

**THE INITIAL AND AFTERMARKET PERFORMANCE OF IPOs: EVIDENCE
FROM THE NAIROBI STOCK EXCHANGE**

BY

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DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

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DEDICATION

To my family and friends: for their inspiration, support, encouragement and understanding in my academic journey.

ACKNOWLEDGEMENT

To God Almighty for His immense blessings and graces which have enabled me complete this course.

Special thanks to my Supervisor Mr. Mohamed Mwachiti, for the support and insightful guidance that has yielded to the successful completion of the study.

To my family for their love, encouragement and unlimited support to see me to the successful completion of the MBA programme.

Lastly to all my friends for their encouragement and support.

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ABBREVIATIONS

AR- Abnormal Returns

CAR- Cumulative Abnormal Returns

IPO- Initial Public Offering

MAIRs- Marginal Initial Average Returns

NSE- Nairobi Stock Exchange

ABSTRACT

An initial public offering (IPO) occurs when a security is sold to the general public for the first time, with the expectation that a liquid market will develop. Most companies start out by raising equity capital from a small number of investors, with no liquid market existing if these investors wish to sell their stock. The performance of IPOs, is therefore important to attract the investors to the market. The initial under-pricing of IPOs is a common phenomenon in every stock market, with the amount of under-pricing, and reasons for under-pricing differing from one market to another.

The purpose of this study was to determine the initial and aftermarket performance of IPOs on the Nairobi Stock Exchange (NSE). The study examines 7 Kenyan IPOs issued on the NSE from 1998 to 2008. It uses descriptive statistics to measure the performance of these IPOs. The initial return on the first day of trading is calculated using the Market Adjusted Initial Return (MAIR) whereas the performance over the 12 month period is calculated using the Cumulative Average Return.

On the first day of trading, an average Market Adjusted Initial Return of 59.69% was reported and a Cumulative Average Return (CAR) of 1.05% was reported at the end of the one year period. This shows a decline in returns over a longer period of trading of the share. The initial underpricing on the first day of trading is consistent with international evidence where new issues consistently find excess returns in the short-run.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

1.1.1 Initial Public Offerings

An initial public offering (IPO) occurs when a security is sold to the general public for the first time, with the expectation that a liquid market will develop (Ritter, 1998). Ritter states that most companies start out by raising equity capital from a small number of investors, with no liquid market existing if these investors wish to sell their stock. If a company prospers and needs additional equity capital, at some point the firm generally finds it desirable to "go public" by selling stock to a large number of diversified investors. Once the stock is publicly traded, this enhanced liquidity allows the company to raise capital on more favorable terms than if it had to compensate investors for the lack of liquidity associated with a privately-held company. Existing shareholders can sell their shares in open-market transactions.

There are various reasons why companies may decide to go public. According to Brau, Ryan and DeGraw (2006), the decision is motivated by three interrelated strategic considerations: growth, ownership control, and liquidity. From their research Brau, Ryan and DeGraw note that the intent of going public is to fund company growth, both immediate and long term. Secondly, there is a strong motivation to retain and preserve ownership control. Third, IPOs are motivated by a desire for liquidity to provide currency for future positive net present value growth opportunities and to preserve management control. Liquidity allows stock to be used as currency to fund expansion, participate in mergers and acquisitions, reduces the reliance on concentrated control by a limited number of large investors, and allows management to increase effective control while diversifying ownership.

1.1.2 Pricing of Initial Public Offerings

Aggarwal, Bhagat and Rangan (2009) note that pricing of initial public offerings (IPOs) occupies an important place in finance, perhaps because an IPO provides public capital market participants their first opportunity to value a set of corporate assets. Pricing of IPOs is also quite relevant from an economic efficiency perspective: the IPO is the first opportunity that managers of such companies get to observe price signals from the public capital markets. Such signals can either affirm or repudiate management's beliefs regarding the firm's future growth opportunities, which have obvious implications for real economic activity (i.e., employment and corporate investment). The IPO price chosen by the underwriter, depends on both the intrinsic value of the company, revealed by institutional investors, and noise trader sentiment: The more favorable noise trader sentiment, the higher the IPO price (Derrien, 2005). However, the information about noise trader sentiment is partially incorporated into IPO prices, and the level of initial return is also positively related to noise trader sentiment. The adjustment to the information about noise trader sentiment is partial because the underwriter is concerned with the aftermarket behavior of IPO shares. Namely, he is committed to providing costly price support if the aftermarket share price falls below the IPO price in the months following the offering. Even though noise trader sentiment is bullish at IPO date, it may turn bearish over the price support period. Therefore, the IPO price results from a trade-off: A higher IPO price increases not only underwriting fees, but also the expected cost of price support. This induces the underwriter to choose a conservative IPO price with respect to the short-term aftermarket price of IPO shares.

1.1.3 Initial and Aftermarket Performance of IPOs

Initial and aftermarket performance of IPOs is influenced by a number of factors. Timing of IPOs are quite varied and have an influence of performance thereafter. Lowery (2002), notes that managers take advantage of bull markets and attempt to capture attractive stock prices for their IPOs. This guarantees that initial performance of the IPO is favourably influenced by market characteristic at the time, which is the bull market. Timing is also driven by the attractiveness of the IPO market. Lowery and Schwert (2002) argue that first-day stock performance of firms going public leads other firms to decide to go public. They argue that firms prefer to go public when other good firms are currently issuing. Firms also go public when they reach a certain point in the business growth cycle and need external equity capital to continue to grow. Another factor influencing aftermarket performance is the underwriter used for the IPO. Gleasona, Johnston, and Maduraa (2008) note that using more reputable investment bank underwriter exhibits a higher level of aftermarket risk. Pricing is another factor that influences initial and aftermarket performance. Other factors influencing performance of IPOs include: the size of the firm, oversubscription rate, ex-ante uncertainty, underwriter reputation, time gap between offering and listing date, age of the firm and industry classification.

1.2 Statement of the Problem

There are various determinants that influence the performance of IPOs. One such factor is the period when the IPO is issued whether it is bullish or bearish market as well as hot or cold IPO market periods. The level of IPO market activity may offer information about prevailing issuers. Lowry and Schwert (2002) argue that the IPO market can signal the market's prevailing valuation of a particular type of private business relative to its fundamentals. Thus, an active IPO market may offer more information about valuations and reduce the uncertainty surrounding firm value.

Another factor that influences the performance is the size of the offer. Gleasona, Johnstone, and Maduraa (2008) argue that larger offerings may result in more new projects and growth and could cause more uncertainty about valuation. However, larger offerings may receive more scrutiny by the market. Inside ownership is another factor that affects performance. Aggarwal, Krigman and Womack (2002) find that under-pricing is positively correlated with the amount of inside ownership and suggest that managers intentionally under-price to maximize their sale price at lockup expiration. The level of inside ownership of the firm could affect the volatility of the stock price in the aftermarket and higher levels of inside ownership could result in lower agency problems. However, it could also cause more volatility if insiders sell their shares in the aftermarket. Inside ownership is measured as the number of retained shares to the number of issued shares.

Gleasona et al., note that there are various firm characteristics that affect the valuation of IPOs. These include: technology, age of firm, size of firm, financial leverage and price to book ratio. Firms in the technology sector may exhibit more aftermarket risk because their future performance levels are normally perceived to be more uncertain. Firms that have a longer history of operations may be viewed as more stable and may be more appropriately priced because of the additional information available. Therefore, these firms may have a lower level of aftermarket risk. Age is measured as the number of years the company has been operating prior to the IPO. Larger companies are more widely followed by analysts, which may result in a lower level of asymmetric information. Smaller firms that are not as widely followed are more likely to reveal new information in the aftermarket. Therefore, larger firms should have less volatility in the aftermarket.

Firms with a higher degree of financial leverage are expected to have more volatile stock prices. Firms that exhibit unusually high stock valuations relative to fundamentals at the time of their IPO may be subject to more uncertainty regarding their price.

Thuo (2009) documents the initial and short run performance of 5 Kenyan IPOs issued between 1998 and 2008 and attempts to explain the reason behind such performance. Her study reports an overall excess return of 70.06% on the first day trading and a return of 0.98% after fifteen months. Investors can outperform the market by buying IPOs during the offer date and subsequently selling them on the first day of trading in the market. However, the study reports a significant drop in the returns from the IPOs over time from an initial return of 70.06% on the first day of trading to an average return of 0.98% at the end of 15 months of the study. An investor who invests in IPOs on the first day is most likely to experience negative returns throughout the period of the study.

IPOs performance in both the short run and long run have been analyzed in different theoretical and empirical studies in the Kenyan and international markets. Njoroge (2004) analysed initial and long run performance of IPOs listed in the Nairobi Stock Exchange during the period 1984-2001. Jumba (2002) studied initial public offers in Kenya for the period 1992-2000 over a period of 3 years after going public. Nabucha (2008) studied IPOs in the NSE for the period 1994-2008 and sought to find out if there existed any difference in the pricing and performance of state owned and private firms. Ndatimana (2008) studied long run performance of IPOs over a five year period for the period 1992-2007. Although there have been few IPOs in the Nairobi Stock Exchange as compared to IPOs in the more developed markets, it is important to add to the existing empirical studies already undertaken on IPO performance.

The aim of this study is to examine the initial and aftermarket performance of IPOs at the Nairobi Stock Exchange. Thuo (2009) also dealt with these issues, but this study is intended to improve on her study by including results from the largest IPO in Kenyan history to date which is the Safaricom IPO as well as including results from Co-operative Bank of Kenya IPO which was undersubscribed.

1.3 Objective of the Study

The objective of the study is to determine the initial and aftermarket performance of Initial Public Offers at the Nairobi Stock Exchange.

1.4 Importance of the Study

This study is important to **management of companies** that may be intending to go public as it will provide case-study information on previous IPOs. Companies intending to go public will be informed on initial and subsequent performance of the stocks.

The study is also important to **shareholders and potential investors** by providing them with facts about IPO performance and how lucrative a company's stock is after the first day of trading. It will also give aftermarket performance trends which would guide the investors into making more informed investment decisions regarding the stocks they purchase.

The study will also be beneficial to **academicians and researchers** as it will contribute to the existing empirical evidence and growing body of knowledge on IPO initial and aftermarket performance in the Kenyan market.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter highlights literature related to works of other scholars and writers related to the topic of the study. The chapter begins with review of literature on initial pricing and aftermarket performance. The chapter also includes an empirical review of studies done on stock market performances vis-à-vis pricing as well as a section on the Nairobi Stock Exchange. The summary of the chapter is provided.

2.2 Initial Pricing of IPOs

There are various factors that influence the initial price of an IPOs. One such factor that influences the price is the size of the offer. Gleasona, Johnstone and Maduraa (2008) argue that larger offerings may result in more new projects and growth and could cause more uncertainty about future pricing. However, larger offerings may receive more scrutiny by the market. Inside ownership is another factor that affects pricing. Aggarwal, Krigman and Womack (2002) find that there is a positive correlation between the amount of inside ownership and pricing, in this case under-pricing. Aggarwal, Krigman and Womack suggest that managers intentionally under-price to maximize their sale price at lockup expiration. The level of inside ownership of the firm could affect the volatility of the stock price in the aftermarket and higher levels of inside ownership could result in lower agency problems. However, it could also cause more volatility if insiders sell their shares in the aftermarket. Inside ownership is measured as the number of retained shares to the number of issued shares.

Kim and Ritter (1999) find only a modest ability to explain the pricing of IPOs using accounting multiples, even when using earnings forecasts. Purnanandam and

Swaminathan (2001) construct a measure of intrinsic value based on industry-matched Price/Sales and Price/Ebitda from comparable publicly traded firms. They find that, when offer prices are used, IPO firms are priced about 50 percent above comparables, which is an enormous difference. They also find that this initial overpricing with respect to comparables helps predict long-run underperformance. Kim and Ritter examine IPO pricing in the US using price-earnings, market-to-book, and price-to-sales multiples of comparable firms. Comparable firms are identified, either as recent IPOs in the same industry or comparable firms chosen by a research boutique that specializes in valuing IPOs. A key finding in their paper is that using earnings forecasts from a research boutique improves the pricing accuracy substantially.

There is abundance of evidence of under-pricing IPOs. The reasons are equally abundant and varied. Gounopoulos (2003) note that many researchers have found that issuers or underwriters are able to successfully time their offerings when the market is optimistic about IPOs in general and when the demand for IPOs is high, in order to achieve a smooth distribution of shares and raise a large amount of capital. Derrien and Womack (2000) suggest that the prevailing market climate plays an important role in determining an IPOs under-pricing. Indeed euphoric or hot market, investors may be overly optimistic about a firm's prospects causing the aftermarket equilibrium price to be greater than in normal conditions. Market climate not only affects the number of successful offerings but also the amount and the variability of IPOs under-pricing. When a market is 'hot' the level of under-pricing may double or even triplicate. If market is 'cold' the level of under-pricing would be much lower.

A number of studies conducted report the existence of initial under-pricing. Loughran and Ritter (2001) point out that under pricing is a form of indirect compensation to underwriters to gain favourable allocation on hot issues. Hoffman-Buchardi (2001) finds that the IPO market is subject to dramatic swings. He reports that the IPO price of one firm serves as feedback mechanism to other IPOs since it can reveal information about a certain common value factor about the prospects for a specific industry and therefore change the value of other firms.

Numerous explanations for under pricing have been advanced. Brau and Fawcett (2006) cite various reasons for under pricing. Asymmetric information between the underwriter and the issuer leads to under-pricing. Underwriters exploit superior market knowledge to under-price issues, minimize marketing effort, and ingratiate themselves with buy-side clients. Under-pricing also exists due to asymmetric information between issuers and potential investors. Investor uncertainty about the IPO firm biases offering prices lower than the unknown future market price. Under-pricing rewards sophisticated investors for divulging accurate valuation information during the book-building process.

Under-pricing serves as a protection against possible future litigation from investors. Under-pricing may also serve a marketing function. It can cause a domino or cascade effect among investors that raises demand for the issue. Habib and Ljungqvist (2001) argue that under-pricing allows for cost savings in other areas of marketing the issue. Demers and Lewellen (2003) assert that under-pricing brings attention to the stock on the opening day and additionally demonstrate that under-pricing increases the after-issue trading volume of the stock. Under-pricing broadens the ownership base after the IPO.

Under-pricing helps ensure a wide base of owners to increase the liquidity of the newly public firm.

Derrien (2005) offers a contrary opinion that IPOs are generally overpriced. He argues that since the underwriter sets an IPO price that is between the company's intrinsic value and the price noise traders are ready to pay, IPO shares are overpriced with respect to their long run intrinsic value. If noise traders are bullish at the time of the offering, underpricing (i.e., the pricing of IPO shares below their true value) is not required to induce informed investors to reveal their information about the firm's value. The incentive to reveal this information is provided by noise traders, who are ready to buy IPO shares at inflated prices on the aftermarket. This situation is beneficial to informed investors who make a short-term profit by flipping their IPO shares, and to the issuer, who sells overpriced shares. Those who leave money on the table are the overoptimistic noise traders who pay excessive prices for IPO shares on the aftermarket.

2.3 Kenyan Stock Market

2.3.1 History and Structure of the Nairobi Stock Exchange

In Kenya, dealing in shares and stocks started in the 1920's when the country was still a British colony. There was however no formal market, no rules and no regulations to govern stock broking activities. Trading took place on a gentleman's agreement in which standard commissions were charged with clients being obligated to honour their contractual commitments of making good delivery, and settling relevant costs. At that time, stock broking was a sideline business conducted by accountants, auctioneers, estate agents and lawyers who met to exchange prices over a cup of coffee. Because these firms were engaged in other areas of specialization, the need for association did not arise.

In 1954, The Nairobi Stock Exchange was constituted as a voluntary association of stockbrokers registered under the Societies Act. In the year 2000, there was a notable achievement that thrust the stock exchange to the next level. The Central Depository System (CDS) Act and the amended CMA Act (which covered Collective Investment Schemes (CIS)) were passed by Parliament and received presidential assent, paving the way for the full implementation of the CDS and for the introduction of collective investment schemes in the Kenyan market.

There are 59 listed companies (55 equities, 7 corporate bonds 3 of which have listed equities). There are over 60 Government of Kenya treasury bonds listed on the fixed income segment of the securities exchange. The market regulator is the Capital Markets Authority of Kenya CMA (K). The Authority is a government body mooted in 1989, under the Ministry of Finance and through the Capital Markets Authority Act Cap 485A (the CMA Act). The Authority was established to regulate and oversee the orderly development of Kenya's capital markets.

The instruments traded are equities, preference shares, treasury bonds and corporate bonds. There are 2 indices used: NSE All Share Index (NASI) and NSE 20-Share Index. NASI is market capitalization weighted, while NSE 20 Share Index is geometric Mean of 20 Companies share prices. Delivery and settlement of shares is done via the Central Depository and Settlement Corporation (CDSC).

NSE has the following Three market Segments:

1. Main Investments Market Segment (MIMS)
2. Alternative Investments Market Segment (AIMS)
3. Fixed Income Securities Market Segment (FISMS)

2.3.2 Listing Process and Regulations on the NSE

According to the NSE's Listing Manual (n.d.) and the CMA's (2002) Capital Markets Securities, Public Offers Listing and Disclosure Regulations there are different procedures for listing on the main investment market segment (MIMS), the alternative investment market segment (AIMS) and the fixed income securities market segment (FISMS). The listing procedures for the MIMS are given below as the population of the study will be drawn from this segment.

The issuer to be listed shall be a public company limited by shares and registered under the Companies Act (Cap. 486 of the Laws of Kenya). The issuer shall have a minimum authorized issued and fully paid up ordinary share capital of fifty million shillings. Net assets immediately before the public offering or listing of shares should not be less than one hundred million shillings.

Shares to be listed shall be freely transferable and not subject to any restrictions on marketability or any preemptive rights. The issuer shall have audited financial statements complying with International Financial Reporting Standards (IFRS) for an accounting period ending on a date not more than four months prior to the proposed date of the offer or listing for issuers whose securities are not listed at the securities exchange, and six months for issuers whose securities are listed at the securities exchange. The Issuer must have prepared financial statements for the latest accounting period on a going concern basis and the audit report must not contain any emphasis of matter or qualification in this regard.

At the date of the application, the issuer must not be in breach of any of its loan covenants particularly in regard to the maximum debt capacity. As at the date of the application and for a period of at least two years prior to the date of the application, no director of the issuer shall have any petition under bankruptcy or insolvency laws in any jurisdiction pending or threatened against the director (for director (for individuals), or any winding-up petition pending or threatened against it (for corporate bodies); any criminal proceedings in which the director was convicted of fraud or any criminal offence, nor be named the subject of pending criminal proceeding, or any other offence or action either within or outside Kenya; or been the subject of any ruling of a court of competent jurisdiction or any governmental body in any jurisdiction, that permanently or temporarily prohibits such director from acting as an investment adviser or as a director or employee of a stockbroker, dealer, or any financial service institution or engaging in any type of business practice or activity in that jurisdiction.

The issuer must have suitable senior management with relevant experience for at least one year prior to the listing, none of whom shall have committed any serious offence in any jurisdiction that may be considered inappropriate for the management of a listed company. The issuer shall ensure continued retention of suitably qualified management during listing and no change of management for a period of twelve months following the listing other than for reason of a serious offence that may be considered to affect the integrity or be inappropriate for management of a listed company. The issuer must have at least a third of the Board as non executive directors.

The issuer must have a clear future dividend policy. The issuer should not be insolvent and the issuer should have adequate working capital. Following the public share offering

or immediately prior to listing in the case of an introduction, at least twenty five per centum of the shares must be held by not less than one thousand shareholders excluding employees of the issuer.

In the case of a listing by introduction, the issuer shall ensure that the existing shareholders, associated persons or such other group of controlling shareholders who have influence over management shall give an undertaking not to sell their shareholding before the expiry of a period of twenty four months following listing and such undertaking shall be disclosed in the Information Memorandum

2.4 Initial and Aftermarket Performance of IPOs

There is abundance of evidence of under-pricing IPOs. The reasons are equally abundant and varied. Gounopoulos (2003) notes that many researchers have found that issuers or underwriters are able to successfully time their offerings when the market is optimistic about IPOs in general and when the demand for IPOs is high, in order to achieve a smooth distribution of shares and raise a large amount of capital. Derrien and Womack (2000) suggest that the prevailing market climate plays an important role in determining an IPOs under-pricing. Indeed euphoric or hot market, investors may be overly optimistic about a firm's prospects causing the aftermarket equilibrium price to be greater than in normal conditions. Market climate not only affects the number of successful offerings but also the amount and the variability of IPOs under-pricing. When a market is 'hot' the level of under-pricing may double or even triplicate. If market is 'cold' the level of under-pricing would be much lower.

Brau and Fawcett (2006) note that although the under-pricing may be motivated by various factors, such as investment bank legal liability or ensuring a fully subscribed offering, most factors are related to the degree of risk surrounding the market price on the day of the IPO. However, the risk surrounding the price at the time of the IPO is different from the risk of the stock in the aftermarket. Firms whose IPOs were underwritten by investment banks with a more favourable reputation experience less under-pricing. This relationship may be attributed to the screening by reputable investment banks to underwrite offerings that have relatively low risk. However, the lower level of under-pricing of IPOs underwritten by reputable investment banks could be due to the fact that the market has more confidence in the pricing by these investment banks at the time of the IPO. This does not necessarily mean that reputable investment banks effectively screen out firms that exhibit a high level of risk. Consequently, the investment bank reputation may not serve as a useful indicator of aftermarket risk. Under-pricing also exists due to asymmetric information between issuers and potential investors. Investor uncertainty about the IPO firm biases offering prices lower than the unknown future market price. Under-pricing rewards sophisticated investors for divulging accurate valuation information during the book-building process.

Under-pricing serves as a protection against possible future litigation from investors. Under-pricing may also serve a marketing function. It can cause a domino or cascade effect among investors that raises demand for the issue. Habib and Ljungqvist (2001) argue that under-pricing allows for cost savings in other areas of marketing the issue. Demers and Lewellen (2003) assert that under-pricing brings attention to the stock on the opening day and additionally demonstrate that under-pricing increases the after-issue trading volume of the stock. Under-pricing broadens the ownership base after the IPO.

Under-pricing helps ensure a wide base of owners to increase the liquidity of the newly public firm.

Derrien (2005) offers a contrary opinion that IPOs are generally overpriced. He argues that since the underwriter sets an IPO price that is between the company's intrinsic value and the price noise traders are ready to pay, IPO shares are overpriced with respect to their long run intrinsic value. If noise traders are bullish at the time of the offering, underpricing (i.e., the pricing of IPO shares below their true value) is not required to induce informed investors to reveal their information about the firm's value. The incentive to reveal this information is provided by noise traders, who are ready to buy IPO shares at inflated prices on the aftermarket. This situation is beneficial to informed investors who make a short-term profit by flipping their IPO shares, and to the issuer, who sells overpriced shares. Those who leave money on the table are the overoptimistic noise traders who pay excessive prices for IPO shares on the aftermarket.

There are various theoretical models that attempt to explain the phenomena of underpricing with the IPOs. These models may be applicable to some markets not others due to disclosure and listing requirements and also institutional environment. Most of the literature attributed the phenomena of underpricing to asymmetry information which exist among three participants in the IPO process, the underwriter, the issuing firm and the investor themselves. Academic theories hypothesise that one of these three participants have access to "superior" information for the IPO, therefore they are able to determine the price.

The Winner's Curse

Peng (2005) notes that the most cited in IPO under price literature is the result of winner's curse. Peng notes that the Rock's (1986) model, winner's curse is an application of Akerlof's (1970) lemon problem. It explained that the IPO market consists of two groups of investors: the informed investors who have the superior knowledge on the true value of the issues and uninformed investors, who lack the special knowledge to correctly value, the issue. Due to this information asymmetry, informed investors compete to subscribe for the IPO only when the aftermarket price exceed the offering price thereby creating an adverse selection problem where the probability of uninformed investor subscribe the IPO higher and end up purchasing overprice offering. Therefore, uninformed investors who are aware of the winner's curse and have little knowledge of the IPO will generally avoid subscribe to the bad issue. In order to keep uninformed investors interest, Rock's article suggest that issuing firm are required to sell at a discount on the issue price.

Under-pricing and ex-ante uncertainty

Peng (2005) cites Beatty and Ritter (1986) who examined the effects of investment bank reputation and share value uncertainty on IPO under-pricing. The share value uncertainty is referred as "ex-ante uncertainty." Beatty et al., argued that the greater the level of ex-ante uncertainty, the higher level of under-pricing. They suggested that the underwriter plays important roles in enforcing equilibrium in which firms that are relatively riskier are under-priced more. As the reputation of investments banks are at stake, underwriters select offering prices which are regarded as neither too high nor too low to ensure their market share in underwriting IPOs. Beatty and Ritter use indirect and mostly accounting information to investigate the impact of investor's uncertainty on IPO under-pricing.

Signaling Models

Peng (2005) note that Leland and Pyle's (1977) model was one of the first signaling models which described the issuer's function in the IPO process. Their model was a simple static equilibrium model where the ownership retention rate signaled to investors the quality of the issuer. They argued that the level of retention of shares by original shareholders can be a convincing signal of firm value to outsiders. This idea is very much tied to the principal-agent conflict which should be less of a problem when owners of the company retain a large amount of shares after the IPO, thus these companies are regarded as the ones that are of high quality. Investors are expected to make their IPO purchasing decisions based upon this crucial information. Peng further cites Titman and Trueman who used the quality of the auditing firm's reputation as a signal in their model. When companies decide to float shares on secondary markets, auditors are usually employed as independent valuers of the company's financial status and they prepare the financial information which is to be included in the prospectuses. It is perceived that some auditors offering the service are known for higher quality standards.

Gounopoulos (2003) suggests that investors purchasing IPOs at the offer price earn high returns on initial trading day. He undertakes a multivariate regression analysis on the determinants of the initial performance of IPOs and shows that market condition, demand multiple, cold periods, hot periods and offer price independence (OPI), significantly affects the under-pricing level of the IPOs, which in turn have an adverse effect on the performance of the aftermarket. The actual initial return of an IPO would be predictable if there is a strong positive relationship between ex ante uncertainty and the under-pricing level. As this relationship is not significant, the initial performance of IPOs is not

predictable when using the proxies of operating history of the company, gross proceeds, underwriter and auditor reputation, ownership retention rate, and time to listing.

Brau, Ryan and DeGraw (2006) note that after-market returns are influenced by several factors. Increased first-day returns are associated with the presence of unique, difficult to value assets, such as patents and by planned increases in debt. One-year and three-year abnormal returns are adversely influenced by: reported plans for immediate growth providing support for the overinvestment hypothesis; by management reservations about increased public scrutiny; and by strong initial market conditions supporting the window of opportunity hypothesis. Brau, Ryan and DeGraw note that firms with unique assets or technologies such as proprietary patents and trade secrets, are more difficult to value and certify at IPO time. Firms have private information about the caliber of their projects that is costly for third parties to learn. The associated higher costs of information production are partially adjusted, and expected to result in higher first-day IPO returns. CFO responses appear to support this assertion. Greater reported benefits from patent and copyright ownership are associated with higher first-day returns. The positive relationship between ex ante risk and first-day IPO returns has long been presumed. In this case, the amount of debt can be considered a proxy for risk. CFOs planning to add more debt within the next two years, a risk-increasing move, are associated with higher first-day IPO returns. On the other hand, those increasingly likely to reduce or hold debt structures stable are associated with lower first-day returns.

2.4 Empirical Studies on Pricing and Stock Performance

The prospectus of every initial public offering (IPO) provides a lengthy list of factors that exposes investors to risk when investing in an IPO. However, this list is not useful for distinguishing among IPOs for investors who plan to hold IPO shares in the aftermarket. Aftermarket risk is higher for firms that experienced a higher level of under-pricing (an *ex ante* measure of risk) at the time of the IPO. Thus, under-pricing not only reflects the uncertainty at the time of the offering, but also is a useful indicator of aftermarket risk. Using more reputable investment bank underwriters exhibit a higher level of aftermarket risk, which is contrary to the results found by some studies that used under-pricing at the time of the offering as a measure of risk (Gleasona, Johnston, and Maduraa, 2008).

According to Booth and Chua (1996), issuers' demand for a liquid aftermarket creates incentives for underpricing. They argue that oversubscription for a new issue induces broad initial ownership, which in turn increases secondary market liquidity. However, broad initial ownership increases investor-borne information costs, which must be offset through the initial offer price, which they argue is essentially underpriced. Therefore, they suggest that underpricing is a positive function of ownership dispersion and secondary-market liquidity.

How share retention affects liquidity is far less clear. According to Zheng, Ogden and Jen (2003), underpricing boosts liquidity, especially when the proportion of shares retained by pre-IPO owners is large. They argue that when more shares are retained (i.e. the number of shares floating in the market is reduced), a stock's liquidity declines. However, this share-floating effect is only one of the possible aspects related to share retention. Examining other factors helps define the relation between share retention and aftermarket

liquidity. Peng (2005) did a number of empirical studies based on the Malaysian market. In her research she noted that IPOs are generally underpriced as supported by a number of theoretical models which included: the winner's curse, signaling model and ex-ante uncertainty. She concludes that IPO are generally underpriced to reduce aftermarket risk, which will ensure aftermarket performance is favourably guaranteed.

Njoroge (2004) analyzed initial and long run performance of IPOs for companies listed in the Nairobi Stock Exchange during the period 1984-2001. From a sample of 14 IPOs, he observed that all the IPOs recorded an overall negative cumulative growth of -68.46%.

Jumba (2002) studied the initial public offers in Kenya for the period 1992-2000. Using a sample of 9 IPOs, she found that the average daily return is 0.06% in 3 years after going public, whereas a market model produced daily returns of 0.3% over the same period. She also found out that for 3 years buy and hold period, all IPOs produced below the market average Beta values below 1.

Nabucha (2008) in her study of IPOs in the NSE for the period 1984-2008 sought to find if there existed any difference in the pricing and performance of state owned and private firms. She found that both IPOs depicted negative cumulative abnormal returns of 32% and 6% respectively. She concluded that a long term investor was better of investing in the privatization IPOs as compared to private IPOs.

Ndatimana (2008) studied the long run performance of IPOs over a five year period for the period 1992-2007. He found that the average cumulative returns fall to -3.1% after the first three months down further to -6.17% at the end of the first year, and randomly traces

-1.92%, 0.68%, -1.72% and 8.66% at the end of the 2nd, 3rd, 4th and 5th year respectively. He concluded that there is no discernible regularity of long run performance when gauged against the market benchmarks. Using wealth relatives defined as the average gross total return on IPOs divided by the average gross return on the market index, both measured over 5 years after the IPO excluding the initial return, he found that the wealth relative was 1.0766 at the 5th anniversary and -1.017 at the third anniversary. He asserted that any underperformance for the first three years reverses by the 5th year.

Thujo (2009) studied initial and shortrun performance of 5 Kenyan IPOs issued between 1998 and 2008. The findings of her study indicated that the level of under-pricing is directly related to the market capitalization of the IPOs, market volatility before the issue and the ex-ante uncertainty surrounding the issue.

2.5 Summary

There are various factors that influence the valuation of IPOs. One such factor is the period when the IPO is issued whether it is bullish or bearish market as well as hot or cold IPO market periods. Another factor that influences the valuation is the size of the offer. Larger offerings may result in more new projects and growth and could cause more uncertainty about valuation. Various firm characteristics affect the valuation of IPOs. These include: technology, age of firm, size of firm, financial leverage and price to book ratio.

Prevailing market climate plays an important role in determining an IPOs under-pricing. Indeed euphoric or hot market, investors may be overly optimistic about a firm's prospects causing the aftermarket equilibrium price to be greater than in normal

conditions. Under-pricing is a form of indirect compensation to underwriters to gain favourable allocation on hot issues. IPO price of one firm serves as feedback mechanism to other IPOs since it can reveal information about a certain common value factor about the prospects for a specific industry and therefore change the value of other firms. Theories of under-pricing discussed were: Winners curse, Under-pricing and ex-ante uncertainty and signaling models.

The current study used suitable methods to achieve the objective of determining initial and aftermarket performance of IPOs on the Nairobi Stock Exchange.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This section outlines the research design used in this study, study population and sample, data collection and selection and finally how the data was analysed.

3.2 Population and Sample

The population of interest was the eleven companies that issued IPOs at the NSE between 1996 -2008. These include: Kenya Airways, Rea Vipingo, Athi River Mining, Mumias Sugar Company, Kengen, Scangroup, Access Kenya, Eveready, Kenya Re, Safaricom and Co-operative Bank of Kenya Limited. A census was conducted for the companies that issued IPOs at the NSE between 1996 and 2008 because the population size is quite small. However, data was only available for seven companies that issued IPOs from 1998 to 2008. Prior to 1998, there were no records of the exact offering dates and the first day of trading was recorded in terms of months only. This information was necessary in calculation the initial returns and the market adjusted initial returns..

3.3 Data Collection Methods

The collection of data for this study was from secondary sources. The IPOs sample data was collected from announcements reported in the NSE database. The database contains the most comprehensive and reliable information of the firms listed on the Stock Exchange available. (www.nse.co.ke)

The daily prices of the IPOs and the NSE 20 Share index were recorded and used to analyse the initial and after market performance of the stocks relative to the market. The offer prices of the new issues at and their respective prices at the end of the first day of

trading were used to calculate the MAIRs in order to determine the performance of the IPO stock. The excess MAIR was measured by subtracting the market return from the IPO return. Daily returns on the NSE- 20 Share index which is the benchmark of market return was used as a proxy for the market return.

The prices of the IPOs in the sample were observed for 12 periods with each period consisting of 30 days. These monthly prices were used to calculate the cumulative average market adjusted return (CARs) so as to evaluate the performance of IPOs in the market over time to see if the IPOs are able to sustain their abnormal returns over the sample period.

The other details about the individual characteristics of the new issues, (market value, amount raised and proportion of equity offered) were obtained from the NSE handbook, stock issue prospectuses, annual companies' handbooks, individual annual company reports, NSE website and the individual companies' websites.

3.4 Data Analysis Methods

3.4.1 Initial Return

The study measured the initial performance using the conventional method where the raw initial return on the first day of trading was calculated as follows:

$$R_{i1} = \frac{P_{i,1} - P_{i,0}}{P_{i,0}} \quad (1)$$

Where P_{i1} is the price stock i at the close of the first trading day, P_{i0} is the offer price and R_{i1} is the total first day return on the stock.

The initial return was adjusted for market changes taking into account movements of the Nairobi Stock Exchange 20-Share Index between the closing date and the first day of trading. Raw initial return, which is calculated by the above equation, is ideal in a market that we do not have opportunity cost, and no time lag between the closing day and the first day of trading in the stock exchange. During this period major changes in market conditions could occur, and more information can be revealed. This had as a result the initial return measured to be a result of changes in market conditions rather than initial mispricing by the underwriters. So the raw initial return is adjusted for market changes.

The return on the market index during the same time period is:

$$R_{m1} = \frac{(P_{m1} - P_{m0})}{P_{m0}} \quad (2)$$

where P_{m1} is the NSE – 20 share index value at the close of the first trading day, P_{m0} is NSE- 20 share index value on the offer day and R_{m1} is the total first day's comparable market return.

Using these two returns, the market adjusted initial return for each IPO on the first day of trading was computed as follows:

$$MAIR_{i1} = 100 \times \{ [1 + R_{i1}] / [1 + R_{m1}] - 1 \}$$

Studies which have used this method are: Finn and Higham (1988), Lee and Taylor (1996), Uddin (2000), and Gounopoulos (2003). Due to the length of the time lag between the offer date and the first trading day of the IPO, adjustments will take into account both the changing market conditions and opportunity costs of the money deposited with the application. In the cases shares are undersubscribed, the applicant is allocated the amount of shares applied for so the adjustment for market changes would

take into account the effect of the opportunity cost of capital" (Uddin 2000). In the case shares are oversubscribed then rationing should be applied and there is an opportunity cost lost for the money deposited with the application.

3.4.2 Aftermarket Return

This was calculated using cumulative average returns (CARs) as follows:

Abnormal return for firm i is

$$ar_{it} = r_{it} - r_{bt}$$

where r_{it} is the return for the firm i in the month t

r_{bt} is the return on the NSE index in month t

This was calculated for month 1, month 3, month 6 and month 12 after the first day of trading. These are intervals for which results of performance of the IPOs would provide short term investors with useful information to enable them make decisions to hold or sell their IPO shares.

The after-market adjusted return for each stock is defined as relative price change from closing price at the end of first trading day to closing price at the end of second day less the equivalent change in market return and so on.

The average market adjusted return on a portfolio of n IPOs for day t is the equally weighted arithmetic average of the market adjusted returns:

$$AR_t = 1/n \sum^n Arit$$

The data gathered was tabulated and analysed by the use of descriptive statistics with the help of the use of SPSS and MS Excel, to provide a summary of the information gathered and in order to be able to analyse the characteristics of the variables. The results of the data analysis were presented in forms of tables and graphs.

CHAPTER FOUR

4.0 DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter discusses the findings of the study based on the analysis and interpretation of data collected. The results on initial returns are shown in section 4.2. Section 4.3 presents the results on the market adjusted initial returns while section 4.4 shows the results on abnormal returns. Section 4.5 presents the discussion of findings.

4.2 Initial Returns – IPO Underpricing

The initial returns on IPOs were calculated for seven firms that had complete data for the period. The initial returns are for end of first day of trading. As shown, the raw initial returns averaged 65%. This means that the IPOs were underpriced by an average of 65%. As shown, Kengen was the most underpriced by 236% while Cooperative bank the least underpriced IPO by 10%. Scangroup was underpriced by 43%, Eveready by 15%, Access Kenya by 34%, Kenya Re by 68% and Safaricom by 47%.

Table 1: Initial Returns on IPOs

Company	Initial Return
Kengen	236.13
Scangroup	43.54
Eveready East Africa	15.79
Access Kenya group	34.50
Kenya Re	68.42
Safaricom Ltd	47.00
Co-operative Bank of Kenya	10.00
Average	65.06

4.2.1 Data on Individual Companies

4.2.2.1 Kenya Airways

The company belongs to the commercial and services sector of the Nairobi Stock Exchange. The company listed on the NSE in March 1996, offering 235,423,896 shares up for sale. This represented 51% of the government stake in the company. The initial share price was Ksh 11.25 and the first day of closing was Ksh 12.55

On the first day of trading in Kenya Airways shares on the Nairobi Stock Exchange (NSE), prices ranged from KSh 11.95 per share to KSh 15 per share, and closed at the end of the day at KSh 12.75. A total of 298,000 Kenya Airways shares were traded on the first day of trading in the shares and they amounted to 67% of activity (by number of shares) on the NSE. Over the first week as a whole, 2.6 million shares of Kenya Airways were traded, and these trades accounted for 52% of the transactions on the NSE. The price of Kenya Airways shares at the end of the week fluctuated between KSh 13.5 and KSh 14.0. The stock was oversubscribed by 194%.

However, information on first month and first year of trading was not available.

4.2.2.2 Rea Vipingo

The company belongs to the Agricultural sector of the Nairobi Stock Exchange. The company listed in 1996. The initial share price was Ksh 10.50 and the first day closing price was Ksh 12.00

The stocks' subscription rate was 216% and number of shares on offer was 8,000,000. Information on first month and year of trading was not available.

4.2.2.3 Athi River Mining

The company belongs to the Industrial and Allied sector of the Nairobi Stock Exchange. The company listed in 1997. The initial share price was Ksh 12.25 and the first day closing price was Ksh 12.60

The stocks' subscription rate was 250% with 23,000,000 shares on offer. Information on first month and year of trading was not available.

4.2.2.4 Mumias Sugar Comany

The company belongs to the Industrial and Allied sector of the Nairobi Stock Exchange. The company listed in November 2001. The initial share price was Ksh 6.25 and the first day closing price was Ksh 6.25

The stocks' subscription rate was 60% with 300,000,000 shares on offer. Figure 4.1 below shows the one month average trading range of the stock. The initial black portion of the graph shows the difference between offer price and first day of closing price which in this stock was the same. Over the first month of trading the price was relatively constant. The first year of trading shows a decline in the price of the stock as shown in figure 4.2.

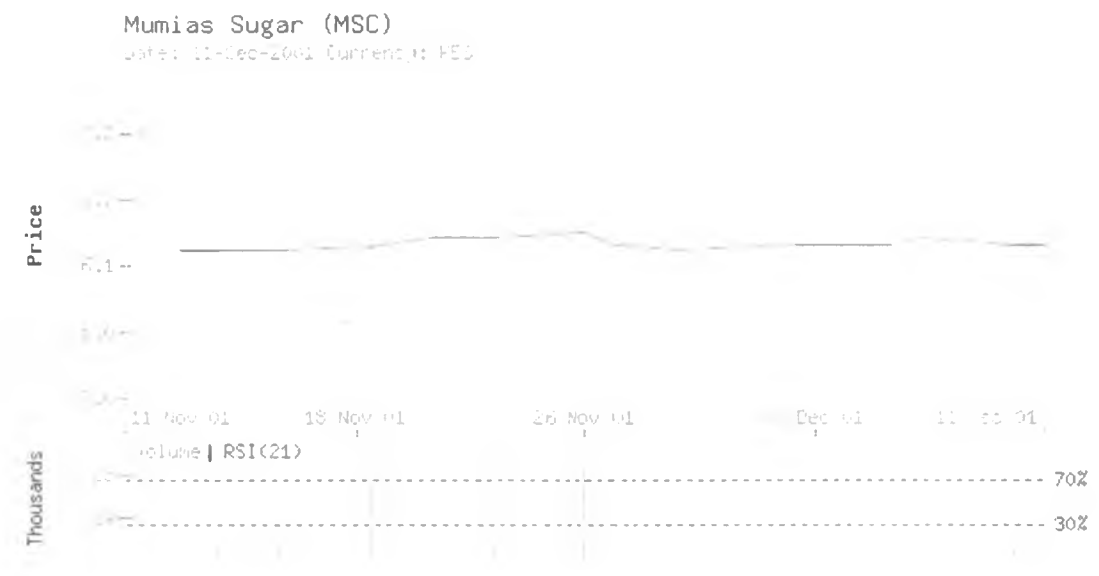


Figure 4.1: Mumias Sugar 30 day average share price

Mumias Sugar (MSC)

Date: 11-Nov-2002 Currency: KES

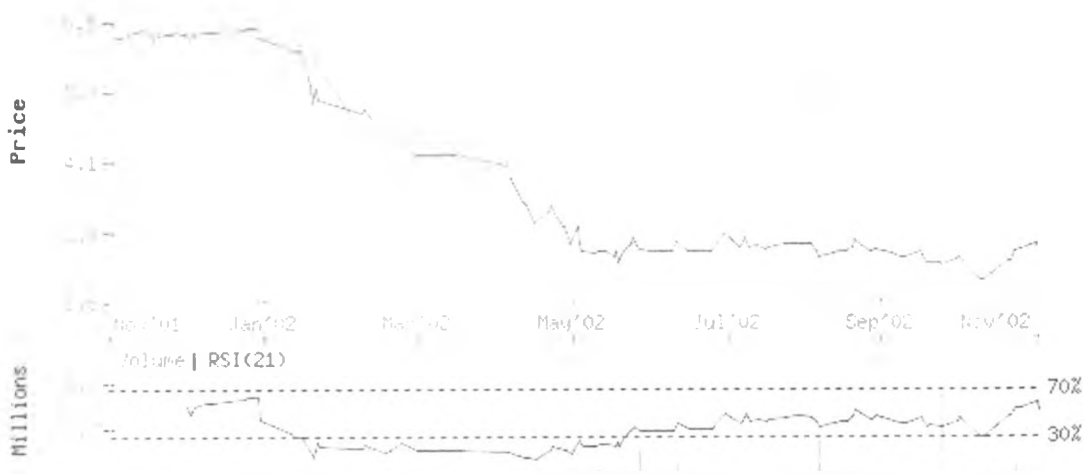


Figure 4.2: Mumias Sugar 1 year average share price

Mumias had a missing date of offer, hence it was dropped from the sample.

4.2.2.5 Kengen

The company belongs to the Industrial and Allied sector of the Nairobi Stock Exchange. The company listed in 2006. The initial share price was Ksh 11.90 and the first day closing price was Ksh 40.00

The stock subscription rate was 337% with 659,508,437 shares on offer.

Figure 4.3 below shows the first month of trade average trend. The initial part of the graph (black line) shows the sharp increase between share offer price and first day of closing. Over the first month, the price was still much higher than the offer price and over the first year (figure 4.4) the price declined but was still higher than the offer price.

KenGen (KEGN)

Date: 16-Jun-06 Currency: KES



Figure 4.3: Kengen 30 Day Average Share Price

KenGen (KEGN)

Date: 16-Apr-07 Currency: KES

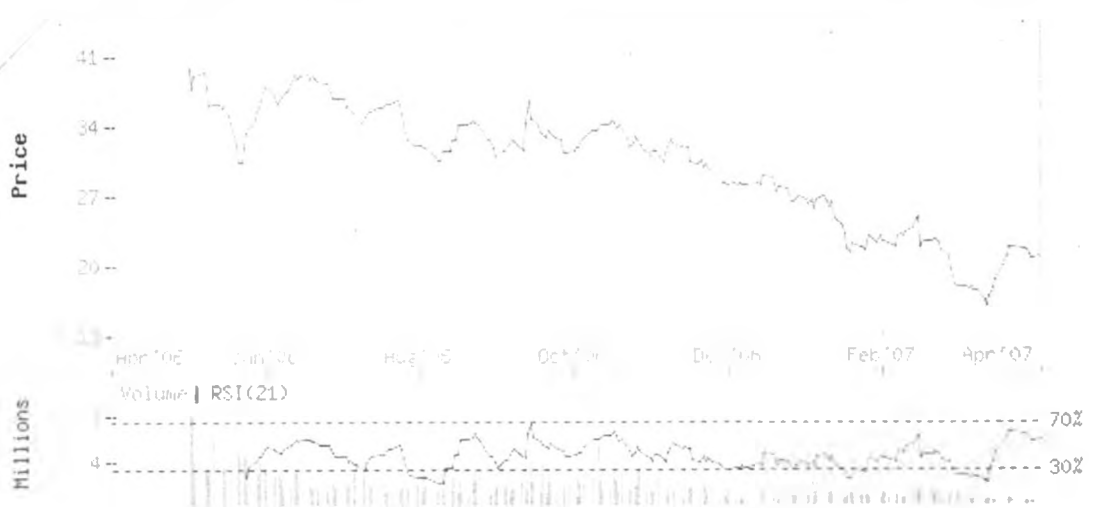


Figure 4.4: Kengen 1 Year Average Share Price

4.2.2.6 Scan Group

The company belongs to the Commercial and Services sector of the Nairobi Stock Exchange. The company listed in 2006. The initial share price was Ksh 10.45 and the first day closing price was Ksh 15.00.

The subscription rate was 621% with 69,000,000 shares on offer.

Figure 4.5 below shows the first month of trade average trend. The initial part of the graph (black line) shows the increase between share offer price and first day of closing. Over the first month, the price was still much higher than the offer price and over the first year (figure 4.6) the price remained fairly stable.

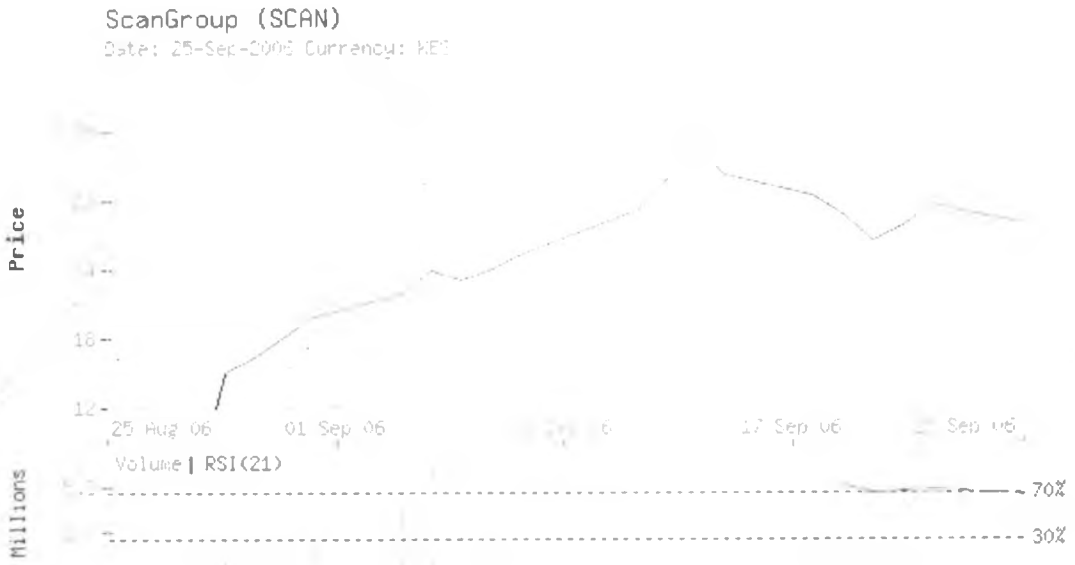


Figure 4.5: Scan Group 30 Day Average Share Price

ScanGroup (SCAN)

Date: 27-Aug-2007 Currency: KES



Figure 4.6: Scan Group 1 Year Average Share Price

4.2.2.7 Access Kenya

The company belongs to the Commercial and Services sector of the Nairobi Stock Exchange. The company listed in 2007. The initial share price was Ksh 10.00 and the first day closing price was Ksh 13.45

The subscription rate was 363% with 80,000,000 shares on offer.

AccessKenya (ACCS)

Date: 29-Jun-2007 Currency: KES

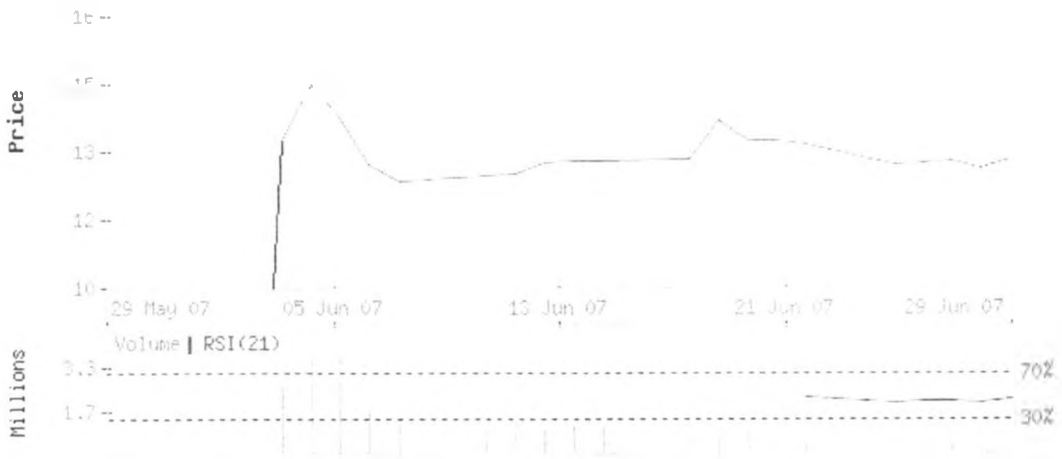


Figure 4.7: Access Kenya 30 Day Average Share Price

Figure 4.7 above shows the first month of trade average trend. The initial part of the graph (black line) shows the increase between share offer price and first day of closing. Over the first month, the price was higher than the offer price and over the first year (figure 4.8 below) the price steadily increased.

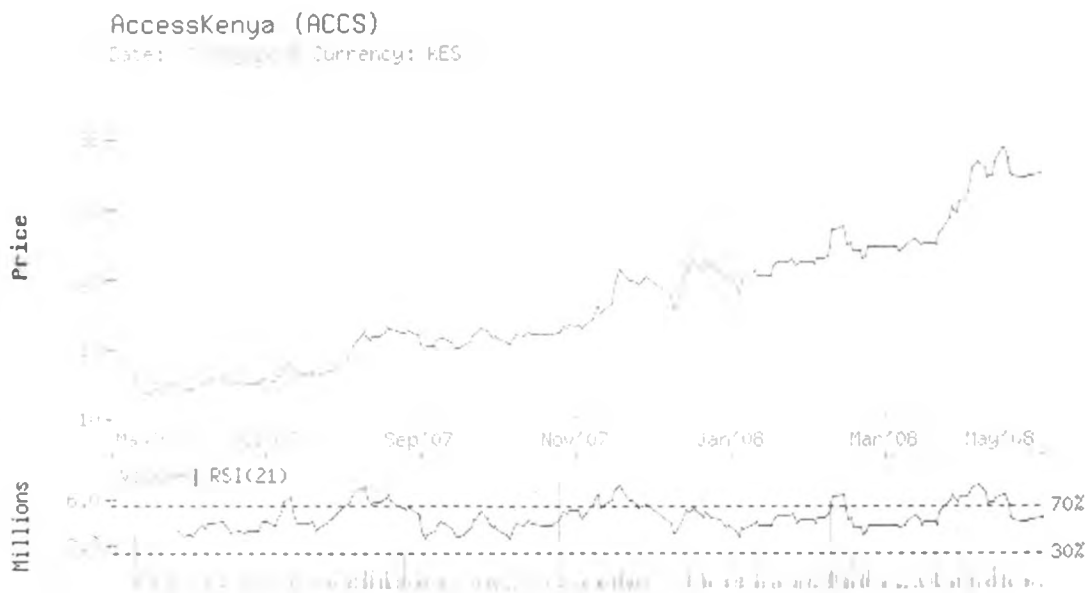


Figure 4.8: Access Kenya 1 Year Average Share Price

4.2.2.8 Eveready

The company belongs to the Industrial and allied sector of the Nairobi Stock Exchange. The company listed in 2006. The initial share price was Ksh 9.50 and the first day closing price was Ksh 11.00

The subscription rate was 614% with 63,000,000 shares on offer.

Figure 4.9 and 4.10 below show the share price averages for the first month and first year of trading respectively. Figure 4.9 shows the increase in share price vis-à-vis offer price and first day of trading closing price. The first month's price was relatively higher than the offer price with the stock steadily declining to below offer price in the first year.

Eveready (EVRD)

Date: 12-Jan-2007 Currency: KES

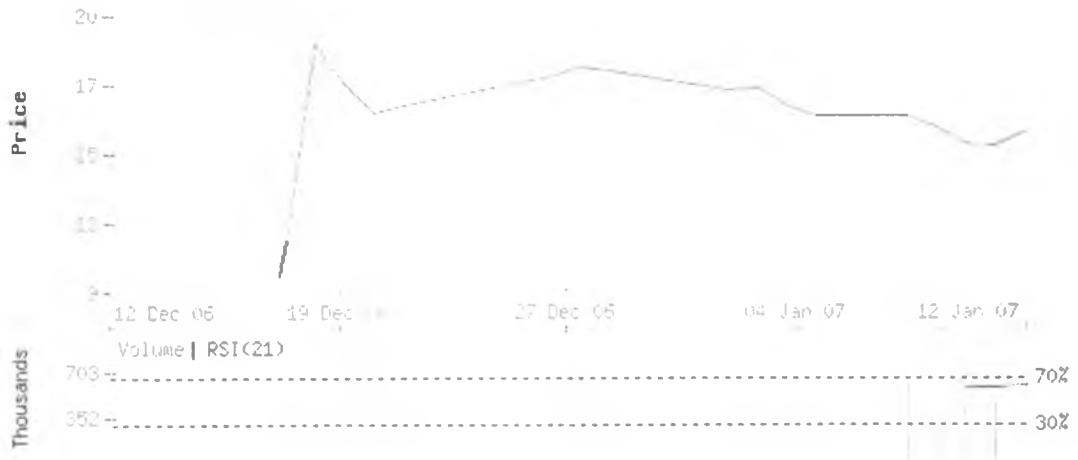


Figure 4.9: Eveready 30 Day Average Share Price

Eveready (EVRD)

Date: 14-Dec-2007 Currency: KES

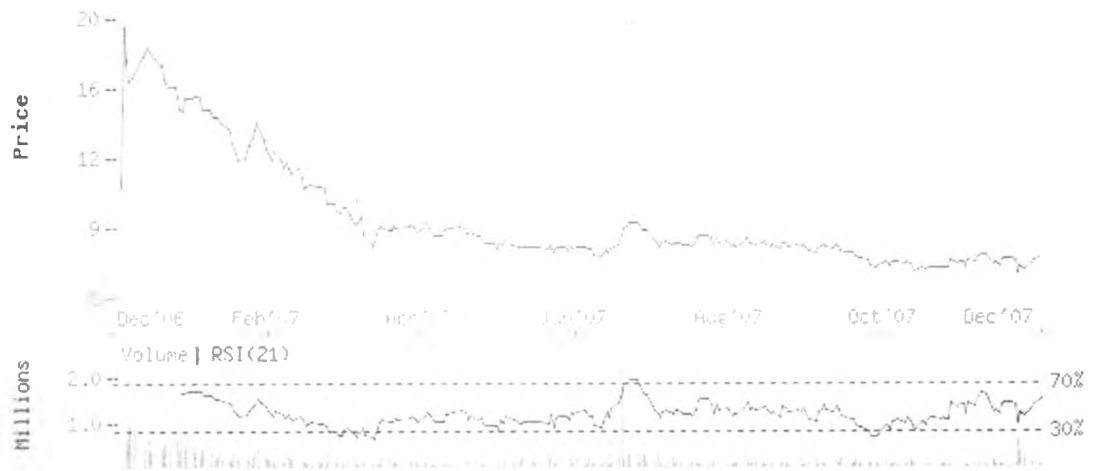


Figure 4.10: Eveready 1 Year Average Share Price

4.2.2.9 Kenya Re

The company belongs to the Finance and Investment sector of the Nairobi Stock Exchange. The company listed in 2007. The initial share price was Ksh 9.50 and the first day closing price was Ksh 16.00

The subscription rate was 340% with 240,000,000 shares on offer.

Figure 4.11 and 4.12 below show the share price averages for the first month and first year of trading respectively. Figure 4.11 shows the increase in share price vis-à-vis offer price and first day of trading closing price. The first month's price was relatively higher than the offer price with the stock remaining fairly steady over the first one year, but the price still being higher than the offer price.

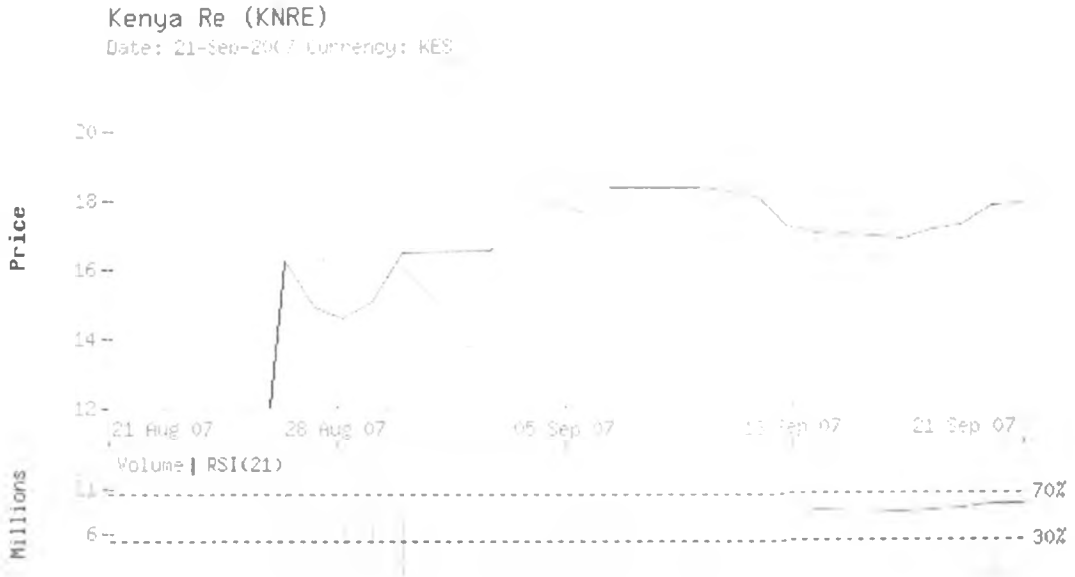


Figure 4.11: Kenya Re 30 Day Average Share Price

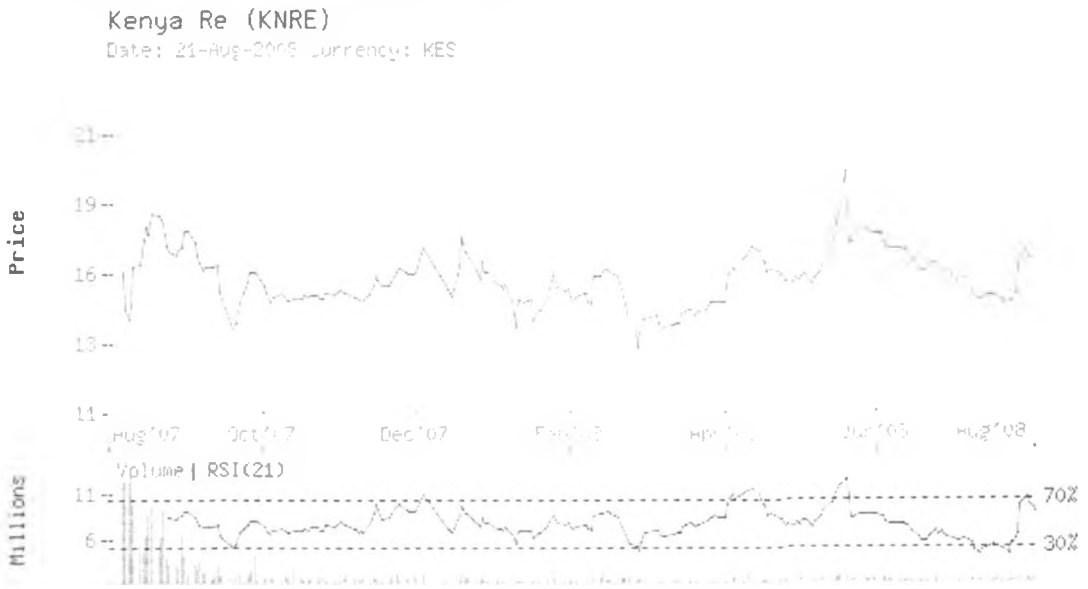


Figure 4.12: Kenya Re 1 Year Average Share Price

4.2.2. 10 Safaricom

The company belongs to the Commercial and Services sector of the Nairobi Stock Exchange. The company listed in 2008. The initial share price was Ksh 5.00 and the first day closing price was Ksh 7.35

The stocks' subscription rate was 532% with 10,000,000,000 shares on offer. Figure 4.13 and 4.14 below show the share price averages for the first month and first year of trading respectively. The first month's price was relatively higher than the offer price with the stock steadily declining over the first year, with the price declining to way below offer price.

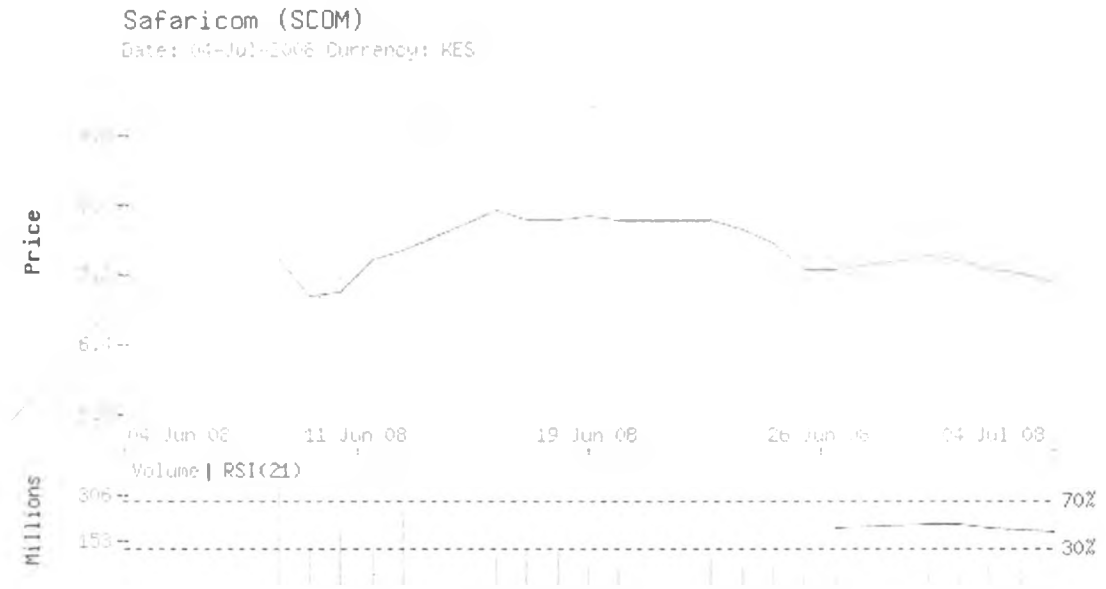


Figure 4.13: Safaricom 30 Day Average Share Price

Safaricom (SCOM)

Date: 01-Jun-2009 Currency: KES



Figure 4.14: Safaricom 1 Year 30 Day Average Share Price

4.2.2.11 Cooperative Bank

The company belongs to the Finance and Investment sector of the Nairobi Stock Exchange. The company listed in 2008. The initial share price was Ksh 9.50 and the first day closing price was Ksh 10.45

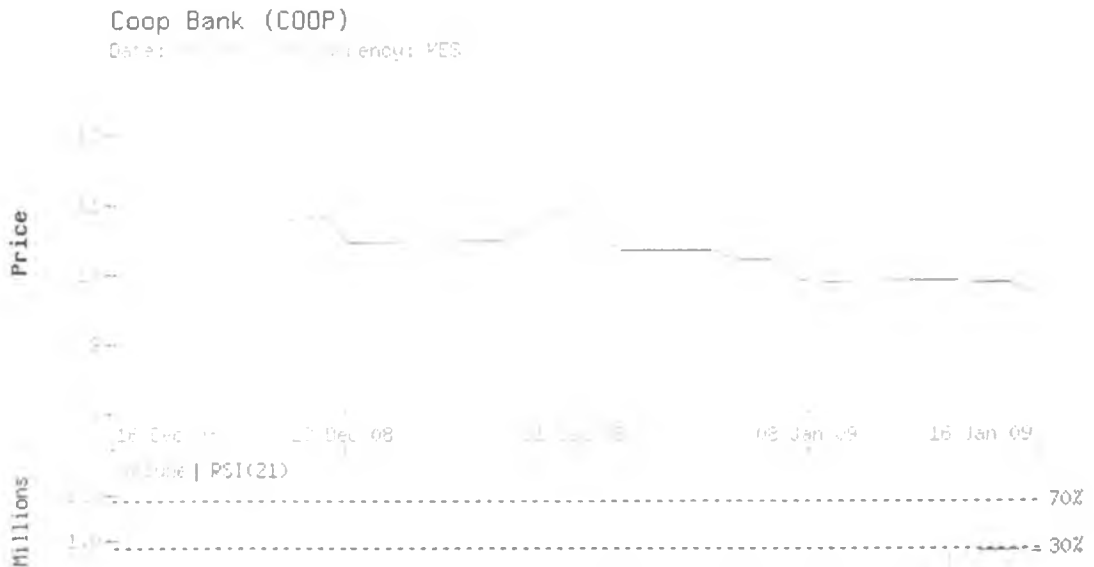


Figure 4.15: Cooperative Bank 30 Day Average Share Price

The subscription rate was 70% with 701,300,000 shares on offer.

Figure 4.15 above and 4.16 below show the share price averages for the first month and first year of trading respectively. The first month's price was slightly higher than the offer price with the stock steadily declining over the first six months, with the price declining to way below offer price but rising to offer price over the remaining 6 months of the first year.

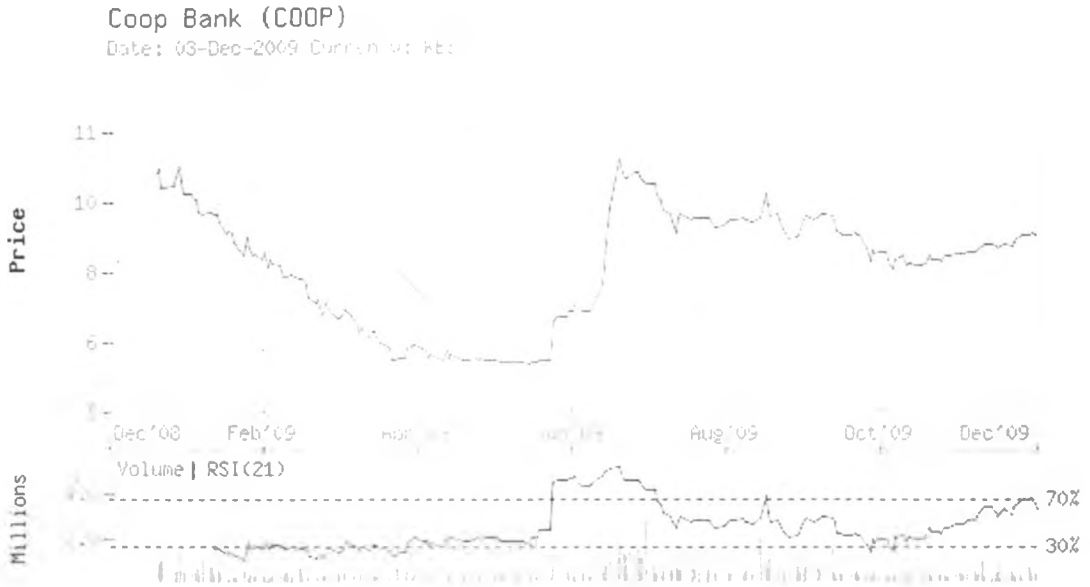


Figure 4.16: Cooperative Bank 1 Year Average Share Price

4.2.2.12 Pricing Summary

Table 2 below shows the pricing summary of the 7 counters, showing the company, year of offer, number of shares offered, subscription rate, offer price, first day of trading closing price, under pricing percentage and first 30 days average price. A correlation between the number of shares offered and under-pricing as well as subscription rate and under-pricing was also done. The results are summarized in the table below.

Table 2: Pricing Summary

Company	IPO year	No of Shares Offered	Subscription Rate	Offer Price (P0)	First Day trading closing price (P1)	Under pricing (P1 -P0)/P0 * 100
Kengen	2006	659,508,437	337%	11.90	40.00	236.13
Scangroup	2006	69,000,000	621%	10.45	15.00	43.54
Eveready	2006	63,000,000	614%	9.50	11.00	15.79
Access Kenya	2007	80,000,000	363%	10.00	13.45	34.50
Kenya Re	2007	240,000,000	340%	9.50	16.00	68.42
Safaricom	2008	10,000,000,000	532%	5.00	7.35	47.00
Cooperative Bank	2008	701,300,000	70%	9.50	10.45	10.00
			Average	9.41	16.18	65.06
			Median	9.5	13.45	43.45
			Mode	9.50	0.00	0.00
		Correlation between subscription rate & under pricing				-0.10244
		Correlation between no. of shares offered & underpricing				-0.0654687

Table 2: Share Pricing Summary

From the table, the average level of under-pricing was 44.01%. The stock mainly affecting this value was the Kengen stock because if the median value is used, the under-pricing value is 15.79%. There was minimal positive correlation between the shares offered and the level of under-pricing, with the correlation being 0.06%. The correlation between subscription rate and level of under-pricing was 0.19%

4.3 Market adjusted initial returns

Table 3 shows the results of the analysis on market adjusted initial returns for day 1, 30 days, 90 days, and for 180 days.

Table 3: Market Adjusted Initial Returns

	Market Adjusted Initial Returns				
	Offer Price	1st day Trading price	NSE 20 Share Index on offer date	NSE 20 Share Index on 1st day of trading	MAIR
Kengen	11.90	40.00	3,973.11	4,447.99	224.18
Scan group	10.45	15.00	4,271.37	4,489.60	38.43
Eveready	9.50	11.00	5,608.25	5,624.84	15.49
Access Kenya	10.00	13.45	5,092.07	5,043.35	35.46
Kenya re	9.50	16.00	5,123.23	5,274.53	65.47
Safaricom Ltd	5.00	7.35	4,855.30	5,445.67	34.84
Co-operative	9.50	10.45	3,175.49	3,367.24	3.96
Average					59.69

The market adjusted initial returns show that the returns for day 1 averaged 59.69% with Kengen having the highest returns at 224% and Cooperative Bank having the least returns at 3.96%.

4.4 Abnormal Returns

Table 4 shows the results on the abnormal returns for IPOs for 30 days, 90 days, 180 days and 360 days. The one month CAR was 1.03 with Scangroup having the highest abnormal return of 0.8. The 3 month CAR was 0.39 with Co-operative Bank having the highest AR of 0.59 and Access Kenya having the least AR at -0.44. The 6 month CAR was 0.08 with Access Kenya having the highest AR of 0.49 and Kengen having the least AR of -0.46. Lastly, the 1 years CAR was 1.05 with Access Kenya having the highest AR of 1.43 and Eveready having the least AR of -0.28.

Table 4: Cumulative Abnormal Returns

Company	Abnormal Returns			
	1 month	3 months	6 months	12 months
Kengen	0.00	0.20	(0.46)	0.51
Scan group	0.80	(0.66)	0.37	0.56
Eveready	0.34	0.17	(0.19)	(0.28)
Access Kenya	0.00	(0.44)	0.49	1.43
Kenya re	0.02	0.07	0.01	0.10
Safaricom Ltd	0.00	0.46	(0.15)	(0.16)
Co-operative	(0.12)	0.59	0.02	(0.69)
Cumulative	1.03	0.39	0.08	1.05
Average	0.15	0.06	0.01	0.15

Table 5: NSE 20 Share Index for CAR calculations

Company	Share Index			
	1 month	3 months	6 months	12 months
Kengen	4,272.43	4,424.17	5,642.04	5,175.11
Scan group	4,879.86	5,656.67	5,387.28	5,334.03
Eveready	6,030.83	5,171.13	5,163.47	5,291.69
Access Kenya	5,181.07	5,403.17	5,221.96	5,341.41
Kenya re	5,176.88	5,222.12	4,858.47	4,684.21
Safaricom Ltd	5,047.78	4,481.40	3,196.51	2,945.35
Co-operative	3,272.49	2,646.58	3,345.62	3,199.79

4.5 Discussion of Findings

The study has noted that there was underpricing that averaged 59.69% for the sampled firms in the study on day one of trading. This is consistent with previous studies done in other markets. For instance, in Pakistan it is 30.78% (Peng, 2005) and 63.92% in Greece (Guonopolos, 2003).

The study also found that the cumulative abnormal returns for the IPOs studied for the entire 12 month period was 1.05%. This is a significant drop in returns, a phenomena commonly referred to as long run underperformance

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of research findings, conclusion, recommendations, limitations, and suggestions for further research.

5.2 Summary of Findings

The study found that the raw initial returns averaged 65%. This means that the IPOs were underpriced by an average of 65%. Kengen was the most underpriced by 236% while Cooperative bank the least underpriced IPO by 10%.

The market adjusted initial returns show that the returns for day 1 averaged 59.69% with Kengen having the highest returns at 224% and Cooperative Bank having the least returns at 3.96%.

The study found that the one month CAR was 1.03% with Scangroup having the highest abnormal return of 0.8%. The 3 month CAR was 0.39% with Co-operative Bank having the highest AR of 0.59% and Access Kenya having the least AR at -0.44%. The 6 month CAR was 0.08% with Access Kenya having the highest AR of 0.49% and Kengen having the least AR of -0.46%. Lastly, the 1 years CAR was 1.05% with Access Kenya having the highest AR of 1.43% and Eveready having the least AR of -0.28%.

5.3 Conclusion and Policy Recommendations

The study concludes that on average, IPOs are underpriced in Kenya. There could be several reasons for this underpricing but this study did not delve into the issue. Further, the underpricing in Kenya is higher than in most countries.

The study concludes that when adjusted for market indices, the initial returns are positive for the IPOs at the Nairobi Stock Exchange for some period of time. This shows that investors can outperform the market by buying IPOs at the offer date and selling them on the first day of trading

The study further concludes that the IPOs cumulative abnormal returns on average for the entire 1 year period are less than the returns on the first day of trading, hence an investor is unlikely to gain by purchasing IPO stocks on the first day of trading.

The study recommends that the investors should invest more in IPOs especially to make the short-run gains that can be achieved by selling them on the first day of trading. This is attributed to overall initial returns on IPOs.

5.4 Limitations of the Study

The major limitation was that data on all the 11 IPOs was unavailable hence the analysis was performed on only 7 firms. Some data necessary for doing the analysis was missing for four firms. Thus the interpretation of results needs to be done in tandem with the limitation of the study.

5.5 Suggestions for Further Research

More studies should be carried out especially by replicating this study in other African countries to establish whether the same results hold. There is also need for researchers to study the determinants of underpricing.

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