

**MARKET REACTION TO PLANNED CHANGE IN CAPITAL STRUCTURE:
PUBLIC OFFERS AS PROXY FOR CHANGE IN CAPITAL STRUCTURE-
EVIDENCE FROM NAIROBI STOCK EXCHANGE**

BY

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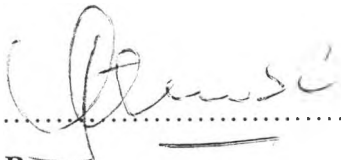
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**MBA RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF E MASTERS
IN BUSINESS ADMINISTRATION OF THE UNIVERSITY OF NAIROBI**


August 2009

DECLARATION

I here confirm that this is my own work with all references and any assistance dully acknowledged.

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

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DEDICATION

To

My Dear Wife Doris Wamalwa

And

My dear children,
That you may be inspired to excel even more.

ACKNOWLEDGEMENT

Thanks to my supervisor Mr. Ngigi and the entire university for the support to come this far.

My wife, Doris Wamalwa, without your encouraging, support and prayers, this may have been a tragedy.

Up and above all, what has been is because God, the maker of heaven and earth allowed. I bow down in adoration.

Finally all errors and omissions are mine and mine alone.

ABSTRACT

This study has two broad aims, to test the existence of a relationship between capital structure and firm value using IPO as a proxy for capital structure on Nairobi Stock Exchange and, to analyze the behavior of firm share prices three months after IPO, and three months after and before SEO. Correlating EPS, MPS and net total earnings with debt ratio, a strong relationship was found to exist between capital structure and firm value for the twenty firms that were analyzed in this study.

An evaluation of mean performance of firms, before and after IPO using EPS, MPS, total assets, equity, net total earnings, and total liabilities did not reveal a significant difference between firm value before and after IPO, using student t test at 95% level of significance. This contradiction was found to have been caused by lack of change in debt ratio. The absence of significant change in debt ratio was occasioned by the finding that firm increase their debt financing along with issuance of additional shares .

IPO was found to have been underpriced, overpriced, or just well priced (two cases). They were followed by turbulent, favorable or unfavorable price reaction which lasted not more than 30 days. After which the share prices stabilized to a steady constant price decline, incline or constant for up to 90 days. By the 90th day, the market would have attained initial offer price if it was well priced. The study therefore finds that the market normalizes prices within 90 days.

SEO was found to have information content. The information was found to undesirable when a firm makes a second or a third public offer. Except for one case, both announcement and actual SEO was followed by declining prices.

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LIST OF ABBREVIATIONS

ARM	Athi River Mining
CMA	Capital Markets Authority
CMC	Cooper Motors Corporation
CORREL	Correlation
EAIT	Earnings per Share
EPS	Earnings per Share
ICDC	Industrial and Commercial Development Corporation
IPO	Initial Public Offer
KCB	Kenya Commercial Bank
KENGEN	Kenya Electricity Generating Company
KQ	Kenya Airways
MPS	Market Price per Share
NBK	National Bank of Kenya
NIC	National Industrial Credit
NSE	Nairobi Stock Exchange
SEO	Secondary Offers
TPS	Tourism Promotion Services

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1.0 INTRODUCTION

1.1 Background

Modern capital structure theory began with Modigliani and Miller (MM) (1958) where they proved that under restrictive set of assumptions, a firm's value is unaffected by its capital structure. Put in another way, MM's results suggested that it does not matter how a firm finances its operations, hence capital structure is an irrelevancy theory.

In the examination of the theories of capital structure, emphasis is placed on the conflict between the traditional approach to the assessment of the role of capital structure and that of the MM theory holding that capital structure is irrelevant in a perfect capital market. Available literature indicates that the jury is still out on the question of the relevance of capital structure to stockholders' value.

Some theorists contend that a firm's optimal capital structure is that combination of debt and equity at which agency and bankruptcy costs are minimized. Agency costs are the incremental costs associated with having an agent of debt capital holders make decisions for the principal. Within the context of this consideration of the determination of optimal capital structure, management is an agent, while stockholders are the principals. Other theorists point out, however that, while issuing debt typically produces positive outcomes for the firms, the determination of an optimal capital structure for a firm is a dynamic process that, in addition to agency and bankruptcy costs, must account for the effects of both corporate and personal income taxes, transaction costs and the degree of control over a firm's investments that will be delegated by stockholders to the firm's management (Brealey & Myers, 1996).

The effect of large shareholders (block holders) ownership on firm value could be positive or negative. A positive effect may come about because large shareholders have greater power and stronger incentives to ensure shareholder value maximization. A negative effect may occur, if block-holder ownership above a certain level leads to entrenchment of owner-managers that expropriate the wealth of minority shareholders.

Moreover the owners' portfolio risk will increase with their exposure, which may influence risk taking and expected. Non-linear effects are not unlikely. It may be the incentive alignment dominates for small levels of block-holder ownership, whereas entrenchment effects set in at higher levels. The effect may even become positive against very high levels: If ownership is highly concentrated – and one block-holder is firmly in control – the incentive for costly tunneling activities are more internalized by the controlling owner, the higher her share of ownership – so less expropriation should therefore take place (Thomsen,, 2004).

Moreover, in addition to agency relations, there may be other reasons why concentrated ownership can raise or lower firm value. Concentrated ownership may for example reduce the liquidity and therefore the value of a share to minority investors. Received theories, namely optimal capital structure, pecking order and signaling, suggest a likely change in the value of a firm at the time financing decisions are disclosed to the market (Arsiraphongphisit and Ariff, 2008).

There is a known relationship between ownership structure and firm value (Hatfield, Louis and Davidson III. (Fall 1994), Kumar (2000)). This relationship has not been established especially in the Kenyan firms, partly because most studies have had to rely on cross-sectional data and partly because it is difficult to find good instruments to isolate the effects of ownership structure from that of many other variables, which affect the value of a firm.

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 honor 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 specializauion, the need for association did not arise (NSE Fact book, 2008).

The first successful privatization through the NSE took place in 1988 following sale of a 20% government stake in Kenya Commercial Bank. In this offer, the government offloaded 20% of its stake to the public. This allowed private investors and the public, including the international investors to invest into the bank (NSE Fact book, 2008).

In 1996, the largest share issue in the history of NSE, the privatization of Kenya Airways, came to the market. Having sold a 26% stake to KLM, the Government of Kenya proceeded to offer 235,423,896 shares (51% of the fully paid and issued shares of Kshs. 5.00 each) to the public at Kshs. 11.25 per share. Subsequent financial results since this offer suggests improvement in firm value in the long run. The Nairobi Stock Exchange now has 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. Currently in Kenya, the Capital Markets Authority (CMA) regulates all bourse transactions (NSE Fact book, 2008).

Tested if a change in capital structure of a firm has an impact on the value of a firm; seeking evidence from Nairobi Stock Exchange (NSE). Theoretically, it is expected that a levered firm has more value than un-levered firm. Consequently, when a firm increases its equity, or is known to want to increase the same is likely to be seen by the market as undesirable. This is expected to be translated into decreasing MPS and reducing EPS. This may happen irrespective of the fact that the firms overall profitability may increase due to increased asset base. Whether this is true on NSE is what this study attempted to test, using IPO and Secondary Offers (SEO) as proxies for changes in capital structure.

1.2 Problem Statement

Many studies have been carried out on capital structure and firm value relationship. Initially, Modigliani and Miler (1958) argued that there was no relationship between the two phenomena. Miller and Modigliani (1966) and Miller (1977), *inter alia*, later concurred that capital structure affects firm value. Affirmatively, Ross (1977) holds that when a firm takes up more debt financing, it signals to the market that it is geared for a prosperous future. Eldomiaty (2003) in his study on determinants of financial signaling

and systematic risk in a transitional economy concludes that long-term debt is more effectual in financial signaling than short-term debt implying preference for long-term debt in a capital structure for better effect on firm value.

Initial Public Offer (IPO), essentially increases the firm's capital base by enlarging equity proportion (conversely reducing debt proportion). In essence, this changes a firm's capital structure and its risk class as well as the firm's performance (Eldomiaty, 2003). This result into changes in the state of firm's value which is usually captured in firm performance indicators (Kumar, 2000).

Studies have also shown that the performance of a firm after IPO is poorer than time before IPO as measured by financial indicators. Abnormal initial returns, underperformance and subsequent decline in firm value have been found to be related with debt financing, venture capital participation, underwriting *inter alia* (Jain & Kini, 1994; Barry & Mihov, 2005).

This proposal therefore seeks to examine the market reaction within three months after a firm starts trading following IPO and SEO. IPO and SEO are used as a proxies of planned change in the capital structure of a firm. While this has been investigated in various markets (Arsiraphongphisit. and Ariff, 2008), no such a study has been done on IPOs on Nairobi Stock Exchange (NSE). It is for this reason that this proposal sought to inquire into the relationship between capital structure changes following IPO, and firm value, before and after issue of IPO.

1.3 Purpose of the Study

This study is beneficial to shareholders on crucial information in regard to investment for owners of a given firm. They then can make choices of what levels of either debt or equity financing they may adopt in their firm. It has been noted that offers often share out debt and equity proportionately and so lowering the risk to the original equity owners.

The Finance manager of a firm are provided with critical decision-making information regarding financing and their impact on the value of the firm. The information from the

study will form a basis for a lot of investment and operational decisions. This is normally the domain of the finance manager in firms.

Other researchers, this is an area of great interest with enormous research opportunities. This study should provide a good lead to further research concerning capital structure and its relationship with a firm's performance. The Kenyan industry will be provided with empirical results from data that they can relate with.

Corporate managers are provided with insight on how Initial public offer affects the capital structure of a firm and therefore it will help management to plan and establish how much capital to raise from the public that will enhance the value of the firm.

1.4 Research Objectives

The objectives of this study was:

- (i) To determine if there is a relationship between changes in equity financing proportion with market price per share (MPS), earnings per share (EPS) and profitability of firms quoted on Nairobi Stock Exchange.
- (ii) To determine if an increase in equity financing affects market price per share (MPS), earning per share (EPS) and profitability of quoted on Nairobi stock Exchange.
- (iii) To determine direction of change in market price per share, earning per share and profitability of firms quoted on Nairobi Stock Exchange three months before and after SEO and three months after IPO.

1.5 Research Questions

This study seeks to answer the following questions for each of the candidate firm under investigation:

- i. What was the firm's market price per share, earnings per share and profitability within three years before and after completion of Initial Public Offer (IPO)?
- ii. What was the firm's market price per share within ninety days before and after completion of IPO?
- iii. What was the debt ratio of the firm within three years before and after IPO?

- iv. What was the firm's market price per share, earnings per share and profitability three years before and after IPO?
- v. Did the firm sustain market price per share, earning per share and profitability three years after SEO?
- vi. What is the behavior of share price after IPO and SEO?
- vii. Was there a significant change in the firm's value due to changes in capital structure?

1.6 Hypothesis

There are two null hypotheses, first is an assertion that there is no relationship between the firm's capital structure and firm value in Kenyan firms. The second is an assertion that IPO/SEO does not affect the performance of a firm.

1.8 Significance of the study

The relationship of between capital structure and firm value has been well documented by different researchers across the globe. However on the local scene (Kenya) not much has been documented. Therefore this research seeks to establish how local firms use capital structure to enhance the firm's value.

To shareholders, this study will be to provide crucial information in regard to investment for owners of a given firm. They then can make choices of what levels of either debt or equity financing they may adopt in their firm. It has been noted that offers often share out debt and equity proportionately and so lowering the risk to the original equity owners.

The Finance manager of a firm will be provided with critical decision-making information regarding financing and their impact on the value of the firm. The information from the study will form a basis for a lot of investment and operational decisions. This is normally the domain of the finance manager in firms.

For other researchers, in academic institutions, research institutes and in the industry, this is an area of great interest with enormous research opportunities. This study will provide a good lead to further research concerning capital structure and its relationship with a

firm's performance. The Kenyan industry will be provided with empirical results from data that they can relate with.

As for the management, this study will provide an insight on how Initial public offer affects the capital structure of a firm and therefore it will help management to plan and establish how much capital to raise from the public that will enhance the value of the firm.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

Under favorable economic conditions, Earnings per Share increase with financial leverage. But leverage also increases the financial risk of shareholders. As a result, it cannot be stated definitely whether or not the firm's value will increase with leverage. The objective of a firm should be directed towards the maximization of the firm's value. The capital structure or financial leverage decision should be examined from the point of its impact on the value of the firm. If a capital structure decision can affect a firm's value, then it would be one that maximizes its market value. However, there exist conflicting theories on the relationship between capital structure and the value of the firm (Brigham & Houston, 2004).

2.2 Theoretical Orientation

2.2.1 Modigliani – Miller Theorem

Despite a continuing stream of research on the subject (see John & John, 1993, Bagwell & Zecher, 1993), a full understanding of capital structure has yet to be achieved. A potential reason for the limited understanding is lack of integration of organizational theory (Frankfurter & Philippatos, 1992).

The relationship between capital structure and firm value has been the subject of considerable debate, both theoretically and in empirical research. Throughout the literature, debate has centered on whether there is an optimal capital structure for an individual firm or whether the proportion of debt usage is irrelevant to the individual firm's value. In their seminal article, Modigliani and Miller (1958 and 1963) demonstrated that, in a frictionless world, financial leverage is unrelated to firm value, but in a world with tax-deductible interest payments, firm value and capital structure are positively related.

Miller (1977) added personal taxes to the analysis and demonstrated that optimal debt usage occurs on a macro-level, but it does not exist at the firm level. Interest deductibility

at the firm level is offset at the investor level. Miller (1977) provided a modification on the theory of firm value by introducing both personal and corporate tax. He demonstrated that for levered firms, the expected cash flow to shareholders after corporate tax and personal taxation would be the payment to shareholders less debt interest, less corporate taxes and personal taxes. Bond holders would receive their return on bond income less personal taxes on bond incomes. Ultimately, with introduction of personal tax, the gain from leverage is lower than when personal taxes are not introduced. By implication, the value of a levered firm with corporate and personal taxes is less than when personal taxes are not charged.

Modigliani and Miller made two findings under perfect market conditions. A perfect capital market is one with no transaction or bankruptcy costs; one with perfect information; firms and individuals can borrow at the same interest rate; no taxes, and investment decisions aren't affected by financing decisions. Their first 'proposition' was that the value of a company is independent of its capital structure. That is, you cannot change the size of a cake by cutting it into different sized pieces. Their second 'proposition' stated that the cost of equity for a leveraged firm is equal to the cost of equity for an unlevered firm, plus an added premium for financial risk. That is, as leverage increases, while the burden of individual risks is shifted between different investor classes, total risk is conserved and hence no extra value is created.

Their analysis was extended to include the effect of taxes and risky debt. Under a classical tax system, the tax deductibility of interest makes debt financing valuable; that is, the cost of capital decreases as the proportion of debt structure increases. The optimal structure then would be to have virtually no equity at all. If capital structure is irrelevant in a perfect market, then imperfections, which exist in the real world, must be the cause of its relevance. The theories below try to address some of these imperfections, by relaxing assumptions made in the M&M model.

2.2.2 Trade-off Theory of Capital Structure

Trade-off theory allows bankruptcy costs to exist. It states that there is an advantage to financing with debt (namely, the tax benefit of debt) and that there is a cost of financing

with debt (the bankruptcy costs of debt). The marginal benefit for further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Empirically, this theory may explain differences in debt/equity ratios between industries, but it doesn't explain differences within the same industry.

2.2.3 Pecking Order Theory of Capital Structure

Pecking order theory tries to capture the costs of asymmetric information. It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or at least resistance, preferring to raise equity as a financing means "of last resort". Hence internal debt is used first, and when that is depleted, debt is issued, and when it is not sensible to issue debt anymore, debt is issued. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required. Thus, the form of debt a firm chooses can act as a signal of its need for external finance. The pecking order theory is popularized by Myers (1984) when he argues that equity is less preferred means to raise capital because when managers (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this overvaluation. As a result, investors will place a lower value to the new equity issuance.

2.2.4 Debt Financing

Debt holders have a prior claim on the company's cash flows relative to shareholders, who are entitled only to any residual cash flow after debt holders have been paid. This therefore means that the fixed claim of debt holders causes the residual claim of the stockholders to become less certain, and this increases the cost of stock (Brigham & Houston, 2004).

Managers when making financing decisions for a firm are interested with establishing which source of finance is available to them. According to the pecking order theory, debt

financing is cheaper after internal financing (use of retained earnings). Debt constitutes far a major source of external financing for large firms. This has led to the introduction of the euro syndicated loans and corporate bonds as the main source of large firms financing in both markets.

From a theoretical point of view, corporate financing decisions are characterized by agency costs and asymmetric information problems. This would include the decision of whether to obtain direct financing via corporate bond market or financing from banks through the syndicated loan market. When it comes to financing through the syndicated loan market, the theory of financial intermediation is placed high on the role of banks in monitoring and screening of borrowers and this has added more costs to banks.

Three main arguments are commonly used to explain firms' choices of financing when deciding between public (bonds) and private (bank loans) debt. The flotation costs argument posits that the use of public debt entails substantial issuance costs, including a large fixed-cost component [Blackwell and Kidwell (1998) and Bhagat and Frost (1986)]. It follows then that, a relatively small public debt issues would not be cost efficient and firms would only tap public capital markets when issuing large amounts of debt to benefit from economies of scale. This is documented by empirical studies that show a positive relationship between the use of public debt financing and a firm's size (Krishnaswami et al. (1999), Denis and Mihov (2003), Esho et al. (2001), and Houston and James (1996).

The renegotiation and liquidation hypothesis argues that borrowers with a higher ex ante probability of financial stress are far less likely to borrow publicly. This is because it is more difficult to renegotiate the terms of debt agreements effectively with a myriad of bond holders than with a single bank or small group of lenders (Chemmanur and Fulghieri (1994) and Berlin and Loeys (1988)). Likewise, lenders in public debt markets are unable to distinguish, owing to information asymmetry and free-rider problems, between the optimality of liquidating or allowing the project to continue. If such situations are reflected on the debt contracts in the form of harsh covenants, they may, in turn, result in the premature liquidation of profitable projects. According to Cantillo & Wright (2000), Denis and Mihov (2003) and Esho et al. (2001)), there exists a negative

relationship between the issuance of public debt and proxies for borrowers' financial stress.

The information asymmetry hypothesis suggests that a firm's choice of debt market is related to the degree of asymmetric information the firm is exposed to. Information asymmetries result in problems of moral hazard between shareholders and debt holders, including possible asset substitution and underinvestment (see Jensen and Meckling (1976) and Myers (1977)). Owing to such problems, a firm faces higher contracting costs in the public markets, as lenders who are unable to monitor the firm's activities will demand higher returns for risks generated by information asymmetries. Indeed, part of early banking theory focuses on private lenders as more efficient and effective monitors (Diamond (1984), Fama (1985) and Boyd and Prescott(1986)). As a result, firms with greater incentive problems arising from information asymmetries are expected to borrow privately given banks' ability to monitor borrowers' activities and to mitigate moral hazard (Diamond 1984 and 1991)). Such monitoring is typically achieved in privately placed debt by incorporating restrictive covenants, agreements that are not in standard use in public issues (Smith and Warner (1979)). Hence, Krishnaswami et al. (1999) and Denis and Mihov (2003) report that firms that are potentially more exposed to problems of moral hazard have lower proportions of public debt in their financing choices.

Debt financing has two important advantages; first, interest paid is tax deductible, which lowers debt's effective cost. Second, debt holders get a fixed return, so stockholders do not have to share their profits if the business is extremely successful.

However, debt also has disadvantages. The higher the debt equity ratio, the riskier the company, and the higher the cost of both debt and equity. Second, if a company falls on hard times and operating income is not sufficient to cover interest charges, its stockholders will have to make up the shortfall, and if they cannot, bankruptcy will result. Good times may be just around the corner, but too much debt can keep the company from getting there and thus can wipe out the stockholders (Pandey, 2005).

2.2.5 Equity Financing

Equity financing is where by a firm(s) seek to raise funds by selling there securities on an open stock market. The pecking order theory has argued that raising fund externally-by issuing share is the more expensive compared to debt and retained earnings. However, equity financing may be internally (retained earnings) and externally by selling common or preferred stock. Preferred stock gives its holders certain privileges that make them senior to common stockholders. Preferred stockholders are promised a fixed periodic dividend, which is stated as a percentage of the share price or an exact value of the share.

Managers are in a better position to forecast a company's free cash flow than are investors, and academics calling this information Asymmetry. Suppose a company's stock price is Kshs.50 per share. If the managers are willing to issue new stock at Kshs.50 per share, the investors reason that no one would sell anything for less than its true value. Therefore, the true value as seen by the managers with their superior information must be less than Kshs.50. Thus, investors perceive an equity issue as a negative signal and this usually causes the stock price to fall (Brigham & Ehrhardt, 2007).

The apparent existence of an efficient capital market, coupled with the evidence on the relationship between risk and expected return, suggest that businesses are unlikely to be advantaged significantly by selecting one type of finance rather than another. An increase in equity financing, which does not expose shareholders to increased risk, tends to be expensive. Secured loan finance, which does expose them to increased risk, tends to be cheap. This suggests that there is no advantage or disadvantage to existing shareholders in raising further finance in one way or another. One method may increase expected returns of existing ordinary shareholders but it is also likely to increase their risk commensurately (McLaney, 2006).

2.3 Empirical Literature Review

2.3.1 Changes in Capital Structure and Firm Value

The founding study on the effect of capital structure on firm value by Modigliani and Miller (1958) negated any effect on firm value caused by capital structure. They used a cross-sectional equation on data taken from forty-three electric utilities in the years 1947-

148 and forty-two oil companies which operated in 1953. Regressing net cash flow from operations against financial leverage, they found that the cost of capital was not affected by capital structure.

Later Weston's (1963) and Miller's & Modigliani's (1966) studies concurred in finding that the value of a firm is a function of present value of operating cash inflow, tax subsidy on the debt financing and growth potential of the firm. Consequently, the firm's value is affected by firm's capital structure. This change of opinion has since then, elicited increased research to confirm or refute. The current study attempts to use IPO as a proxy for change in capital structure which comes as a result of increasing the firm's equity proportion. The proposal seeks to test the relevance of this theory on firms quoted on Nairobi stock Exchange.

According to Ross (1977)'s incentive signaling theory, a firm which increases its dividend payout out promises increased cash payout commitment. Such a firm is perceived by the investors as one anticipating prosperous future prospects. In the same manner, a firm which alters its capital structure by acquiring more debt, signals to the market that it is strong enough to undertake increased future cash payment obligations. Such a firm is perceived to have brighter future prospects. Consequently, its share prices do go up, and with them is the firm's value.

Eldomiaty, (2003) in a paper entitled, "Determinants of Financial Signaling and Systematic Risk in Transitional Economy: Evidence from Egypt," looked at the relationship between changes in firm's capital structure and its effect on the firm's value in differing states of risk. The study argues that changes in capital structure shifts a firm from one risk class to another. Consequently, the effect of change in capital structure should be assessed against the state of risk. The paper finds that under three levels of risk, firms are concerned with adjusting market value to a target level and that there exists a relationship between long term debt capital to market value of a firm. No relationship is found to exist between short term debt financing and firm value.

This finding is consistent with Miller's, (1977) who argued that the value of a levered firm above the unlevered firm results firm's corporate and personal tax shield arising from interest on debt financing which is tax deductible, assuming personal income tax on stocks is more than income from bonds. For the benefit arising from taxation shield to be realized, the firm must operate long enough to be taxable.

This proposed study, learning from Eldomiaty, (2003) and Miller, (1977), seek to assess the state of the firm's value at the end of the first, second and third year after change in capital structure following IPO. The expectation is that the firm's value attributable to individual shareholder shall be proportionately lower due to reduced proportion of debt financing in the capital structure. This may be moderated by earnings from increased investments from additional capital form IPO. This factor needs to be discounted. The study shall also seek to examine the immediate reaction of the share price ninety days after the completion of the IPO. This will be assessed against the share pricing ninety days before the IPO issuance.

Kumar (2005) carried a study in India. He sorts to determine if ownership structure of corporations influence the firm value. The ownership under examination was corporate, foreign, institutional and managerial. Data was captured on from 1994-2000 on corporation quoted on the security market. The study finds that foreign ownership does not influence a firm's performance while institutional and director ownership affect performance positively if significant. Ordinarily, firms that go public would previously have been private limited owned by a group of acquaintances. When they go public through an IPO, institutions, individuals, foreign as well as local, directors as well as management do acquire shares. As a result, their ownership is expected to have an impact on the firms' performance, subsequently firm value. The proposed study shall classify forms of ownership and relate it with the state of changes of the post IPO prices of firms on Nairobi Stock Exchange.

2.3.2 Effect of Initial Public Offer on Capital Structure

Initial Public offer is also referred to as "going public". This happens when a privately held firm makes a decision to issue its stock on an open market to be bought by

individual or institutional investors. When a firm decides to sell its securities in the primary market, then it has three alternatives; a public offering, in which it offers its shares for sale to the general public, a rights offering in which new shares are issued to existing shareholders or a private placement in which the firm sells new securities directly to an investor or group of investors (Gitman, 2007).

When a firm offers its shares for trading through a public offer, shareholders who buy into the firm introduce new equity into the firm. Thus, it introduces fresh equity financing for the firm. Public offers also affect the existing debt of the firm. The new equity introduced through IPO does increase the proportion of equity financing while the debt financing proportion gets smaller. In effect, the firm changes its risk class and subsequently the performance is expected to change.

Hamao, et al. (1999), in their study titled, "Institutional Affiliation and the Role of Venture Capital: Evidence from Initial Public Offerings in Japan," assessed the presence of venture capital in the ownership structure of Japan as compared with American firms. They found that unlike US firms which, when going public have both improved long-term performance and lower under-pricing at the time of the IPOs; Japan firms, depicted no difference in the long-run performance of venture capital-backed IPOs and those that were not backed by venture capital. They however found that firms that issued IPOs and were backed by backed by foreign owned or independent venture capitalists performed better in the longrun.

They further observed that where venture capitalist served as both venture capitalist financier and an underwriter, of the same firm, their performance was no worse off than those whose venture capitalist had no conflict of interest. However, IPOs in which the venture capitalist served as the lead underwriter had higher initial returns than other venture capital backed IPOs, but not in the long term performance. This implied an influence of conflict of interest of venture capitalist-cum-underwriter, in the Japan capital market.

2.3.2 Effect of Initial Public Offer on Firm Performance

Jain and Kini (1994) in their study titled, "The Post-Issue Operating Performance of IPO Firms," investigated the change in operating performance of firms as they make the transition from private to public ownership. Using a sample of 2,126 firms drawn from 1976-1988, they observed a significant decline in the firms operating performance subsequent to the initial public offering (IPO). There was decline in operating return on assets, operating cash flows deflated by assets, as compared to their pre-IPO levels, both before and after industry adjustments. Further, they found a significantly positive relation between post-IPO operating performance and equity retention by the original entrepreneurs. However, there was no relationship between post-IPO operating performance and the level of initial under-pricing. Post-issue declines in the market-to-book ratio, price/earnings ratio, and earnings per share are also documented. This occurred despite high growth in sales, increase in assets base and increased capital expenditure. Firms where the entrepreneurs retained higher ownership performed well as compared to those firms where the entrepreneurs retained minimal ownership.

In Jain and Kini's (1994) study, inconsistency is observed in the decline of post-issue operating performance with the fact that IPO firms are initially priced at high price-earnings (P/E) multiples, implying that investors have expectations of high earnings growth in the future. IPO firms start out with high market-to-book (M/B) and P/E ratios relative to their industry counterparts but experience a decline in these measures after the IPO. In addition, earnings per share (EPS) also decline with time. Overall, these results suggest that investors appear to value firms going public based on the expectation that earnings growth will continue, while in actuality the pre-IPO profit margins, on which the expectations are formed, are not even sustained.

This proposed study intends to assess the using P/E ratios, Market to book values (M/B) and price earning ratio (P/E), cash flow from operation, return on assets to assess after issue performance of the firm. Subsequently, the value of the firm will be captured. The assessment will be in an effort to check if what happens on Nairobi Stock exchange is consistent with what is reported on other markets world over (Ritter (1991), Loughran and Ritter (1995) and Lang (1991)).

Aggarwal et al. (2000) analyzed institutional allocation in initial public offerings (IPOs) using a new data set of U.S. offerings between 1997 and 1998. They did document a positive relationship between institutional allocation and day one IPO returns. This was partly explained by the practice of giving institutions more shares in IPOs with strong premarket demand, consistent with book-building theories. However, institutional allocation also contained private information about first-day IPO returns not reflected in premarket demand and other public information. This evidence supported book-building theories of IPO underpricing. It however but suggested that institutional allocation in underpriced issues were in excess of that explained by book-building theory alone. Among others objectives, this proposed study examined the kind of allottees from day one to the last day of the offer. Subsequent type of ownership shall then be regressed against the firms' performance. This will reveal if, on Nairobi stock exchange, the effect of type of ownership has any effect on firm performance following IPO.

Baker and Wurgler (2000)'s study in which they traced capital structure to past market valuations, they demonstrated more contradictions. Unlevered firms were found to be those that raised funds when their valuations were high, as measured by the market-to-book ratio. Levered firms were found to raise funds when their valuations were low. The results are difficult to reconcile with the tradeoff theory because temporary changes in market-to-book lead to permanent changes in capital structure. The results were also difficult to reconcile with the pecking order because temporary increases in market-to-book lead to permanent increases in cash balances. The results were consistent with the theory that capital structure was the cumulative outcome of a series of market-timing-motivated financing decisions.

Lowry and Scwert (2003) sort to examined the pricing process of IPO. They investigated the inclusion or non-inclusion of all publicly available information. They not all available information was included in the IPO pricing. Further, the quality of underwriters, the use of venture capitalists to fuel the offer or none use, did affect the IPO pricing Despite all these, IPO prices process is almost efficient, therefore, it produces a fair market price of

the firms concerned. That however, was dependent on the level of efficiency of a capital market.

This study provided an assurance that the pricing process of IPOs was correct. This proposed study relied on the assurance to use IPO pricing as a reliable firm valuation. But still, the behavior of the firms share price after IPO shall be examined to concur or disagree with the level of efficiency of Nairobi stock exchange.

Arsiraphongphissit and Ariff, (2008), used private equity placement (a type Initial public offer) that results into relative change in capital structure to assess its effect on the firm value, in Australia. They used the industry ratio as a benchmark. They find that an abnormal return to a firm adjusting its capital structure is positive as compared to abnormal returns when the ratio is adjusted away from the industry median. The findings are consistent with the theory and do confirm that industry relative ratios surrogate for optimal capital structure decisions in Australian firms.

The proposed study seeks to examine the entire set of firms that undertook IPO on Nairobi stock Exchange. All types of acquisition including private placements are jointly combined. The aim of the study is to test if there is a relationship between increase in equity financing as compared to debt financing in a capital structure and the firm's value as measured by market price per share, earning per share and the level of profitability.

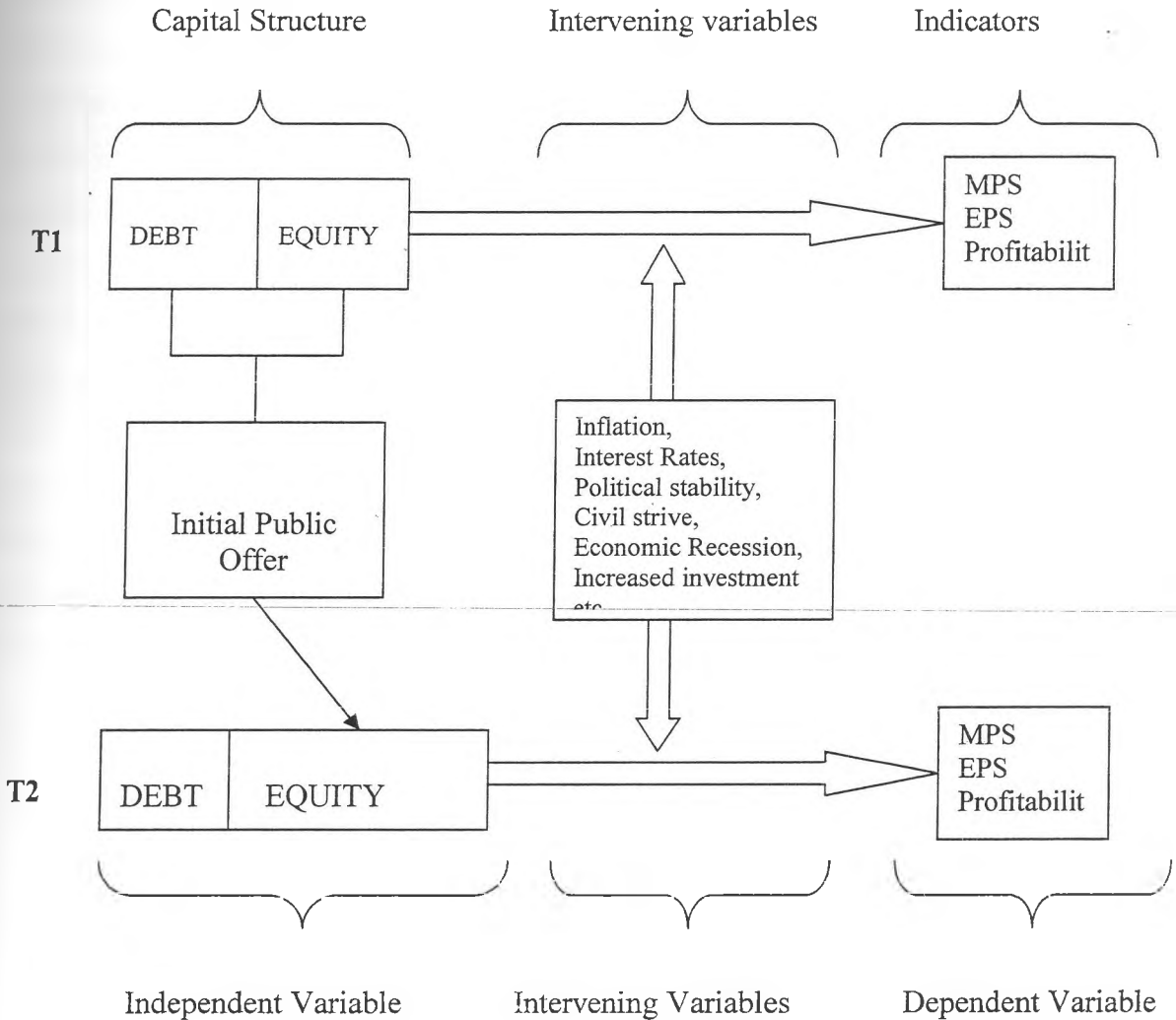
2.4 Conceptual Framework

The conceptual framework of this study, Figure 2.1 below, shows capital structure as the independent variable while the indicators (MPS, EPS and Profitability) are the dependent variables. The effect change in capital structure resulting from issue of IPO shall be monitored using MPS, EPS and firms profitability. This will be monitored at between at the start of time period 1 (T1) and at the end of time period 2 (T2).

In the figure, capital structure at time T1 is at 50% debt financing and 50% Equity financing. Following IPO receipts there will be increase in the total amount of capital by reason of increased equity financing. By implication the proportion of debt financing to equity financing will have increased. It is expected that this will result into changes in the

value of the firm by affecting market price per share, earnings per share attributable to ordinary shares and distributable profits. Initial Public offer is the item that will cause change in the capital structure by enlarging equity financing while debt financing remains the same.

Figure 2.1: Conceptual Framework



Source: Author's Configuration of the Study

The effect of intervening and moderating variables within the capital market environment including inflation, economic recession, state of political stability, civil strife, the use of venture capitalists to fund the issue, the quality of the underwriters will be addressed.

Effects of inflation, civil strife, political instability, economic recession shall be cleared out by deflating all values of assets and prices that shall be used in the study, so that they are all uniformly priced.

If intervening variables will take full effect they would distort the magnitude of dependent variables (indicators). Inflation would result into excessive market price per share, earning per share would also be excessively high and the firm's profitability will be exceedingly overstated. However, the analysis period of three years before and after an IPO is not significant enough to cause major changes in price index. Similarly, the analysis of three months before and after secondary offer, is a period that defeats all possible intervening variable effects. In the same line, global economic recession would slow down demand in the capital market which would depress the expected higher prices of the shares. There was no need to discount the effect of inflation, all prices and asset values shall be transformed to 1990 prices using Consumer Price Index (CPI) (Lowry & Schwert, 2003). Across the years 1990 to 2008, any turbulence the general political, social and economic status of in Kenya is generally was captured in the increases commodity prices (inflation). Consequently, adjusting that will eliminate all the intervening and moderating variables on the indicators.

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter will discuss the research methodology used in the research. It involves the research design, targeted population and sample, data collection methods, research procedures and data analysis methods that will be followed in the research process. This study will guide the implementation of the research study towards the realization of the objectives.

3.2 Study Design

The study was designed to assess the value of firms before they offered new or additional shares to the public and initial public offers and after. This was done comparing the value of the firm with initial capital structure and after equity has increased in the capital structure. It is a window study. Six years window was taken to assess the performance of a firm before and after an IPO or SEO is made. In the same manner the behaviour of a firm's share price were observed in a window of three months before and after an IPO or SEO.

Two levels of analysis will be done. The first will involve computing the relevant performance measures of firms three years before IPO and three years after IPO. The aim will be to assess if the IPO has any impact on the value of the firm in the long run.

The second analysis shall involve studying the effect of IPO announcement and subsequent implementation on the market price per share on the market. In this analysis, trends shall be drawn to tracing the reaction of prices ninety days before and ninety days after the implementation of the IPO. A similar analysis shall be carried out on the effect of announcement on the share pricing.

3.3 Population of the Study

The population of the study consists of all firms which participated in Initial Public Offers (IPO's) and Secondary Offers (SEO's) on the Nairobi Stock Exchange since its inception (1920).

3.4 Sample

The sample of the study was drawn from the population on judgmental basis. The availability and accessibility of the required information determined the sample size. Due to this the sample size comprised of seventeen firms (17) (which had in total twenty observations) which issued IPOs and secondary offers (SEO) from 1990 to 2008 and there was found sufficient information to qualify for analysis. Table 3.1 below shows the spread of the firms across the sectors as classified by NSE.

Table 3-1: Distribution of companies per market segment

Sector	No. of Companies	Percentage %
Agricultural	0	0%
Commercial and Services	6	35.3%
Finance and Investment	6	35.3%
Industrial and Allied	5	29.4%
Alternative Investment	0	0%
Total	17	100.0%

(Source: Nairobi Stock Exchange, 2009)

3.5 Data Collection.

Values were drawn from the Nairobi Stock Exchange; Capital Markets Authority which is the regulating agent for the government for all NSE offered entities. The values were drawn over a period of six years, three years before IPO and three years after IPO. Key variables drawn include: share prices, total assets capital structure (equity and long term debt), total liabilities, number of shares, earnings per share, daily share prices, total earnings after interest and tax and it is from these ratios that the following ratios used in the analysis were derived from, these include: log of total assets, log of earnings after interest and tax. market price per share. net worth. debt ratio.

In collecting data for the population of study, It was difficult to extract all the financial statements of all the firms for the time period mentioned(since 1990-2008) as some of the firms were privately held and most of their data is either in their warehouse or destroyed and could not be retrieved. The availability and accessibility of data was the major determinant of the sample size.

The daily share prices were not available at the Nairobi stock exchange hence this information could only be found in the newspapers which were quite difficult to access and at the same time sort.

3.6 Data analysis and Presentation

Before analyzing data, it was first edited, coded and entered into excel worksheet, which was used for analyzing the data. Graphs are used to present the results for easier understanding and interpretation. In addition, common themes were captured through content analysis. Correlation analysis, t-test, f-test and regression analysis was done on the debt ratios, log of earnings after interest and taxes against the firm sizes and performance measures. This was aimed to revealing if there is any relationship between the capital structure and firm values and performance.

CHAPTER FOUR

4.0 DATA ANALYSIS

4.1 Introduction

Analysis is reported in this chapter initially, eighteen (18) firms which had not been listed are analyzed, then a set of two firms (2) firms which made a secondary equity offer (SEO) are presented graphically. Measures of significant changes in the firm value are then assessed to determine if the change was significant or not for all the firms.

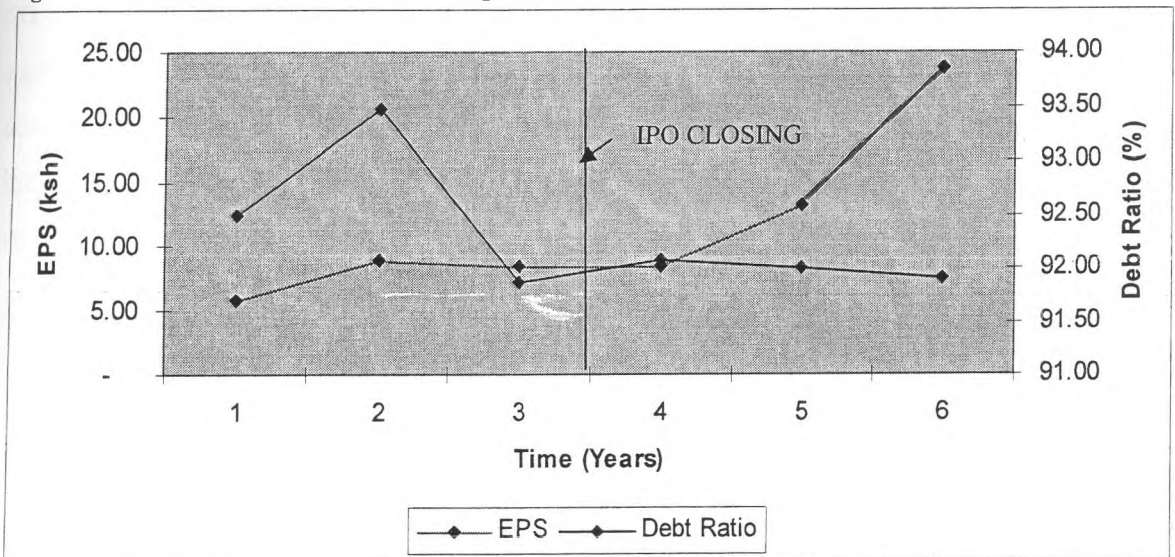
4.2 Analysis of New Firms on the Market (IPO)

The theoretical value of the firms was computed using the formula $MPS = EPS \times P/E$ where P/E is the market capitalization divided by the total earnings of the firm. In the three years prior to the IPO, EPS and MPS were run as such.

4.2.1 Kenya Commercial Bank IPO (1990)

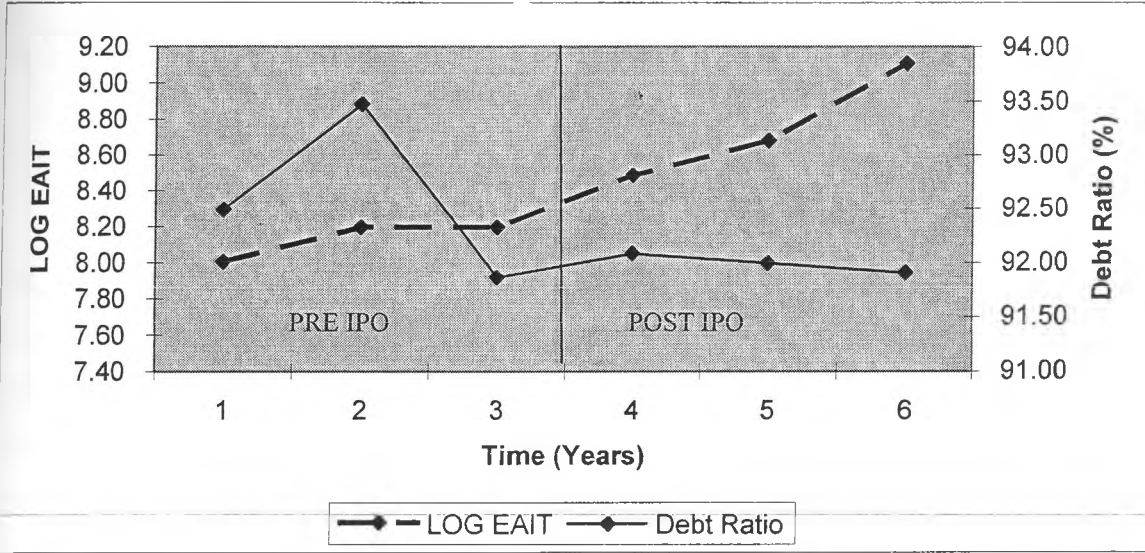
Three years prior to its IPO, KCB had an average EPS of Ksh. 7.76 as compared to Ksh. 15.15 three years after (as depicted in figure 4.1 below) with a negative correlation of 0.37 with debt ratio. This is consistent with earnings which grow from a mean of Ksh. 148million to Ksh. 689million three years before and after the IPO (see Figure 4.2).

Figure 4.1: KCB IPO Movement of EPS against Debt Ratio



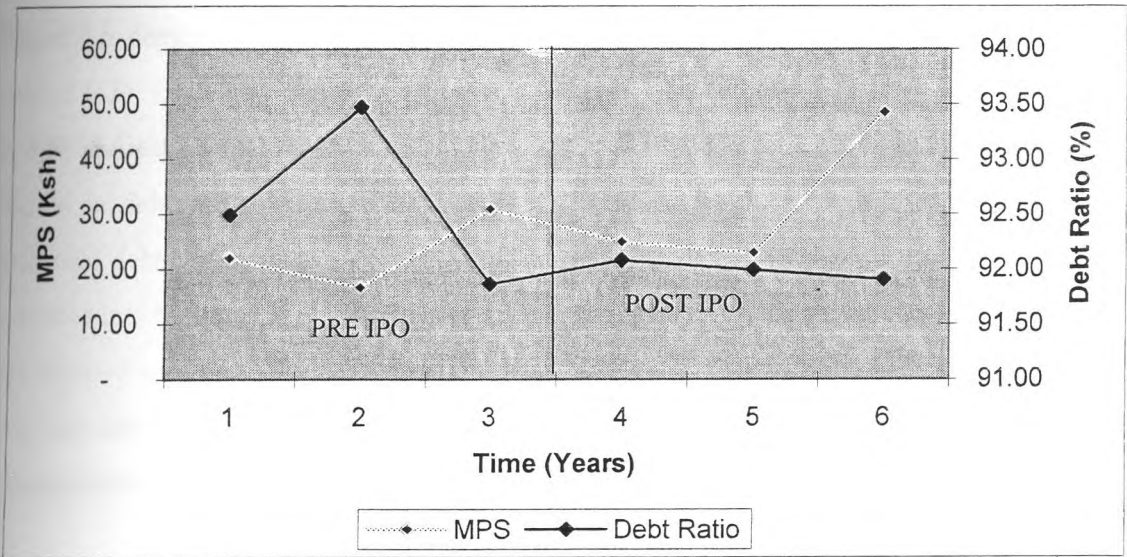
The MPS increased from a mean of Ksh. 23.20 to Ksh. 32.17 within the same range (Figure 4.3), with a correlation of 0.9 with debt ratio. All these improved performance had mild inverse relationship with changes in debt ratio of 37%, -63%, -49% for EPS, MPS and Log of Earnings respectively. However total assets had a positive strong correlation of 0.8 with earnings. This may explain that earnings were majorly influenced by increased total assets than change in capital structure.

Figure 4.2: KCB IPO Movement of Logarithmic EAIT against Debt Ratio



The apparent observation made above may be explained again by the fact that as more equity was resourced, the firm also acquired more debt financing. Consequently, the actual effect of holding back leverage failed to feature prominently. Instead, as equity increased by reason of IPO, debt proportion also increased also in the same capital structure (see Appendix C).

Figure 4.3: KCB IPO Movement of MPS Against Debt Ratio over time



4.2.2 Firestone IPO (1994)

Firestone also issued an IPO in 1994. Figure 4.4 depicts how EPS moved three years before the IPO and three years after it. It increased from Ksh. 1.60 to Ksh. 3.54 with an average of Ksh. 2.28. In the next three years after the IPO, the EPS increased mildly and stopped at Ksh. 3.33. There was a fairly strong inverse correlation between EPS and debt ratio of 0.74.

Figure 4.4: Firestone Movement of EPS against Debt Ratio

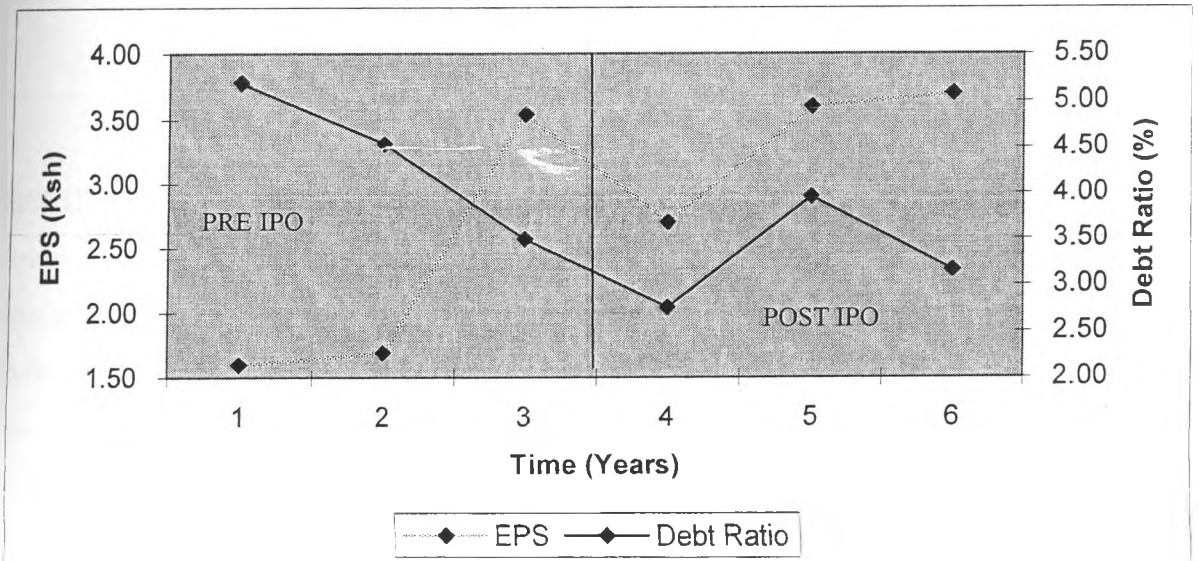
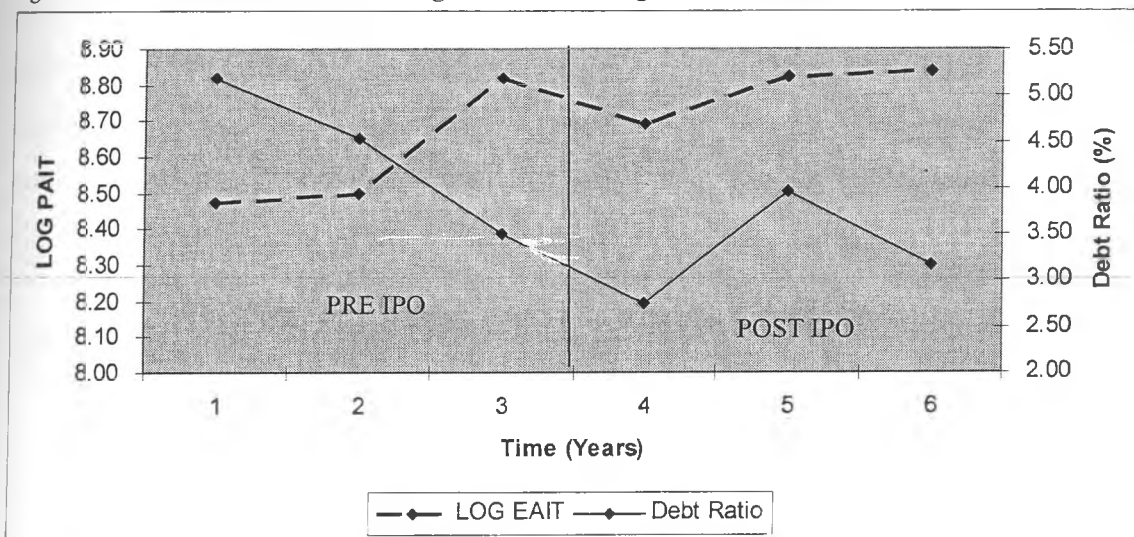


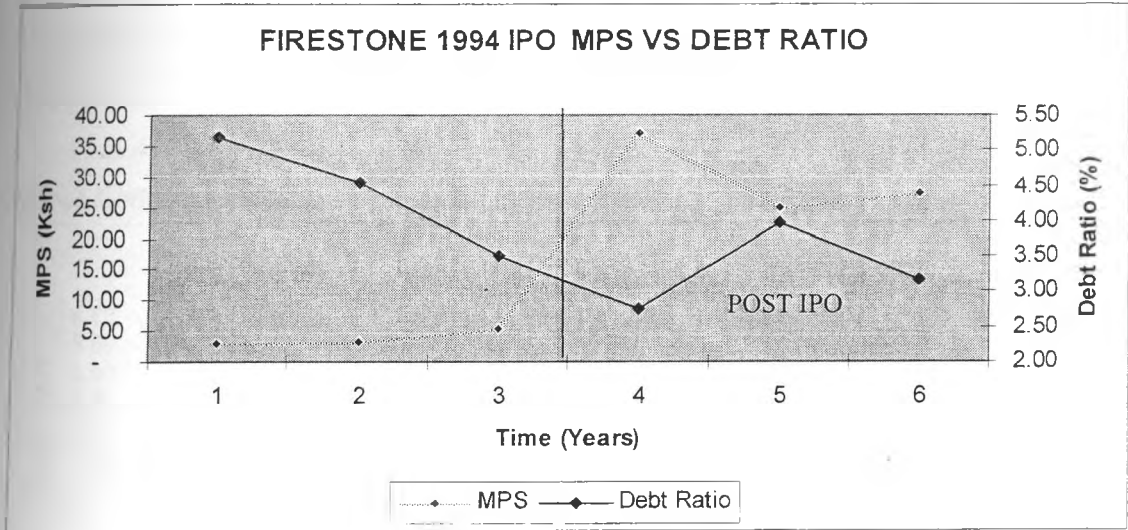
Figure 4.5 demonstrates a similar inverse correlation between total earnings and debt ratio of 0.74. Evidently the earnings increased the years with logarithmic means of 8.60 to 8.79 and actual means of Ksh. 422million to Ksh 617million. Notably, there was a decline in debt ratio as expected across the two periods but still the firm attracted additional debt with increase in equity financing thrice the beginning amount as equity increased less than three. This increase in debt financing explains why the T statistic does not approve of the hypothesis that there was significant relationship between capital structure change and firm value. This leaves the increased earnings to be explained by increased resource base (total assets) of the firm.

Figure 4.5: Firestone Movement of Logarithmic EAIT against Debt Ratio



MPS (Figure 4.6 below) also depicts a negative correlation of 0.78 with debt ratio. However, MPS increased significantly prior the IPO, with a mean of Ksh. 3.82 for the three years to a mean of Ksh.29.75 for the three years after the IPO. The market had very favorable feelings for the firm.

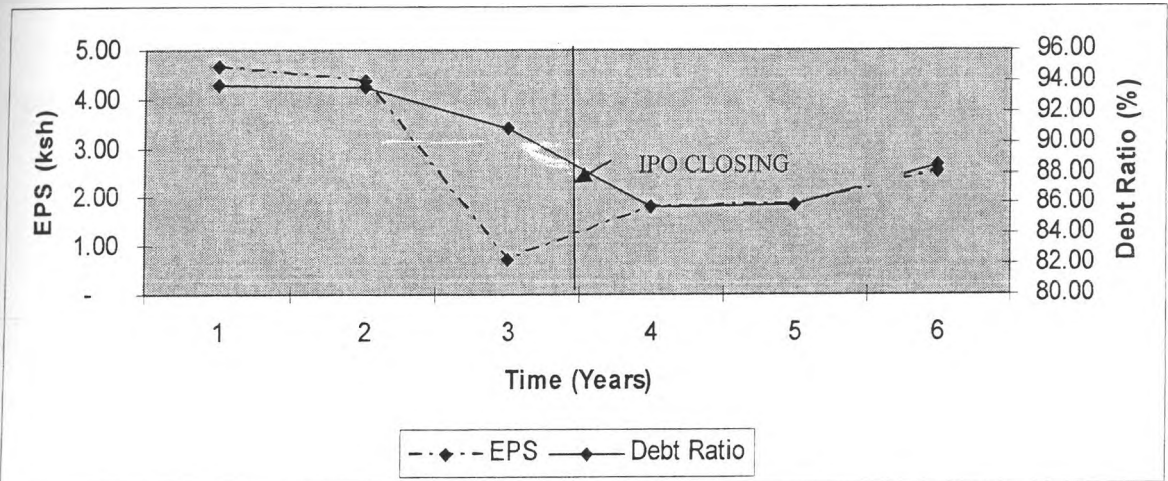
Figure 4.6: Firestone Movement of MPS against Debt Ratio



4.2.3 National Bank of Kenya IPO (1994)

NBK issued an initial public offer in 1994. The EPS three years prior to the offer increased from Kshs. 4.68 to Kshs. 70 with a mean of Ksh. 3.26 (see Figure 4.7 below). However, after the IPO the EPS increased up to Ksh. 25 with a declined average from Ksh. 3.25 to Ksh. 2.05.

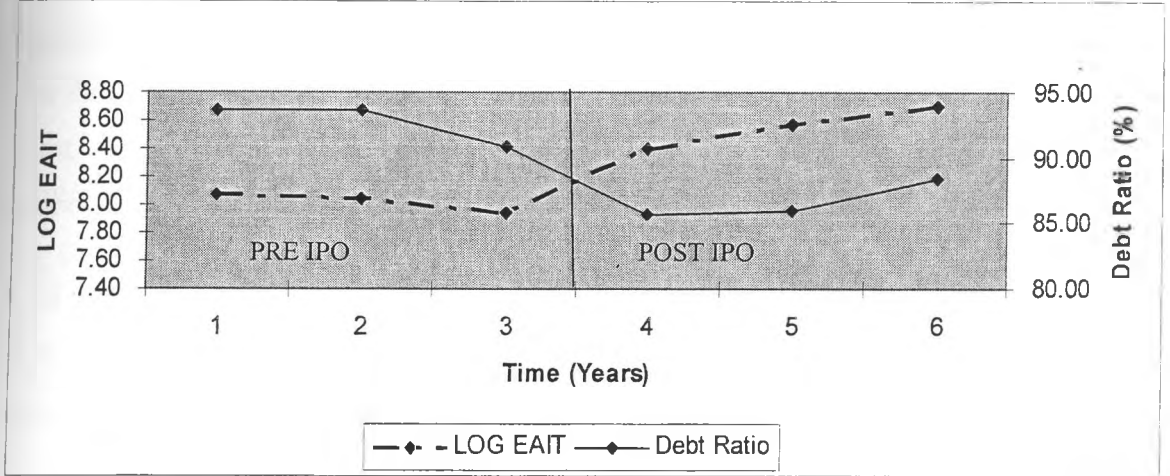
Figure 4.7: NBK Movement in EPS and Debt Ratio over Time



The mps declined from Ksh. 36.49 to Ksh. 92.17 in the period before the offer, with a mean of Kshs. 284.02. After the offer the decline continued to Ksh. 13.60 with a three year mean of Ksh. 20.87. Figure 4.8 below depicts the decline of both MPS and debt ratio over the same period of time. The decline was accompanied by general increase in

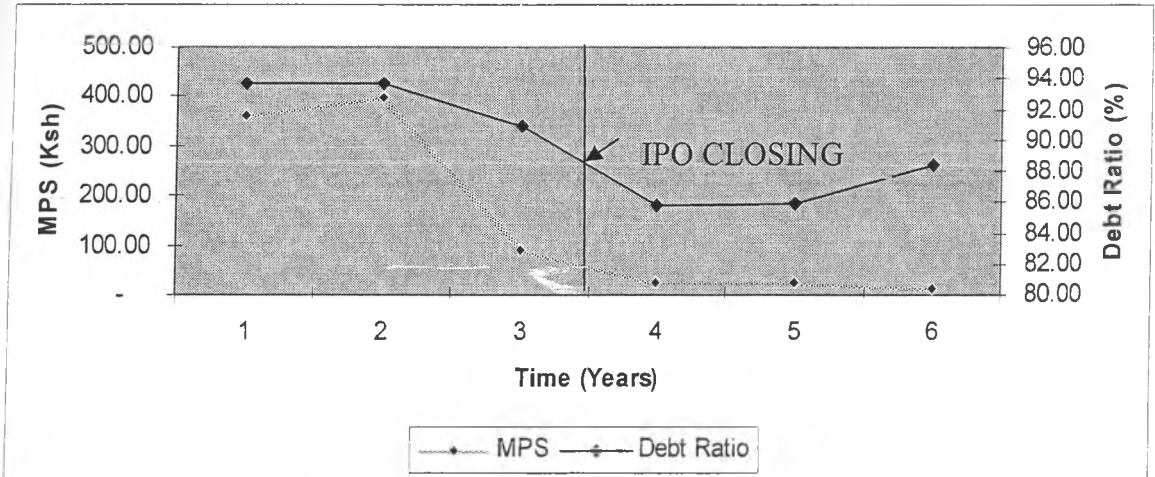
earnings with an average of Ksh. 104million (log of EAIT of 8.02) to Ksh. 373million (log of EAIT of 8.55). In actual terms (Fig. 4.9) Earnings increased five fold after the IPO (Appendix C).

Figure 4.8: NBK Movement in Logarithmic EPS and Debt Ratio over Time



An overall analysis of significance of difference (T-Test), records a T Stat of -0.67 which is less than T critical values of 1.746 and 2.120 for one tail and two tails respectively. Thus the study finds no significant relationship between capital structure and the value of the firm, as proxied by EPS, or MPS, or EAIT (Appendix D).

Figure 4.9: NBK Movement in MPS against Debt Ratio Over Time



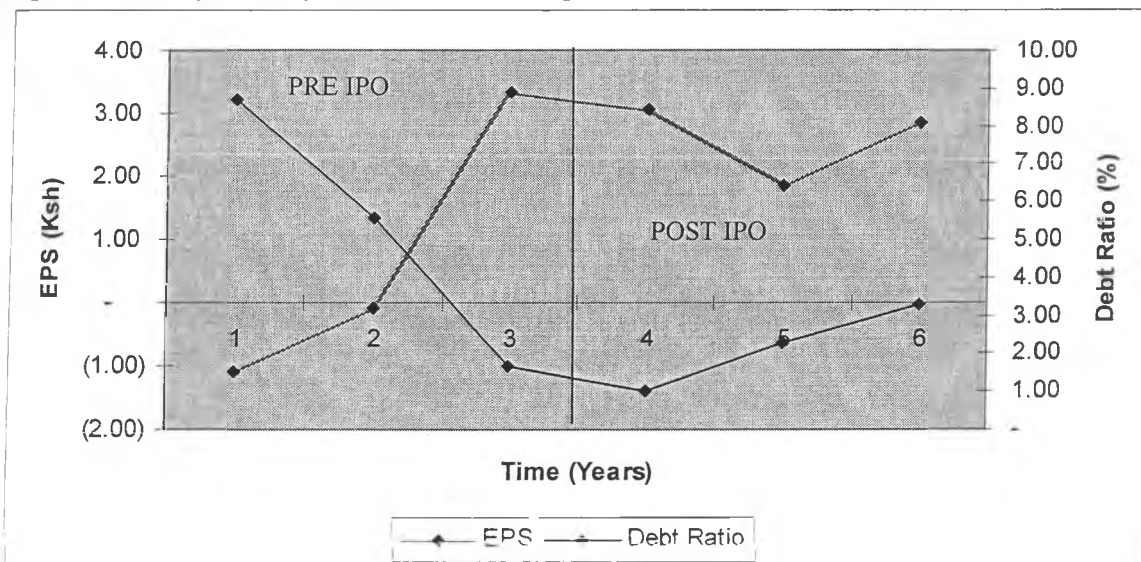
This inconsistency is caused by insignificant change in debt ratio which declined from a mean of 92.71% over the three year period to the IPO to 86.70% over a three year period after the IPO.

In actual terms as equity increased from an average of Ksh. 892million to Ksh. 3.035million (3035billion), debt increased an average of Ksh. 6.7billion to Ksh. 12billion over the year period prior to and after the IPO respectively. This reduced and diluted the effect of change in capital structure on earnings. The improvement in earnings is attributed to increased capital base (Appendix C).

4.2.4 Kenya Airways (KQ) IPO (1996)

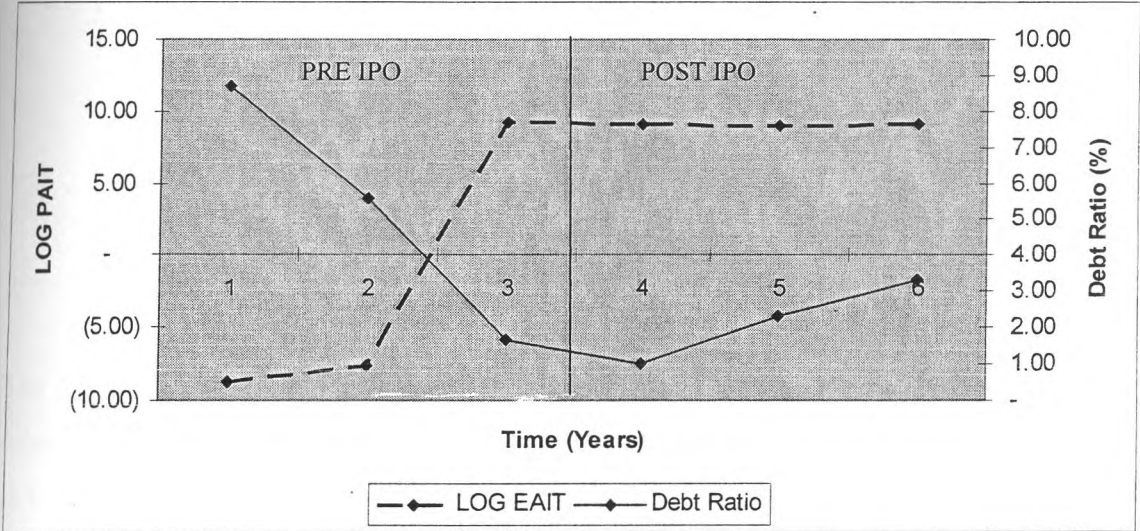
Kenya airways made its first IPO in 1996. The trend of debt ratio by Figures 4.10-4.12 demonstrated a significant decline in debt ratio. The trend started way before the IPO was offered. EPS is strongly inversely correlated with debt ratio (-0.94). Incidentally, this study finds no liability for KQ in two of the three years before the IPO. After the IPO, the firm attracted liability equivalent to its total equity such that it was 50% levered. Nevertheless, EPS started shooting up two years prior to the year of the IPO posted. The mean of the EPS three years prior to the IPO, stood at 0.72. This moved to Ksh 2.59 in the first three years after the IPO.

Figure 4.10: Kenya Airways Movement of EPS against Debt Ratio



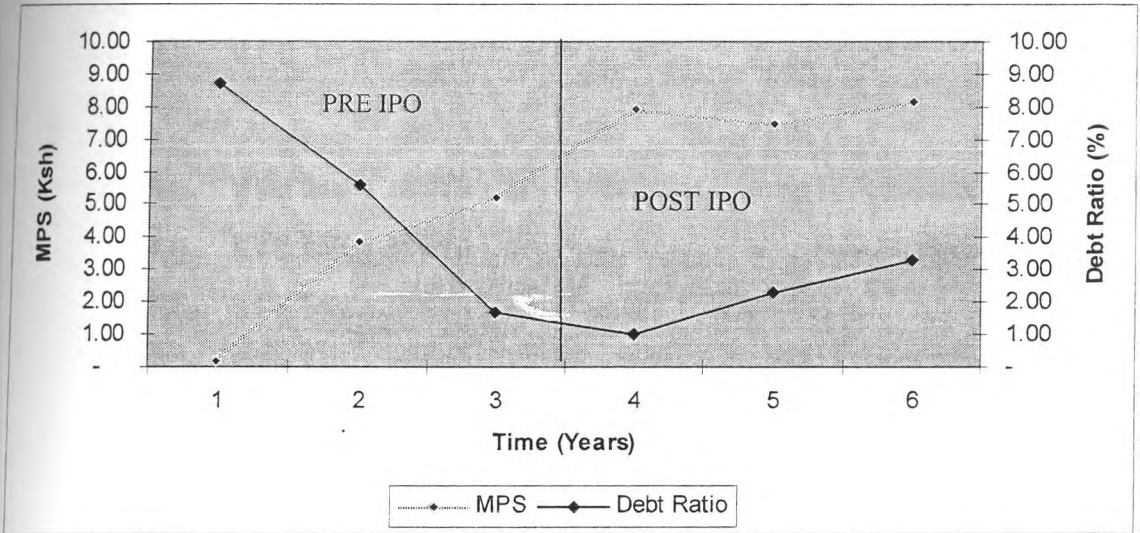
Earnings after interest and tax also started rising two years prior to the IPO moving from a loss of Ksh. 512million, through loss of Ksh. 43million and resting at a gain of Ksh 1.m EAIT within three years (Figure 4.11 above). This level was maintained across the IPO period and beyond (Appendix C).

Figure 4.11: Kenya Airways Movement of Logarithmic EAIT against Debt Ratio



In the same direction, MPS of KQ averaged Ksh. 3.09 over the three years prior the IPO but proceeded to an average of Ksh. 7.87 in the last three years. Figure 4.18 clearly shows a continuously increasing trend of MPS across the six years from Ksh. 9.41 (Appendix C).

Figure 4.12: Kenya Airways Movement of MPS against Debt Ratio

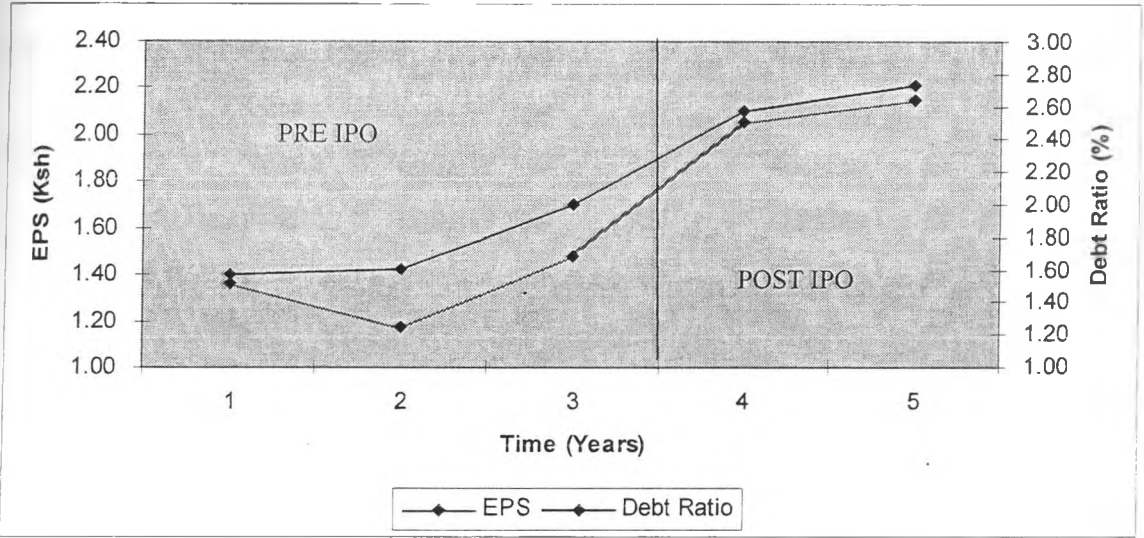


The T test nonetheless, fails to reject the hypothesis that the performance of a firm is not related to capital structure. The T calculated is -0.717 which is less than T critical which is 1.75 and 2.131 for one tail and two tails respectively. All these notwithstanding there exists a strong inverse correlation between EPS, MPS, and EAIT with debt ratio of -0.94, 0.88, and 0.92 respectively. The significance of these correlations across IPO period is what fails the test. There is a strong evidence that KQ has in place value adding strategies than capital structure (Appendix D).

4.2.5 Tourism Promotion Services (TPS) Serena IPO (1997)

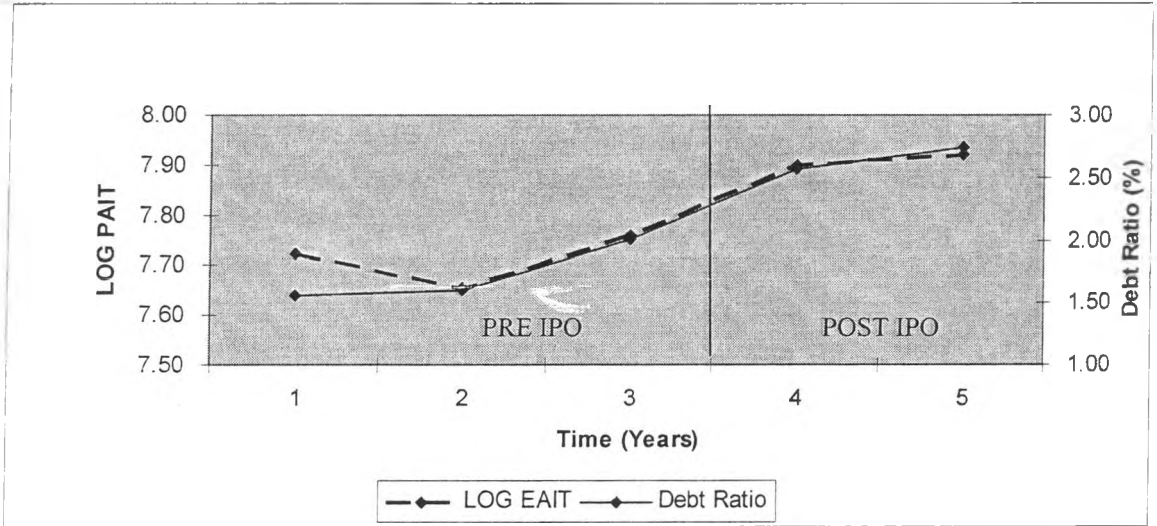
In 1997, Serena Group of Hotels issued a public offer. Three years prior to the offer, (Figure 4.13), Serena had a mean EPS of Ksh. 1.34 which improved slightly to Ksh.2.10 as a mean of three years after the IPO (Appendix D).

Figure 4.13: TPS Serena Movement of EPS against Debt Ratio



Total earnings increased by about 50% while MPS move up by about Ksh.8 only from KSh.9.84 to Ksh.17.43 on average for the three years prior to and after the IPO (Appendix D).

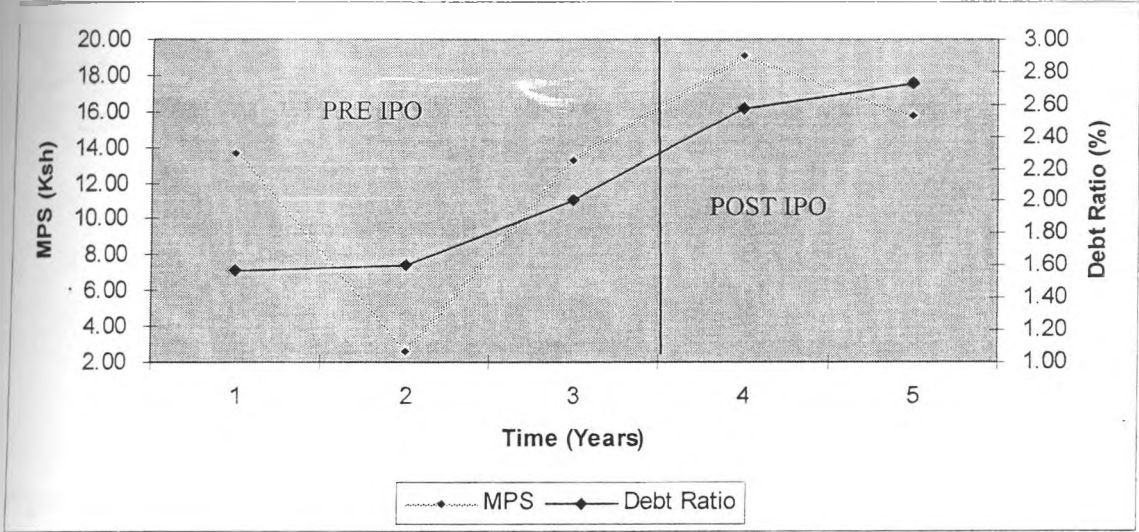
Figure 4.14: TPS Serena Movement of Logarithmic EAIT against Debt Ratio



The insignificance of changes in firm value indicators may be explained by on average more than doubling the firm's debt financing while the firm issued equity financing. This moved from Ksh.570 million to Ksh.1278million and the debt ratio increasing from a

mean of 1.73% to 2.06% with the highest of 2.74 being reported at the end of the third year after the IPO.

Figure 4.15: TPS Serena Movement of MPS against Debt Ratio



The study further finds that there is no significant relationship between the firm's value and the firm's capital structure. However, the study finds a positive relationship between the firms EPS, MPS and earnings with the issuance of IPO and/or SEO. This may be by reason of increased capital basis and information content inbuilt in the IPO and SEO.

4.2.6 Athi River Mining (ARM) IPO (1997)

As depicted in Figure 4.16 below, EPS dropped from an average of Ksh.0.43 to Ksh.0.33 over a period of three years before and after the IPO respectively. The study also notices the little value the market attaches to the firm. This may explain the erratic behavior of EPS as well as debt ratio.

Figure 4.16: Athi River Mining Movement of EPS against Debt Ratio

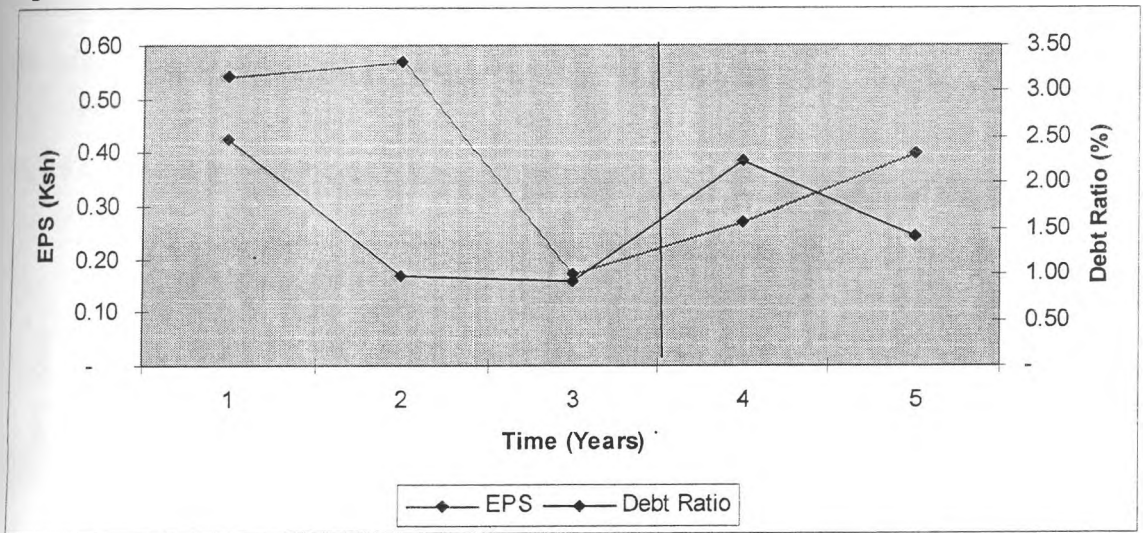
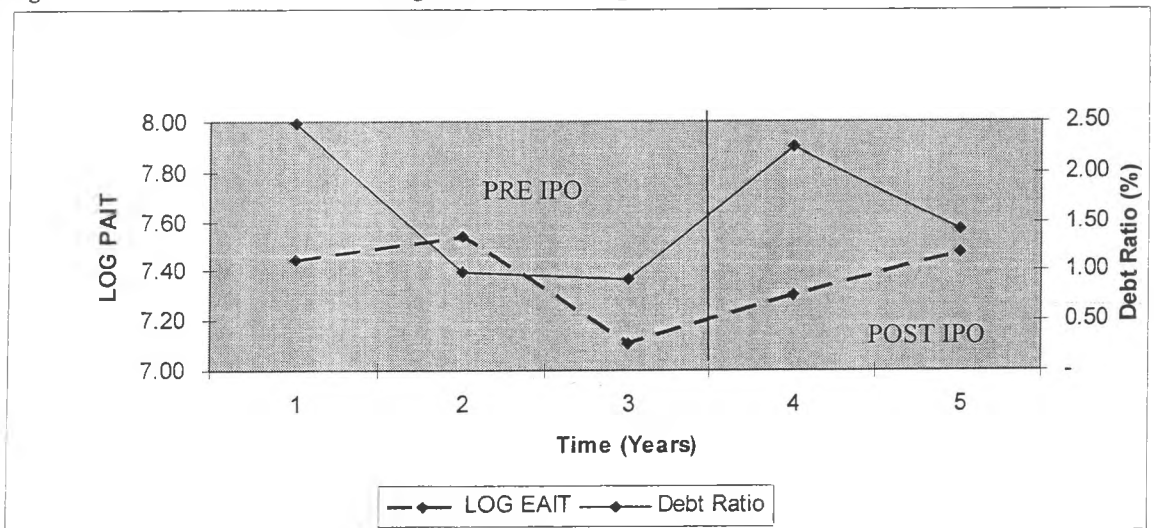


Figure 4.17 also depicts a general slight decline in net earnings through adverse fluctuations. These fluctuations may depict the manager's panic over the state of the firm's continuity. The same panic seems to have been captured by the market so that MPS also declined consistently from an average of Ksh.10.01 to Ksh.4.88 (hitting Ksh.4 in the third year) two years prior to and three years after the IPO offer (see Figure 4.18).

Figure 4.17: ARM Movement of Logarithmic EAIT against Debt Ratio



The t test however failed to sanction the disapproval of the hypothesis that there is no relationship between capital structure and value of a firm. The study also finds no

Figure 4.16: Athi River Mining Movement of EPS against Debt Ratio

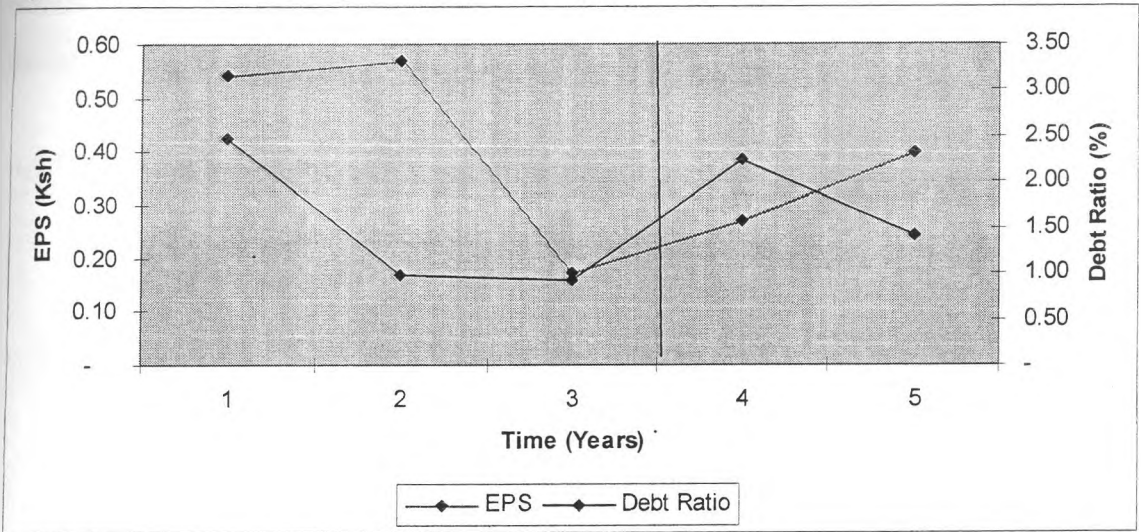
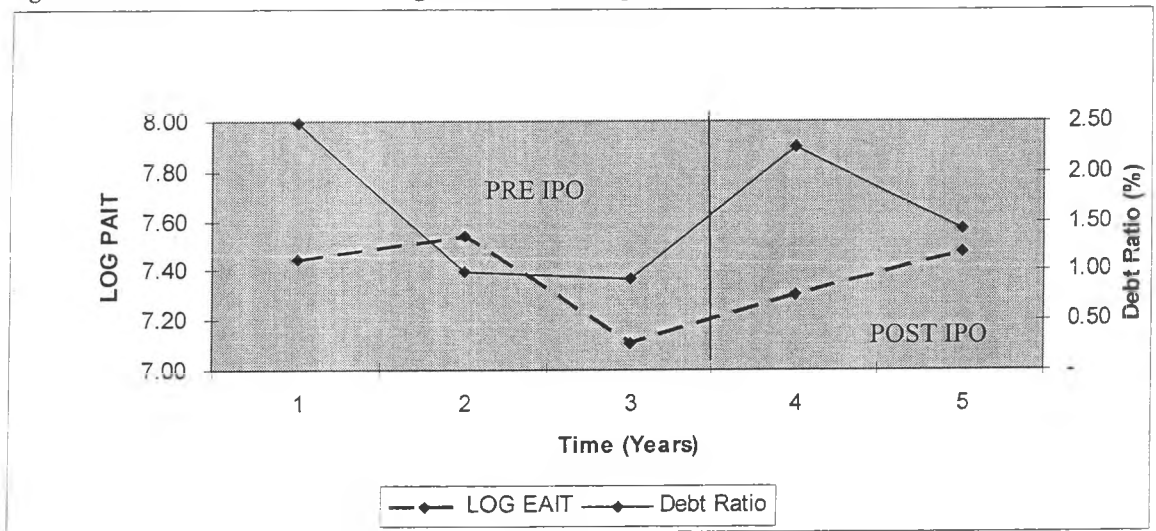


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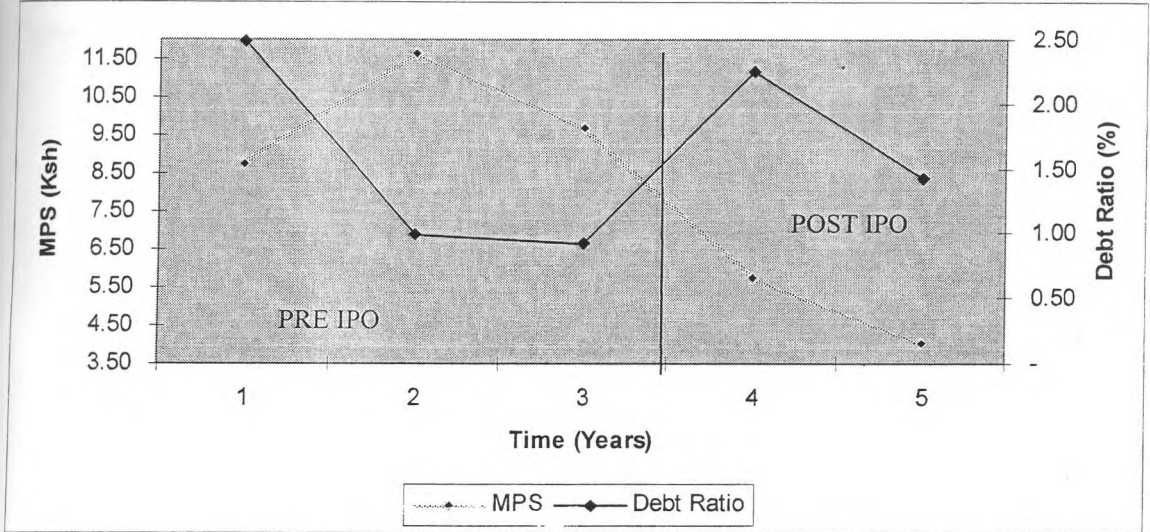
Figure 4.17: ARM Movement of Logarithmic EAIT against Debt Ratio



The t test however failed to sanction the disapproval of the hypothesis that there is no relationship between capital structure and value of a firm. The study also finds no

consistent relationship between IPO offer and the firm's value as measured by EPS, total earnings and MPS. Therefore basing on ARM, the study has no conclusive position on the information contentment of the IPO and/or SEO (Appendix D).

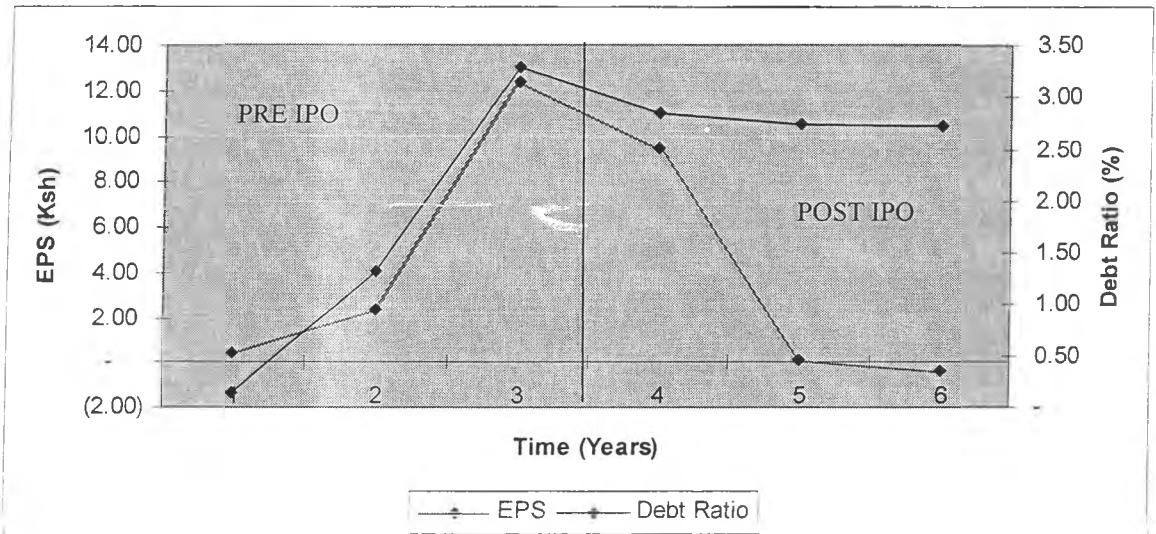
Figure 4.18: ARM Movement of MPS against Debt Ratio



4.2.7 Mumias Sugar IPO (2001)

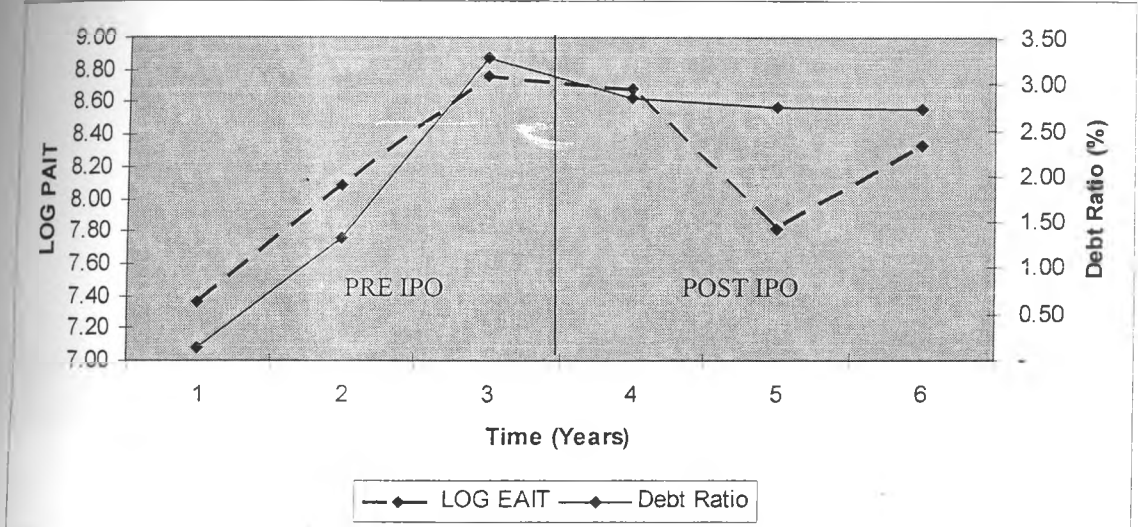
This was the first IPO for Mumias Sugar Company. Prior to the offer, the company had a mean of Ksh. 5.06 in EPS which moved to Ksh. 3.06 for three years prior to and after the IPO (Figure 4.19).

Figure 4.19: Mumias Movement of EPS against Debt Ratio



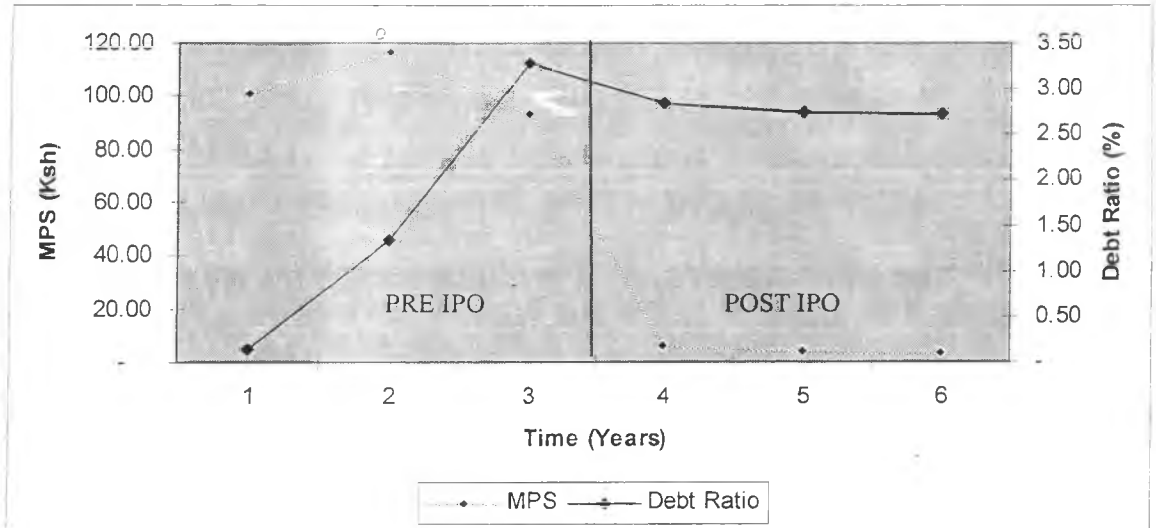
Looking at the curve, it appears there was leaked informed which caused the firm to realize increased good performance prior to the IPO. This information turned out not to be good just before the IPO and both EPS and net total earnings (Figure 4.20) started declining.

Figure 4.20: Mumias Movement of Logarithmic EAIT against Debt Ratio



Looking at Figure 4.21 below MPS started declining two years prior to the issuance of the IPO. By implication, the market sensed the probable danger in the industry one year before it was captured by financial statements. The market having learnt of this scenario (Figure 4.21) responded by dropping MPS from Ksh. 116.29 to Ksh.3.40. This is an indicator of an informed market which could not even be decreased by an IPO.

Figure 4.21: Mumias Sugar Company Movement of MPS against Debt Ratio



Incidentally, both debt increased ten fold between 1998 and 1999, from Ksh. 74 million to Ksh 792million, then between 1998 to 2000, it increased 30 fold from Ksh. 74million to Ksh 217million, reaching a peak fairly stable at that level. In the year 2001, both liabilities and debts, amounted to Ksh 7billion of the total of Ksh. 10billion.

4.2.8 Kenya Electricity Generating Company IPO (2006)

When KENGEN went public it had been performing very well. In 2003 its EPS was highest at ksh.9.17 (see Figure 4.22) but consistently declined to a low of Ksh.1.11 over the IPO window period of six years. The three year mean prior to IPO and after was Ksh. 7.23 and Ksh. 1.67 respectively. This is a downward trend between the two periods. The correlation between EPS and debt ratio is -0.4 a relative weak inverse correlation.

Figure 4.22: Kenya Electricity Generating Movement of EPS against Debt Ratio

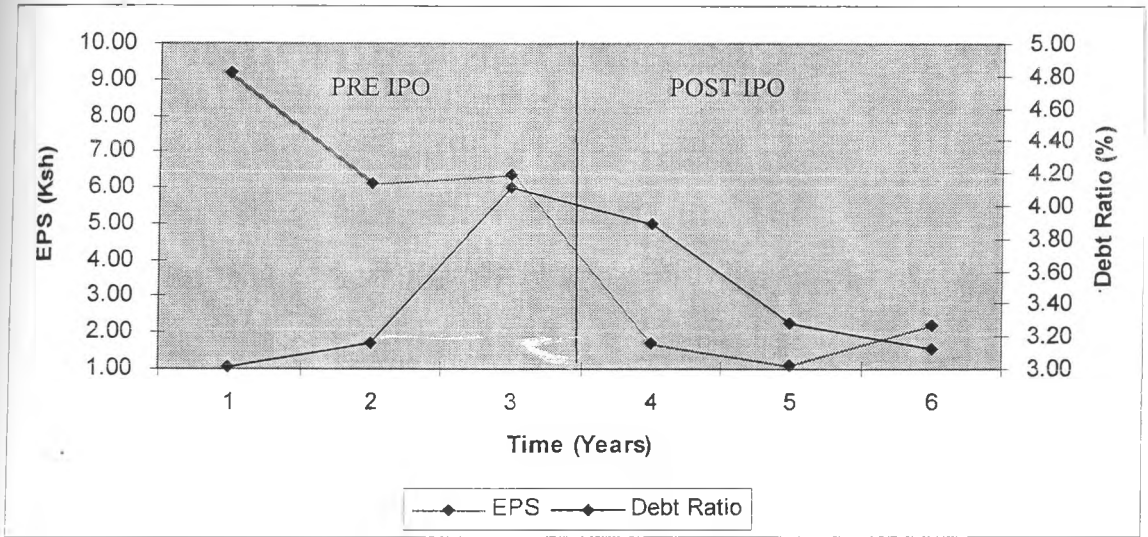
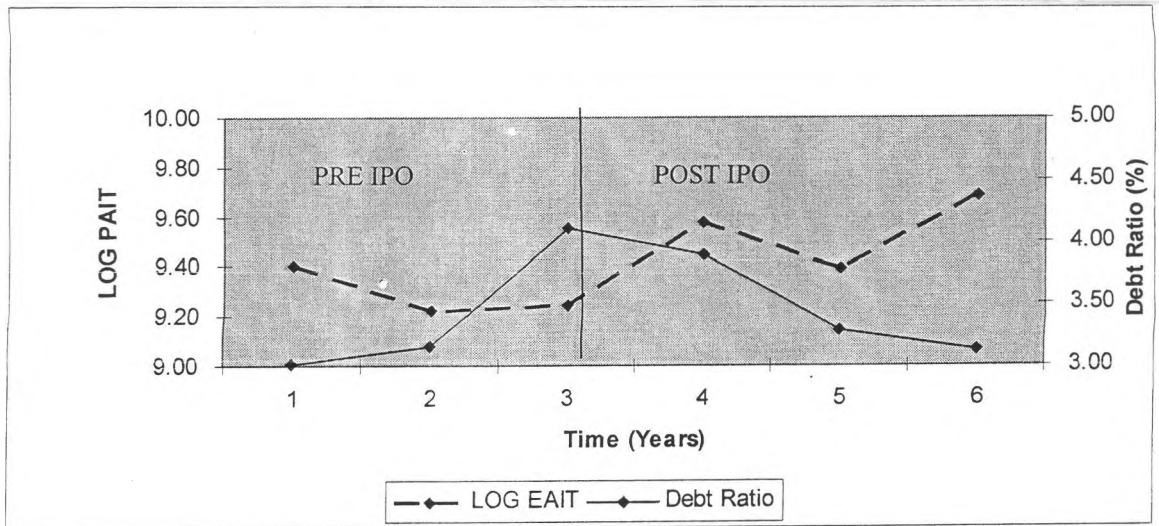


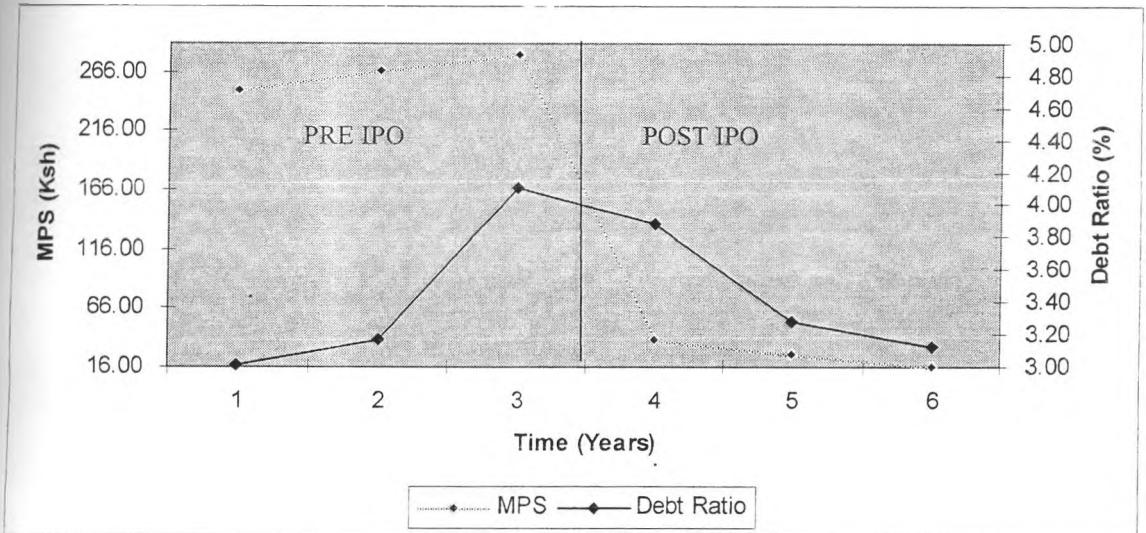
Figure 4.23 shows a general slight increase in net total earnings over the two periods with a logarithmic average of 9.29 and 9.55 for three years prior to the IPO and three years after the IPO. The increase is very minimal.

Figure 4.23: KenGen Movement of Logarithmic EAIT against Debt Ratio



Over the period, MPS (Figure 4.24) dropped from a mean of Ksh.266.27 to Ksh 27.25 over the period of three years before and after the IPO respectively. This implies that the market did not judge the IPO kindly since the price slumped to as low as Ksh.16.25.

Figure 4.24: Kenya Electricity Generating Movement of MPS against Debt Ratio



The t test at 95% level of significance yielded t calculated of 0.087 which is less than t critical of 1.724 and 2.09 for one tail and two tail respectively. The hypothesis that share capital is not related to firm value could not be denied in the case of KENGEN. However, the study finds that the market has a tendency to lose confidence in the firm that issues IPO. This is revealed by decline in MPS, EPS also declined despite upturn in net total earnings due to increased number of shares.

4.2.9 Equity Bank IPO (2006)

Equity bank went public in 2006 when its EPS had been declining from Ksh11.35 to Ksh. 3.80, after IPO, (see Figure 4.25). EPS increased consistently from Ksh.3.8 to Ksh.10.25. the means of three years prior to the IPO and after IPO were Ksh. 7.56 and Ksh.6.63 respectively. The correlation between EPS and debt ratio is found to be 0.50 which is a mild direct relationship between the variables.

Figure 4.25: Equity Bank Movement of EPS against Debt Ratio

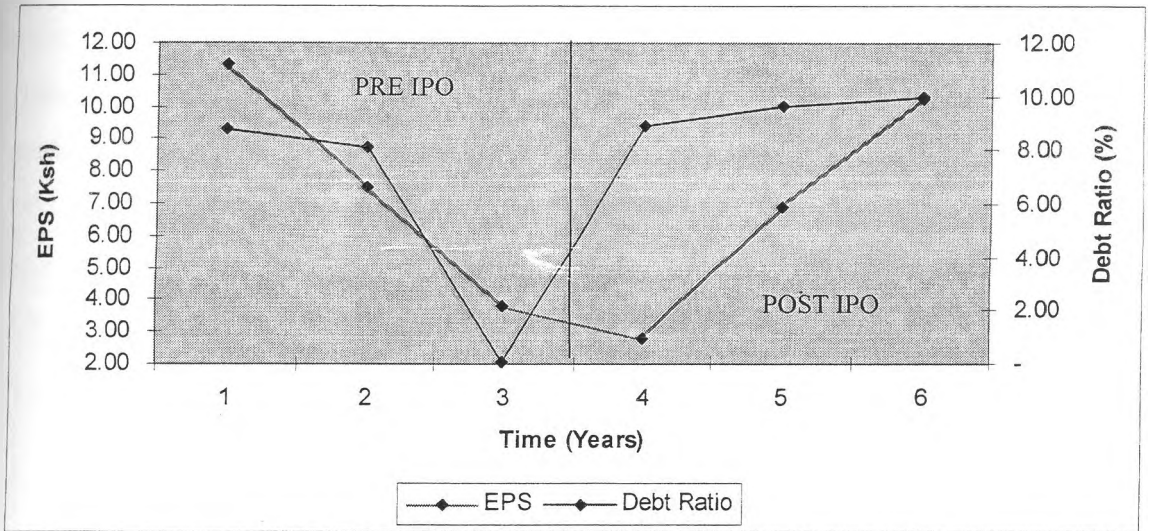
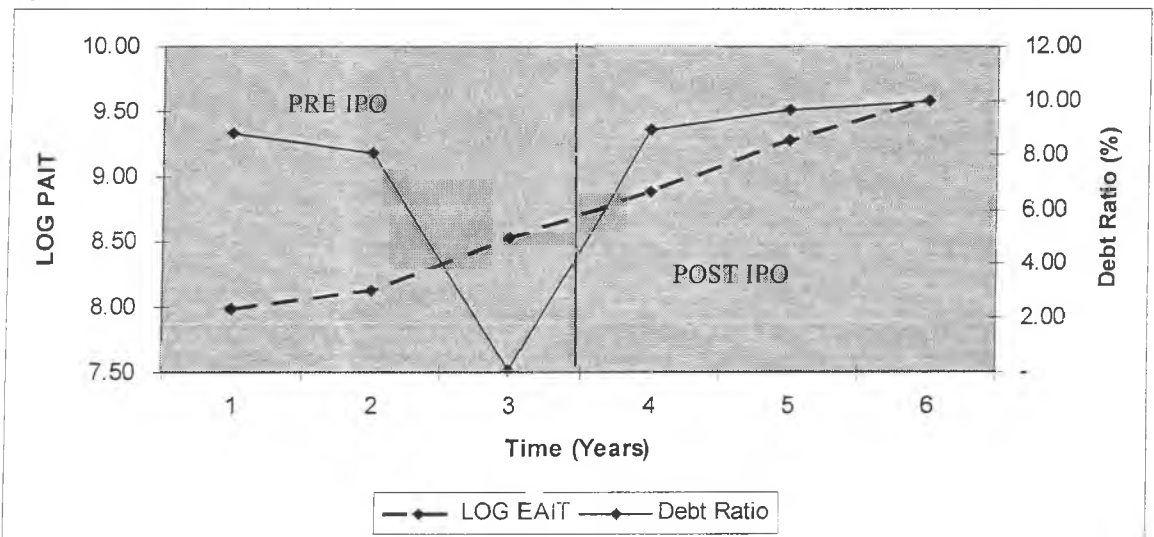


Figure 4.26 displays the movement of net total earnings, this increased consistently from log 7.99 to log 9.57 (actual values being Kshs 97 million to 3.8 billion). The difference in means of net total earnings of Ksh.192 million and Ksh.2 billion after the last three years prior to the IPO and after the IPO respectively.

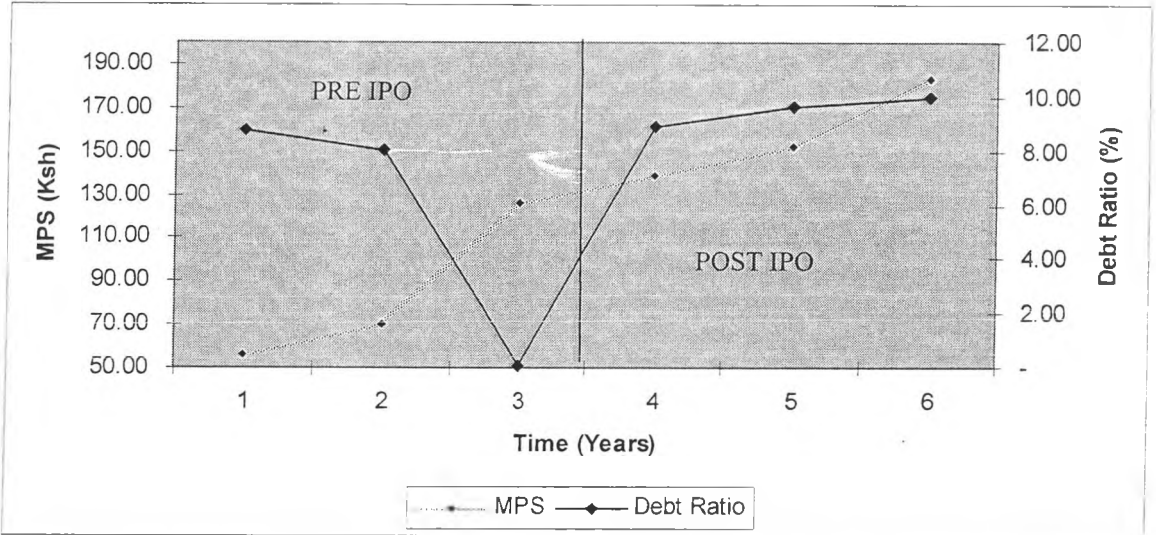
Figure 4.26: Equity Bank Movement of Logarithmic EAIT against Debt Ratio



The MPS as displayed in Figure 4.27 increased consistently from Ksh.55.77 to Ksh.183.00 the mean differences of MPS were Ksh 84 and Ksh158 for three years prior and after the IPO respectively.

The t test of difference between means indicate that t calculated (-1.348) is less than t critical of 1.83 and 2.262 for one tail and two tail respectively. The null hypothesis is rejected. (Appendix D).

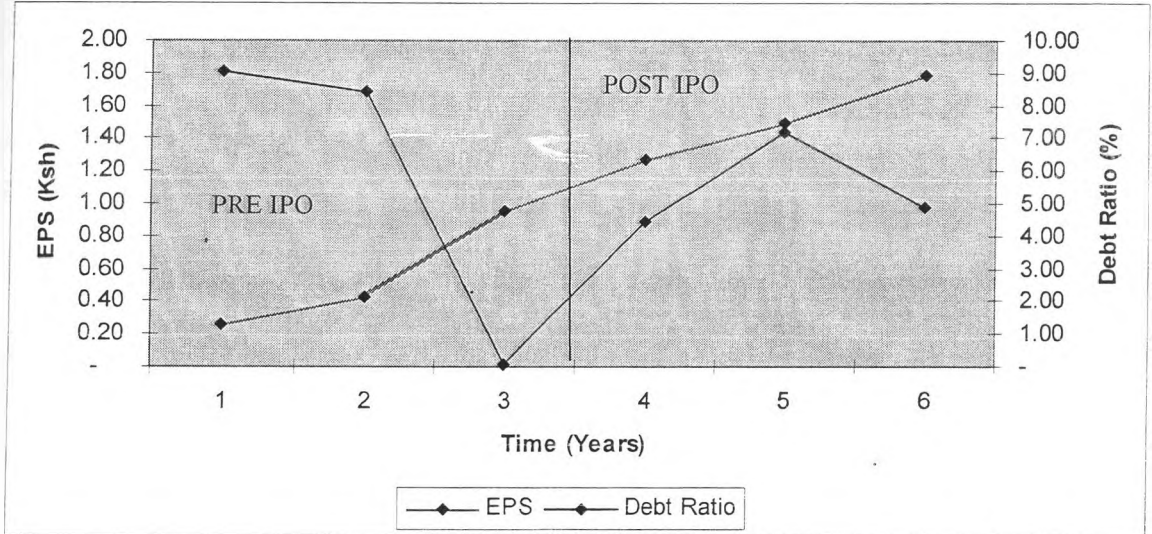
Figure 4.27: Equity Bank Movement of MPS against Debt Ratio



4.4.10 Scangroup IPO (2006)

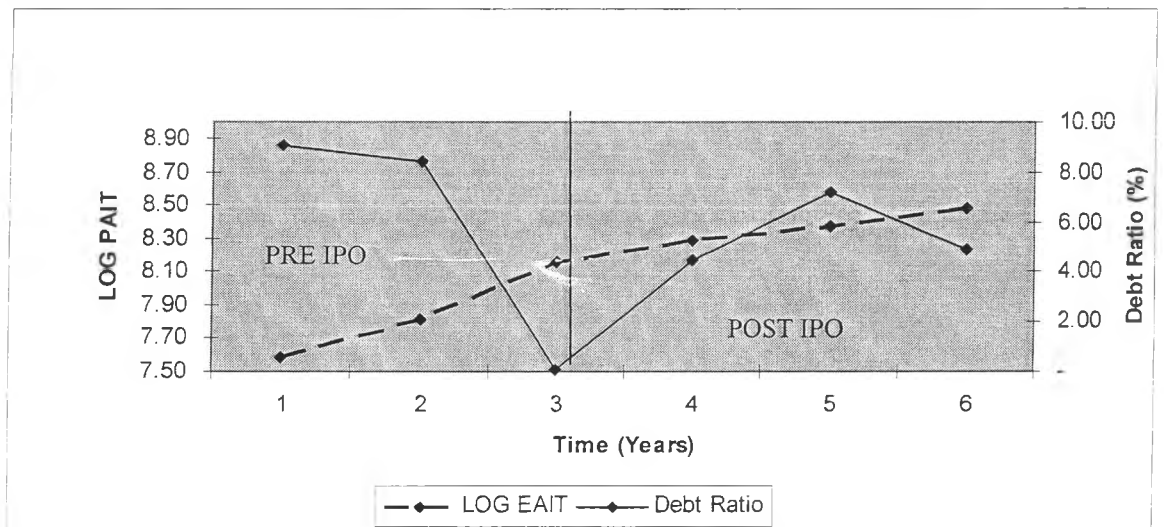
Scangroup issued an IPO in 2006 when its EPS had averaged to Ksh 0.55 over the past three years prior to the IPO, the hitting Ksh.1.52 after the IPO, EPS improved to an average of Ksh.0.4 in the subsequent three years. There was an increase in between the two sets of periods (see Figure 4.28).

Figure 4.28: Scangroup Movement of EPS against Debt Ratio



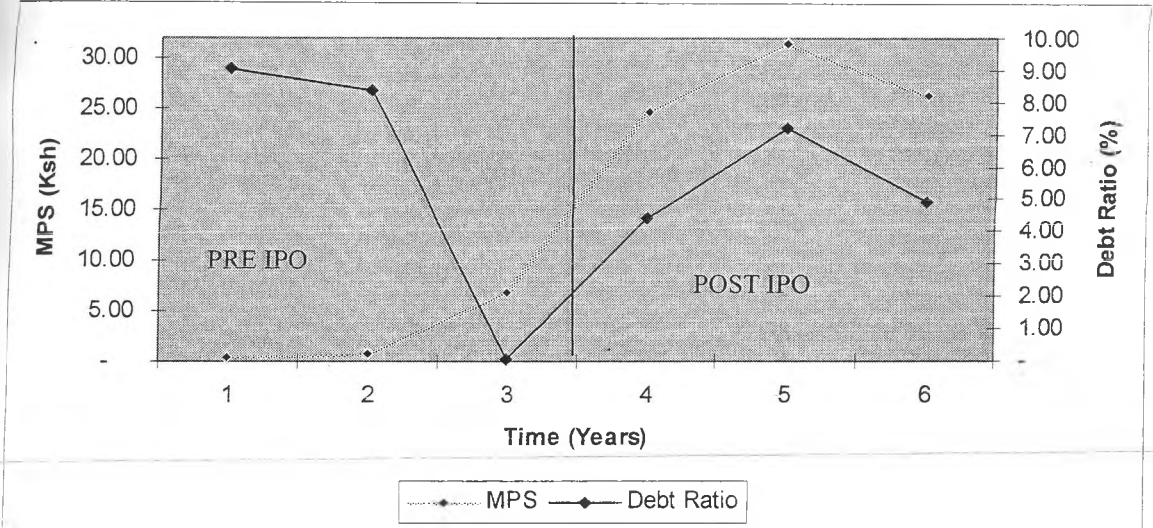
The logarithmic mean of net earnings (see Figure 4.29) also depicted an increasing trend across the two periods. The same was true with MPS (see Figure 4.30 below). The MPS moved from Ksh.0.34 as high as Ksh.31.5 in the period after the IPO. This is a highly capitalized firm by market. In this case of Scangroup, there is a general improvement in the EPS, net total earnings as well as MPS over the two periods of before and after the IPO.

Figure 4.29: Scangroup Movement of Logarithmic Net Earnings against Debt Ratio



A t test however failed to deny that there is no relationship between capital structure and firm value. The t calculated was -1.273 while the t critical was 1.795 for one tail and two tail. Never the less the study continues to observe information content in the IPO. The information content in this case is not negative as had been assessed in the cases of Kenya Commercial Bank, Mumias Sugar Company, Kengen *inter alia*. The emerging question is what else does the market look at before it judges a firm to be a loser or a winner?

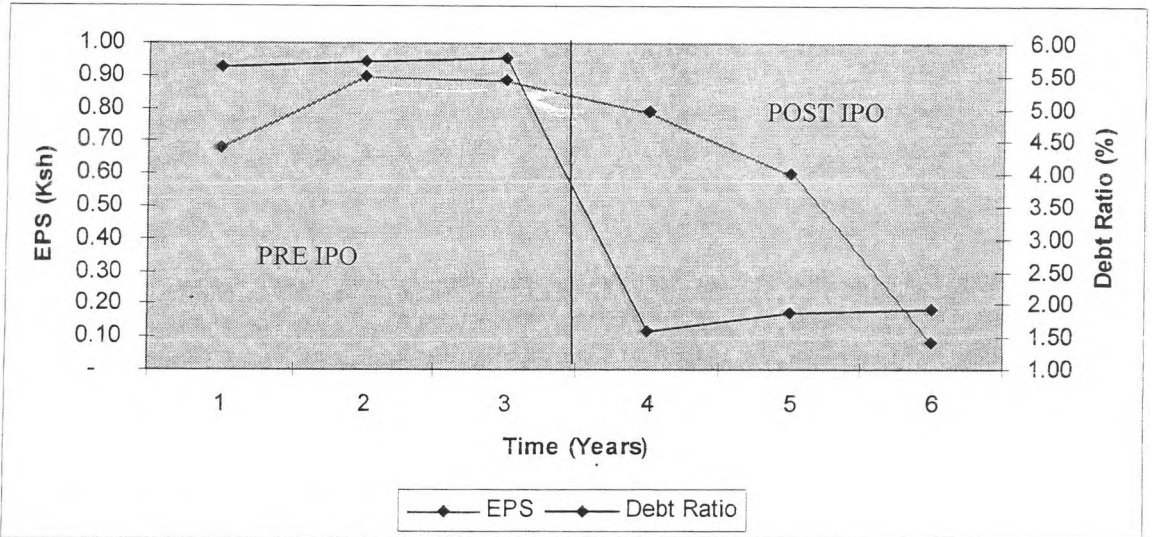
Figure 4.30: Scangroup Movement of MPS against Debt Ratio



4.2.11 Eveready IPO (2006)

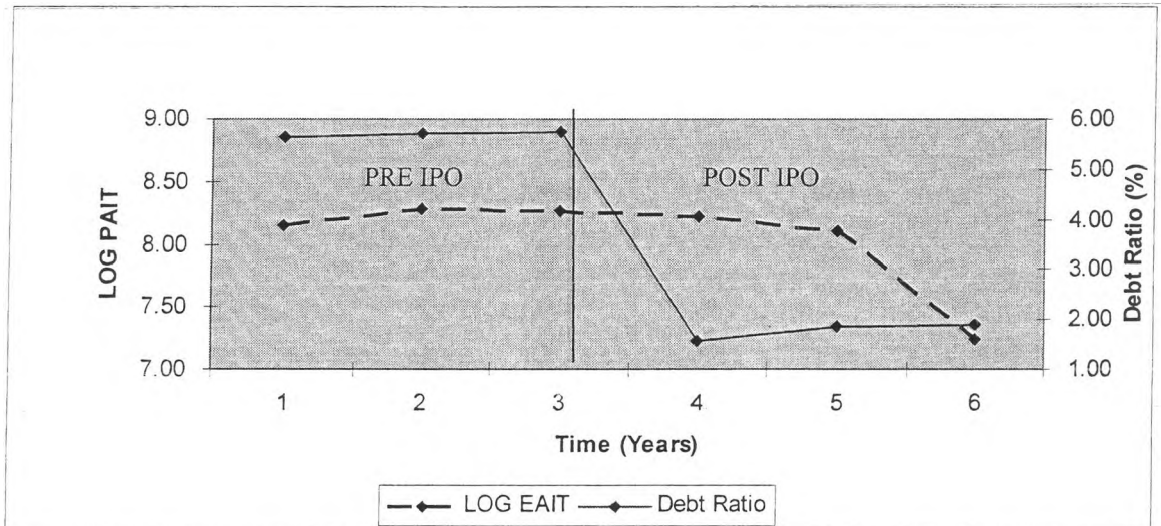
Figure 4.31 shows how debt ratio remained stable at 5.7% prior to the IPO. It then dropped suddenly to an average of 1.8%.the earnings per share dropped in at an increasing rate across the window period. The correlation between EPS and debt ratio is 0.57 positive.

Figure 4.31: Eveready Movement of EPS against Debt Ratio



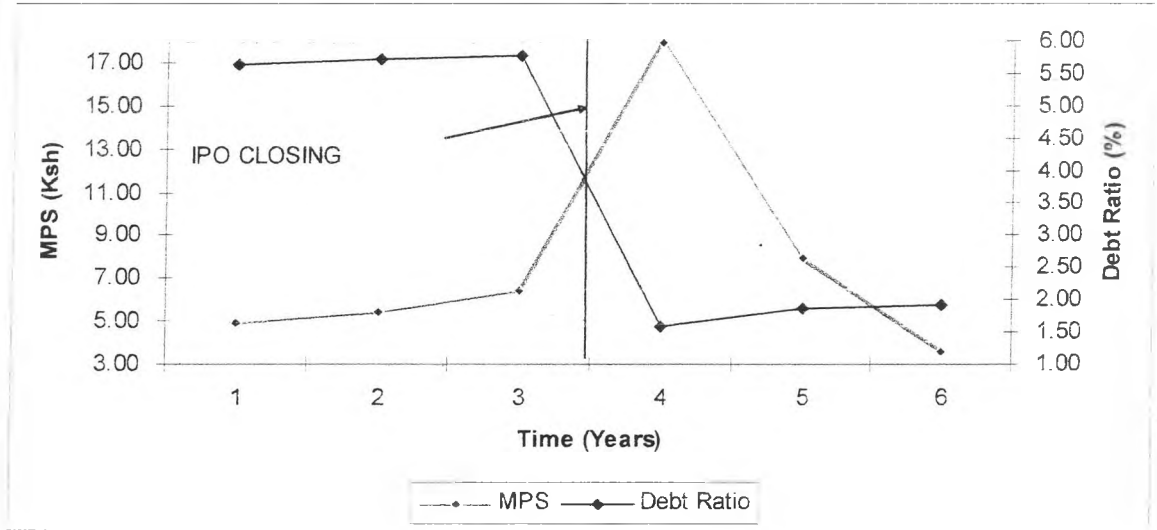
The earnings accordingly decreased at the same rate over the years under analysis as shown in Figure 4.32. The variable sustained a positive mild correlation with debt ratio. Figure 4.33 clearly displays the same.

Figure 4.32: Eveready Movement of Logarithmic EAIT against Debt Ratio



Market price per share responded around IPO time but realized it was deceived. Price rose from Ksh.3 to Ksh.18 then dropped to Ksh.3 again. The correlation coefficient of -0.48 is mild. The t test failed to deny the null hypothesis since t calculated is less than t critical.

Figure 4.33: Eveready Movement of MPS against Debt Ratio



4.2.12 Access Kenya IPO (2007)

This is another success case that realized EPS of average of Ksh.0.15 over the three year period prior to IPO. This increased to an average of Ksh.0.91 over the next period of three years after (Figure 4.34) below. The inverse correlation between EPS and debt ratio is 0.40.

Figure 4.34: Access Kenya Movement of EPS against Debt Ratio

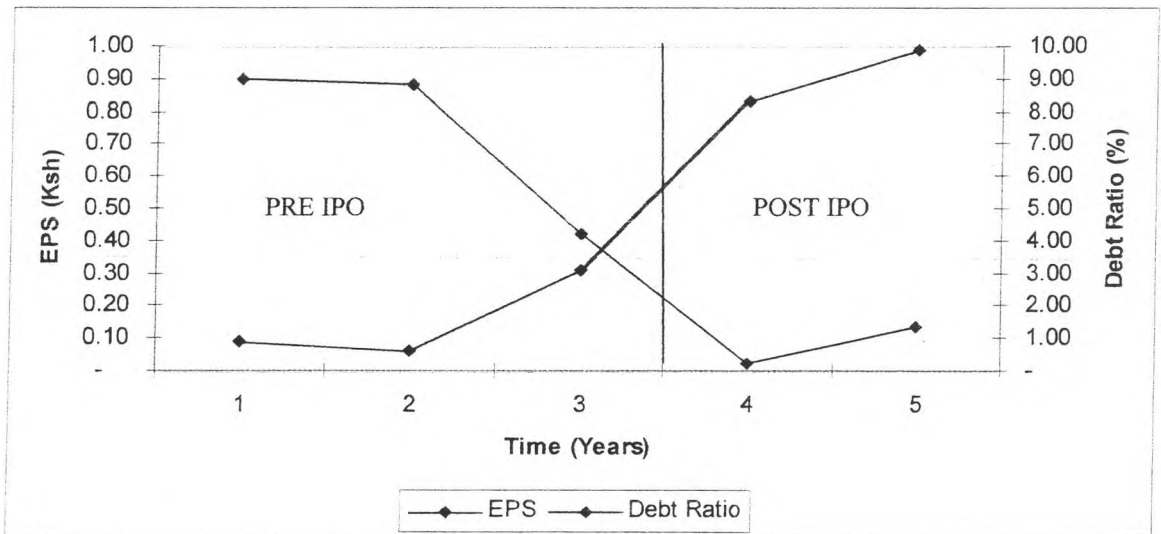
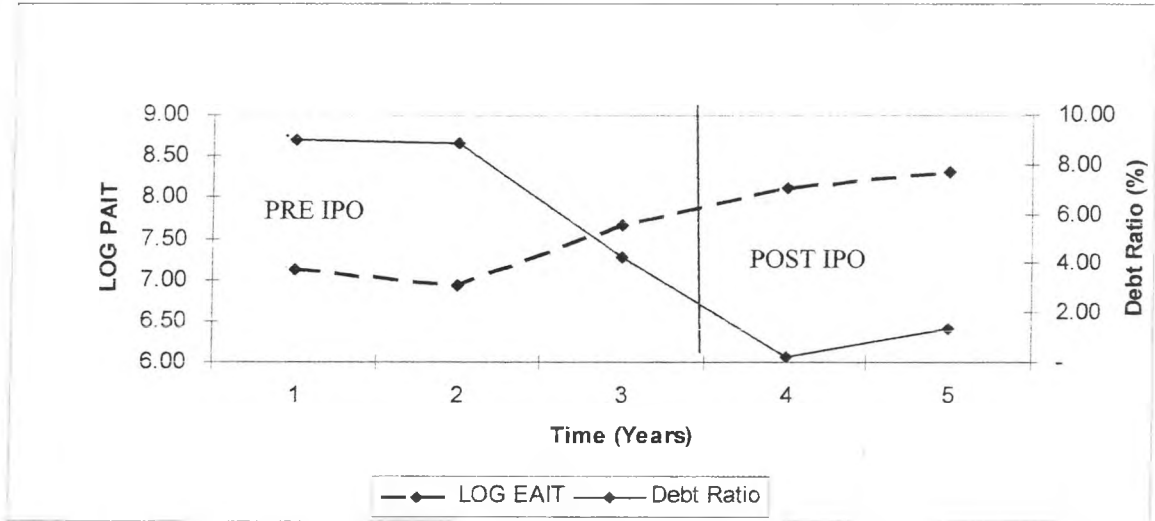


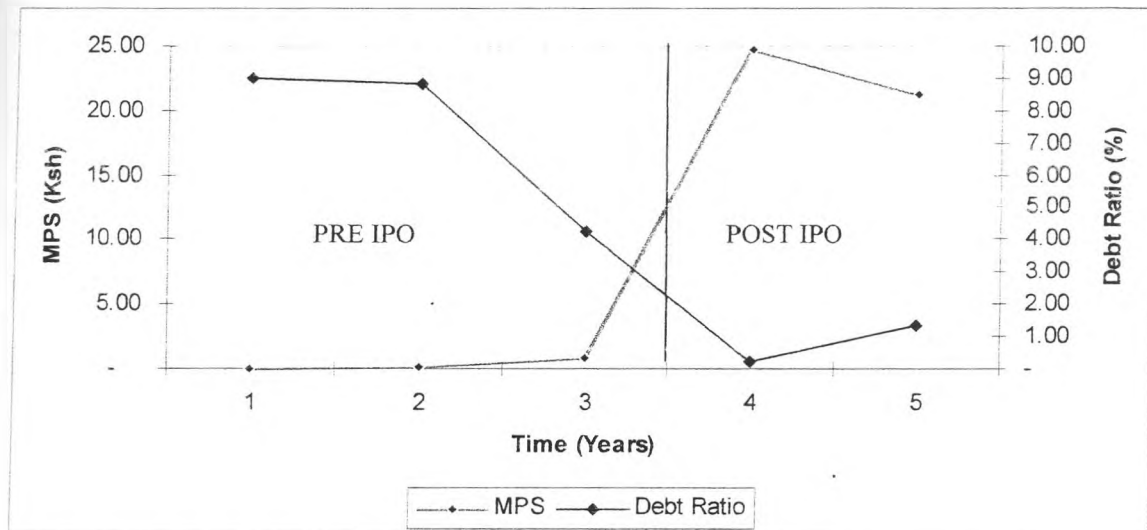
Figure 4.35 also indicated an increase in the net total earnings increased across the IPO windows period. The inverse correlation of 0.51 is what provides the cross scenario in the figure. Expectedly, debt ratio decline with issue price of additional equity share capital. MPS increased from Ksh.0.06 to as high as Ksh.24.75 in the period after the IPO (see Figure 4.36).

Figure 4.35: Access Kenya Movement of Logarithmic EAIT against Debt Ratio



The means of MPS for the two periods, three years before and after are Ksh.0.35 and Ksh23. The t test indicates a rejection to deny the null hypothesis that there is no relationship between capital structure and firm value.

Figure 4.36: Access Kenya Movement of MPS against Debt Ratio



4.2.13 Safaricom IPO (2008)

Safaricom is one of the latest firms to issue an IPO on the NSE. The average of EPS declined from 0.88 to 0.30 over the three years prior to and after IPO. Figure 4.37 below clearly shows the EPS trend.

Figure 4.37: Safaricom Movement of EPS against Debt Ratio

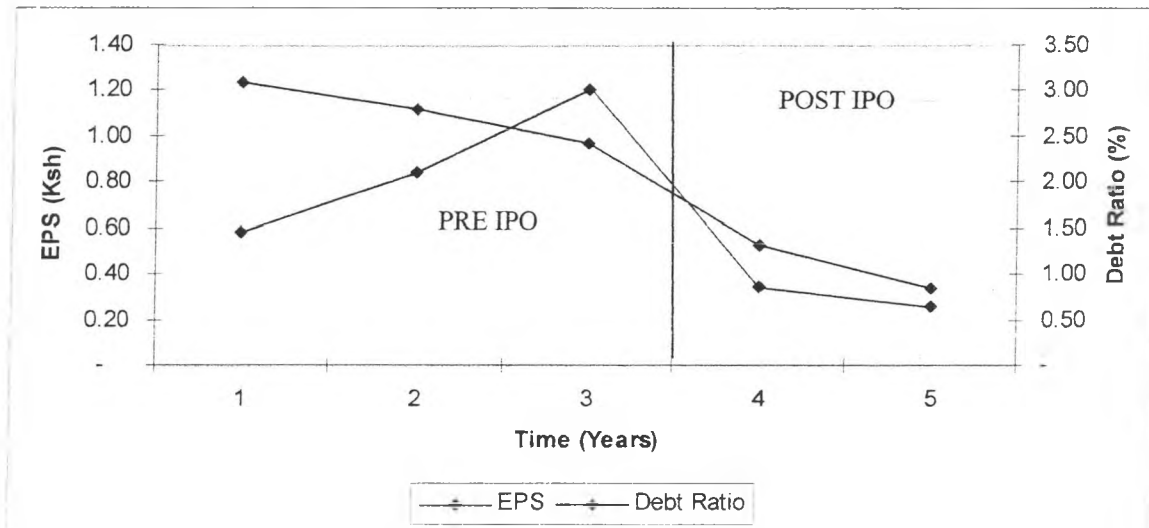
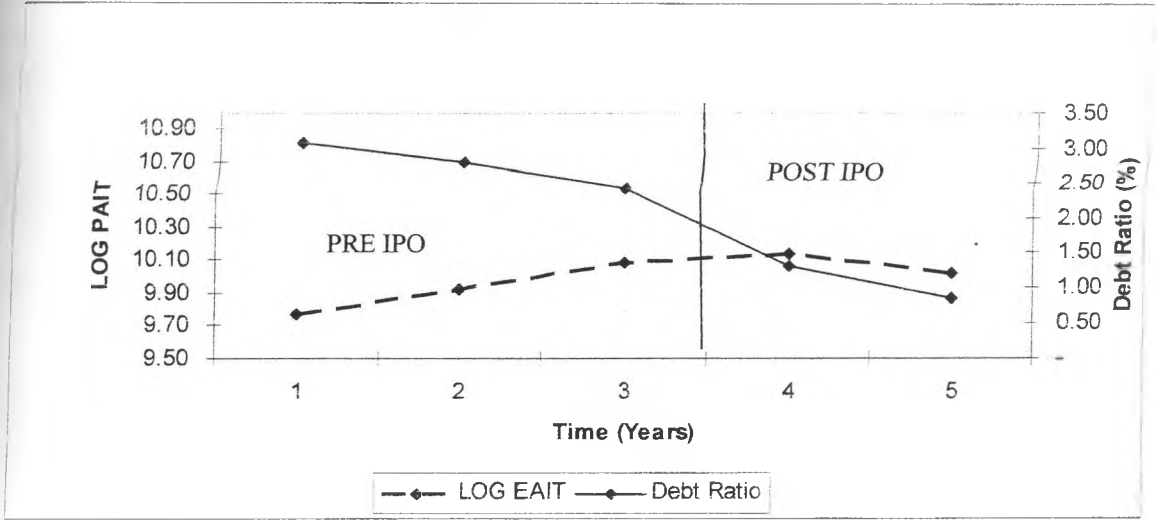


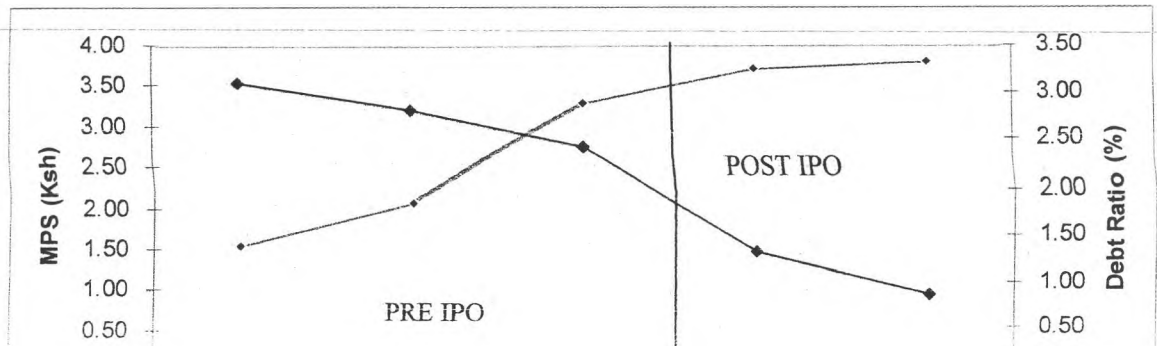
Figure 4.38 below shows the movement of debt ratio in relation with Log net total earnings before and after the IPO. The net total earnings increases gradually while debt ratio declines gradually. The correlation of (0.7) negative is observed.

Figure 4.38: Safaricom Movement of Logarithmic EAIT against Debt Ratio



MPS is also negatively correlated with debt ratio. Figure 4.39 shows how MPS increases across the IPO period and keeps increasing after the IPO.

Figure 4.39: Safaricom Movement of MPS against Debt Ratio

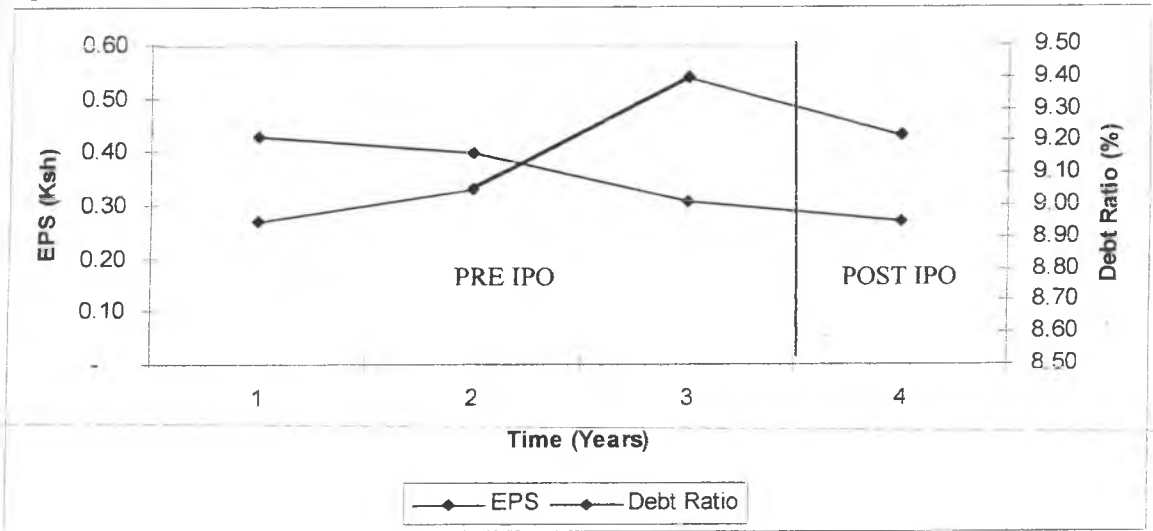


value of the firm. Similarly that IPO has served well as a proxy for change in capital structure.

4.2.14 Cooperative Bank IPO (2008)

The EPS moved from Ksh.0.27 increasing through Ksh.0.43 at the year in which the IPO was issued (see figure 4.40). In the same manner, net of total earnings increased from Ksh.446million to 2.4billion. All this was due to its growing capacity (total assets).

Figure 4.40: Co-operative Bank Movement of EPS against Debt Ratio



MPS however remained below Ksh.2.46 till one year prior to the IPO (see Figure 4.41), when it shot up from Ksh.2.46 to Ksh.11.40 in 2008 when the IPO was offered.

It is good to note that this firm has released financial statements since after IPO once, the 2008 financial report. This explains why the line marking the IPO is where it is. Numeral 4 on the X axis of Figure 4.40 represents 2008 (see Appendix C).

Figure 4.41: Co-operative Bank Movement of MPS against Debt Ratio

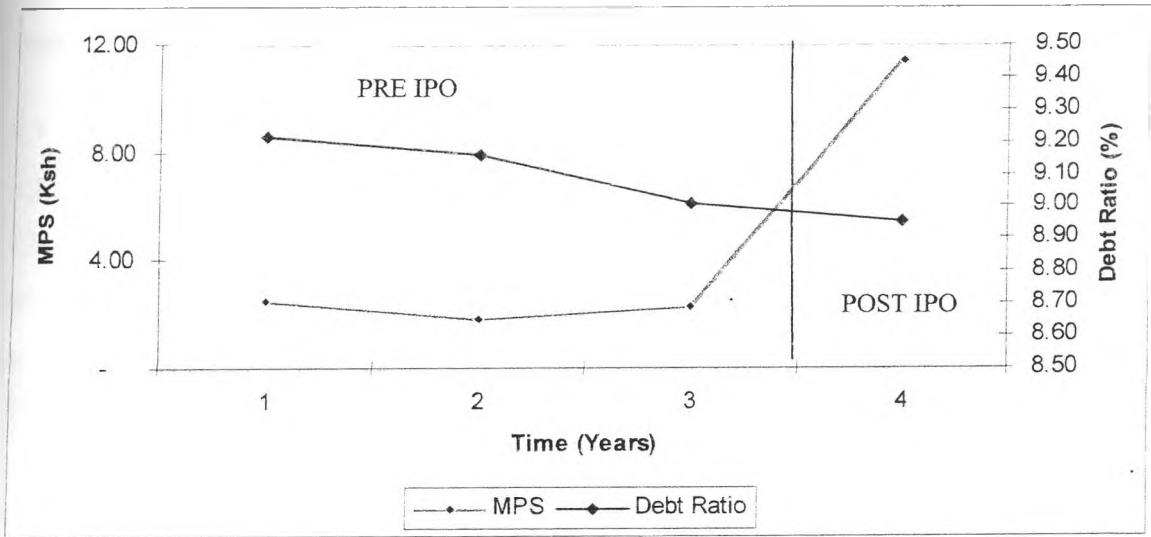
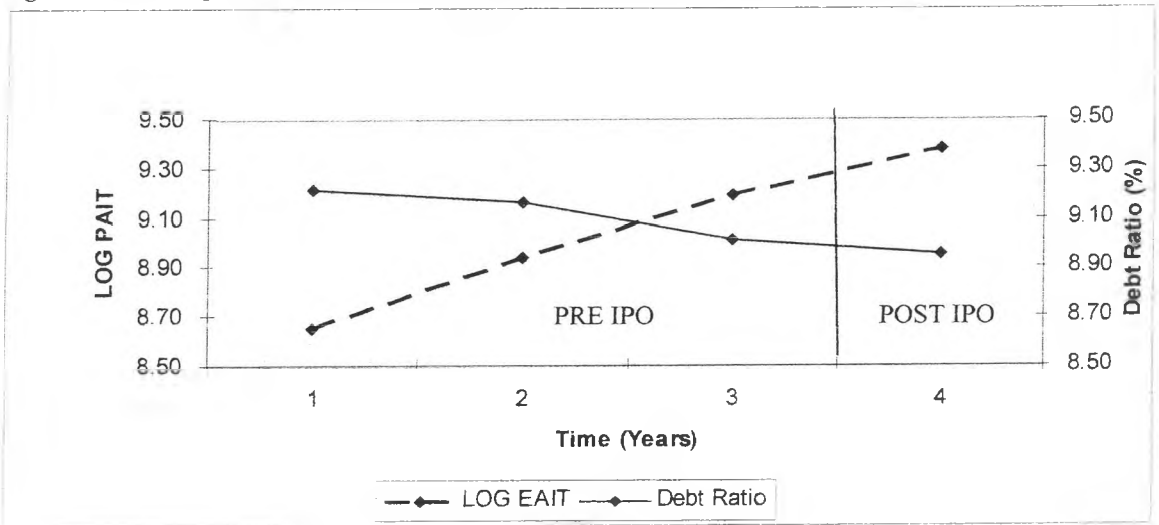


Figure 4.42 shows Co-operative Bank's the logarithmic net earnings of against debt ratio over the four year period. This company has only been in the market for one year. The correlation between the logarithmic net earnings and debt ratio was -0.98 indicating that as less debt was incorporated in the capital structure, net earnings increased.

Figure 4.42: Co-op Bank Movement of Logarithmic EAIT against Debt Ratio



From past examples of firms that have made public offers, it is expected that EPS will increase if it is classified together with firms like KCB, NIC, and Firestone. Since cooperative bank is a bank of all cooperative societies, it is perceived to be stronger than

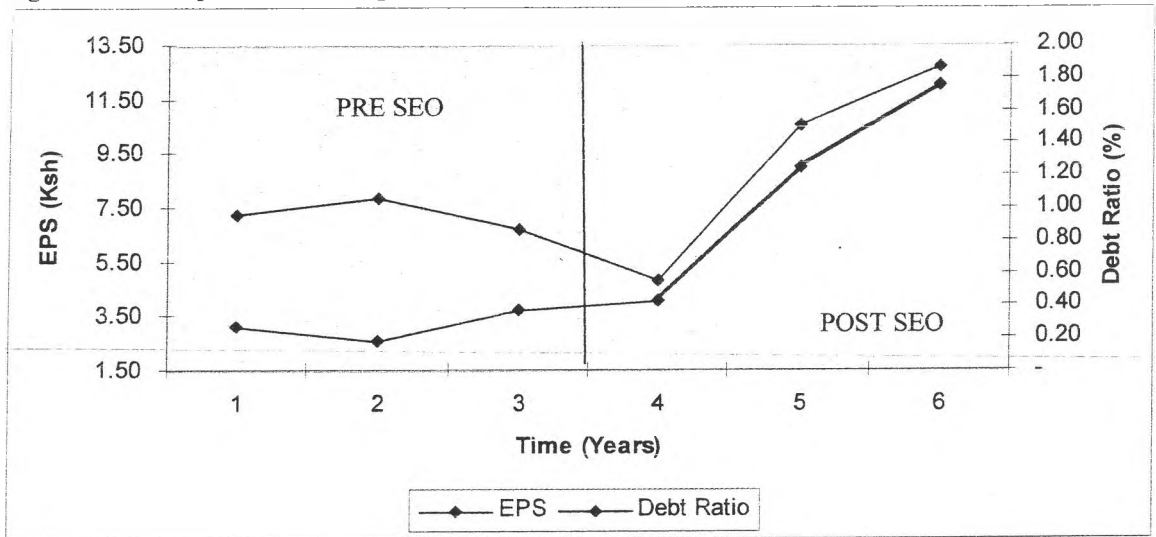
or/as KCB consequently, this study predicts that in the next four consecutive years, co-op bank's MPS, EPS and earnings will continue to grow.

4.3 Analysis of Secondary Offers

4.3.1 Cooper Motors Corporation (CMC) Holdings SEO (1993)

CMC made its secondary offer in 1993. Figure 4.43 depicts EPS which increased along with an abnormal increase in debt ratio. The mean EPS for the three years prior to the secondary offer, was Ksh. 3.15 which improved to Ksh.8.36 for the three years after the SEO. The correlation was 0.88 with debt ratio.

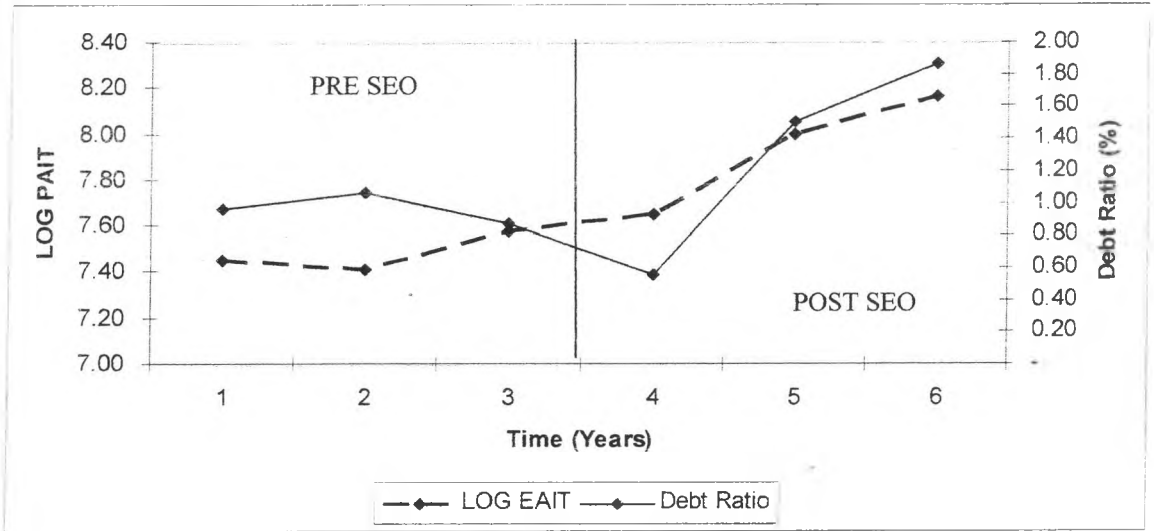
Figure 4.43: Cooper Motors Corp Movement of EPS against Debt Ratio



This was sustained by an increased profitability from a logarithmic mean of 7.48 to 7.94 for the periods of three years before and after the SEO. The actual profit increased by Ksh. 6million only (see Figure 4.44). The actual correlation stood at 0.80.

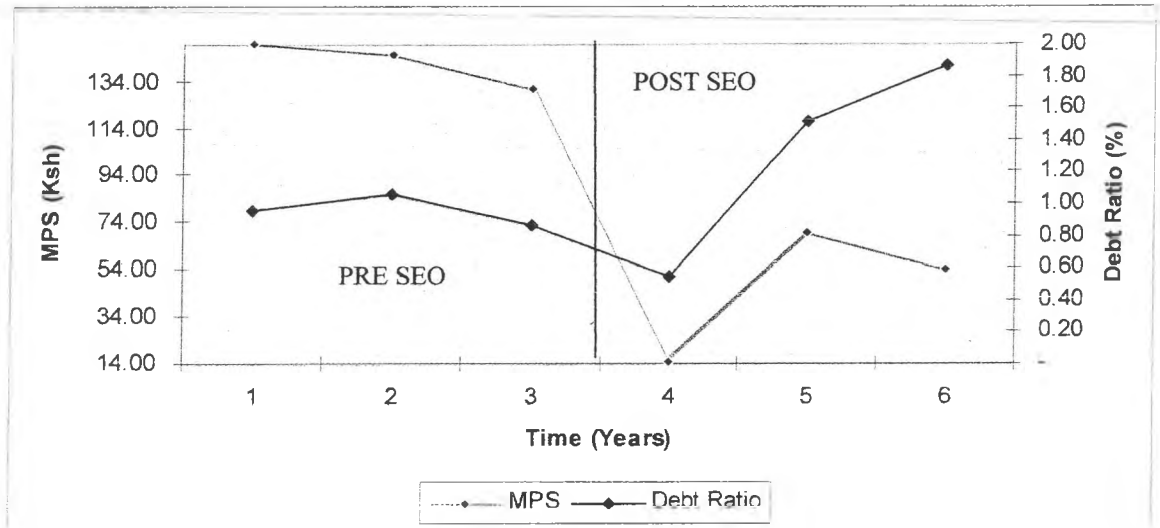
The MPS (Figure 4.45) had a mild inverse correlation with debt ratio of -0.12. Incidentally, the MPS dropped from a mean of Ksh. 142.08 to Ksh. 46.97 over the three years prior and after the SEO.

Figure 4.44: CMC Movement of Logarithmic EAIT against Debt Ratio



From absolute values as well as logarithmic values, this offer did not succeed. It yielded very low returns. However, the management believed in themselves and made good earnings enough to register an increase in EPS.

Figure 4.45: Cooper Motors Corp Movement of MPS against Debt Ratio



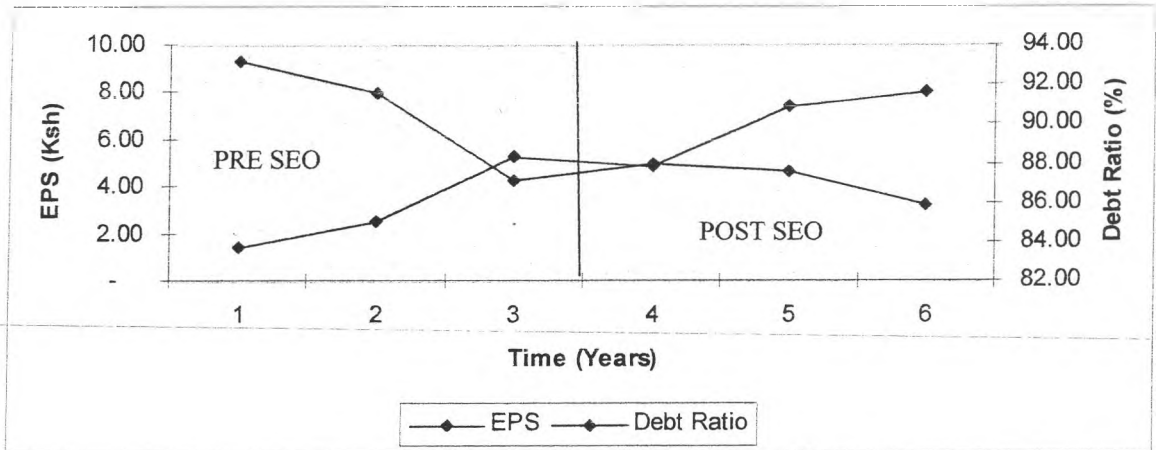
T statistic recorded a t-calculated of -0.43 as compared with T critical of 1.753 and 2.131 for a one and two tail tests respectively. This meant the study fails to reject the proposition that there was no relationship between capital and firm performance or value

as far as the firm was concerned. Ideally there was insufficient capital raised to meet the requirement of the T-test.

4.3.2 National Industrial Credit (NIC) SEO (1994)

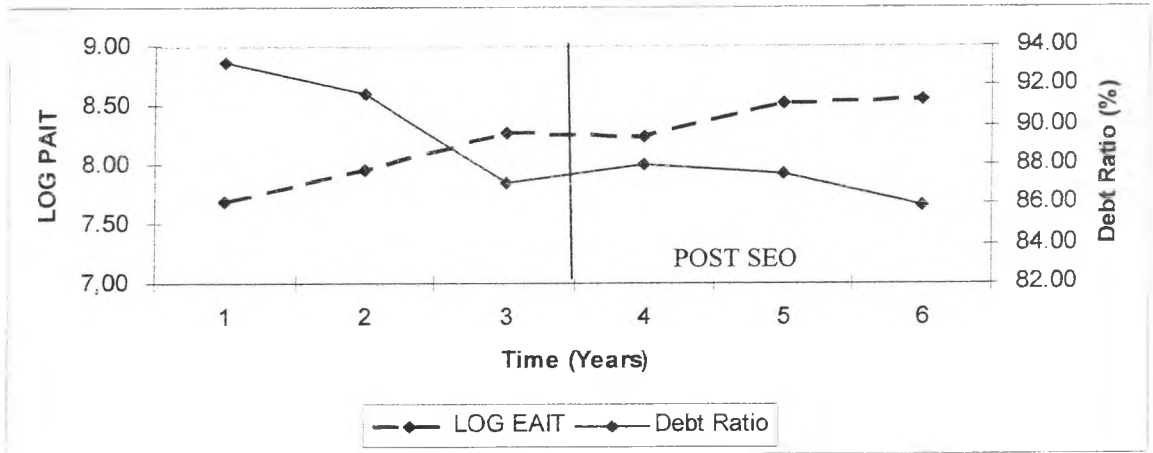
NIC issued its secondary offer in 1994. As depicted in Figures 4.7 to 4.9 below demonstrate a mild negative correlation of -0.49, -0.68 for EPS and MPS for debt ratio. Total earnings demonstrated a much stronger correlation. EPS (Figure 4.46) increased consistently with a mean of Ksh. 3.06 to Ksh. 6.78 between the three years prior to the SEO and three years after.

Figure 4.46: National Industrial Credit Movement of EPS against Debt Ratio



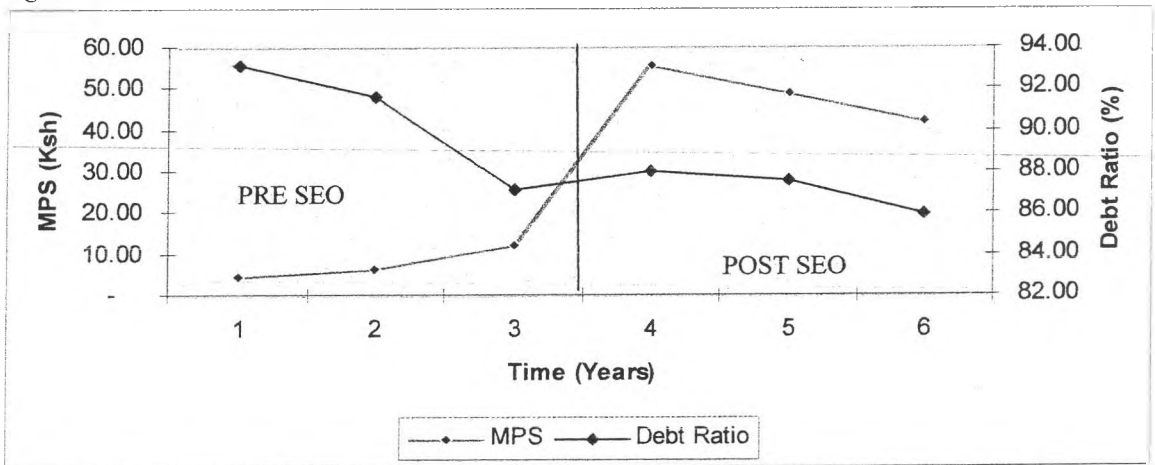
Total earnings also grew mildly between the two set periods (Figure 4.47) from a logarithmic mean of 7.97 to 8.43 and the actual means of Ksh. 107million to Ksh. 283million.

Figure 4.47: NIC Movement of Logarithmic EAIT against Debt Ratio



MPS (Figure 4.48) had a little stronger inverse correlation of 0.68 with debt ratio. This is an expected occurrence when shares are increased by way of new issues.

Figure 4.48: National Industrial Credit Movement of MPS against Debt Ratio

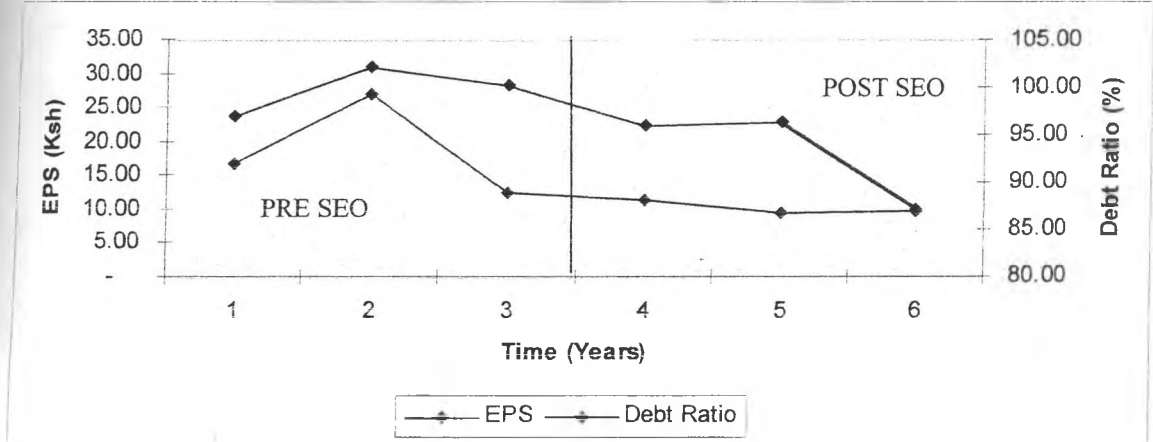


Despite all these, the T test did not acknowledge a significant relationship between capital structure and firm value. Reason being, as equity increased, firm debt capital increased proportionately and therefore more or less maintaining the same debt ratio which changed very insignificantly from 90.6% to 87.15%, ideally were just about 1%.

4.3.3 Kenya Commercial Bank SEO (1996)

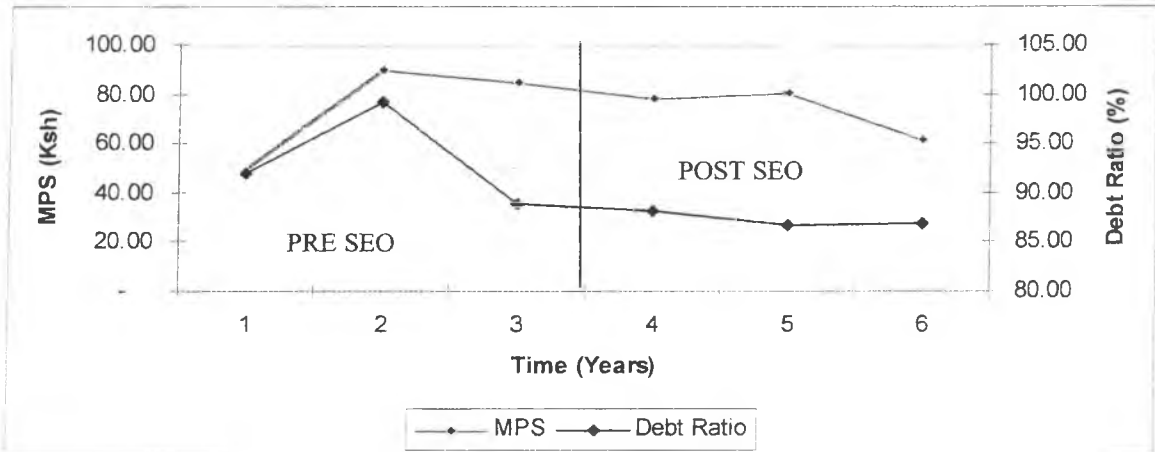
KCB made a secondary offer of equity shares in 1996. Three years prior to the offer EPS was Ksh. 23.70, 31.02, and 28.11 respectively. After the IPO, EPS moved from Ksh. 22.29 to settle at Ksh. 10.04 at the end of the third year. Certainly this was no good performance (see Figure 4.49).

Figure 4.49: Kenya Commercial Bank Movement of EPS against Debt Ratio



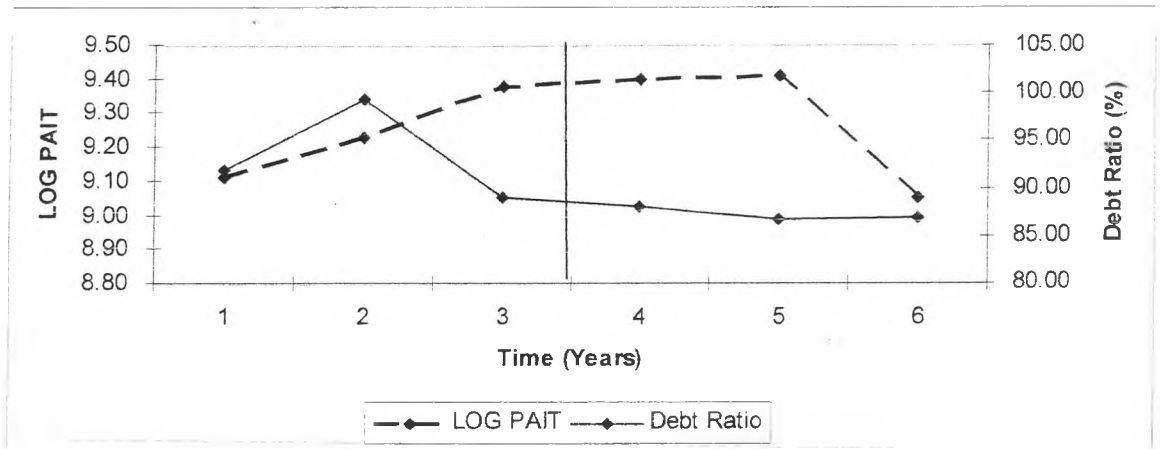
On the other hand MPS dropped from a mean of Ksh. 74.5 in the three years prior the SEO to Ksh. 73.33 in the three years after the offer (see Figure 4.50).

Figure 4.50: KCB Movement of Logarithmic EAIT against Debt Ratio



On average however, the level of EAIT (Figure 51) rose from log 9.24 to log of 9.29 (very insignificant rise). It is important to note that the insignificance in the impact that the IPO had on the firm value is also confirmed by the T test of significances of difference at 95% level of significance. The T calculated is -0.467 while the T critical is 1.734 and 2.10, one tail and two tail respectively. The null hypothesis that there is no relationship between a change in the firm's capital structure and the firm's value fails to be rejected.

Figure 4.51: Kenya Commercial Bank Movement of MPS against Debt Ratio



When not accepting this hypothesis, the study observes that KCBs debt ratio did not change. Contrary, as more equity was attracted, more debt financing was also contracted. By implication, there was no change in debt ratio, therefore no meaningful relational analysis would be observed

4.3.4 Kenya Commercial Bank SEO (1998)

In its secondary offer, KCB's EPS stood at Ksh. 28.19. This declined to Ksh. 22.87 just before the offer was executed. After the offer, EPS dropped to as low as (Ksh. 13.86) with a mean of Ksh. -2.65 from a mean of Ksh. 24.45 three years after and before the offer respectively (see Figure 4.52).

Figure 4.52: KCB Movement of EPS against Debt Ratio (1998 SEO)

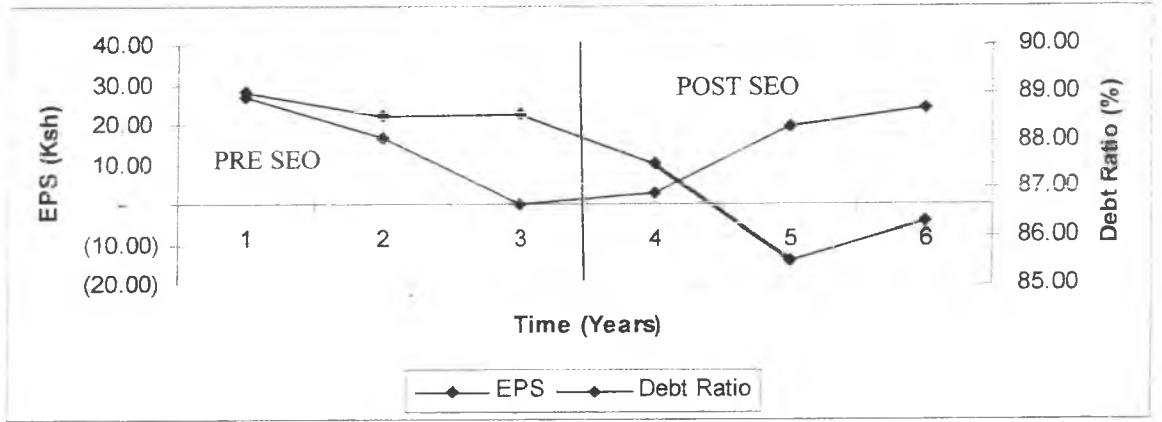
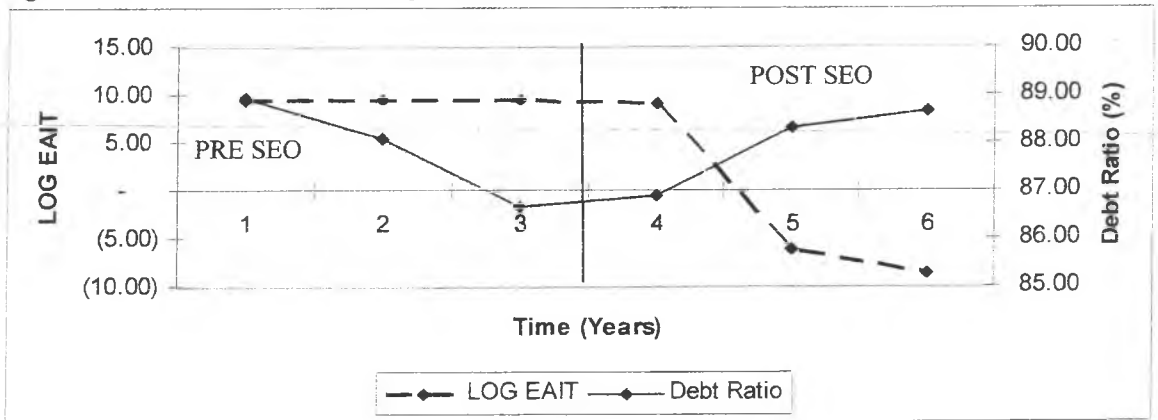


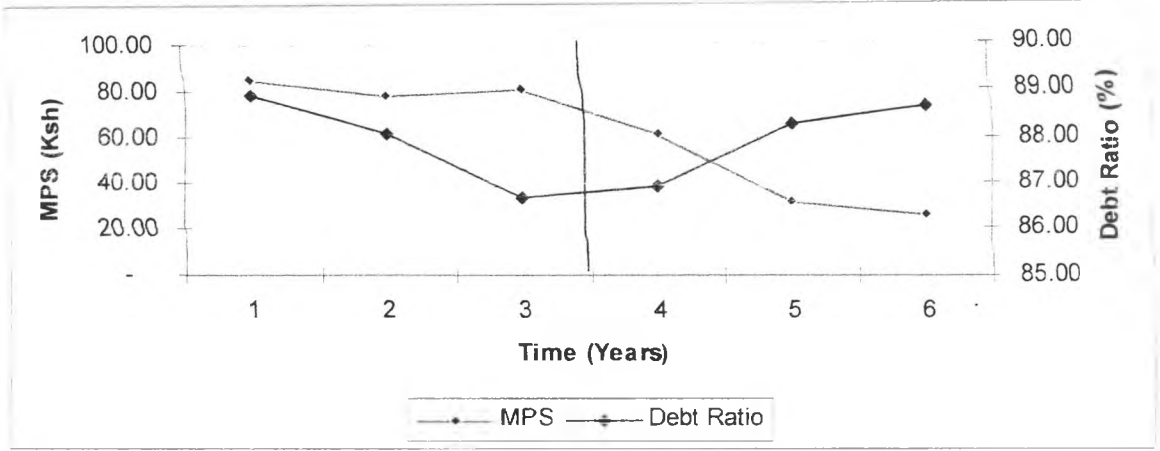
Figure 4.53 demonstrates how total earnings remained constant at a logarithmic value of 19.39 for the three years prior to SEO. One year after, the net earnings dropped to up to negative logarithmic value of -1.94.

Figure 4.53: KCB Movement of Logarithmic EAIT against Debt Ratio



This reaction which is consistent with market opinion as depicted by the MPS, which also demonstrated its displeasure by a constant decline from Ksh. 85 to Ksh. 25 (see Figure 4.54). From this reaction, it is observable that the market was not happy with the second public offer. The management did not assess the market's wishes and wants.

Figure 4.54: KCB Movement of MPS against Debt Ratio (1998 SEO)



The T test fails to support the hypothesis that there is a relationship between capital structure and firm value (T calculated -0.134) is less than T critical (1.734 and 2.11 for one tail and two tail respectively). However, the study finds that a second secondary offer is engorged with negative information content to the players in the capital markets. It appears that the market opines that the firm's management are incompetent to raise money from profitability, having failed to manage money raised from previous two public offers, hence they are seeking to be collecting money from the public repeatedly. Firms should therefore stay warned off making second and third offers.

This information seems to have reached the market three years prior to the year in which the offer was made. The continued decline in EPS and MPS way back from the third year prior to the offer (Figure 4.3) attest to that. By implication the continued decline in MPS and EPS the company could not have continued to realize stable constant net total earnings for four years. This must have been as a result of manipulated financial statements (Figure 4.29 above).

4.3.5 Industrial & Commercial Development Corporation (ICDC) SEO (2001)

The firm made its secondary offer in 2001 prior to which it had a continuously declining EPS (Figure 4.55 below).this went consistently with debt ratio. The firm experienced stagnant growth in net total earnings in the first half, then some growth in the second half of the six years (see Figure 4.56).

Figure 4.55: ICDC Movement of Earnings per Share against Debt Ratio

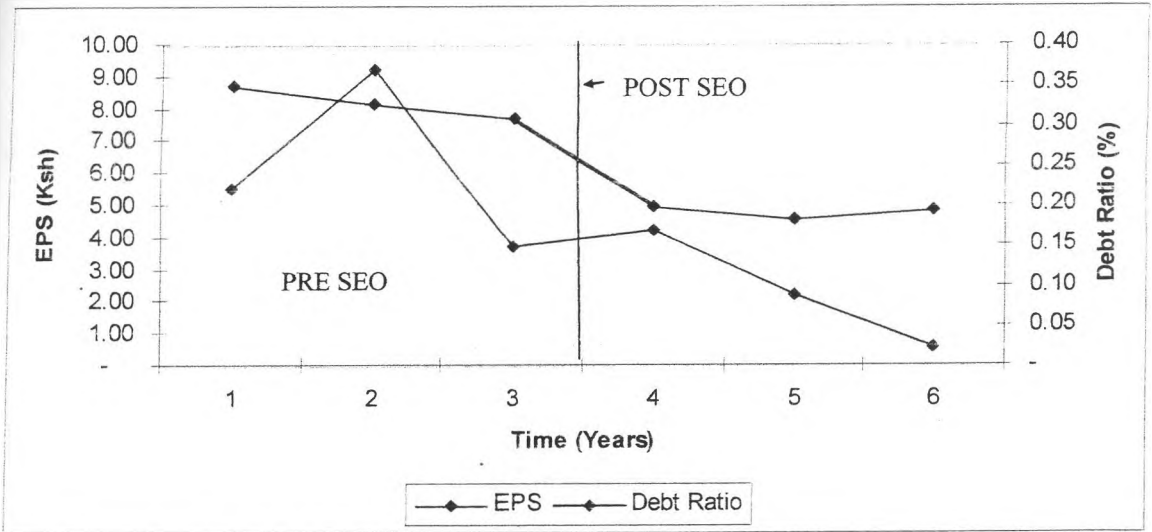
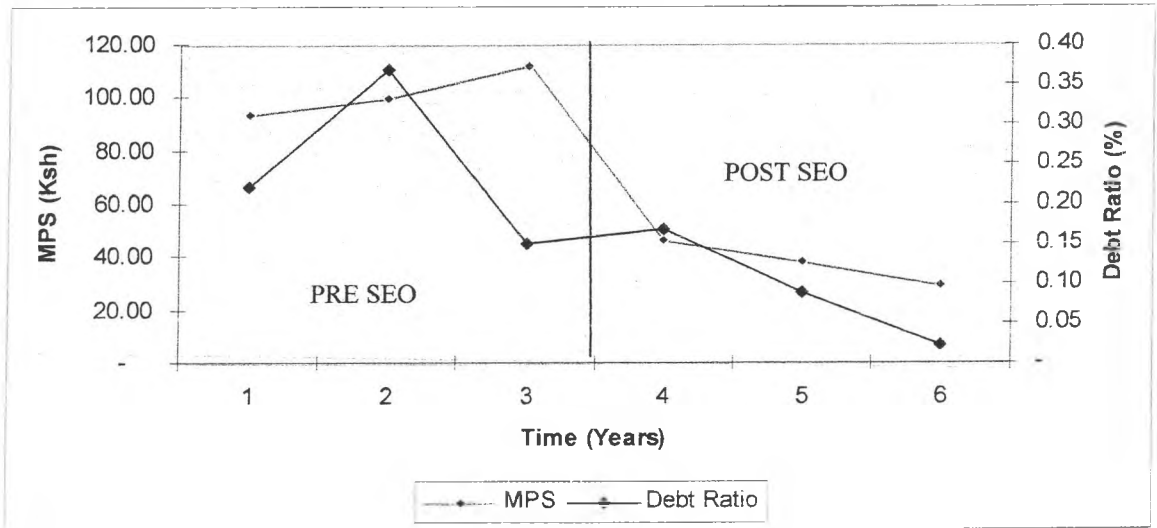


Figure 4.56 depicts the firm's decline in the MPS as it approached IPO, from a record high of Ksh.111.99 to Ksh.29. T test failed to sustain the hypothesis that capital structure is related to the value of a firm. The t-calculated (-0.137) is less than t-critical of 1.725 and 2.085 for one tail and two tail tests respectively.

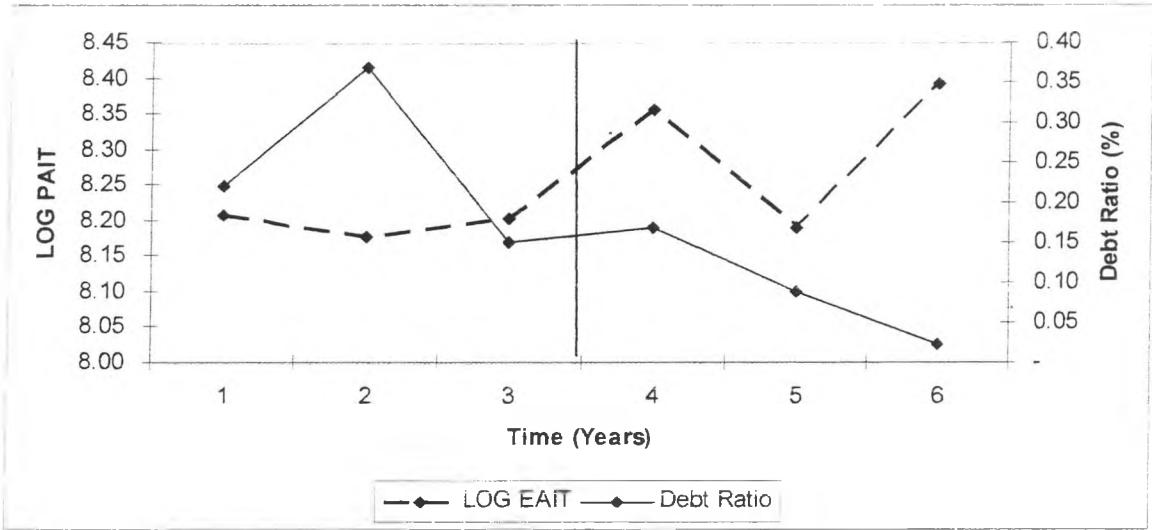
Figure 4.56: ICDC Movement of MPS against Debt Ratio



However the research learns further that the market has no good will for secondary offers. This experience was realized by KCB when it realized declining MPS, EPS and

eventually profitability (Figure 4.57). Further the analysis confirms that there is adverse information content in secondary offers.

Figure 4.57: ICDC Movement of Logarithmic EAIT against Debt Ratio



4.3.6 Mumias Sugar SEO (2006)

Mumias sugar later offered a SEO; three years prior to which EPS (Figure 4.58) increased at a reducing at a reducing rate from negative (Ksh.0.42) to Ksh.2.99 in one year after SEO. After which the EPS dropped to as low as Ksh.0.79. this kind of graph shows investors expectation which are not sustainable. Alongside it however, the debt ratio declined steadily from 2.72% to 1.6%. The correlation of the two variables was found to be 0.11 (almost non-existent).

Figure 4.58: Mumias Movement of EPS against Debt Ratio (2006 SEO)

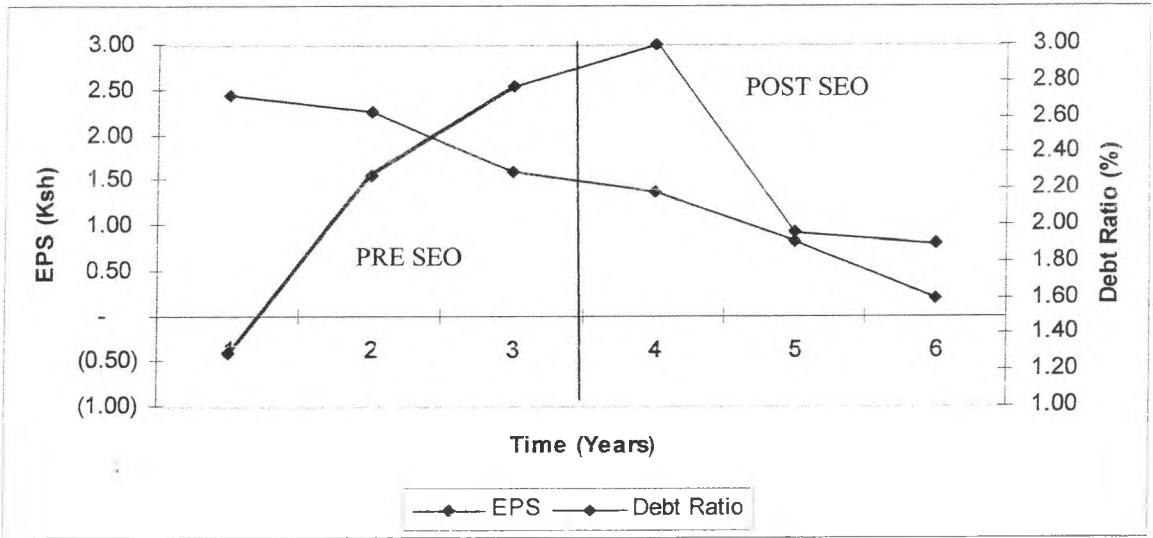
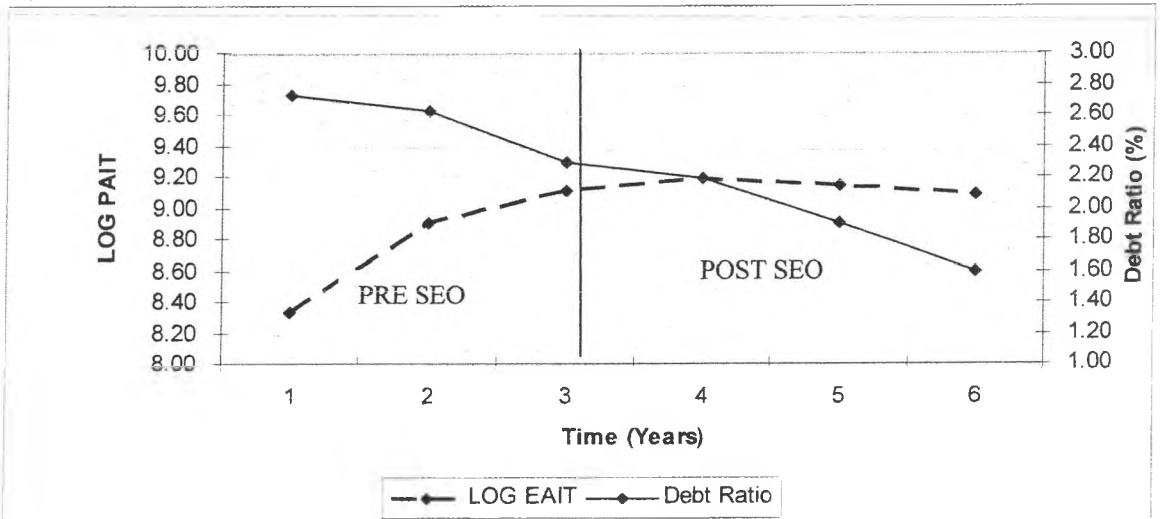


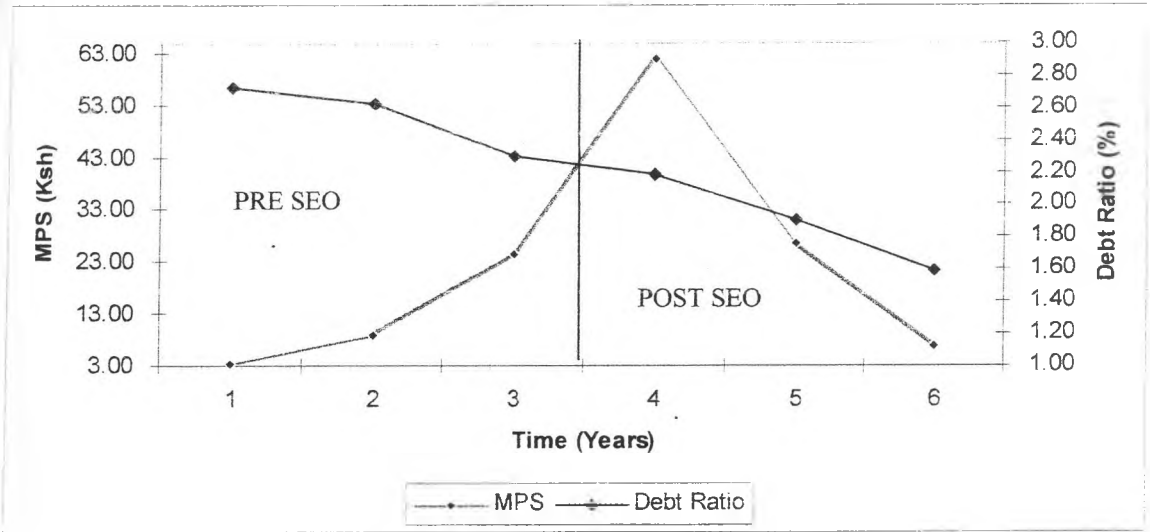
Figure 4.59 also depicts a rising net total earnings at a reducing rate over the period of three years prior to the IPO and remaining almost constant over the period of three years after IPO. The correlation of net earnings to debt ratio is (0.69) inversely strong enough.

Figure 4.59: Mumias Movement in Log EAIT and Debt Ratio (2006 SEO)



MPS, like EPS rose from a low point of Ksh.3 to as high as Ksh.63 across three years prior to the SEO plus one year after SEO. Suddenly there was a sharp decline in the same reaching Ksh.4.00. The correlation of the two variables is inversely related (0.18) (see Figure 4.60).

Figure 4.60: Mumias Movement of MPS against Debt Ratio (2006 SEO)



The results of t test report t calculated -0.477 with critical of 1.734 and 2.101 thus the research does not deny the null hypothesis that there is no relationship between capital structure and firm value.

4.4 Summary of Measures of Significance

As is seen in the table below, the null hypothesis was rejected on the weight that t-cal for all firms was less than t-critical in both cases of one tail and two tail. The null hypothesis averred that there was no relationship between capital structure and firm value. This is a contradiction with the findings of correlation analysis which found strong correlation between the two variables.

Table 4-1 Summary of T-Test Analyses (95%)

No.	Firm Name	Offer	t Stat	t Critical 1-tail	t Critical 2-tail	Decision
1.	KCB 1990	IPO	-0.75	1.77	2.16	Fail to Reject Ho
2.	CMC HOLDING	SEO	-0.43	1.75	2.13	Fail to Reject Ho
3.	NIC	SEO	-1.00	1.76	2.14	Fail to Reject Ho
4.	FIRESTONE	IPO	-0.59	1.75	2.12	Fail to Reject Ho
5.	NBK 1994	IPO	-0.67	1.75	2.12	Fail to Reject Ho
6.	KENYA AIRWAYS	IPO	-0.72	1.75	2.13	Fail to Reject Ho
7.	KCB 96	SEO	-0.47	1.73	2.10	Fail to Reject Ho

8.	T.P.S	IPO	-0.74	1.75	2.12	Fail to Reject Ho
9.	ARM	IPO	-0.27	1.73	2.09	Fail to Reject Ho
10	KCB	SEO	-0.13	1.73	2.10	Fail to Reject Ho
11	MUMIAS SUGAR 01	IPO	-0.14	1.72	2.09	Fail to Reject Ho
12	ICDC 01	SEO	-0.14	1.72	2.09	Fail to Reject Ho
13	KENGEN	IPO	-0.29	1.73	2.09	Fail to Reject Ho
14	EQUITY BANK	IPO	-1.35	1.83	2.26	Fail to Reject Ho
15	SCANGROUP	IPO	-1.27	1.80	2.20	Fail to Reject Ho
16	EVEREADY	IPO	-0.16	1.73	2.10	Fail to Reject Ho
17	MUMIAS SUGAR	SEO	-0.48	1.73	2.10	Fail to Reject Ho
18	ACCESS KENYA	IPO	-1.48	1.81	2.23	Fail to Reject Ho
19	SAFARICOM	IPO	-1.17	1.75	2.13	Fail to Reject Ho
20	COOPERATIVE BANK	IPO	-0.43	1.73	2.09	Fail to Reject Ho

4.5 Analysis of Initial Public Offers and Daily Share Prices

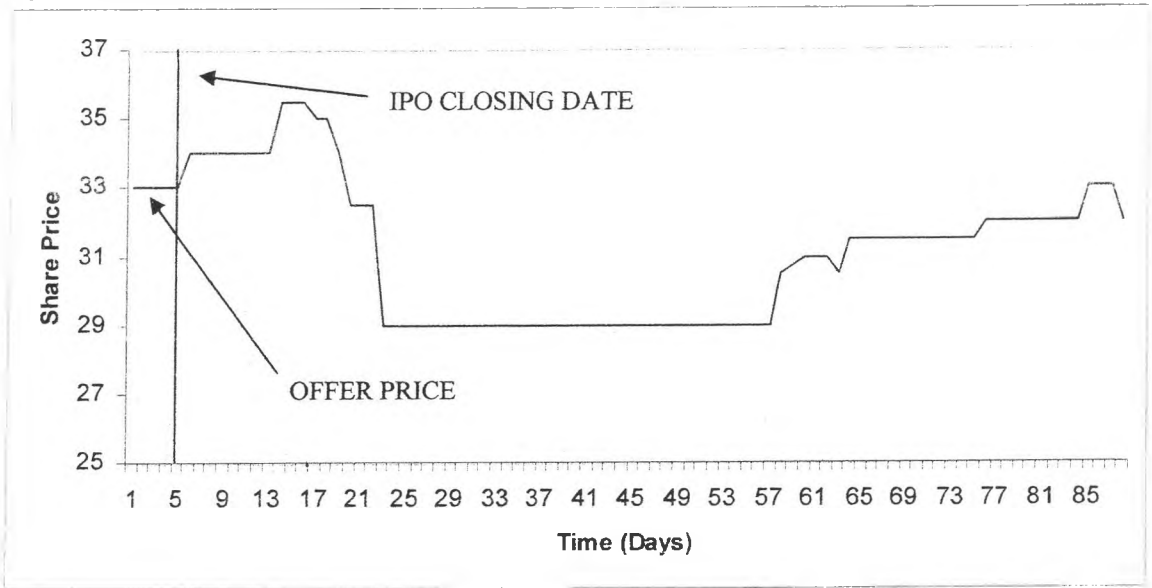
The analysis below examines the trend of behavior of daily prices from day one of trading, following the offer price. The behavior is followed for 90 days. The objective is to assess the magnitude under or over pricing, the magnitude of market reaction and the period it takes the market to correct the reaction, if abnormal.

The values used in this analysis are daily closing market prices of shares as were traded on Nairobi stock market daily price handbook. The same are reported in the daily news papers. An analysis of the reaction of shares after SOE and IPO was undertaken. The following responses were observed for each firm.

4.5.1 Kenya Commercial Bank – IPO 1990

Offer price was Kshs. 33. (See figure 4.61 below). When trading commenced, the price short up to a maximum of Kshs. 35.5 within nine days and then dropped to Kshs. 29 which was a price below the offer price. The average price of Kshs. 29 prevailed for more than a year.

Figure 4.61: KCB daily share prices

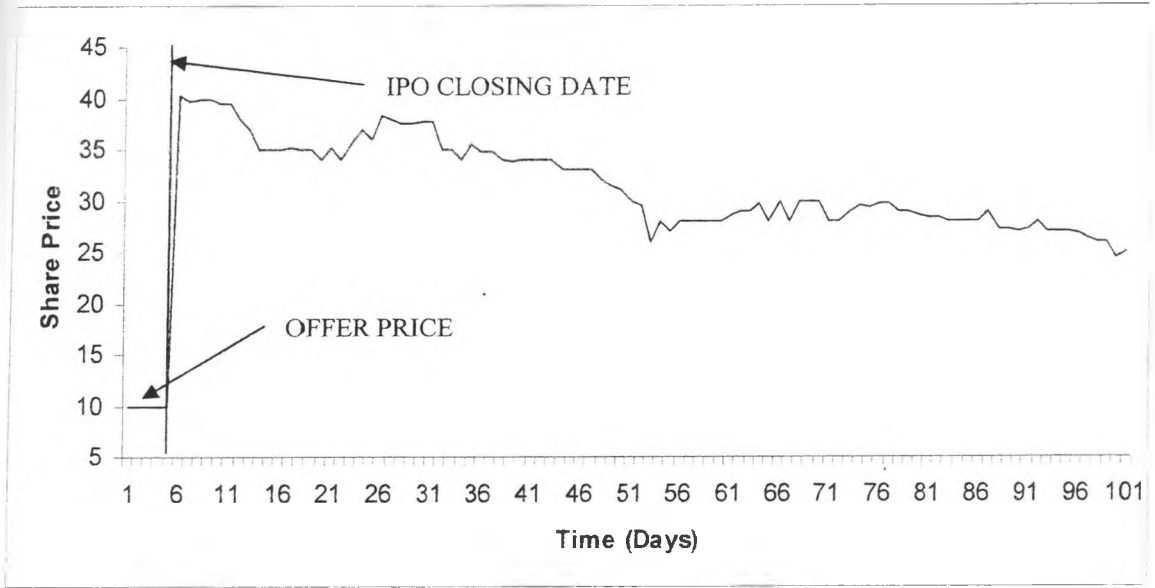


The study found the market excited for a period of nine days only. There after the price normalized below the offer price. The study opines that the offer price was excess of what the shares were worth.

4.5.2 Firestone IPO – 1994

Firestone issued its IPO on 19th September 1994 at an offer price of Kshs. 10. The trading price shot up to Kshs. 40.25 then maintained an average of Kshs. 35 for 90 days. The shares continued to sell at three times its initial offer price for over three years. (See figure 4.62 below)

Figure 4.62: Firestone IPO Share price

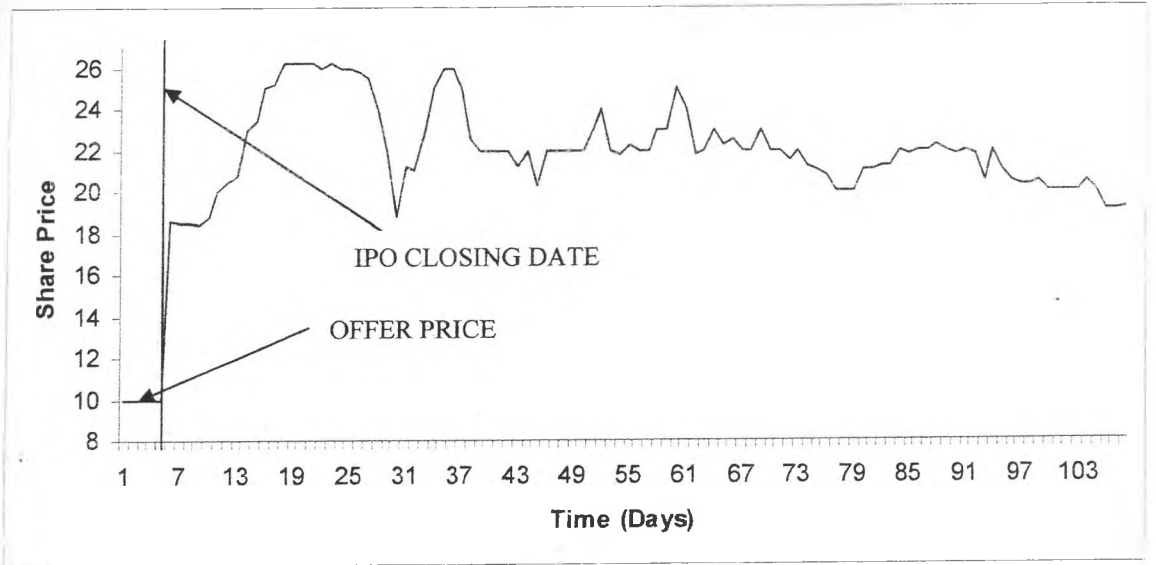


The study finds that the shares were underpriced during IPO and that the actual value was assigned immediately the shares were traded. The study still observes a gradual but declining trend of the share prices over time. A market overreaction is also observed.

4.5.3 National Bank of Kenya IPO – 1994

National bank made an offer at Kshs. 10 but started trading at Kshs 18. The prices went further to a peak of Kshs 26.25, and then averaged at Kshs 22 for over three months. (See figure 4.63 below)

Figure 4.63: NBK daily share prices

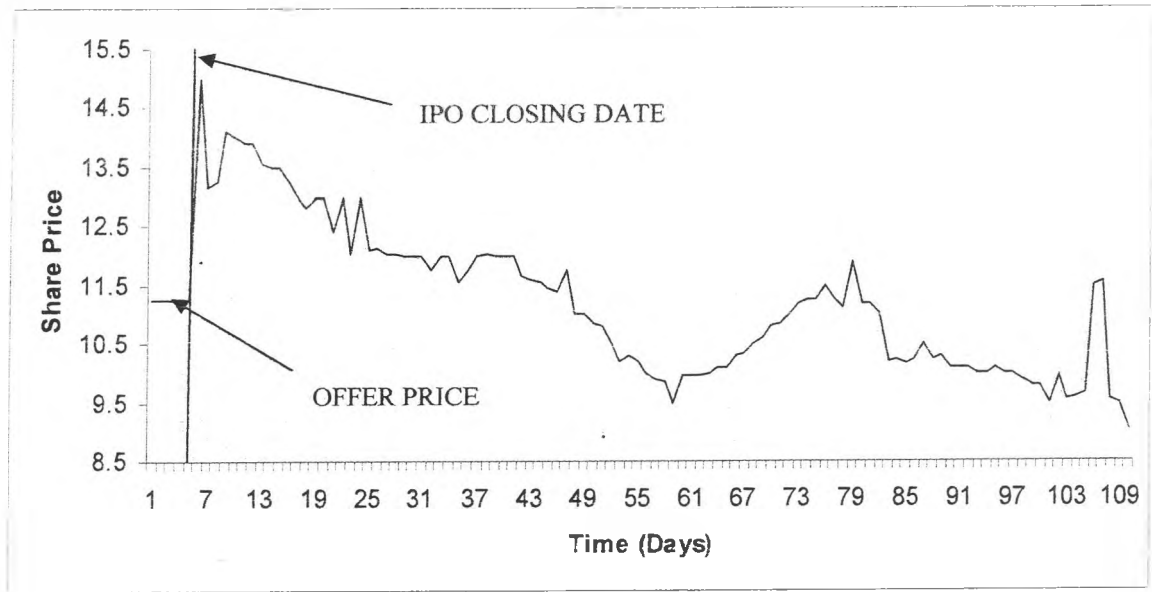


The study finds grossly under priced shares during the offer. The study finds a market reaction which lasts for over three months (90 days). Over the same period, the study finds a gradual decline in the share prices.

4.5.4 Kenya Airways IPO – 1996

Kenya airways (KQ) IPO closed on 18th June 1996 at an offer price of Kshs. 11.25. it stated trading at Kshs. 15 on day ones reaction. (As shown in figure 4.64) the prices declined fairly fast up to Kshs. 10 in 48 days, at which price the shares went on trading for over 90 days there after.

Figure 4.64: KQ daily share prices

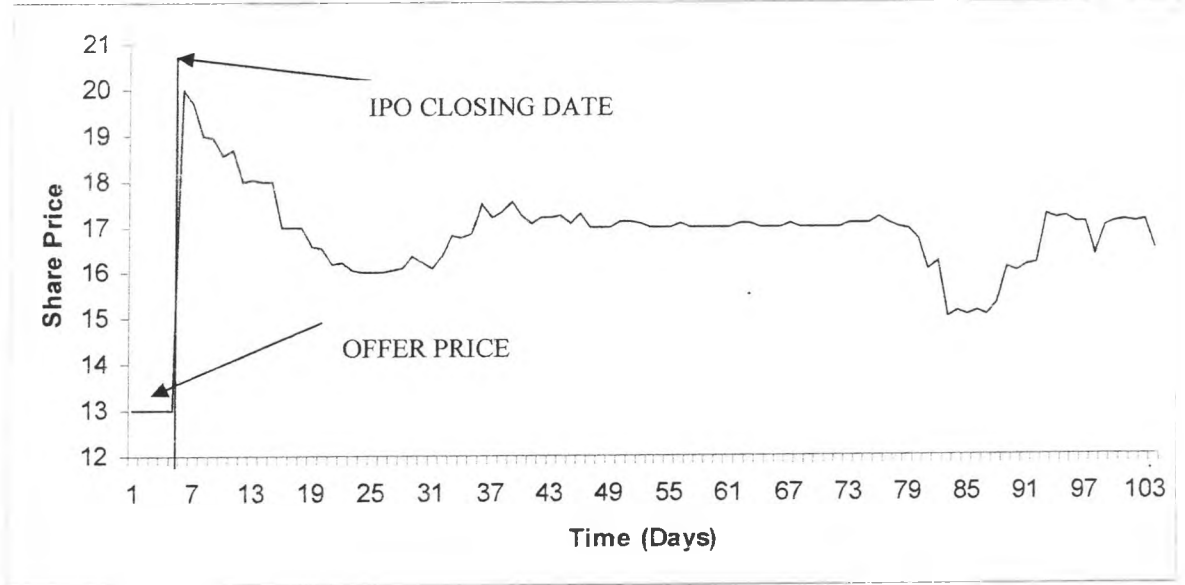


The study finds a market reaction that lasts for a 45 days on average. There after, the market assigns the shares a value as fairly near the offer price as possible. The shares were over priced by about 11%.

4.5.5 Tourism Promotion Services (TPS) Serena IPO – 1997

The company made a public offer which closed on 14th April 1997 at Kshs 13. Trading commenced at Kshs. 20 on day one, Kshs. 19.70 on two and continued declining up to Kshs. 16 on the 21st day of trading the price bounced back(Figure 4.65 below) to an average of Kshs.17 per share till the 90th day of trading.

Figure 4.65: TPS Serena daily share price

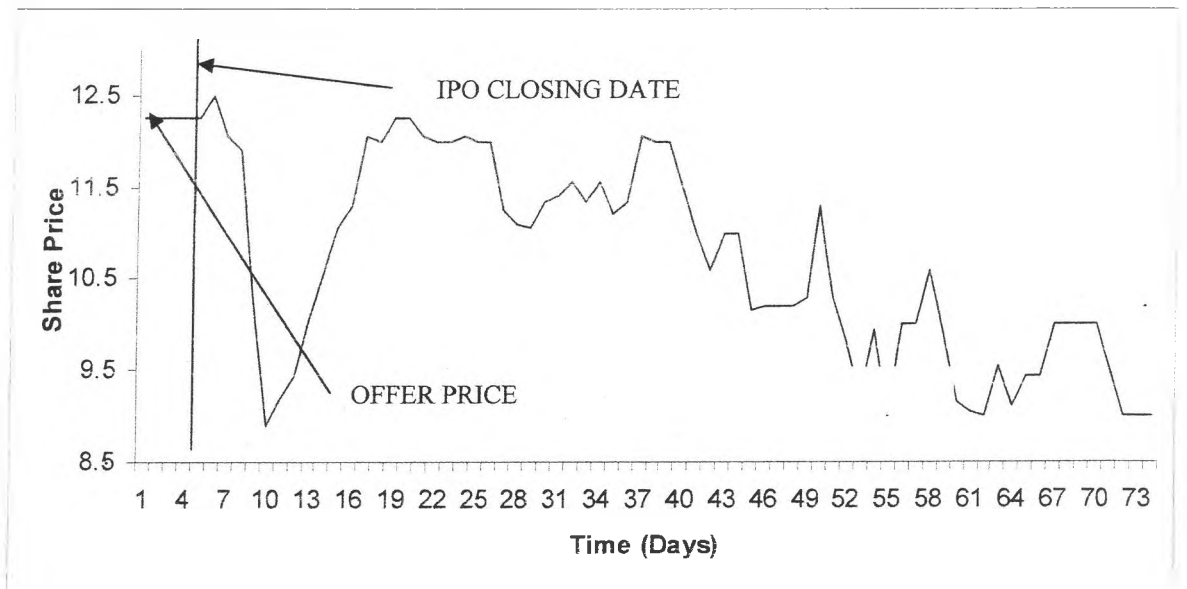


The study finds a reaction that lasted for about 20 days, the share offer was underpriced and the market made a recovery. The under pricing was by about 24% of the proper market price.

4.5.6 Athi River Mining (ARM) IPO – 1997

ARM closed its offer on 23rd July 1997 at Kshs. 12.25 it started trading at Kshs. 12.5, Kshs.12.25, Kshs.11.9 on days one, two and three respectively. Within the next five days it dropped to Kshs.8.9 and recovered to Kshs.12.05 in the next eleven days (See figure 4.66). There after, the shares fluctuated violently, yet steadily declining in price from Kshs.12 to Kshs.9 the next period of 63 days.

Figure 4.66: ARM IPO Share Price

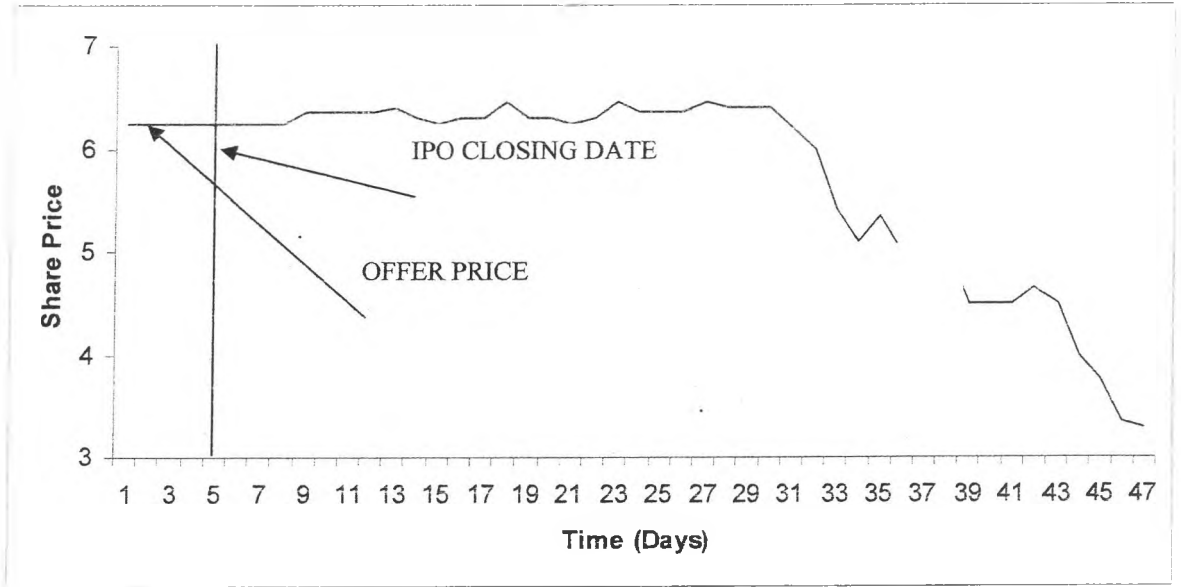


The study finds no excitement on the market regarding ARM IPO, ideally, the IPO was received with mixed reaction of low opinion. Actual response was declining from Kshs.12.5 to 8.9 (2.9% decline) drop in value, followed by a recovery of similar magnitude. The study finds that ARM IPO was overpriced by $[(12.25-9)/12.5]$ 36% since the price seems to settle at Kshs.9. Why the market had a mixed reaction is not understood by the researcher.

4.5.7 Mumias Sugar Company IPO – 2001

Mumias Sugar Company's IPO closed on 19th October 2001 at an offer price of Kshs. 6.25 per share Figure 4.67 below shows that this offer price was consistent with the market expectations. This expectation lasted for 24 days of active trading, and then the market share price declined continuously to Kshs.3.3 on the 42nd day. There after, the firm ceased trading.

Figure 4.67: Mumias Sugar Company daily share price

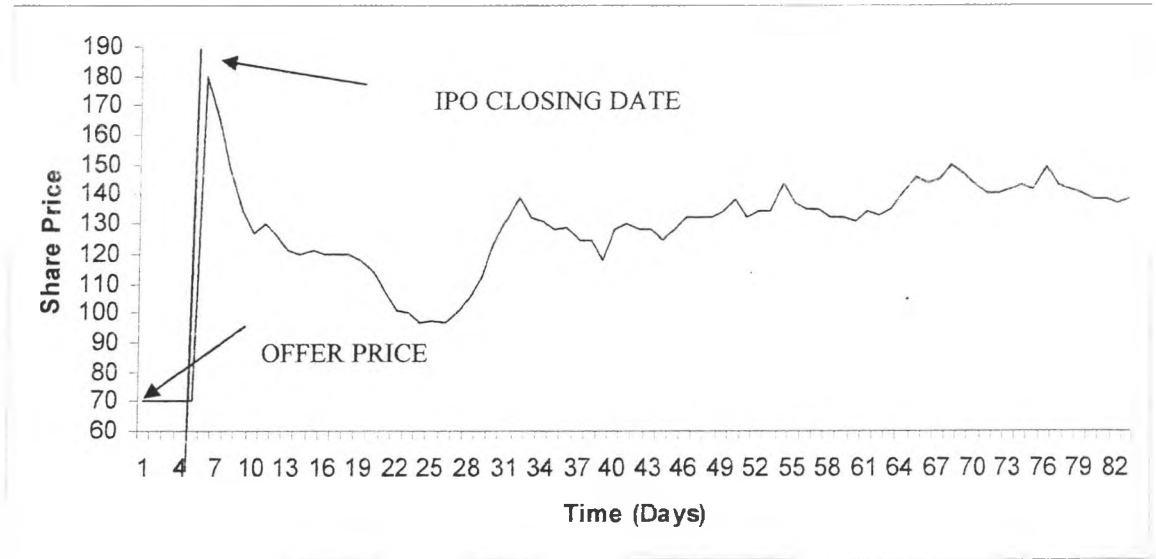


The study finds that the market was not able to detect the voidness of the shares till the 32nd day of trading. In total, the shares traded for 45 days at a price they were not worth without being detected.

4.5.8 Kenya Electricity Generating (KenGen) IPO – 2006

KenGen closed their offer at Kshs.11.9 on 12th April 2006. The share price then traded at Kshs.40.25, Kshs.38, Kshs.39.25 for days one, two, and three respectively. (See figure 4.68). Then the price declined gradually to Kshs.30 on the 13th day of trading. After which it recovered to an average of Kshs.38 up to the 90th day (40-34).

Figure 4.68: Kengen daily share price

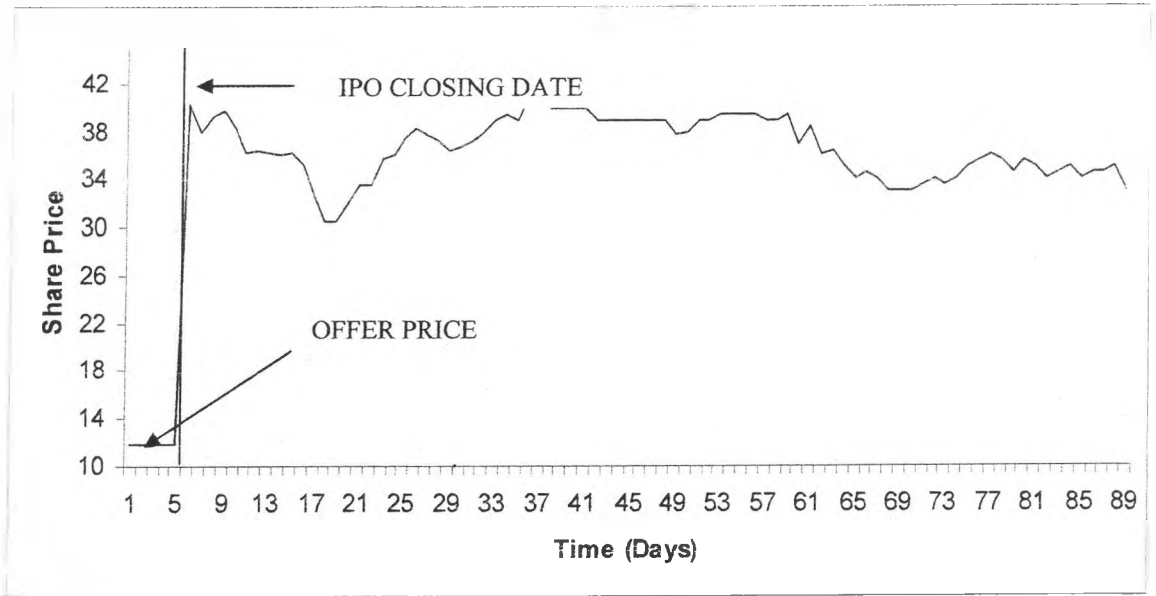


The study learns that Kengen was underpriced by 68% $[(38-11.9)/38]$. The market had an over reaction of 7.26% (75.26%-68%). The normalized price which fluctuated between Kshs.40 and 34 was arrived at after one day.

4.5.9 Equity Bank IPO – 2006

The bank came into the market by way of introduction; the valuation average price was agreed at Kshs.70 per share. Equity banks IPO closed at Kshs.70. The shares traded at Kshs.180, Kshs 166, Kshs.149 on days one, Two and three respectively (See figure 4.69) the prices continued to decline to Kshs.96.5 in 19 days. Then the share prices started increasing steadily up to Kshs. 149 on the 76th day.

Figure 4.69: Equity daily Share price

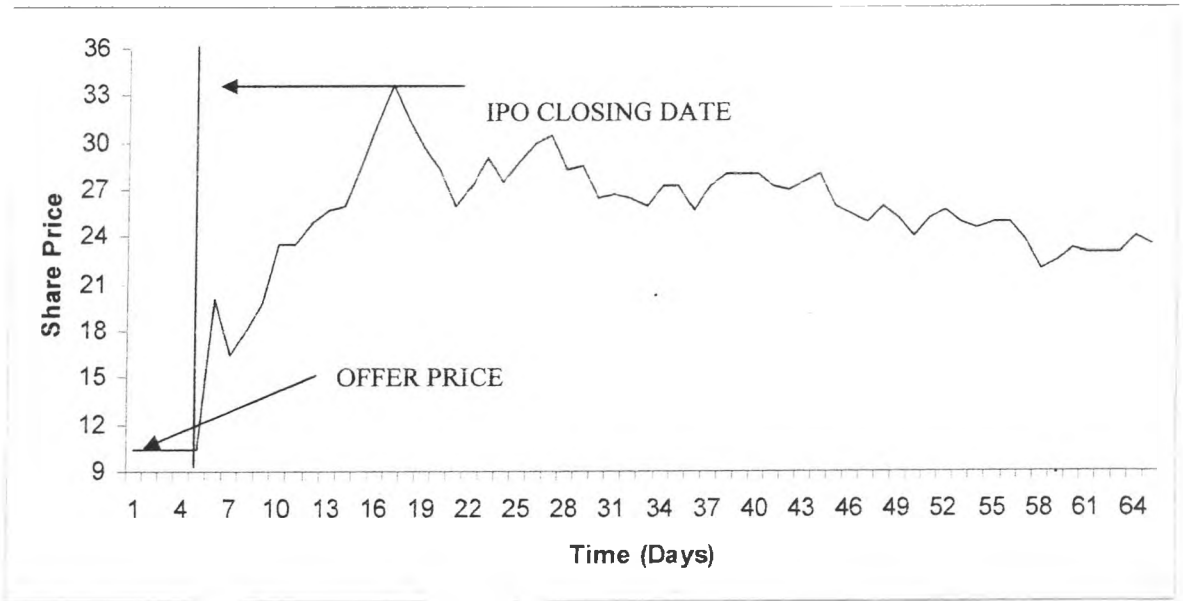


The study learns that there was an overreaction which was followed by a reverse overreaction. The market stabilized after 26 days of open trading, when the share price increased steadily from Kshs. 96.5 to Kshs.150 (125 average).

4.5.10 Scangroup IPO – 2006

Scangroup IPO share price shot to Kshs. 20, 16.5 17.5 for days one, two, and three of trading. Figure 4.70 below depicts a second reaction which caused a continuous increase in price at an average of Kshs27 after 17 days of trading.

Figure 4.70: Scangroup Daily Share Price

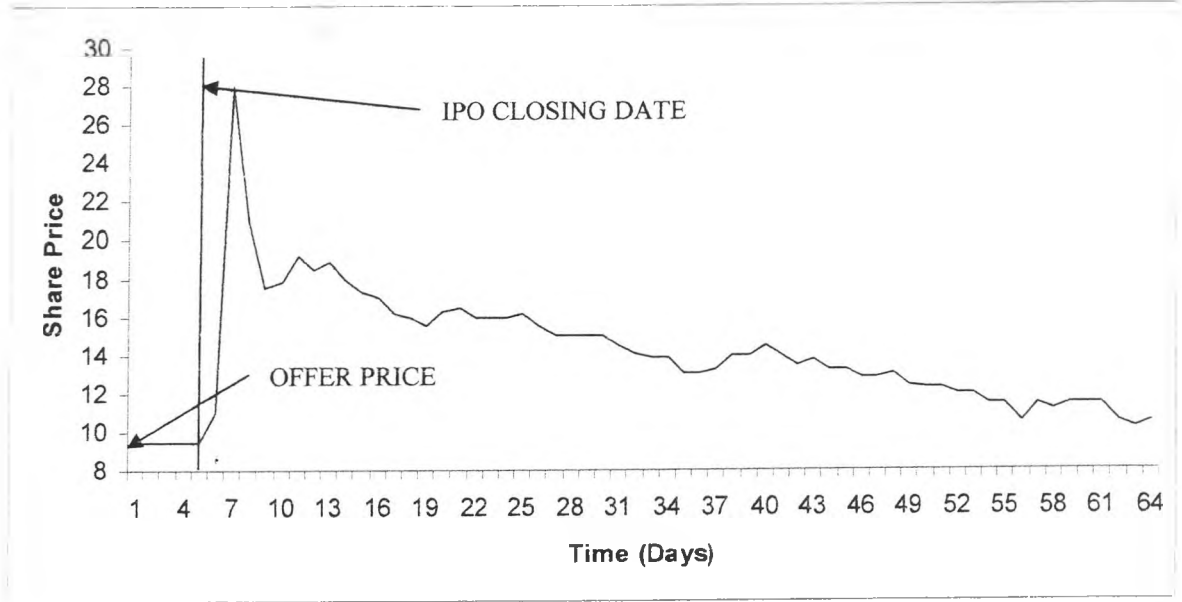


The study finds two market reactions with Scangroup shares. The offer price was underpriced by about (27-10) Kshs.17, 62.9% of the expected normalized prices. The share prices continued decreasing gradually till the end of 8 weeks.

4.5.11 Eveready IPO – 2006

The company's IPO closed on the 24th of November 2006, at an offer price of Kshs.9.50. the market Prices on day one, two, and three were Kshs11, Kshs.28 and Kshs.21 respectively. The reaction cleared within the first two weeks of trading. There after, share price continued to decline more slowly to Kshs.10.5 at the 64th day of trading. (See figure 4.71).

Figure 4.71: Eveready Daily Share Price

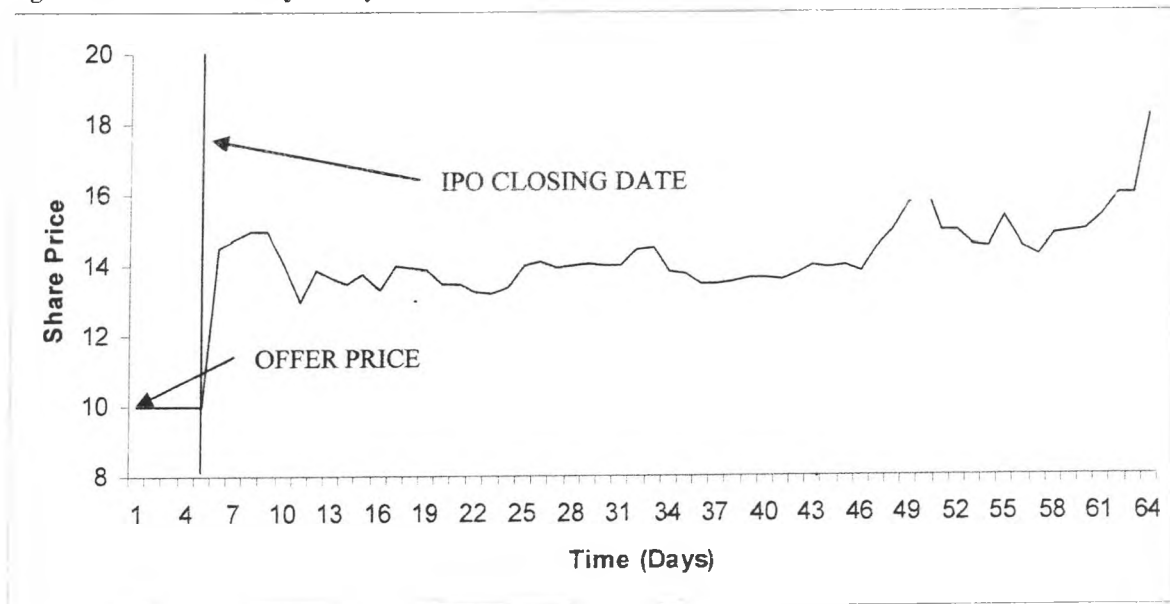


The study finds that the market experienced excitement which lasted two weeks. This was followed by 8 weeks of normalizing the price to Kshs.10 the price of Kshs10 on offer was correct price in the long run market opinion.

4.5.12 Access Kenya IPO – 2007

The IPO closed at Kshs.10 on 30th April 2007. The excitement price was Kshs.15 Arrived at after five days. This was followed by a drop of to Kshs. 13.5. then the market found a balance and the share price started increasing from Kshs.13.5 to Kshs.18.25 on the 59th day of trading. (See figure 4.72)

Figure 4.72: Access Kenya Daily Share Price

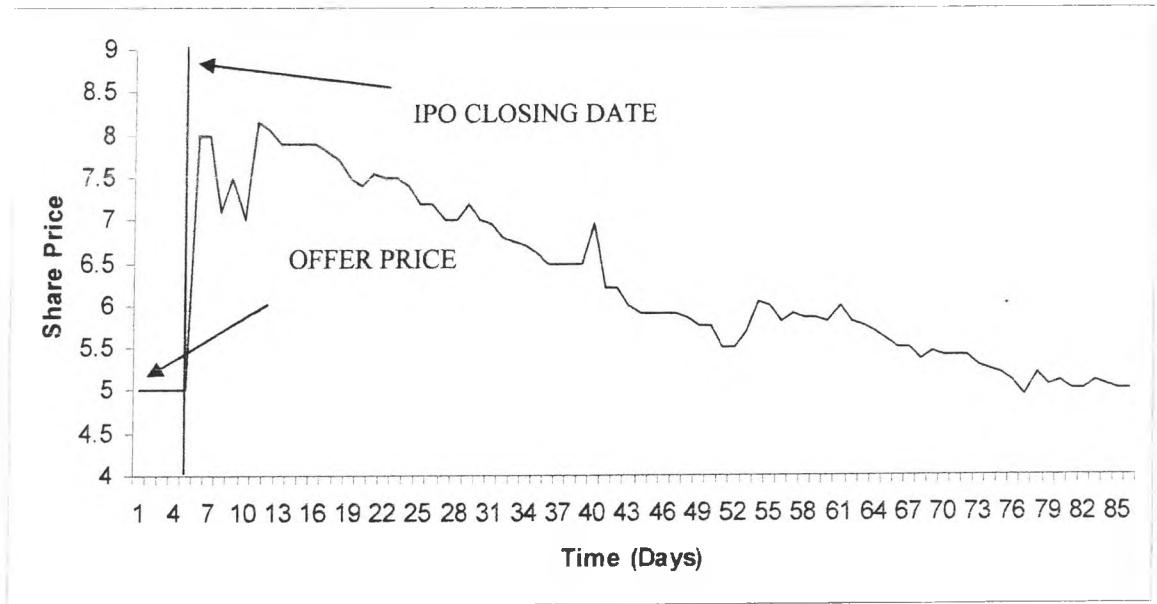


The study learns that the access Kenya shares were under valued by about 25%. It took the market 5 days to clear from forward excitement effect and five other day to clear from reverse excitement effect (disappointment).

4.5.13 Safaricom IPO – 2008

Safaricom made an offer at Kshs.5 which closed on April 23rd 2008. The shares traded at Kshs.8, for the two trading days. The market share continued declining steadily from Kshs.8 to Kshs.5 on the 80th day (See figure 4.73)

Figure 4.73: Safaricom Daily Share Price

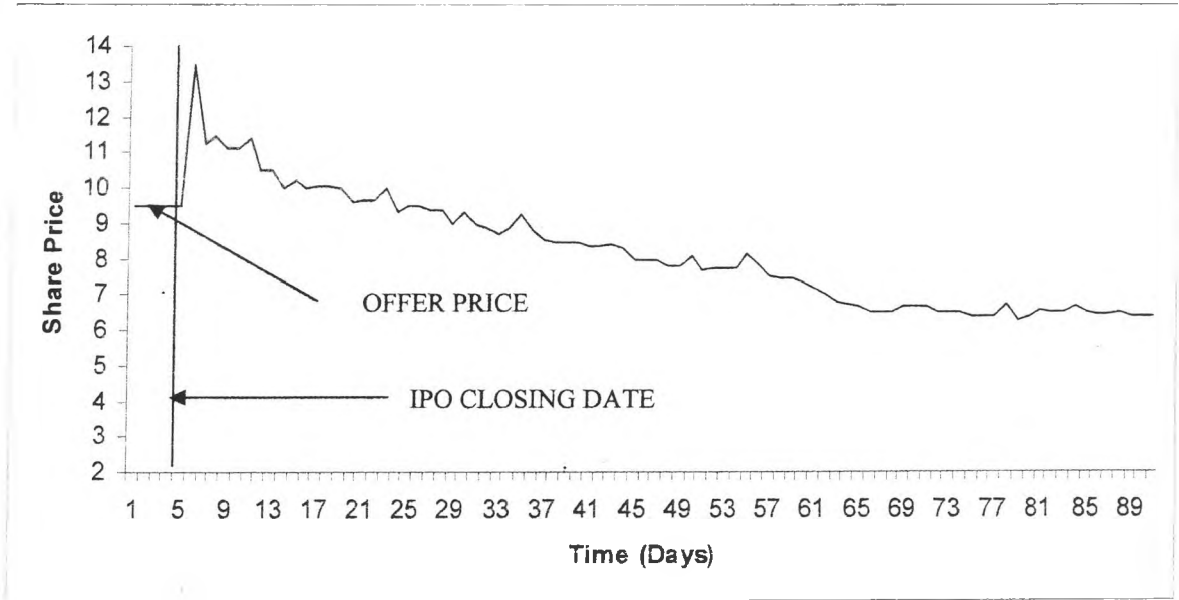


It follows that offer period was not underpriced. The reaction made however priced the shares at Kshs.18 (about 60%) of the normalized price. It took the market 80 days to arrive at the IPO offer price of Kshs.5 by implication; assessment of the market was slow.

4.5.14 Cooperative Bank IPO – 2008

It went public in at Kshs.9.5 the trading picked at Kshs 13.5 then started declining steadily to Kshs 6.40 on the 85th day. Figure 4.74 shows a reaction which lasted only 3 days.

Figure 4.74: Co-operative Bank Share Price



The study learns that the offer price was overpriced. Notice that the market reaction lasted up to the 64th day on the figure above. When the market price was Kshs.6.75. from then onward the price oscillated between kshs.6.75 and kshs.6.5. This meant such was the value attached to the shares.

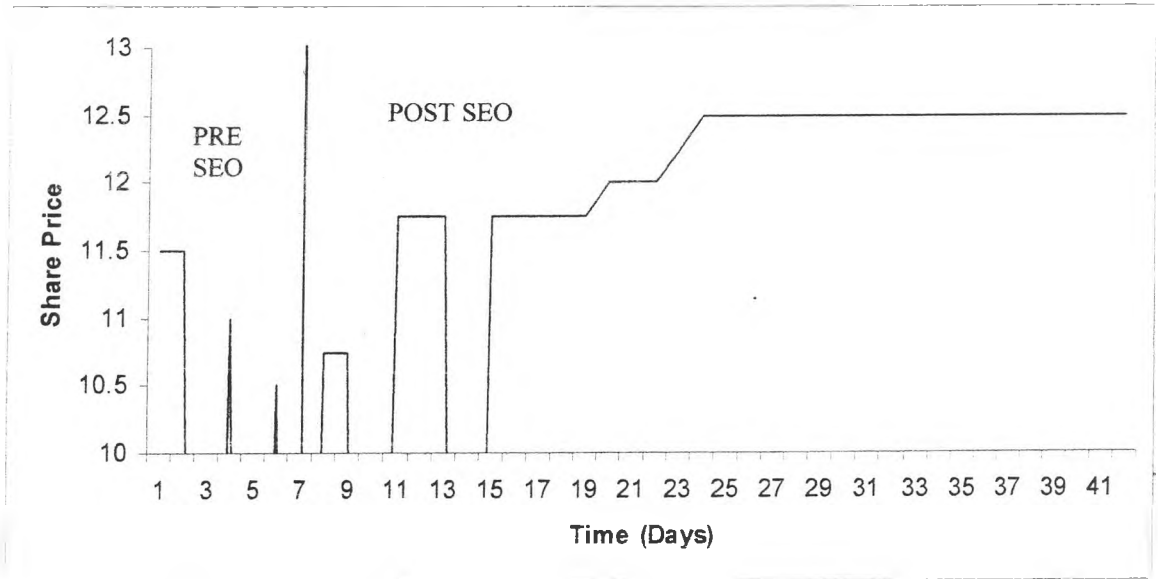
4.6 Analysis Secondary Offers and Daily Share Prices

Secondary offer occurs when a company goes to the public to issue additional shares at a privileged price. The objective is to raise more capital to run its investment plans. Kenya experienced SEO by KCB 1996, KCB 1998, CMC Holdings 1993, NIC 1994 and Mumias 2006. Below is an examination of the behavior of the share price after three months before and after a secondary offer.

4.6.1 Cooper Motors Corporation (CMC) Holding SEO - 1993

CMC SEO was completed on 22nd March 1993 at Kshs. 10 per share. Figure 4.75 below demonstrates the share price movement days before and after.

Figure 4.75: CMC Daily Share prices

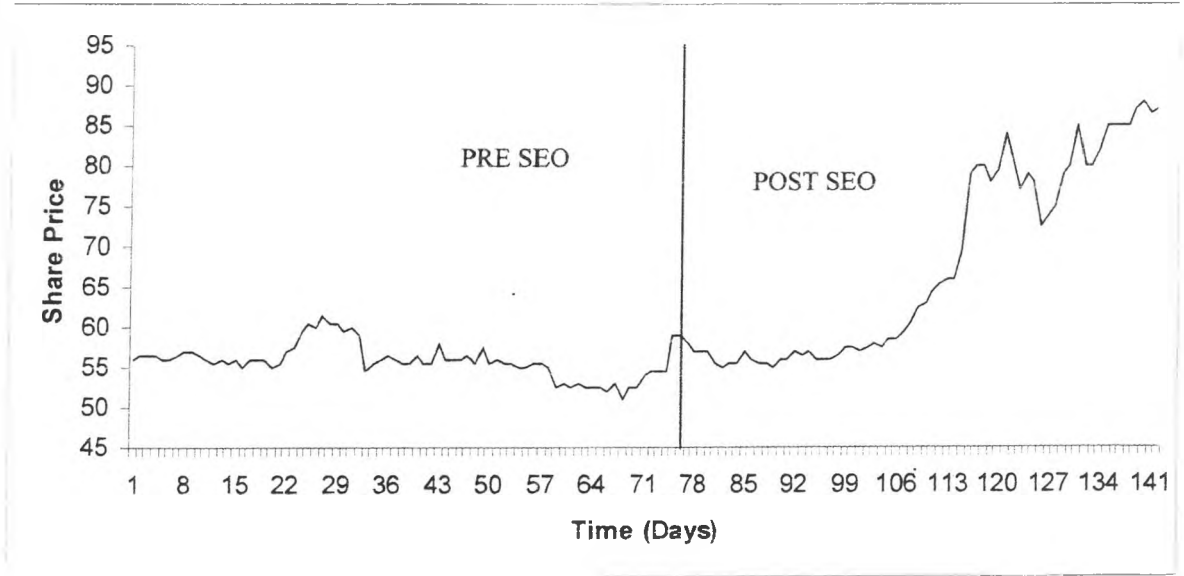


The study finds that there was erratic moment of CMC trading and not trading. This scenario continued after the SEO. It however took seven days for CMC to trade consistently. The study finds also that the share prices increased to Kshs12.5 and stabilized there for over 20 days. Whether or not SEO is to be responsible for eventual stabilization of the share prices cannot be explained for now.

4.6.2 National Industrial Credit (NIC) SEO – 1994

This firm issued SEO ending 14th September at Kshs. 52. Prior to the SEO, (See Figure 4.76) the firms share price had dropped from Kshs. 125 to Kshs. 52 with one week after which price per share remained stable across SEO.

Figure 4.77: KCB 1996 Daily Share Price

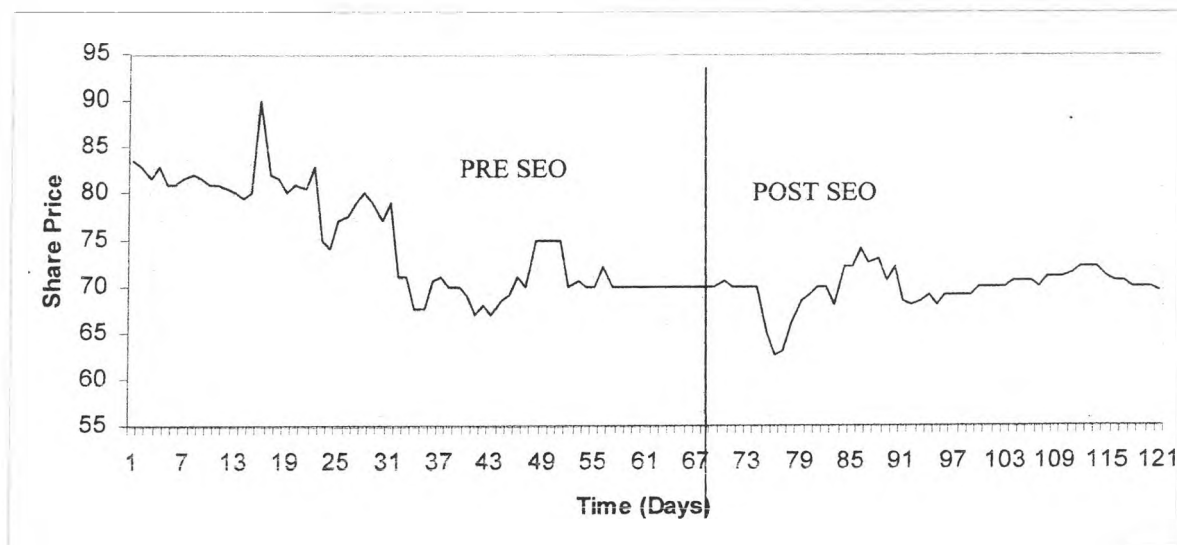


The observer learns that just prior to the SEO day, the share prices increased from a usual price of Ksh. 55 to Kshs 59. There after the price continued in a straight line up to Kshs. 87 on the 161st day. The study there finds SEO announcement having positive information content for KCB in 1996 offer which resulted in over 80% increase in market price, consequently, the study argues that this offer has an influence on the value of the firm.

4.6.4 Kenya Commercial Bank (KCB) SEO – 1998

Having realized favorable response from the offer of 1996, KCB made another SEO in 1998. Prior to the offer, share price had been declining in a fluctuating manner from Kshs. 83 to Kshs. 69.00 (Figure 4.78 below). The price then stabilized at Kshs. 75 till the SEO period ended. The offer was at Kshs. 65. After the offer the price dropped to Kshs.65 then rose to an average of Kshs. 75 in the next six weeks after which the price declined.

Figure 4.78: KCB 1998 Daily Share Price

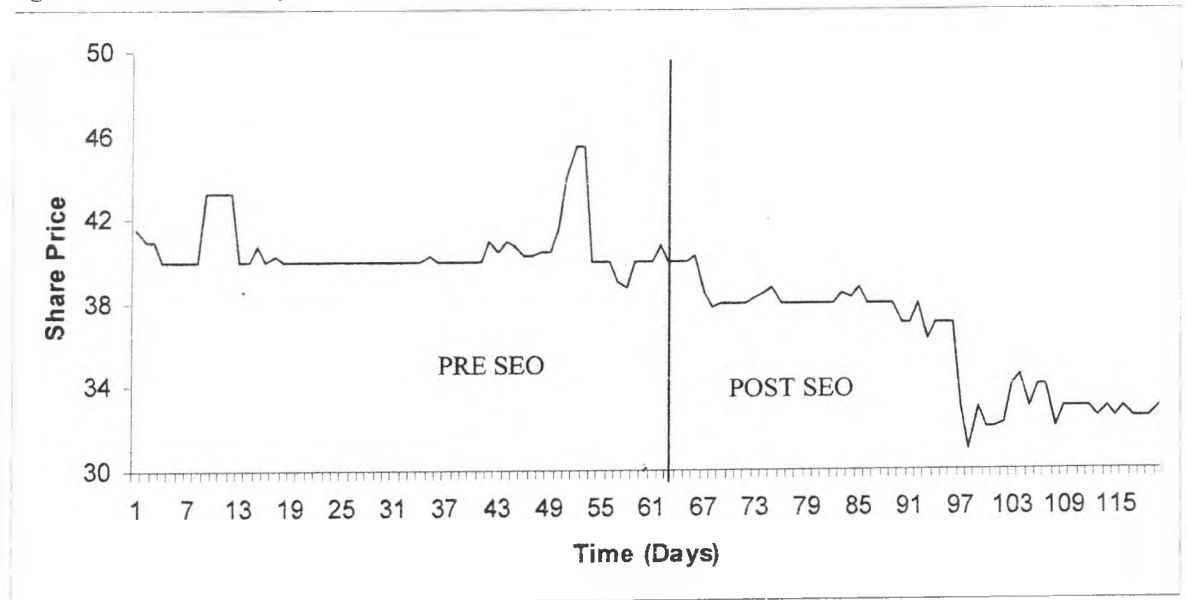


The study finds that the second SEO was portent with adverse information. This may have been due to the passed continuously declining prices before the offer. The study also finds a market reaction in reverse excitement in nature before the share prices stabilized. After a while, the share prices still dropped towards Kshs 60 per share.

4.6.5 Industrial and Comm. Dev. Corporation (ICDC) SEO 2001

ICDC SEO of 2001 closed on 16th November 2001 at Kshs. 37. Figure 4.79 below shows how the shares price dropped from an average of Kshs. 40 per Share become stable over two months. This was followed by a declining trend after SEO from Kshs. 40 to as low as Kshs. 31 per share.

Figure 4.79: ICDC Daily Share Price

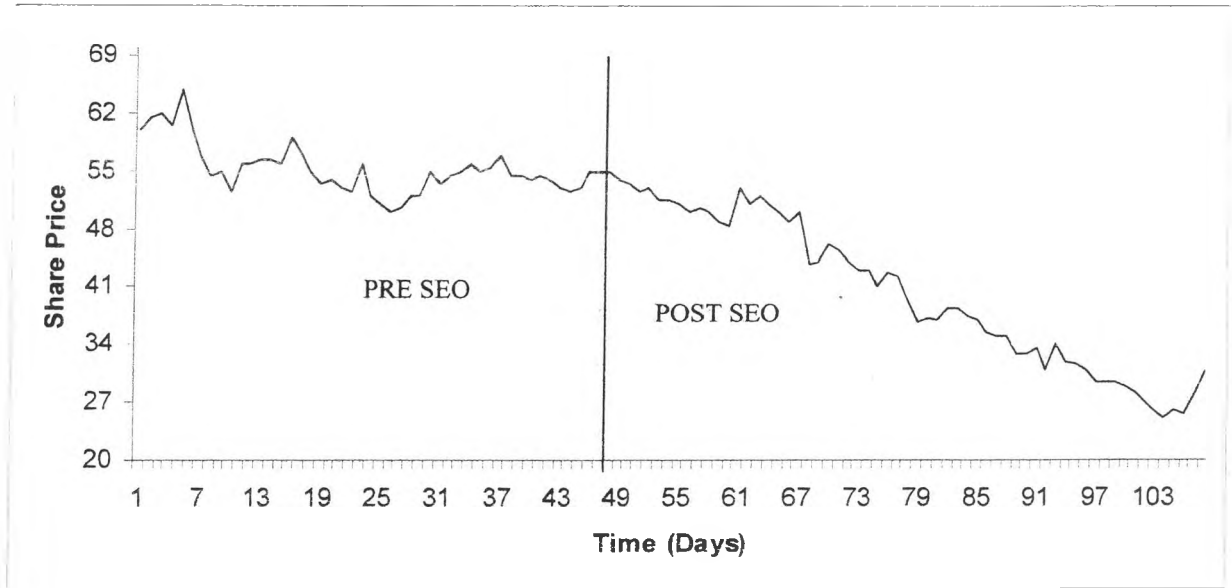


The study finds adverse information content in SEO to this firm.

4.6.6 Mumias Sugar Company SEO – 2006

Mumias Sugar Company made a Secondary offer closing on the 18th December at Kshs 49.50 prior to the offer share prices had been on the decline from Kshs.63 to Kshs. 43 in the last six weeks. After the offer the share price continued to decline at a faster rate to as low as Kshs 25 per share on the 103rd day (see Figure 4.80 below).

Figure 4.80: Mumias SEO Daily Share Price



The study finds negative information content in the SEOs for this firm. The study also finds a declining Price After the offer. This means the market does not get convinced that SEO would right the wrongs in the firm's management.

4.6.7 Summary of Findings of SEO

The study finds that of the six firms that made SEO, five (ICDC, KCB (1998), CMC, NIC, Mumias Sugar Co. depicted adverse information content from the announcement as well as after. In all cases, share price of firms had to drop prior to the offer. The same fall continued after the offer.

This study finds further that if the market conceive positive information content in a SEO, this will only be relevant to a first secondary offer. The same message content cannot be replicated in a second and third secondary offer (KCB's multiple offers demonstrate that).

In all cases, SEO prices are under priced as compared to market prices at the time of the offer. This is to encourage investors to subscribe in many numbers. This however does not affect trading prices at all. Immediately after the SEO, share price remains the same, subject to market opinion regarding the firm

4.7 Summary of the Analysis

This chapter has reported analysis in two categories. The analysis found a strong correlation between capital structure and the value of firm using correlation analysis on data drawn from twenty corporations in Kenya. The measures of firm value were EPS, MPS and net total earnings and debt ratio as a measure of leverage.

The same test was done using IPO as a proxy for leverage; the assumption was that, firms issuing IPO do will not seek funds from money lenders. This assumption did not hold because firms offered new shares, thus increasing their equity proportions, but also increased their debt financing. This resulted in debt ratio remaining more or less the same. When student t-test was run on data from all firms, the null hypothesis that there is no relationship between capital structure and firm value could not be rejected. Contradiction is caused by the violation of the assumption that debt financing would remain constant.

A second analysis examined firms share behavior after IPO and before and after SEO. The study finds share prices increasing, or decreasing or remain constant after IPO's. this occurrence was found to start after the market has ceased. The market panic was found to last not more than thirty days after IPO, the study finds three different kinds of excitement which the researcher labels "favourable", "none" and "adverserous". The price behavior also was found to behave in three different ways, "simple", "compound" and "complex".

The analysis of share prices after SEO offer revealed that the market reads adverse information from it. Prices were found to decline before and after every secondary offer except one. The study also finds adverse (negative) information content in a second or third SEO. This is evidenced by more decline in share price before and after a second SEO offered by KCB.

CHAPTER FIVE

5.0 DISCUSSION, LIMITATIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion of the findings, limitations of the study, suggestion for further studies. The researcher hopes that this study will stimulate further studies on IPO. This is a phenomenon that will continue to recur in a young emerging economy like Kenya and eastern African countries. There is need to provide guidance to the investors both foreign and local, manager, board of governors and the government.

5.2 Discussion

This study sought to, *inter alia*, assess the evidence from Nairobi Stock Exchange that structure is related with the value of a firm. The study was designed such that a change would be caused in the capital structure by increasing equity, then the value of a firm would be observed to assess if there be any change.

Initial public offer was used as a proxy for change in capital structure. The assumption was that firms would make public offers of new share would increase the proportion of capital to debt because debt financing would not be increased at the same time. Measures of firm value used were; MPS, EPS, net of total earnings (log of EAIT), and firm size as measured log of total assets, while change in capital structure was captured by debt ratio.

Correlation analysis was done on MPS, Log of EAIT, EPS, and against debt ratio as a proxy for capital structure change. The results showed weak (0.4) to strong (0.9) correlation between measures of firm value and capital structure. This was evidence that there existed a relationship between capital structure and firm value. The decrease of intensity of relationship however varied from one firm to another.

In the twenty observations, the correlation of EPS with Debt Ratio had; one (1) 0.4 measure, three 0.5 measure, and one (1) 0.68 measure. The rest, fifteen correlates were

above 0.8 measures. This is a very strong correlation implying that there is a strong relationship between capital structure and debt ratio.

On the other hand, MPS correlation with debt ratio, reported measures of below 0.3 five times, measures of between 0.4-0.6 three observations, and measures of over 0.7 for the rest of the firms (12). This too confirms a strong relationship between MPS and debt ratio for capital structure. The study however finds this measure not as strongly asserting the relationship as does EPS correlation with debt ratio.

Correlation between logarithmic value of net total earnings with debt ratio reported two measures below 0.3, five between 0.4-0.6, and fourteen with measures of over 0.7. This implies a very strong correlation between capital structure and earnings as a measure of firm value.

The study further analyzed and compared means of EPS, MPS, debt ratio, total assets, net total earnings to total equity for three years prior to IPO and three years after the IPO. The aim was to test the hypothesis that the means were different, implying that capital structure is not related with firm value. The expectation and assumption was that holding debt capital constant and increasing the value and proportion of equity, there would be significant relation between the two sets of means being indicators of firm value.

A student t-statistic was run on all the twenty observations. The values of t-calculated were compared with t-critical at one and two tails respectively. Except for one case, the study finds that t-cal is consistently less than t-critical. Consequently in nineteen observations out of twenty, the study failed to deny the null hypothesis. Therefore, the study finds no relationship between capital structure and firm value, where IPO is used as a proxy for change in capital structure.

The study finds that this failure to establish that there is a relationship between capital structure and firm value results from the fact that each firm increased debt financing along with equity by issue of new shares to the public through IPO (and sometimes,

retained earnings). As a result, the debt ratio did not change along with MPS, EPS, net total earnings. This explains the rejection of the hypothesis as much as correlation establishes a relationship.

This aside, the study finds that the announcement of IPO and actual issuance of IPO has favourable information content to the market. There was general increase in net total earnings and MPS. The study finds a general reduction in EPS long after IPO.

The second set of analysis sought to examine the behavior of share price three months after IPO and the behavior of the share price three months after and before secondary offers on the NSE.

The study observed cases of under pricing, overpricing and matching the markets expectation in one case from all the twenty cases. In each case, the study finds the market reaction in to correct the anomaly. Immediate reactions over-spilled into market excitement which the study classified into three; favorable excitement, adverserous excitement, and neutral excitement.

The study found that excitement gets cleared within a maximum of thirty days and a minimum of as low as three days. Further it was found that there are cases where there is no excitement elicited on the market. In such cases, the pricing of the IPO shall have been priced according to the market expectations.

Market excitement led to three different kinds of reactions, which the researcher calls; 'simple' (where the reaction is one sided), 'compound', where the reaction is taken over by another re-energized reaction in the same direction, and 'complex', where the market reacts in conflicting direction. The prices may shoot up, then drop, and then shoot up again.

After the excitement is cleared, the market was found to take about in the range of twenty to forty days to attain a stable pricing of a firm. The stable pricing may be increasing

steadily, constant, or decreasing steadily. Besides steady increases or decreases, the study finds occurrences of serious fluctuations in prices in any category. Such situations exist when the market is sure of the state of the firm.

The last analysis examined how share prices behave three months prior to the secondary offer and three months thereafter. The study finds information content in the secondary offer announcements and occurrences. The information content may be adverserous or favourable. It is sure to be adverserous if the secondary offer is a second or a third one. In all other occurrences, it was preceded by decreasing MPS, and also followed by decreasing share prices. In the six cases analyzed, only one was found to depict favourable information from secondary offer.

5.3 Limitations

One major limitation of this study is that the data used was not primary data but secondary hence any errors made by those who extracted reduced the accuracy of the findings.

Regarding firms which made initial public offer, the researcher computed theoretical market prices. These prices may not depict the correct values which the market would have attached to those firms' shares. Such values are prone to errors for two reasons, first, because the market does overprice and or over price firms shares in real life and secondly, the computed values dependent on the EPS and total earnings from the annual reports.

Accessing data in electronic form from NSE did not materialize. This resulted in using more time to seek data from manual financial statements which became translated in more man hours of digging from the financial reports from Capital Market Authority and the daily news papers from the Nairobi University archives.

The daily share prices are from different sources thus conflicting share prices were encountered. Due to lack of availability of data the effect of venture capitalists, underwriters and debt financing on IPO firms was not examined.

During the research, various intervening and moderating (dividend policies, bond interest rates as alternative investment to shareholders, inflation, and political stability etc) factors to the ultimate to firm value indicators (EPS, MPS, and dividend payout) were assumed to be constant. Other factors overlooked were investor indifference and that the market was operating efficiently. These variables were assumed to be constant throughout the period of study. The inclusion of these variables may have produced different results.

The study proposal had sort to examine the effect of underwriters and venture capitalists on the performance of IPOs. Due to inability to access the relevant data, this aspect was not examined. Besides, the entire performances of the IPOs were not assessed on the NSE due to the inability to access data.

The number of firms studied is not many enough to justify conclusive inferences. There is need to carry out a study when there are over thirty firms which shall have offered IPO on Nairobi stock Exchange. This may have to wait until many more firms issue IPO on the market.

A further distortion was caused by firms; in the process of issuing IPO which increased equity financing, they also increased debt financing. He consequent result was that debt ratio (capital structure) remained the same after issuing IPO as before. As a result, change in performance was attributed to the investors opinion or perception of IPO and increase in asset size, rather than change in capital structure.

5.4 Recommendation for Further Studies

This study recommends that an examination need to be done on the impact of impact of IPO on the value of a firm, where actual equity increases in proportion over debt financing (i.e. where the effect of additional debt need to be isolated from increase in equity). Research question in this case would include, *inter alia*, how does increase in equity financing affect firm value?

The impact of SEO announcement on the share prices was also not done. A study need to be undertaken to asses the investors' perception of the firms' value after IPOs

announcement and after IPOs closure. Leading questions in such a research would include, *inter alia* what factors determine IPO/SEO price? How long does it take for the market to eliminate IPO/SEO under-pricing effect on NSE?

A empirical study to test the relevance of finance valuation theories (i.e. CAPM Theory, APT Theory, Gordons firm value model, Cash-flow Value Theory of a firm) need to be conducted on Nairobi stock Market. *Inter alia*, research question would include, how well do asset valuation models compare with the actual market valuation of firms' shares on NSE? How do the asset valuation theories models compare with each other in assessing the value of shares on Nairobi stock Exchange?

Between the year 1990 till 2008, there were nine secondary offers made on Nairobi Stock Exchange. The offers were Kenya Commercial Bank- 2 SEO, National Industrial Credit bank – 1 SEO, CMC – 1 SEO, ICDC – 1 SEO and Mumias Sugar- 1 SEO. The foregoing firms were analyzed since there was data. Secondary offers by National Bank of Kenya, East Africa Oxygen and Kenya Finance Corporation were not captured for lack of data. It is on this basis that this study recommends that a further examination need to be done on all the SEOs plus additional which may occur in the future. This will yield a better representational result on the empirical impact change in capital structure value of a firm, using IPO as a proxy for capital structure.

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LIST OF APPENDICES

APPENDIX A

IPOs and SEO on NSE: 1990 To 2008

Year	Company Subscription rate (%)	Amount raised (Kshs.)
1990	KCB	297,000,000
1991	KFC	40,800,000
1992	UCHUMI	232,000,000
1992	CROWN BERGER	138,000,000
1992	HFCK	126,000,000
1993	E A OXYGEN	42,400,000
1993	CMC	20,000,000
1994	FIRESTONE	1,420,000,000
1994	NBK	400,000,000
1994	NIC	718,000,000
1996	REA VIPINGO	84,000,000
1996	KQ	2,664,000,000
1996	NBK	600,000,000
1996	KCB	560,000,000
1997	TPS	167,609,000
1997	ARM	281,750,000
1998	KCB	1,823,250,000
1999	HFCK	
2000	AFRICAN LAKES	378,000,000
2001	MUMIAS	1,125,000,000
2001	ICDCI	331,208,164
2006	KenGen	7,800,000,000
2006	Scan Group	721,000,000
2006	Equity Bank	0
2006	Eveready East Africa	556,800,000
2006	Mumias (offer for sale)	500,000,000
2007	Kenya Re ³	2,280,000,000
2007	Access Kenya Group	800,000,000
2008	Safaricom Ltd	50,000,000,000
Total amount raised		78,208,817,164

Source: NSE Website (2009).

APPENDIX B
Company IPO and SEO List

COMPANY	IPO OPENING DATE	IPO CLOSING DATE	NUMBER OF SHARES	ISSUE PRICE	PAR VALUE	DATE OF LISTING ON THE NSE
KCB	10 th Sept 1990	2 nd Oct 1990	9,000,000	33.00	10.00	2 nd October 1990
KFC	22 nd Oct 1991	11 th November 1991	3,261,970	12.50	10.00	
HFCK	7 th October 1992	4 th November 1992	18,000,000	7.00	5.00	8 th Dec 1992
UCHUMI	17 th November 1992	8 th Dec 1992	16,000,000	14.50	5.00	4 th Jan 1993
CROWN BERGER	9 th November 1992	1 st Dec 1992	8,630,000	16.00	5.00	5 th Jan 1993
E.A. OXYGEN	1 st March 1993	31 st Mar 1993	42,400,000	25.5	5.00	
CMC HOLDING	22 nd March 1993	22 nd April 1993	20,000,000	10.00	5.00	
NIC	15 th August 1994	14 th Sept 1994	17,929,286	52.00	5.00	
FIRESTONE	19 th Sept 1994	14 th Oct 1994	40,000,000	10.00	5.00	1 st Dec 1994
NBK	4 th October 1994	2 nd Nov 1994	40,000,000	10.00	5.00	1 st Dec 1994
REA VIPINGO	4 th March 1996	20 th March 1996	8,000,000	10.50	5.00	2 nd May 1996
KENYA AIRWAYS	25 th March 1996	18 th June 1996	235,423,896	11.25	5.00	3 rd June 1996
NBK	20 th May 1996	18 th June 1996	40,000,000	15.00	5.00	
KCB		15 th Oct 1996	12,000,000	50.00	10.00	
T.P.S	24 th March 1997	14 th April 1997	169,609,000	13.00	5.00	12 th May 1997
ARM	10 th July 1997	23 rd July 1997	281,750,000	12.25	5.00	15 th Aug 1997
KCB	24 th April 1998	15 th May 1998	28,050,000	65.00	10.00	
AFRICAN LAKES	21 st March 2000	4 th April 2000	376,000,000	95.00	5.00	21 st Mar 2000
MUMIAS SUGAR	24 th Sep 2001	19 th Oct 2001	1,124,231,360	6.25	5.00	15 th Nov 2001
ICDC	29 th Oct 2001	16 th Nov 2001	13,968,709	37.00	5.00	
KENGEN	20 th March 2006	12 th April 2006	659,508,437	11.90	2.50	17 th May 2006
EQUITY BANK			90,564,550	70.00	5.00	7 th Aug 2006
SCANROUPE	17 th July 2006	28 th July 2006	69,000,000	10.45	1.00	29 th Aug 2006

EVEREAD Y	13 th November 2006	24 th November 2006	63,000,000	9.50	1.00	18 th Dec 2006
MUMIAS SUGAR	4 th December 2006	18 th December 2006	91,999.620	49.50	2.00	
ACCESS KENYA	19 th April 2007	30 th April 2007	80,000,000	10.00	1.00	4 th June 2007
KENYA RE	18 th July 2007	31 st July 2006	240,000,000	9.50	2.50	27 th Aug 2007
SAFARIC OM	28 th March 2008	23 rd April 2008	10,000,000, 000	5.00	0.05	9 th June 2008
COOP BANK LTD	13 th October 2008	13 th November 2008	701,300,000	9.5	1.00	22 nd Dec 2008

Source: Authors Compilation

Appendix C: Raw Data and Financial Statements

Appendix D: T-Test Results

Appendix E: Companies Share Prices on NSE