

**AN EMPIRICAL INVESTIGATION INTO THE
RELATIONSHIP BETWEEN STOCK PRICES AND
THE NUMBER OF SHAREHOLDERS OF FIRMS
QUOTED AT THE NSE.**

BY:

MAINA SAMUEL KARANJA

(D/61/8211/04)

SUPERVISOR: LUTHER OTIENO

**A MANAGEMENT RESEARCH PROJECT
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER
OF BUSINESS ADMINISTRATION (MBA),
FACULTY OF COMMERCE, UNIVERSITY OF
NAIROBI.**

AUGUST 2006

DECLARATION

This project is my original work and has not been submitted for a degree in any other University

this project special mention being Jane the corner stone of my life and the one about to be conceived.

I promise to keep the academic fire burning and I will continuously increase my competence through further research in the financial fields. And I promise there will be more projects in the future

Samuel Karanja Maina

Name

05/10/2006

Date

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

h. A. A. A.

Supervisor Name

6/10/2006

Date

ACKNOWLEDGMENT

I would like to thank my Supervisor, Mr. Lutter for taking time to support and guide me. I would also like to thank other lecturers in the MBA program for sharing their knowledge and providing support in my academic endeavors.

DEDICATION

To all those who contributed to my successful completion of the MBA program be it in financial, moral or spiritual assistance, to them all I dedicate this project special mention being Jane the corner stone of my life and the one about to be conceived.

I promise to keep the academic fire burning and to continually increase my competence through further research in the financial fields. And I promise there will be more projects in the future

ACKNOWLEDGMENT

I would like to thank my Supervisor, Mr. Luther for taking time to support and guide me through my project. I would also like to thank other lecturers in the MBA program for sharing their knowledge and providing support in my academic endeavors.

I would also like to thank my colleagues and friends especially Patrick and Ayako who struggled with me during the program and provided invaluable support and encouragement.

I would like to express my appreciation to my family, who contributed significantly to the completion of this study.

May God bless you all for the tireless efforts and support you accorded me when I needed it most.

ABSTRACT

Empirical investigations on stock markets traditionally focus primarily on stock prices and their behavior over time. Based on the available set of information about a company, its stock price reflects investor's expectations on the future performance of that firm. The arrival of new information causes investors to adapt their expectations and is the main source of price movements.

CHAPTER ONE: INTRODUCTION

This study has not been done in Kenya hence the need to establish the nature of the relationship between a firm's investor base and its stock price for firms listed on the NSE. The findings of this research will therefore bridge the knowledge gap that exists on this particular issue. The objective of the study was to investigate and document the relationship between stock prices and the number of shareholders of firms quoted at the NSE. More precisely, the study sought to establish the correlation between the two variables-stock prices and the number of shareholders

For purposes of this study the population was all the 48 companies quoted at the Nairobi Stock Exchange (NSE) (Appendix 1) over the period 1997-2003. The study relied entirely on secondary data, which was obtained from the financial statements, and other records of companies quoted at the NSE. The data that was collected mainly comprise of yearly stock prices and number of shareholders for all the companies included in the study for the seven-year period 1997-2003.

The findings in this study show a negative relationship which is not linear between the two variables stock prices and number of share holders hence it is contrary to what Merton found out that an increase in the number of investors holding a security should increase the company's value. Companies with the highest number of shareholders tend to report some of the lowest stock prices over the years under study holding other factors constant.

TABLE OF CONTENTS

DECLARATION.....	I
DEDICATION.....	II
ACKNOWLEDMENT.....	III
ABSTRACT.....	IV
CHAPTER ONE: INTRODUCTION	
1.1 Background.....	1
1.2 Statement of the Problem.....	2
1.3 Objective of the study.....	4
1.4 Importance of the Study.....	4
CHAPTER TWO: LITERATURE REVIEW	
2.2 Empirical Studies.....	6
2.3 Expanding Investor Base.....	8
2.4 Trade-Offs.....	10
2.5 Liquidity and Stock Ownership Patterns.....	11
2.6 The Principal-Agent Paradigm.....	12
2.7 Market Anomalies.....	13
2.7.1 The January Effect.....	13
2.7.2 The Weekend Effect (or Monday Effect).....	13
2.7.3 Other Seasonal Effects.....	14
2.7.4 Small Firm Effect.....	14
2.7.5 P/E Ratio Effect.....	15
2.7.6 Value- Line Enigma.....	15
2.7.7 Over/Under Reaction of Stock Prices.....	15
2.7.8 Standard & Poor's (S&P) Index Effect.....	16
2.7.9 Pricing of Closed-End Funds.....	16
2.7.10 The Distressed Securities Market.....	17

2.7.11 The Weather.....	17
2.8 Technical Analysis.....	18
2.9 Studies on NSE.....	19

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction.....	21
3.2 Population.....	21
3.3 Data collection.....	21
3.4 Data Analysis.....	21

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Introduction.....	23
4.2 Coverage.....	23
4.3 Data Analysis.....	24

CHAPTER FIVE: DISCUSSIONS CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....	31
5.2 Summary.....	31
5.3 Conclusion.....	31
5.4 Limitations of the study.....	32
5.5 Suggestions for further research.....	33

REFERENCES.....	34
-----------------	----

APPENDICES

Appendix 1: List of All Companies Quoted At NSE.....	42
Appendix 2: Data Collection Form.....	43
Appendix 3: Letter of Introduction.....	44

CHAPTER ONE: INTRODUCTION

1.1 BACKGROUND

Empirical investigations on stock markets traditionally focus primarily on stock prices and their behavior over time. Based on the available set of information about a company, its stock price reflects investor's expectations on the future performance of that firm. The arrival of new information causes investors to adapt their expectations and is the main source of price movements.

However, since investors are heterogeneous in their interpretations of new information, prices may remain unchanged even though new information is revealed to the market. This will be the case if some investors interpret it as good news whereas others find it to be bad news. Changes in price therefore reflect the average reaction of investors' news. It is well known that investors select stock not only on the basis of their risk and return but also based on firm characteristics, such as the growth prospects and the familiarity they have with the business of the firm (Huberman, 2001; Kang, and Stulz, 1997; Falkenstein, 1996).

A growing body of theoretical and empirical research shows that to the extent that firm managers and controlling shareholders are not expected to maximize shareholder value, corporate valuation decreases, firm cost of funds increases, and firm investment is inefficiently constrained (La Porta, 1997, and 2002). Ultimately, though, investors are assumed to pay for what they get and outsiders provide funds as long their participation constraint is satisfied (Shleifer, and Wolfenzon, 2002).

Merton (1987) pointed out that firms have an incentive to broaden the investor base because this lowered their cost of raising external capital. He showed that by expanding its stockholder basis the firm could lower its cost of capital and increase its value.

Using simple calculations he argued that a small business with a limited stockholder base could pay a cost of capital up to 300 basis points higher than if its stock were widely held.

This provides enough incentives for firms to distribute information to widen the number of investors that are aware of the stock. The findings of this research will reveal the information content of a firm's shareholder base as well as the nature of its relationship to stock prices.

1.2 STATEMENT OF THE PROBLEM

Demsetz (1968) stated that one of the important determinants of secondary market liquidity is the number of shareholders. As the number of persons currently holding a particular share increases, the number of market participants interested in trading the assets increases in direct proportion. Therefore, the number of transactions per unit time also increases. The number of transactions and the volume traded was observed to be highly correlated in Demsetz's study. Another consequence of an increase in the number of shareholders is the reduction in bid-ask spreads, Demsetz (1968).

Benston and Hagerman (1974) observed a direct relation between a proxy for insider holdings and bid-ask spread. They stated that insiders possess shares for the purpose of controlling the firm and have privileged access to price-sensitive information not available to the public. Market makers in order to reduce their potential losses on account of trading with insider's and/ or other informed traders widen their bid-ask spreads.

Merton (1987) stated that risk-averse investors do not invest in stocks that they do not know anything about. Investor relations make investors aware of a stock thereby increasing the stock's investor base and the stock price through a risk sharing effect.

Trueman (1996) offered a model in which the manager of a firm pursued investor relations so as to attract informed investors. Each additional informed investor who faced constraints on short sales could potentially increase the stock price, given that the market had incomplete information about the exact number of such informed investors who traded in the company's stock.

Merton (1987) showed analytically that an increase in the relative size of a firm's investor base (i.e., the group of investors and potential investors who are aware of the firm) increased the market value of the firm. Merton's model implied that changes in the investor base of well known widely held firms, which already had very large investor bases, had essentially no effect on the firms' market value. Studies by Kadlec and Mc

Connell (1994) and Karolyi (1996) presented empirical evidence that greater investor recognition for firms increases their share prices.

Market efficiency-championed in the Efficient Market hypothesis (EMH), formulated by Fama (1970)-suggests that, at any given time, prices fully reflect all available information on a particular stock and/or market. Thus, according to the EMH, no investor has an added advantage in predicting a return on a stock price since no one has access to information not already available to everyone else. In efficient markets, prices become not predictable but random, so no investment pattern can be full proof. A planned approach to investment, therefore, cannot be successful. This “Random Walk” of prices, commonly spoken about in the EMH school of thought, results in the failure of any investment strategy that aims to beat the market consistently.

Ayako's (2005) empirical study on the relationship between trading volume and stock returns for firms listed on the NSE concluded that there was no relationship between these two variables i.e. trading volume and stock returns, implying that prices at the NSE follow a random walk. This study has not been done in Kenya hence the need to establish the nature of the relationship between a firm's investor base and its stock price for firms listed on the NSE. The findings of this research will therefore bridge the knowledge gap that exists on this particular issue.

The study tested the following hypothesis:

$H_0: \mu=0$: There is no relationship between the number of stockholders of a firm and its stock price.

$H_1: \mu \neq 0$: There is a relationship between the number of stockholders of a firm and its stock price.

1.3 OBJECTIVE OF THE STUDY

The objective of this study was to investigate and document the relationship between stock prices and the number of shareholders of firms quoted at the NSE. *the value of its stock is*

More precisely, the study was interested in the correlation between the two variables-stock prices and the number of shareholders. The findings sought to show the nature of this relationship as well as the impact of one variable against the other

1.4 IMPORTANCE OF THE STUDY

The findings of this study are of great importance to the following:

1. Financial Scholars and Practitioners

Since stock prices and the number of stockholders of listed firms are widely available market statistics, it is not surprising that both financial academics and practitioners will recognize the potential usefulness of changes in investor base in making investment decisions. They can learn valuable information about a security by observing both past stock prices and changes in investor base. The study will establish several important regularities about the information content of changes in investor base of a firm. This will add to the knowledge of scholars and practitioners.

2. Traders/ Investors

The objective of trading in stocks for the average trader is to realize capital gains by following price trends. Price trends in technical analysis are identified in a number of ways utilizing a variety of technical tools, most notably the trend line. Information on the relationship between stock prices and the investor base of listed firms may also prove to be a useful tool to investors/ traders when making investment decisions.

3. Stock Analysts

It is the duty of stock analysts to provide forecasts of stock prices to their clients. They give advice on which stocks are worth buying or selling. Stock analysts, therefore, will find this information useful in predicting future stock prices especially if they rely on technical analysis to make forecasts.

4. Management TWO: LITERATURE REVIEW

Managers are stewards of Companies charged with the responsibility of maximizing the wealth of its stockholders. To achieve this they must ensure that the value of its stock is high or increasing. If, by increasing investor base of the firm, the value of the stock will rise, they have an obligation to do so.

4.1 EMPIRICAL STUDIES

Merton (1937) proposed that an increase in a firm's investor base leads to a lower required return and a higher stock price. He also argued that increasing the number of investors that hold a security also has a positive effect on its liquidity. Merton's theory provides a rationale for the efforts of many companies, stock exchanges, and policy-makers to increase share ownership. An increase in the number of investors holding a security should increase the company's value.

Benston and Hagerman (1974) find a negative cross-sectional relationship between the number of stockholders and stocks bid-ask spreads. Amihud and Mendelson (1986) show that a security's value is decreasing in its illiquidity costs because investors require compensation for these costs. Therefore, increasing the number of investors who can hold a security should be value-increasing.

Jensen and Meckling (1976) addressed the influence of insider ownership on corporate performance. They argued that managers have incentives to pursue interests that are to the detriment of shareholders. By owning equity themselves, manager's interests converge with those of shareholders.

Empirically, corporate performance is expected to be positively related to the level of insider ownership.

However, increased managerial ownership can also insulate managers from the market for corporate control and serve to reduce corporate performance (Demsetz, 1983; Stout, 1988).

This approach has been characterized as the managerial attachment hypothesis, in direct contrast to Jensen and Meckling's convergence-of-interests hypothesis.

CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

This section discusses comprehensively the literature surrounding the relationship between stock prices and the number of shareholders of a firm.

2.2 EMPIRICAL STUDIES

Merton (1987) proposed that an increase in a firm's investor base leads to a lower required return and a higher stock price. He also argued that increasing the number of investors that hold a security also has a positive effect on its liquidity. Merton's theory provides a rationale for the efforts of many companies, stock exchanges, and policy-makers to increase share ownership: An increase in the number of investors holding a security should increase the company's value.

Benston and Hagerman (1974) find a negative cross-sectional relationship between the number of stockholders and stocks bid-ask spreads. Amihud and Mendelson (1986) show that a security's value is decreasing in its illiquidity costs because investors require compensation for these costs. Therefore, increasing the number of investors who can hold a security should be value-increasing.

Jensen and Meckling (1976) addressed the influence of insider ownership on corporate performance. They argued that managers have incentives to pursue interests that are to the detriment of shareholders. By owning equity themselves, manager's interests converge with those of shareholders.

Empirically, corporate performance is expected to be positively related to the level of insider ownership.

However, increased managerial ownership can also insulate managers from the market for corporate control and serve to reduce corporate performance (Demsetz, 1983; Stulz, 1988).

This approach has been characterized as the managerial entrenchment hypothesis, in direct contrast to Jensen and Meckling's convergence-of-interests hypothesis.

The impact of ownership concentration was also addressed by Shleifer, and Vishny (1986). They argued that when ownership is diffuse shareholders are not motivated to monitor management decisions closely because the ensuing benefit is too small to cover the monitoring costs. Under their efficient monitoring hypothesis, however, large equity stakes held by institutions (and other block holders) create a greater incentive to monitor management. Greater ownership concentration will therefore enhance firm performance. However, Pound (1988) argued that large shareholders also face potential conflicts of interest in acting to discipline management.

Morck, Shleifer, and Vishny (1988) examined the relationship between insider ownership and firm performance, measured using Tobin's Q, for 371 large US firms. They found evidence of a non-monotonic relationship.

McConnell and Servaes (1990) also find evidence of a non-linear relationship between insider ownership and performance, although their inflection points differ.

A series of further studies have followed the same line of approach; chief among these are Hermalin and Weisbach (1988), Lorderer and Martin (1997), Cho (1998), Himmelberg et al. (1999), and Holderness et al. (1999).

Reviewing these studies as a whole, Demsetz and Villalonga (2001) concluded that they "do not give strong evidence by which to reject the belief that firm performance and managerial equity ownership are unrelated."

Several cross-country studies have investigated the relationship between ownership changes and firm performance. Megginson et al. (1994) compares the pre and post-privatization performance of 61 firms in 18 countries, out of which 6 were from developing countries and 12 from developed countries.

The results indicated that, for most firms in their sample, there was a significant increase among newly privatized firms in profitability and operating efficiency. In a follow-up study, D' Souza and Megginson (1999) followed the same methodology for a sample of 85 firms that were privatized through public share offerings. The results confirmed, mainly, their earlier findings.

In their study of all firms listed on the Shanghai Stock Exchange (SHSE) from 1991 to 1996, Qi et al. (2000) found that firm performance was positively related to the proportion

of shares held by legal persons (institutional/corporate investors) but negatively related to the proportion of shares owned by the state.

In addition, they find little evidence in support of a positive correlation between corporate performance and the proportion of tradable shares by either domestic or foreign investors.

Several recent studies (e.g. Basak and Cuoco (1998), Contantinides, Donaldson and Mehra (1998), Saito (1995), Polkovnichenko (1998), and Vissing-Jorgensen (1997) noted that an increase in the stock market participation rate has, in theory, the potential to decrease the required risk premium on stocks because it spreads market risk over a broader population.

2.3 EXPANDING INVESTOR BASE

According to Yakov and Mendelson (1999), Companies can expand the investor base of their stock by reducing their minimum trading unit (MTU) or lot size, which is the minimum number of shares that can be traded on an exchange. Small investors may be unable to trade the minimum unit if this requires a large amount of money and in some exchanges Odd-lot trading is forbidden e.g. Japanese stock exchanges.

A reduction in the MTU enables them to invest in stocks that they would otherwise avoid, resulting in an increase in the investor base.

Stock splits provide another vehicle for increasing the investor base by reducing the minimum monetary value necessary for trading a given lot size (Yakov and Mendelson, 1999). This is indeed a prevalent managerial objective (Baker and Gallagher, 1980) that may have motivated stock splits in the United States.

The evidence is that the number of shareholders increases following a split (Mukherji, kim, and Walker (1997), and that the increase is positively associated with the stocks abnormal return on the ex-split day, following which stockholders were not entitled to additional shares (Lamoureux, and Poon (1987)).

Moreover, the ability to trade smaller units after the stock split enhances liquidity (Amihud and Mendelson (1986,1988)), Muscarella and Vetsuypens (1996).

Stock splits increase the proportional bid-ask spread (Copeland (1997)), and Brennan and Copeland (1988) suggested that this was used by companies to signal improved performance, which explained the favorable price response to stock splits.

Ashuman and Kalay (1997) proposed that because stock splits increased the economic significance of the minimum tick, they also affected the economic incentives of some classes of market participants to provide greater liquidity for the stock.

Ohlson and Penman (1985) found that a stock's return showed greater volatility after a split and conjectured that the lower stock price attracted noise traders who caused greater volatility.

Lamoureux and Poon (1987) proposed that the greater post-split volatility increased the value of the tax-trading option, which led to a higher stock price.

Brennan and Hughes (1991) suggested that because brokerage commissions increased with the number of shares traded, stock splits increased brokers' revenue for a given dollar amount traded and consequently induced information gathering by investment analysts in brokerage firms about companies that split their stock. This motivated managers with favorable information about their companies to split their shares and bring about a positive price reaction.

Firms can also increase their investor base by listing on an exchange. Kadlec and McConnell (1994) found that for firms that moved from NASDAQ stock markets for the New York Stock Exchange the increase in the stock price at the announcement date is negatively related to the shadow cost of incomplete information.

However, the price increase can be the result of other factors associated with listing on an exchange in addition to the increase in the number of shareholders.

In particular, changes in value could result from changes in the market microstructure (Amihud, Mendelson, and Lauterbach (1997)), or from insider information that affected the listing decision.

2.4 TRADE-OFFS

The substantial value increase following the reduction in trading unit and the associated increase in the investor base raise the question of why some companies do not reduce their MTU, especially given the very small out-of-pocket cost of doing so.

However, there are indirect costs associated with the increased dispersion of stock ownership that follows a reduction in MTU: the dispersion of stock ownership raises problems associated with corporate control.

Fama and Jensen (1985) and Amihud and Mendelson (1988) suggested that there was a trade-off between liquidity and control. For example, when a company goes public, it increases the liquidity of its stock and enables investors' easy exit from their investment, but there is also an increase in the agency costs resulting from the separation between ownership, and control and the conflict of interests between managers and shareholders. The effect is similar when a company increases the dispersion of its ownership, as highly concentrated ownership can reduce agency costs due to a mitigation of the collective action problem (Coffee, 1991, Bhidé, 1993). Unlike small individual investors, large stockholders have an incentive to monitor corporate management and institutional investors have the ability to perform that function effectively. In contrast, small individual stockholders have neither the incentive nor the ability to effectively monitor management (Jensen and Meckling (1976)). The result is that more concentrated ownership improves corporate governance. Thus each company faces a trade-off: greater ownership dispersion provides a liquidity benefit, but it also increases agency costs and raises problems of efficient management control.

Bolton and Von Thadden (1998) explicitly model this trade-off. The above analysis suggests that increasing the ownership dispersion through the reduction in the minimum trading unit is not beneficial to all companies. Although increases in the investor base and the greater liquidity have their benefits, they may also generate greater governance costs.

The companies that decide to reduce their MTU are those that consider the added governance costs to be relatively small compared with the benefits of greater stock dispersion and liquidity.

2.5 LIQUIDITY AND SOCK OWNERSHIP PATTERNS

Keynes (1930) and Hicks (1962) chose “Liquidity” as a subject in economics, but the terminology they used consisted of phrases such as the “future volatility of market price” or the “possibility of immediate execution of a transaction.”

When discussing whether or not a stock is liquid Bagehot (1971) focused on factors such as the existence of adverse selection effects due to information asymmetry, the price impact of a trade, and the portion of trading cost, which is set according to the pricing policy of the market maker.

When a stock liquidity is discussed in market microstructure theory, it is often the case that more practical concepts are introduced such as the “cost of changing positions (tightness)”, the “trade size or thickness of the order book-profile (order book refers to a panel which provides traders with bid-ask spread prices and volume offered per price) required for changing prices (market depth)” and the “required period of time to recover from price fluctuation caused by a sudden shock or to reach a new equilibrium (market resilience);, Grinblatt et al. (1995).

In defining a “Liquid Market” Black (1971) noted that this is a market in which a “bid-ask price is always quoted, its spread is small enough and trades can be immediately executed with minimal effect on price.” Miller (1988) pointed out that we could measure Liquidity of a stock by looking at “the ability of executing trades under the current price quotes price and time-wise.”

Bhide (1993) and Maug (1998) dealt explicitly with the relationship between liquidity and ownership structure. Bhide (1993) argued that a liquid stock market is a hindrance to effective monitoring because it reduces the cost of ‘exit’ by unhappy shareholders.

Maug (1998) derived a theoretical model for investigating this negative effect against an opposite effect from reducing the problem of free riding by small shareholders (better liquidity makes it less costly to hold large stakes). The model suggested that amore liquid market makes corporate governance more effective.

As long as company insiders have the same incentives as the outside owners to maximize the value of the firm, theory predicts that insider holdings and liquidity are positively related ('the consequence of interest' hypothesis). On the other hand, an insider may also have incentive to expropriate wealth from the outside owners, Chiang (1988). Typically, it is assumed that an increase in insider holdings has a negative effect on liquidity.

Glosten and Harris (1988) also found an insignificant relationship between spreads and insider holdings for a sample of 250 NYSE stocks in the period 1981-1983.

2.6 THE PRINCIPAL AGENT PARADIGM

The standard theoretical predictions about the relative efficiency of different ownership structures are based on the Principal-Agent, Fama (1992). According to the Principal-Agent model, a monitoring problem arises because the owners of a firm (the principal) delegate control over business decisions to the management of the firm (the Agent). Thus the main role of management is monitoring.

The incentives and capabilities to monitor a firm's business decisions are thought to depend on the owners' concentration and the owner type. A third relevant characteristic of the ownership structure is the division between outside owners and the insiders, Chiang (1988).

Large owners are assumed to have more resources and stronger incentives to monitor the managers than small owners, while small owners have incentives to free ride on the monitoring of large owners. Direct owners, represented by personal investors who monitor the agent directly, are predicted to perform more efficient monitoring than indirect owners, Maug (1998).

On the other hand, large indirect investors may potentially be more professional and have better access to information than small direct investors, Maug (1988). For example, the holdings of institutional investors tend to be larger than the holdings of the typical shareholders. If so, the information acquisition costs are spread over a larger investment, and this creates an incentive for the institutions to acquire information.

2.7 MARKET ANOMALIES (Monday Effect)

The Efficient Market Hypothesis (EMH) became controversial especially after the detection of certain anomalies in the capital markets. Some of the main anomalies that have been identified are as follows:

2.7.1 The January Effect

Rozeff and Kinney (1976) were the first to document evidence of higher mean returns in January as compared to other months. Using NYSE stocks for the period 1904-1974, they find that the average return for the month of January was 3.48 percent as compared to only .42 percent for the other months. Later studies document the effect persists in more recent years: Bhardwaj and Brooks (1992) for 1977-1986 and Eleswarapu and Reinganum (1993) for 1961-1990. The effect has been found to be present in other countries as well (Gultekin and Gultekin, 1983). The January effect has also been documented for bonds by Chang and Pinegar (1986).

Maxwell (1998) shows that the bond market effect is strong for non-investment grade bonds, but not for investment grade bonds. More recently, Bhabra, Dhillon and Ramirez (1999) document a November effect, which is observed only after the Tax Reform Act of 1986. They also find that the January effect is stronger since 1986. Taken together, their results support a tax-loss selling explanation of the effect.

Ariel (1987) shows that returns tend to be higher on the last day of the month. Cadsby and Kamau (2003) Carried out a study on the turn of the month and January effect at NSE for the period 1995-2003 .The geometric average rate of return method was then applied to arrive at the required means of the 2 weeks periods and monthly basis. Means returns for the February to December compared with the mean returns for the January of the following year, indicated absence of the January effects at NSE. The results indicated that the turn of the month effect and January effect were prevalent phenomenon in the period covered. It implied that the volatility of the stock market returns do not significantly differ across periods. Therefore there is no abnormal behavior of stock returns in January and therefore support the hypothesis that the January effect is to a large extent attributable to tax loss selling.

2.7.2 The Weekend Effect (or Monday Effect)

French (1980) analyzes daily returns of stocks for the period 1953-1977 and finds that there is a tendency for returns to be negative on Mondays whereas they are positive on the other days of the week.

He notes that these negative returns are "caused only by the weekend effect and not by a general closed-market effect". A trading strategy, which would be profitable in this case, would be to buy stocks on Monday and sell them on Friday. Kamara (1997) shows that the S&P 500 has no significant Monday effect after April 1982, yet he finds the Monday effect undiminished from 1962-1993 for a portfolio of smaller U.S. stocks.

Internationally, Agrawal and Tandon (1994) find significantly negative returns on Monday in nine countries and on Tuesday in eight countries, yet large and positive returns on Friday in 17 of the 18 countries studied. However their data do not extend beyond 1987. Steeley (2001) finds that the weekend effect in the UK has disappeared in the 1990s.

2.7.3 Other Seasonal Effects

Holiday and turn of the month effects have been well documented over time and across countries. Lakonishok and Smidt (1988) show that US stock returns are significantly higher at the turn of the month, defined as the last and first three trading days of the month. Ariel (1987) shows that returns tend to be higher on the last day of the month. Cadsby and Ratner (1992) find similar turn of month effects in some countries and not in others. Ziemba (1991) finds evidence of a turn of month effect for Japan when turn of month is defined as the last five and first two trading days of the month. Hensel and Ziemba (1996) and Kunkel and Compton (1998) show how abnormal returns can be earned by exploiting this anomaly. Lakonishok and Smidt (1988), Ariel (1990), and Cadsby and Ratner (1992) all provide evidence to show that returns are, on average, higher the day before a holiday, than on other trading days. The latter paper shows this for countries other than the U.S. Brockman and Michayluk (1998) describe the pre-holiday effect as one of the oldest and most consistent of all seasonal regularities.

2.7.4 Small Firm Effect

Banz (1981) published one of the earliest articles on the 'small-firm effect' which is also known as the 'size-effect'. His analysis of the 1936-1975 periods reveals that excess returns would have been earned by holding stocks of low capitalization companies. Supporting evidence is provided by Reinganum (1981) who reports that the risk adjusted annual return of small firms were greater than 20 percent.

If the market were efficient, one would expect the prices of stocks of these companies to go up to a level where the risk adjusted returns to future investors would be normal. But this did not happen.

2.7.5 P/E Ratio Effect

Sanjoy Basu (1977) shows that stocks of companies with low P/E ratios earned a premium for investors during the period 1957-1971. An investor who held the low P/E ratio portfolio earned higher returns than an investor who held the entire sample of stocks. These results also contradict the EMH. Campbell and Shiller (1988b) show P/E ratios have reliable forecast power. Fama and French (1995) find that market and size factors in earnings help explain market and size factors in returns. Dechow, Hutton, Meulbroek and Sloan (2001) document that short-sellers position themselves in stocks of firms with low earnings to price ratios since they are known to have lower future returns.

2.7.6 Value-Line Enigma

The Value-Line organization divides the firm into five groups and ranks them according to their estimated performance based on publicly available information. Over a five-year period starting from 1965, returns to investors correspond to the rankings given to firms. That is, higher-ranking firms earned higher returns. Several researchers (e.g. Stickel, 1985) find positive risk-adjusted abnormal (above average) returns using value line rankings to form trading strategies, thus challenging the EMH.

2.7.7 over/Under Reaction of Stock Prices to Earnings Announcements

There is substantial documented evidence on both over and under-reaction to earnings announcements.

DeBondt and Thaler (1985, 1987) present evidence that is consistent with stock prices overreacting to current changes in earnings. They report positive (negative) estimated abnormal stock returns for portfolios that previously generated inferior (superior) stock price and earning performance.

This could be construed as the prior period stock price behavior overreacting to earnings developments (Bernard, 1993). Such interpretation has been challenged by Zarowin (1989) but is supported by DeBondt and Thaler (1990). Bernard (1993) provides evidence that is consistent with the initial reaction being too small, and being completed over a period of at least six months.

Bernard (1993) further notes that such anomalies are not due to research design flaws, inappropriate adjustment for risk, or transaction costs. Thus, the evidence suggests that information is not impounded in prices instantaneously as the EMH would predict.

2.7.8 Standard & Poor's (S&P) Index effect

Harris and Gurel (1986) and Shleifer (1986) find a surprising increase in share prices (up to 3 percent) on the announcement of a stock's inclusion into the S&P 500 index. Since in an efficient market only information should change prices, the positive stock price reaction appears to be contrary to the EMH because there is no new information about the firm other than its inclusion in the index.

2.7.9 Pricing of Closed-end Funds

The Investment Company Act of 1940 regards all investment funds that do not continuously issue and redeem their shares as closed-end funds. Unlike open-end funds, closed-end funds do not stand ready to sell or repurchase their securities at the net asset value per share.

They float a fixed number of shares in an initial public offering and after that, investors wishing to buy or sell shares of a closed-end funds must do so in the secondary market. The prices in the secondary market are dictated by the market forces of demand and supply which may not be directly linked to the fund's fundamental or net asset value. Malkiel (1977) argues that the market valuation of closed-end investment company shares reflects mispricing. As he notes, "The pricing of closed-end funds does then seem to provide an illustration of market imperfection in capital-asset pricing." [Malkiel, 1977].

In general, the funds have been shown to trade at a discount relative to their net asset values (See Malkiel, 1977; Brickley and Schallheim, 1985; Lee, Shleifer and Thaler, 1991). Between 1970 and 1990, the average discount on closed-end funds ranged between 5 to 20 percent. The existence of discounts clearly contradicts the value additivity principle of efficient and frictionless capital markets. Reports from the popular press have also commented on mispricing in the closed-end fund market.

As Laderman notes in *Business Week* (March 1, 1993), "America's financial markets are the most efficient in the world. But there's one corner where pockets of inefficiency still exist: closed-end funds".

2.7.10 The Distressed Securities Market

While the academic literature largely suggests that stocks in the distressed securities market are efficiently priced (e.g. Ma and Weed [1986], Weinstein [1987], Fridson and Cherry [1990], Blume, Keim and Patel [1991], Cornell and Green [1991], Eberhart and Sweeney [1992], Altman and Eberhart [1994], Buell [1992]) the popular press has frequently conjectured that the stock pricing may be inefficient during the bankruptcy period. For example, the shares of Continental Airlines continued to trade on the AMEX at or about \$1.50 per share even after the company had negotiated a plan with its creditors that would provide no distribution to the pre-petition equity holders (*WSJ*, 1992). Investors have always sought superior returns in the securities market and vulture investors have attracted a substantial amount of risk-oriented money by offering the possibility of high

returns by exploiting the *apparent* pricing inefficiencies or anomalies in the market for distressed securities.

2.7.11 The Weather

Few would argue that sunshine puts people in a good mood. People in good moods make more optimistic choices and judgments. Saunders (1993) shows that the New York Stock Exchange index tends to be negative when it is cloudy.

More recently, Hirshleifer and Shumway (2001) analyze data for 26 countries from 1982-1997 and find that stock market returns are positively correlated with sunshine in almost all of the countries studied. Interestingly, they find that snow and rain have no predictive power!

These phenomena have been rightly referred to as anomalies because they cannot be explained within the existing paradigm of EMH. It clearly suggests that information alone is not moving the prices. (Roll, 1984). These anomalies have led researchers to question the EMH and to investigate alternate modes of theorizing market behavior. Such a development is consistent with Kuhn's (1970) route for progress in knowledge.

2.8 TECHNICAL ANALYSIS

Technical Analysis is essentially the search for recurrent and predictable patterns in stock prices, (Bodie, Kane, and Marcus (2002)). Technical analysts are sometimes called Chartists because they study records or charts of past stock prices, hoping to find patterns they can exploit to make a profit. The chartists may draw lines connecting the high and low prices for the day to examine any trends in prices. Although technicians recognize the value of information regarding future economic prospects of the firm, they believe that such information is not necessary for a successful trading strategy. This is because whatever the fundamental reason for a change in stock price, if the stock price responds slowly enough; the analyst will be able to identify a trend that can be exploited during the adjustment period. The key to successful technical analysis is a sluggish response to stock

prices to fundamental supply-and-demand factors. This prerequisite, of course, is diametrically opposed to the notion of an efficient market. (Bodie et al., 2002).

2.8.1 The Dow Theory

This theory, named after its creator Charles Dow (who established The Wall Street Journal), is the grandfather of most technical analysis, (Bodie et al., 2002).

The aim of the Dow Theory is to identify long-term trends in stock market prices.

The two indicators used are the Dow Jones Industrial Average (DJIA) and the Dow Jones Transportation Average (DJTA). The DJIA is the key indicator of underlying trends, while the DJTA usually serves as a check to confirm or reject that signal. The Dow Theory posits three forces simultaneously affecting stock prices: *First*, the primary trend is the long-term movement of prices, lasting several months to several years. *Second*, secondary or intermediate trend are caused by short-term deviations of prices from the underlying trend line. These deviations are eliminated via corrections, when prices revert back to trend values. *Third*, tertiary or minor trends are daily fluctuations of little importance. (Bodie et al., 2002).

The Dow Theory is based on a notion of predictably recurring price patterns. Yet the EMH holds that if any pattern is exploitable, many investors would attempt to profit from such predictability, which would ultimately move stock prices and cause the trading strategy to self destruct.

2.9 STUDIES ON NSE

Most of the empirical studies on the relationship between investor base and stock prices have been conducted on developed stock markets. There is, specifically, no documented literature on the investor base-stock price relationship.

The following is a chronology of some studies conducted on Companies listed on the NSE, which contain relevant material for purposes of this study.

Omosa (1989) researched on the predictive ability of asset pricing models on the NSE and found that the models were not generally good predictors of prices. She argued that this was due to the inefficiency of the models or imperfections in the market.

Mwangi (1997) analyzed price movements for some selected stocks at the NSE. The objective of his study was to determine factors that affect share price movements in addition to developing a model that could be used to predict price movements. He came to the conclusion that it was not always possible to develop models that accurately predict prices at the NSE.

This was because, according to him, the parameters used in forecasting vary over time due to changes in the underlying earnings generating process. Based on his findings he did not, entirely, advocate for the use of conditional asset pricing models that reflect time varying risk premiums and risk betas.

Iminza (1997) researched on share prices in the NSE focusing on their relationship with dividend payments. She used correlation analysis to establish whether a relationship existed between changes in share prices and changes in dividend payout.

Sifunjo (1999) researched on the causal relationship between exchange rates and stock prices in Kenya. For purposes of his study he used Granger's (1969) model as well as Unit Root and Co-integration tests. In the classical Granger causality test, a variable X_t causes Y_t in Granger's sense, if the lagged values of X_t help improve the forecast of Y_t . Empirical evidence from his study showed that exchange rates Granger-cause stock prices in Kenya. In particular, he established that there is unidirectional causality from exchange rates to stock prices.

Ayako (2005) conducted an investigation on the relationship between trading volume and stock returns of companies listed on the NSE. Using Simple Regression analysis he concluded that an investor couldn't successfully use a model to predict stock returns. The implications of his study were that stock prices at the NSE followed a 'random walk.' Further, he used a correlation model to establish the co-movement between the two variables in his study. The findings revealed that there was no relationship between the two. A similar model will be used in this study to establish the co-movement between investor base and stock prices.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This section presents a brief description of the methodology that was used to carry out the research.

3.2 POPULATION

For purposes of this study the population was all the 48 companies quoted at the Nairobi Stock Exchange (NSE) (Appendix 1) over the period 1997-2003. The NSE was the ideal front for carrying out the study based on availability, accessibility, and reliability of the data that was used. There was no sampling, as the study covered all companies listed at the NSE over the period under study. Any firm that did not remain listed over this period, either due to deregistration or new listing was excluded from the study.

3.3 DATA COLLECTION

The study relied entirely on secondary data, which was obtained from the financial statements, and other records of companies quoted at the NSE. Data collection forms (Appendix 2) were used to aid in the retrieval of data for individual companies.

The data that was collected mainly comprise of yearly stock prices and number of shareholders for all the companies included in the study for the seven-year period 1997-2003.

3.4 DATA ANALYSIS

The data was analyzed using Regression Analysis. Regression analysis measures the pattern of relationship and the closeness of the relationship in absolute terms. Frequently, Correlation Analysis is used along with Regression Analysis to measure how well the regression line explains the variations of the dependent variable.

More specifically, Correlation analysis was used to correlate the changes in shareholder base with those of stock prices. Correlation measures the degree of association between two variables, which are not necessarily independent. This technique was used since it does not imply causation but rather shows how two variables move together. A competing

technique is the Granger-Causality test, which was used by Sifunjo (1999). This test (Granger-Causality) is used to investigate the causal relationship between two variables.

The Correlation model to be used is in the form:

$$\text{Corr} [P_t, \text{NSH}_t] = \text{Cov} [P_t, \text{NSH}_t] / (\text{SD} [P_t] \cdot \text{SD} [\text{NSH}_t]) \quad (3.1)$$

Where;

P_t (NSH_t) - Stands for stock prices (number of shareholders) in year t .

Cov- Denotes Covariance, and

SD- Abbreviates Standard Deviation

A positive Correlation (Corr) will imply that number of shareholders and stock prices move in the same direction, i.e. when the number of shareholders increases the stock price also increases, and vice versa. A negative Correlation (Corr) will imply that number of shareholders and stock prices move in opposite directions, i.e. as the number of shareholders increases, the stock price decreases, and vice versa.

Using the same approach as Ayako (2005), in his study, a simple regression model was, also, used to establish whether there existed a relationship between the number of shareholders of a firm and its stock price.

The regression model used was in the form of:

$$P_t = A + B\text{NSH}_t \quad (3.2)$$

Where;

A- Is the intercept of the regression model, which represents the stock price of a company when there is no change in the number of shareholders.

B- Is the slope, which represents the degree in which the stock price of a company changes as the number of shareholders, changes.

P_t - Stands for stock price in year t .

NSH_t - Stands for number of shareholders in year t .

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 INTRODUCTION

This chapter presents the results from analyzing the relationship between stock prices and the number of shareholders of firms quoted at the NSE. The research specifically sought to achieve the following objective of investigating and documenting the relationship between stock prices and the number of shareholders of firms quoted at the NSE. This was made possible by the use of the linear regression model shown in the research methodology.

4.2 COVERAGE

Out of the average 40 companies that have been actively involved in trading for the period 1997-2003, it was not possible to get the relevant data on each of them. The study focused on 28 companies each year. This represents about 70% of the most actively traded stocks at the NSE for the period 1997-2003.

Most of the companies not included in the research were left out due to non-availability of data for the entire study period. This is due to the fact that some of these companies went public sometime between the study periods while others ceased being quoted during the same time period. This research considers 70% coverage reasonable enough to enable meaningful research conclusions about the stock market to be drawn.

The objective of this study was to investigate and document the relationship between stock prices and the number of shareholders of firms quoted at the NSE. The researcher was interested in the correlation between the two variables-stock prices and the number of shareholders so as to achieve the objective of the study. Data collected is shown in Table in the appendix. It represents the variables Stock prices and the Total number of shareholders which was made up of the following; institutional owners, Public owners and foreign owners.

4.3 DATA ANALYSIS AND FINDINGS

The R^2 measures the degree of variability of the dependent variable due to the change in independent variable. R^2 of more than 50% implies that the relationship between the two variables is very strong and there fore any small changes on the dependent variable will have an effect on the independent variables.

Table 4.1 Regression results for the companies

COMPANY	PEARSON COEFFICIENT	R^2	R^2 %	Rank
NIC Bank	-0.031	0.001	0.1	24
KAKUZI	- 0.497	0.247	24.7	9
FIRESTONE	0.318	0.010	1	21
E. A.CABLES	-0.004	0.000	0	25
DUNLOP	0.454	0.206	20.6	10
EXPRESS KENYA	0.274	0.075	7.5	15
BARCLAYS BANK	-0.974	0.948	95	1
STANDARD CHARTERED	-0.670	0.449	44.9	5
BAT (K) LTD	0.639	0.408	40.8	6
KENYA AIRWAYS	0.354	0.125	12.5	13
E.A BREWERIES	-0.526	0.277	27.7	7
REA VIPINGO	0.364	0.032	3.2	19
DIAMOND TRUST	0.055	0.003	0.3	22
KCB	0.865	0.749	74.9	2
CMC HOLDINGS	0.214	0.046	4.6	16
GEORGE WILLIAMSONSONS	-0.207	0.043	4.3	17
CROWN BERGER	0.013	0.00	0	25
BOC GASES	0.154	0.023	2.3	20
KAPCHORUA TEA	0.519	0.269	26.9	8
EAST AFRICAN CABLES	0.046	0.002	0.2	23
UNGA GROUP	-0.019	0.000	0	25
BROOKBOND	0.783	0.613	61.3	4
ICDC	0.416	0.173	17.3	12
BAMBURI	0.434	0.188	18.8	11
STANDARD NEWS PAPER	-0.808	0.654	65.4	3
LIMURU TEA	-0.341	0.116	11.6	14
CARBACID INVESTMENTS	0.190	0.036	3.6	18
KENYA OIL (KENOL)	0.021	0.00	0	25

Table 4.2: Shows the significance levels and F ratio values.

From the above regression results analysis done, we see that only 5 companies have R^2 or coefficient of determination values of $> 50\%$ which in turn implies that the relationship between the two variables is strong and there fore any small changes on the dependent variable will have an effect on the independent variables. The companies with R^2 values greater than 50% are Barclays bank with 95% , KCB with 74.9% , Standard group with 65.4% , Brook bond with 61.3% and lastly Standard chartered bank with 44.9% respectively. R^2 or coefficient of determination shows that in all this cases, the model explains 50% of the variations or that 50% of the variations in the Number of shareholders may be predicted the changes in stock prices of the companies.

This is an indication that 25 companies out of the total 28 companies analyzed have coefficient of determination values (R^2) below 50% indicating that there is a very weak relationship if none at all between the two variables namely number of share holders and the stock prices for the different companies.

The Pearsons coefficient shows the degree of association between two variables, which are not necessarily independent. The negative signs in the Pearson coefficient from table 4.1 above indicate that there is a negative linear association between the two variables, implying that they move in the opposite direction and as one is increasing the other is reducing .In our case as the Stock price increases the number of shareholders does not necessarily increase. The rank is based on the R^2 values of the different companies under study. From the above table a look at the Pearsons coefficient values shows that they are somewhere near zero or are less than 0.5 indicating that there is no linear relationship between the variables stock prices and number of shareholders but there may be a relationship but it is not linear.

Summary of F values and significance levels of the models

The F values and their significance levels of the different companies analysed is shown below. The F ratio helps in comparing the means of several populations in a study.

Table 4.2: Shows the significance levels and F ratio values.

COMPANY	F sign	Sig.
NIC Bank	0.005	0.948
KAKUZI	1.641	0.256
FIRESTONE	0.562	0.487
E. A.CABLES	0.00	0.993
DUNLOP	1.296	0.306
EXPRESS KENYA	0.407	0.552
BARCLAYS BANK	91.906	0.00
STANDARD CHARTERED	4.069	0.100
BAT (K) LTD	3.453	0.122
KENYA AIRWAYS	0.175	0.436
E.A BREWERIES	1.912	0.225
REA VIPINGO	0.763	.422
DIAMOND TRUST	0.015	0.907
KCB	14.927	0.012
CMC HOLDINGS	0.239	0.646
GEORGE WILLIAMSON	0.225	0.656
CROWN BERGER	0.001	0.977
BOC GASES	1.839	0.233
KAPCHORUA TEA	1.839	0.233
EAST AFRICAN CABLES	0.011	0.921
UNGA GROUP	0.002	0.968
BROOKBOND	7.904	0.037
ICDC	9.044	0.354
BAMBURI	1.161	0.331
STANDARD NEWS PAPER	9.436	0.028
LIMURU TEA	0.658	0.454
CARBACID INVESTMENTS	0.188	0.683
KENYA OIL (KENOL)	0.002	0.964

Source: *research data*

From table 4.2 above, most of the regressions variables seem not to be statistically significant since the significance level (P values) are relatively larger than 0.05 and are statistically different from zero. This in turn implies that the correlations are not significant and the two variables are not linearly related. This is shown in the last column of the table above. Companies with a high F statistic value have models that are significant as it is indicated by the significance column where by the lower the significance value as it tends towards zero the better the model. For instance Barclays bank of Kenya had a high F statistic value of 91.906 and a significance level of 0.00 as compared to E.A Cables with had F Value of 0.00 and a significance value of 0.99 which implies that the model is not significant and that there is no association between the variables in the model.

Summary of the descriptive statistics

The study used descriptive statistics for analysis that is the mean and standard deviation values of the Share prices and the Number of shareholders. The standard deviation shows the range of spread between the actual values and the mean value of the stock prices and the Number of shareholders. The higher the standard deviation the larger the spread between the two values actual and computed values.

Table 4.3 descriptive statistics

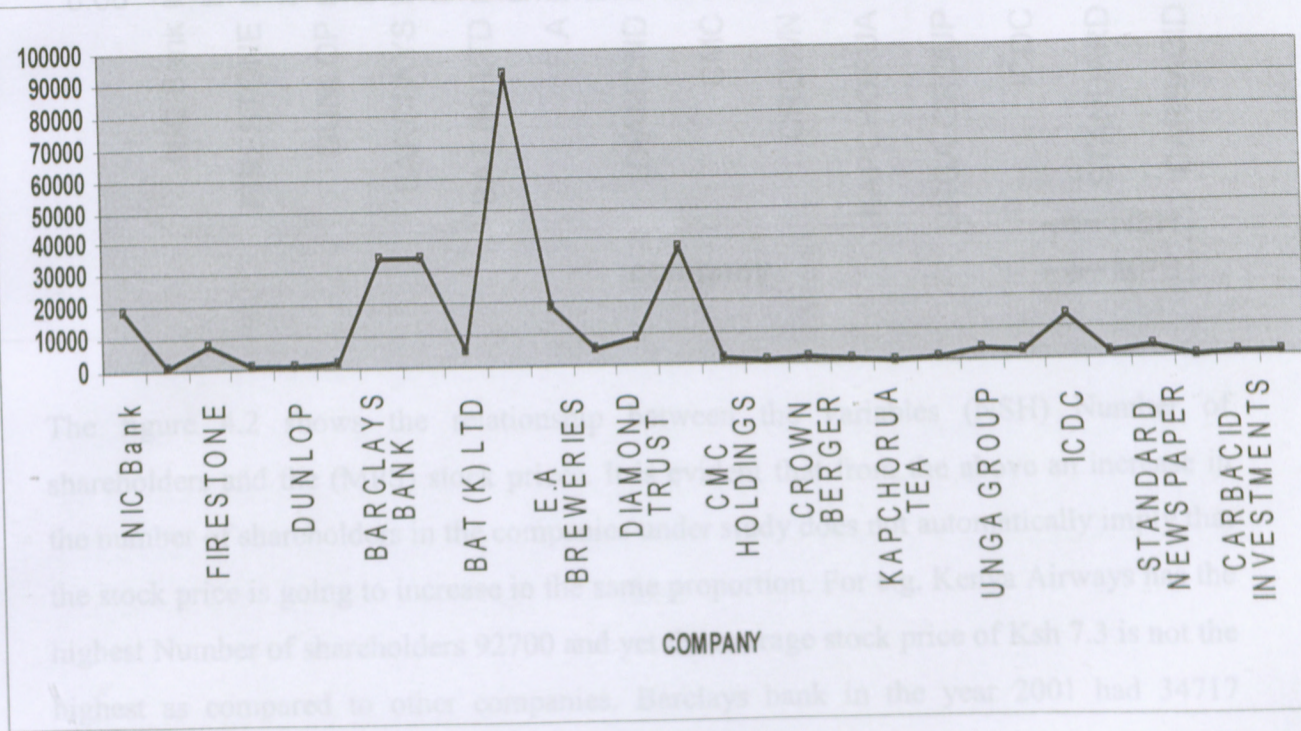
	Share Prices		No of Share holders	
NAME OF COMPANY	Std dev	Mean	Std dev	Mean
NIC Bank	11.90	27.67	195.74	18501.43
KAKUZI	46.93	63.47	29.79	981.29
FIRESTONE	5.48	13.49	244.39	7182.00
EA.CABLES	7.38	14.76	3.25	752.71
DUNLOP	6.64	10.63	5.11	686.14
EXPRESS KENYA	15.86	25.58	34.99	1374.43
BARCLAYS BANK	71.67	121.14	355.75	34395.00
STANDARD CHARTERED	52.49	72.68	183.16	34048.71
BAT (K) LTD	82.01	91.93	89.00	4778.00
KENYA AIRWAYS	0.74	7.31	1490.65	92708.14
E.A BREWERIES	61.23	90.43	11053.31	18253.14
REA VIPINGO	1.83	4.70	109.36	5085.57
DIAMOND TRUST	8.45	19.86	301.81	8097.14
KCB	25.22	41.62	60292.19	37231.14
CMC HOLDINGS	26.91	36.39	64.69	2091.71
GEORGE WILLIAMSONSONS	32.80	95.57	57.44	1167.86
CROWN BERGER	1.60	7.71	369.14	2066.43
BOC GASES	26.26	58.46	70.41	674.86
KAPCHORUA TEA	31.42	120.00	1.90	62.57
EAST AFRICAN CABLES	4.83	13.47	6.63	752.29
UNGA GROUP	41.44	35.44	157.09	3639.86
BROOKBOND	29.45	91.00	2029.87	2626.71
ICDC	11.86	42.21	80.51	13117.86
BAMBURI	36.48	45.60	289.33	1798.71
STANDARD NEWS PAPER	17.28	19.87	2227.34	3555.29
LIMURU TEA	165.16	598.83	3.18	66.86
CARBACID INVESTMENTS	24.38	61.25	41.52	722.57
KENYA OIL (KENOL)	77.85	96.93	17.96	633.57

Source: research data

From the above table we see the mean and standard deviation values for the stock prices and the number of shareholder that are reported by the various companies. The mean

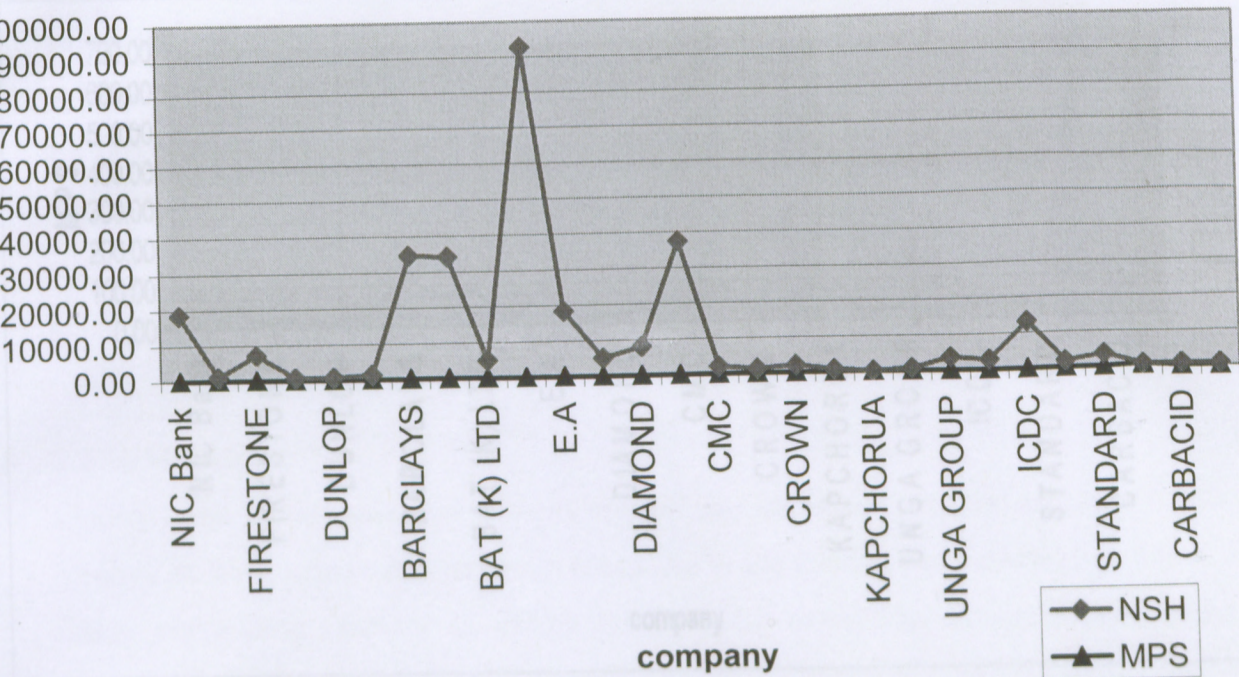
values column represents the average stock prices for each company in the study for the 7 years duration. The standard deviation column shows the variability of the stock prices over the duration of 7 years each company under the study. For instance Limuru Tea Company has a mean stock price of 598.83 for the study period with a standard deviation of 165.16. The average number of shareholders is 66.86 with a variability of 3.18.

Figure 4.1 shows the average number of shareholders for various firms



From the figure above, the average number of shareholders for the firms in the study is shown. It is calculated as the total number of shareholders for the 7 years divided by seven. As seen from the above graph Kenya Airways Company which is between BAT and EABL has the highest average number of share holders within the period of study of about 92700 shareholders. Kapchorua and Limuru Tea on the other hand had the least average number of shareholders 62 and 66 respectively as shown by the figure above.

Figure 4.2 Relationships between MPS and NSH

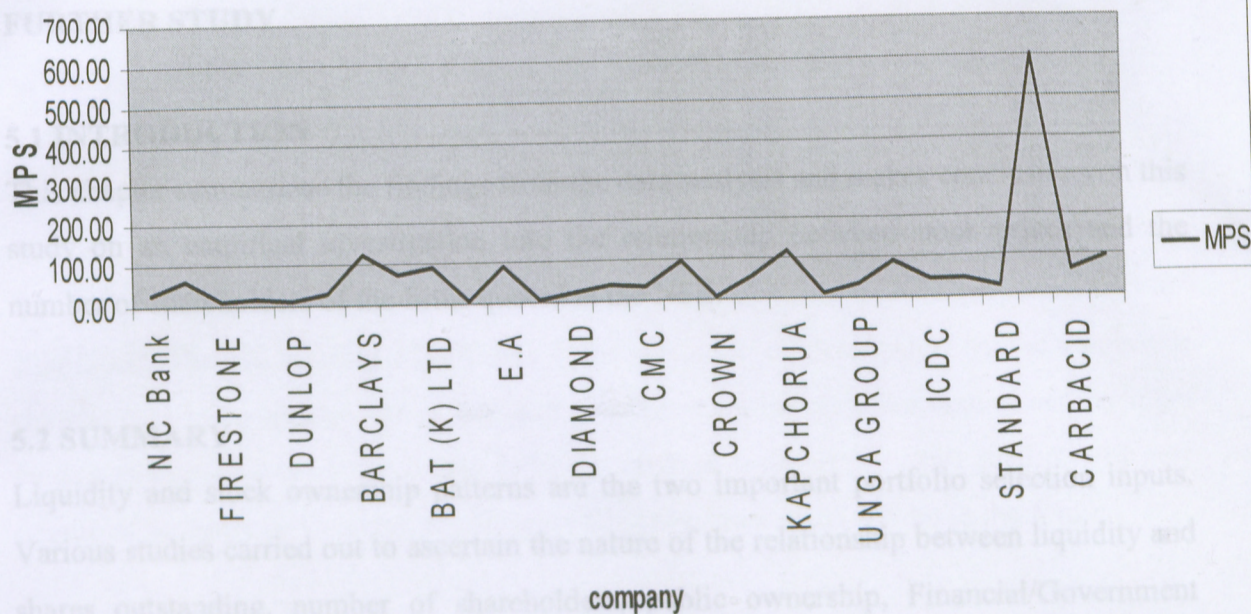


The figure 4.2 shows the relationship between the variables (NSH) Number of shareholders and the (MPS) stock prices. It is evident that from the above an increase in the number of shareholders in the companies under study does not automatically imply that the stock price is going to increase in the same proportion. For e.g. Kenya Airways has the highest Number of shareholders 92700 and yet the average stock price of Ksh 7.3 is not the highest as compared to other companies. Barclays bank in the year 2001 had 34717 shareholders and 34578 in 2002. The banks stock price on the years was 72.5 and 101 in 2001 and 2002 respectively. This shows that the number of shareholders has increased and the stock price has reduced thus supporting the claim that there is an inverse relationship between the two variables.

Source research data

The above table shows the summary descriptive statistics of all the companies under study for all the 7 years.

Figure 3 shows the average stock prices for different firms



The figure above shows the average stock prices for the different firms in the study over the seven years. For instance Barclays bank had an average stock price of Ksh 121 for all the 7 years duration and Limuru Tea has an average stock price of Ksh 589 for the 7 years under study. The stock prices vary for year to year depending on the performance of the companies and the market conditions

Summary for all the companies

Table 4.4 Descriptive Statistics

	Mean	Std. Deviation	N
Stock prices	68.8579	109.8903	28
Number of share holders	10609.00	19471.85	28

Source research data

The above table shows the summary descriptive statistics of all the companies under study for all the 7 years.

CHAPTER FIVE: SUMMARY CONCLUSIONS AND SUGESSTIONS FOR FURTHER STUDY

5.1 INTRODUCTION

This chapter summarizes the findings from the data analysis and makes conclusions on this study on an empirical investigation into the relationship between stock prices and the number of shareholders of the firms quoted at the NSE.

5.2 SUMMARY

Liquidity and stock ownership patterns are the two important portfolio selection inputs. Various studies carried out to ascertain the nature of the relationship between liquidity and shares outstanding, number of shareholders, public ownership, Financial/Government ownership and foreign ownership respectively have established positive links. Also, a negative relationship between liquidity and insider ownership is what most finance scholars concur with. The purpose of the study was to establish the nature of the relationship between a firm's investor base and its stock price for firms listed on the NSE. The objective of the study was mainly to investigate and document the relationship between stock prices and the number of shareholders of firms quoted at the NSE. The study found out that there is no linear relationship between the variables stock prices and the number of shareholders for the companies studied and that an increase in stock prices does not necessarily mean an increase in the number of shareholders for the firms. Companies with the highest number of shareholders tend to report some of the lowest stock prices over the years under study holding other factors constant.

5.3 CONCLUSION

The objective of this study was to investigate and document the relationship between stock prices and the number of shareholders of firms quoted at the NSE. The researcher was interested in the correlation between the two variables-stock prices and the number of shareholders so as to achieve the objective of the study. The objective was achieved by collecting secondary data from the firms concerned which are the firms listed on the NSE.

Bhide (1993) and Maug (1998) dealt explicitly with the relationship between liquidity and ownership structure. Bhide (1993) argued that a liquid stock market is a hindrance to effective monitoring because it reduces the cost of 'exit' by unhappy shareholders.

In order to find out if there is any relationship between the stock price and the number of shareholders, the regression analysis was used. In this analysis it was found out that there was a relationship but it was not linear in nature between the two variables and it was not significant. The stock prices of different firms are not at all determined by the number of shareholders the company has at any particular moment but they are determined by other factors randomly and so the Prices follow a random walk so we can't predict with any degree of certainty or by using any formula what the stock price will be in the future.

An increase in the relative size of the firm's investor base will reduce the firm's cost of capital and increase the market value of the firm. Thus, managers of the firm have an incentive to increase or expand the firm's investor base (Merton 1987).

Amihud and Mendelson (1986) show that a security's value is decreasing in its illiquidity Costs because investors require compensation for these costs. Therefore, increasing the number of investors who can hold a security should be value increasing. Merton's theory provides a rationale for the efforts of many companies, stock exchanges, and policy makers to increase share ownership; an increase in the number of investors holding a security should increase the company's value. The findings in this study show a negative relationship which is not linear between the two variables stock prices and number of shareholders hence it is contrary to what Merton found out that an increase in the number of investors holding a security should increase the company's value. The study was however limited by a number of factors which are discussed in the next section.

5.4 LIMITATIONS OF THE STUDY

This study is limited with respect to the following:

The time frame chosen for the study may not be sufficiently long to enable the research to generalize conclusions. With a longer time frame, it would have been possible to improve

on the statistical significance of the results. For this study however, time and data availability constraints inhibited the choice of a longer time frame.

It utilizes the ordinary least square method in regression computation to estimate the relationship between market price and stock ownership patterns i.e. number of shareholders. This method has been found to have weaknesses. More elaborate models have been advanced. However, these approaches are not easily testable.

This study was unable to collect all data from the selected list of quoted companies at NSE due to imperfections of non-disclosure and non-submission of ownership data to the Capital Markets Authority as well as NSE.

5.5 SUGGESTIONS FOR FURTHER RESEARCH

This study serves as a 'ground breaker' for other researchers to carry on related studies in the future. In particular, the following three areas would be very useful as research areas if the conclusions made in this study are to be validated and generalized in the Kenyan context.

Secondly, it would be helpful if (given time and other resources) a similar study was carried out but covering a longer time frame (about 15 years or more). The results of such a study would be helpful in validating the findings of this study.

Thirdly, a similar study on companies that are not listed should be carried out and compare the results with from the study with this studies findings.

Last but not least, measurement of the benefit of improved monitoring verses the cost of reduced liquidity is another fruitful area for further research.

REFERENCES

- Agrawal, A. and K. Tandon (1994): "Anomalies or illusions? Evidence from stock markets in eighteen countries," *Journal of International Money and Finance* 13, 83-106.
- Altman, E. and A. Eberhart, Summer (1994): "Do seniority provisions protect bondholders' investments?" *Journal of Portfolio Management* 20, 67-75.
- Amihud, Yakov and Haim Mendelson (1986): "Asset pricing and the Bid -ask spread" *Journal of Financial Economics* 17, 223-249.
- Amihud, Yakov and Haim Mendelson, (1986): "Liquidity and Asset prices: Financial Management Implications", *Financial Management* 17, 5-15.
- Ashuman v, Ravi and Auner, Kalay, (1979), "Can splits create Market Liquidity/ Theory and Evidence," working paper University of Utah.
- Ayako D.M (2005): "An Empirical investigation into the Relationship between trading volume and Stock returns of companies quoted at the NSE," *Unpublished MBA Research project*, University of Nairobi.
- Bagehot, W., (1971): "The only game in town," *Financial Analyst Journal*, 22, 12-14.
- Baker H., and P Gallagher (1980): "Management view of stock splits," *Financial Management*, 9, 72-73
- Banz, R. [1981] "The relationship between return and market value of common stocks," *Journal of Financial Economics* 9, 3-18.

Benstone George J; and Hangerman, R.I. (1974): "Determinants of Bid –ask spreads in the over the Counter market", *Journal of Financial Economics* 1, 353-364

Benston, G and Hagerman, L. (1974): "Determinants of bid –Ask spreads in the Over the counter market", *Journal of Financial Economics* (1) 353-364

Bernard, V. L. (1993): "Stock price reaction to earnings announcements: A summary of recent anomalous evidence and possible explanations," *Advances in Behavioral Finance*, Russell Sage Foundation, 303-340.

Bhide, Amar. (1993): "The Hidden cost of Stock market Liquidity", *Journal of Financial Economics* 34, 31-51

Bolton, Patrick and Ernst Von Radden (1998): Blocks, "Liquidity and Corporate control". *Journal of Finance* 53, 1-25.

Brennan, Michael J, and Thomas E. Copeland (1988): "Stock Split Stock prices and Transaction costs". *Journal of Financial Economics* 22, 83-101

Brennan, Michael J; And Patricia J.Hughes, (1991): "Stock prices and the supply of Information". *Journal of Finance* 46, 1665-1691

Brockman, P. and D. Michayluk (1998): "The persistent holiday effect: Additional evidence," *Applied Economic Letters* 5, 205-209.

Black, B.S., (1971): "The value of institutional investor monitoring: the empirical evidence," *Journal of Finance*, 81, 637-659.

Blume, M. E., Keim, D. B., and S. A. Patel (1991): "Returns and volatility of low-grade bonds: 1977-1989," *Journal of Finance* 46, 49-74.

Bodie, Z., Kane, A., and Marcus, A.J., (2002): "Investments," 5th Ed. Mc Graw- Hill Irwin. USA.

- Buell, S. G., (1992): "The accuracy of the initial pricing of junk bonds," *Journal of Fixed Income* 2, 77-83.
- Cadsby, B. and M. Ratner (1992): "Turn-of-month and pre-holiday effects on stock returns: Some international evidence," *Journal of Banking and Finance* 16, 497-509.
- Chiang, R., and Venkatesh, P.C. (1988): "Insider holdings and perceptions of information asymmetry: A note," *Journal of Finance*, 43, 1041-1048.
- Cho, M-H (1998): "Ownership structure Investment and the corporate value an Empirical analysis". *Journal of Financial Economics* vol 47 pp 103-121
- Coffee John C, (1991): "Liquidity Versus Control The institutional investor as corporate monitor". *Columbia Law review* 91, 1277-1367
- Copeland, Thomas, E, (1979): "Liquidity changes following stock splits and transaction costs", *Journal of Financial Economics* 22, 83-101.
- Cornell, B. and K. Green (1991): "The investment performance of low-grade bond funds," *Journal of Finance* 46, 29-48.
- Dechow, P.M., A.P. Hutton, L. Meulbroek and R.G. Sloan [2001] "Short-sellers, fundamental analysis, and stock returns," *Journal of Financial Economics* 61, 77-106.
- De Bondt, W.F.M., and R.H. Thaler (1985): "Does the stock market overreact?", *Journal of Finance* 40, 793-805.
- Demsetz, H. (1983): "The Structure of Equity ownership and the theory of the Firm", *Journal of Law and Economic* vol 26, pp 375-390
- Demsetz, H and Lehn. K (1985): "The structure of corporate ownership cases and consequences". *Journal of political Economy* vol 93 pp 1155-1177

- Demsetz H. (1968): "The cost of transacting", *Quarterly Journal of Economics* 82 pp 33-53
- Demsetz, H., and Villalonga, B. (2001): "Ownership structure and corporate performance of privatized firms during the 1990's". *The Journal of finance* vol 54, No.4 pp 1397-1424
- D'Souza, J. and Megginson, W. (1999): "The Financial and operating performance of Privatized firms during the 1990's". *The journal of Finance*, vol 54 No. 4 pp 1397-1424
- Eberhart, A. C. and R. J. Sweeney (1992): "Does the bond market predict bankruptcy settlement," *Journal of Finance* 47, 943-980.
- Fama, E. (1970): "Efficient Capital Markets: A Review Of Theory and Empirical Work," *Journal of Finance*, 25,383-417.
- Fama, Eugene F, and Michael C. Jensen (1985): "Organizational Forms and Investment decisions". *Journal of Financial Economics* 19, 101-119
- Fama, E., and French, K.R. (1992): "The cross-section of expected stock returns," *Journal of Finance*, 47, 427-465.
- Fridson, M. S. and M. A. Cherry (1990): "Initial pricing as predictor of subsequent performance of high-yield bonds," *Financial Analyst Journal* 46, 61-67.
- Glosten, L.R., and Harris, L. (1988): "Estimating the components of the bid-ask spread," *Journal of Financial Economics*, 21, 123-142.
- Grinblatt, Kaul, and Wermers, N., (1995): "Market microstructure and asset pricing; on the compensation for illiquidity in stock returns, *Journal of Financial Economics*, 41, 341-364.
- Harris, L. and E. Gurel (1986): "Price and volume effects associated with changes in the S&P 500 list: New evidence for the existence of price pressures," *Journal of Finance* 41, 815-829.

Hirshleifer, D. and T. Shumway [2001] "Good day sunshine: Stock returns and the weather," SSRN Working Paper, Forthcoming, *Journal of Finance*.

Hensel, C.R. and W.T. Ziemba [1996] "Investment results from exploiting turn-of-the-month effects," *Journal of Portfolio Management*, Spring, 17-22.

Hermalin, B and Weisbach, M (1988) "The determinants of board composition RAND," *Journal of Economics* vol 19 pp 589-606

Hicks, S.M., (1962): "The economics of liquidity services," *The Quarterly Journal of Economics*.

Himmelbarg, C Hubbard R.G Palia D, (1999) "Understanding the determinants of Managerial Ownership and the link between Ownership and performance," *Journal of Financial Economics* 53 pp 353-384

Holderness, C. Kroszner, R, and Sheehan D (1999), "Were the good old days that good? Evolution of managerial stock ownership and corporate governance since the great depression," *The Journal of Finance*, 54 pp435- 469

Iminza, W.I. (1997): "An empirical investigation of the information content of dividend payment on share prices of publicly quoted companies." *Unpublished MBA Research Project*, University Of Nairobi.

Jensen, Michael C; William H Meckling, (1976), "Theory of the Firm Managerial Behavior, agency cost and ownership structure," *Journal of Financial Economics* 3, 306-360

Kadlec Gregory B, and John J. Mc Connell, (1994) "The Effect of Market segmentation and illiquidity on Asset prices. Evidence from the Exchange listings," *Journal of Finance* 49, 611-636

Karolyi, A., (1996): "Why do markets move together? An examination of us - Japan stock return co-movements," *Journal of Finance*, 51, 951-986.

Keynes, S. (1930): "Strategic investor behavior and volume-volatility relation in equity markets." *Working paper* 9, Norges bank.

Kuhn, T.S. (1970): "The Structure of Scientific Revolutions." University of Chicago Press.

Lakonishok, J. and S. Smidt (1988): "Are seasonal anomalies real? A ninety-year perspective," *Review of Financial Studies* 1, 403-425.

Lamoureux, Christopher G and Perey Poon, (1987), "The Market reaction to stock splits," *Journal of Finance* 42, 1347-1370

Loderer, C and Martin, K (1997) "Executive stock ownership and performance tracking front traces," *Journal of Financial Economics* ,45 pp 223-255

Malkiel, B. G. [1977] "The valuation of closed-end investment company shares," *Journal of Finance* 32, 847-859.

Maug, E., (1998): "Large shareholders as monitors: Is there a trade-off between liquidity and control?" *Journal of Finance*, 53, 65-98.

McConnell, J and Serves, H (1990) "Additional evidence on Equity ownership and Corporate value," *Journal of Financial Economics* , 47 pp 595-612

Meggison, W.L, and Netter, J.M (2001), "From state to Market .A survey on Empirical studies on privatization *Journal of Economic literature*," 39 No. 2 pp 32-89.

Merton M and Robert C (1987), "A Simple model of Capital market equilibrium with Incomplete information," *Journal of Finance*, 42,483-511

Morck R, Shleifer A, Vishny R.W (1988) "Management ownership and Market valuation an Empirical analysis," *Journal of Financial Economics*, 20 pp.293-315

Mukherji, Sandip, Young H Kim and Michael C.Walker (1997), "The Effect of stock splits on the ownership structure of firms," *Journal of Corporate Finance* 3, 167-188

Muscarella, Chris J and Michael R. Vetsuypens, (1996), "Stock Splits signaling or Liquidity? The case of SDR Solo splits," *Journal of Financial Economics* 42, 3-26

Mwangi, M.N. (1997): "An analysis for price movement for selected stocks in NSE." *Unpublished MBA Research Project*, University Of Nairobi.

Ohlson, J.A and Stephen Penman, (1985), "Volatility increases subsequent to stock splits. An Empirical observation," *Journal of Financial Economics*, 14 251-266

Omosa, F.Y. (1989): "Predictive ability of asset pricing models on the NSE." *Unpublished MBA Research Project*, University Of Nairobi.

Pound. J (1988), "proxy contests and the efficiency of the shareholders oversight *Journal of Financial Economics* vol 20 pp 237-265

Roll, R. [1984] "Orange juice and weather," *American Economic Review* 74, 861-880.

Saunders, E.M.J. (1993): "Stock prices and Wall Street weather," *American Economic Review* 83, 1337-1345.

Shiller, R.J. [1981] "Do stock prices move too much to be justified by subsequent changes in dividends?" *American Economic Review* 71, 421-435.

Shleifer A and Vishny, R. (1986) "Large Shareholders and corporate control," *Journal of political Economy* 94 pp 461-488

Sifunjo, K (1999): "The causal relationship between exchange rates and stock prices in Kenya." *Unpublished MBA research project*, University of Nairobi.

Stickel, S.E. [1985] "The effect of value line investment survey rank changes on common stock prices," *Journal of Financial Economics* 14, 121-144.

Stulz, R.M. (1988), "Managerial control of Voting Rights Financing policies and the market for Corporate control." *Journal of Financial Economics*, 2, pp 25-54.

Qi, D., Wu. W and Zhang, H (2000), "Shareholding structure and corporate performance of partially privatized firms! Evidence from listed Chinese companies," *Pacific Basin Finance Journal* 8, Issue 5, pp 587-610

Weinstein, M. I. (1987): "A curmudgeon's view of junk bonds," *Journal of Portfolio Management* 13, 76-80.

Agricultural	
7. Huichings Biener Ltd. Ord. 5.00	CMC
8. Kenya Airways Ord. 5.00	HBM
9. Marshalls (E.A) Ord. 5.00	KENAIR
10. Nation Media Group Ord. 5.00	MARSH
11. Tourism Promotion Services Ltd. Ord. 5.00	NMG
12. Uchumi Supermarket Ltd. Ord. 5.00	SERENA
	UCHUMI
Commercial and Services	
Finance and Investment	
13. Barclays Bank Ltd. Ord. 10.00	BBK
14. CFC Bank Ltd. Ord. 5.00	CFC
15. Diamond Trust Of Kenya Ord. 5.00	DTK
16. Housing Finance CO. Ltd.	HFCK
17. ICDC Investment CO. Ltd Ord. 5.00	ICDC
18. Jubilee Insurance CO. Ltd. Ord. 5.00	JUB
19. Kenya Commercial Bank Ord. 10.00	KCB
20. National Bank Of Kenya Ltd. Ord. 5.00	NBK
21. NIC Bank Ltd. Ord. 5.00	NIC
22. Pan Africa Insurance CO. Ltd. Ord. 5.00	PANAFR
23. Standard Chartered Bank Ord. 5.00	SCBK
Industrial and Allied	
24. Athi River Mining Ord. 5.00	ARM
25. BOC Kenya Ltd.	BOC
26. Bamburi Cement Ltd. Ord. 5.00	BAMB
27. British American Tobacco Kenya Ord. 5.00	BAT
28. Carbagid Investments Ltd. Ord. 5.00	CARB
29. Crown Berger Ord. 5.00	CBERG
30. Olympia Capital Holdings Ltd. Ord. 5.00	OCH

APPENDICES

APPENDIX 1: LIST OF ALL COMPANIES QUOTED AT THE NSE

	NAME OF COMPANY	CODE
	Agricultural	
1.	Unilever Tea Kenya Ltd. Ord. 10.00	UTK
2.	Kakuzi Ltd. Ord. 5.00	KAKUZI
3.	Rea Vipingo Plantations Ltd. Ord. 5.00	REAVIP
4.	Sasini Tea & Coffee Ltd. Ord. 5.00	SASINI
	Commercial and Services	
5.	Car & General (K) Ord. 5.00	CARGEN
6.	CMC Holdings Ltd. Ord. 5.00	CMC
7.	Hutchings Biemer Ltd. Ord. 5.00	HBM
8.	Kenya Airways Ord. 5.00	KENAIR
9.	Marshalls (E.A) Ord. 5.00	MARSH
10.	Nation Media Group Ord. 5.00	NMG
11.	Tourism Promotion Services Ltd. Ord. 5.00	SERENA
12.	Uchumi Supermarket Ltd. Ord. 5.00	UCHUMI
	Finance and Investment	
13.	Barclays Bank Ltd. Ord. 10.00	BBK
14.	CFC Bank Ltd. Ord. 5.00	CFC
15.	Diamond Trust Of Kenya Ord. 5.00	DTK
16.	Housing Finance CO. Ltd.	HFCK
17.	ICDC Investment CO. Ltd Ord. 5.00	ICDC
18.	Jubilee Insurance CO. Ltd. Ord. 5.00	JUB
19.	Kenya Commercial Bank Ord. 10.00	KCB
20.	National Bank Of Kenya Ltd. Ord. 5.00	NBK
21.	NIC Bank Ltd. Ord. 5.00	NIC
22.	Pan Africa Insurance CO. Ltd. Ord. 5.00	PANAFR
23.	Standard Chartered Bank Ord. 5.00	SCBK
	Industrial and Allied	
24.	Athi River Mining Ord. 5.00	ARM
25.	BOC Kenya Ltd.	BOC
26.	Bamburi Cement Ltd. Ord. 5.00	BAMB
27.	British American Tobacco Kenya Ord. 5.00	BAT
28.	Carbacid Investments Ltd. Ord. 5.00	CARB
29.	Crown Berger Ord. 5.00	CBERG
30.	Olympia Capital Holdings Ltd. Ord. 5.00	OCH

31.	E.A cables Ord. 5.00	EACABL
32.	E.A Portland Cement Ord. 5.00	EAPORT
33.	East African Breweries Ltd. Ord. 10.00	EABL
34.	Firestone E.A Ord. 5.00	FIREST
35.	Kenya Oil CO. Ltd. Ord. 5.00	KENOL
36.	Mumias Sugar CO. Ltd. Ord. 2.00	MSC
37.	Kenya Power & Lighting CO. Ltd Ord. 20.00	KPL
38.	Total Kenya Ltd. Ord. 5.00	TOTAL
39.	Unga Group Ltd. Ord. 5.00	UNGA
Alternative Market Segment		
40.	A Baumann & CO. Ord. 5.00	ABAUM
41.	City Trust Ltd. Ord. 5.00	CTRUST
42.	Eaagads Ord. 1.25	EAGADS
43.	Express Kenya Ord. 5.00	EXPRESS
44.	Williamson Tea Kenya Ltd. Ord. 5.00	WTK
45.	Kapchorua Tea CO. Ltd. Ord. 5.00	KAPCHO
46.	Kenya Orchards Ltd. Ord. 5.00	KORCH
47.	Limuru Tea Ord. 20.00	LTEA
48.	Std Newspapers Group Ord. 5.00	SNG

APPENDIX 2: DATA COLLECTION FORM

COMPANY CODE-----

PERIOD	NO. OF SHAREHOLDERS	STOCK PRICE

APPENDIX 3: LETTER OF INTRODUCTION

Dear Sir/Madam,

RE: Request for Research Information

I am a postgraduate student at the faculty of commerce, University Of Nairobi. As part of my MBA (Finance) course requirements, I am undertaking a research project that seeks to establish the **RELATIONSHIP BETWEEN STOCK PRICES and the NUMBER OF SHAREHOLDERS OF FIRMS QUOTED AT THE NSE.**

To fulfill information requirements for my study I intend to collect secondary data from your institution. The information requested is needed for purely academic purposes and will be treated in strict confidence, and will not be used for any other purpose other than for my research.

I would be most grateful if you can allow me access to all the relevant information pertinent for this research. Any additional information you might consider necessary for this study is most welcome. I appreciate your assistance in accessing the much-needed information.

Yours Sincerely,

MAINA, S.K

Supervisor

Mr. Luther Otieno

DEPT. OF ACCOUNTING

U.O.N