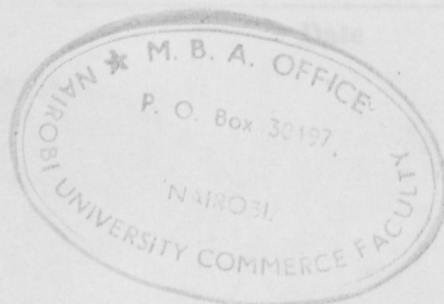


DECLARATION

# THE IMPACT OF DIVIDEND PAYMENTS ON SHAREHOLDERS' WEALTH

*The Case of Quoted Companies in Nairobi Stock  
Exchange*



By

NURA MOHAMED HUKA

A MANAGEMENT RESEARCH PROJECT SUBMITTED IN  
PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE  
AWARD OF THE MASTER OF BUSINESS AND  
ADMINISTRATION DEGREE. FACULTY OF COMMERCE,  
UNIVERSITY OF NAIROBI

© October 2000

7 November 2000

Date

## DECLARATION

This research paper is my own original work and has not been presented for examination at any other institution.

*To my late mother and to my late father...*  
*throughout my entire life...*

*In witness whereof I testify for the...  
throughout my course. May the Almighty God bless you abundantly and may you live to  
love, serve and glorify Him the rest of your life. Amen. that the fear of the  
Almighty God is the beginning of wisdom.*

*Nura Mohamed Huka*

Nura Mohamed Huka

03 — 11 — 2000

Date



This research paper has been submitted for examination with my approval as a University of Nairobi Supervisor.

*Otieno Odhiambo Luther*

Otieno Odhiambo Luther

7<sup>th</sup> November 2000

Date

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*To my late mother and to my father who instilled in me the discipline of hard work throughout my entire life in school.*

I am greatly indebted to my supervisor, Mr. Olicno Odhumbi Luther for his invaluable guidance and close supervision of this work. I am grateful to members of the Accounting Department, particularly Mr. J.M. Karaya for his worthy contribution and stimulating discussions. It is not possible to mention by name all those who offered their  
*To Abdinoor Shariff & Family for the understanding, patience and love accorded to me throughout my course. May the Almighty God bless you abundantly and may you live to fear, serve and glorify Him the rest of your lives. Always remember that the fear of the Almighty God is the beginning of wisdom.*

Managing Partner, MGI Adam & Associates, Mr. Billow A. Kerow, for allowing me flexible work/study program and for his professional guidance; all my workmates of this firm for their continuous support and encouragement and to Susan Yipani who tirelessly converted my illegible handwriting into this beautiful piece of work.

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## 1. INTRODUCTION

### 1.1 Background

The broad goal of the firm can be brought into focus if we say that the financial manager should attempt to maximize the wealth of the firm's shareholders through achieving the highest possible value for the firm. Shareholder wealth maximization is not a simple task, since the financial manager cannot directly control the firm's stock price, but can only act in a way that is consistent with the desires of the shareholders in general.

A company should endeavour to establish a dividend policy that will maximize shareholders wealth. Almost everyone agrees that if the company does not have sufficiently profitable investment opportunities, it should distribute any excess funds to its shareholders.

Why is dividend policy so interesting? One reason is that deciding on the amount of earnings to payout, as dividend is one of the major financial decisions that a firm's financial manager faces. Secondly, a proper understanding of dividend policy is crucial for many other areas of financial economics. In particular, theories of asset pricing, capital structure, merger and acquisitions and capital budgeting all rely on a view of how and why dividends are paid. Five empirical observations have played an important role in discussions of dividend policy:

- (i) Corporations typically pay out a significant percentage of their earnings as dividends,
- (ii) Historically, dividends have been the predominant form of payout; share repurchases were relatively unimportant until the mid 1980s.

- (iii) Individuals in high tax brackets receive larger amounts in dividends and pay substantial amounts of taxes on these dividends.
- (iv) Corporations smooth dividends.
- (v) The market reacts positively to announcements of dividend increases and negatively to announcements of dividend decreases.

Lintner (1956) observed that earnings were the most important determinant of any change in dividends. Management needed to explain to shareholders the reasons for its actions and base its explanations on observable indicators. The level of earnings is the most important of these.

The challenge to financial economists have been to develop a dividend policy framework based on firms maximizing profits and investors maximizing utility, that is consistent with these observations and is not rejected by careful empirical tests.

Cash dividends may be viewed as a signal to investors. Presumably, firms with good views about their future profitability will want to tell shareholders. The signal to shareholders is that management and the board of directors truly believe things are better than what the stock price reflects. In this vein, Miller and Rock (1985) suggest that investors draw inferences about the firm's internal operating cashflows from the dividend announcement.

Capital market imperfection, which bears on the dividend decision, concerns the need for information in an uncertain world. Capital markets are imperfect in the sense that information is neither costless nor universally available and so decisions have often to be made by stock market investors on the basis of imperfect and incomplete information.

In such circumstances, a company's dividend declaration - a free and universally available piece of data - is often thought to signal information about its future performance. In fact, given that information about a company's future performance prospects is fairly sparse - especially to the individual investor - any information that becomes available is seized upon and embodied with a measure of importance, which may often be in excess of its real value. In this term, the dividend decision once again gains in importance. If the stock market places such an (albeit may be unjustified) informational content on the dividend declaration, then a company will not be acting so as to maximize its shareholders' wealth if it ignores this fact. It is most likely for this reason that many publicly quoted companies follow stable dividend policy.

Signaling effect of the dividend declaration is an important issue for companies. Several studies have shown that an increase or decrease over the expected level of dividends does precipitate a rise or fall (respectively) in the market share price. Hence the dividend declaration effect on the share price may be a major (if not the major) consideration in the decision (Woolridge J.R., 1983).

Pettit (1972) found that dividend announcements do convey valuable information. Michaely and Thales (1975) report that when firms make surprisingly quarterly earnings, prices continue to move in the same direction for the next three quarters, especially on the days surrounding the next two quarterly earnings announcements. Since dividends omission and initiations are similar to earnings surprises, one might expect a similar drift in prices following the change in policy.

The competing dividend signaling model assumes that dividends are needed to convey positive information from well-informed managers to poorly informed shareholders in capital markets characterized by asymmetric information.

Lintner (1956) documents that corporate managers approach dividend decisions with great care and with the idea that the level of dividend payment selected will become a fixed expense of the company for the foreseeable future. Lintner shows that managers are far more concerned with changing an established per share dividend payout.

A later study by Fama and Blume (1968) documents that managers do in fact have target payout ratios in mind and that dividend payments per share track the course of corporate profits quite closely over time. Furthermore, Fama and Blume (1968) show that managers employ a partial adjustment strategy in adjusting dividend payment to changes in corporate profits, wherein an increase in profit levels will not fully be reflected in a higher equilibrium dividend per share until several quarters have elapsed. This strategy allows management to become confident that profits have in fact permanently increased before fully committing to higher dividend payments. Naturally, overtime, knowledge of this corporate behaviour pattern is incorporated into investor perception of dividend policy changes.

In their seminal work, Miller & Modigliani (1961) demonstrate that absent imperfections, dividend policy should not affect shareholders' wealth. Dividend irrelevance is also supported by the empirical work of Black & Scholes (1974). Alluding to an argument in the Miller-Modigliani paper, Black & Scholes emphasize the ability of the firms to adjust dividends to appeal to a group of investors and argue that this supply effect may account for their finding of no significant relationship between dividend yields and stock returns.

Three schools of thought have emerged in the course of the dividend controversy:

- (i) Modigliani and Miller (1961) argued that dividend policy is irrelevant i.e. dividend policy does not affect a firm's value or its cost of capital. Thus according to them, there is no optimal dividend policy - one dividend policy is as good as any other.
- (ii) Gordon and Lintner (1962) disagreed with Modigliani and Miller arguing that dividends are less risky than capital gains, so a firm should set a high dividend payout ratio and offer a high dividend yield in order to minimize its cost of capital. Modigliani and Miller disagreed and called this argument the "bird-in-the-hand fallacy".
- (iii) A third group, (tax differential group), whose position is the reverse of the Gordon-Lintner theory, stated that since dividends are effectively taxed at higher rates than capital gains, investors require rates of return on stocks with high dividend yields. According to this theory, a firm should pay low (or zero) dividend in order to minimize its cost of capital and maximize its value.

These three theories offer contradictory advice to corporate managers. Miller-Modigliani says dividend policy does not matter; Gordon-Lintner said that the managers should set a high payout; and the tax differential advocates say set a low payout. Which theory should we believe?

## 1.2 Statement of the problem

In the foregoing analysis, the impact of a company's dividend policy on its value is an unresolved issue. Individuals invest in a company because they expect to receive some returns, which may either be capital gains or dividend. It is this factor that makes the company's dividend policy be of paramount importance.

Our understanding of why corporations pay dividends is currently incomplete and of the Unsatisfactory. On the one hand, Modigliani and Miller tell us that dividends are irrelevant, on the other hand, dividends continue to flood the empirical world with cash and one is hard put to characterize this pattern as being founded on irrelevance. Not surprisingly, the attendant anomaly has led some scholars, notably Black (I), to suggest that we really do not know why companies pay dividends. Something is clearly amiss.

Along with capital structure, dividend policy was one of the first areas of corporate finance to be analyzed with rigorous theoretical model, and it has since become one of the most thoroughly researched issues in modern finance. In spite of this much remains unexplained about the role of dividend in conveying information to investors about corporate prospects.

This study endeavours to determine whether dividend payment does actually affect the market value of a company. It intends to evaluate whether the change in dividend paid has any effects on firm's share prices.

### 1.3 Objective of the study

The study aims to establish whether there is a relationship between dividend paid and the share prices.

### 1.4 Importance of the study

Dividend decision of a company is a crucial area of financial management. Dividends are desirable from shareholders' point of view as they intend to increase their current wealth. It helps management to develop such dividend policy, which divides the net earnings into dividends and retained earnings in an optimum way to achieve the objective of maximizing the wealth of shareholders.

Investors buying stocks of a company will be interested in the future value of the company. Knowledge of the dividend policies of companies will be of value to investors as they will be able to tell the trends of share prices of the various companies.

Finally it is hoped that the study will stimulate further research on the subject by demonstrating feasibility and the practical difficulties that are likely to be encountered.

The use of the objective of wealth maximization has been advocated as an appropriate possible criterion to choose among the alternative financial actions. It provides an unambiguous measure of what financial management should seek to maximize in making investment and financing decisions (Solomon Op.cit p22).

### 1.5 Hypothesis

**H<sub>0</sub>:** There is no relationship or negative relationship between dividends paid and share prices.

**H<sub>A</sub>:** There is a positive relationship between dividend paid and the share price.

2. LITERATURE REVIEW

2.1 Wealth maximization

The use of the objective of wealth maximization has been advocated as an appropriate and operationally feasible criterion to choose among the alternative financial actions. It provides an unambiguous measure of what financial management should seek to maximize in making investment and financing decisions (Solomon Op.cit p22).

Wealth maximization means maximizing the net present value of a course of action (Pandey I.M. 1999). The net present value of a course of action is the difference between the present value of its benefits and the present value of its costs. A financial action, which has a positive net present value, creates wealth and therefore is desirable.

The objectives of wealth maximization take care of the questions of the timing and risk of expected benefits. These problems are handled by selecting an appropriate rate for discounting the expected flow of future benefits.

The wealth maximization objective is consistent with the objective of maximizing owners' economic welfare. Maximizing the economic welfare of owners is equivalent to maximizing the utility of their consumption over time with their wealth maximized; owners can adjust their cashflows in such a way as to optimize their consumption. From shareholders point of view, the wealth created by a company through its actions is reflected in the market value of the company's shares.

Therefore the wealth maximization principal implies that the fundamental objectives of a firm should be to maximize the market shares. The value of the company's shares is represented by their market price, which, in turn, is a reflection of the company's financial decisions. The market price serves as the company's performance indicator.

## 2.2 Need for a valuation approach

The objective of maximizing the market value of the company's shares requires a valuation model. The financial manager must know or at least assume the factors, which influence the market price of shares. Otherwise he would find himself unable to maximize the market value of the company's shares. There is no unanimity regarding the appropriate share valuation model. In practice, innumerable factors influence the price of a particular share, and also these factors change very frequently. Moreover, these factors vary across shares of various companies.

## 2.3 Issues in dividend policy

Dividend decision of the firm is yet another crucial area of financial management. The important aspect of dividend policy is to determine the amount of earnings to be distributed to shareholders and amount to be retained in the company. Retained earnings are the most significant internal sources of financing the growth of the firm. On the other hand, dividends may be considered desirable from shareholders point of view as they tend to increase their current wealth. The objective of a dividend policy should be to maximize a shareholder's return so that value of his investment is maximized. Return consists of two components; dividends and capital gains. Dividend policy has a direct influence on these two components of return.

## 2.4 Dividend relevance

### 2.4.1 Walter's Model

Professor James E. Walter (1963) argues that the choice of dividend policies almost always affects the value of the enterprise. His model, one of the earlier theoretical works, clearly shows the importance of the relationship between the company's internal rate of return,  $r$ , and its costs of capital,  $k$ , in determining the dividend policy that will maximize the wealth of the shareholders. Walter's model is based on the following assumptions:-

1. The company's internal rate of return,  $r$ , and its costs of capital  $k$ , are constant.
2. All earnings are either distributed as dividends or reinvested internally immediately.
3. The company has a very long or infinite life.

### 2.4.2 Gordon's Model

According to Gordon's dividend capitalization model, the market value of a share is equal to the present value of an infinite stream of dividend to be reared by the share. Gordon's Model is based on the following assumptions: -

1. The company is an all-equity company.
2. The company and its stream of earnings are perpetual
3. The corporate taxes do not exist
4. No external financing is available.

### 2.4.3 The Bird-in-the-hand fallacy

A more sophisticated argument for a relationship between the value of the firm and dividend payout is that although the dividend decision cannot change the present value of cash payments to shareholders, it can affect the temporal pattern of payouts. Suppose that investors view distant dividend payments as riskier than current payments, might they prefer a bird in the hand to two in the bush?

Ross (1977) suggests that implicit in the Miller-Modigliani's dividend irrelevance proposition is the assumption that the market knows the return stream of the firm and values this stream to set the value of the firm. What is valued in the market place, however, is the perceived stream of returns for the firm.

He further said that a firm that increases dividend payout is signaling that it has expected future cashflows that are sufficiently large to meet debt payments and dividend payment without increasing the probability of bankruptcy.

Therefore we may expect to find empirical evidence that shows the value of the firm increases because dividends are taken as signals that the firm is expected to have permanently higher future cashflows.

Lintner (1956) conducted interview with 28 carefully selected companies to investigate their thinking on the determination of dividend policy. His fieldwork suggested that:

1. Managers focused on the change in the existing rate of dividend payout, not on the amount of the newly established payout as such.
2. Most management sought to avoid making changes in their dividend rates that might have to be reversed within a year or so.
3. Major changes in earnings "out of line" with existing dividend rates were the most important determinants of a company's dividend decisions.
4. Investment requirements generally had little effect on modifying the pattern of dividend behaviour.

The bird-in-the-hand fallacy put forward, first of all, by Kirshman in the following words: -

"..... of two stocks with identical earnings record, and prospects but the one paying a larger dividend than the other, the former will undoubtedly command a higher price merely because stockholders prefer present to future values. Myopic vision plays a part in the price-making process. Stockholders often act upon the principle that a bird in the hand is worth two in the bush and for this reason are willing to pay a premium for the stock with the higher dividend rate, just as they discount the one with the lower rates."

Graham and Dodd (1934) also hold a similar view when they state:-

"..... the typical investor would most certainly prefer to have his dividend today and let tomorrow take care of itself. No instances are on record in which the withholding of dividends for the sake of future profits have been hailed with such enthusiasm as to advance the price of the stock. The direct opposite has invariably been true. Given two companies in the same general position and with the same earning power, the one 'paying the larger dividend will always sell at a higher price.'"

## 2.5 Dividend irrelevance

According to Modigliani and Miller (1961), dividend policy of a company is irrelevant it does not affect the wealth of the shareholders. They argue that the value of the company depends on the company's earnings, which result from its investment policy.

Modigliani and Miller's (1961) hypothesis of dividend irrelevance is based on some simplifying assumptions. Under these assumptions the conclusion derived by them is logically consistent and intuitively appealing. But the assumptions underlying M-M's hypothesis may not always be found valid.

However, it is contended, and quite rightly, that dividends are relevant because they have informational value. Solomon contents that dividends may offer tangible evidence of the company's ability to generate cash, and as a result, the dividend policy of the company affects the share price. He states:-

“..... In an uncertain world in which verbal statements can be ignored or misinterpreted, dividend actions does provide a clear-cut means of 'making a statement' that 'speaks louder than a thousand words’.

Ross S. in dividend signaling hypothesis argued that the announcement of changes in dividend policy influences shares prices, and that the managers use the dividend changes to convey information about the future earnings of their companies. They may also influence the perceptions of the investors about riskness of the company remains unchanged.

When dividend decision is treated as a financial decision, the net earnings of the firm may be considered as a source of long-term funds (Pandey I.M.1999). With this approach, dividend will be paid only when the company does not have profitable investment opportunities. The dividends paid to shareholders represent a distribution of earnings that cannot be profitably reinvested by the company.

One may argue that capital markets are not perfect; therefore shareholders are not indifferent between dividends and retained earnings. Because of the market imperfections and uncertainty, shareholders may give a higher value to the near dividends than the future dividends and capital gains. Thus, the payment of dividends may significantly affect the market price of the share. Higher dividends increase the value of the shares and low dividends reduce the value. In order to maximize wealth under uncertainty, the company must pay enough dividends to satisfy investors.

(Gordon M.J., 1962).

## 2.6 Constraints on paying dividends

Most companies recognize that the shareholders have a desire to receive dividends, although some of the shareholders are also interested in the capital gains. But the company's decision regarding the amount of earnings to be distributed as dividends depend on a number of factors.

### 2.6.1 Legal restrictions

The dividend policy of the company has to be evolved within the legal framework and restrictions. The directors are not legally compelled to declare dividends e.g. the Companies Act provides that dividends shall be declared as paid only out of the current profit.

The legal rules act as boundaries within which a company can operate in terms of paying dividends. Acting within these boundaries, a company will have to consider many financial variables and constraints in deciding the amount of earnings to be distributed as dividends.

### 2.6.2 Liquidity

The cash position of a company is an important consideration in paying dividends; the greater the cash position and overall liquidity, the greater the ability to pay dividends.

### 2.6.3 Financial Conditions

The financial conditions or capabilities of a company depend on its use of borrowings and interest charges payable. A higher degree of leverage makes a company quite vulnerable to changes in earnings and also, it becomes quite difficult to raise funds externally for financing its growth.

### 2.6.4 Access to the capital market

A company, if not sufficiently liquid, can pay dividends if it is able to raise debt or equity in the capital markets. The greater the ability of the company to raise funds in the capital markets, the greater will be its ability to pay dividends even if it is not liquid.

### 2.6.5 Control

The control of the existing shareholders will be diluted if they do not want or cannot buy additional shares. Under these circumstances, the payment of dividends may be withheld and earnings may be retained to finance the company's investment opportunities.

### 2.6.6 Inflation

When prices rise, funds saved on account of depreciation would not be adequate to replace assets or to maintain the capital intact. Consequently, to maintain the capital intact and preserve the earnings power of the company earnings would be retained.

John and Williams (1987) developed a single-period model with dividends, investments and stock repurchases. Williams (1988) developed a multi-period model and he shows that in the efficient signaling equilibrium, companies, which typically pay dividends, choose their investments in risky assets to maximize net present value and issue new stock.

Kumar (1988) provides a 'coarse signaling theory that is consistent with the fact that some companies do not vary their dividends for long periods of time. This does not explain why companies use dividends rather than repurchases. However, building on work by Ofer and Thakar (1987) and Barclay and Smith (1988), Brennan and Thakar (1990) suggest that repurchases have a disadvantage in that informed investors are able to bid for undervalued stocks and avoid overvalued ones. Thus, there is adverse-selection problem. Dividends do not suffer from this problem because they are pro-rata.

In Kumar's Model, (1988) Managers have better information about their company's productivity than outside investors. The sequence of events is that the Managers learn the company's productivity type, signal it to investors through the level of dividend payments and the shareholders, then decide how much to invest.

In studies carried out by Iminza W. (1997) it was found that dividend has a significant impact on share prices. The impact is much greater when there is a reduction in dividend paid than an increase.

## **2.7 How companies distribute value to the owner**

A company can distribute part of its value to the owners by paying them a cash dividend, repurchasing some of its common stock or by paying a stock dividend.

### 2.7.1 Cash Dividend

The board of directors decides how much and when to pay cash dividends and announces its decision on the dividend declaration date. This date has economic significance because the financial market first learns of unexpected dividend changes on this date. Consequently, the company's stock price should increase or decrease on or near the declaration date in response to the favourable or unfavorable information investors infer from the dividend surprise.

### 2.7.2 Share Repurchases

A company can distribute cash to the owners by offering to repurchase some of its common stock. This policy permits each owner to determine whether he or she receives a current dividend from the company.

### 2.7.3 Stock dividends and stock splits

Companies also pay in kind dividends as stock or as stock splits. Stock dividends and split are administered in much the same way as cash dividends. In a perfect financial market, share repurchases and stock dividends are equivalent to cash dividends because owners can buy or sell shares of stock to convert one form to another.

The phrase dividend policy has historically referred to a corporation's choice of whether to pay its shareholders a cash dividend and if so, how much to pay and with what frequency (annually, semi or quarterly). In recent years dividend policy has come to include many more variables such as via share repurchases or specially designed dividend rather than regular dividends, whether to rely on stock rather than cash distributions and how to balance the cash flow preferences of highly taxed individuals with those of the untaxed institutional investor who are becoming increasingly dominant in capital markets around the world.

## 2.8.2 The agency cost of retaining earnings

Managers can use internal financing at their discretion with little monitoring or control. This provides them the opportunity to invest the company's excess free cash flows in projects that satisfy their own objectives.

Rozeff and others suggested that boards of directors declare dividends to deprive managers of this unsupervised access to internal financing.

Perhaps the best known advocates of the incorporation of external financing in valuation models are Merton Miller and Franco Modigliani who have used M.M. model to show that the price of a company's stock is independent of its dividend policy in a perfect risk less capital market in which no individual trader or company can influence the price of securities; information is freely and immediately available to all; there are no transactions costs or other legal and institutional impediments to investment; and there is no differential taxation of personal income (i.e. dividends) and capital gains.

Note that the proof of irrelevancy of dividend policy was made using multi period model whose returns were uncertain. Therefore it is an extremely general argument. In addition to providing insight into what does not affect the value of the company, it provides considerable insight into what does affect value. The value of the company depends only on the distribution of future cashflows provided by investment decisions. The key to the Miller-Modigliani argument is that investment decisions are completely independent of dividend policy. The company can pay any level of dividend it wishes without affecting investment decisions. If dividends plus desired investments outlays use more cashflows than is provided from operations, the company should seek external financing (e.g. equity). The desire to maintain a level of dividends need not ever affect the investment decision.

## 2.9 The dividend clientele effect

Miller and Modigliani originally suggested the dividend clientele effect. Each Corporation tends to attract to itself a "clientele" consisting of those preferring its particular payout ratio but one clientele would be as good as another in terms of the valuation it would imply for firms.

The clientele effect is a possible explanation for management reluctance to alter established payout ratios because such changes might cause current shareholders to incur unwanted transaction costs.

The first study to look at this issue was the stock split study by Fama, et al (1969). They found that when splits were accompanied by dividend announcements, there was an increase in adjusted share prices for the group that announced dividend increases and a decline in share prices for the dividend decrease group.

Watts (1973) finds a positive dividend announcement effect but concludes that the information content is of no economic significance because it would not enable a trader with monopolistic access to the information to earn abnormal returns after transaction costs.

Friend and Pocket (1964) use cross section data to test the effect of dividend payout on share value. Prior to their work, most studies had related that higher dividend payout was associated with higher price/earnings ratios. The usual cross-section equation was:-

$$P_{it} = a + b \text{Div}_{it} + \text{CRE}_{it} + E_{it}$$

Where:

$P_{it}$  = the price per share

$\text{Div}_{it}$  = aggregate dividend paid out

$\text{CRE}_{it}$  = Cumulative retained earnings

$E_{it}$  = the error term

The other path-breaking empirical article on dividend policy, by Aharomy and Swamy (1980), documents how stock market investors react to dividend increases, decreases and continuations. They show that dividend increases result on average, in a statistically significant 0.35% positive stock price change (abnormal return), while dividend continuation (no change in DPS) are financial non-events causing essentially no measurable change in stock prices. Dividend cuts (or elimination), on the other hand are viewed as true disaster - yielding statistically significant average stock price declines of between 1.13% and 1.46% on the announcement day and cumulative stock price declines of between 4.62% and 5.39%. Over the two weeks period preceding and including the day the dividend cut is announced. Thus they concluded that markets react to announcements of dividends changes in systematic, predictable ways that are consistent with the hypothesis that dividends convey relevant informational asymmetries.

Rori Michnely & Richard (1995) in their findings document that when firms make surprising quarterly earnings announcements, prices continue to move in the same direction for the next two quarters, especially on the day surrounding the next two quarterly earnings announcements. Since dividends omissions and initiations are similar to earnings surprises, one might expect a similar drift in prices following the change in policy.

## CONCLUSION

In summary, the empirical evidence is far from conclusive. The relationship between dividend changes and subsequent earnings changes is positive, but not significant. Given this, it is rather hard to interpret any of the evidence as supporting the information signalling hypothesis. Researchers find that significant market reaction to dividend changes is positively related to the size of the dividend change and that analysts revise their expectations in the direction of the dividend change. The latter evidence deepens the puzzle. How can it be that analysts interpret dividend changes as a good proxy for subsequent earnings changes but we cannot detect strong empirical relations between dividends and subsequent earnings? It is safe to say that more research is needed on this

topic. It is also crucial to note that most of those studies were done in developed countries thus their conclusions may not be conclusive as far as developing countries like Kenya are concerned.

## DATA ANALYSIS AND PROCEDURES

### 3.1 The population

The population of interest in this study comprises companies consistently quoted on the Nairobi Stock Exchange (NSE) for the 4 years up to March 2000. A period of four years was found appropriate, as it was long enough to give consistent observations and allow conclusions to be drawn there from.

Each of the companies was checked against financial records at NSE to establish whether the company was not quoted for any time within the period of study. The companies that were de-registered or unquoted between 1997 and March 2000 were disqualified from the study. Out of the fifty-eight quoted companies, only fifteen met the criteria for selection. Each of these companies was then matched with its dividend announcement dates and its stock prices.

### 3.2 Sampling Technique

All the elements of the population were included in the sample. A cut-off date (1997) was selected to cover the period of four years. To qualify as a sample unit, each company was checked against its quotation date and qualified if the date was before or in 1997.

Checking the consistency of final dividend payments did a further elimination process. On these criteria more companies were taken off from the sample leaving only fifteen companies in the sample.

## METHODS OF DATA ANALYSIS AND PROCEDURES

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Checking the consistency of final dividend payments did a further elimination process. On these criteria more companies were taken off from the sample leaving only fifteen companies in the sample.

### 3.3 Data Description and Collection

The study entailed mainly the use of secondary data. Dividend announcement dates were extracted from the records of one of the major stockbrokers in NSE (Equity Stockbrokers Limited). A dividend announcement date is the date when news of the forthcoming dividend first appears in the newspapers. Neither the ex-dividend nor the dividend paid is considered to be an announcement day. The announcement date was accompanied by the amount of dividend to be paid. Also, yearly dividend payout data was obtained from the stockbrokers.

Relevant data on daily stock prices was extracted from records maintained at the NSE. Prices for the 10 days prior and 10 days after the announcement date were recorded as it was assumed that there would be some delayed reaction after dividend announcement date.

### 3.4 Techniques of Analysis

This study uses daily stock price data (method used by Paul Asquith and David Mullins 1963) to compute excess stockholder returns and to examine dividend announcement for each company in the database. The daily excess return for a security is estimated by: -

$$XR_{it} = R_{it} - \bar{E}(R_{it})$$

Where:

$t$  = the day measured relative to an event.

$XR_{it}$  = the excess price to security  $i$  for the day  $t$ .

$R_{it}$  = daily price on security  $i$  for day  $t$ .

$\bar{E}(R_{it})$  = the expected price on security  $i$  for day  $t$ .

The term  $\bar{E}(R_{it})$  is estimated by:

$$\bar{E}(R_{it}) = R_{it}(1 + P_A)$$

$$P_A = \frac{P_i - P_0 + D_1}{P_0}$$

The excess price for each security,  $XR_{it}$ , is then calculated as the difference between the actual price to a security and the price to its control portfolio.

Average excess price for each relative day are calculated by:

$$\overline{XR}_t = 1/N \sum_{i=1}^N XR_{it}$$

Where:

$N$  = is the number of securities with excess price during day  $t$ .

Daily average cumulative excess prices, CERs, are formed by summing average excess returns over event time as follows: -

$$CER = \sum_{t=k}^L \overline{XR}_t$$

Where:

The CER is for the period from  $t = K$  days until  $t = L$  days.

In addition, a 2-day average excess return is generated for each dividend announcement examined. A 2-day excess return is necessary to capture the entire impact of a dividend announcement. Day  $t = 0$  is the day the news of the dividend is announced or published in the newspapers. In many cases however, the news is announced on the previous day,  $t = -1$ , and reported the next day. If a dividend is announced before the market closes, then the market response to the news actually predates the announcement day by one. If the news is announced after the market closes, the market will respond the next day and the announcement day is indeed zero. Thus in reality there is a 2-day announcement "day"  $t = -1$  and  $t = 0$ . This 2 -day return is calculated as:

$$\overline{XR}_{(-1,0)} = 1/N \sum_{t=K}^L XR_{i(-1,0)}$$

Where

$$XR_{i(-1,0)} = XR_{i,-1} + XR_{i,0}$$

$XR_{i,-1}$  = the excess price to security / on the day prior to the published dividend announcements in the newspapers

$XR_{i,0}$  = the excess return to security / on the day the dividend announcement is published in the newspapers.

Finally, a  $t$ -statistic is calculated for  $XR_{(-1,0)}$  by:

$$XR_{t(-1,0)} = \frac{XR_{(-1,0)}}{S_{XR_{t(-1,0)}}/\sqrt{N}}$$

Where:  $S_{XR_{t(-1,0)}}$  = the standard deviation of the 2-day excess returns.  
 $N$  = the number of companies in the sample.

Expected Price ( $E(P_{it})$ ) were calculated using the market model i.e.

$$P_{it} - P_{it-1} + D_{it} = P_{it-1} E(R_{it}) - R_{it} (1 + P_{it})$$

Where:  
 $R_{it}$  = Daily Prices  
 $P_{it}$  = Expected Price in %

Excess price ( $XR_{it}$ ) was calculated by subtracting Daily Price from Expected Price. Further, Average Excess Return and Cumulative Return were computed.

Daily Average Cumulative Excess Price, CEP is formed by summing average excess price over event time. 2-day excess price is computed by summing excess price for 4 years and dividing it by 4.  $t$ -statistic is computed by dividing 2-day excess price by standard deviation of 2-day excess price.

TABLE 4.1

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by British American Tobacco Limited.

The aim of the study was to determine whether there were significant differences in share prices relative to expectations soon after release of information on dividend payment. Share prices for each company for 10 days on either side of the announcement date were collected. Daily, average and cumulative excess returns are computed for each company. In addition, a 2 day excess price is generated for each dividend announcement examined in order to capture the entire impact of a dividend announcement.

Expected Price (E (R<sub>it</sub>)) were calculated using the market model i.e.

$$\frac{P_1 - P_0 + D_1}{P_0} = \beta_a P_a$$

$$E(R_{it}) = R_{it} (1 + \beta_a)$$

TABLE 4.2

2-day Excess Price, Standard Deviation and t-statistic for British American Tobacco Limited.

Where:

R<sub>it</sub> = Daily Prices

P<sub>0</sub> = Expected Price in %

Excess price (XR<sub>it</sub>) was calculated by subtracting Daily Price from Expected Price.

Further, Average Excess Return and Cumulative Return were computed.

Daily Average Cumulative Excess Price, CEP is formed by summing average excess price over event time. 2-day excess price is computed by summing excess price for 4 years and dividing it by 4. t-statistic is computed by dividing 2-day excess price by standard deviation of 2-day excess price.

TABLE 4.1

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by British American Tobacco Limited.

DAY	AVERAGE EXCESS PRICE %	CUMULATIVE EXCESS PRICE %	DAY	AVERAGE EXCESS PRICE %	CUMULATIVE EXCESS PRICE %
-10	-16	-16	1	-15	204
-9	-19	-35	2	-10	214
-8	-19	-54	3	-4	218
-7	-18	-72	4	-4	222
-6	-18	-90	5	-5	227
-5	-16	-106	6	-5	232
-4	-15	-121	7	-1	233
-3	-14	-135	8	-0.08	234
-2	-19	-154	9	-0.76	235
-1	-18	-172	10	-0.05	236
0	-17	-189			

TABLE 4.2

2-day Excess Price, Standard Deviation and t-statistic for British American Tobacco Limited.

	1997 to 2000
2-day Average Excess Price:	-33%
t-statistic:	-1.38
$t_{0.05;4}$	+2.132
Standard Deviation	+0.24

- 2-day Average Excess Price is significant meaning that any changes in share price was as a result of dividend payment but not any other extraneous variable.
- From the t-statistic which was computed from our 2-day price fail to reject the null hypothesis, that dividend paid has a negative effect on share price.
- This was also supported by the Cumulative Excess Price (CEP) which is -236%.
- Further the CEP revealed that payment of dividend will have high negative effect on share price.
- This means that the shareholders of B.A.T. prefer the retention of earnings that being paid as dividend.
- The higher changes in share prices can be associated to the company's changes in their dividend payout ratio.

TABLE 4.3

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Bamburi Portland Cement Limited.

## BAMBURI PORTLAND CEMENT LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	-4	-4	1	2	-35.2
-9	-5	-9	2	-11	-46.2
-8	-5	-14	3	-6	-52.2
-7	-4	-18	4	-4	-56.2
-6	-5	-23	5	-3	-59.2
-5	-4	-29	6	-3	-62.2
-4	-4	-33	7	-2	-64.2
-3	-2	-35	8	-2	-66.2
-2	-1	-36	9	-0.2	-66.4
-1	-0.8	-36.8	10	-0.7	-67.1
0	0.44	-37.2			

TABLE 4.4 Price, Standard Deviation and t-statistic for Barclays Bank of Kenya Limited.

2-day Excess Price, Standard Deviation and t-statistic for Bamburi Portland Cement Limited.

	1997 to 2000
1-day Average Excess Price:	10%
t-statistic:	
2-day Average Excess Price: t-statistic:	-15%
t-statistics:	+0.08
Standard Deviation:	+2.132
t <sub>0.05,4</sub> :	+0.19
Standard Deviation	

- The t-statistics reject the null hypothesis i.e. dividend payment has positive effect on share prices.
- However, the CEP shows -67% meaning that share prices are adversely affected by dividend payment. This difference was as a result of other extraneous factors which were captured by the 2-day excess price (+16%).

Change in dividend payout ratio had also an impact on share price changes.

TABLE 4.5

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Barclays Bank of Kenya Limited

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	0.2	0.2	1	-5	-37.3
-9	0.2	0.4	2	-6	-43.3
-8	-0.2	0.2	3	-6	-49.3
-7	-0.5	-0.3	4	-5	-54.3
-6	-2	-2.3	5	-6	-60.3
-5	-4	-6.3	6	-7	-67.3
-4	-4	-10.3	7	-8	-75.3
-3	-5	-15.3	8	-8	-83.3
-2	-5	-20.3	9	-7	-90.3
-1	-6	-26.3	10	-7	-97.3
0	-6	-32.3			

TABLE 4.6

2-day Excess Price, Standard Deviation and t-statistic for Barclays Bank of Kenya Limited.

	1997 to 2000
2-day Average Excess Price:	-10%
t-statistic:	-1.77
$t_{0.05;4}$ :	+2.132
Standard Deviation:	+0.057

- The t-statistic fail to reject the null hypothesis i.e. dividend payment has negative effect on share prices.
- Also the CEP revealed that payment of dividend will adversely affect share prices (-97.3%).
- This means that shareholders of BBK may have higher preference for earnings retention than for dividend.
- Changes in dividend payout ratio had also an impact on share price changes.

TABLE 4.7

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Brooke Bond Kenya Limited.

## BROOKE BOND KENYA LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	1	1	1	3	9.5
-9	2	3	2	4	13.5
-8	0.7	3.7	3	2	15.5
-7	0.7	4.4	4	2	17.5
-6	0.7	5.1	5	2	19.5
-5	0.9	6	6	2	21.5
-4	0.9	6.9	7	2	23.5
-3	0.9	7.8	8	2	25.5
-2	1	8.8	9	0.7	26.2
-1	0.7	9.5	10	0.06	26.26
0	-3	6.5			

TABLE 4.8

2-day Excess Price, Standard Deviation and t-statistic for Brooke Bond Kenya Limited

	1997 to 2000
2-day Average Excess Price:	+4%
t-statistic:	+0.31
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.12

- The t-statistic rejects the null hypothesis i.e. dividend payment has positive impact on share prices.
- This was supported by the CEP (+26.26%). This means that payment of dividend has positive impact on share prices (appreciate).
- Though CEP is below average, it means that the majority of shareholders in Brooke Bond prefers dividend payment rather than retention of earnings.

**TABLE 4.9**

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Carbacid Limited.

**CARBACID LIMITED**

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	0.7	0.7	1	-0.5	13.6
-9	1	1.7	2	-1	12.6
-8	3	4.7	3	-1	11.6
-7	2	6.7	4	-0.4	11.2
-6	3	9.7	5	-2	9.2
-5	2	11.7	6	-2	7.2
-4	0.1	11.8	7	-1	6.2
-3	0.6	12.4	8	-1	5.2
-2	0.7	13.1	9	-2	3.2
-1	-1	12.1	10	-2	1.2
0	2	14.1			

**TABLE 4.10**

2-day Excess Price, Standard Deviation and t-statistic for Carbacid Limited

	<u>1997 to 2000</u>
2-day Average Excess Price:	-2%
t-statistic:	-0.1
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.16

- The t-statistics fail to reject the null hypothesis i.e. dividend payment has negative effect on share prices.
- This was supported by the CEP (1.2%). This means that Carbacid shareholders were indifferent to dividend payment or retention of earnings.

TABLE 4.11

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by City Finance Corporation Limited.

CITY FINANCE CORPORATION LIMITED					
DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	1	1	1	-0.7	7.2
-9	0.7	1.7	2	-3	4.2
-8	0.5	2.2	3	-4	0.2
-7	2	4.2	4	-2	-1.8
-6	1	5.2	5	-5	-6.8
-5	-0.1	5.1	6	-1	-7.8
-4	1	6.1	7	-4	-11.8
-3	0.2	6.3	8	-5	-16.8
-2	1	7.3	9	-4	-20.8
-1	0.4	7.7	10	-4	-24.8
0	0.2	7.9			

TABLE 4.12

2-day Excess Price, Standard Deviation and t-statistic for City Finance Corporation Limited

	<u>1997 to 2000</u>
2-day Average Excess Price:	-0.4%
t-statistic:	-0.01
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.3

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP supports this findings (-24.8%).
- This means that CFC shareholders (majority but not all - as -24.8% is low) prefer retention of earnings to dividend payment.

TABLE 4.13

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by East African Cables Limited.

EAST AFRICAN CABLES LIMITED					
DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-16	-16	1	-16	-184
-9	-16	-32	2	-15	-199
-8	-16	-48	3	-15	-214
-7	-16	-64	4	-14	-228
-6	-16	-80	5	-15	-243
-5	-17	-97	6	-8	-251
-4	-14	-111	7	-7	-258
-3	-14	-125	8	-8	-266
-2	-14	-139	9	-9	-275
-1	-14	-153	10	-14	-289
0	-15	-168			

TABLE 4.14

2-day Excess Price, Standard Deviation and t-statistic for East African Cables Limited

	1997 to 2000
2-day Average Excess Price:	-30%
t-statistic:	-0.47
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.63

- The t-statistics fail to reject the null hypothesis; that dividend payment has negative effect on share prices.
- The CEP of -290% support this fact. This means that the shareholders of E.A.C. prefer the retention of earnings to dividend payment. This fact is supported by the high ratio of CEP, which highly deviates from zero.

TABLE 4.15

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Firestone E.A. Limited.

FIRESTONE E.A. LIMITED			KENYA LIMITED		
DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-8	-8	1	-7	-86
-9	-9	-17	2	-6	-92
-8	-7	-24	3	-7	-99
-7	-5	-29	4	-2	-101
-6	-6	-35	5	-3	-104
-5	-8	-43	6	-3	-107
-4	-8	-51	7	-4	-111
-3	-8	-59	8	-4	-115
-2	-7	-66	9	-4	-119
-1	-7	-73	10	-4	-123
0	-6	-79			

TABLE 4.16

2-day Excess Price, Standard Deviation and t-statistic for Firestone E.A. Limited

	1997 to 2000
2-day Average Excess Price:	-15%
t-statistic:	-0.32
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.44

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP supports this finding (-123%).
- The high CEP ratio means that shareholders of Firestone E.A. Ltd prefer retention of earnings to dividend payment.

TABLE 4.17

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by George Williamson Kenya Limited.

GEORGE WILLIAMSON KENYA LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-8	-8	1	-0.8	-82.8
-9	-9	-17	2	-0.5	-83.3
-8	-9	-26	3	-1	-84.3
-7	-10	-36	4	-1	-85.3
-6	-8	-44	5	-1	-86.3
-5	-6	-50	6	-3	-89.3
-4	3	-47	7	-4	-93.3
-3	-2	-49	8	-4	-97.3
-2	-16	-65	9	-4	-101.3
-1	-16	-81	10	-4	-105.3
0	-1	-82			

TABLE 4.18

2-day Excess Price, Standard Deviation and t-statistic for George Williamson Kenya Limited

	<u>1997 to 2000</u>
2-day Average Excess Price:	-2%
t-statistic:	-0.12
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.19
	0.06

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP of -105.3% supports this fact. The high negative CEP means that the higher the dividend payout ratio, the higher the negative effect on share prices.
- This means that shareholders of George Williamson Kenya Ltd prefer retention of earnings to dividend payment.

TABLE 4.19

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Housing Finance Corporation of Kenya Limited.

## HOUSING FINANCE CORPORATION OF KENYA LTD

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-1	-1	1	-2	-15.865
-9	-0.8	-1.8	2	-3	-18.865
-8	-0.2	-2	3	-4	-22.865
-7	-0.6	-2.6	4	-4	-26.865
-6	0.035	-2.565	5	-3	-29.865
-5	-5	-7.565	6	-3	-32.865
-4	0.1	-7.465	7	-4	-36.865
-3	-0.3	-7.765	8	-6	-42.865
-2	-0.1	-7.865	9	-4	-46.865
-1	-1	-8.865	10	-4	-50.865
0	-5	-13.865			

TABLE 4.20

2-day Excess Price, Standard Deviation and t-statistic for Housing Finance Corporation of Kenya Limited

	1997 to 2000
2-day Average Excess Price:	-3%
t-statistic:	-0.53
$t_{0.05,4}$ :	+2.132
Standard Deviation:	0.06

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP of 50.86%, which is below average, means that the preference of dividend payment among HFCK shareholders differs. However, majority of the shareholders seem to prefer retained earnings to dividend payment.

TABLE 4.21

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Kakuzi Limited.

## KAKUZI LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-4	4	1	-1	44
-9	6	10	2	-2	42
-8	6	16	3	1	43
-7	7	23	4	1	44
-6	5	28	5	1	45
-5	5	33	6	1	46
-4	5	38	7	-6	40
-3	4	42	8	1	41
-2	1	43	9	-0.7	40.3
-1	1	44	10	-0.6	39.7
0	1	45			

TABLE 4.22

2-day Excess Price, Standard Deviation and t-statistic for Kakuzi Limited

	1997 to 2000	2000
2-day Average Excess Price:	-2%	-10%
t-statistic:	-0.36	-1.2
$t_{0.05,4}$ :	+2.132	-2.132
Standard Deviation:	+0.06	+0.06

- The t-statistics fail to reject the null hypothesis that dividend payment has adverse effect on share prices.
- This was supported by 2-day excess price which smoothens all other extraneous variables.

TABLE 4.23

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by National Industrial Credit Bank Limited.

NATIONAL INDUSTRIAL CREDIT BANK LIMITED					
DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-6	-6	1	-3	-71
-9	-8	-14	2	-7	-78
-8	-7	-21	3	-4	-82
-7	-7	-28	4	-4	-86
-6	-6	-34	5	-1	-87
-5	-6	-40	6	-2	-89
-4	-6	-46	7	-3	-92
-3	-7	-53	8	-4	-96
-2	-5	-58	9	-3	-99
-1	-7	-65	10	-3	-102
0	-3	-68			

TABLE 4.24

2-day Excess Price, Standard Deviation and t-statistic for National Industrial Credit Bank Limited

	1997 to 2000	1997 to 2000
2-day Average Excess Price:	-28%	-10%
t-statistic:	-1.04	-1.2
$t_{0.05,4}$ :	+2.132	+2.132
Standard Deviation:	+0.27	+0.08

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP of -102% supports this fact.
- This means that NIC shareholders prefer retention of earnings to dividend payment.

TABLE 4.25

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Nation Printers & Publishers Limited.

NATION PRINTERS & PUBLISHERS LIMITED					
DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
10	-18	-18	1	-10	-212
-9	-18	-36	2	-7	-219
-8	-17	-53	3	-5	-224
-7	-17	-70	4	-2	-226
-6	-18	-88	5	-2	-228
-5	-18	-106	6	-2	-230
-4	-17	-123	7	-2	-232
-3	-17	-140	8	-0.4	-232.4
-2	-27	-167	9	-0.4	-232.8
-1	-19	-186	10	-0.4	-233.2
0	-16	-202			

TABLE 4.26

2-day Excess Price, Standard Deviation and t-statistic for Nation Printers & Publishers Limited

	1997 to 2000
2-day Average Excess Price:	-28%
t-statistic:	-1.04
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.27

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- The CEP of -233% supports the t-statistics.
- The above findings mean that Nation Printers & Publishers Limited shareholders prefer retained earnings for future investments that dividend payment.

TABLE 4.27

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Sasini Tea & Coffee Limited.

## SASINI TEA &amp; COFFEE LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	-6	-6	1	-8	-97
-9	-6	-12	2	-14	-111
-8	-7	-19	3	-14	-125
-7	-7	-26	4	-15	-140
-6	-9	-35	5	-12	-152
-5	-10	-45	6	-12	-164
-4	-9	-54	7	-11	-175
-3	-9	-63	8	-10	-185
-2	-9	-72	9	-8	-193
-1	-9	-81	10	-3	-196
0	-8	-89			

TABLE 4.28

TABLE 4.28

2-day Excess Price, Standard Deviation and t-statistic for Sasini Tea & Coffee Limited

	<u>1997 to 2000</u>
2-day Average Excess Price:	-17%
t-statistic:	-0.43
$t_{0.05,4}$ Standard Deviation:	+2.132
Standard Deviation:	+0.38

- The t-statistics fail to reject the null hypothesis i.e. dividend payment has negative effect on share prices.
- This was supported by CEP negative of -196%.
- This means that dividend payment signals bad information to shareholders, who seem to prefer retention of earnings to dividend payment.

TABLE 4.29

Average Daily Excess Price and Average Daily Cumulative Excess Price (CEP) 10 days before and 10 days after announcement of first dividend (day 0) by Standard Chartered Bank Limited.

## STANDARD CHARTERED BANK LIMITED

DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%	DAY	AVERAGE EXCESS PRICE%	CUMULATIVE EXCESS PRICE%
-10	-7	-7	1	-1	-54
-9	-7	-14	2	-2	-56
-8	-7	-21	3	1	-55
-7	-9	-30	4	-3	-58
-6	-5	-35	5	-4	-62
-5	-5	-40	6	-3	-65
-4	-5	-45	7	-3	-68
-3	-5	-50	8	-3	-71
-2	-4	-54	9	-7	-78
-1	-2	-56	10	-5	-83
0	3	-53			

TABLE 4.30

2-day Excess Price, Standard Deviation and t-statistic for Standard Chartered Bank Limited

	<u>1997 to 2000</u>
2-day Average Excess Price:	-3%
t-statistic:	-0.2
$t_{0.05,4}$ :	+2.132
Standard Deviation:	+0.17

- The t-statistics fail to reject the null hypothesis that dividend payment has negative effect on share prices.
- This was supported by CEP of -83%.
- This means that dividend payment is perceived as bad information by shareholders. Thus the majority of the shareholders of Standard Chartered Bank Limited prefer retention of earnings to dividend payment.

### CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

#### 5.1 Conclusion

The main objective of this study was to establish whether dividend payment has any effect on shareholders' wealth. From the analysis presented, it appears that dividend payment has a significant impact on share prices hence shareholders' wealth. The findings hold a similar view with the following view of the various scholars:-

(i) Information signaling hypothesis advanced by Stephen Ross:

From the findings, dividend payment has information which affect share prices. Findings in this study revealed that dividend payment conveys bad information to the market and thus in an inefficient market, we can use dividend information as a signal to convey important information to the market.

(ii) "Clientele" effect theory advanced by Richardson Pettit:

The findings revealed that Cumulative Excess Price (CEP) varies from one company to the other, meaning that a company has a 'clientele' of shareholders with similar requirements. Changes in dividend policy mean some investors will come in and others will exit.

However, the findings fail to support the following views :-

(i) Modigliani and Miller: "Irrelevancy Policy".

The MM argument that dividend policy of a company is irrelevant as it does not affect the wealth of the shareholders does not hold. The findings reveal that dividend policy is relevant as it affects the share prices of the company.

## 5.2 Limitations of the Study

(iii) Gordon Lintner's "Bird-in-hand" theory:

Looking only at quoted companies limited the study, as this population was very small. The negative CEP reveals that shareholders do not prefer dividend payment to capital gains. This means that Lintner's findings do not hold in my case. This could limit the generalization of the results of this study.

(iv) Graham & Dodd:

The study assumed that the market is perfect. However, most of the research carried out reveals: The theory that two companies in the same general position and with the same earning power, one paying the larger dividend will always sell at a higher price does not hold. Changes in dividend policy adversely affect share prices e.g. BAT.

Generally, it is evident that payment of dividend has negative effect on share prices hence shareholders wealth. Further, the degree of variation changes from one company to the other, meaning that company has 'clientele' of shareholders. This suggests that each company should establish the specific policy that it's management deems most appropriate and then let shareholders who do not like this policy sell their shares to other investors who do. However, investors switching is costly because of brokerage costs and a possible shortage of investors who like the companies newly stated dividend policy. This means that companies should not change dividend policies frequently because such changes will result in net losses due to the above costs.

## 5.2 Limitations of the Study

Looking only at quoted companies limited the study, as this population was very small compared to the number of companies in Kenya. Further, this was worsened by the fact that only fifteen out of the fifty-eight quoted companies qualified for this study. This could limit the generalization of the results of this study.

The study assumed that the market is perfect. However, most of the research carried out revealed that the Kenyan market is imperfect. This assumption may limit the findings.

## 5.3 Recommendations of the study

The results of this study have shown that investors react differently to changes in dividend. It would be of benefit if a research was carried out on the investors differential reaction. Some of the studies have shown that a company that pays high dividend is assumed to be lacking viable investment projects thus leading to low price with a high dividend payment. Other studies have shown that managers do not raise dividends unless they anticipate higher or at least stable earnings in the future. A research to determine the investor's differentials behaviour will be beneficial.

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	76.94	4.00	67.59	9.35	0.1215
-9	76.00	4.00	67.59	8.41	0.1107
-8	75.15	4.00	67.59	7.56	0.1006
-7	75.15	4.00	67.59	7.56	0.1006
-6	75.00	4.00	67.59	7.41	0.0988
-5	74.69	4.00	67.59	7.10	0.0951
-4	72.00	4.00	67.59	4.41	0.0613
-3	73.00	4.00	67.59	5.41	0.0741
-2	60.00	4.00	67.59	7.59	-0.1265
-1	60.00	4.00	67.59	7.59	-0.1265
0	60.00	4.00	67.59	7.59	-0.1265
1	60.00	4.00	67.59	7.59	-0.1265
2	60.91	4.00	67.59	6.68	-0.1097
3	60.34	4.00	67.59	7.25	-0.1202
4	62.00	4.00	67.59	5.59	-0.0902
5	62.00	4.00	67.59	5.59	-0.0902
6	62.00	4.00	67.59	5.59	-0.0902
7	63.00	4.00	67.59	4.59	-0.0729
8	60.90	4.00	67.59	6.69	-0.1099
9	63.20	4.00	67.59	4.39	-0.0695
10	63.59	4.00	67.59	-4.00	-0.0629

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	53.00	4.00	54	-1.00	-0.0189
-9	50.57	4.00	54	-3.43	-0.0678
-8	50.66	4.00	54	-3.34	-0.0659
-7	50.88	4.00	54	-3.12	-0.0613
-6	51.00	4.00	54	-3.00	-0.0588
-5	50.00	4.00	54	-4.00	-0.0800
-4	50.00	4.00	54	-4.00	-0.0800
-3	50.00	4.00	54	-4.00	-0.0800
-2	50.01	4.00	54	-3.99	-0.0798
-1	50.04	4.00	54	-3.96	-0.0791
0	50.02	4.00	54	-3.98	-0.0796
1	51.00	4.00	54	-3.00	-0.0563
2	52.00	4.00	54	-2.00	-0.0385
3	52.00	4.00	54	-2.00	-0.0385
4	53.03	4.00	54	-0.97	-0.0183
5	50.00	4.00	54	-4.00	-0.0800
6	50.00	4.00	54	-4.00	-0.0800
7	50.09	4.00	54	-3.91	-0.0781
8	50.12	4.00	54	-3.88	-0.0774
9	50.51	4.00	54	-3.49	-0.0691
10	50.00	4.00	54	-4.00	-0.0800

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	64.60	5.00	90.68	-26.08	-0.4037
-9	63.11	5.00	90.68	-27.57	-0.4369
-8	65.00	5.00	90.68	-25.68	-0.3951
-7	65	5.00	90.68	-25.68	-0.3951
-6	64.72	5.00	90.68	-25.96	-0.4011
-5	65.00	5.00	90.68	-25.68	-0.3951
-4	65.00	5.00	90.68	-25.68	-0.3951
-3	64.64	5.00	90.68	-26.04	-0.4028
-2	65.26	5.00	90.68	-25.42	-0.3895
-1	66.24	5.00	90.68	-24.44	-0.3690
0	67.39	5.00	90.68	-23.29	-0.3456
1	69.24	5.00	90.68	-21.44	-0.3096
2	76.90	5.00	90.68	-13.78	-0.1792
3	79.29	5.00	90.68	-11.39	-0.1436
4	78.16	5.00	90.68	-12.52	-0.1602
5	79.12	5.00	90.68	-11.56	-0.1461
6	79.29	5.00	90.68	-11.39	-0.1436
7	81.05	5.00	90.68	-9.63	-0.1188
8	82.63	5.00	90.68	-8.05	-0.0974
9	84.07	5.00	90.68	-6.61	-0.0786
10	85.68	5.00	90.68	-5.00	-0.0584

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	78.11	8.00	105.05	-26.94	-0.3449
-9	76.43	8.00	105.05	-28.62	-0.3745
-8	77.41	8.00	105.05	-27.64	-0.3571
-7	76	8.00	105.05	-29.05	-0.3822
-6	78.14	8.00	105.05	-26.91	-0.3444
-5	83.69	8.00	105.05	-21.36	-0.2552
-4	90.00	8.00	105.05	-15.05	-0.1672
-3	91.20	8.00	105.05	-13.85	-0.1519
-2	92.08	8.00	105.05	-12.97	-0.1409
-1	92.10	8.00	105.05	-12.95	-0.1406
0	93.60	8.00	105.05	-11.45	-0.1223
1	94.80	8.00	105.05	-10.25	-0.1081
2	100.00	8.00	105.05	-5.05	-0.0505
3	97.21	8.00	105.05	-7.84	-0.0807
4	96.40	8.00	105.05	-8.65	-0.0897
5	96.40	8.00	105.05	-8.65	-0.0897
6	98.50	8.00	105.05	-6.55	-0.0665
7	98.50	8.00	105.05	-6.55	-0.0665
8	98.03	8.00	105.05	-7.02	-0.0716
9	98.03	8.00	105.05	-7.02	-0.0716
10	97.05	8.00	105.05	-8.00	-0.0824

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	120.02	7.00	117.09	2.93	0.0244
-9	120.10	7.00	117.09	3.01	0.0251
-8	120.20	7.00	117.09	3.11	0.0259
-7	117.96	7.00	117.09	0.87	0.0074
-6	117.99	7.00	117.09	0.90	0.0076
-5	118.74	7.00	117.09	1.65	0.0139
-4	118.95	7.00	117.09	1.86	0.0156
-3	117.90	7.00	117.09	0.81	0.0069
-2	117.60	7.00	117.09	0.51	0.0043
-1	116.63	7.00	117.09	-0.46	-0.0039
0	113.62	7.00	117.09	-3.47	-0.0305
1	113.44	7.00	117.09	-3.65	-0.0322
2	109.95	7.00	117.09	-7.14	-0.0649
3	109.60	7.00	117.09	-7.49	-0.0683
4	110.88	7.00	117.09	-6.21	-0.0560
5	110.96	7.00	117.09	-6.13	-0.0552
6	110.57	7.00	117.09	-6.52	-0.0590
7	110.21	7.00	117.09	-6.88	-0.0624
8	110.48	7.00	117.09	-6.61	-0.0598
9	110.41	7.00	117.09	-6.68	-0.0605
10	110.09	7.00	117.09	-7.00	-0.0636

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	119.04	9.00	137.75	-18.71	-0.1572
-9	118.72	9.00	137.75	-19.03	-0.1603
-8	118.04	9.00	137.75	-19.71	-0.1670
-7	118.81	9.00	137.75	-18.94	-0.1594
-6	121.66	9.00	137.75	-16.09	-0.1323
-5	123.63	9.00	137.75	-14.12	-0.1142
-4	123.81	9.00	137.75	-13.94	-0.1126
-3	120.67	9.00	137.75	-17.08	-0.1415
-2	122.22	9.00	137.75	-15.53	-0.1271
-1	123.53	9.00	137.75	-14.22	-0.1151
0	126.63	9.00	137.75	-11.12	-0.0878
1	136.23	9.00	137.75	-1.52	-0.0112
2	136.11	9.00	137.75	-1.64	-0.0120
3	135.84	9.00	137.75	-1.91	-0.0141
4	134.43	9.00	137.75	-3.32	-0.0247
5	128.95	9.00	137.75	-8.80	-0.0682
6	126.08	9.00	137.75	-11.67	-0.0926
7	125.72	9.00	137.75	-12.03	-0.0957
8	126.57	9.00	137.75	-11.18	-0.0883
9	128.83	9.00	137.75	-8.92	-0.0692
10	128.75	9.00	137.75	-9.00	-0.0699

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	128.64	8.00	127.44	1.20	0.0093
-9	128.58	8.00	127.44	1.14	0.0089
-8	127.60	8.00	127.44	0.16	0.0013
-7	126.77	8.00	127.44	-0.67	-0.0053
-6	127.19	8.00	127.44	-0.25	-0.0020
-5	127.66	8.00	127.44	0.22	0.0017
-4	125.69	8.00	127.44	-1.75	-0.0139
-3	126.48	8.00	127.44	-0.96	-0.0076
-2	126.12	8.00	127.44	-1.32	-0.0105
-1	122.42	8.00	127.44	-5.02	-0.0410
0	125.00	8.00	127.44	-2.44	-0.0195
1	123.09	8.00	127.44	-4.35	-0.0353
2	120.05	8.00	127.44	-7.39	-0.0616
3	121.40	8.00	127.44	-6.04	-0.0498
4	122.46	8.00	127.44	-4.98	-0.0407
5	124.68	8.00	127.44	-2.76	-0.0221
6	120.07	8.00	127.44	-7.37	-0.0614
7	119.85	8.00	127.44	-7.59	-0.0633
8	118.35	8.00	127.44	-9.09	-0.0768
9	118.35	8.00	127.44	-9.09	-0.0768
10	119.44	8.00	127.44	-8.00	-0.0670

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	111.96	7.50	97.44	14.52	0.1297
-9	112.49	7.50	97.44	15.05	0.1338
-8	112.23	7.50	97.44	14.79	0.1318
-7	113.16	7.50	97.44	15.72	0.1389
-6	104.11	7.50	97.44	6.67	0.0641
-5	93.16	7.50	97.44	-4.28	-0.0459
-4	94.64	7.50	97.44	-2.80	-0.0296
-3	92.46	7.50	97.44	-4.98	-0.0539
-2	91.36	7.50	97.44	-6.08	-0.0665
-1	91.87	7.50	97.44	-5.57	-0.0606
0	89.14	7.50	97.44	-8.30	-0.0931
1	88.08	7.50	97.44	-9.36	-0.1063
2	88.91	7.50	97.44	-8.53	-0.0959
3	89.11	7.50	97.44	-8.33	-0.0935
4	89.47	7.50	97.44	-7.97	-0.0891
5	90.02	7.50	97.44	-7.42	-0.0824
6	90.00	7.50	97.44	-7.44	-0.0827
7	89.81	7.50	97.44	-7.63	-0.0850
8	90.00	7.50	97.44	-7.44	-0.0827
9	89.94	7.50	97.44	-7.50	-0.0834
10	89.94	7.50	97.44	-7.50	-0.0834

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	150.00	0.80	150.8	-0.80	-0.0053
-9	150.00	0.80	150.8	-0.80	-0.0053
-8	150.00	0.80	150.8	-0.80	-0.0053
-7	150.00	0.80	150.8	-0.80	-0.0053
-6	150.00	0.80	150.8	-0.80	-0.0053
-5	150.00	0.80	150.8	-0.80	-0.0053
-4	150.00	0.80	150.8	-0.80	-0.0053
-3	150.00	0.80	150.8	-0.80	-0.0053
-2	149.62	0.80	150.8	-1.18	-0.0079
-1	149.11	0.80	150.8	-1.69	-0.0113
0	150.00	0.80	150.8	-0.80	-0.0053
1	150.00	0.80	150.8	-0.80	-0.0053
2	150.00	0.80	150.8	-0.80	-0.0053
3	150.00	0.80	150.8	-0.80	-0.0053
4	150.00	0.80	150.8	-0.80	-0.0053
5	150.00	0.80	150.8	-0.80	-0.0053
6	150.00	0.80	150.8	-0.80	-0.0053
7	150.00	0.80	150.8	-0.80	-0.0053
8	150.00	0.80	150.8	-0.80	-0.0053
9	150.00	0.80	150.8	-0.80	-0.0053
10	150.00	0.80	150.8	-0.80	-0.0053

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	132.49	1.70	116.7	15.79	0.1192
-9	134.00	1.70	116.7	17.30	0.1291
-8	130.00	1.70	116.7	13.30	0.1023
-7	130.00	1.70	116.7	13.30	0.1023
-6	130.00	1.70	116.7	13.30	0.1023
-5	130.00	1.70	116.7	13.30	0.1023
-4	130.00	1.70	116.7	13.30	0.1023
-3	130.00	1.70	116.7	13.30	0.1023
-2	131.90	1.70	116.7	15.20	0.1152
-1	130.00	1.70	116.7	13.30	0.1023
0	129.42	1.70	116.7	12.72	0.0983
1	132.61	1.70	116.7	15.91	0.1200
2	134.79	1.70	116.7	18.09	0.1342
3	125.00	1.70	116.7	8.30	0.0664
4	125.00	1.70	116.7	8.30	0.0664
5	125.00	1.70	116.7	8.30	0.0664
6	125.00	1.70	116.7	8.30	0.0664
7	125.00	1.70	116.7	8.30	0.0664
8	125.00	1.70	116.7	8.30	0.0664
9	118.00	1.70	116.7	1.30	0.0110
10	115.00	1.70	116.7	-1.70	-0.0148

BAMBURI PORTLAND CEMENT CO. LTD

BROOKE BOND (K) LIMITED

1999

DAYS	DAILY PRICE	DAILY DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	141.00	2.30	145.3	-4.30	-0.0305
-9	142.00	2.30	145.3	-3.30	-0.0232
-8	141.42	2.30	145.3	-3.88	-0.0274
-7	141.42	2.30	145.3	-3.88	-0.0274
-6	142.00	2.30	145.3	-3.30	-0.0232
-5	142.00	2.30	145.3	-3.30	-0.0232
-4	142.00	2.30	145.3	-3.30	-0.0232
-3	142.00	2.30	145.3	-3.30	-0.0232
-2	142.00	2.30	145.3	-3.30	-0.0232
-1	142.00	2.30	145.3	-3.30	-0.0232
0	141.26	2.30	145.3	-4.04	-0.0286
1	142.00	2.30	145.3	-3.30	-0.0232
2	142.00	2.30	145.3	-3.30	-0.0232
3	142.00	2.30	145.3	-3.30	-0.0232
4	142.00	2.30	145.3	-3.30	-0.0232
5	142.00	2.30	145.3	-3.30	-0.0232
6	143.00	2.30	145.3	-2.30	-0.0161
7	143.00	2.30	145.3	-2.30	-0.0161
8	143.00	2.30	145.3	-2.30	-0.0161
9	143.00	2.30	145.3	-2.30	-0.0161
10	143.00	2.30	145.3	-2.30	-0.0161

2000

DAYS	DAILY PRICE	DAILY DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	104.00	4.00	108	-4.00	-0.0385
-9	104.00	4.00	108	-4.00	-0.0385
-8	104.00	4.00	108	-4.00	-0.0385
-7	104.00	4.00	108	-4.00	-0.0385
-6	104.00	4.00	108	-4.00	-0.0385
-5	104.00	4.00	108	-4.00	-0.0385
-4	104.00	4.00	108	-4.00	-0.0385
-3	104.00	4.00	108	-4.00	-0.0385
-2	104.00	4.00	108	-4.00	-0.0385
-1	104.00	4.00	108	-4.00	-0.0385
0	90.00	4.00	108	-18.00	-0.2000
1	104.00	4.00	108	-4.00	-0.0385
2	104.00	4.00	108	-4.00	-0.0385
3	104.00	4.00	108	-4.00	-0.0385
4	104.00	4.00	108	-4.00	-0.0385
5	104.00	4.00	108	-4.00	-0.0385
6	104.00	4.00	108	-4.00	-0.0385
7	104.00	4.00	108	-4.00	-0.0385
8	104.00	4.00	108	-4.00	-0.0385
9	104.00	4.00	108	-4.00	-0.0385
10	104.00	4.00	108	-4.00	-0.0385

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	40.26	0.75	48.99	-8.73	-0.2168
-9	40.31	0.75	48.99	-8.68	-0.2153
-8	40.23	0.75	48.99	-8.76	-0.2177
-7	40.42	0.75	48.99	-8.57	-0.2120
-6	40.25	0.75	48.99	-8.74	-0.2171
-5	40.26	0.75	48.99	-8.73	-0.2168
-4	40.76	0.75	48.99	-8.23	-0.2019
-3	41.44	0.75	48.99	-7.55	-0.1822
-2	42.93	0.75	48.99	-6.06	-0.1412
-1	42.98	0.75	48.99	-6.01	-0.1398
0	44.12	0.75	48.99	-4.87	-0.1104
1	44.89	0.75	48.99	-4.10	-0.0913
2	46.48	0.75	48.99	-2.51	-0.0540
3	49.61	0.75	48.99	0.62	0.0125
4	52.44	0.75	48.99	3.45	0.0658
5	59.75	0.75	48.99	10.76	0.1801
6	55.10	0.75	48.99	6.11	0.1109
7	48.71	0.75	48.99	-0.28	-0.0057
8	49.21	0.75	48.99	0.22	0.0045
9	47.61	0.75	48.99	-1.38	-0.0290
10	48.24	0.75	48.99	-0.75	-0.0155

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	40.00	0.625	36.805	3.20	0.0799
-9	40.00	0.625	36.805	3.20	0.0799
-8	40.00	0.625	36.805	3.20	0.0799
-7	40.00	0.625	36.805	3.20	0.0799
-6	39.94	0.625	36.805	3.14	0.0785
-5	39.95	0.625	36.805	3.15	0.0787
-4	40.11	0.625	36.805	3.31	0.0824
-3	40.00	0.625	36.805	3.20	0.0799
-2	40.00	0.625	36.805	3.20	0.0799
-1	40.11	0.625	36.805	3.31	0.0824
0	40.50	0.625	36.805	3.70	0.0912
1	41.70	0.625	36.805	4.90	0.1174
2	28.00	0.625	36.805	-8.81	-0.3145
3	31.12	0.625	36.805	-5.69	-0.1827
4	32.11	0.625	36.805	-4.70	-0.1462
5	34.50	0.625	36.805	-2.31	-0.0668
6	34.89	0.625	36.805	-1.92	-0.0549
7	36.91	0.625	36.805	0.10	0.0028
8	36.16	0.625	36.805	-0.65	-0.0178
9	37.12	0.625	36.805	0.31	0.0085
10	36.18	0.625	36.805	-0.63	-0.0173

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	32.05	0.75	32.09	-0.04	-0.0012
-9	30.75	0.75	32.09	-1.34	-0.0436
-8	30.87	0.75	32.09	-1.22	-0.0395
-7	31.61	0.75	32.09	-0.48	-0.0152
-6	31.00	0.75	32.09	-1.09	-0.0352
-5	32.00	0.75	32.09	-0.09	-0.0028
-4	32.00	0.75	32.09	-0.09	-0.0028
-3	33.00	0.75	32.09	0.91	0.0276
-2	33.00	0.75	32.09	0.91	0.0276
-1	33.61	0.75	32.09	1.52	0.0452
0	33.92	0.75	32.09	1.83	0.0540
1	30.16	0.75	32.09	-1.93	-0.0640
2	30.11	0.75	32.09	-1.98	-0.0658
3	30.00	0.75	32.09	-2.09	-0.0697
4	30.00	0.75	32.09	-2.09	-0.0697
5	30.16	0.75	32.09	-1.93	-0.0640
6	30.28	0.75	32.09	-1.81	-0.0598
7	30.11	0.75	32.09	-1.98	-0.0658
8	30.86	0.75	32.09	-1.23	-0.0399
9	31.16	0.75	32.09	-0.93	-0.0298
10	31.34	0.75	32.09	-0.75	-0.0239

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	26.00	0.50	26.5	-0.50	-0.0192
-9	26.00	0.50	26.5	-0.50	-0.0192
-8	26.00	0.50	26.5	-0.50	-0.0192
-7	25.84	0.50	26.5	-0.66	-0.0255
-6	26.00	0.50	26.5	-0.50	-0.0192
-5	26.00	0.50	26.5	-0.50	-0.0192
-4	26.00	0.50	26.5	-0.50	-0.0192
-3	26.00	0.50	26.5	-0.50	-0.0192
-2	26.00	0.50	26.5	-0.50	-0.0192
-1	26.00	0.50	26.5	-0.50	-0.0192
0	26.00	0.50	26.5	-0.50	-0.0192
1	26.50	0.50	26.5	0.00	0.0000
2	26.00	0.50	26.5	-0.50	-0.0192
3	26.00	0.50	26.5	-0.50	-0.0192
4	26.00	0.50	26.5	-0.50	-0.0192
5	26.00	0.50	26.5	-0.50	-0.0192
6	26.01	0.50	26.5	-0.49	-0.0188
7	26.00	0.50	26.5	-0.50	-0.0192
8	26.00	0.50	26.5	-0.50	-0.0192
9	26.00	0.50	26.5	-0.50	-0.0192
10	26.00	0.50	26.5	-0.50	-0.0192

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	75.00	1.20	70.2	4.80	0.0640
-9	74.00	1.20	70.2	3.80	0.0514
-8	74.00	1.20	70.2	3.80	0.0514
-7	75	1.20	70.2	4.80	0.0640
-6	75.00	1.20	70.2	4.80	0.0640
-5	75.00	1.20	70.2	4.80	0.0640
-4	73.00	1.20	70.2	2.80	0.0384
-3	73.00	1.20	70.2	2.80	0.0384
-2	72.00	1.20	70.2	1.80	0.0250
-1	72.00	1.20	70.2	1.80	0.0250
0	72.00	1.20	70.2	1.80	0.0250
1	71.00	1.20	70.2	0.80	0.0113
2	70.00	1.20	70.2	-0.20	-0.0029
3	71.00	1.20	70.2	0.80	0.0113
4	72.00	1.20	70.2	1.80	0.0250
5	69.00	1.20	70.2	-1.20	-0.0174
6	69.00	1.20	70.2	-1.20	-0.0174
7	69.00	1.20	70.2	-1.20	-0.0174
8	69.00	1.20	70.2	-1.20	-0.0174
9	69.00	1.20	70.2	-1.20	-0.0174
10	69.00	1.20	70.2	-1.20	-0.0174

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	64.00	1.30	64.3	-0.30	-0.0047
-9	65.00	1.30	64.3	0.70	0.0108
-8	66.00	1.30	64.3	1.70	0.0258
-7	65	1.30	64.3	0.70	0.0108
-6	65.00	1.30	64.3	0.70	0.0108
-5	67.00	1.30	64.3	2.70	0.0403
-4	64.00	1.30	64.3	-0.30	-0.0047
-3	65.00	1.30	64.3	0.70	0.0108
-2	63.00	1.30	64.3	-1.30	-0.0206
-1	62.00	1.30	64.3	-2.30	-0.0371
0	63.00	1.30	64.3	-1.30	-0.0206
1	63.00	1.30	64.3	-1.30	-0.0206
2	63.00	1.30	64.3	-1.30	-0.0206
3	63.00	1.30	64.3	-1.30	-0.0206
4	64.00	1.30	64.3	-0.30	-0.0047
5	63.00	1.30	64.3	-1.30	-0.0206
6	63.00	1.30	64.3	-1.30	-0.0206
7	64.00	1.30	64.3	-0.30	-0.0047
8	64.00	1.30	64.3	-0.30	-0.0047
9	63.00	1.30	64.3	-1.30	-0.0206
10	63.00	1.30	64.3	-1.30	-0.0206

## CARBACID LIMITED

## APPENDIX 10

1997

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	61.00	2.50	69.5	-8.50	-0.1393
-9	60.60	2.50	69.5	-8.90	-0.1469
-8	63.90	2.50	69.5	-5.60	-0.0876
-7	63	2.50	69.5	-6.50	-0.1032
-6	63.00	2.50	69.5	-6.50	-0.1032
-5	63.00	2.50	69.5	-6.50	-0.1032
-4	63.00	2.50	69.5	-6.50	-0.1032
-3	61.00	2.50	69.5	-8.50	-0.1393
-2	63.00	2.50	69.5	-6.50	-0.1032
-1	61.00	2.50	69.5	-8.50	-0.1393
0	65.00	2.50	69.5	-4.50	-0.0692
1	65.00	2.50	69.5	-4.50	-0.0692
2	65.00	2.50	69.5	-4.50	-0.0692
3	66.50	2.50	69.5	-3.00	-0.0451
4	66.00	2.50	69.5	-3.50	-0.0530
5	68.00	2.50	69.5	-1.50	-0.0221
6	65.00	2.50	69.5	-4.50	-0.0692
7	66.00	2.50	69.5	-3.50	-0.0530
8	67.00	2.50	69.5	-2.50	-0.0373
9	68.00	2.50	69.5	-1.50	-0.0221
10	67.00	2.50	69.5	-2.50	-0.0373

1998

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	54.00	1.10	48.1	5.90	0.1093
-9	56.00	1.10	48.1	7.90	0.1411
-8	55.00	1.10	48.1	6.90	0.1255
-7	54	1.10	48.1	5.90	0.1093
-6	56.00	1.10	48.1	7.90	0.1411
-5	53.00	1.10	48.1	4.90	0.0925
-4	52.00	1.10	48.1	3.90	0.0750
-3	53.00	1.10	48.1	4.90	0.0925
-2	55.00	1.10	48.1	6.90	0.1255
-1	54.00	1.10	48.1	5.90	0.1093
0	56.00	1.10	48.1	7.90	0.1411
1	51.00	1.10	48.1	2.90	0.0569
2	50.00	1.10	48.1	1.90	0.0380
3	49.00	1.10	48.1	0.90	0.0184
4	49.00	1.10	48.1	0.90	0.0184
5	48.10	1.10	48.1	0.00	0.0000
6	48.80	1.10	48.1	0.70	0.0143
7	49.00	1.10	48.1	0.90	0.0184
8	49.00	1.10	48.1	0.90	0.0184
9	48.00	1.10	48.1	-0.10	-0.0021
10	47.00	1.10	48.1	-1.10	-0.0234

CARBACID LIMITED

## APPENDIX 10

1997

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	61.00	2.50	69.5	-8.50	-0.1393
-9	60.60	2.50	69.5	-8.90	-0.1469
-8	63.90	2.50	69.5	-5.60	-0.0876
-7	63	2.50	69.5	-6.50	-0.1032
-6	63.00	2.50	69.5	-6.50	-0.1032
-5	63.00	2.50	69.5	-6.50	-0.1032
-4	63.00	2.50	69.5	-6.50	-0.1032
-3	61.00	2.50	69.5	-8.50	-0.1393
-2	63.00	2.50	69.5	-6.50	-0.1032
-1	61.00	2.50	69.5	-8.50	-0.1393
0	65.00	2.50	69.5	-4.50	-0.0692
1	65.00	2.50	69.5	-4.50	-0.0692
2	65.00	2.50	69.5	-4.50	-0.0692
3	66.50	2.50	69.5	-3.00	-0.0451
4	66.00	2.50	69.5	-3.50	-0.0530
5	68.00	2.50	69.5	-1.50	-0.0221
6	65.00	2.50	69.5	-4.50	-0.0692
7	66.00	2.50	69.5	-3.50	-0.0530
8	67.00	2.50	69.5	-2.50	-0.0373
9	68.00	2.50	69.5	-1.50	-0.0221
10	67.00	2.50	69.5	-2.50	-0.0373

1998

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	54.00	1.10	48.1	5.90	0.1093
-9	56.00	1.10	48.1	7.90	0.1411
-8	55.00	1.10	48.1	6.90	0.1255
-7	54	1.10	48.1	5.90	0.1093
-6	56.00	1.10	48.1	7.90	0.1411
-5	53.00	1.10	48.1	4.90	0.0925
-4	52.00	1.10	48.1	3.90	0.0750
-3	53.00	1.10	48.1	4.90	0.0925
-2	55.00	1.10	48.1	6.90	0.1255
-1	54.00	1.10	48.1	5.90	0.1093
0	56.00	1.10	48.1	7.90	0.1411
1	51.00	1.10	48.1	2.90	0.0569
2	50.00	1.10	48.1	1.90	0.0380
3	49.00	1.10	48.1	0.90	0.0184
4	49.00	1.10	48.1	0.90	0.0184
5	48.10	1.10	48.1	0.00	0.0000
6	48.80	1.10	48.1	0.70	0.0143
7	49.00	1.10	48.1	0.90	0.0184
8	49.00	1.10	48.1	0.90	0.0184
9	48.00	1.10	48.1	-0.10	-0.0021
10	47.00	1.10	48.1	-1.10	-0.0234

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	22.49	0.50	21.2	1.29	0.0574
-9	22.78	0.50	21.2	1.58	0.0694
-8	22.96	0.50	21.2	1.76	0.0767
-7	22	0.50	21.2	0.80	0.0364
-6	23.00	0.50	21.2	1.80	0.0783
-5	23.00	0.50	21.2	1.80	0.0783
-4	23.60	0.50	21.2	2.40	0.1017
-3	23.15	0.50	21.2	1.95	0.0842
-2	23.75	0.50	21.2	2.55	0.1074
-1	22.99	0.50	21.2	1.79	0.0779
0	23.00	0.50	21.2	1.80	0.0783
1	23.00	0.50	21.2	1.80	0.0783
2	23.00	0.50	21.2	1.80	0.0783
3	23.00	0.50	21.2	1.80	0.0783
4	23.00	0.50	21.2	1.80	0.0783
5	23.00	0.50	21.2	1.80	0.0783
6	21.70	0.50	21.2	0.50	0.0230
7	21.30	0.50	21.2	0.10	0.0047
8	21.00	0.50	21.2	-0.20	-0.0095
9	21.00	0.50	21.2	-0.20	-0.0095
10	20.70	0.50	21.2	-0.50	-0.0242

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	21.00	0.67	22.67	-1.67	-0.0795
-9	20.50	0.67	22.67	-2.17	-0.1059
-8	20.40	0.67	22.67	-2.27	-0.1113
-7	21	0.67	22.67	-1.67	-0.0795
-6	20.00	0.67	22.67	-2.67	-0.1335
-5	20.25	0.67	22.67	-2.42	-0.1195
-4	20.00	0.67	22.67	-2.67	-0.1335
-3	20.00	0.67	22.67	-2.67	-0.1335
-2	20.19	0.67	22.67	-2.48	-0.1228
-1	20.25	0.67	22.67	-2.42	-0.1195
0	20.00	0.67	22.67	-2.67	-0.1335
1	20.00	0.67	22.67	-2.67	-0.1335
2	19.00	0.67	22.67	-3.67	-0.1932
3	18.00	0.67	22.67	-4.67	-0.2594
4	19.00	0.67	22.67	-3.67	-0.1932
5	18.00	0.67	22.67	-4.67	-0.2594
6	21.00	0.67	22.67	-1.67	-0.0795
7	20.00	0.67	22.67	-2.67	-0.1335
8	20.40	0.67	22.67	-2.27	-0.1113
9	21.00	0.67	22.67	-1.67	-0.0795
10	22.00	0.67	22.67	-0.67	-0.0305

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	17.50	0.67	13.91	3.59	0.2051
-9	17.25	0.67	13.91	3.34	0.1936
-8	17.14	0.67	13.91	3.23	0.1884
-7	18.3	0.67	13.91	4.39	0.2399
-6	18.45	0.67	13.91	4.54	0.2461
-5	17.10	0.67	13.91	3.19	0.1865
-4	17.96	0.67	13.91	4.05	0.2255
-3	17.15	0.67	13.91	3.24	0.1889
-2	17.35	0.67	13.91	3.44	0.1983
-1	17.15	0.67	13.91	3.24	0.1889
0	17.35	0.67	13.91	3.44	0.1983
1	16.30	0.67	13.91	2.39	0.1466
2	15.55	0.67	13.91	1.64	0.1055
3	15.00	0.67	13.91	1.09	0.0727
4	15.00	0.67	13.91	1.09	0.0727
5	14.20	0.67	13.91	0.29	0.0204
6	14.70	0.67	13.91	0.79	0.0537
7	14.13	0.67	13.91	0.22	0.0156
8	13.74	0.67	13.91	-0.17	-0.0124
9	13.61	0.67	13.91	-0.30	-0.0220
10	13.24	0.67	13.91	-0.67	-0.0506

1998  
2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	14.00	0.67	15.86	-1.86	-0.1329
-9	14.05	0.67	15.86	-1.81	-0.1288
-8	14.00	0.67	15.86	-1.86	-0.1329
-7	14	0.67	15.86	-1.86	-0.1329
-6	14.00	0.67	15.86	-1.86	-0.1329
-5	13.80	0.67	15.86	-2.06	-0.1493
-4	13.75	0.67	15.86	-2.11	-0.1535
-3	14.00	0.67	15.86	-1.86	-0.1329
-2	14.00	0.67	15.86	-1.86	-0.1329
-1	14.00	0.67	15.86	-1.86	-0.1329
0	14.00	0.67	15.86	-1.86	-0.1329
1	14.15	0.67	15.86	-1.71	-0.1208
2	14.25	0.67	15.86	-1.61	-0.1130
3	15.00	0.67	15.86	-0.86	-0.0573
4	15.14	0.67	15.86	-0.72	-0.0476
5	15.35	0.67	15.86	-0.51	-0.0332
6	15.25	0.67	15.86	-0.61	-0.0400
7	15.00	0.67	15.86	-0.86	-0.0573
8	15.05	0.67	15.86	-0.81	-0.0538
9	15.00	0.67	15.86	-0.86	-0.0573
10	15.19	0.67	15.86	-0.67	-0.0441

1997

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	31.50	2.50	35.75	-4.25	-0.1349
-9	31.00	2.50	35.75	-4.75	-0.1532
-8	31.00	2.50	35.75	-4.75	-0.1532
-7	31.39	2.50	35.75	-4.36	-0.1389
-6	31.00	2.50	35.75	-4.75	-0.1532
-5	31.25	2.50	35.75	-4.50	-0.1440
-4	31.25	2.50	35.75	-4.50	-0.1440
-3	31.25	2.50	35.75	-4.50	-0.1440
-2	31.25	2.50	35.75	-4.50	-0.1440
-1	31.25	2.50	35.75	-4.50	-0.1440
0	31.25	2.50	35.75	-4.50	-0.1440
1	31.50	2.50	35.75	-4.25	-0.1349
2	31.65	2.50	35.75	-4.10	-0.1295
3	31.55	2.50	35.75	-4.20	-0.1331
4	32.15	2.50	35.75	-3.60	-0.1120
5	31.25	2.50	35.75	-4.50	-0.1440
6	33.45	2.50	35.75	-2.30	-0.0688
7	33.45	2.50	35.75	-2.30	-0.0688
8	33.45	2.50	35.75	-2.30	-0.0688
9	33.47	2.50	35.75	-2.28	-0.0681
10	33.25	2.50	35.75	-2.50	-0.0752

1998

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	29.94	2.00	31	-1.06	-0.0354
-9	29.94	2.00	31	-1.06	-0.0354
-8	29.75	2.00	31	-1.25	-0.0420
-7	30	2.00	31	-1.00	-0.0333
-6	30.00	2.00	31	-1.00	-0.0333
-5	30.00	2.00	31	-1.00	-0.0333
-4	30.00	2.00	31	-1.00	-0.0333
-3	29.55	2.00	31	-1.45	-0.0491
-2	29.74	2.00	31	-1.26	-0.0424
-1	30.00	2.00	31	-1.00	-0.0333
0	30.00	2.00	31	-1.00	-0.0333
1	30.00	2.00	31	-1.00	-0.0333
2	29.86	2.00	31	-1.14	-0.0382
3	30.00	2.00	31	-1.00	-0.0333
4	30.00	2.00	31	-1.00	-0.0333
5	30.00	2.00	31	-1.00	-0.0333
6	30.00	2.00	31	-1.00	-0.0333
7	30.00	2.00	31	-1.00	-0.0333
8	29.75	2.00	31	-1.25	-0.0420
9	29.00	2.00	31	-2.00	-0.0690
10	29.00	2.00	31	-2.00	-0.0690

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	23.25	2.00	20	3.25	0.1398
-9	23.25	2.00	20	3.25	0.1398
-8	23.25	2.00	20	3.25	0.1398
-7	22.75	2.00	20	2.75	0.1209
-6	22.75	2.00	20	2.75	0.1209
-5	21.65	2.00	20	1.65	0.0762
-4	25.36	2.00	20	5.36	0.2114
-3	25.36	2.00	20	5.36	0.2114
-2	25.36	2.00	20	5.36	0.2114
-1	25.36	2.00	20	5.36	0.2114
0	23.75	2.00	20	3.75	0.1579
1	22.65	2.00	20	2.65	0.1170
2	22.65	2.00	20	2.65	0.1170
3	322.65	2.00	20	302.65	0.9380
4	23.25	2.00	20	3.25	0.1398
5	22.15	2.00	20	2.15	0.0971
6	22.35	2.00	20	2.35	0.1051
7	22.25	2.00	20	2.25	0.1011
8	22.25	2.00	20	2.25	0.1011
9	21.75	2.00	20	1.75	0.0805
10	18.00	2.00	20	-2.00	-0.1111

1998

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	12.70	4.50	20.23	-7.53	-0.5929
-9	12.80	4.50	20.23	-7.43	-0.5805
-8	12.80	4.50	20.23	-7.43	-0.5805
-7	12.7	4.50	20.23	-7.53	-0.5929
-6	12.70	4.50	20.23	-7.53	-0.5929
-5	12.70	4.50	20.23	-7.53	-0.5929
-4	12.70	4.50	20.23	-7.53	-0.5929
-3	12.70	4.50	20.23	-7.53	-0.5929
-2	12.70	4.50	20.23	-7.53	-0.5929
-1	12.71	4.50	20.23	-7.52	-0.5917
0	12.72	4.50	20.23	-7.51	-0.5904
1	12.84	4.50	20.23	-7.39	-0.5755
2	12.92	4.50	20.23	-7.31	-0.5658
3	13.00	4.50	20.23	-7.23	-0.5562
4	13.14	4.50	20.23	-7.09	-0.5396
5	13.27	4.50	20.23	-6.96	-0.5245
6	15.12	4.50	20.23	-5.11	-0.3380
7	15.64	4.50	20.23	-4.59	-0.2935
8	15.29	4.50	20.23	-4.94	-0.3231
9	15.66	4.50	20.23	-4.57	-0.2918
10	15.73	4.50	20.23	-4.50	-0.2861

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	29.25	0.80	32.05	-2.80	-0.0957
-9	28.99	0.80	32.05	-3.06	-0.1056
-8	32.55	0.80	32.05	0.50	0.0154
-7	32.88	0.80	32.05	0.83	0.0252
-6	32.85	0.80	32.05	0.80	0.0244
-5	30.45	0.80	32.05	-1.60	-0.0525
-4	30.42	0.80	32.05	-1.63	-0.0536
-3	30.25	0.80	32.05	-1.80	-0.0595
-2	30.25	0.80	32.05	-1.80	-0.0595
-1	30.20	0.80	32.05	-1.85	-0.0613
0	30.56	0.80	32.05	-1.49	-0.0488
1	30.00	0.80	32.05	-2.05	-0.0683
2	32.67	0.80	32.05	0.62	0.0190
3	31.24	0.80	32.05	-0.81	-0.0259
4	31.25	0.80	32.05	-0.80	-0.0256
5	30.00	0.80	32.05	-2.05	-0.0683
6	32.87	0.80	32.05	0.82	0.0249
7	30.77	0.80	32.05	-1.28	-0.0416
8	30.56	0.80	32.05	-1.49	-0.0488
9	31.30	0.80	32.05	-0.75	-0.0240
10	31.25	0.80	32.05	-0.80	-0.0256

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	25.21	1.50	36.48	-11.27	-0.4470
-9	25.00	1.50	36.48	-11.48	-0.4592
-8	25.50	1.50	36.48	-10.98	-0.4306
-7	27	1.50	36.48	-9.48	-0.3511
-6	25.27	1.50	36.48	-11.21	-0.4436
-5	25.03	1.50	36.48	-11.45	-0.4575
-4	25.03	1.50	36.48	-11.45	-0.4575
-3	25.03	1.50	36.48	-11.45	-0.4575
-2	25.20	1.50	36.48	-11.28	-0.4476
-1	25.50	1.50	36.48	-10.98	-0.4306
0	26.00	1.50	36.48	-10.48	-0.4031
1	27.00	1.50	36.48	-9.48	-0.3511
2	27.00	1.50	36.48	-9.48	-0.3511
3	27.50	1.50	36.48	-8.98	-0.3265
4	32.23	1.50	36.48	-4.25	-0.1319
5	33.33	1.50	36.48	-3.15	-0.0945
6	33.76	1.50	36.48	-2.72	-0.0806
7	34.51	1.50	36.48	-1.97	-0.0571
8	34.76	1.50	36.48	-1.72	-0.0495
9	34.81	1.50	36.48	-1.67	-0.0480
10	34.98	1.50	36.48	-1.50	-0.0429

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	18.84	0.70	18.04	0.80	0.0425
-9	18.47	0.70	18.04	0.43	0.0233
-8	18.46	0.70	18.04	0.42	0.0228
-7	18.8	0.70	18.04	0.76	0.0404
-6	18.70	0.70	18.04	0.66	0.0353
-5	18.70	0.70	18.04	0.66	0.0353
-4	18.50	0.70	18.04	0.46	0.0249
-3	18.97	0.70	18.04	0.93	0.0490
-2	18.99	0.70	18.04	0.95	0.0500
-1	19.50	0.70	18.04	1.46	0.0749
0	19.68	0.70	18.04	1.64	0.0833
1	19.54	0.70	18.04	1.50	0.0768
2	19.44	0.70	18.04	1.40	0.0720
3	19.00	0.70	18.04	0.96	0.0505
4	19.00	0.70	18.04	0.96	0.0505
5	18.98	0.70	18.04	0.94	0.0495
6	18.02	0.70	18.04	-0.02	-0.0011
7	17.98	0.70	18.04	-0.06	-0.0033
8	17.46	0.70	18.04	-0.58	-0.0332
9	17.34	0.70	18.04	-0.70	-0.0404
10	17.34	0.70	18.04	-0.70	-0.0404

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	16.00	0.50	13.4	2.60	0.1625
-9	16.00	0.50	13.4	2.60	0.1625
-8	16.00	0.50	13.4	2.60	0.1625
-7	16	0.50	13.4	2.60	0.1625
-6	16.00	0.50	13.4	2.60	0.1625
-5	16.00	0.50	13.4	2.60	0.1625
-4	16.00	0.50	13.4	2.60	0.1625
-3	15.95	0.50	13.4	2.55	0.1599
-2	15.97	0.50	13.4	2.57	0.1609
-1	15.26	0.50	13.4	1.86	0.1219
0	15.10	0.50	13.4	1.70	0.1126
1	14.20	0.50	13.4	0.80	0.0563
2	14.10	0.50	13.4	0.70	0.0496
3	13.80	0.50	13.4	0.40	0.0290
4	13.81	0.50	13.4	0.41	0.0297
5	13.50	0.50	13.4	0.10	0.0074
6	13.00	0.50	13.4	-0.40	-0.0308
7	12.90	0.50	13.4	-0.50	-0.0388
8	12.90	0.50	13.4	-0.50	-0.0388
9	12.90	0.50	13.4	-0.50	-0.0388
10	12.90	0.50	13.4	-0.50	-0.0388

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	70.00	1.50	71.5	-1.50	-0.0214
-9	70.00	1.50	71.5	-1.50	-0.0214
-8	70.00	1.50	71.5	-1.50	-0.0214
-7	69.35	1.50	71.5	-2.15	-0.0310
-6	69.00	1.50	71.5	-2.50	-0.0362
-5	69.00	1.50	71.5	-2.50	-0.0362
-4	69.05	1.50	71.5	-2.45	-0.0355
-3	69.35	1.50	71.5	-2.15	-0.0310
-2	69.00	1.50	71.5	-2.50	-0.0362
-1	69.00	1.50	71.5	-2.50	-0.0362
0	69.00	1.50	71.5	-2.50	-0.0362
1	70.00	1.50	71.5	-1.50	-0.0214
2	70.00	1.50	71.5	-1.50	-0.0214
3	70.00	1.50	71.5	-1.50	-0.0214
4	70.00	1.50	71.5	-1.50	-0.0214
5	70.00	1.50	71.5	-1.50	-0.0214
6	70.00	1.50	71.5	-1.50	-0.0214
7	70.00	1.50	71.5	-1.50	-0.0214
8	70.00	1.50	71.5	-1.50	-0.0214
9	70.00	1.50	71.5	-1.50	-0.0214
10	70.00	1.50	71.5	-1.50	-0.0214

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	156.00	7.50	146.91	9.09	0.0583
-9	151.00	7.50	146.91	4.09	0.0271
-8	151.00	7.50	146.91	4.09	0.0271
-7	151.55	7.50	146.91	4.64	0.0306
-6	160.00	7.50	146.91	13.09	0.0818
-5	156.00	7.50	146.91	9.09	0.0583
-4	160.75	7.50	146.91	13.84	0.0861
-3	161.34	7.50	146.91	14.43	0.0894
-2	165.40	7.50	146.91	18.49	0.1118
-1	165.40	7.50	146.91	18.49	0.1118
0	166.34	7.50	146.91	19.43	0.1168
1	164.35	7.50	146.91	17.44	0.1061
2	163.55	7.50	146.91	16.64	0.1017
3	155.98	7.50	146.91	9.07	0.0581
4	155.74	7.50	146.91	8.83	0.0567
5	155.70	7.50	146.91	8.79	0.0565
6	140.98	7.50	146.91	-5.93	-0.0421
7	141.92	7.50	146.91	-4.99	-0.0352
8	141.00	7.50	146.91	-5.91	-0.0419
9	141.00	7.50	146.91	-5.91	-0.0419
10	139.41	7.50	146.91	-7.50	-0.0538

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	143.00	2.50	143.5	-0.50	-0.0035
-9	143.00	2.50	143.5	-0.50	-0.0035
-8	142.00	2.50	143.5	-1.50	-0.0106
-7	142	2.50	143.5	-1.50	-0.0106
-6	143.00	2.50	143.5	-0.50	-0.0035
-5	145.00	2.50	143.5	1.50	0.0103
-4	145.00	2.50	143.5	1.50	0.0103
-3	143.00	2.50	143.5	-0.50	-0.0035
-2	143.00	2.50	143.5	-0.50	-0.0035
-1	143.00	2.50	143.5	-0.50	-0.0035
0	145.00	2.50	143.5	1.50	0.0103
1	145.00	2.50	143.5	1.50	0.0103
2	145.00	2.50	143.5	1.50	0.0103
3	143.00	2.50	143.5	-0.50	-0.0035
4	143.00	2.50	143.5	-0.50	-0.0035
5	143.00	2.50	143.5	-0.50	-0.0035
6	143.00	2.50	143.5	-0.50	-0.0035
7	141.00	2.50	143.5	-2.50	-0.0177
8	141.00	2.50	143.5	-2.50	-0.0177
9	141.00	2.50	143.5	-2.50	-0.0177
10	141.00	2.50	143.5	-2.50	-0.0177

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	77.00	2.50	74	3.00	0.0390
-9	77.00	2.50	74	3.00	0.0390
-8	77.00	2.50	74	3.00	0.0390
-7	77	2.50	74	3.00	0.0390
-6	77.00	2.50	74	3.00	0.0390
-5	77.00	2.50	74	3.00	0.0390
-4	77.00	2.50	74	3.00	0.0390
-3	77.00	2.50	74	3.00	0.0390
-2	77.17	2.50	74	3.17	0.0411
-1	75.79	2.50	74	1.79	0.0236
0	75.79	2.50	74	1.79	0.0236
1	76.00	2.50	74	2.00	0.0263
2	75.00	2.50	74	1.00	0.0133
3	75.00	2.50	74	1.00	0.0133
4	75.00	2.50	74	1.00	0.0133
5	75.00	2.50	74	1.00	0.0133
6	75.00	2.50	74	1.00	0.0133
7	75.00	2.50	74	1.00	0.0133
8	72.50	2.50	74	-1.50	-0.0207
9	71.50	2.50	74	-2.50	-0.0350
10	71.50	2.50	74	-2.50	-0.0350

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	24.00	0.75	24.76	-0.76	-0.0317
-9	24.00	0.75	24.76	-0.76	-0.0317
-8	24.00	0.75	24.76	-0.76	-0.0317
-7	24	0.75	24.76	-0.76	-0.0317
-6	23.99	0.75	24.76	-0.77	-0.0321
-5	24.00	0.75	24.76	-0.76	-0.0317
-4	24.00	0.75	24.76	-0.76	-0.0317
-3	24.00	0.75	24.76	-0.76	-0.0317
-2	24.01	0.75	24.76	-0.75	-0.0312
-1	24.00	0.75	24.76	-0.76	-0.0317
0	24.00	0.75	24.76	-0.76	-0.0317
1	24.00	0.75	24.76	-0.76	-0.0317
2	24.00	0.75	24.76	-0.76	-0.0317
3	24.00	0.75	24.76	-0.76	-0.0317
4	24.00	0.75	24.76	-0.76	-0.0317
5	24.00	0.75	24.76	-0.76	-0.0317
6	24.00	0.75	24.76	-0.76	-0.0317
7	24.06	0.75	24.76	-0.70	-0.0291
8	24.02	0.75	24.76	-0.74	-0.0308
9	24.03	0.75	24.76	-0.73	-0.0304
10	24.01	0.75	24.76	-0.75	-0.0312

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	20.28	1.00	23.79	-3.51	-0.1731
-9	20.59	1.00	23.79	-3.20	-0.1554
-8	21.14	1.00	23.79	-2.65	-0.1254
-7	21.23	1.00	23.79	-2.56	-0.1206
-6	21.75	1.00	23.79	-2.04	-0.0938
-5	22.03	1.00	23.79	-1.76	-0.0799
-4	22.08	1.00	23.79	-1.71	-0.0774
-3	22.08	1.00	23.79	-1.71	-0.0774
-2	21.96	1.00	23.79	-1.83	-0.0833
-1	21.50	1.00	23.79	-2.29	-0.1065
0	21.60	1.00	23.79	-2.19	-0.1014
1	24.66	1.00	23.79	0.87	0.0353
2	23.55	1.00	23.79	-0.24	-0.0102
3	22.23	1.00	23.79	-1.56	-0.0702
4	22.22	1.00	23.79	-1.57	-0.0707
5	23.01	1.00	23.79	-0.78	-0.0339
6	22.88	1.00	23.79	-0.91	-0.0398
7	22.46	1.00	23.79	-1.33	-0.0592
8	22.46	1.00	23.79	-1.33	-0.0592
9	23.13	1.00	23.79	-0.66	-0.0285
10	22.79	1.00	23.79	-1.00	-0.0439

1999

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	16.01	1.00	14.86	1.15	0.0718
-9	16.01	1.00	14.86	1.15	0.0718
-8	16.00	1.00	14.86	1.14	0.0713
-7	16	1.00	14.86	1.14	0.0713
-6	16.00	1.00	14.86	1.14	0.0713
-5	16.00	1.00	14.86	1.14	0.0713
-4	16.00	1.00	14.86	1.14	0.0713
-3	15.79	1.00	14.86	0.93	0.0589
-2	15.84	1.00	14.86	0.98	0.0619
-1	15.49	1.00	14.86	0.63	0.0407
0	15.14	1.00	14.86	0.28	0.0185
1	15.13	1.00	14.86	0.27	0.0178
2	15.11	1.00	14.86	0.25	0.0165
3	15.47	1.00	14.86	0.61	0.0394
4	15.58	1.00	14.86	0.72	0.0462
5	15.60	1.00	14.86	0.74	0.0474
6	15.61	1.00	14.86	0.75	0.0480
7	15.20	1.00	14.86	0.34	0.0224
8	14.02	1.00	14.86	-0.84	-0.0599
9	13.89	1.00	14.86	-0.97	-0.0698
10	13.86	1.00	14.86	-1.00	-0.0722

2000

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	9.51	0.25	8.77	0.74	0.0778
-9	9.55	0.25	8.77	0.78	0.0817
-8	9.50	0.25	8.77	0.73	0.0768
-7	9.3	0.25	8.77	0.53	0.0570
-6	9.29	0.25	8.77	0.52	0.0560
-5	9.14	0.25	8.77	0.37	0.0405
-4	9.17	0.25	8.77	0.40	0.0436
-3	9.13	0.25	8.77	0.36	0.0394
-2	9.22	0.25	8.77	0.45	0.0488
-1	9.22	0.25	8.77	0.45	0.0488
0	7.92	0.25	8.77	-0.85	-0.1073
1	7.95	0.25	8.77	-0.82	-0.1031
2	7.92	0.25	8.77	-0.85	-0.1073
3	8.04	0.25	8.77	-0.73	-0.0908
4	8.07	0.25	8.77	-0.70	-0.0867
5	8.07	0.25	8.77	-0.70	-0.0867
6	8.08	0.25	8.77	-0.69	-0.0854
7	8.15	0.25	8.77	-0.62	-0.0761
8	8.37	0.25	8.77	-0.40	-0.0478
9	8.55	0.25	8.77	-0.22	-0.0257
10	8.52	0.25	8.77	-0.25	-0.0293

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	102.00	1.40	102.4	-0.40	-0.0039
-9	100.90	1.40	102.4	-1.50	-0.0149
-8	101.00	1.40	102.4	-1.40	-0.0139
-7	101	1.40	102.4	-1.40	-0.0139
-6	101.00	1.40	102.4	-1.40	-0.0139
-5	103.00	1.40	102.4	0.60	0.0058
-4	103.00	1.40	102.4	0.60	0.0058
-3	102.00	1.40	102.4	-0.40	-0.0039
-2	102.00	1.40	102.4	-0.40	-0.0039
-1	102.00	1.40	102.4	-0.40	-0.0039
0	102.00	1.40	102.4	-0.40	-0.0039
1	103.00	1.40	102.4	0.60	0.0058
2	102.00	1.40	102.4	-0.40	-0.0039
3	102.00	1.40	102.4	-0.40	-0.0039
4	102.00	1.40	102.4	-0.40	-0.0039
5	102.00	1.40	102.4	-0.40	-0.0039
6	102.00	1.40	102.4	-0.40	-0.0039
7	96.00	1.40	102.4	-6.40	-0.0667
8	97.00	1.40	102.4	-5.40	-0.0557
9	99.29	1.40	102.4	-3.11	-0.0313
10	101.00	1.40	102.4	-1.40	-0.0139

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	123.00	1.75	130.75	-7.75	-0.0630
-9	128.00	1.75	130.75	-2.75	-0.0215
-8	129.00	1.75	130.75	-1.75	-0.0136
-7	129	1.75	130.75	-1.75	-0.0136
-6	129.00	1.75	130.75	-1.75	-0.0136
-5	129.00	1.75	130.75	-1.75	-0.0136
-4	129.00	1.75	130.75	-1.75	-0.0136
-3	129.00	1.75	130.75	-1.75	-0.0136
-2	129.00	1.75	130.75	-1.75	-0.0136
-1	129.00	1.75	130.75	-1.75	-0.0136
0	129.00	1.75	130.75	-1.75	-0.0136
1	126.00	1.75	130.75	-4.75	-0.0377
2	126.00	1.75	130.75	-4.75	-0.0377
3	124.00	1.75	130.75	-6.75	-0.0544
4	124.00	1.75	130.75	-6.75	-0.0544
5	124.00	1.75	130.75	-6.75	-0.0544
6	124.00	1.75	130.75	-6.75	-0.0544
7	115.00	1.75	130.75	-15.75	-0.1370
8	115.00	1.75	130.75	-15.75	-0.1370
9	127.00	1.75	130.75	-3.75	-0.0295
10	129.00	1.75	130.75	-1.75	-0.0136

1999

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	141.00	1.75	142.75	-1.75	-0.0124
-9	141.00	1.75	142.75	-1.75	-0.0124
-8	142.07	1.75	142.75	-0.68	-0.0048
-7	145	1.75	142.75	2.25	0.0155
-6	143.00	1.75	142.75	0.25	0.0017
-5	143.00	1.75	142.75	0.25	0.0017
-4	143.00	1.75	142.75	0.25	0.0017
-3	141.03	1.75	142.75	-1.72	-0.0122
-2	143.00	1.75	142.75	0.25	0.0017
-1	143.00	1.75	142.75	0.25	0.0017
0	140.29	1.75	142.75	-2.46	-0.0175
1	141.00	1.75	142.75	-1.75	-0.0124
2	141.00	1.75	142.75	-1.75	-0.0124
3	141.00	1.75	142.75	-1.75	-0.0124
4	141.00	1.75	142.75	-1.75	-0.0124
5	143.00	1.75	142.75	0.25	0.0017
6	143.00	1.75	142.75	0.25	0.0017
7	143.00	1.75	142.75	0.25	0.0017
8	141.00	1.75	142.75	-1.75	-0.0124
9	141.00	1.75	142.75	-1.75	-0.0124
10	141.00	1.75	142.75	-1.75	-0.0124

2000

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	95.09	1.00	71	24.09	0.2533
-9	97.95	1.00	71	26.95	0.2751
-8	97.65	1.00	71	26.65	0.2729
-7	92.75	1.00	71	21.75	0.2345
-6	92.45	1.00	71	21.45	0.2320
-5	91.75	1.00	71	20.75	0.2262
-4	90.00	1.00	71	19.00	0.2111
-3	79.88	1.00	71	8.88	0.1112
-2	78.64	1.00	71	7.64	0.0972
-1	79.14	1.00	71	8.14	0.1029
0	70.00	1.00	71	-1.00	-0.0143
1	70.00	1.00	71	-1.00	-0.0143
2	70.00	1.00	71	-1.00	-0.0143
3	70.00	1.00	71	-1.00	-0.0143
4	70.00	1.00	71	-1.00	-0.0143
5	70.00	1.00	71	-1.00	-0.0143
6	70.00	1.00	71	-1.00	-0.0143
7	70.00	1.00	71	-1.00	-0.0143
8	70.00	1.00	71	-1.00	-0.0143
9	70.00	1.00	71	-1.00	-0.0143
10	70.00	1.00	71	-1.00	-0.0143

1997

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	46.48	0.75	49.53	-3.05	-0.0656
-9	46.99	0.75	49.53	-2.54	-0.0541
-8	46.93	0.75	49.53	-2.60	-0.0554
-7	47.07	0.75	49.53	-2.46	-0.0523
-6	47.45	0.75	49.53	-2.08	-0.0438
-5	47.45	0.75	49.53	-2.08	-0.0438
-4	47.45	0.75	49.53	-2.08	-0.0438
-3	46.34	0.75	49.53	-3.19	-0.0688
-2	47.95	0.75	49.53	-1.58	-0.0330
-1	46.51	0.75	49.53	-3.02	-0.0649
0	53.33	0.75	49.53	3.80	0.0713
1	53.48	0.75	49.53	3.95	0.0739
2	46.50	0.75	49.53	-3.03	-0.0652
3	48.88	0.75	49.53	-0.65	-0.0133
4	49.89	0.75	49.53	0.36	0.0072
5	48.99	0.75	49.53	-0.54	-0.0110
6	48.72	0.75	49.53	-0.81	-0.0166
7	48.72	0.75	49.53	-0.81	-0.0166
8	48.72	0.75	49.53	-0.81	-0.0166
9	48.72	0.75	49.53	-0.81	-0.0166
10	48.78	0.75	49.53	-0.75	-0.0154

1998

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	50.00	1.00	53.82	-3.82	-0.0764
-9	50.01	1.00	53.82	-3.81	-0.0762
-8	50.90	1.00	53.82	-2.92	-0.0574
-7	50.59	1.00	53.82	-3.23	-0.0638
-6	50.55	1.00	53.82	-3.27	-0.0647
-5	49.85	1.00	53.82	-3.97	-0.0796
-4	49.62	1.00	53.82	-4.20	-0.0846
-3	49.59	1.00	53.82	-4.23	-0.0853
-2	51.77	1.00	53.82	-2.05	-0.0396
-1	51.63	1.00	53.82	-2.19	-0.0424
0	50.47	1.00	53.82	-3.35	-0.0664
1	50.27	1.00	53.82	-3.55	-0.0706
2	50.21	1.00	53.82	-3.61	-0.0719
3	50.29	1.00	53.82	-3.53	-0.0702
4	50.39	1.00	53.82	-3.43	-0.0681
5	52.86	1.00	53.82	-0.96	-0.0182
6	51.51	1.00	53.82	-2.31	-0.0448
7	50.71	1.00	53.82	-3.11	-0.0613
8	52.98	1.00	53.82	-0.84	-0.0159
9	52.99	1.00	53.82	-0.83	-0.0157
10	52.82	1.00	53.82	-1.00	-0.0189

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	35.10	1.00	35.24	-0.14	-0.0040
-9	32.46	1.00	35.24	-2.78	-0.0856
-8	33.18	1.00	35.24	-2.06	-0.0621
-7	33.25	1.00	35.24	-1.99	-0.0598
-6	33.18	1.00	35.24	-2.06	-0.0621
-5	33.97	1.00	35.24	-1.27	-0.0374
-4	34.00	1.00	35.24	-1.24	-0.0365
-3	33.00	1.00	35.24	-2.24	-0.0679
-2	33.00	1.00	35.24	-2.24	-0.0679
-1	31.67	1.00	35.24	-3.57	-0.1127
0	32.98	1.00	35.24	-2.26	-0.0685
1	38.07	1.00	35.24	2.83	0.0743
2	37.90	1.00	35.24	2.66	0.0702
3	37.71	1.00	35.24	2.47	0.0655
4	36.85	1.00	35.24	1.61	0.0437
5	36.87	1.00	35.24	1.63	0.0442
6	37.29	1.00	35.24	2.05	0.0550
7	37.14	1.00	35.24	1.90	0.0512
8	34.20	1.00	35.24	-1.04	-0.0304
9	33.28	1.00	35.24	-1.96	-0.0589
10	34.24	1.00	35.24	-1.00	-0.0292

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	25.87	1.05	28.44	-2.57	-0.0993
-9	25.75	1.05	28.44	-2.69	-0.1045
-8	25.90	1.05	28.44	-2.54	-0.0981
-7	26	1.05	28.44	-2.44	-0.0938
-6	26.00	1.05	28.44	-2.44	-0.0938
-5	26.00	1.05	28.44	-2.44	-0.0938
-4	26.50	1.05	28.44	-1.94	-0.0732
-3	26.50	1.05	28.44	-1.94	-0.0732
-2	26.85	1.05	28.44	-1.59	-0.0592
-1	27.10	1.05	28.44	-1.34	-0.0494
0	27.11	1.05	28.44	-1.33	-0.0491
1	27.12	1.05	28.44	-1.32	-0.0487
2	27.00	1.05	28.44	-1.44	-0.0533
3	27.80	1.05	28.44	-0.64	-0.0230
4	27.00	1.05	28.44	-1.44	-0.0533
5	28.80	1.05	28.44	0.36	0.0125
6	28.65	1.05	28.44	0.21	0.0073
7	28.44	1.05	28.44	0.00	0.0000
8	26.00	1.05	28.44	-2.44	-0.0938
9	27.66	1.05	28.44	-0.78	-0.0282
10	27.39	1.05	28.44	-1.05	-0.0383

1997

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	109.14	2.125	151.915	-42.78
-9	110.10	2.125	151.915	-41.82
-8	113.68	2.125	151.915	-38.24
-7	116.09	2.125	151.915	-35.83
-6	114.87	2.125	151.915	-37.05
-5	115.85	2.125	151.915	-36.07
-4	116.77	2.125	151.915	-35.15
-3	118.67	2.125	151.915	-33.25
-2	116.00	2.125	151.915	-35.92
-1	117.76	2.125	151.915	-34.16
0	115.10	2.125	151.915	-36.82
1	140.00	2.125	151.915	-11.92
2	140.00	2.125	151.915	-11.92
3	140.00	2.125	151.915	-11.92
4	140.00	2.125	151.915	-11.92
5	139.32	2.125	151.915	-12.60
6	141.79	2.125	151.915	-10.13
7	141.00	2.125	151.915	-10.92
8	150.39	2.125	151.915	-1.53
9	150.25	2.125	151.915	-1.67
10	149.79	2.125	151.915	-2.13

1998

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	138.00	1.75	203.75	-65.75
-9	140.30	1.75	203.75	-63.45
-8	140.10	1.75	203.75	-63.65
-7	141.3	1.75	203.75	-62.45
-6	141.20	1.75	203.75	-62.55
-5	141.00	1.75	203.75	-62.75
-4	145.50	1.75	203.75	-58.25
-3	145.61	1.75	203.75	-58.14
-2	147.91	1.75	203.75	-55.84
-1	146.00	1.75	203.75	-57.75
0	165.00	1.75	203.75	-38.75
1	166.00	1.75	203.75	-37.75
2	186.00	1.75	203.75	-17.75
3	199.27	1.75	203.75	-4.48
4	199.60	1.75	203.75	-4.15
5	200.00	1.75	203.75	-3.75
6	201.28	1.75	203.75	-2.47
7	201.00	1.75	203.75	-2.75
8	200.00	1.75	203.75	-3.75
9	200.90	1.75	203.75	-2.85
10	202.00	1.75	203.75	-1.75

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	135.00	1.10	136.1	-1.10	-0.0081
-9	135.00	1.10	136.1	-1.10	-0.0081
-8	134.23	1.10	136.1	-1.87	-0.0139
-7	134.77	1.10	136.1	-1.33	-0.0099
-6	135.04	1.10	136.1	-1.06	-0.0078
-5	135.00	1.10	136.1	-1.10	-0.0081
-4	135.00	1.10	136.1	-1.10	-0.0081
-3	135.00	1.10	136.1	-1.10	-0.0081
-2	135.00	1.10	136.1	-1.10	-0.0081
-1	135.76	1.10	136.1	-0.34	-0.0025
0	135.00	1.10	136.1	-1.10	-0.0081
1	135.35	1.10	136.1	-0.75	-0.0055
2	135.03	1.10	136.1	-1.07	-0.0079
3	135.07	1.10	136.1	-1.03	-0.0076
4	135.00	1.10	136.1	-1.10	-0.0081
5	135.00	1.10	136.1	-1.10	-0.0081
6	135.00	1.10	136.1	-1.10	-0.0081
7	135.00	1.10	136.1	-1.10	-0.0081
8	135.00	1.10	136.1	-1.10	-0.0081
9	135.00	1.10	136.1	-1.10	-0.0081
10	135.00	1.10	136.1	-1.10	-0.0081

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	90.00	1.20	75.02	14.98	0.1664
-9	87.58	1.20	75.02	12.56	0.1434
-8	85.92	1.20	75.02	10.90	0.1269
-7	81.4	1.20	75.02	6.38	0.0784
-6	80.40	1.20	75.02	5.38	0.0669
-5	80.00	1.20	75.02	4.98	0.0623
-4	77.20	1.20	75.02	2.18	0.0282
-3	74.50	1.20	75.02	-0.52	-0.0070
-2	70.90	1.20	75.02	-4.12	-0.0581
-1	70.87	1.20	75.02	-4.15	-0.0586
0	70.00	1.20	75.02	-5.02	-0.0717
1	70.00	1.20	75.02	-5.02	-0.0717
2	70.00	1.20	75.02	-5.02	-0.0717
3	70.00	1.20	75.02	-5.02	-0.0717
4	72.51	1.20	75.02	-2.51	-0.0346
5	73.50	1.20	75.02	-1.52	-0.0207
6	73.19	1.20	75.02	-1.83	-0.0250
7	73.00	1.20	75.02	-2.02	-0.0277
8	73.60	1.20	75.02	-1.42	-0.0193
9	73.89	1.20	75.02	-1.13	-0.0153
10	73.82	1.20	75.02	-1.20	-0.0163

1997

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	75.00	4.50	77.44	-2.44	-0.0325
-9	75.00	4.50	77.44	-2.44	-0.0325
-8	75.00	4.50	77.44	-2.44	-0.0325
-7	75.00	4.50	77.44	-2.44	-0.0325
-6	75.00	4.50	77.44	-2.44	-0.0325
-5	75.00	4.50	77.44	-2.44	-0.0325
-4	75.00	4.50	77.44	-2.44	-0.0325
-3	75.00	4.50	77.44	-2.44	-0.0325
-2	75.00	4.50	77.44	-2.44	-0.0325
-1	75.00	4.50	77.44	-2.44	-0.0325
0	75.00	4.50	77.44	-2.44	-0.0325
1	75.00	4.50	77.44	-2.44	-0.0325
2	60.00	4.50	77.44	-17.44	-0.2907
3	60.00	4.50	77.44	-17.44	-0.2907
4	59.99	4.50	77.44	-17.45	-0.2909
5	60.00	4.50	77.44	-17.44	-0.2907
6	60.00	4.50	77.44	-17.44	-0.2907
7	60.00	4.50	77.44	-17.44	-0.2907
8	60.00	4.50	77.44	-17.44	-0.2907
9	73.00	4.50	77.44	-4.44	-0.0608
10	72.94	4.50	77.44	-4.50	-0.0617

1998

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	95.40	0.50	124.5	-29.10	-0.3050
-9	96.75	0.50	124.5	-27.75	-0.2868
-8	94.96	0.50	124.5	-29.54	-0.3111
-7	95	0.50	124.5	-29.50	-0.3105
-6	90.08	0.50	124.5	-34.42	-0.3821
-5	87.50	0.50	124.5	-37.00	-0.4229
-4	91.20	0.50	124.5	-33.30	-0.3651
-3	91.00	0.50	124.5	-33.50	-0.3681
-2	90.00	0.50	124.5	-34.50	-0.3833
-1	90.00	0.50	124.5	-34.50	-0.3833
0	92.00	0.50	124.5	-32.50	-0.3533
1	92.00	0.50	124.5	-32.50	-0.3533
2	93.00	0.50	124.5	-31.50	-0.3387
3	94.00	0.50	124.5	-30.50	-0.3245
4	96.00	0.50	124.5	-28.50	-0.2969
5	100.00	0.50	124.5	-24.50	-0.2450
6	104.00	0.50	124.5	-20.50	-0.1971
7	110.60	0.50	124.5	-13.90	-0.1257
8	119.52	0.50	124.5	-4.98	-0.0417
9	122.00	0.50	124.5	-2.50	-0.0205
10	124.00	0.50	124.5	-0.50	-0.0040

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	76.15	1.00	65.94	10.21	0.1341
-9	75.12	1.00	65.94	9.18	0.1222
-8	70.00	1.00	65.94	4.06	0.0580
-7	71.63	1.00	65.94	5.69	0.0794
-6	70.00	1.00	65.94	4.06	0.0580
-5	70.00	1.00	65.94	4.06	0.0580
-4	70.00	1.00	65.94	4.06	0.0580
-3	70.00	1.00	65.94	4.06	0.0580
-2	70.00	1.00	65.94	4.06	0.0580
-1	70.00	1.00	65.94	4.06	0.0580
0	70.00	1.00	65.94	4.06	0.0580
1	70.00	1.00	65.94	4.06	0.0580
2	70.00	1.00	65.94	4.06	0.0580
3	70.00	1.00	65.94	4.06	0.0580
4	64.00	1.00	65.94	-1.94	-0.0303
5	67.43	1.00	65.94	1.49	0.0221
6	67.24	1.00	65.94	1.30	0.0193
7	64.64	1.00	65.94	-1.30	-0.0201
8	64.64	1.00	65.94	-1.30	-0.0201
9	64.66	1.00	65.94	-1.28	-0.0198
10	64.94	1.00	65.94	-1.00	-0.0154

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	35.00	0.75	35.75	-0.75	-0.0214
-9	36.00	0.75	35.75	0.25	0.0069
-8	36.00	0.75	35.75	0.25	0.0069
-7	35	0.75	35.75	-0.75	-0.0214
-6	35.00	0.75	35.75	-0.75	-0.0214
-5	36.00	0.75	35.75	0.25	0.0069
-4	36.00	0.75	35.75	0.25	0.0069
-3	35.00	0.75	35.75	-0.75	-0.0214
-2	35.00	0.75	35.75	-0.75	-0.0214
-1	36.00	0.75	35.75	0.25	0.0069
0	36.00	0.75	35.75	0.25	0.0069
1	36.00	0.75	35.75	0.25	0.0069
2	36.00	0.75	35.75	0.25	0.0069
3	36.00	0.75	35.75	0.25	0.0069
4	36.00	0.75	35.75	0.25	0.0069
5	36.00	0.75	35.75	0.25	0.0069
6	36.00	0.75	35.75	0.25	0.0069
7	35.00	0.75	35.75	-0.75	-0.0214
8	34.00	0.75	35.75	-1.75	-0.0515
9	35.07	0.75	35.75	-0.68	-0.0194
10	35.00	0.75	35.75	-0.75	-0.0214

1997

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	55.89	1.75	50.22	5.67	0.1014
-9	56.25	1.75	50.22	6.03	0.1072
-8	56.55	1.75	50.22	6.33	0.1119
-7	56.83	1.75	50.22	6.61	0.1163
-6	56.27	1.75	50.22	6.05	0.1075
-5	56.27	1.75	50.22	6.05	0.1075
-4	56.97	1.75	50.22	6.75	0.1185
-3	57.77	1.75	50.22	7.55	0.1307
-2	58.08	1.75	50.22	7.86	0.1353
-1	58.74	1.75	50.22	8.52	0.1450
0	58.74	1.75	50.22	8.52	0.1450
1	52.13	1.75	50.22	1.91	0.0366
2	53.12	1.75	50.22	2.90	0.0546
3	53.12	1.75	50.22	2.90	0.0546
4	55.00	1.75	50.22	4.78	0.0869
5	54.12	1.75	50.22	3.90	0.0721
6	54.12	1.75	50.22	3.90	0.0721
7	54.12	1.75	50.22	3.90	0.0721
8	54.25	1.75	50.22	4.03	0.0743
9	46.00	1.75	50.22	-4.22	-0.0917
10	48.47	1.75	50.22	-1.75	-0.0361

1998

DAYS	DAILY PRICE DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)	
-10	46.65	1.75	43.92	2.73	0.0585
-9	46.65	1.75	43.92	2.73	0.0585
-8	46.65	1.75	43.92	2.73	0.0585
-7	46.35	1.75	43.92	2.43	0.0524
-6	44.86	1.75	43.92	0.94	0.0210
-5	44.99	1.75	43.92	1.07	0.0238
-4	44.54	1.75	43.92	0.62	0.0139
-3	44.72	1.75	43.92	0.80	0.0179
-2	45.00	1.75	43.92	1.08	0.0240
-1	45.03	1.75	43.92	1.11	0.0247
0	44.98	1.75	43.92	1.06	0.0236
1	43.64	1.75	43.92	-0.28	-0.0064
2	41.36	1.75	43.92	-2.56	-0.0619
3	41.36	1.75	43.92	-2.56	-0.0619
4	41.36	1.75	43.92	-2.56	-0.0619
5	40.13	1.75	43.92	-3.79	-0.0944
6	40.70	1.75	43.92	-3.22	-0.0791
7	41.53	1.75	43.92	-2.39	-0.0575
8	41.69	1.75	43.92	-2.23	-0.0535
9	42.19	1.75	43.92	-1.73	-0.0410
10	42.17	1.75	43.92	-1.75	-0.0415

1999

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	48.59	3.00	50.58	-1.99	-0.0410
-9	47.81	3.00	50.58	-2.77	-0.0579
-8	47.81	3.00	50.58	-2.77	-0.0579
-7	47.81	3.00	50.58	-2.77	-0.0579
-6	47.04	3.00	50.58	-3.54	-0.0753
-5	47.05	3.00	50.58	-3.53	-0.0750
-4	47.00	3.00	50.58	-3.58	-0.0762
-3	46.45	3.00	50.58	-4.13	-0.0889
-2	46.96	3.00	50.58	-3.62	-0.0771
-1	46.95	3.00	50.58	-3.63	-0.0773
0	48.50	3.00	50.58	-2.08	-0.0429
1	47.91	3.00	50.58	-2.67	-0.0557
2	47.94	3.00	50.58	-2.64	-0.0551
3	48.07	3.00	50.58	-2.51	-0.0522
4	48.06	3.00	50.58	-2.52	-0.0524
5	48.01	3.00	50.58	-2.57	-0.0535
6	48.01	3.00	50.58	-2.57	-0.0535
7	47.20	3.00	50.58	-3.38	-0.0716
8	48.01	3.00	50.58	-2.57	-0.0535
9	47.25	3.00	50.58	-3.33	-0.0705
10	47.58	3.00	50.58	-3.00	-0.0631

2000

DAYS	DAILY PRICE	DIVIDENDS	EXPECTED PRICE	EXCESS PRICE	EXCESS PRICE (%)
-10	58.30	5.00	80.6	-22.30	-0.3825
-9	58.30	5.00	80.6	-22.30	-0.3825
-8	58.64	5.00	80.6	-21.96	-0.3745
-7	64.12	5.00	80.6	-16.48	-0.2570
-6	65.30	5.00	80.6	-15.30	-0.2343
-5	64.48	5.00	80.6	-16.12	-0.2500
-4	64.46	5.00	80.6	-16.14	-0.2504
-3	64.53	5.00	80.6	-16.07	-0.2490
-2	65.36	5.00	80.6	-15.24	-0.2332
-1	67.66	5.00	80.6	-12.94	-0.1913
0	79.94	5.00	80.6	-0.66	-0.0083
1	79.63	5.00	80.6	-0.97	-0.0122
2	79.64	5.00	80.6	-0.96	-0.0121
3	79.65	5.00	80.6	-0.95	-0.0119
4	74.35	5.00	80.6	-6.25	-0.0841
5	74.35	5.00	80.6	-6.25	-0.0841
6	75.64	5.00	80.6	-4.96	-0.0656
7	75.00	5.00	80.6	-5.60	-0.0747
8	75.16	5.00	80.6	-5.44	-0.0724
9	75.30	5.00	80.6	-5.30	-0.0704
10	75.60	5.00	80.6	-5.00	-0.0661

KAKUZI LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0039	-0.063	-0.0124	0.2533	0.0435	0.0435
-9	-0.0149	-0.0215	-0.0124	0.2751	0.056575	0.100075
-8	-0.0139	-0.0316	-0.0048	0.2751	0.0562	0.156275
-7	0.0139	-0.0316	0.0155	0.2729	0.067675	0.22395
-6	-0.0139	-0.0316	0.0017	0.2345	0.047675	0.271625
-5	0.0058	-0.0316	0.0017	0.232	0.051975	0.3236
-4	0.0058	-0.0316	-0.0122	0.2262	0.04705	0.37065
-3	-0.0039	-0.0316	0.0017	0.2111	0.044325	0.414975
-2	-0.0039	-0.0316	-0.0175	0.1112	0.01455	0.429525
-1	-0.0039	-0.0316	-0.0124	0.0972	0.012325	0.44185
0	-0.0039	-0.0316	-0.0124	0.1029	0.01375	0.4556
1	0.0058	-0.0377	-0.0124	-0.0143	-0.01465	0.44095
2	-0.0039	-0.0377	-0.0124	-0.0143	-0.017075	0.423875
3	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.43335
4	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.399325
5	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.4523
6	-0.0039	0.0544	-0.0124	-0.0143	0.00595	0.45825
7	-0.0667	-0.137	-0.0124	-0.0143	-0.0576	0.40065
8	-0.0557	0.137	-0.0124	-0.0143	0.01365	0.4143
9	-0.0313	0.0295	-0.0124	-0.0143	-0.007125	0.407175
10	-0.0139	0.0136	-0.0124	-0.0143	-0.00675	0.400425
2-day excess price	0.0019	-0.0693	-0.0248	0.0829	-0.002325	
Standard deviation	0.063958131					
t-statistic	-0.036351907					

NATIONAL INDUSTRIAL CREDIT BANK LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0656	-0.0764	-0.004	-0.0993	-0.061325	-0.061325
-9	-0.0541	-0.0762	-0.0856	-0.1045	-0.0801	-0.141425
-8	-0.0554	-0.0574	-0.0621	-0.0981	-0.06825	-0.209675
-7	-0.0523	-0.0638	-0.0598	-0.0938	-0.067425	-0.2771
-6	-0.0438	-0.0647	-0.0621	-0.0938	-0.0661	-0.3432
-5	-0.0438	-0.0796	-0.0374	-0.0938	-0.06365	-0.40685
-4	-0.0438	-0.0846	-0.0365	-0.0732	-0.059525	-0.466375
-3	-0.0688	-0.0853	-0.0679	-0.0732	-0.0738	-0.540175
-2	-0.033	-0.0396	-0.0679	-0.0592	-0.049925	-0.5901
-1	-0.0649	-0.0424	-0.1127	-0.0494	-0.06735	-0.65745
0	0.0713	-0.0664	-0.0685	-0.0491	-0.028175	-0.685625
1	0.0739	-0.0706	-0.0743	-0.0487	-0.029925	-0.71555
2	-0.0652	-0.0719	-0.0702	-0.0533	-0.06515	-0.7807
3	-0.0133	-0.0702	-0.0655	-0.023	-0.043	-0.8237
4	0.0072	-0.0681	-0.0437	-0.0533	-0.039475	-0.80185
5	-0.011	-0.0182	-0.0442	0.0125	-0.015225	-0.8784
6	0.0116	-0.0448	-0.055	-0.0073	-0.023875	-0.902275
7	-0.0116	-0.0613	-0.0512	0	-0.031025	-0.9333
8	-0.0116	-0.0159	-0.0304	-0.0938	-0.037925	-0.971225
9	-0.0116	-0.0157	-0.0589	-0.0282	-0.0286	-0.999825
10	-0.0154	-0.0189	-0.0292	-0.0383	-0.02545	-1.025275
2-day excess price	0.009	-0.113	-0.187	-0.0981	-0.097275	
Standard deviation	0.080814412					
t-statistic	-1.20368382					

BROOKE BOND KENYA LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0053	0.1192	-0.0305	-0.0385	0.011225	0.011225
-9	-0.0053	0.1291	-0.0232	-0.0385	0.015525	0.02675
-8	-0.0053	0.1023	-0.0274	-0.0385	0.007775	0.034525
-7	-0.0053	0.1023	-0.0274	-0.0385	0.007775	0.0423
-6	-0.0053	0.1023	-0.0274	-0.0385	0.007775	0.050075
-5	-0.0053	0.1023	-0.0232	-0.0385	0.008825	0.0589
-4	-0.0053	0.1023	-0.0232	-0.0385	0.008825	0.067725
-3	-0.0053	0.1023	-0.0232	-0.0385	0.008825	0.07655
-2	-0.0079	0.1152	-0.0232	-0.0385	0.0114	0.08795
-1	-0.0113	0.1023	-0.0232	-0.0385	0.007325	0.095275
0	-0.0053	0.0983	-0.0232	-0.0385	-0.03255	0.062725
1	-0.0053	0.12	-0.0286	0.0385	0.03115	0.093875
2	-0.0053	0.1342	-0.0232	0.0385	0.03605	0.129925
3	-0.0053	0.0664	-0.0232	0.0385	0.0191	0.149025
4	-0.0053	0.0664	-0.0232	0.0385	0.0191	0.1569
5	-0.0053	0.0664	-0.0232	0.0385	0.0191	0.187225
6	-0.0053	0.0664	-0.0232	0.0385	0.0191	0.206325
7	-0.0053	0.0664	-0.0161	0.0385	0.020875	0.2272
8	-0.0053	0.0664	-0.0161	0.0385	0.020875	0.248075
9	-0.0053	0.011	-0.0161	0.0385	0.007025	0.2551
10	-0.0053	-0.0148	-0.0161	0.0385	0.000575	0.255675
2-day excess price	-0.0166	0.2223	-0.0518	0	0.038475	
Standard deviation	0.124438455					
t-statistic	0.309188987					

BAMBURI PORTLAND CEMENT LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.2168	0.0799	-0.0012	-0.0192	-0.039325	-0.039325
-9	-0.2153	0.0799	-0.0436	-0.0192	-0.04955	-0.088875
-8	-0.2177	0.0799	-0.0395	-0.0192	-0.049125	-0.138
-7	-0.212	0.0799	-0.0152	-0.0255	-0.0432	-0.1812
-6	-0.2171	0.0785	-0.0352	-0.0192	-0.04825	-0.22945
-5	-0.2168	0.0787	-0.0028	-0.0192	-0.040025	-0.269475
-4	-0.2019	0.0824	-0.0028	-0.0192	-0.035375	-0.30485
-3	-0.1822	0.0799	0.0276	-0.0192	-0.023475	-0.328325
-2	-0.1412	0.0799	0.0276	-0.0192	-0.013225	-0.34155
-1	-0.1398	0.0824	0.0452	-0.0192	-0.00785	-0.3494
0	-0.1104	0.0912	0.054	-0.0192	0.0039	-0.3455
1	-0.0913	0.1174	0.064	0	0.022525	-0.322975
2	-0.054	-0.3145	-0.0658	-0.0192	-0.113375	-0.43635
3	0.0125	-0.1827	-0.0697	-0.0192	-0.064775	-0.501125
4	0.0658	-0.1462	-0.0697	-0.0192	-0.042325	-0.504125
5	0.01801	-0.0668	-0.064	-0.0192	-0.0329975	-0.576448
6	0.01109	-0.0549	-0.0598	-0.0192	-0.0307025	-0.60715
7	-0.0057	0.0028	-0.0658	-0.0192	-0.021975	-0.629125
8	-0.0045	-0.0178	-0.0399	-0.0192	-0.02035	-0.649475
9	-0.029	0.0085	0.0298	-0.0192	-0.002475	-0.65195
10	-0.0155	-0.0173	0.0239	-0.0192	-0.007025	-0.658975
2-day excess price	-0.2311	0.1998	0.1092	-0.0192	0.014675	
Standard deviation	0.186868142					
t-statistic	0.07853131					

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	0.064	-0.0047	-0.1393	0.1093	0.007325	0.007325
-9	0.0514	0.0108	-0.1469	0.1411	0.0141	0.021425
-8	0.0514	0.0258	-0.0876	0.1255	0.028775	0.0502
-7	0.064	0.0108	-0.1032	0.1093	0.020225	0.070425
-6	0.064	0.0108	-0.1032	0.1411	0.028175	0.0986
-5	0.064	0.0403	-0.1032	0.0925	0.0234	0.122
-4	0.0384	-0.0047	-0.1032	0.075	0.001375	0.123375
-3	0.0384	0.0108	-0.1393	0.0925	0.0006	0.123975
-2	0.025	-0.0206	-0.1032	0.1255	0.006675	0.13065
-1	0.025	-0.0371	-0.1393	0.1093	-0.010525	0.120125
0	0.025	-0.0206	-0.0692	0.1411	0.019075	0.1392
1	0.0113	-0.0206	-0.0692	0.0569	-0.0054	0.1338
2	-0.0029	-0.0206	-0.0692	0.038	-0.013675	0.120125
3	0.0113	-0.0206	-0.0451	0.0184	-0.009	0.111125
4	0.025	-0.0047	-0.053	0.0184	-0.003575	0.100225
5	-0.0174	-0.0206	-0.0221	0	-0.015025	0.092525
6	-0.0174	-0.0206	-0.0692	0.0143	-0.023225	0.0693
7	-0.0174	-0.0047	-0.053	0.0184	-0.014175	0.055125
8	-0.0174	-0.0047	-0.0373	0.0184	-0.01025	0.044875
9	-0.0174	-0.0206	-0.0221	-0.0021	-0.01555	0.029325
10	-0.0174	-0.0206	-0.0373	-0.0234	-0.024675	0.00465
2-day excess price	0.0363	-0.0577	-0.2085	0.1662	-0.015925	
Standard deviation	0.157826115					
t-statistic	-0.100902186					

CITY FINANCE CORPORATION BANK LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	0.0574	-0.0795	0.2051	-0.1329	0.012525	0.012525
-9	0.0694	-0.1059	0.1936	-0.1288	0.007075	0.0196
-8	0.0767	-0.1113	0.1884	-0.1329	0.005225	0.024825
-7	0.0364	-0.0795	0.2399	-0.1329	0.015975	0.0408
-6	0.0783	-0.1335	0.2461	-0.1329	0.0145	0.0553
-5	0.0783	-0.1195	0.1865	-0.1493	-0.001	0.0543
-4	0.1017	-0.1335	0.2255	-0.1535	0.01005	0.06435
-3	0.0842	-0.1335	0.1889	-0.1329	0.001675	0.066025
-2	0.1074	-0.1228	0.1983	-0.1329	0.0125	0.078525
-1	0.0779	-0.1195	0.1889	-0.1329	0.0036	0.082125
0	0.0783	-0.1335	0.1983	-0.1329	0.00255	0.084675
1	0.0783	-0.1335	0.1466	-0.1208	-0.00735	0.077325
2	0.0783	-0.1932	0.1055	-0.113	-0.0306	0.046725
3	0.0783	-0.2594	0.0727	-0.0573	-0.041425	0.0053
4	0.0783	-0.1932	0.0727	-0.0476	-0.02245	-0.029675
5	0.0783	-0.2594	0.0204	-0.0332	-0.048475	-0.065625
6	0.023	-0.0795	0.0537	-0.04	-0.0107	-0.076325
7	0.0047	-0.1335	0.0156	-0.0573	-0.042625	-0.11895
8	-0.0095	-0.1113	-0.0124	-0.0538	-0.04675	-0.1657
9	-0.0095	-0.0795	-0.022	-0.0573	-0.042075	-0.207775
10	-0.0242	-0.0305	-0.0506	-0.0441	-0.03735	-0.245125
2-day excess price	0.1562	-0.253	0.3355	-0.2537	-0.00375	
Standard deviation	0.297363487					
t-statistic	-0.012610829					

## EAST AFRICA CABLES

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.1349	-0.0354	0.1398	-0.5929	-0.15585	-0.15585
-9	-0.1532	-0.0354	0.1398	-0.5805	-0.157325	-0.313175
-8	-0.1532	-0.042	0.1398	-0.5805	-0.158975	-0.47215
-7	-0.1389	-0.033	0.1209	-0.5929	-0.160975	-0.633125
-6	-0.1532	-0.033	0.1209	-0.5929	-0.16455	-0.797675
-5	-0.144	-0.033	0.0762	-0.5929	-0.173425	-0.9711
-4	-0.144	-0.033	0.2114	-0.5929	-0.139625	-1.110725
-3	-0.144	-0.0491	0.2114	-0.5929	-0.14365	-1.254375
-2	-0.144	-0.0424	0.2114	-0.5929	-0.141975	-1.39635
-1	-0.144	-0.0333	0.2114	-0.5917	-0.1394	-1.53575
0	-0.144	-0.0333	0.1579	-0.5904	-0.15245	-1.6882
1	-0.1349	-0.0333	0.117	-0.5755	-0.156675	-1.844875
2	-0.1295	-0.0382	0.117	-0.5658	-0.154125	-1.999
3	-0.1331	-0.0333	0.117	-0.5562	-0.1514	-2.1504
4	-0.112	-0.0333	0.1398	-0.5396	-0.136275	-2.130825
5	-0.144	-0.0333	0.0971	-0.5245	-0.151175	-2.43785
6	-0.0688	-0.0333	0.1051	-0.338	-0.08375	-2.5216
7	-0.0688	-0.0333	0.1011	-0.2935	-0.073625	-2.595225
8	-0.0688	-0.042	0.1011	-0.3231	-0.0832	-2.678425
9	-0.0681	-0.069	0.0805	-0.2918	-0.0871	-2.765525
10	-0.0752	-0.069	-0.1111	-0.2861	-0.13535	-2.900875
2-day excess price	-0.2789	-0.0666	0.3284	-1.1672	-0.296075	
Standard deviation	0.632924837					
t-statistic	-0.467788563					

## FIRE STONE E.A

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0957	-0.447	0.0425	0.1625	-0.084425	-0.084425
-9	-0.1056	-0.4592	0.0233	0.1625	-0.09475	-0.179175
-8	-0.0154	-0.4306	0.0228	0.1625	-0.065175	-0.24435
-7	-0.0252	-0.3511	0.404	0.1625	0.04755	-0.1968
-6	-0.0244	-0.4436	0.0353	0.1625	-0.06755	-0.26435
-5	-0.0525	-0.4575	0.0353	0.1625	-0.07805	-0.3424
-4	-0.0536	-0.4575	0.0249	0.1625	-0.080925	-0.423325
-3	-0.0595	-0.4575	0.049	0.1599	-0.077025	-0.50035
-2	-0.0595	-0.4476	0.05	0.1609	-0.07405	-0.5744
-1	-0.0613	-0.4306	0.0749	0.1219	-0.073775	-0.648175
0	-0.0488	-0.4031	0.0833	0.1126	-0.064	-0.712175
1	-0.0683	-0.3511	0.0768	0.0503	-0.073075	-0.78525
2	-0.019	-0.3511	0.072	0.0496	-0.062125	-0.847375
3	-0.0259	-0.3265	0.0505	0.029	-0.068225	-0.9156
4	-0.0256	-0.1319	0.0505	0.0297	-0.019325	-0.8505
5	-0.0683	-0.0945	0.0495	0.0074	-0.026475	-0.9614
6	-0.0249	-0.0806	-0.0011	-0.0308	-0.03435	-0.99575
7	-0.0416	-0.0571	-0.0033	-0.0388	-0.0352	-1.03095
8	-0.0488	-0.0495	-0.0332	-0.0388	-0.042575	-1.073525
9	-0.024	-0.048	-0.0404	-0.0388	-0.0378	-1.111325
10	-0.0256	-0.0429	-0.0404	-0.0388	-0.036925	-1.14825
2-day excess price	-0.1296	-0.7817	0.1517	0.1722	-0.14685	
Standard deviation	0.445068193					
t-statistic	-0.329949437					

## KAKUZ LIMITED

## EXCESS PRICE

## GEORGE WILLIAMSON KENYA

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0214	0.0583	-0.0035	-0.3449	-0.077875	-0.077875
-9	-0.0214	0.0271	-0.0035	-0.3745	-0.093075	-0.17095
-8	-0.0214	0.0271	-0.0106	-0.3571	-0.0905	-0.26145
-7	-0.031	0.0306	-0.0106	-0.3822	-0.0983	-0.35975
-6	-0.0362	0.0808	-0.0035	-0.3444	-0.075825	-0.435575
-5	-0.0362	0.0583	-0.0103	-0.2552	-0.06025	-0.496425
-4	-0.0355	0.0861	-0.0103	-0.1672	-0.031725	-0.52815
-3	-0.031	0.0894	-0.0035	-0.1519	-0.02425	-0.5524
-2	-0.0362	0.118	-0.0035	-0.1409	-0.01565	-0.56805
-1	-0.0362	0.118	-0.0035	-0.1406	-0.015575	-0.583625
0	-0.0362	0.1168	-0.0103	-0.1223	-0.013	-0.596625
1	-0.0214	0.1061	-0.0103	-0.1081	-0.008425	-0.60505
2	-0.0214	0.1017	-0.0103	-0.0505	0.004875	-0.600175
3	-0.0214	0.0581	-0.0035	-0.0807	-0.011875	-0.61205
4	-0.0214	0.0567	-0.0035	-0.0897	-0.014475	-0.54865
5	-0.0214	0.0565	-0.0035	-0.0897	-0.014525	-0.64105
6	-0.0214	-0.0421	-0.0035	-0.0665	-0.033375	-0.674425
7	-0.0214	-0.0352	-0.0177	-0.0665	-0.0352	-0.709625
8	-0.0214	-0.0419	-0.0177	-0.0716	-0.03815	-0.747775
9	-0.0214	-0.0419	-0.0177	-0.0716	-0.03815	-0.785925
10	-0.0214	-0.0538	-0.0177	-0.0824	-0.043825	-0.82975
2-day excess price	-0.0576	0.2241	-0.0138	-0.2487	-0.024	
Standard deviation	0.194316494					
t-statistic	-0.123509844					

## HOUSING FINANCE CORPORATION OF KENYA LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0317	-0.1731	0.0718	0.0778	-0.0138	-0.0138
-9	-0.0317	-0.1554	0.0718	0.0817	-0.0084	-0.0222
-8	-0.0317	-0.1254	0.0713	0.0768	-0.00225	-0.02445
-7	-0.0317	-0.1206	0.0713	0.057	-0.006	-0.03045
-6	-0.0321	-0.0938	0.0713	0.056	0.00035	-0.0301
-5	-0.0317	-0.0799	0.0713	0.0405	5E-05	-0.03005
-4	-0.0317	-0.0774	0.0713	0.0436	0.00145	-0.0286
-3	-0.0317	-0.0774	0.0589	0.0394	-0.0027	-0.0313
-2	-0.0312	-0.0833	0.0619	0.0488	-0.00095	-0.03225
-1	-0.0317	-0.1065	0.0407	0.0485	-0.01225	-0.0445
0	-0.0317	-0.1014	0.0185	-0.1073	-0.055475	-0.099975
1	-0.0317	0.0353	0.0178	-0.1031	-0.020425	-0.1204
2	-0.0317	-0.0102	0.0165	-0.1073	-0.033175	-0.153575
3	-0.0317	-0.0702	0.0394	-0.0867	-0.0373	-0.190875
4	-0.0317	-0.0707	0.0462	-0.0867	-0.035725	-0.2128
5	-0.0317	-0.0339	0.0474	-0.0867	-0.026225	-0.252825
6	-0.0317	-0.0398	0.048	-0.0867	-0.02755	-0.280375
7	-0.0291	-0.0592	0.0224	-0.0854	-0.037825	-0.3182
8	-0.0308	-0.0592	-0.0599	-0.0761	-0.0565	-0.3747
9	-0.0304	-0.0285	-0.0698	-0.0478	-0.044125	-0.418825
10	-0.0312	-0.0439	-0.0722	-0.0287	-0.044	-0.462825
2-day excess price	-0.0634	-0.0712	0.0585	-0.0546	-0.032675	
Standard deviation	0.061160411					
t-statistic	-0.534250827					

KAKUZI LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0039	-0.063	-0.0124	0.2533	0.0435	0.0435
-9	-0.0149	-0.0215	-0.0124	0.2751	0.056575	0.100075
-8	-0.0139	-0.0316	-0.0048	0.2751	0.0562	0.156275
-7	0.0139	-0.0316	0.0155	0.2729	0.067675	0.22395
-6	-0.0139	-0.0316	0.0017	0.2345	0.047675	0.271625
-5	0.0058	-0.0316	0.0017	0.232	0.051975	0.3236
-4	0.0058	-0.0316	-0.0122	0.2262	0.04705	0.37065
-3	-0.0039	-0.0316	0.0017	0.2111	0.044325	0.414975
-2	-0.0039	-0.0316	-0.0175	0.1112	0.01455	0.429525
-1	-0.0039	-0.0316	-0.0124	0.0972	0.012325	0.44185
0	-0.0039	-0.0316	-0.0124	0.1029	0.01375	0.4556
1	0.0058	-0.0377	-0.0124	-0.0143	-0.01465	0.44095
2	-0.0039	-0.0377	-0.0124	-0.0143	-0.017075	0.423875
3	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.43335
4	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.399325
5	-0.0039	0.0544	0.0017	-0.0143	0.009475	0.4523
6	-0.0039	0.0544	-0.0124	-0.0143	0.00595	0.45825
7	-0.0667	-0.137	-0.0124	-0.0143	-0.0576	0.40065
8	-0.0557	0.137	-0.0124	-0.0143	0.01365	0.4143
9	-0.0313	0.0295	-0.0124	-0.0143	-0.007125	0.407175
10	-0.0139	0.0136	-0.0124	-0.0143	-0.00675	0.400425
2-day excess price	0.0019	-0.0693	-0.0248	0.0829	-0.002325	
Standard deviation	0.063958131					
t-statistic	-0.036351907					

NATIONAL INDUSTRIAL CREDIT BANK LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0656	-0.0764	-0.004	-0.0993	-0.061325	-0.061325
-9	-0.0541	-0.0762	-0.0856	-0.1045	-0.0801	-0.141425
-8	-0.0554	-0.0574	-0.0621	-0.0981	-0.06825	-0.209675
-7	-0.0523	-0.0538	-0.0598	-0.0938	-0.067425	-0.2771
-6	-0.0438	-0.0647	-0.0621	-0.0938	-0.0661	-0.3432
-5	-0.0438	-0.0796	-0.0374	-0.0938	-0.06365	-0.40685
-4	-0.0438	-0.0846	-0.0365	-0.0732	-0.059525	-0.466375
-3	-0.0688	-0.0853	-0.0679	-0.0732	-0.0738	-0.540175
-2	-0.033	-0.0396	-0.0679	-0.0592	-0.049925	-0.5901
-1	-0.0649	-0.0424	-0.1127	-0.0494	-0.06735	-0.65745
0	0.0713	-0.0664	-0.0685	-0.0491	-0.028175	-0.685625
1	0.0739	-0.0706	-0.0743	-0.0487	-0.029925	-0.71555
2	-0.0652	-0.0719	-0.0702	-0.0533	-0.06515	-0.7807
3	-0.0133	-0.0702	-0.0655	-0.023	-0.043	-0.8237
4	0.0072	-0.0681	-0.0437	-0.0533	-0.039475	-0.80185
5	-0.011	-0.0182	-0.0442	0.0125	-0.015225	-0.8784
6	0.0116	-0.0448	-0.055	-0.0073	-0.023875	-0.902275
7	-0.0116	-0.0613	-0.0512	0	-0.031025	-0.9333
8	-0.0116	-0.0159	-0.0304	-0.0938	-0.037925	-0.971225
9	-0.0116	-0.0157	-0.0589	-0.0282	-0.0286	-0.999825
10	-0.0154	-0.0189	-0.0292	-0.0383	-0.02545	-1.025275
2-day excess price	0.009	-0.113	-0.187	-0.0981	-0.097275	
Standard deviation	0.080814412					
t-statistic	-1.20368382					

## NATION PRINTERS &amp; PUBLISHERS LTD

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.3919	-0.4764	-0.00814	0.1664	-0.17751	-0.17751
-9	-0.3798	-0.4522	-0.0081	0.1434	-0.174175	-0.351685
-8	-0.3363	-0.4543	-0.0139	0.1269	-0.1694	-0.521085
-7	-0.3086	-0.452	-0.0099	0.0784	-0.173025	-0.69411
-6	-0.3225	-0.442	-0.0078	0.0669	-0.17635	-0.87046
-5	-0.3113	-0.445	-0.0081	0.0623	-0.175525	-1.045985
-4	-0.301	-0.4003	-0.0081	0.0282	-0.1703	-1.216285
-3	-0.2801	-0.3993	-0.0081	-0.007	-0.173625	-1.38991
-2	-0.3096	-0.775	-0.0081	-0.00581	-0.2746275	-1.664538
-1	-0.29	-0.3955	-0.0025	-0.0586	-0.18665	-1.851188
0	-0.3199	-0.2348	-0.0081	-0.0717	-0.158625	-2.009813
1	-0.0851	-0.2274	-0.0055	-0.0717	-0.097425	-2.107238
2	-0.0851	-0.0954	-0.0079	-0.0717	-0.065025	-2.172263
3	-0.0851	-0.0225	-0.0076	-0.0717	-0.046725	-2.218988
4	-0.0851	-0.0208	-0.0081	0.0346	-0.01985	-2.061328
5	-0.0904	-0.0188	-0.0081	0.0207	-0.02415	-2.262988
6	-0.0704	-0.0123	-0.0081	0.025	-0.01645	-2.279438
7	-0.0774	-0.0137	-0.0081	0.0277	-0.017875	-2.297313
8	-0.0101	-0.0188	-0.0081	0.0193	-0.004425	-2.301738
9	-0.0111	-0.0142	-0.0081	0.0153	-0.004525	-2.306263
10	-0.0142	-0.0087	-0.0081	0.0163	-0.003675	-2.309938
2-day excess price	-0.3751	-0.6229	-0.008	-0.1303	-0.284075	
Standard deviation	0.27261211					
t-statistic	-1.042048352					

## SASINI TEA &amp; COFFEE LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	-0.0325	-0.305	0.1341	-0.0214	-0.0562	-0.0562
-9	-0.0325	-0.2868	0.1222	0.0069	-0.04755	-0.10375
-8	-0.0325	-0.3111	0.058	0.0069	-0.069675	-0.173425
-7	-0.0325	-0.3105	0.0794	-0.0214	-0.07125	-0.244675
-6	-0.0325	-0.3821	0.058	-0.0214	-0.0945	-0.339175
-5	-0.0325	-0.4229	0.058	0.0069	-0.097625	-0.4368
-4	-0.0325	-0.3651	0.058	0.0069	-0.083175	-0.519975
-3	-0.0325	-0.3681	0.058	-0.0214	-0.091	-0.610975
-2	-0.0325	-0.3833	0.058	-0.0214	-0.0948	-0.705775
-1	-0.0325	-0.3833	0.058	0.0069	-0.087725	-0.7935
0	-0.0325	-0.3533	0.058	0.0069	-0.080225	-0.873725
1	-0.0325	-0.3533	0.058	0.0069	-0.080225	-0.95395
2	-0.2907	-0.3387	0.058	0.0069	-0.141125	-1.095075
3	-0.2907	-0.3245	0.058	0.0069	-0.137575	-1.23265
4	-0.2909	-0.2969	-0.0303	0.0069	-0.1528	-1.32925
5	-0.2907	-0.245	0.0221	0.0069	-0.126675	-1.512125
6	-0.2907	-0.1971	0.0193	0.0069	-0.1154	-1.627525
7	-0.2907	-0.1257	-0.0201	-0.0214	-0.114475	-1.742
8	-0.2907	-0.0417	-0.0201	-0.0515	-0.101	-1.843
9	-0.0608	-0.205	-0.0198	-0.0194	-0.07625	-1.91925
10	-0.0617	-0.004	-0.0154	-0.0214	-0.025625	-1.944875
2-day excess price	-0.065	-0.7366	0.116	0.0138	-0.16795	
Standard deviation	0.386273733					
t-statistic	-0.434795291					

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STANDARD CHARTERED BANK LIMITED

DAYS	EXCESS PRICE					
	1997	1998	1999	2000	AEP	CEP
-10	0.1014	0.0585	-0.041	-0.3825	-0.0659	-0.0659
-9	0.1072	0.0585	-0.0579	-0.3825	-0.068675	-0.134575
-8	0.1119	0.0585	-0.0579	-0.3745	-0.0655	-0.200075
-7	0.1163	0.0524	-0.0579	0.257	0.09195	-0.108125
-6	0.1075	0.021	-0.0753	-0.2343	-0.045275	-0.1534
-5	0.1075	0.0238	-0.075	-0.25	-0.048425	-0.201825
-4	0.1185	0.0139	-0.0762	-0.2504	-0.04855	-0.250375
-3	0.1307	0.0179	-0.0889	-0.249	-0.047325	-0.2977
-2	0.1353	0.024	-0.0771	-0.2332	-0.03775	-0.33545
-1	0.145	0.0247	-0.0773	-0.1913	-0.024725	-0.360175
0	0.145	0.0236	-0.0429	-0.0083	0.02935	-0.330825
1	0.0366	-0.0064	-0.0557	-0.0122	-0.009425	-0.34025
2	0.0546	-0.0619	-0.0551	-0.0121	-0.018625	-0.358875
3	0.0546	-0.0619	0.0552	-0.0119	0.009	-0.349875
4	0.0869	-0.0619	-0.0524	-0.0841	-0.027875	-0.31185
5	0.0721	-0.0944	-0.0535	-0.0841	-0.039975	-0.417725
6	0.0721	-0.0791	-0.0535	-0.0656	-0.031525	-0.44925
7	0.0721	-0.0575	-0.0716	-0.0747	-0.032925	-0.482175
8	0.0743	-0.0535	-0.0513	-0.0724	-0.025725	-0.5079
9	-0.0917	-0.041	-0.0705	-0.0704	-0.0684	-0.5763
10	-0.0361	-0.0415	-0.0631	-0.0561	-0.0517	-0.628
2-day excess price	0.1816	0.0183	-0.133	-0.2035	-0.03415	
Standard deviation	0.171026129					
t-statistic	-0.199677092					

2-day excess price  
Standard deviation  
t-statistic

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