Design

In this study a descriptive survey approach was used. This approach was normally used to test research questions concerning the current status of the subjects in the study (Gay 1981) Descriptive research design was chosen because it enabled the researcher to generalise the findings to a larger population. The researcher was therefore able to generalize the findings to all companies listed at NSE.

3.3 Target Population

The population of this study constitutes all the companies listed at NSE in the last 10 years (2000--2010). The study was therefore targeting all the newly listed companies within the stipulated period in the NSE market. Census method was adapted to select the sample of the study.

3.5 Data collection procedures

The researcher used secondary data which was obtained from the NSE data bank, the CMA data centre, financial analyst's reports, and library and interment search. Other data sources that can deliver the same topics such as companies' reports, newspapers and magazines were also used. The researcher used historical method to collect data where by information of each selected firm over the last four years period after the IPO was collected and recorded using the research instruments which consists of tables with various headings (see appendix). For comprehensive data collection, the researcher and research assistants' visited information centers whereby they went through the relevant

documents/records and extracted the required information. Also electronic media like internet, phones, SMS, E-mails were used to save time and costs.

3.7 Data analysis

Data was collected to measure post offering stock price performance using three year market adjusted buy hold stock returns to ensure that analyst's forecasts are known prior to the stock return accumulation period, which was starts the months after equity offering. The researcher then tabulated the data in tables so as to provide a basis for various statistical computations. Data collected was analyzed using descriptive statistics such as tables and charts showing percentages of variable measures of relationships, statistical averages and measures of dispersions.

To test bias in analysts' long term earnings growth forecasts the researcher used a T-test at 99% confidence level to determine the difference in the mean forecast errors to confirm the prediction that affiliated analysts tend to issue more optimistic long-term earnings growth forecasts than unaffiliated analysts. He also estimate the regression of forecast errors on forecast growth in earning to examine the sensitivity of the forecast errors to the growth expectations using the coefficient on forecast growth in earnings.

To test the price bias in analysts long-term earnings growth forecast of stocks trading in the NSE market the researcher used non linear weighted least squares regression analysis, since this was allowed one to conduct statistical tests of the non linear restrictions implied by the researchers hypothesis in the model above. Since multiple analysts forecasts can relate to a single equity offering the researcher conducted pricing analysis using a single consensus observation for each offering in order to avoid cross-sectional dependences. The forecasts of growth in earnings used for each observation were the mean of the forecasts relating to the offer. The price test was conducted for three samples. The first sample consists of all firms offerings represented by the entire sample of all firms-offerings represented by the entire sample of analysts' forecasts. This sample provided a benchmark for the subsequent samples. The second sample includes all firms-offering for which we have an affiliated analysts forecasts, this sample allows the researcher to

examine whether affiliated analysts forecasts are priced irrespective of the availability of unaffiliated analysts. The third sample included all firms-offering for which we have unaffiliated analysts. The sample allowed the analysts to examine whether unaffiliated analysts forecasts are priced irrespective of the availability of affiliated forecasts. To investigate the price of the consensus errors, the researcher was made use of the systems of equations in the model in the last part of topic two.

Quantitative analysis using the least square regression analysis was used to analyze perception about the impact of stock prices forecasts and the analysts' effects on the value of the shares trading in the NSE. The full model and variable definitions are provided below. The researcher tested the following model to explain the stock price post-offering performance of newly listed firms in the NSE market issued by analyst I, for firm j in year t.

$Y = \alpha_0 + \alpha_2 X_1 \ldots\ldots + \alpha_4 j$ .....equation 1

Where Y is the depended variable (post-offering performance), α_0 is a constant, $\alpha_2$is the coefficient of the explanatory variable, X_i is the explanatory variable and $\alpha_5 j$ is the error term assumed to have zero mean and independent across time period.

The following linear regression model was used:

$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 j$

Where:-

Y = Post- off performance

α_0 = constant term

α_2 α_3 α_4 = coefficients

X_1 = analysts forecast error

X_2 = stock prices

X_3 = share volume traded

X_4 = Analysts incentives

α_5 j = error

3.8 Ethical Issues

The researcher sought permission to carry out the study from the University. The study collected the information from the Nairobi Stock Exchange following the right procedure. Any personal information that was used for research purposes was kept strictly confidential.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

The chapter provides the analysis and interpretation of data. Data was summarized using tables' charts and graphs and analyzed using descriptive statistics. The first part of the topic provides a descriptive detail of the study sample and an overview of the results (tables 4.2 and 4.3), while the second part deals with formal statistical tests of the hypothesis (tables 4.4 to 4.6) and finally directly relates the over optimism in the forecasts to the post offering underperformance.

4.2 Sample formulation

The researcher formulated the study sample of newly listed firms in the NSE between years 2001 to 2010 with three years of Earning and stock returns data following the equity offering as shown in the table 4.1 below.

Table 4.1 Sample formulation

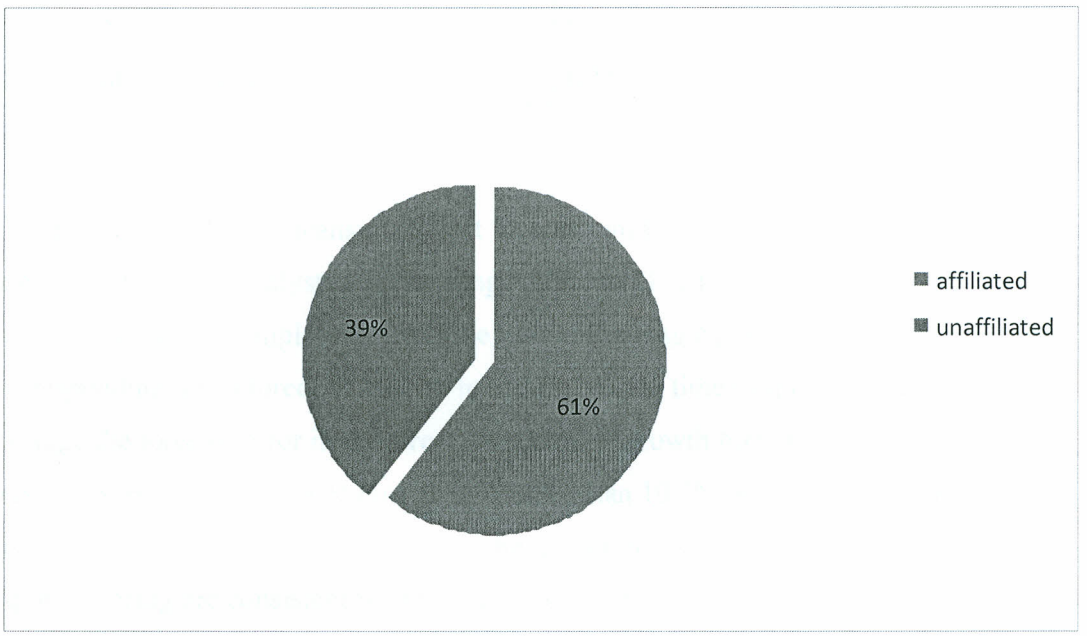
No of firms	Characteristics
+15	Common stock offering within the time period 2001 to 2010
-2	Firms with second offering
-2	Firms offering right issue
-1	Firms offering stock introduction
-0	Firms with no LTG earnings forecasts
10	Final sample of firms-offering (IPOs)

Source (Data on common stock offering is obtained from the CMA and the NSE data bank.)

4.3 Analysts affiliation

The study sought to establish the level of analyst's affiliation to the issuing lead managers. The result was represented in figure 41 below.

Figure 4.1 Analysts affiliations



From the findings of the above table the study established the majority of financial analysts in the country are affiliated as shown by 61% and unaffiliated by 39%

4.4 Analysts forecast and post-0ffering performance

The study set out to determine whether there is a relationship between analysts affiliation their forecasts and stock returns. The results are shown in table 4.2 below.

Table 4.2 Profile of analysts' forecasts and post-offering performance three years following equity offerings

analysts	Mean abnormal returns	Mean realized earnings growth	Mean forecasts earning growth	Mean forecast error	No of observations
All	-0.122	0.035	.14	-0.105	66
Affiliated	-0.323	0.097	0.244	-0.142	40
Unaffiliated	-0.121	0.038	0.15	-0.103	26

Table 4.2 above shows means of analyst forecasts and realized performance for the full sample of 10 firms Analysts LTG earnings forecasts. The mean realized growth in earning for the full sample over the three years following equity offering is 12.2% The corresponding mean forecasts growth in earnings at the time of the offering is 14.6% on average the forecast error in the three years earning growth forecast is -10.5%.Analysts tend to overestimate earnings growth by greater than 10.5% per year in the three years following equity offering. The negative abnormal returns in the three years following equity offering are consistent with the investors having overly optimistic expectations of earning growth.

The mean abnormal return for the affiliated analysts is 32.3% which is much more negative than the average returns for the entire sample and the forecast error are also larger than for the entire sample. These results are consistent with the affiliated analysts issuing more optimistic earning growth forecasts. The mean abnormal returns for the unaffiliated analysts have the least negative abnormal returns and least forecast error.

4.5 analysts forecast error and post-offering performance

The study further sought to examine the relationship between variation in forecast error and variation in abnormal return. Growth portfolios' were formed by ranking all analysts LTG forecasts and assigning equal number of observations in equal number to the three portfolios. The results are presented in table 4.3 below.

Table 4.3 Profile of analysts forecast error and post-offering performance stratified by analyst's affiliation and forecasts earnings growth for three years following equity offering.

Range of forecast earning growth for each portfolio	**firms where analyst predicts :-**		
	Low growth (-100% to 10%)	Medium growth (11% to 20%)	High growth (21% to 100%)
Part A no forecasts of analysts with			
Affiliated analysts (40)	8(20%)	11(27.5)	21(67.5)
Unaffiliated analysts (26)	6 ((23.0)	8 (30.7%)	12(46.1%)
All analysts (66)			
Part B Mean forecast error			
Affiliated analysts	-0.156	-0.108	-0.238
Unaffiliated analysts	-0.021	-0.05	-0.288
All analysts	-0.018	-0.058	-0.476
Part C mean abnormal return			
Affiliated analysts	-0.21	**-0.224**	**-0.532**
Unaffiliated analysts	-0.098	**-0.022**	**-0.398**
All analysts	-0.048	**-0.058**	**-0.231**

Result in part A of table 4.3 indicates that affiliated analysts tend to be concentrated in the high forecast growth with 67.5% of observations. The unaffiliated analysts tend to be more evenly distributed across three forecast growth portfolios' with 46.1% being in the high growth portfolio.

In part B of table 4.3 reports the mean forecast errors for the affiliations and forecast growth sub-samples. The study reveals that forecast errors are more negative in the high forecast growth portfolios and also consistently more negative for the affiliated analysts than for the unaffiliated analysts. Thus analysts over optimism is more pronounced for the high growth portfolios' and within the high growth portfolios, thus affiliated analysts make the most overly optimistic forecasts.

In part C of table 4.3reports means abnormal and reveals that firms in the high growth portfolios experience the greatest long-run underperformance and within the high growth portfolios, the abnormal stock returns are more negative for affiliated analysts' deals than for the unaffiliated analysts' deals. Thus, firms' long-term stock price under performance is greatest when affiliated analyst project high growth earning.

4.6 Test of bias in analyst's long-term earnings growth forecast

The study sought to evaluate the differences in the forecast error for affiliated and unaffiliated analysts. A t test was used to evaluate the difference in means. The results are presented in table 4.4 below.

Table 4.4 Test of bias in analyst's long-term earnings growth forecast.

Part A, Distribution of variables for affiliated and unaffiliated analysts (p value for tests of equal means)

		Mean	Std deviation	No of observations
Forecast error	Affiliated	-0.133	0.330	40
	unaffiliated	-0.102	0.271	26
	p-value	0.003		
Forecast earnings growth	Affiliated	0.211	0.122	40
	unaffiliated	0.148	0.110	26
	p-value	0.000		
Realized earning growth	unaffiliated	0.060	0.311	40
	unaffiliated	0.064	0.270	26
	p-value	0.913		

Part B Sensitivity of forecast errors to analysts forecasts of long term growth earning growth.

$FE_{t+1} = \alpha_0 + \alpha_1 \text{ growth}_t + \sum_{t+i}$

A_0		A_1	p-value for α	Adjusted R^2 (%)	No of observations
Entire sample all analysts	0.005	-0.671	0.047	7.44	60
Total affiliated analysts	0.027	-0.845		9.51	40
Total unaffiliated analysts	0.021	-0.661		6.349	26

From table 4.4 above the coefficients indicates that the realized growth in earnings is only about one third of the forecasts in growth earnings. This in turn indicates that an analyst over optimism is greater for firms with greater growth prospects. The results for the unaffiliated analysts are similar to the results of the enter sample. The coefficient for the affiliated analysts indicates that the realized growth in earning is only about one-sixth of the forecast growth in earnings. Thus a t-test rejects the null hypothesis that the coefficient on forecast earnings growth is the some in the affiliated and unaffiliated regressions (P-value=0.047) From the study findings over optimism in affiliated analysts relative to unaffiliated analysts growth forecast is high for securities with high growth prospects.

The study findings from table 4.4 part A above reveals that the forecast errors for affiliated analysts are consistently more negative than for the unaffiliated analysts. The mean forecast error for the affiliated analysts is (-13.3%) while the mean forecast error for the unaffiliated analysts are (-10.2%). A t-test for the difference in means rejects the null of equity (p-value =0.003). This confirms the researcher prediction that affiliated analyst's tent to issue more optimistic long-term earnings growth forecasts.

The results of also reveals that the larger negative mean forecast error for affiliated (versus unaffiliated) analysts is driven by their over-optimistic forecasts of growth (p-value of 0.000) and not by lower growth realization for firms they follow (p- value of 0.913).

4.7 Test of the relatioship between affiliated analyst's forecasts of long-term earnings growth and underwriting fee paid to the employers.

The study sought to establish whether there is a relationship between affiliated analysts and the underwriting fees paid to their employers. Table 4.5 below presents the findings:

Summary model $\text{Growth} = Y_0 + Y_1\text{fee} + Y_2\text{R growth} + \mu$

Table 4.5 affiliated analyst's forecasts of long-term earnings growth and underwriting fee paid to the employers.

	Y_0	Y_1	Y_2Rgrowth	adjusted R%	no of observation
Regression 1	0.134	0.065		6.80	40
Regression 2	0.134	0.064	0.026	7.01	40

According to table 4.5 above the study revealed that there is a positive relation between the affiliated analyst growth forecasts and the fee basis paid to their employers. For each 100 basis point paid to the lead managers analysts growth forecast increased by 650 basis point (6.5% point). The fee basis is the percentage of the shilling value of the offering paid to each lead investment bank.

4.8 Tests of whether the systematic bias in analysts' forecasts of earning growth is reflected in stock prices (the pricing bias tests)

The study also sets out to investigate whether the systematic bias in analysts' forecasts earning growth is reflected in stock prices. Since multiple analysts forecasts can relate to a single consensus observation for each offering in order to avoid cross-sectional dependence. The forecast growth in earnings used for each observation is the mean of the forecasts relating to the offer. The researcher conducted pricing tests for three samples which includes; all firm-offerings represented by the entire sample of analysts' forecasts, All-firm offerings for which have an affiliated forecasts and a third sample which includes all firm offerings for which have unaffiliated analysts forecasts. The researcher used the non linear weighted least square model and the results were presented in table 4.6 below:

Non- linear weighted least squares regression model

$Y_{t+1} = b_o + \sum_{t+1}$

$X_{t+1} = w_1(Y_{t+1} - bX_0)$

Table 4.6 Results of non linear weighted least squares regression examining the pricing of the bias in analysts' forecasts of LTG earnings around equity offering.

	All deals	All deals with affiliated analysts	All deals with unaffiliated analysts
b_0	-0.121	-0.143	-0.118
b_{e0}	-0.029	-0.027	-0022
W1	1.171	1.254	1.102
No of observations	66	40	26

Market efficiency ($b_{e0} = b_0$)

Naïve expectation ($b_{e0} = 0$

e0 significance level at one percent level

b represents the mean forecast errors in analysts' forecasts.

If investors rationally anticipate the bias in analysts' forecasts, then the earnings expectations embedded in stock prices will result in b0=-b0 and if investors naively relays on analysts forecast of LTG earnings, then the earning expectations embedded in stock prices will result in $-b_0$ being equal to zero.

The non-linear weighted least squares parameter estimates for the system of equations n 5 above are reported in panel A of table 6.the estimate of the mean forecast error for each

deals b0, is (-12.1%). The implied estimates of the mean forecast error in the stock price equation are (-2.9%). This estimate is significantly different from the rational value of (-0.121%) rejecting the market efficiency, but is not significantly different from the naïve value of zero. Thus the researcher was unable to reject the hypothesis that investors' naïve reliance on analysts' forecasts potentially explains the underperformance of stock prices following equity offerings.

The mean forecast errors for the affiliated and unaffiliated deals also differ slightly at the issuer level versus the analyst level. However, it is noted that the affiliated analysts are more overly optimistic than the unaffiliated analysts with forecast errors of (-14.3%) and (-11.8%) respectively.

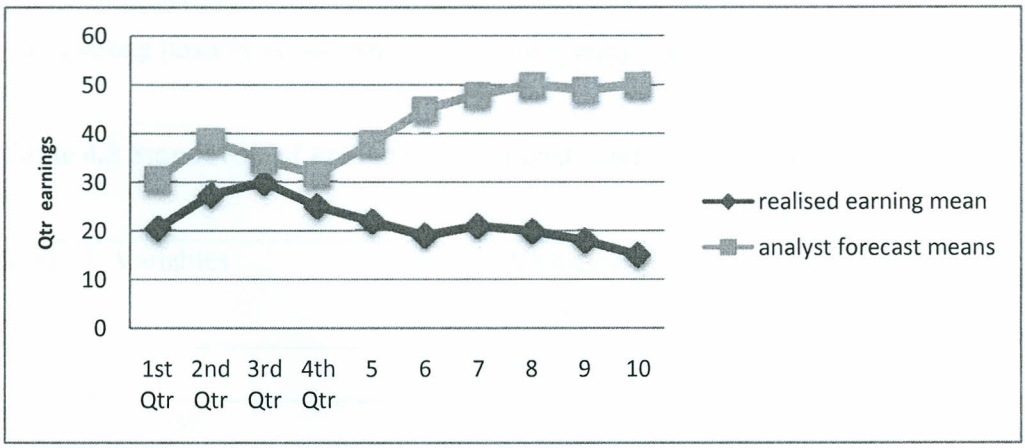
Despite the differences in actual forecasts errors, the implied estimate of the forecast errors in stock price is quite similar. The forecast error implicates in stock prices for the affiliated deals is (-2.7%), while for the unaffiliated deals is (-2.2%). In both cases, the market efficiency is rejected but in neither case is the hypothesis that investors naively relay on analysts' forecasts rejected. Thus despite the differences in the magnitude of the forecast errors for affiliated and unaffiliated analysts forecasts, researcher was unable to reject the hypothesis that they are both incorporated into stock prices.

4.9 EPS and their analysts forecasts around equity offering

The annuals earnings forecasts was divided in to four quarters, and data was recorded over 11 quarters starting on the equity offering announcement quarter (q=0) .EPS is measured relative to the mean of the beginning of the end of the quarter stock reported. The research uses the closing stock price the day before the forecast and deflates all quarterly earnings. Price deflection allows comparison of EPS across firms and years. Each fiscal year is divided in to four quarters that are separated by quarterly EPS announcement. Results are presented in figure 4.6 below:

The figure 4.6 shows a rising trend of the quarterly mean EPS over a period after the IPO and a declining trend their after. Thus the researcher concluded that equity offerings are associated with the peak of the firm's earnings and not with analysts earning forecasts.

Figure 4.2 Analysts forecasts and realized earnings means around equity offering



4.10 Regression Summary using the full model with all the variables

$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 j$

In a bid to get general trend of the relationship between analysts long-term earnings growth forecasts and stock price performance following equity offering, the above regression equation model was used and all variables corded in the SPSS to derive the following results in tables 4.6 and 4.7 below.

Table 4.7 Model Summary

Model	R	R Squared	Adjusted R squared	Std. Error of the Estimate
1	.874(a)	.763	.718	.05503

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.712 an indication that there was variation of 71.2% on the Post- off performance due to changes in the independent variable which are analysts forecast error, stock prices, share volume traded and Analysts incentives at 95% confidence interval. This shows that 71.2% changes in Post- off

performance could be accounted for by analysts forecast error, stock prices, share volume traded and Analysts incentives. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.874

Table 4.8 Standardized and Unstandardized Coefficients of all variables.

Model	Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sign
		B	Std. Error	Beta		
1	Constant	.780	14.258		1.247	.218
	Analysts Forecast error X_1	.196	15.695	.065	.458	.648
	Stock Prices X_2	.625	1.666	.138	.976	.333
	Value of share traded X_3	.614	1.398	.222	1.871	.067
	Analysts incentives X_4	.592	.771	.027	.087	.932

From the data in the above table the established regression equation for summary of the three years following equity offering was:-

$$Y = 0.780 + 0.196\ X_1 + 0.625X_2 + 0.625\ X_4 + 0.592X_5$$

From the above regression equation it was revealed that holding analysts forecast error, stock prices, share volume traded and Analysts incentives to a constant zero , Post- off performance would stand at 0.780 , a unit increase in analysts forecast error would lead to increase in the in the Post- off performance by a factors of 0.196, unit increase in stock prices would lead to increase in post- off performance by factors of 0.625 , unit increase in investors characteristic would lead to increase in Post- off performance by a factor of 0.614, unit increase in analyst would lead increase in Post- off performance by a factor of 0.108.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The researcher had intended to investigate whether analyst's affiliation affects their long term earning growth forecasts reports /optimism, to establish whether analysts bias (optimism) is reflected in the stock prices of firms issuing equity, to determine whether there is a relationship between affiliated analysts forecasts reports and fee paid to them or their employers and to determine whether analyst's forecasts are unusually favorable to what can be regarded as normal forecasts.

From the findings the study revealed that affiliated analysts make overly optimistic long-term earnings growth forecast for firms issuing equity. The study found that means abnormal returns for the affiliated analysts was (-32.2%) which was more negative than the average returns for the entire sample (-12.2%) and the forecast error was also larger (-14.2%) than for the entire sample (-10.5%).

The study revealed that there is co-existence of brokerage services and underwriting services in the same institutions lead to affiliated analysts to compromise their responsibility to brokerage clients in order to attract underwriting business. The study also revealed a positive relationship between the affiliated analysts' growth forecasts and the fee paid to them or their employers.

From the findings, the study revealed that the overly optimistic forecasts are reflected in stock prices as the mean forecast error for the affiliated and unaffiliated differ slightly at the issuers level (-14.3%) and (-11.8%) respectively. The result suggests that investor's reliance on analysts overly optimistic forecasts provide one potential explanation for the price underperformance following equity offering.

Further the study revealed that equity offerings are associated with the peak of the firms earning and not with analysts earning forecasts as EPS increased for a short period and starts decreasing following equity offerings.

5.2 Summary of Findings using regression equation for the three years following equity offering

In a bid to get general trend of the relationship between analyst's long-term earnings growth forecasts and stock price performance following equity offering, the study found means of all the years and from the mean of the above the researcher coded these mean in the SPSS and then derived various regression equations that are discussed below:-

$$Y = 0.780 + 0.196\ X_1 + 0.625X_2 + 0.625\ X_4 + 0.592X_5$$

From the above regression equation it was revealed that holding analysts forecast error, stock prices, share volume traded and Analysts incentives to a constant zero , Post- off performance would stand at 0.780 , a unit increase in analysts forecast error would lead to increase in the Post- off performance by a factors of 0.196, unit increase in stock prices would lead to increase in post- off performance by factors of 0.625 , unit increase in investors characteristic would lead to increase in Post- off performance by a factor of 0.614, unit increase in analyst would lead increase in Post- off performance by a factor of 0.108

5.3 Conclusions

From the findings the study found that analyst's affiliation affects their long term earning growth forecasts reports /optimism, it was found that analyst affiliation had positive effects on the long term earning growth forecasts reports /optimism, the study thus concludes that analyst's affiliation affects their long term earning growth forecasts reports /optimism.

From the results it was revealed that analyst's bias (optimism) was reflected in the stock prices of firms issuing equity as it was found that analyst's bias (optimism) had positive

effects on the stock prices of firms issuing equity, the study thus concludes that that analyst's bias (optimism) had positive effects on the stock prices of firms issuing equity.

On whether there is a relationship between affiliated analysts forecasts reports and fee paid to them or their employers, the study found that there was a positive relationship between affiliated analysts forecasts reports and fee paid to them or their employers, the study thus concludes that there was a positive relationship between affiliated analysts forecasts reports and fee paid to them or their employers.

The study also found that analyst's forecasts are unusually favourable to what can be regarded as normal forecasts, thus the study concludes that analyst's forecasts are unusually favourable to what can be regarded as normal forecasts.

5.4 Recommendations

Based on the research findings the researcher makes the following recommendations:-

(I) For firms listed in the NSE to influence their stock prices there is need for the managers to manage the analyst's affiliation, analyst's bias (optimism) and analyst's forecasts as they were found to positively affect the post- offering Performance.

(II) There is need for a special campaign to change investment altitude by stake holders among investing public towards investing opportunities in the NSE.

5.5 suggestions for further study

Based on the study, the researcher proposed the following suggestion for further study:-

(I) A similar study should be carried out on the buy-side analysts in the NSE market.

(II) To examine whether firm choices of investment banks for the underwriting services are influenced by the optimism in the earnings forecasts issued by analysts affiliated with the investment bank.

REFERENCES

Ali, A. (1996). Bias in analysts' earnings forecasts as an explanation for the long-run Analysts earnings forecast, *Contemporary Accounting Research.*

Barber, B. M., and J. D. Lyon, (1996). How can long-run abnormal stock returns be both positively and negatively biased? Working Paper. UC-Davis.

Barber, B. M., and J. D. Lyon, (1997). Detecting long-run abnormal stock returns: The Empirical power and specification of test statistics. *Journal of Financial Economics* (March): 341- 372

Bhushan, R. 1989. Firm characteristics and analysts following. *Journal of Accounting and Economics* 11(July): 255-274.
Boston.

Bradshaw, M. T. (1999). Do analysts use their own forecasts? Working paper. University of Michigan.

Brav, A., and P. Gompers. (1997). Myth or reality? The long-run underperformance of initial public offerings: Evidence from venture and nonventure capital-backed companies. *Journal of Finance* 52 (December): pp.1791-1821.

Brown, P., Foster, G. and Noreen, E. (1985). Security Analysts Multi-Year Earnings Forecasts And The Capital Market. *Studies in Accounting Research Number 21.* American Accounting Association.

Campbell, J. (1991). A Variance Decomposition of Stock Returns, *The Economic Journal* 101: pp.157-179.

Chan Ikcy homao and J Lakenishok (1991), "Fundamentals Of Stock Returns In Japan

Kothari, J. Shanken and R. Sloan. (1994). Lack of timeliness and noise as explanations for the low contemporaneous return-earnings association, *Journal of financial forecasting.*

Dechon, P., Hutton, A. and sloam, R. (1997) .The Role of Affiliated Analysts, Long Term Earning :Forecasts in the over Pricing of Equity Offering WorkingPaper.

Dechow, P. M., and R. G. Sloan. (1997). Returns to contrarian investment: Tests of the Naïve Expectations Hypotheses, *Journal of Financial Economics* 43 (January): pp.3-28.

Defusco, RADW., Leavery J E pinto and DE Runke (2001), Quantitative Methods For Investment Management And Research.

Dugar, A., and S. Nathan. (1995). The effect of investment banking relationships on financial analysts' earnings forecasts and investment recommendations. *Contemporary Accounting Research* 12 (Fall 1995): pp.131-60.

Fama, E. F., and K. R. French. (1992, June). The cross-section of expected stock returns, *Journal of Finance* 47: pp. 427-65.

Fama, E. F., and K. R. French. (1993,February):. Common risk factors in the returns to stocks and bonds, *Journal of Financial Economics. pp.*33 3-56.

Hansen, R. S., and A. Sarin. (1996). Is honesty the best policy? An examination of security analyst behavior around seasoned equity offerings. Implication For Stock Market Efficiency, *Journal Of Finance.*

Kinner D and R sloan (2002) Earnings Suprises Growth Expectations And Stock *Accounting and Economics* . Vol. 18: pp.289-324.

Kiweu, J.M. 1991 The behavior of share prices in the NSE an Empirical investigation

Kothari, S. P., and J. B. Warner. (1997,March). Measuring long-horizon security price performance. *Journal of Financial Economics. pp.* 301-339.

La Porta, R. (1996). Expectations And The Cross-Section of Stock Returns. *Journal of Finance.* Vol. 51 (December): pp.1715-42.

Lakonishok J., A. Shliefer; and R. W. Vishny. (1994, December),. Contrarian investment, extrapolation, and risk. *Journal of Finance* 49 ,pp.1541-1578.

Lin, H., and M. McNichols. (1998). Underwriting relationships and Analysts' Forecasts And Investment Recommendations. *Journal of Accounting and Economics.* 25 (February): Vol.5, pp.101- 127.

Lin, H., and M. McNichols. (1998). Analyst Coverage of Initial Public Offering Firms. Working Paper. Stanford University.

Loughran, T., and J. R. Ritter. (1995). The New Issue Puzzle. *Journal of Finance* , 50 (March): pp.23- 51.

Loughran, T., and J. R. Ritter. (1997, (December). The Operating Performance Of Firms Conducting Seasoned Equity Offerings. *Journal of Finance , Vol.*52 , pp. 1823-1850.

Lowenstein R ((1996) Today's Analysis Often Wears Two Hats" *Wall street journal may* Macmillan Press. Markets The Case of NSE" *unpulished MA thesis Kenyatta university.*

McNichols, M., and P. O'Brien. (1997). Self-Selection and Analyst Coverage. *Journal of Accounting Research*, Vol , 35, pp. 167-199.

Michael, R. and Womack, K (1999. *Conflict Of Interest And The Credibility Of Underwriter Mastering Finance*, Financial times' management." Pitman publishing, Britain.

Michaely, R., and K. L. Womack. (1996). Conflict of interest and the credibility of underwriter analyst recommendations. *Working Paper.* Cornell University.

Mikhail, M. B., B. R. Walther, and R. H. Willis. (1999, (April):), Does Forecast Accuracy Matter To Security Analysts? *The Accounting Review ,Vol.* 74, pp. 185-200.

Mishkin, F. S. (1983). *A Rational Expectations Approach To Macroeconomics*, A National Bureau of Economics Research monograph. Chicago, The University of Chicago Press.

Muhanji S.I. (2000) 'An assessments of investment in securities in Emerging capital

NSE (2002), The role of the exchange in the Economy. NSE outline available from

Omosa FYB (1989), 'predictive ability of selected asset models on the NSE."

Prasamna Chandra (2002) investment analysis and portfolio Management, 2nd Ed. MCgraw Hill,Tata .

Raedy J Pshare and Y yang (2006) horizon dependent under reaction in financial Prior Stock Price Changes. *Journal of Economics and accountancy,* Vol.*114 (June). pp.* 147-65.

Rajan, R., and H. Servaes. (1997, (June). Analyst Following Of Initial Public Offerings. *Journal of Finance* PP.507-529.

Rangan, S. (1998, (October). Earnings Management and The Performance of Seasoned Equity offerings. *Journal of Financial Economics:* Vol. I 50 ,PP.101-122

Ruthorfort, S. (1993), Introduction To Stock Exchange Investment 2nd ed. London Side Financial Analysts'.

Sougiannis, T., E. Oltheten, and T. Yaekura. (1996). Inferring equity values from analysts' earnings forecasts. *Working Paper.* University of Illinois at Urbana-Champaign.

Spiess, D. K, and J. Affleck-Graves. (1995, July). The long-run performance following Seasoned Equity Offerings. *Journal of Financial Economics* , Vol.38): pp.243-67.

Sprecher, C.R 1975, *'Introduction to Investment Management* . Longhton, Mifflin Company.

Stickel, S. E. (1992, December). Reputation and performance among security analysts. *Journal of Finance.*Vol. 47 pp.1811-1836.

Stickel, S. E., (1998). Analyst incentives and the financial characteristics of Wall Street darlings. *Working paper*. Lasalle University.

Teoh, S. H. , I Welch, and T. J. Wong. (1998). Earnings Management And The Underperformance Of Seasoned Equity Offerings. *Journal of Financial Economics* , Vol.50 ,P

Appendices

Appendix I: Introductory Letter

Misheck M Muema,
Department of Accounting & Finance
Kenyatta University
P.O Box 43844-00100
Nairobi
April 30 2009

Dear Respondent,

I am currently a graduate student at Kenyatta University, studying for the degree of master of business administration (Finance option)

As part of the requirement of the MBA degree course I will be writing a researched project whose objective is to investigate the role of analyst's long term earnings growth forecast and how they influence the stock prices of new issues in the Nairobi stock exchange (Kenya)

Your company has been selected and your participation in this exercise will be highly appreciated as an essential part of the study and hence the request for your assistance in availing the required data. It is my assurance that any information provided will be highly regarded, treated with confidentiality and for academic purposes only.

In the complete manuscript of this research papers the research will provide formal tests that documents the market's Expectations of earnings growth for these companies. The research instruments have been carefully structured to ensure that responses do not reveal inappropriate information.

Further a copy of the results attained will be forwarded to you.

Yours sincerely,

Misheck Mutombi Muema.

Appendix II: Research Instruments

Instructions

Please read and fill the tables carefully.

A Data on common stocks offering within the period (2000 to 2010)

Name of firm	Date of issue	IPO	Rights issue	Bonus issue	

B Data on common stock offering forecasts and affiliation

Name of firm	affiliated	unaffiliated	Offering forecast	Recommended issue price	

C. Data on affiliated analysts forecasts and stock returns.

Name of firm	Issue price	Stock 3 monthly prices/returns 36 after the IPO											
		1	2	3	4	5	6	7	8	9	10	11	12

D Data on fee paid to analysts employers/analysts

1. All affiliated analysts interested to work for

Name of firm	institution	amount	Issue price	Tender awarded or not

2. All unaffiliated analysts interested to make earning growth forecasts

Name of firm	Analysts name	amount	Issue price	Tender awarded or not

E Earning per share (EPS) per quarter

P-- projected earnings by analysts

R--- realized earnings by firms

Name of firms		EPS	1qtr	2	3	4	5	6	7	8	9	10	11	12
	R													
	P													
	R													
	P													
	R													
	P													
	R													
	P													

Appendix III: Listed companies in the NSE market

Main investment market segment

Kakuzi
Rea vipingo plantations
Sasini ltd
Accesskenya group
Care and general
CMCholding
Hutchings biemer
Kenya airways
MarshallsEA
Nation media group
Safaricom ltd
Scangroup
TPSEA(SERENA)
Uchumi super market
Baclays bank
Centum investment co
CFC stanbic holdings
Diamond trust bank
Equity bank
Housing co
Jubilee holdings
KCB Bank
Kenya re corperation
NBK bank
NIC bank
Olympia capital holdings
Pan Africa insurance
Standard chartered bank
Co-operative bank
Athi river mining
B.O.Ckenya
Bamburi cement
BATkenya ltd
Caracid investment
Crown berger
EAcables
EAportland cement
EA breweries
Everaerdy
Konolkobil
KPLC
Kengen
Mumias sugar co
Sameer Africa
Total Kenya
Unga group

Alternative investment segment

City trust
Eaagards
Express kenya
Williamson tea Kenya
Kapchura tea co
Kenya orchards
Limuru tea co

Source:- CMA

Appendix IV: List of Brokers and Investment Bank

Brokers	Investment bank
Kingdom securities	Standard investment bank
Drumond	Apex investment bank
Ngenye Kariuki	CFC bank
Discount securities	Faida investment bank
Ashbhu securities	Dyrer and blair investment bank
Sterling brokers	
Crane securities	
Equity stock brokers	
Guaranteed Audio Video System	
Hark Securities	
Kenya Wide Securities	
Kestrel Capital	
Reliance Securities	
Solid Securities	
Tower and Country Securities	
Crossfield Securities Ltd	

Source:-CMA