

UNIVERSITY OF NAIROBI LIBRARY

THE RELATIONSHIP BETWEEN OFFERING PRICE AND THE
SUBSCRIPTION RATE OF INITIAL PUBLIC OFFERING AT NAIROBI
STOCK EXCHANGE.

SIGNED

DATED

BY

MOKO S.K.

PROJECT HAS BEEN SUBMITTED FOR EXAMINATION WITH MY
APPROVAL AS THE UNIVERSITY SUPERVISOR.

A MANAGEMENT PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
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OCTOBER 1995

DECLARATION.

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THIS PROJECT IS MY ORIGINAL WORK AND HAS NOT BEEN SUBMITTED FOR A DEGREE IN ANY OTHER UNIVERSITY.

ACKNOWLEDGEMENTS

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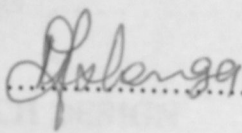
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With much heart felt thanks to my two teachers, Stephen Gachini and Joseph Kamau for their moral and financial support. There was too much to pay. Finally, "May All the Glory, Praise and Honor go back to God" He watched my coming in and going out.

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ABSTRACT.

The study contained in this report investigated the price behavior of Initial Public Offering at Nairobi Stock Exchange between 1984 and 1994. The study, mainly explored the relationship between discount on these new equity issues and the rate of subscription. The rationale behind this relationship is that the issues that are underpriced more are also over-subscribed more and vice versa.

The general objective was to relate this discount on the offering price and the rate of subscription. This was to be achieved through two specific objectives:-

- (i). Investigate whether the initial public offering at NSE are issued at a discount or premium. That is, whether the issues were underpriced or overpriced.
- (ii). Investigate whether this underpricing or overpricing is related to the rate of subscription.

To achieve these objectives, secondary data was collected from the Nairobi Stock Exchange, Registrar of Companies and Individual Companies, for the ten years period and for all the ten companies.

The data was analyzed using mainly the regression analysis and correlation analysis. The F-ratio was used to test the significant of the over all model. The data analysis related to the pricing was analyzed by use of summary statistic. A statistical test was carried out using the t-test to find out whether the underpricing was significant.

The findings of this study were as follows;

- (i) The initial public offering at NSE during this period (1984 and 1994) were issued at a discount on average.
- (ii) There is a linear and positive relationship between the discount on offering price and the rate of subscription. However this relationship is not significant at 5% and 10% level of

significance.

(iii) All those companies that were over subscribed more than twice had set their offering price below the net asset value per share.

The findings obtained thus led to the following conclusions:

(i). The initial public offering offered at this period were issued at a discount, implying they were underpriced.

(ii). There is a linear and positive relationship between the discount on offering price and the rate of subscription. However this relationship was not significant.

Arising from these findings, are the implications that short-term holding were highly profitable to initial subscribers. In addition , the findings also implied that the discount on offering price has an influence on the rate of subscription of initial public offering.

shows a mark of an age of optimism and economic dynamism.

The current increased optimism in Nairobi Stock Exchange can be traced back to 1984. Kariki (1986) the chairman of the NSE said that although more than 1,000 private and public companies were eligible to join the stock Exchange by then, they were unwilling to do so. He attributed this to either because of selfishness, apathy or because they wanted to use Kenya as a source of cheap labour and quick profit. He noted that between 1974 and 1984 not a single company joined the NSE. But following the removal of the capital gains tax, companies started joining "since 1984 companies have been going public at a rate of one company in every two years."

This is because the stock Exchange was working in tandem with the government incentives to encourage more companies to go public. Such incentives include tax reduction, tax discounts, allowance for foreign exchange and soft-loan interest rates.

Munyaho (1990) also attributes this to "governmental inducement and measures taken to develop the capital market." A study commissioned by government also concluded a trend

CHAPTER ONE: INTRODUCTION

1.1: BACKGROUND.

Quotation of a company at stock exchange can be defined as the process by which a company's shares are allowed to be bought or sold at the stock exchange. Therefore the company's name will appear on the stock exchange list and its shares are said to be listed and thus dealt in. Recently we have witnessed a succession of widely publicized issues of shares of a number of companies in Nairobi Stock Exchange (NSE). Mwarania (1989), says most of these public issues have been over-subscribed by wide margins, although this is not a new phenomenon on the Nairobi Stock Exchange. He explained this by saying "willingness to go public and the public enthusiasm to buy the floated shares is a mark of an age of optimism and economic dynamism".

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This is because the stock Exchange was working out with the government incentives to induce more companies to go public, such incentives include tax reduction, tax dividends, allocation for foreign exchange, tax holiday among others.

Manas'seh (1990) also attribute this to government inducement and measures taken to develop the capital market. A study commissioned by government recommended a broad

required to support a new issue, and which must be lodged with the Registrar of Companies before any shares can be offered for sale (NSE 1990). Anyone who wants to buy a new issue simply fills the form included in the prospectus and send it (with a cheque) to the given address. One can also fill in the newspaper coupon included in the prospectus advertised and send it to the company.

1.3 PRICING OF INITIAL PUBLIC OFFERING

The pricing of new issues is raised as a particular problem in this study. Determining the offering price is one of the critical steps in the process of going public. (Ross 1990) says this is one of the most difficult activity for the underwriter in that it constitutes a potential cost to the issuing firm. In that if the issue is priced too low it may be oversubscribed and existing shareholders will experience an opportunity loss, if set too high it may be unsuccessful and be withdrawn. Mwarania (1999) stated that "if the price is lower than the intrinsic value of the shares being offered and if all the shares rank pari passu then there is an implicit transfer of wealth from the old shareholders to the new and vice versa. Jary (1991) stated that issuing houses have a role of advising a fixed price or a range of a tender the base price. The problem is that issuing houses often act in a low commissioning role. It is clearly in their interest to push a lower price to clear the market.

Often when companies go public, the issue is solely intended to raise new capital for the company. But there are also occasions when no new capital is raised all the shares on offer are being sold by existing shareholders for example when the government sell off their shareholding in companies .

There are at least five methods of issuing shares, namely offer for sale, placing, the Offer for sale by tender, the public issue and the right issue (Samuels 1990).

In this study we are concerned with the public issue, where the public is being offered shares directly by the company at an agreed price. This method is used especially when the company is being quoted for the first time on the stock exchange. Generally the company engage underwriter who will be willing to buy the share left unsold as a result of the level of subscription falling short of the shares floated. The issues of shares for the first time when the company become quoted is referred to as initial public offering (Ross 1990), of which this study is concerned. A company that want its shares traded on the Stock Exchange for the first time must advertise in the dailies and issue a prospectus through a number of newspaper circulation which would then point out to a outlining details of the sale. A prospectus is " a document giving details of a company

required to support a new issue, and which must be lodged with the registrar of companies before any shares can be offered for sale (NSE 1990). Anyone who want to buy a new issue simply fills the form included in the prospectus and send it (with a cheque) to the given address, one can also fill in the newspaper coupon included in the prospectus advertised and send it to the company.

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Some of the views held of how offering price is set include among others the following views. Richard (1991) says it is the issuing firm and the underwriter who determine the price. Brealey (1990) argues that the firm and the underwriter first look at the price earning ratios of the shares of the firms principal competitors. They then work through a number of discounted cash flow calculations which would then point out to a

certain market value.

In general, management has to ascertain the maintainable level of profit, desired price-earning ratio, dividend cover and dividend yield. The offering price is then determined given the relevant information on these matters and the knowledge of share prices of similar types of company. Schall et al (1988) argues on similar line but advocate two possible approaches.

(i) The constant growth model. This model is used if net income and dividend of the firm have risen at a fairly regular rate which are expected to continue in the future by both investors and management. The value of the stock, S , can be estimated using the relationship

$$S = \frac{D}{K - G}$$

Where:-

D = Expected dividend payment next year to all shareholders

K = Rate of return required by investors

G = Long-run dividend growth rate

There is need to estimate K , management and the investment banker may have some idea of the required rate of return based on their knowledge of the securities market and the firm. For example rate of return on shares of comparable firms with stocks currently being traded may be used to get some idea of the "going rate". Alternatively the beta of the firm may be estimated and the capital Asset pricing model used to determine the discount rate.

This model is not always applicable for most firms going public do not have a record of stable growth income and dividends.

(ii) **Comparative price-earning ratio (P/E).** The firm's management compute P/E ratios of several firms similar to theirs, other firms that have recently gone public, plus other relevant information such as their earnings. From this a subjective judgement is made of what is appropriate P/E of the firm. The resulting ratio is multiplied by current net income to arrive at market value of the stock.

$$S = P/E * NET INCOME$$

The P/E method is simply a systematic way to estimate the value of the firm's stock using as much information as possible. They then conclude, "prior to sale the issue price is purely the result of a bargaining process". If the price is set too low the current owners of stock will not receive full value on the sale ultimately, the market will determine the actual value when the stock is sold.

Hanley (1993) held a different view when she argues that the offering price is set based on the information about demand acquired during the "waiting period" for the issue from regular investors through non binding indication of interest. The "waiting period" is the time from the filling of the preliminary prospectus to the final offer date. Regular investors are those that are actively involved on an on going basis in purchasing shares of firms going public. If demand for the issue is greater than expected, the final price will be set higher than the expected offering price disclosed in the preliminary prospectus.

Alternatively, if demand is low, the final offer price will be below the expected price. In practice, changes in the offer price are accompanied by revisions in the number of shares being issued. However the Kenya market of new issues is not developed to this extent and therefore the revision of prices and number of issues offered is unapplicable.

Spindit (1989) supported the Hanley's argument and develop a model of pricing and allocation rules used by the underwriters to induce regular investors to truthfully reveals information to be used in setting initial offering price and revise the number of issues.

Bluckland (1981) argues that in new issue market, specialist organizations seek to act as surrogates for the market in setting an appropriate price at which previously unquoted equities can be marketed prior to being traded on a stock exchange .It is expected that the price set by the issuing firm must be conformable with the aim of maximization of shareholders wealth.

This has two implications,

(i). Maximization of the receipts from sale of existing and newly-created shares by close approximation of issue price and subsequent market price.

(ii). Avoidance of under-subscription of the issue which adversely affect the companies credit-worthiness in the future.

In short, the company and the issue advisors agree upon a forecast of profit and an expected valuation , based on this and comparable price/earning ratio, a discount is then applied to arrive at an issue price . This discount is occasioned by risk attached to the equity ,the need to precipitate applications and by underwriter's demand for insurance against under subscription. However the investor's expectation of appropriate discount level is bound to differ from those chosen by the advisor.

Mwarania (1989) highlighted the conventional methods of valuing shares. He argues that the relationship between intrinsic value of a share and the price offered may be presented as follows $\text{price offered} = \text{intrinsic value} + \text{noise}$. The noise is a result of future uncertainty, unjustified beliefs and fears. The intrinsic value in theory is the present value of the expected future benefits from holding the share. These conventional methods

namely, Market value of the existing tangible asset, Earning methods, Par value method and Dividend method do not eliminate the noise and therefore there is a possibility of overpricing or underpricing the shares. He then concluded by saying that, "it is difficult to determine which of the above method was used in determining the offering price looking at the company prospectuses". The major problems of these conventional methods of valuing shares is that, some require estimation of expected future earnings together with required rate of return by investors. The problems is even worse for a firm going public-for the first time. In that, it has no information on investors view of the company. This increases the probability of either over or underpricing the issues.

Manas'seh (1990) state that it is the broker and company that set the price of the new issue. Such a price must take into account

(i) The company's Price/ Earning ratio (P/E).

$$P/E = \frac{MP}{EPS}$$

Where:-

MP = Market price of the company's share.

EPS = Earning Per Share.

This ratio will indicate the payback period of the share.

(ii) Expected Divided Yield (DY).

$$Dy = \frac{DPS}{MP} \times 100$$

Where:-

DPS = Dividend Per Share.

This ratio approximate expected return on the shares. In both of the above cases, Issuing price is used as a proxy for market price.

(iii) Dividend coverage ratio (DC).

This ratio gives the number of times Ordinary / Preference dividends are covered by available profits.

Ibbotson (1975) argues that it has been suggested by analysts and others that,

(i). Underwriters price a new issue by multiplying the firms current earnings by an industry-wide price to earnings (P/E) ratio

(ii). Underwriters often use a P/E ratio that is many months old. Hence analysts infer that underwriters will assess lower than equilibrium P/E ratio to new issues and therefore underprice them following increases in market index. The underwriter is concerned about price risk, and the Issuer is interested in netting the maximum proceeds from the new issues. The Issuer does not want to face resistance from the investors Marketing the issue. Additional pricing problem is related to the fact that the new issue is untested, in the sense that market participants have not independently set a price for the security through the market process.

Samuels et al (1990) argues that the price at which a new issue of shares is offered to the market is based on the price and yield on comparable issues already being traded. Usually the issuing house would like to see the development of a small premium on the issue price which occurs when the market price settles a little above the issue price. This would give them and their client a small profit in return for taking up the issue. In order to make a new issue attractive to investors, the yields offered are usually a little above

that of similar traded securities. Investors must be attracted to purchase the new issue in preference to existing securities. In any case to set the offer price too high that the issue is left with the underwriter is of no benefits to the company or the share owners.

The pricing of new issues has been a subject of much written debate most of which contains a suggestion that this is an "art rather than a science". However when everything is said and done the following issues should be clear:-

(i). The company wishes to issue equity on the most beneficial terms having regard to alternative forms of finance.

(ii). The selling shareholders wish to maximize the realization of their equity asset.

(iii). The new investors wishes to have the advantage of the discount that has been applied to the flotation price to encourage his participation. There after, capital and income performance is expected to be in line with the expectations held and consequent rating upon which the shares were purchased.

(iv). The sponsoring broker and Merchant bankers, as advisers to the company must ensure that the interest of all parties are best served. Long term maximization of vendor shareholder and company wealth can almost always be achieved while at the same time affording reasonable returns to investors. It is important role of the sponsor to avoid the overpricing of an Issue which can lead to the shares trading for a prolonged period at a discount to the Issue price. The damaging effect on the company of an adverse impression created at this early stage should not be underestimated.

Fisher 1972, Ibbotson 1975 and Horne 1970 investigated this pricing phenomenon reporting different levels of average initial return in the short run. The over or underpricing is inferred from the level of initial average return an investor earns as a result of decrease or increase in the offering price after the issue. This initial return is

calculated based on the first recorded market price (bid price) of the issue (the approach adopted in this study). Given that investors buy shares to earn a return either in the short-run or long-run, if the offering price is attractive the demand will be high. The demand will be reflected by the level of subscription of the issues. Ross (1990) state that when the price of a new issue is cheap it is likely to be oversubscribed and if dear it is likely to be under-subscribed.

these instances the first price in the secondary market may be substantially above the offering price. If on the other hand the original price is believed

1.3 RATE OF SUBSCRIPTION.

Assuming other factors constants the rate of subscription reflect the demand for the issues and is measured by calculating the ratio of the number of applications for shares received by the issuing firm to the number of shares offered for sale (Buckland 1981), that is, the ratio of the number of shares applied for by the investors to the number of shares offered by the company. As noted earlier most of the initial public offering in Nairobi stock exchange have been oversubscribed by greater margins. The "cause" or the factor to be associated with this tendency is not clear, this study was set out to find out whether this phenomenon could be explained or associated with the level of discount applied on the Issue offering price. Therefore the relationship between the rate of subscription and the offering price. Nduati (1992) had this to say " as predicted, the Housing Finance Company of Kenya (HFCK) shares were heavily oversubscribed and reports last week said the Crown Berger shares were also oversubscribed. If this record is to go by, it is safe to assume that the Uchumi shares will also be oversubscribed".

As a results, the question being answered is what contributed or can be attributed to this high level of subscriptions. The researchers argues that the pricing phenomenon (offering price) will explain this tendency. Moses and Cheney (1989) summaries these

argument well, While the financial fundamentals of publicly, traded securities of comparable companies will be used in setting the offering price, the fact remains that there is an uncertainty about the market's acceptance of the price. They then ascertain that if the price set by the underwriter is perceived by the market to be too low, the issue will be oversubscribed and the availability to the small individual investor may be quite limited. Often in these instances the first price in the secondary market may be substantially above the offering price. If on the other hand the original price is believed to be too high by the market, the new issue will be made available abundantly to all investors and is likely to be under-subscribed unless the underwriter has indicated to the stock exchange its intent to stabilize the price by buying back the newly issued securities at or near the offering price, the investor in a new issue may find that the price set by the market is below that of the initial offering price. " while many initial public offering (IPO) shoot up in price, many other Issues decline in price once they start trading. The offering that shoot up in price are much more commonly oversubscribed than those that decline in price (Beatty 1986)". In such cases, over-subscription implies many investors who wanted to buy the shares at the issue stage will have to wait until the shares hit the secondary market and buy them at the prevailing market price. In addition the company going public will have to refund millions of shillings to the unsuccessful applicants, for example HFCK had to refund sh 250 m. Davis (1976) state that "there is evidence to suggest a clear prima facie relationship between application level and discount". If it is expected that there is any constant relationship between discount and the level of application then the findings of this study will confirm or refute it from a Kenyan environment.

1.4 STATEMENT OF THE PROBLEM

In Kenya, most of the initial public offering has been oversubscribed by greater margins. This level of subscription is simply a secondary reflection of attractive terms of the issue. Davis (1976) claims that the applications themselves theoretically reflect the demand by investors which may be as a result of characteristic of the firm's performance or of the issuing process or of the overall stock exchange activity. The level of subscription is important to the firm in that under-subscription lead to depressed share prices which in turn increases the firm's equity cost of capital. While oversubscription stimulate larger than necessary premium, increasing the opportunity cost of issuing for the firm's shareholders.

In addition to these high level of subscriptions, looking at the behavior of prices subsequent to the issue it is tempting to conclude that the issue were grossly underpriced (Mwarania 1989). Given that the level of subscription and the offering price are associated (Ross 1990 & Ritter 1989), it is being argued that the pricing phenomenon of the initial public offering is the chief factor that explain this rate of subscription. Buckland (1981) investigated the price discount on new equity issues in the UK and their relationship to investor subscription. In their study they found out that price discount on new equity issues and subscription ratios move together very closely, "it is immediately obvious from the values of average discount are very closely associated with excess demand in the new issue market".

This study differ from their in that they considered new issues offered by the offer for sale method only, but we also consider those offered by public issue method. They also excluded foreign owned companies or subsidiaries, a restriction our study does not take into consideration. In Kenya, there is, currently no known study carried out to

investigate this relationship, the gap this study is geared to fill.

1.5 OBJECTIVE OF THE STUDY

The objective of this study is to investigate the relationship between the "discount" on offering pricing of initial public offering and the rate of subscription. This general objective was to be achieved through two specific objectives:-

(i) To investigate whether and at what level the initial public offering are overpriced or underpriced.

(ii) To investigate whether there is a relationship between the level of overpricing or underpricing of offering price and the rate of subscription.

1.6 IMPORTANCE OF THE STUDY

This study does shed some light on the large subscription margin common with initial public offering in Kenya. It is also of interest to :-

Firms Going Public :- The firms intending to go public would find the results useful as findings shows the role offering price plays in determining the level of subscription.

Underwriters:- Given that the underwriters are involved in setting offering price and buying the unsold issues, the results that offering price actually influences the level of subscription is of vital interest to them. In that the objective of both the firm going public and the underwriter is full subscription. The setting of initial offering price should then be given the attention it deserve.

Investors:- Investors purchases shares with the objective of making return inform of capital gain or dividend.

Academics: The study will act as a foundation for further research related to this area

of initial public offering.

2.1: THEORETICAL BACKGROUND.

2.1.1: Nairobi Stock Exchange.

Nairobi Stock Exchange was set up in 1954 as a voluntary association of stockbrokers registered under the societies Act. The NSE is operated and regulated by a company limited by a guarantee. It is fully funded from a levy imposed on members, the stock brokers. Policy is determined by its board of directors which is made up of representatives of the market, government and industry. In 1990 the NSE was registered as a Limited company, with a full time secretariat being created. The following year in 1991 it phased out the call-over system in favor of open outcry system which has been in application since then. The regulatory body, the Capital Markets Authority (CMA), was launched in 1989 to assist create a conducive environment for growth and development of the country's capital markets. Nairobi Stock Exchange moved to its present more spacious premises at Nation Center in July, 1994. In the same year the Kenyan government relaxed exchange controls and allowed foreign investors participation.

The Stock Exchange is the most significant institution of the Capital Markets. A Stock Exchange is a Market where small and large investors can buy and sell shares and bonds (equity). Investors are attracted to share investment for two primary reasons: to increase the means of funds invested and to spread the risks in their portfolio. Investment in shares can also make benefit of a house built or inherited in the long term, or the appreciation of art and historical objects, or a company's growth, profits, assets all tend to rise together, over the medium to long term the return on investment in shares far out-weighs alternative forms of saving such as bank deposits and life insurance policies.

CHAPTER TWO : LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1: THEORETICAL BACKGROUND.

2.11: Nairobi Stock Exchange.

Nairobi Stock Exchange was set up in 1954 as a voluntary association of stockbrokers registered under the societies Act. The NSE is operated and regulated by a company limited by a guarantee. It is fully funded from a levy imposed on members, the stock brokers. Policy is determined by its board of directors which is made up of representatives of the market, government and industry. In 1990 the NSE was registered as a Limited company, with a full time secretariat being created. The following year in 1991 it phased out the call-over system in favor of open outcry system which has been in application since then. The regulatory body, the Capital Markets Authority (CMA), was launched in 1989 to assist create a conducive environment for growth and development of the country's capital markets. Nairobi Stock Exchange moved to its present more spacious premises at Nation Center in July, 1994. In the same year the Kenyan government relaxed exchange controls and allowed foreign investors participation.

The Stock Exchange is the most significant institution of the Capital Markets. A Stock Exchange is a Market where small and large investors can buy and sell shares and other securities. Investors are attracted to shares investment for two primary reasons : to increase the return of funds invested and to spread the risks in their portfolio. Investment in shares has the major benefits of a loose link to inflation in the long term, as the economy grows and inflation rises, so a company's turnover, profits, assets all tend to rise. Generally, over the medium to long term the return on investment in shares far out performs alternative forms of saving such as bank deposits and life assurance policies

among others. This has also been true in Kenya during the recent past. For example, the market capitalization of the NSE has seen growth of nearly 100% since 1993, increasing from 9.4 to 9.8, while Capitalization increased from \$ 1,418 m in 1993 to \$ 2.2 billion at the end of Dec. 1994, stood at \$ 2.2 billion at the end of March 1995.

Table 1. RETURNS COMPARISON.

SOURCE OF RETURN	1975 -1984 % p.a.	1985- 1994 % p.a.
INVESTMENT IN SHARES	17.5	26.5
TREASURY BILLS AND BONDS	13.2	18.5
BANKS DEPOSITS *	11.2	14

Source: EAS, Thur Sept 21, 1995.

* : Average 12 months fixed deposits rate.

Note : Investment in shares returns represents merely capital gain and exclude income from dividends.

Therefore most investors prefer investing in shares as this in the long-run has proved profitable. As the above table shows this can also be a worthy while investment.

The stock exchange is a Market through which companies, government and local authorities can raise new fund for expansion and development by issuing new securities to the public. In Kenyan we have Nairobi Stock Exchange which is grouped among emerging Stock Exchange, according to 1995 emerging Stock Exchange fact book (D/N. June 20 1995). According to this report "emerging Stock Exchange refers to those Markets which have begun the process of change, growing in size and sophistication in contrast to Markets that are small and give little appearance of change."

In International Finance Corporation report (D/N. June 20 1995) the NSE was presented as the world's favorite giving investors the best return in dollar terms estimated

at 179%, trading value at \$ 14.2 m in 1993 to 62.2 m 1994, Market price/earning increased from 9.4 to 9.8, while Capitalization increased from \$ 1,418 m in 1993 to \$ 3,081 m in 1994. Kihumba (1994) reported that the NSE has seen growth of nearly 100% in dollar terms since mid-Dec 1993, Market Capitalization which stood at approximately \$ 1.2 billion at the end of Dec , stood at well above \$ 2.2 billion as at the end of March 1994 (Appendix 9 & 10). This increased operation in NSE which has resulted in quotation of a number of companies for the first time can be attributed to the modernization of the Stock Exchange ,Opening Stock Exchange to the Foreign Investors and the liberalization of the Economy, among other factors.

Dyer and Blair Ltd a Stock broker at NSE gave the following factors as responsible for the high performance of NSE in the recent times. Declining Yield on Treasury Bills, Improved Company Performance, Interest Rates, Exchange Rate, and New Issues.

In the current development plan (1994/96), several measures being taken are outlined, "During the plan period the NSE will be reviewed with a view to developing Professionalism of Brokage services and generating Public confidence in the trading system. The Stock Exchange will endeavor to have brokers in all District of the country,.....the streaming of procedures for issuing all types of securities and their subsequent trading including the legal and administrative impediments". Some of the anomalies that the government will remove which adversely affected the operations of the Capital Market include,

(i). The pressure upon companies to undervalue their shares. This is due to the fact that undervaluation of shares leads to capital losses to companies going public.

(ii). Ensure that the management of semi-private firms whose shares have been floated is not interfered with. The plan also endeavors to develop a second tier Market

(over the counter market) to enable the companies raise long term capital under less stringent listing requirements. Impediments to the creation of specialized institutions such as full service securities firms, underwriters and discount houses will be addressed.

Some of these issues were addressed in the 1995/96 budget with the following standing out more strongly.

(i). The Market was opened further to foreign portfolio investors, the limit on portfolio investment in Kenyan companies quoted on the stock Exchange was raised from 20% to 40% and the limitations on the individual portfolio holding from 2.5% to 5%.

(ii). Taxes (dividend/withholding). Reduction of double taxation on income derived from equity investment from 10% to 7.5%. The capital gains tax was suspended in 1985.

(iii). Commissions on securities. Previously standing at 2.5% will now range between 2% for small transactions and 1.1% for larger deals, that is,

Table 2. THE APPROVED COMMISSION CHARGES.

CONSIDERATION	COST TO INVESTORS (%)
Less than Ksh 5,000,000.	2%
Ksh 5,000,000 but less than Ksh 10,000,000.	1.8%
Ksh 10,000,000 but less than Ksh 50,000,000.	1.55%
Above Ksh 50,000,000.	1.1%

* Minimum charge per transaction: Ksh 100 implemented with effect from July 1995.

* A charge of 0.05% for all fixed interest securities for every shilling.

(iv). Capital Market Authority (CMA). The government will publish the fees to be charged by CMA for services it provides in accordance with the Act (to be amended) which will there by enable it to move rapidly towards complete self-financing, currently getting 0.14% contribution out of the commission charged. The government will also encourage,

(a). The establishment of an independent central Depository to minimize risk in clearing settlement and registration time.

(b). Private sector to establish a credit rating agency to improve risk assessment for securities in order to facilitate their trading at the Stock Exchange

2.12 Market Index.

The Index measures the overall share prices movement of the Market, for in a certain day some share prices will go up and some down, and the rest will probably not change. An increase in the Index implies an improvement in Market activities in terms of price, traded volume or both and vice versa. If the Index falls, many shares prices are declining and many investors start their purchase decisions process and if the Index is gaining share prices in general are rising and investor commence their sale decision process. In general the Index reflects what investors think of the prospects for the economy as a whole or sector of the economy. It may also indicate investors preferences or levels of investable incomes. For example, NSE index between 1990- June 1995 has been rising considerably (Appended 8).

The NSE share Index is based on the shares of 20 companies, chosen to be

representative of the whole Stock Market and is calculated on a daily basis (Geometric Mean of 20 Prices). In general the stock exchange index is used in several ways among them include:-

(i). Used as a base measure of how well investor's portfolio has performed. Since security prices tend to move together, investors think that their portfolio should perform, on a risk-adjusted basis, at least as well as the Market Index.

(ii). Used to determine if there is a relationship between historical price movement and economic variables, such as interest rates, money supply and Gross National Product. The Market Index may be used for forecasting since it has been found to be a leading indicator of the economy.

(iii). Used to determine the future price movement by the technical analysts who believe Stock prices move in identifiable patterns.

(iv). Used to determine systematic risk for individual securities and portfolios. Systematic risk measures the relationship of the Market, by regressing security or portfolio returns to Market returns over a period of time, the analyst can determine the systematic risk or beta for the security or portfolio.

In this study researchers used market index as a bench mark for judging the return on a given stock at the same time hold the effect of stock-price movement in the market and therefore remove the impact of any general movement in the share prices in the market. A number of authors among them Van Horne (1970) has advocated for the use of industry average index as opposed to the general stock exchange index in that it approximate more closely underlying stock price movement of the type associated with the stock being listed. Lack of industry index in NSE has necessity the use of the whole stock exchange index although such has also been used in other studies such as Kelohargiu

(1993). will be impounded in the error term U_{it} , which thus presumably captures the effects

The market Index Model utilizes the Market Index to estimate the rate of return on a given security. The return on various securities are related only through common relationship with some basic underlying factors which is the rate of return on a broad market index. To isolate the effects of an event on the price of the share, it is necessary to control for the differential effects of the market wide information on individual share return. The market index model proposed by Shape and tested by Blume provides a particularly simple and effective way to do so. The model assumes that individual security return R_{jt} are linearly related to the return on a market portfolio, R_{mt} and that the usual assumptions of the regression model are satisfied. The market model takes the form,

$$R_{jt} = a_i + b_i R_{mt} + U_{it}$$

where:-

R_{jt} = Return for period t on the i^{th} security.

R_{mt} = Average return on a market portfolio of all assets on the Exchange or a representative sample of all securities such as the return on the NSE 20 share index.

a_i, b_i = Parameters that are to be estimated by least-squares.

U_{it} = The disturbance or error term for period t.

The systematic part of a security's return is presumed to be captured by its normal relationship to the return on the market portfolio or representative sample of the whole security market. Any return not accounted for by a security's normal relationship to the

market will be impounded in the error term U_{jt} which thus presumably captures the effects of company specific influences.

Horie (1990) state that " there is no theory behind the market model. It is purely a statistical description of the association between returns on stocks and the markets as a whole. As such , there is no formal definition of what a_i and b_i are but it is possible to estimate these coefficient for any stock"

Fisher (1972) argues that the general problem of adjusting for market wide movement in security price on individual common stock return has received considerable attention. One of the procedure is to estimate the parameters of the Sharpe-Unter-mission capital Asset Pricing model for each security and the interpret the residual in each period e_{jt} as a abnormal return on stocks. The approach used in event study method. The Capital Asset Pricing Model like Market Index Model takes the form,

$$R_{jt} = a_j + R_{mt} + e_{jt}$$

However to estimate of coefficient of a_j and b_j for each new security is not Practical given that prior to the issue no price observation for unseasoned new issue is made. Estimation of these coefficients requires use of several price observation before the event of interest. This would enable one forecast the expected return at the time of event which is then related to the actual return.

One way for adjusting for market effect on new issues returns is to use market index (Fisher 1972 and Puxty 1991). The difference between security and market return is then computed using the equation below:-

$$U_{jt} = R_{jt} - R_{mt}$$

R_{mt} represent the market index most representative of the new issues.

If for each new issue stock; a_j equal to zero and b_j exist among recent offering and that the average b_j of new issues exceed one that is if the non-diversifiable risk of each issue is the same as that of the market, then equation above is consistent with the capital asset pricing model. However one would expect that inter-firm differences in b_j exist among recent offering and that the average b_j of new issued exceed one (that most new issues are "riskier" than the stocks in the stock exchange index). In addition, one would also not expect a_j (the point at which a regression line intercepts the vertical axis) to be equal to zero, one would expect the changes in average price of the new issues to exceed in a positive direction the change in the stock exchange index. Hence new issues might be expected to show price performance superior to those of the stock exchange index. Closely allied to the question of risk is that of company's size and age. Those companies which comprise the stock exchange index tend to be both larger and older than those going public. To the extent that these factors have an effect on the return required by investors independent of that of risk new issues would be expected to provide an even higher return relative to stocks in the stock exchange index.

In a similar manner, differences in dividend yield also may bias the result. The total returns that an investor receives from the investment in a company stock is composed of dividends received over the holding period as well as the capital gain or loss realized at the end of the holding period. To the level that the new stocks in the sample have a lower dividend yield than does the stock in the stock exchange index one would expect the average price of the new stocks to show a greater increase than does the stock

exchange index. The lower dividend would be off set by greater expected price appreciation. Thus if new stocks are riskier and have lower dividend yields than the stock exchange index sample, with which they are compared, they would be expected to show greater price appreciation than the stock exchange index sample. The result then is that the transformation of stock return to excess return in equation above serves to adjust roughly the market effect on the new issue return.

2.2 THE DEFINITION OF TERMS.

(1) Brokers: A Stockbroker is the investor's link with the Stock Exchange. They are supposed to give technical information and advice to the members of the public on matters pertaining to the securities available on the Stock Exchange. They are Stock Exchange members firms which buys and sells shares on behalf of the clients. A Stockbroker therefore is a licensed firm which buys and sells securities on behalf of investors for a brokerage fee.

(2).Underwriting. This is the process by which a company issuing new shares to the public enters into an arrangement with an institution such as a bank under which this institution will agree, for a fee, to acquire a stated proportion of any shares left unsold after a public issue of shares. Underwriting is a requirement of the companies Act for companies going public in Kenya and need to raise public finance. However so far only one company (Jubilee Insurance Company) has engaged an underwriter when going public in Kenya since 1984. The arrangement is necessary just in case the issued shares are not sold out completely, for the law does not allow the issuing company to remain with such shares. The underwriter usually purchases these shares at a price lower than what the public were paying (spread) with the objective of either retaining them as a shareholder

and hence earn dividend or selling them later when their price appreciate to earn a capital gain.

(3) **Stags.** One who applies for a new issue in the hope of being able to sell what is allotted to him at a profit as soon as dealing start. Therefore he is a speculator on the stock Exchange who purchases large blocks of new issue of shares in anticipation of a rise in market price when they begin to be dealt on the stock exchange secondary market. This speculation is associated with new shares which usually are assumed to be low-priced and in most cases such prices increase with time allowing the stag to sell them at a profit. Such a speculation in the new market is known as staggling.

2.3 REQUIREMENT BEFORE BEING QUOTED IN NSE.

1. The company must be registered with the Registrar of companies as a limited company as per Company Act Cap 486.
2. A company must have an issued capital of at least Ksh 2 million with par value of between sh 5 and sh 10 per share.
3. At least 20% of the issued equity capital for which quotation is being sought must be offered to the public whose value must be at least Ksh 2 m which must be sponsored by a broker a member of NSE and must prepare detailed prospectus containing information about company as required by the NSE council.
4. The Memorandum and Articles of Association of the company must comply with requirement of the stock exchange whether or not require by law.
5. The stock exchange requires that the spread of shareholders existing at the close of an offer is sufficiently wide to justify the listing, approximately 150 shareholders is regarded as a minimum.

6. Details and particulars of the company such as current directors, legal advisors, company secretary, auditors, subsidiaries or associate companies if any. In general name, history and description of the company activities and interest must be provided.
7. A report by the company auditors in respect of the last five completed financial years of the company if the company has been in existence for five or more years.
8. The company must pay the following fees:
 - a) A hearing fee, currently equivalent to sh 1,000.
 - b) For each class of shares or debentures for which quotation is needed a fee of sh 1,000 (paid within 30 days after quotation is granted)
 - c) For any alteration in its existing capital structure affecting shares a fee of sh 1,000 is paid except for such issues as right, bonus, script issues.

The NSE new issues manual state that, "The cost of going public is heavy particularly if the Issue is Underwritten. Cost would include the fees of the Issuing house and Underwriter, the sponsoring broker's fees, updated property valuations, Auditor's fees, printing and legal costs plus any extraordinary expenses that may be incurred in the flotation. A very rough guide to the costs of a new flotation is in the region of 5-10% of the capital raised. Naturally costs and fees may vary according to the parties involved and the overall costs of the Issue are normally paid for out of the proceeds of the Issue", however these costs are tax deductible.

9. The company must pay an annual quotation fee and abide by the rules of conduct and regulations governing the quotation of companies at NSE. In essence, disclosure of information is the whole basis of the listing requirements of the Kenya Stock market. The company is required to maintain a standard of

continuing disclosure sufficient to enable investors and their advisers to assess its performance and to estimate its prospects. To this end the prospectus on flotation must include, inter alia, full particulars of the company, its origins and history and its financial performance overtime. A reasonable forecast of current and future earnings and prospective dividends is also required. In short, disclosure initially and continuously is fundamental to the whole system of a free and unfettered market in securities and it is the basic principle running through the listing requirement of the Stock Exchange. The aim of the stock exchange in making these requirements is to ensure an adequate market in the securities it lists.

2.4 PUBLIC FLOTATION AND UNDERWRITING PROCEDURE.

- STEP 1.** Negotiation between the Issuer and Managing Underwriter.
- STEP 2.** Planning the strategy and type of Issue.
- STEP 3.** Appointment of Managing Underwriter or Sponsoring Broker in absence of Underwriter.
- STEP 4.** Preparation of documents.
Amend Memorandum and Articles of Association.
To convert the company to a public if private.
- STEP 5.** Applications to and negotiation with the capital Issue committee to set offering price and approve this Issue.
- STEP 6.** Application for Listing on Nairobi Stock Exchange.
- STEP 7.** Signing Underwriting agreement by Issuer.
- STEP 8.** Establishing share Transfer Registry.
- STEP 9.** Preparation and filling prospectus with

- Registrar of Co, and Stock Exchange.
- STEP 10.** Distribution of final prospectus and public offering.
- STEP 11.** Collection of proceeds by Managing Underwriter and payment to Issuer.
- STEP 12.** Return of allotments.
- STEP 13.** Shares listed on the Stock Exchange.
- Source:** Business Finance, Manas'seh 1990, pp 235.

2.5 THE FLOTATION TEAM.

There are many decisions to be made throughout the period up to the actual flotation and these decisions rest with the "Flotation Team" which include the following members.

A. Sponsoring stockbroker.

The sponsoring broker plays a crucial role in coordinating the flotation team and advising the issues in a number of aspects among them include,

Initial appraisal.

This is mainly on the suitability of the company for flotation and on the optimum timing of a flotation.

The prospectus.

The stockbroker co-ordinate the efforts of drafting a suitable prospectus containing the details concerning the company as required by the law and the stock exchange and in a format appreciable by the professional investor.

Exposure to potential investor.

The stockbroker being well-informed and connected with the potential investors will assess the best method of marketing the shares. He distributes to all its clients and

potential investors a comprehensive report on the issue, together with a copy of the prospectus.

Pricing

The stockbroker is assumed to have a unique insight into the price which the market would find acceptable and therefore plays a key role in setting the initial price.

Post-flotation support.

The period after the shares are issued often determines the success or failure of an issue. It is at this period that the stockbroker will ensure that a liquid two way market develops by providing information and general advice to investor on the listed company.

B. Merchant Bankers.

Being an experts in the field of finance and investments, the merchant bankers will in consultation with company management and other professional plays a crucial role prior and after flotation. Among these role include:-

- (i). Identify capital requirement and its composition.
- (ii). Draw corporate financial and investment strategy.
- (iii). Involved in the drafting of the issue prospectus.
- (iv). Involve together with the sponsoring brokers in the pricing and timing of the issue.
- (v). Assist in the distribution of documents.
- (vi). Perhaps the most important role is the underwriting or arranging for the underwriting of an issue.
- (vii). Involved in the allotment process including refunds and arrangements of successful applicants.

C. The Auditors.

The Auditors are normally appointed to the flotation as accountants to the Issue. They play key roles pre-listing among which include:-

The Accountant's Report.

It forms part of prospectus and covers areas such as the basic structure of the company, the accounting policies, the earnings of the company over the previous five years, where applicable the company asset and liabilities and other financial details.

The prospectus.

The accountant must ensure that all financial information in the prospectus is recorded properly and in accordance with the facts and the law.

Tax.

The accountant will be consulted frequently on the tax implications of the company, especially if a restructuring of the company is necessary prior to listing.

General.

Give advice on more general areas of the prospectus together with matters such as employee share option schemes and accounting policies.

D. The Advocates.

The advocates advise the Issuer on the re-organizations that occur when a company transfer to public status, such matters include changes on, the Memorandum and Articles of Association, Share capital and Registration as a public company. They are also involved in drafting the prospectus and reports on title to properties and any litigation and material contracts outstanding. The advocates also represents the interests of the company and the selling shareholders in any legal agreement.

E. The public Relations and Advertising Agents.

Depending on the public profile of the company planning entry to the market, a campaign to increase public awareness needs to be conducted throughout the period up to flotation. One of the most important contribution to be made by the advertising and marketing agents, however is the art work and design of the prospectus and choice of media.

F. Valuers.

Report by professional valuers on the company's properties and other fixed assets must be included in the prospectus together with reports by other specialists. All these members act as a team and each contribute to the results of the whole exercise of flotation.

2.6 FACTORS THAT INFLUENCE THE SUCCESS OF IPO.

There are various factors that has been highlighted in the theory of Issue of shares, which contribute to the success or failure of an Issue, among them include,

Market comparable.

Factors such as the record of the company, it's reputation in the field and it's dividend policy , earnings and dividend yield are very important to any investor. However majority of the new Issues are priced on the basics of a multiple of the taxed earnings of the business.

Net asset value.

Depending on the type of business, the value of a company's net assets play an important part in forming an investment opinion. The composition of the assets and their earning power is also taken into consideration.

Public profile.

The attitude of professional and individual investors to a flotation and the price they are prepared to pay for the shares is strongly influenced by the degree of awareness of the company. This may exist because of an existing high product profile but it normally needs to be cultivated by the use of a careful marketing and public relations campaign a head of flotation.

Management.

For smaller companies in particular, investment interest in new Issues hinges crucially on the assessment of the key executives. It is their ability to maintain the overall successful progress of the company that recommends a new Issue as against alternative and safer investment in a large comparable quoted company.

Prospects for growth.

Investors attach considerable importance to the view that they form about the opportunities both for organic growth and acquisitions and will value the shares accordingly.

Market sentiments.

The attitude to new Issues in general varies with market sentiment and the company on flotation has either to accept the sentiment of the day or postpone the Issue and await more favorable climate.

The flotation discount.

Once the above and other factors has been taken into consideration when setting the Issue price, a discount is normally applied to encourage investors to take a risk of investing in a new Issue, rather than in an established quoted security. This study argues that in general the pricing of the new shares is the key determinate of the success of the

Issue as reflected in the rate of subscription. However other factors clearly had a role to play. For example Net Asset Value as the findings of this study shows.

2.7 THE BENEFITS OF BEING QUOTED.

There are several reasons why a company decide to became quoted, however looking at the reasons given in various prospectus of companies one get more or less the same general statement. That they are giving kenyans an opportunity to share in the ownership of the company. Among those companies which the government held shares, they gave the purpose of going public as government policy of privatization programme. However from commercial point of view, one or more of the following factors motivate companies to go public.

Source of fund

One of the major reason for going public is usually to increase the equity base of a company, thus allowing for future expansion and growth without the interest burden associated with the use of debt. This ability to raise funds from outside investors by the issue of shares is perhaps the most valuable of all benefits that accrue to companies on flotation.

Financial benefits

An immediate benefit enjoyed by a newly listed company is the considerable improvement in its overall financial position. The injection of substantial equity fund greatly improves the companies gearing and important balance sheet ratios. With such capital reinforcement and good management higher earnings and dividend are almost certain to follow.

Loan capital issue opportunities

Other types of share capital, such as preference share, convertible or non-convertible, or loan capital such as debentures and notes which may or may not be convertible can be issued to raise further funds. The issue of such instruments by well established and profitable concerns can be distinctly advantageous such opportunities are undoubtedly far easier for a quoted company than for an unlisted one.

Mergers

A tendency towards amalgamation within an industry and the growth of conglomerates has been a feature of economic development over the past few years in most industrialized countries. A phenomenon expected in the near future in Kenya. A merger scheme based on an exchange of shares appeals more to the sellers when the shares they receive are listed on the stock exchange and are thus marketable, than when they are not.

Acquisition funding

Acquisition of any size are normally easier to fund as a public company. Private company ventures are often attracted to a sale where quoted shares are offered as consideration both for their own tax reasons and because they will have the opportunity to participate in the future growth of the combined businesses if they so wish.

Prestige and status

Going public will raise the level of awareness of the company and its products in both the investment community and the public generally. This can result, for example in a greater ability to attract high calibre employees, unprompted approaches by potential acquisition candidates and increased general business opportunities. Public companies also benefit from access to the useful information brought to them by their advisers, financial

analysts, stockbrokers and shareholders.

A company public profile at flotation and there after will depend on the individual directors and shareholders involved, the nature of their business and the time and expenses devoted specifically to attracting publicity.

Market valuation

Shareholders and potential investors are able to check the value of their investment in the newly listed company daily by referring to the price list of quoted companies as published in the media. This facility is a major advantage over investors in unlisted companies.

Liquid assets

A portfolio of quoted shares is generally regarded as being a highly liquid asset as the shares may be sold through the stock exchange with the least amount of time and inconvenience. For this reason quoted shares are the most acceptable form of security to banks and other financial institutions.

Avenue for investment

Quoted shares offer the investing public particularly institutional investors and pension funds, an attractive avenue for investment by virtue of their liquidity and the detailed financial knowledge and record of each quoted company that is available to the public. Many investors regard quoted shares as an attractive hedge against inflation.

Freedom to invest

By a public flotation existing shareholder are placed in a position to diversify their interest and invest in other assets else where in that they can now sell their shares freely and invest in other areas.

No restriction on transfers of shares

Shares in a private company can generally only be sold to the remaining shareholders in terms of the articles of association of that private company. While as Shares in quoted companies are freely transferable.

Realization of investment

A key benefit that shareholders in private companies derive from flotation is the ability to dispose of part of their shareholdings and establish a market valuation for the balance. When a company is floated the new investors will normally expect the management to return sufficient holdings to guarantee their future motivation but they would raise no objection to existing shareholders realizing part of the investment through the stock market.

Employment incentive

Both for existing employees and those to be recruited, the ability of companies to offer share options and employee share schemes is a key advantage of public company status. At the time of flotation preferential allotments of shares to employees liked trade associations and associated companies may be permitted by the listing committee up to reasonable quantities.

Estates

By going public, the existing shareholders immediately have the means through their quoted stock holding to properly arrange their estates and to protect their families and other beneficiaries from unnecessary estate duties. A listing on the stock exchange provides the basis for the valuation for estate duty purposes.

Control

Control over the company's fortunes by the owners continues after public flotation

as only 20% of the new capital is required to be in the public's hands. The owners may retain over 50% of the equity which control in itself but they also often appoint the chairman and the Board of Directors prior to the issue.

Each company when going public may have its own unique reasons for doing so. Generally the above benefits are the major motivating factors although each factor may carry different weight for different companies.

Despite these benefits, NSE has experienced very low rate of quotation. Few private and public companies are willing to become quoted, several reasons ranging from political to economic have been cited. For example, Manas'seh (1990) has cited among other factors, the following reasons.

2.8 REASONS FOR THE LOW RATE OF QUOTATION AT NSE.

Given a span of approximately twenty years only ten companies have become quoted. Some of the reasons given include:-

(i). Most companies operating in Kenya are owned by families who value their control and secrecy more and as such are not willing to go public. As this they believe would dilute their interest although in reality this is not always the case, because only 20% of the new issues are required to be issued to the public at large.

(ii). Quotation is supposed to be essentially a means of raising finance from the public and yet companies operating in Kenya are open to cheap debt finance. This was the case with Jubilee Insurance, Barclays Bank, and Kenya Commercial Bank, which became quoted rather than to give a chance to Kenyans to acquire ownership in them.

(iii). Some companies in Kenya are subsidiaries of multinational which are already quoted at home and therefore the original owners may not be willing to sell their interest

to the public.

(iii). Cost of going public is usually very high.

Ross (1990) stated that issuing shares to the public is not free, and the costs of different issuing methods are important determinants of which is used. The costs fall into six categories. **Spread or Underwriting Discount.** The spread is the difference between the price the issuer receives and the price offered to the public. That is, the difference between what the underwriter pays for the share and what the public pays.

Other Direct Expenses. These are costs incurred by the issuer that are not part of the compensation to underwriters. They include filing fees, legal fees and taxes.

Indirect Expenses. These costs are not reported in the prospectus such as management time on the new issue.

Underpricing. For IPO, the stock typically rises substantially after the issue date. This is a cost to the firm because the stock is sold for less than its efficient price in the after market.

Green- share Option. The green- share option gives the underwriters the right to buy additional shares at the offer price to cover over allotment. This is a cost to the firm because the underwriter will only buy additional shares when the offer price is below the price in the after market.

(v). Formalities required when being quoted and regulations that bid the company there after at the stock exchange discourages companies from being quoted. Some of these impediments are being addressed in the current development plan (1994 - 1996). For example it took six years before Barclays Bank was finally quoted. As mentioned else where, Mwarania (1989) cited the problem of getting permission from new issue or capital issue committee consisting of officers from the Central Bank and Ministry of Finance as

one of the major contributing factors to the low quotation. The introduction of a capital gain tax in 1975 was not only mistimed but also misguided.

2.6 PRIOR STUDIES AND FINDINGS

The studies done in the area of Initial public offering (IPO) seems to fall into two categories. The first group address the pricing phenomenon, that is, overpricing or underpricing of IPO, the finding claim tendency to underprice the shares offered. The underpricing in this case being inferred from the average initial return in the short run (the period between the time the shares are offered and the first time they start trading). The second category attempt to offer models of explanation or hypothesis for this pricing tendency.

It is upon these findings that this study is founded, the researchers hypothesis that the level of subscription of IPO is related to this pricing phenomenon. The applications themselves theoretically reflect the demand by investors for characteristics of firm's performance or of the issuing process or of the overall stock market activity. This is true because investors buy common stocks not simply for their own sake but more so for what they anticipate from them after their commitment (Lorie 1978). This is generally in form of dividends or Capital gain and if they perceive the initial offering to be underpriced they will purchase to make a gain. Hence tendency to oversubscribed the offer, "If you are smart you will play the game only if there is substantial underpricing on the average" (Rock 1986).

Ibbotson (1975) in his research found out that the residual (excess return) of the new issues rose approximately 11.4% in the first month. However in the next 59 months the residual were not significantly different from zero, implying that no inefficiencies in

the after markets. This gives the implications that in the "short-run" an investor can earn a high return as opposed to buying after the offer in the market. This argument is based on the fact that Stock Markets are efficient and after the offer all relevant information will be reflected in the prices even the tendency to overprice or underprice. Fisher (1972) argued that based on efficient market hypothesis early price behavior has no value in predicting later price behavior. Empirical studies (Smith 1986) have reported that initial public offerings achieve sizable average returns over short periods, suggesting that the offering may have been underpriced.

Although most of the studies try to offer possible explanation for this general tendency to underprice the initial offering, there is no single generally accepted hypothesis. It is worthy noting that private firms that decide to go public are usually faced with unique situation. First the uncertainty about the market clearing price is significantly greater than for public corporation with shares already trading and intend to issue additional new issues. It is therefore possible for the issuing firm and the underwriter to underprice or overprice the initial public offering.

Ritter (1986) argues that while on average initial public offerings have positive initial returns, a large fraction of them have price declines and the offerings that shoot up in price are much more commonly oversubscribed than those that decline in price. Rely (1977) suggested that the short-run price adjustment after the offering should be continued through the long-run as the market continues to recognize and adjust for the mispricing. This implies that after the issue, the true market value of share is determined.

As a result of most of the initial public offerings being reported as underpriced the models below tend to explain this underpricing phenomenon as opposed to overpricing. One of the explanations is Asymmetric information, this falls in two categories.

(a). Asymmetric information - between the issuing firm and the underwriter (Baron 1982)

(b). Asymmetric Information - between the informed and the uninformed potential investors (Rock 1986, Ritter 1986)

Baron (1982) analysis on optimal contract for advising and marketing services between a firm and underwriter or investment banker revealed that the underwriter is better informed about the market demand for the firms securities than the issuing firm. Ross (1990) says that when a firm goes public particularly for the first time, the buyers know relatively very little about the firm's operations instead they rely on the judgement of the investment banker who has presumably examined the firm in details and given the wide interaction with customers, the banker stand better informed than the firm. The reason for underpricing then is because the firm must compensate the investment banker for providing advice and marketing the securities, the offering price is then a decreasing function of the uncertainty about the market demand. Alternatively the value of delegation to the investment Banker is an increasing function of the uncertainty about the market demand of the issue.

The above argument was contradicted by Muscarella (1989) who tested this model by examining initial public offering underpricing tendency of the shares of 38 investment Bankers that marketed their own IPO. The argument being that there should be no information asymmetry and hence less or no underpricing compared to IPO where issuer and investment banker are not one and the same. The author concluded that self-underwritten IPO by securities firms display underpricing comparable to that of other IPO.

Asymmetric information between informed and uninformed investors seems the most acceptable hypothesis. Rock (1986) and Ritter (1987) argues that initial public

offering are underpriced because of what they call winner's curse faced by uninformed investors. That though they win the bid, they are cursed with the outcome. The argument being that if new issues were priced below their expected value both informed and uninformed investors will submit their bid and due to high demand, the issue is rationed so the uninformed investors do not get as much as they wanted. If the issue is overpriced, the informed investors are less likely to submit bids and therefore the issue is more likely to be under subscribed with uninformed investors getting all the amount they wanted of overpriced offer. Therefore the uninformed investor receives fewer shares when more knowledgeable investors storm to buy an underpriced issue but gets all he wants when the informed investor avoid the issue. Ross (1990) supported winners curse argument and says it explains much of the reason why IPO have such a large average return. To counteract the winner's curse and attract the uninformed investors firms underprice the issues. Otherwise uniformed investor would be faced with prospect of systematic losses and pull out of the market. Rock (1986) on the article why new issues are underpriced stated that "the argument depend upon the existence of a group of investors whose information is superior to that of the firm as well as that of all other investors. If the new shares are priced at their expected value, these privileged investors crowd out the others when good issues are offered and they withdraw from the market when bad issues are offered. The offering firm must price the shares at a discount in order to guarantee that the uninformed investors purchase the issue." He than continued to support his argument by saying that if an investor finds that he receives none of the underpriced issues due to rationing brought about by the informed demand, and all of the overpriced issues, then the investor will revise downwards his valuation of new shares. The investor does not participate in the new issue market until the price fall enough to

compensate for the "bias" in allocation.

It is not clear from Rock's and other researchers arguments what advantage accrues to the issuer from uninformed investor participation nor is it clear what level of discount is sufficient to attract them to the offer. In any case it is conceivable that reducing the offer price could elicit greater informed demand exacerbate the bias, and further disadvantage the uninformed investors.

Fisher (1972) stated that "it is widely alleged that underwriters may attempt to underprice new issues of common stock so that initial offering will be fully subscribed and rise in price subsequent to issue". In general, the greater the uncertainty about the true price of the new shares, the greater the advantage of the informed investor and the higher the discount the firm must offer to entice uninformed investors into the market. In addition the researchers argue that in attracting both informed and uninformed investors through underpricing implies the issues will be fully or oversubscribed and therefore there is a relationship between offering price and the rate of subscription. The objective of this study was to offer empirical evidence to this line of argument.

Koh and Waiter (1989) tried to determine whether rationing occurs more often for "good" than for "bad" issues, a necessary conditions if Rock's model is correct in arguing that uninformed investor face a winner's curse. While they claim support for Rock's theory findings that the uninformed investor should earn the risk-free rate conditional on the rationing process; the fact that rationing is so pervasive and so large cast doubts on Rock's basic assumptions that issues need to be underpriced to attract uninformed investor into the market. That is, why attract the uninformed investor and then ration the issue to such an extent that it is of no economic significant. The Jafle (1975) and Spindt(1989) claim that it is not uncommon for underwriters to receive indications of interest for shares

five times the number of shares available before the pricing of issues implies that they are informed on potential demand and need not necessarily attract unformed investor.

The other hypothesis advanced by studies like those of Ibbotson (1975) and Tinic(1988) is the legal-liability hypothesis. The argument behind it being that initial public offering underpricing could provide insurance against legal liability and the associated damages to investment banker. Economist such as Ritter (1986) argue that each investment banker has a reservoir of "reputation capital" which he is bound to protect mispricing of new issues as well as unethical dealing is likely to reduce this reputation capital. Therefore this legal-liability hypothesis argues that underwriters or investment banker underprice new issues as a cheap way of lowering the probability that the price will fall after the issue, which in turn reduces the likelihood of legal liability or action by disgruntled buyers. Besides this probability underwriter has long-term incentive to make sure that his customers do not pay too much, they might desert him in future deals. The issue of legal-liability however seem irrelevant in Kenya where laws governing the issue of shares do not provide for legal action in case of overpricing. This study provides an opportunity to examine IPO returns in circumstances where the legal hypothesis is unlikely to have an important impact on initial returns like for the other studies done in developed countries. Securities issuance is largely unregulated and the potential to win compensation for damages is relatively low. In practice however issuers are liable only for serious errors or omissions that would constitute misrepresentation. Unlike the environment for floating new shares capital in the USA which requires commitment of considerable resources for legal fees. In as much as the issuing firms often are sued, ostensibly because of erroneous or inadequate information in the prospectus.

Ibbotson (1975) and Tinic (1988) hypothesized that the issuing firms may

underprice their IPO to reduce their vulnerability to such law suits. Tinic argues that several testable propositions attend the law suits-avoidance hypothesis : For example, IPO issued in the USA after passage of the 1933 securities Act should show larger initial returns than IPOs brought to the market before; Experienced investment bankers should discount their offering less than less knowledgeable competitors; and small and riskier firms going public should tend to discount their IPO more than firms less likely to face legal liabilities.

Tinic (1988) was also of the opinion that underpricing of initial public offering is undertaken deliberately. However Ruud (1993) findings seems to contradict this view, in that the results suggest that the apparent underpricing may be largely attributed to the frequent market practice of underwriters supporting and stabilizing the price. Ross (1990) argues that for either firm commitment or best effort issues the principal underwriter is permitted to buy shares if the market price fall below the offering price. The purpose being to support the market and stabilize the price from temporally down word pressure. This is another hypothesis that seems unapplicable in Kenyan context based on the same reason that laws governing issue of shares are less developed and underwriting is less common.

Allen (1989) and Weich (1989) gave another hypothesis that would explain this pricing tendency, they called it signaling equilibrium phenomenon. The reasoning behind it being that High-quality firms can afford to signal their type by underpricing their initial public offering but low-quality firms can not because they will not recoup the cost of the signal. The motivating factor being based on the assumptions that the present value of the future benefits of IPO underpricing is greater than the immediate loss. The increase in price there after is argued. will also enable the firm raise additional funds cheaply.

Ruud(1993) found little evidence of any benefit accruing to the issuer through subsequent stock offering.

Another hypothesis almost related to this of quality was proposed by Ritter (1984), he found out that high-risk initial public offering are underpriced more than low-risk offering. The argument being underpricing implies high initial public offering return commensurate with high risk. However further investigation revealed that the high average initial return can be attributed almost entirely to just one Industry that is natural resources. His findings of cycles in the monthly average initial returns, along with their non zero mean (in the long-run) are difficult to reconcile with the standard notion of market efficiency. Rock (1982) looked at the issue of underpricing IPO in more or less the same way. From uncertainty point of view, facing issuing firms, investment Banker and investors on the true value of a share, the underpricing is merely a compensation to investors for the cost of becoming informed. He therefore concluded by saying that High-risk offering are in an expected value sense underpriced more than other low risk offering. The measure of risk in his model was the uncertainty uninformed investors have regarding the after market price, that is, riskier firms should have higher average initial return than firms that are less riskier. The implication was "there is a positive relationship between risk and average initial return and this relation is heteroscedatic". The author also used risks proxy mainly sales and standard deviation of earnings to verify his findings.

Based on these studies and the findings analyzed, it is worthy noting that the results need to be taken with caution and interpreted with this two or more issues in mind. One of them is that while most of the studies reported by Smith (1986), as shown in table 4, reported an average initial return ranging from 11% to around 52%, suggesting that IPO are usually underpriced and hence probability of making a gain or return from

subscribing to the new issues, most of them ignore the transaction costs, cost of searching or the opportunity cost of funds. Meaning the real return may be lower than implied. Van Horne (1970) attempted to incorporate this by using ask prices instead of bid prices, based an assumption that the cost of purchase for an investor net of transaction costs is approximated by the ask price and a commission of 1%. The former findings changed and therefore an investor should take into account such facts when making a commitment. It is also worthy noting that not all IPO will guarantee a significant price increase, as the findings of this study shows.

The other precaution that should be taken into account is the enthusiasm generated by the issue which may contribute temporarily to rise in price. Davis (1976) attempted to show the influence of the firm's size, method of issue and market volatility on market discount on new issues of equity. In the analysis they argued that the degree of enthusiasm generated for any specific issue will have an influence on the after the offer price. However it was impossible to measure this degree of enthusiasm. Fisher (1972) says "the greatest danger perhaps is that speculation in the new issue market is self-generating, a sharp rise in price often creates demand for an issue" As a result one would conclude the issue was underprice due to rise in price while as this may not be the case. In the same line of thinking if the market is invaded by optimism (bull market) or pessimism (bear market) the risk would be the same. For example. In a bull market there is general belief that shares are undervalued - the price will rise for above the intrinsic value which may keep on rising until a major crash occurs bringing it to sharp and painful end. However it is expected that this trend will be reflected in the movement of Stock exchange index and it will be catered for in the adjustment being made using market index.

As these past studies findings has shown, the IPO are generally believed to be underpriced. Brealey (1978) stated that "many investment bankers and institutional investors argue that under-pricing is in the interest of the issuing firm. They say that a low offering price on the initial public offering raises the price of the stock when it is subsequently traded in the market and the firm's ability to raise further capital". However as Ritter (1986) has claimed, a significant fraction of them has price declines, implying they were overpriced. In Kenya no empirical evidence to show whether IPO at NSE has been overpriced or underpriced. This study has it first objective, to establish this empirically. The other argument that has come up very strongly is that, the offering price is set with the objective of enticing potential investors to buy these new shares. It therefore implies that the offering price has a role to play in determining the level of subscription. Using the law of demand, it is expected that those IPO that are highly underpriced to be in high demand as reflected by the rate of subscription. Ross (1990) claims that "when the price of a new issue is too low, the issue is often oversubscribed". This study therefore hypothesized that there is a relationship between the level of discount and the rate of subscription of IPO and this relationship is assumed to be linear. The second objective of this study is therefore to investigate whether this relationship exist.

current Kenya Finance Bank and Kenya Finance Corporation.

3.1 POPULATION

The population consists the 57 quoted companies in the Nairobi Stock Exchange as at the end of 1994. All companies qualify for the study in that they were at one point in time listed on the first time in the Stock Exchange (Appendix 1).

This chapter deals with the research design used to conduct the study. It covers the population of the study, the sample selected for the study and the data collection process.

OVERVIEW.

The aim of this section is to give an overview of the companies that comprised the sample and whose data was analyzed. That is, the composition of the sample in reference to the total population.

The population of the study constituted of 52 companies which were quoted up to the end of 1994. The sample used comprised of 10 companies quoted for the first time between 1984 and 1994. The data was available for all the 10 companies and is presented in the Appendix 3.

Out of the ten companies seven (70 %) of them falls under Finance and Investment sector, two (20 %) under Industrial and Allied sector, one (10 %) under Commercial and Services sector and Agricultural sector was not presented. Again a close examination of this companies shows at the time of quotation, four (40 %) of them were Banks (the current Kenya Finance Bank was then Kenya Finance Corporation).

3.1 POPULATION.

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3.2 SAMPLE

The sample consists of the ten companies quoted for the first time since 1984 to 1994. This sample was chosen based on the availability of data and the fact that between 1974 to 1984 there was on new company that became quoted for the first time in NSE (Kariuki 1986). Data was not available for companies that became quoted before 1974. The list of sample used is presented on Appendix 2.

3.3 DATA COLLECTION

The data used in this study was secondary data obtained from the NSE Secretariat, Registrar of companies and Individual companies. Specifically the following data was collected:-

- (i). Issue/offering price.
- (ii). First recorded transaction price (observed market price) or bid price.
- (iii). The stock exchange index in the time of Issue and the date of the first trading after the quotation.
- (iv). Prospectus - Provided information that relate to the findings such as dividend yield, price earning ratio, dividend cover and Net Asset Value per share. However the quality of the prospectus information itself is subject to the ambiguities of the accounting information, particularly with respect to stock and asset valuation. Nevertheless, prospectus are controlled by stock exchange council regulations.
- (V). The rate of subscription.

3.4 DATA ANALYSIS:

The data analysis method used in this study is essentially Regression analysis and

correlation analysis. The data collected for the calculation of discount on new issues was analyzed by way of summary statistic. A statistical tool of t-test was used to test for significance.

In this chapter, the data obtained from the relevant sources was analyzed and presented in summarized and organized form. This is done in three sections as follows. The first section contains the data analysis associated with calculation of the discount on new equity issues. A statistical test, the t-test was used to measure the significant of the level of discount. This was done at both 5 % and 10 % levels of significance.

The second section, contains the data analysis aimed at finding out whether there is a linear relationship between the discount on new equity issues and the rate of subscription. Regression analysis and correlation analysis are used as the major tools of analysis. The F-ratio was used to test the significant of the regression equation as a whole, at both 5 % and 10 % levels of significance. The third section contains the analysis of the fundamental variables, namely Earning Per Share, Dividend Per Share, Dividend Yield, Price-Earning Ratio and Net Asset Value Per Share in relation to the rate of subscription.

4.1 CALCULATION OF "EXCESS" RETURN.

First the return of a new stock was calculated between the offering price and the first transaction price recorded after the stock started trading. This return was then adjusted for market effect using the stock exchange index. That is, in order to remove the impact of any general movement in the share prices the extent of any discount or premium was measured relative to the stock exchange share index using the formula below. This give us the "abnormal" return for each stock which was used to judge whether the stock was overpriced or underpriced.

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That is,

An excess return, U_{jt} , was computed for each stock in each period.

$$U_{jt} = R_{jt} - R_{mt}$$

Where

R_{jt} = return on stock j in period t

R_{mt} = return on the stock market.

This formula measures the extent to which the rate of return on a newly issued share exceeds the rate of return earned on the stock market as a whole. Of course any company- specific or industry- specific news which emerges after trading begins will reduce the accuracy of this corrections for developments after the issue price is fixed, although over short periods such influences are likely to be small.

Given the two sets of returns, the stock exchange index return was subtracted from the new stock return. The difference represents the change in price for the new listed stock from the base date, holding constant the effect of stock exchange-stock price movement. Once these differences were computed for all stocks in the sample, they were summed and an average calculated (sample mean).

4.11. Sample mean was then calculated (U).

$$U = \frac{1}{N} \sum_{j=1}^n U_{jt}$$

The sample mean may be viewed as a performance index which reflect, the return in excess of the stock market return, on a shilling of investment divided equally among N new issues in a sample.

Where:

4.12. Hypothesis Tested.

U_t = the difference between the index for the stock and that of the market.

The null Hypothesis (H_0).

S_n = standard error about the average D .

$$H_0: \mu_t = 0.$$

The alternative Hypothesis (H_1)

The researchers used a five-steps procedure to test the above hypothesis:-

$$H_1: \mu_t \neq 0$$

STEP 1.

Formulated the null and alternative hypothesis as shown above.

STEP 2. To test the null hypothesis that U_t is equal to zero we compute a student t statistic.

That is if the return on stocks (R_{jt}) is equal to the return on market (R_{mt}) then U_{jt} equal zero and hence the offering price represents the true market price. Otherwise, if less than zero the stocks were overpriced and if significantly greater than zero the were underpriced.

which tests null hypothesis just once. A single-decision procedure requires no stipulation on the value of the population standard deviation which may remain unknown.

4.13 Computation of t-statistic.

STEP 3. The t statistics was used to test whether the "excess" return

was significant. To test for the significance of the average differences by a means of a t-test, the t-ratio was computed as follows.

$$t = \frac{U_t}{S_t} \sqrt{\frac{\sum D^2}{N}} \frac{S_D}{\sqrt{N}}$$

Where:

S_t = standard deviation of U_{st}

D = the difference between the index for the stock and that of the market.

N = total number of observation

S_D = standard error about the average D .

The ratio was used to judge whether changes in the market price of new listing stock between those dates were significant having removed the impact of any general movement in share prices using the representative stock exchange index.

The researchers used a five-steps procedure to test the above hypothesis:-

STEP 1.

Formulated the null and alternative hypothesis as shown above.

STEP 2.

The test statistic and procedure was selected. Given the size of the sample and the fact that the standard deviation of the population was not known, the testing procedure was based on the student t-test statistic. The researchers then used the single- decision procedure which tests null hypothesis just once. A single- decision procedure requires no stipulation on the value of the population standard deviation which may remain unknown.

The decision rule was therefore based on the t-test statistic.

STEP 3.

The significance level, hence the acceptance and rejection region were identified and established. The researchers used both 5% and 10% level of significance, whose

statistical distribution are given in the tables. These two levels gave $t=1.833$ and $t=1.383$ as critical values respectively.

STEP 4. $t = 3.938$ is greater than the table value.

The value of the test statistic was computed which was to be compared with the critical values given in the t-statistic tables based on the two levels of significance and degree of freedom.

STEP 5. Decision was made. Significant at 10 % level of significance.

The null hypothesis was to be accepted if the computed value of the t-statistic fell within the acceptance region and was be rejected if it fell outside this region.

t-statistic from the t-distribution tables at 5% level of significance is $t = 1.833$. We likewise didn't find conclusive the null hypothesis, in that, the computed t-value is still greater than the critical value from the t-distribution. In short,

4.2. FINDINGS.

The results of this study are organized in three sections, the first constitute of the investigation of discount on the issue price and the second involve the relationship between the discount on issue price and the rate of subscription and the third section contains results on the relationship between the rate of subscription and the fundamental variables from the prospectus.

4.2.1 Discount on the Issue Price.

The researchers carried the analysis as described above and the results shows that:-

On average the initial public offering at NSE in Kenya offer a short period return of approximately 47.5% The researchers then tested this results to check whether it was significant using both 5% and 10% level hypothesized. Given that the computed t-statistic was 3.938. Using the two levels of significance, it was found out that:-

(i). At 10% level of significance.

The t-statistic (table value) gave a critical value of $t = 1.383$. This means the computed t-value ($t = 3.938$) is greater than the table value.

Therefore the computed t-value falls under the rejection region. Hence there was no evidence to accept the null hypothesis that the "excess" return is not significantly different from zero and the researchers therefore concluded that the short-run average return on the IPO of 47.5% was significant at 10 % level of significance.

(ii) At 5% level of significance.

The researchers then repeated the test of significant using 5% level of significance. The t-statistic from the t-distribution tables at 5% level of significance is $t = 1.833$. We likewise didn't find conclusive evidence to accept the null hypothesis, in that, the computed t-value is still greater than the critical value from the t-distribution. In short, therefore the average initial return on IPO is significant at both 5% and 10% level of significance.

Researchers noted after further investigation in regression analysis that two of the companies can be referred to as outlier (for more explanation see the regression analysis section). Further data analysis to calculated the discount or premium without the two companies revealed more or less the same results unlike the regression analysis. The reason being as a result of the rule of averages, the effect was minimized. Using a sample of eight companies (excluded the two that were considered outliers) the results of this further analysis were that;

On average the IPO were issued at discount of approximately 41.2 %. This level of discount was significant both at 5 % and 10 % levels of significance, as the following tests shows.

(i). At 10 % Level of significance.

The computed t- statistic was $t = 3.062$ and the t- value from t- distribution tables at 10 % level of significance is $t = 1.383$. As a result, the computed t- statistic (3.062) is greater than the t- value from tables. Therefore, the researchers found no conclusive evidence to accept the null hypothesis as was the case before.

(ii). At 5 % levels of significance.

Similarly, the same process was followed, the t- value from t- distribution tables at 5 % level of significance is $t = 1.833$. It was also less than the computed t- statistic ($t = 3.062$). Therefore there was no conclusive evidence to accept the null hypothesis. The results of these two data analysis section were more or less the same and they are summarized in the table 3 below.

TABLE 3. DISCOUNT ON INITIAL PUBLIC OFFERING RESULTS.

SAMPLE SIZE	E.U.P %	tc	SD	SE	T - TEST	
					10%	5%
TEN COMPANIES	47.5	3.936 *	0.3813	0.1206	1.383	1.833
EIGHT COMPANIES	41.2	3.062 *	0.3804	0.1345	1.383	1.833

Source: Research Findings.

* = Significant both at 10 % and 5 % levels of significance.

LEGEND: E.U.P = Estimated underpricing, tc = Computed t- statistic, SD = Standard Deviation SE = Standard Error.

The table above shows that for both samples, the average initial return on the IPO, which reflect the level of discount is significant both at 10 % and 5 % levels of

significance. Such systematic discounting has been reported in most developed countries notably UK and US, with the shares on average immediately trading at a considerable premium over the issue price as shown in table 4.

TABLE 4. COMPARISON WITH THE OTHER PAST STUDIES FINDINGS.

STUDY	SAMPLE PERIOD	SAMPLE SIZE	ESTIMATED UNDERPRICING
IBBOTSON (1974)	1960 - 1969	120	11.4%
IBBOTSON (1975)	1960 - 1970	2650	16.8%
RITTER (1984)	1960 - 1982	5162	18.8%
	1977 - 1982	1028	26.5%
	1980 - 1981	325	48.4%
RITTER (1985)	1977 - 1982		
- FIRM COMMITMENT		664	14.8%
- BEST EFFORT		364	47.8%
CHALK & PEAVY (1985)	1974 - 1982	440	13.8%
- FIRM COMMITMENT		415	10.6%
- BEST EFFORT		82	52.0%

SOURCE: JOURNAL OF FINANCIAL ECONOMICS 15, (1986), PP 20.

* Firm Commitment:- The underwriter buys the securities for less than the offering price and accept the risk of not being able to sell all of them.

* Best Efforts :- The underwriter avoids the risk because he does not purchase the shares but act as an agent, receiving a commission for each share sold. If the issue cannot be sold at the offering price it is usually withdrawn.

Looking at some of the findings as show above, it is clear that on average most of the IPO are issued at a discount. However some appears normal and non significance. As the NSE new issues manual state, "In this context discount figure of 10% to 30% is normal but there is no hard and fast rule".

The findings of this study indicates that the discount on initial public offering in NSE is quite high compared to those of the past studies. At least two of the reasons that would help explain this excess return on IPO in kenyan contexts include;

(i). Pressure upon the companies to undervalue their shares. This is one of the anomaly that is being address in the current development plan (1994-1996). Mwarania (1989) cited the introduction of a capital issues committee in 1971 (A government Agency housed in ministry of Finance), with the power to regulate the timing, the distribution, the quantity and the **pricing** of any public issue of shares and stocks. This as one of the major policy mistakes initiated by the government, which brought to an end a new burst of growth experienced in NSE over the period 1966 - 1972.

(ii). The government policy of privatization and ensuring parastatals are sold to indigenous Kenyans may imply that new issues previously held by the government are under valued to enable most Kenyans to buy. This seems to have been the case with National Bank of Kenya.

This underpricing has therefore contributed to some extent to the high level of

subscription experienced recently in NSE. The rate of subscription on the other hand may also have been influenced by the low rate of quotation. That is, due to the low quotation in NSE when a company then decide to go public most Kenyans are eager to buy the shares.

REGRESSION ANALYSIS FINDINGS.

It was also noted that issuing new shares by several companies almost at the same period may have it own problems as this writer seems to suggest, "the company tried to refund the money as soon as possible so that owners could bid for the other floatation, but considering that the refund were by cheque one week was too late for those who wanted to buy Crown Berger shares" (Nduati 1992). As noted in section three of this study Crown Berger for reasons not clear was poorly subscribed despite it good fundamental variables or profitability record.

The results of this study clearly shows that an investor on initial public offering earns high returns in the short-run. The theory of efficient market suggest that the price of the newly issued stock will quickly adjust to reflect the available set of relevant information. To the extent that underpricing exists, the difference between offering price and subsequent market price constitutes a "rent" that is distributed to the initial purchasers of the stock. As many of the initial public offering are over-subscribed, it is this subsequent price behavior that is important to the majority of the investors who must buy at the market price rather than the offering price. However in the long-run, however the efficient market hypothesis suggest that subsequent market price behavior should be independent of the initial price change after the offering. One would not expect information as to price behavior immediately subsequent to the offering to be of any value in selecting stocks a few days after issue. That is , based on the efficient market nation of rapid adjustment of price to available information, so that subsequent returns will not

be different for issues with large initial prices increases as compared with returns on the new issues as a whole.

4.22 REGRESSION ANALYSIS FINDINGS.

Regression analysis tell us how one variable is related to another by providing an equation that allow us to use the known value of one or more variables to estimate the unknown value of the remaining variable (Lapan 1990). Also related to this is correlation analysis which tell us the degree to which the two variables are related (the strength of the relationship). Levin (1987) summaries it well , regression and correlation analysis will show us how to determine both the nature and the strength of a relationship between the two variables.

In regression analysis, we shall develop an regression equation, that is, a mathematical formula that relates the discount on new issues to the rate of subscription. Then we will apply correlation analysis to determine the degree to which the two variables are related. Where correlation analysis tell us how well the estimating equation actually describes the relationship. It is important to note that we consider the relationship found through regression in this study to be relationship of association but not necessarily a cause and effect relationship. In this study, the researchers carried out a regression analysis to find out weather the discount on the new equity issues are related to the rate of subscription and if so the strength of this relationship. It was expected that the findings will offer an explanation to the high rate of subscription observed when the companies became quoted for the first time in NSE.

A trend line for the total sample of ten companies was fitted in order to get an

appreciation of the general relationship between the two variables over the ten years period. The results are summarized in the table below. There was no conclusive evidence to reject the null hypothesis that the rate of subscription do not depend on the discount on new equity issues. The results which accompanied the overall model are explained and interpreted below.

From the results presented in the computer print out the following interpretations were made:-

To test the fitness of the over all model as the line of best fit, the following statistics were used.

(i). Coefficient Of Determination (r^2).

The coefficient of determination, expresses the amount of variation in the dependent variable that is explained by the regression equation. That is, it measures the proportion of variation in the dependent variable that can be explained by the variation in the independent variable. In other words, it is the total variation of the dependent variable attributed to the estimated regression equation. Normally the value lies between zero and one. The regression analysis results of this study shows that the coefficient of determination is equal to 0.0527 (5.25 %). This means that only 5.27 % of the variation in the rate of subscription are explained or attributed to the discount applied on the new equity. A coefficient of determination of 5.27 % is very low, it means that the rate of subscription is poorly explained by the discount on the new equity issues. Therefore the computed value of $r^2 = 0.0527$ signifies that 5.27 % of the total variation of the subscription rate about their mean can be explained by the relationship between the rate of subscription and corresponding discount on the new equity issues, as estimated by the regression line.

(ii). Correlation Coefficient (r).

Correlation Coefficient is used to measure the strength /degree of the relationship between the two or more variables. It shows how closely the two variables can move together. It therefore indicates how well the regression line explains the variation in the values of the dependent variable. The correlation coefficient express the strength of the relationship as a quantity between negative one and positive one. The sign signifies the direction of the relationship, that is, direct or inversely related and it must agree with the slope of the regression line. The data may exhibit a curvilinear relationship and the coefficient of correlation will be given as zero and it is incorrect to conclude there is no relationship. Therefore, correlation coefficient must be restricted to instances where the underlying relationship between the independent and the dependent variable is believed to be linear. Otherwise a different procedure is required to calculate the strength of association for data that have a curvilinear relationship. In short, the correlation coefficient measures the strength and the direction of the relationship between the independent and the dependent variable.

The results of this study shows a correlation coefficient equal to 0.23 (23 %). This implies a weak and positive relationship between the discount on the new equity issues and the rate of subscription. It is said to be weak in the sense that it does not explain even a quarter (25 %) of the variation in the rate of subscription. The relationship between the two variables was direct and the slope was positive.

(ii). F- Test/Ratio.

To finally test the overall fitness of this equation, F- statistic was used, which

actually test the significant of the regression equation as a whole. The question we are answering is whether the value of the coefficient of determination really indicates that the discount on new issues explain the variation in the rate of subscription or might this have happened just by chance? , that is , Is the regression as a whole significant?.

It provides a method of testing the null hypothesis that non of the predictor variables in the model has any significant association or inference on the dependent variable. The alternative hypothesis stating that at least one of the predictor variables has some significant inference on the dependent variable. If the null hypothesis is false, then the F- ratio tend to be larger than it is when the null hypothesis is true. So if the F-ratio is too high in reference to the critical value of the significance level we reject the null hypothesis and conclude that the regression as a whole is significant.

To carry out this test, the researchers used a five steps procedure:-

Testing the Null Hypothesis.

STEP 1. Formulated the null hypothesis.

The null Hypothesis (H_0)

$$H_0: \beta_1 = \beta_2 = \dots = \beta_k = 0.$$

The alternative Hypothesis (H_1).

$$H_1: \beta_i \neq 0$$

To determine whether the discount on the new equity issues has a significant association with the rate of subscription, the null hypothesis was stated that non of the

predictor variables has any significant association with the rate of subscription. And the alternative hypothesis that at least one of the predictor variables has a significant association with the dependent variable.

STEP 2. Selected the test statistic and the procedure. A value of F served as the test statistic.

STEP 3. Obtained the significance level and identified the acceptance and the rejection regions. Both the 5 % and 10 % level of significance were used giving critical values of $F = 5.32$ and $F = 3.46$ respectively.

STEP 4. The value of the test statistic was computed. That is the computed F-statistic equal to $F=0.445$.

STEP 5. The decision was made, based on the critical values as given by the 5 % and 10 % level of significance. As noted above, critical values provided the acceptance and rejection region.

The findings of this analysis shows that;

The computed F- value (0.445) is less than both the values of F-statistic at 10 % and 5 %, that is , $F= 3.46$ and $F= 5.32$ respectively. This means the F-value falls within the acceptance region in both cases. Therefore there was no conclusive evidence to reject the null hypothesis that non of the predictor variables has any significant association with the dependent variable. In relation to the study, it implies that discount on the new equity issues has no significant association with the rate of subscription. Hence the overall model is not significant at either 5 % or 10 % levels of significance.

TABLE 5. Sample of Ten Companies.

STATISTIC	VALUE	COMMENT
r^2	0.0527	Only 5.27 % of variation in the rate of Subscription can be explained by the discount on new equity issues.
r	0.23	Weak positive relationship between discount on the new equity issues and the rate of subscription.
F	0.445	The model is neither significance at 5 % or 10 % level of significance.

Source: Research Findings.

In attempt to verify these findings the researchers carried out further investigation, in order to confirm or refute these findings. It may have been the fact that the two variables are not linearly related, the rate of subscription can only be explained by more than one independent variable or it is actually true that the two variables has not significant association. As a results researchers carried out further investigation, in order to confirm or refute these findings.

The researchers then decided to carry out some residual analysis. By plotting the raw data to get the scatter diagram, the results revealed that two of the companies (National Bank and Jubilee Insurance) can be referred to as **outliers**. These are isolated observations that are so extreme that they do not appear to belong with the rest.

Regression analysis without including the two was then carried out following the same procedure. The only change this time is the number of the sample, now using eight

companies instead of ten. eight Companies.

Over All Model Testing.

(i). Coefficient Of Determination.

The coefficient of determination change considerably from 5.25 % to 32.3 %. This means that the discount on new equity issues this time explains 32.2 % of the variation in the rate of subscription. However this proportion is still low although higher than previously.

(ii). Correlation Coefficients.

The correlation coefficient also change drastically from 23 % to 56.8 %. This implies that there is a strong and positive relationship between the discount on the new equity issues and the rate of subscription. That is in the sense that correlation coefficients is above 50 % level.

(iii). F- Test/Ratio.

In the same way, the F-Ratio also changed from $F = 0.445$ to $F = 3.802$. Using the same testing procedure, it was found out that the overall model was now significant at 10 % level of significance. That is the computed F-value (3.802) is now greater than the F-statistic from the tables (3.46). This means that the discount on new equity issues has a strong, direct and positive relationship with the rate of subscription.

In short, the result of the regression analysis shows that the level of discount on new equity issues, explains very little of the variation of the rate of subscription. The two variables has a weak positive relationship and the model relating the two is not significant at either 5% or 10% level of significance given a sample of ten companies. This results

Table 6. Sample of eight Companies.

STATISTIC	VALUE	COMMENT
r^2	0.322	Only 32.2 % of the variation in the rate of Subscription can be explained by the discount on the issue price.
r	0.568	Strong positive relationship between discount on new equity issues and the rate of subscription.
F	3.802	The overall model is significance at 10 % level of significance. Accept the model at this level of significance.

Source: Research Findings.

As a results there was no conclusive evidence to accept the null hypothesis that non of the predictor variable has any significant inferences on the dependent variable. Therefore at least one predictor variable has a significant inferences on the dependent variable. Hence discount on the new issues has a significant association with the rate of subscription given a sample of eight companies. Based on the fact that larger samples are more representative of the population, the researchers base the findings of this study on the results of the sample of ten companies.

In short, the result of the regression analysis shows that the level of discount on new equity issues, explains very little of the variation of the rate of subscription. The two variables has a weak positive relationship and the model relating the two is not significant at either 5% or 10% level of significance given a simple of ten companies. This results

were attributed to the problem of outliers which then boils down to the size of the sample. A sample of ten companies is not large enough (20%) relative to the total population. As such the effect of outlier is likely to be high, to minimize outliers effect a larger sample could be used. However given this was not possible for this study it was not carried out.

Therefore, the regression analysis results need some qualification. The fact that no strong relationship was demonstrated between the discount on the issue price and the rate of subscription using the larger sample of ten companies does not of necessity imply that the discount on the initial public offering does not influence the rate of the subscription.

Rather it may be the case that the findings are as a result of the sample size which makes the weight of a single company greater and therefore the problem of outliers. The findings could also be as a result of the simple methodology used. It is possible that the relationship between the discount on issue price and the subscription rate is not wholly linear as assumed. In addition the rate of subscription may be a function of more than one variables. Therefore use of multiple regression may be attempted, however most of the factors that are advanced in literature that they influence the rate of subscription may not be quantifiable. Therefore a larger sample and/or more sophisticated model which defines the relationship as non-linear could be attempted. This would yield more varied refutation or confirmation of the hypothesized relationships.

4.23. FUNDAMENTAL VARIABLES RELATED TO ISSUE PRICE.

The objectives of this data analysis section was to find out whether the findings in the first and the second section of this study can be explained through the information provided in the prospectus. However not all the information in the prospectus was considered.

Looking at the data presented in the table 7 it is clear that all those companies that were oversubscribed two times or more had the following in common :-

(i). The Issue Price was below the Net Asset Value Per Share. This gives the impression that these issues were actually undervalued relative to the asset value or worth of a share in terms of the asset share. Moses (1989) stated that one of the strategy of investing in shares as "buy stocks that have a high ratio of book value to stocks price". A strategy that can equally apply to new share issues.

(ii). The dividend yields based on the previous year dividend and the issue price, were quite high. However National Bank with the lowest dividend yield had the highest price appreciation. The lower dividend yield was off set by a lower offering price that was to ensure a capital appreciation or return commensurate with the investment. On the other hand Crown Berger which had the highest dividend yield, had lower price appreciation for the same argument. This is because investors buy shares either for capital gain or dividend return. As such if the company had lower dividend, investors could only invest for capital gain. To ensure a capital gain and therefore motivate the investors to buy the shares, the issue is underprice. Kariuki (1986) stated that " according to the figures released by Barclays Bank their shares offer the largest return so far on the NSE. The sh 10 nominal value ordinary share offered at 16 computed at 1985 dividend of 25 % offer a gross return of 15.625 %. In comparison with leading quoted companies offering a gross yield below 10 % these shares seems under valued". This implies that an investor can use the dividend yield in comparison with those currently in the market to make a judgement.

TABLE 7 : FUNDAMENTAL ANALYSIS RESULTS.

VAR	BB	HFCK	KCB	NBK	SBK	JIK	CB	UC	F
NAV	31.54	10	23.25	14	10.83	29.07	15.45	11.4	21.32
IP	16	7	20	10	14.5	14.5	16	14.5	35.5
DY	15.6	14.28	15	2.5	13.7	12.07	49.56	8.62	4.73
RATE SUB	613	400	327	300	233	220	104	103.2	101

Source : Research Findings.

Legend:

VAR = Variable. NAV = Net Asset Value. IP = Issue Price.

DY = Dividend Yield RATE SUB = Rate of Subscription.

* : For the other abbreviations see Appendix 2.

There was no clear cut relationship between Earning per Share, and Dividend per Share for the previous five years and the rate of subscription (Appendix 5& 6). This gives the impression that the rate of subscription may be a function of more than one variable some of which may be difficult to quantify.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND IMPLICATIONS.

5.1: SUMMARY.

The findings of this study shows that initial public offering in NSE are on average issued at a discount. That is, the average initial return that an investor can earn after buying the shares when they are offered and selling immediately when they start trading. This discount was significant both at 5 % and 10 % level of significance. This gives the suggestion that IPO are usually on average underpriced, hence it implies that an investor can make a capital gain (profit). The results are summarized below.

TABLE 8. DISCOUNT ON NEW EQUITY ISSUES (IPO) AT NSE.

SAMPLE SIZE.	ESTIMATED UNDER PRICING.	COMPUTED t-STATISTIC.	t- TEST	
			10 %	5 %
TEN COMPANIES	47.5 %	* 3.938	1.383	1.833
EIGHT COMPANIES	41.2 %	* 3.062	1.383	1.833

Source: Research Findings.

Note : The estimated discount compare the trading price after the issue to Issue price, corrected for movements in the over all market index.

Based on the argument that the cheaper the issue, the most likely the higher rate of the subscription, a regression analysis was carried out. The discount level on new equity issues was related to the rate of subscription for each company. The results shows that the relationship between the discount on new equity issues and the rate of subscription is weak and positive. This discount on new issues explain quite a proportion of the

variation in the rate of subscription though this relationship is not significant. These results are summarized in the table 9 below.

Table 9. Regression Analysis Results.

SAMPLE SIZE	STATISTICS			F - test	
	r ²	r	F	10%	5%
TEN COMPANIES	0.0527	0.23	0.445 *	3.46	5.32
EIGHT COMPANIES	0.322	0.568	3.802 **	3.46	5.22

Source : Research findings

Note : * - Neither significant at 5% or 10% level of significance

** - Significant at 10% level of significance.

Based on a sample of ten companies, the results shows there was;

(i). A direct, weak and positive relationship.

(ii). This relationship is not significant at either 5% or 10% level of significance. As a result there was no conclusive evidence to enable the researcher to reject the null hypothesis that the rate of subscription do not depend on discount on new equity issues.

Further investigation shows that the results were partly due to the problem of outlier. Regression analysis taking this into account revealed different results. The results shows that there was a direct, strong and positive relationship. In addition, this relationship was significant at 10% level of significance.

Therefore the findings of this study can be summarized as follows,

(i). The initial public offering at NSE during this period (1984 and 1994) were issued at a discount on average, implying they were underpriced.

(ii). There is a positive and linear relationship between the discount on offering price and the rate of subscription. However this relationship is not significant at 5 % or 10 % level of significance.

(ii). All those companies that were over-subscribed more than twice had set their offering price below the net asset value per share.

IMPLICATION OF THE STUDY.

The findings of this study had the following implications,

(i). The short-term holding were highly profitable to the initial subscribers. This results therefore implies that the initial public offering are issued at a discounts. In other words, the fact that IPO shows a sizable average returns over short-period suggest that the offering are underpriced. This is because if underpricing of new issues exist, one would expect a significantly positive value of the initial rate of return, that is, the average percentage change in price from the offering to the first published market price, adjusted for market effects. This implies that in the "short-run" an investor can earn a higher return as opposed to buying after the offer in the market. .

(ii). Companies going public are incurring high costs in form of underpricing initial public offering. The findings seem to suggest that firms going public issues shares at a discount. This might hurt them in trying to raise capital for expansion, because discount is a cost to the issuing firms as much as it is a return to the investors. In addition to the direct costs of going public, there is an indirect cost either to the original owners of the firm or where new finance is raised, to the company itself, of the shares are sold for less

than investors would be willing to pay.

(iii). The discount on offering price influences the level of subscription for initial public offering.

(iv). The initial public offering net asset value is a good indicator of the likely rate of subscription.

CONCLUSIONS.

It has been demonstrated that the new equity shares issued between 1984 to 1994 at NSE has on average been issued at a discount. And that this level of discount was significant both at 5 % and 10 % level of significance. Findings indicate significantly large returns for the initial subscribers, adjusted for market effects in the short-run following the offering. The results shows that discount on new issues has an association with the rate of subscription. However this relationship was not significant at either 5 % or 10 % level of significance. Given the findings of further analysis which shows this relationship to be significant at 10 % level of significance, there was therefore no conclusive evidence to conclude that the rate of subscription do not depend on the level of discount on new equity issues. The researchers therefore recommended that there is need for further analysis using a larger sample on this relationship.

LIMITATION OF THE STUDY

The major limitation of this study is associated to the sample. First the sample size is small and this militates against the generalization of the results of this study. Secondly the sample was composed of companies that can be associated with the same sector or industry as shown in the overview. This can be attributed to availability of data, in that,

the data for companies quoted before 1984 was not available.

The other limitation of this study is based on the assumption that NSE was efficient during this period. The studies current done on the efficiency of NSE, non has tested the semi- strong hypothesis which is most relevant to this study. The results of this study therefore wholly depend on how efficient NSE was with within this period otherwise the market price set may not be a true value of the share when it start traded for the first time.

SUGGESTION FOR FURTHER RESEARCH.

This study may be view as a starting point for several other studies related to it because so far no other research has been done in Kenya directly related to it. A word of caution is necessary at this point availability of data in this area of research is a challenge exercise.

(i). This study can be replicated in future with a larger sample that would enable the researchers to arrive at conclusive results.

(ii). A study can also be carried out to establish how Kenya firms go about in setting the offering price.

(iii). This study has established that new issues are underprice, however a further research can be carried out to offer an explanatory model for this phenomena.

(iv). Given the low rate of quotation in NSE, study can be conducted to try and bring out some of the major reasons behind this tendency.

Appendix 1

List of 52 companies quoted on the Nairobi Stock Exchange by June 13, 1995.

Agricultural

1. Brooke Bond Kenya Limited
2. Eaagads Limited
3. George Williamson (K) Limited
4. Kakuzi Limited
5. Kapchorua Tea Company Limited
6. Limuru Tea Company Limited
7. Ol Peject Ranching Limited
8. Sasini Tea Limited
9. Theta Group Limited

Commercial and Services

10. A. Baumann and Company Limited
11. African Hotel and Tours Limited
12. Car and General (K) Limited
13. C.M.C Holdings Limited
14. Standard Newspaper Limited
15. Express Kenya Limited
16. Hutchings Bremer Limited
17. Marshalls (E.A) Limited
18. Motor Mart Building

19. Nation Printers & Publishers Limited
20. Pearl Dry Cleaners and Limited
21. Phillips International Limited
22. Uchumi Supermarkets

43. E.A Packaging Industries Ltd

Financial & Investment

23. Barclays Bank of (K) Limited
24. City Trust Limited
25. Credit Finance Corporation Ltd
26. Diamond Trust of Kenya Ltd
27. Housing Finance Co of (K) Ltd
28. I.C.D.C Investment Limited
29. Jubilee Insurance Co Limited
30. Kenya Commercial Bank Ltd
31. Kenya Finance Corp Ltd
32. National Bank of Kenya Limited
33. National Industrial Credit Limited
34. Pan African Insurance Co Limited
35. Standard Chartered Bank Limited

Industrial and Allied

36. Bamburi Portland Cement Limited
37. BAT Kenya Limited
38. Carbacid Investment Limited

39.	Crown Berger Limited	
40.	Dunlop Kenya Limited	
41.	E.A Cables Limited	
42.	E.A Oxygen Limited	BB.
43.	E.A Packaging Industries Ltd	HFCK or HF.
44.	E.A. Portland Cement	KCB.
45.	Firestone E.A (1969) Ltd	NBK.
46.	Kenya Breweries Limited	SBK.
47.	Kenya National Mills Limited	JK.
48.	Kenya Oil Company Limited	CB.
49.	Kenya Orchards Limited	UC.
50.	Kenya Power & Lighting Ltd	KPC.
51.	Total Kenya Limited	P.
52.	Unga Group Limited	

APPENDIX 2.

SAMPLE.

ABBREVIATION.

DISCOUNT ON NEW EQUITY ISSUES.

NAME	DISCOUNT ON	DATE OF	ABBREVIATION
1. Barclays Bank	43	613	BB.
2. Housing Finance Corporation of Kenya	55.93	400	HFCK or HF.
3. Kenya Commercial Bank	11.78	127	KCB.
4. National Bank of Kenya			NBK.
5. Standard Bank of Kenya			SBK.
6. Jubilee Insurance of Kenya		233	JIK.
7. Crown Berger	34.01	104	CB.
8. Uchumi	13.36	103.2	UC.
9. Kenya Finance Corporation		101	KFC.
10. Firestone			F.

SOURCE: Research Findings

APPENDIX 4.

DIVIDEND PER SHARE FOR THE PREVIOUS FIVE YEARS.
DISCOUNT ON NEW EQUITY ISSUES.

COMPANY NAME.	DISCOUNT ON ISSUE. %	RATE OF SUBSCRIPTION %
BARCLAYS BANK	41.43	613
HFCK	55.93	400
KENYA COMM	32.78	327
NATIONAL BANK	145.47	300
STANDARD BANK	77.97	233
JUBILEE	0	220
CROWEN BERGER	30.01	104
K. FINANCE .B	25.38	103.2
FIRESTONE	22.62	101

Source: Research Findings.

APPENDIX 5.

DIVIDEND PER SHARE FOR THE PREVIOUS FIVE YEARS.

COMPANY NAME.	1	2	3	4	5	MEAN	RATE OF SUBSCRIPTION. %
BB	2	1	2	3	2.5	2.1	613
HFCK	0	0	.14	.14	1	.256	400
KCB	1.5	1.5	2	2	3	2	327
NB	.5	.5	1.55	1.25	.25	.81	300
SB	0	.34	1.12	.88	1.99	.866	233
JI	.47	.66	.875	1.75	1.75	1.101	220
CB	3.88	5.05	4.73	6.08	7.93	5.532	104
UC	.42	.5	.625	1.04	1.25	.767	103.2
F	.74	.8	1.02	1.17	1.68	1.082	101

Source: Research Findings.

APPENDIX 6.

**PART OF FUNDAMENTAL VARIABLES RESULTS.
EARNINGS PER SHARE FOR THE PREVIOUS FIVE YEARS.**

COMPANY NAME	1	2	3	4	5	MEAN	RATE OF SUBSCRIPTION. %
BB	2.39	1.39	6.63	6.83	7.62	4.972	613
HFCK	.04	.1	.39	1.26	.71	.4898	400
KC	6.37	6.87	5.97	6.15	9.38	6.948	327
NB	1.91	3.49	4.68	4.38	.7	3.032	300
SB	.77	.9	1.7	2.05	2.3	1.544	233
JI	.96	2.08	3.2	3.26	3.27	2.554	220
CB	5.7	6.49	6.19	8.58	10.12	7.416	104
UC	1.14	1.56	2.32	3.2	3.86	2.416	103.2
F	1.08	1.38	1.6	1.69	3.54	1.858	101

Source: Research Findings.

EPS = Earning Per Share

DPS = Dividend Per Share

DY = Dividend Yield (Anticipated Dividend Yield)

P/B = Price Earning Ratio

APPENDIX 7.

PART OF FUNDAMENTAL VARIABLES RESULTS.

COMPANY NAME	NUMBER OF SHARES. '000	EPS	DPS	DY %	P/E	RATE OF SUBSCRIPTION %
BB	5,000	7.62	2.5	15.6	2.1	613
HFCK	18,000	.71	1	14.28	9.86	400
KCB	7,500	9.38	3	15	2.13	327
NB	40,000	.7	.25	15	14.29	300
SB	21,000	2.3	1.99	12.07	6.3	233
JI	800	3.27	1.75	12.07	4.43	220
CB	8,638	10.12	7.93	14.06	1.58	104
UH	16,000	3.86	1.25	15.52	3.76	103.2
F	40,000	3.54	1.68	5.21	10.03	101

Source: Research Findings.

Legend:

EPS = Earning Per Share.

DPS = Dividend Per Share.

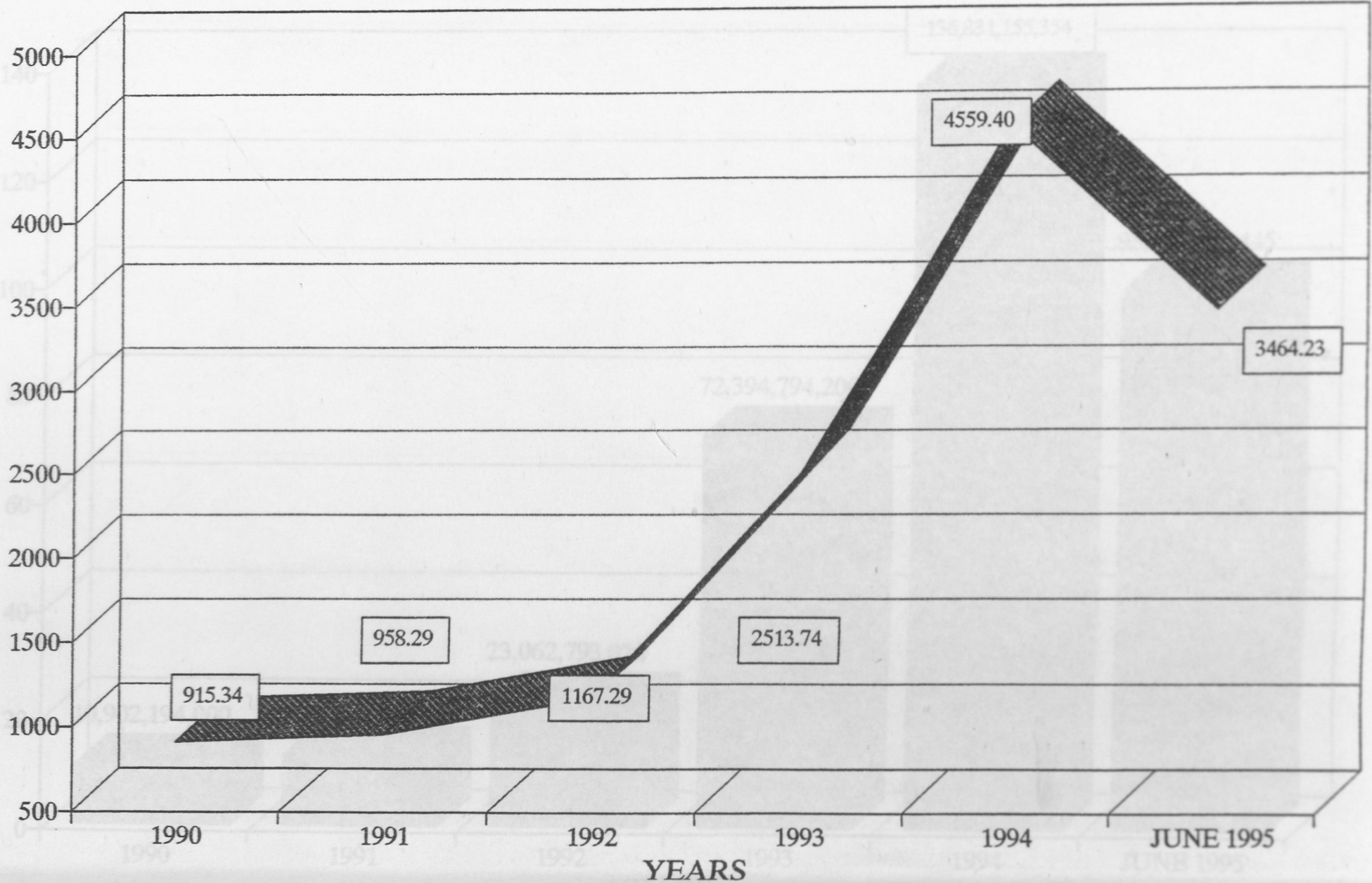
DY = Dividend Yield (Anticipated Dividend Yield).

P/E = Price Earning Ratio.

NSE 20 SHARE INDEX 1990-JUNE 1995

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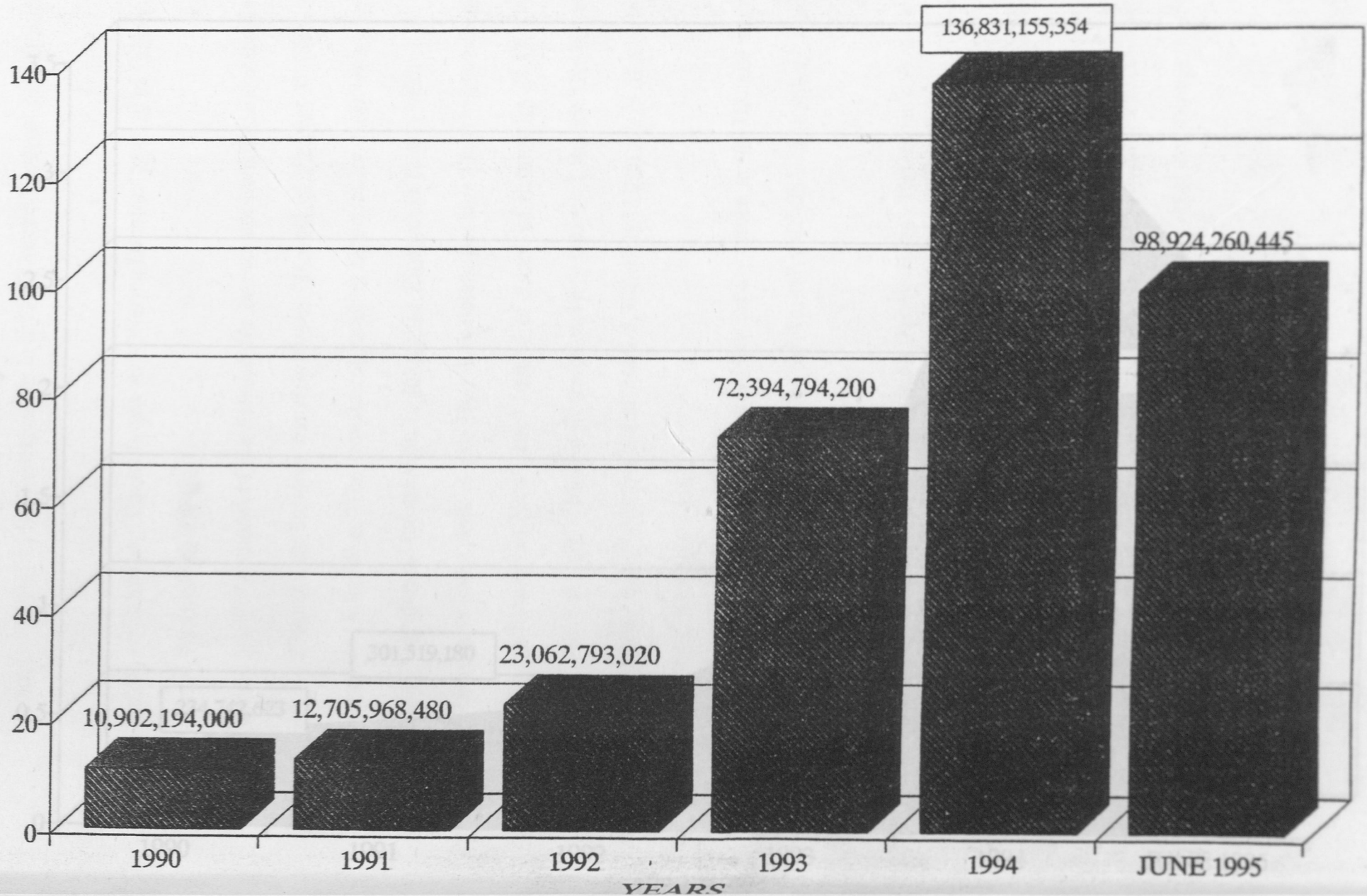
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MARKET CAPITALIZATION 1990-JUNE 1995

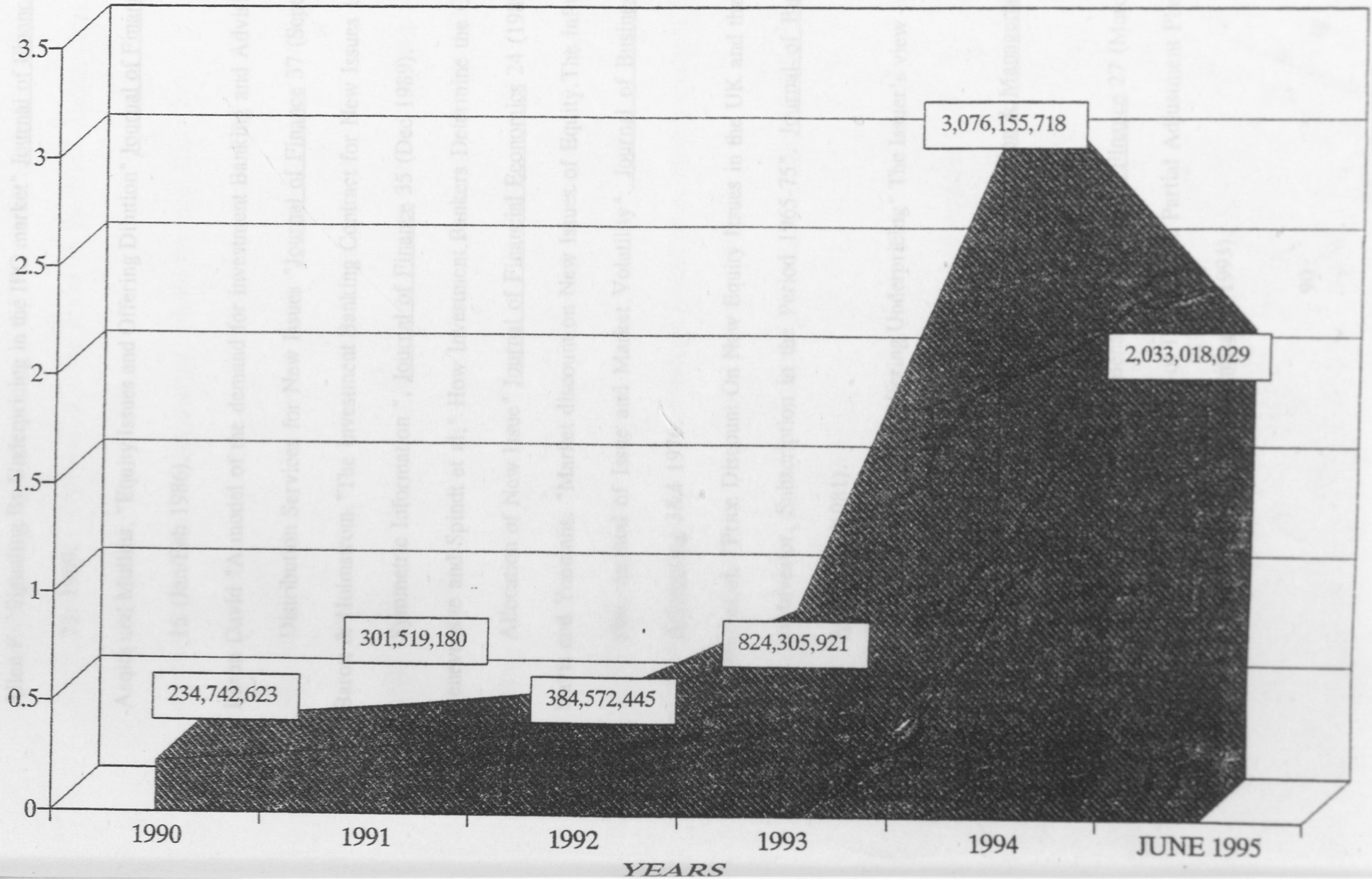
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VALUE
(Times 10E9)



VALUE OF SHARES TRADED 1990-JUNE 1995

VALUE
(Times 10E9)



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