

**AN EMPIRICAL INVESTIGATION INTO  
MARKET EFFICIENCY AND THE EFFECTS OF  
CASH DIVIDEND ANNOUNCEMENTS ON  
SHARE PRICES OF COMPANIES LISTED ON THE  
NAIROBI STOCK EXCHANGE**

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**D61/P/8910/99**

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

**NOVEMBER, 2006**

## DECLARATION

THIS RESEARCH IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED  
FOR A DEGREE IN ANY OTHER UNIVERSITY

SIGNED ..... DATE.....

ELIZABETH KANINI KIIIO

THIS RESEARCH PROJECT HAS BEEN SUBMITTED FOR EXAMINATION  
WITH MY APPROVAL

SUPERVISOR:

SIGNED  DATE. 27-11-08

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## DEDICATION

To my

Mum – Susan

Son- Steve

Husband- Sebastian

And most of all my late grandmother Lucia.

For their support and inspiration that saw me complete my studies.

## ACKNOWLEDGEMENT

My sincere thanks go to my supervisor Mr. Lishenga, for his constructive criticism, guidance, and inspiration he accorded me in my endeavor to undertake and complete this paper.

Special thanks to my husband Eng. Sebastian Kyoni for his encouragement, Patience and emotional support during my MBA Programme. Special thanks to my mum for continuous support throughout my MBA Programme.

Finally I appreciate the views of my cousin Muteti and all my colleagues and friends.

To all I say thanks-God Bless.

## ABSTRACT

An efficient market is one in which prices fully reflect available information. An implication of an efficient market is that no excess returns can be made from this information because current prices already reflect the information. However, Excess returns if any should if any should not be statistically significance from zero (Fox and Opong, 1999).

This study investigates if the Nairobi Stock Exchange efficiently reacts to dividend announcements in price adjustments. The study extends and improves on previous studies by assessing the speed with which share prices adjust to the information contained in cash dividend announcement using Daily data on Nairobi Stock Exchange from 2000 to 2004. The sample consists of firms making up the Nairobi Stock Exchange(NSE) 20 share Index.

To determine the short term reactions to dividend announcements the researcher calculated market adjusted buy and hold returns for the samples for the twenty one day event period (that is from the day before the announcement to the day after) The results reveal that cumulative market adjusted returns to be significant for ten days before and ten days after the announcement for dividend paying firms .This indicates that share prices are indeed responsive to cash dividends.

ii)

However the dividend anticipation by the market, as reflected by price adjustments before and after dividend announcement was poor most probably as a result of inadequate information with regard to both company prospects and dividend policy. Consequently, information insufficiency automatically leads to market inefficiency.

iii)

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background

Fama (1970) described an efficient market as one in which prices fully reflect available information. An implication of an efficient market is that no excess returns can be made from this information because current prices reflect the information. However, excess returns (if any) should not be statically significant from zero (Fox and Opong (1999)).

Market efficiency depends on the ability of traders to devote time and resources to gather and disseminate information. Markets that are more efficient attract more investors, which translate into increased market liquidity asserts Osei (1998). Investors care about market efficiency because stock price movement affects their wealth. More generally, Stock market inefficiency may affect consumption and investment spending and therefore influence the overall performance of the economy.

The question of whether markets are efficient, and if not, where the inefficiencies lie, is central to investment valuation. If markets are, in fact efficient, the market price provides the best estimate of value, and the process of valuation becomes one of justifying the market price. If markets are not efficient, the market price may deviate from the true value, and the

process of valuation is directed towards obtaining a reasonable estimate of this value. Those who do valuation well will then be able to make 'higher' returns than other investors, because of their capacity to spot under and over valued firms. To make these higher returns, though, markets have to correct their mistakes- i.e. become efficient –overtime. Whether these corrections occur over six months or five years can have a profound impact in which valuation approach an investor chooses to use and the time horizon that is needed for it to succeed.

For Nairobi Stock Exchange (NSE) to be able to harness funds from local and foreign investors for viable investment opportunities that will bring about economic growth, it is expected to be efficient. This has made it imperative for researches to be carried out in this area to identify the level of efficiency and the problems hindering the development of the market for effective policy formulation. A study to test if the Nairobi Stock Exchange market efficiently reacts to dividend announcement in price adjustment was therefore imperative.

The **Income Tax Act (CAP 470)** of laws of Kenya defines a dividend as "Any distribution whether in cash or property to its shareholders with respect to their equity interest in the company"(Section 2). Over the years two types of dividend payout have come to dominate company distribution to its shareholders. These are cash dividends and stock dividends.

In Kenya firms listed in the Nairobi Stock Exchange (NSE) usually pay dividends semiannually. There is no legal requirement requiring a firm to adopt a specific dividend policy or payment schedule, dividends distributions however do face legal restrictions.

The information content of dividends hypothesis has emerged from the work of **Lintner (1956)** and **Miller and Modigliani (1961)**. This hypothesis states that company managers use dividend announcements to signal their belief about the prospects of the firm. An announcement of increase in the dividend rate reflects management's belief that the firm's earnings in the foreseeable future were sufficiently high to sustain payment at an increased rate. Similarly, an announcement of a dividend decrease occurs only when management is extremely pessimistic about the probability of that future earnings was sufficient to continue dividend at their present rate. The theoretical implication of the information content hypothesis is that the announcement of a dividend will (or a change of dividend conveys information about management's assessment of the firm's prospects, That this information is different from other information provided by the management, and that this information may cause an immediate investor reaction, included but not limited to share price changes. The validity of the dividend information hypothesis hinges on the belief that a firm's management often possesses privileged information about the firm's future earnings potential and communicates this to the general investment community by altering the expected dividend. The

difference between the actual dividend declared and the “expected” by the market. I.e. the expected change in dividends purportedly is a signal that investors use to reassess their estimates of a securities’ value.

There has always been the “bird –in- the-hand theory “that dividends are worth more than earnings because once paid to the shareholder, the company cannot take them away. While it is true that dividends do have information content and these influence expectations, rising dividends is not a guarantee that the common stock will also rise in the short run.

While increased dividends generally increase common stock value, this is not always the case. If a company’s overall performance is questionable, then raising dividends may not encourage investors (**Gitman (1998)**).

**Ross (1977)** argues that in an efficient market, management can use dividend payment to signal important information to the market, which is only known to them. Increase in dividends is often accompanied by increase in prices of the stock while a dividend reduction generally leads to stock price decline. This according to Ross suggests that investors generally prefer dividends to capital gains. Studies in the developed markets have documented that stock dividend/Split announcement and cash dividends announcements do have a positive impact on the price of a company share.

Researchers in Kenya have mostly concentrated on dividend policy determinants; (**Karanja (1987), Obonyo (1989), Farida (1993), Njoroge (2001), Bitok (2003)**)

Researches on market efficiency have been done by **Dickinson and Muragu (1994)** who studied the efficiency of the Nairobi stock exchange at a weak form; **Makara (2004)** also researched on market efficiency-A test of price earnings Ratio effect. Moreover, **Iminza (1997)** investigated the impact of dividend increase or decrease on stock prices. **Muriithi (2001)** sought to establish the extent to which interim earnings can be used to forecast year-end earnings.

A recent research by **Mbugua (2003)** evaluated the information content of Stock dividend announcements. To the best of the researcher's knowledge, prior to this research no study was carried out in Kenya to assess the speed with which share prices adjust to the information contained in the cash dividend announcements in the Nairobi Stock Exchange. The research was carried to fill in the existing gap& extend the work of **Iminza (1997)**.

## 1.2 Statement of the problem

An efficient market is one in which prices fully reflects available information. An implication of the efficient market is that no excess returns can be made from this information because current prices already reflect the information. However, excess returns if any should be statistically significant from zero (**Fox and Opong, (1999)**). For the Nairobi capital market to be able to harness funds from local and foreign investors for viable investment opportunities that will bring about economic growth,

It is expected to be efficient. This has made it imperative for researches to be carried out in this area.

The study sought to assess the speed at which share prices adjust to the information contained in the cash dividend announcements for the firms listed in the Nairobi Stock Exchange (NSE) 20-share index by use of an event study.

### **1.3 Objectives of the study**

The objectives of the study were:-

1. To evaluate the magnitude of impact of cash dividend announcements on stock returns at the Nairobi Stock Exchange (NSE).
2. To examine the speed with which Stock prices incorporate dividend announcement information.

### **1.4 Importance of the study**

#### **a).Academics**

The study will give a good insight to academics who wish to do further research on the effects of dividends on market share prices

#### **b).Investors**

The study will assist investors who may need to know the relationship between cash dividend announcement and market price of the firm for them to make informed decisions in the choice of their portfolio mix.

### **c). Financial Consultants**

To enable them to offer quality services to their clients.

### **d) Company Directors**

To enable them to make well informed dividend policy decisions.

This paper is organized as follows: -

Chapter Two gives a comprehensive review of literature surrounding the research.

Chapter Three discusses the research methodology /design used in the study.

Chapter four contains the data analysis and discussion of findings.

Chapter five is the conclusion, limitations and recommendation of the study.



# CHAPTER TWO

## LITERATURE REVIEW

### 2.1 Market efficiency

The primary role of the capital market is allocation of ownership of economy's capital stock. In general terms, the ideal is a market in which prices provide accurate signals for resource allocation: That is a market in which firms can make production-investment decisions and investors can choose among the securities that represent ownership of firms' activities under the assumption that security prices at any one time "fully reflects" all available information. A Market in which prices always reflects available information is called efficient. According to Leroy (1989), "the theory of the efficient capital market is just the theory of competitive equilibrium applied to asset markets." In the capital markets like the normal markets, traders are assumed to be rational economic agents, who have rational expectations and who want to maximize expected utility (Brown et al (1988)).

Consequently, in an efficient capital market, prices instantaneously reflect all manner of available information. However, efficient capital markets imply operational efficiency as well as assets prices that are allocationally efficient. Market efficiency thus requires that errors in the market price be unbiased. i.e. the prices can be greater than or less than true value as long as these deviations are random This implies that Stocks are under or overvalued at any point in time, and that these deviations are

uncorrelated with any observable variable. For instance, in efficient markets, stocks with lower PE ratios should not be undervalued than stocks with high PE ratios. If the deviations of market price from the true value are random, it follows that no group of investors should be able to consistently find under or overvalued stocks using any investment strategy.

**Alexander et al (2003)** asserts that a market is said to be efficient if it is impossible to make abnormal profits (other than by chance) by using a set of information to formulate buying and selling decisions.

In efficient capital markets, prices fully and instantaneously reflect all the available relevant information. This means that when assets are traded, prices are accurate signals for capital allocation (**Copeland and Weston (1992)**).

**Fama (1970, 1976)** has done a lot of work on the concept of efficiently capital markets. Fama defines three types of efficiency, namely weak-form efficiency, semi strong form efficiency and strong –form efficiency.

In **weak form efficiency**, no investor can earn excess returns by developing trading rules based on historical price or return information. In other words, information in past prices or returns is not useful or relevant in achieving excess returns. Under the **Semi strong form efficiency**, the current prices reflect the information contained not only in past prices but also public information (including financial statements and news reports).

It therefore implies that no investor can earn excess returns from trading rules based on any publicly available information. Examples of publicly available information are annual reports of companies and investment advisory data. Under **Strong form efficiency**, the current price reflects all information, public as well as well as private. This means that no investor can earn excess returns using any information whether public available or not. Hence no investor is able to consistently find undervalued stocks.

The research focused on the semi-strong form of the efficient market theory. In testing for the semi strong form of a market, the speed of adjustment of share prices to an information-generating event (such as earnings announcement, dividend announcements and stock split among others) is usually examined.

In developed markets such as the USA, Britain and Japan, efficient market hypothesis (EMH) has been the subject of considerable research. The outcome of which is a strong measure of consensus on the validity of the weak and semi strong forms of efficient market hypothesis (EMH) for major developed countries (**Fama, (1970): Ross and Westerfield (1988)**).

However, the efficient market hypothesis debate has also been carried into the emerging markets. In his study **Olatudu (1999)** examined the efficiency of the Nigerian stock market at the semi strong level by looking at the speed of adjustment of shares prices to 595 dividend announcements between 1991 and 1999. The study revealed negative excess returns for the

dividend paying samples before the day of announcement and positive after the announcement date. The research task was therefore to ascertain whether these findings are portable to the Nairobi Stock Exchange.

## **2.2 Market Anomalies**

Webster's dictionary defines an anomaly as a "deviation from the common rule". Studies of market efficiency have uncovered numerous examples of market behavior that are inconsistent with existing models of risk and return and often defy rational explanation. The persistence of some of these patterns of behavior suggests that a problem, in at least some of these anomalies, lies in the models being used for risk and return rather than in the behavior of financial markets.

There are a number of anomalies that have been related to observable firm characteristics, these include small firm effect, market value of equity, price earnings ratios and price book value ratios. Other anomalies include: -Technical anomalies, Calendar anomalies such as January effect, turn of the month effect, Monday effect years ending in five. IPO's offerings, Buy-backs, and insider transactions also affect the market behaviour of share prices.

## Anomalies based on firm characteristics

### a) The Small Firm Effect

Studies have consistently found that smaller firms (in terms of market value of equity) earn higher returns than larger firms of equivalent risk, where risk is defined in terms of the market beta. **Banz (1981)** examined the stocks quoted in the NYSE between 1926-1975 and concluded that holding stocks of low capitalization companies earned excess returns. **Dimson and Marsh (1981)** examined stocks in the United Kingdom from 1955 to 1984. They found that the annual returns on small stocks exceeded that on annual large stocks by 7% annually over the period. **Bergstrom, Frashure and Chisholm (1989)** report a large size effect for French stocks (Small stocks made 32.3% per year between 1975 to 1989, while large stocks made 23.5%) and a much smaller size effect in Germany.

### b) Price Earnings Ratio

Investors have long argued that stocks with low price earnings ratios are more likely to be undervalued and earn excess returns. For instance, Ben Graham, in his investment classic uses “**The Intelligent Investor**,” uses low price earning ratios as a screen for finding undervalued stocks.

### c) Price Book Value Ratios

Studies have shown that there is a negative relationship between returns and price book value ratios. Consistent with this view, **Fama and French (1995)** show that firms with high book to market equity ratios have

persistently low earnings, higher financial leverage, more earnings uncertainty and are more likely to cut dividends compared to those with low book to market equity ratios.

## Calendar Anomalies

### a)The January Effect

Studies done in the United States have revealed strong differences in return behavior across the months of the year. Returns in January are significantly higher than returns in any other month of the year. **Rozeff and Kinney (1976)** revealed that returns for January were 3.48% compared to other months, which they found to be 0.42%. However **King'ori (1995)** did not find any significant seasonal anomalies in the Nairobi Stock Exchange (NSE)

### b)Turn of the month effect

According to **Hensel and Ziemba, (1996)** Stocks consistently show higher returns on the last day and the first four days of the month. They presented the theory that the effects results from cash flows at the end of the month such as salaries, and interest payments. They also found returns for the turn of the month were significantly above average from 1928 through 1993 and that the total return from S&P 500 over the sixty five years period was received mainly during the month. Hence they asserted that by exploiting the turn of the month effect could lead to abnormal

returns. Nevertheless, **Kamau (2003)** concluded that this was not the case in the Nairobi Stock Exchange (NSE).

### **C)The weekend /Monday Effect**

Several studies have shown that returns on Mondays are worse than any other day of the week. **French (1980)** found out that returns on Mondays were significantly negative compared to the returns on the other days of the week .The weekend effect is fairly strong in developed markets.

However in emerging and developing markets it may not always apply.

**Mokua (2003)** reveals that the Nairobi Stock Exchange does not exhibit this pattern.

### **Other Anomalies**

#### **a)IPO's, Seasoned Equity Offerings and Stock Buy outs**

Numerous studies have concluded that Initial Public offerings (IPO's) in aggregate under perform the market and there is also evidence that secondary offerings also underperform. **Bala Dharan and David Ikenberry** found that firms listing their stocks on the NYSE and AMEX for the first time subsequently under perform. **Tim Loughran and Anand M. Vijh** recently found out those acquiring firms in the NYSE that complete stock mergers under perform while firms that complete cash tender offers outperform.

## **b) Insider Transactions**

Insider buying is considered by many to be a signal that the insiders believe the stock is significantly undervalued and their belief is that the stock will outperform accordingly.

Despite strong evidence that stock market is highly efficient, there have been scores of studies that have documented long term historical anomalies in the stock market that seem to contradict the efficient market hypothesis. While the existence of these anomalies is well accepted, the question if investors can exploit them to earn superior Returns in future are subject to debate.

## **2.3.Event studies**

The event study methodology was used in the research .The methodology is based on the assumption that capital market are sufficiently efficient to evaluate the impact of new information (events).

An event study is therefore designed to examine the market reactions to, and excess returns around specific information events. The information events can be market-wide, such as macroeconomic announcements, or firm specific such as earnings, dividend announcements, stock splits or even mergers.

Event studies have been used to test the semi strong form of market efficiency (Fama et al (1969). It involves the following steps: -



### 1. Identification of the events of interest and definition of the event

window:-

The event studied in the research was dividend announcements and their effect on share prices in the Nairobi Stock Exchange. The event window was 21 days .The research therefore examined excess returns 10 days before and 10 days after the dividend announcement. The day of announcement was denoted as day zero.

### 2. Selection of sample set of firms to include in the analysis: -

The sample consisted of the companies making up the 20 NSE Share Index.

### 3. Prediction of a “normal” return during the event window in absence of the event.

### 4. Estimation of the abnormal return within the event window: -

Where by the abnormal return was defined as the difference between the actual and the predicted return.

Several methods may be used to estimate abnormal returns: the single-index model (constant mean return model), the market model and the capital asset price model (CAPM) are the most widely used. **Fama (1991)** believes that the market model can be used to test for market efficiency when the phenomenon being studied is “Firm –specific”, which most event studies are. **McKinley (1979)** argues that to some extent the market model eliminates the biases introduced by using CAPM and APT in events studies. Hence the research applied the modified market model.

5. Testing whether the abnormal return is statistically different from Zero:-  
The averaged excess returns for each period were tested for significance by calculating the t-statistics based on the cross-sectional variance of the excess returns in the relevant period as in **Michaely et al (1995)** and **Fox and Opong (1999)**.

## **2.5 Nairobi Stock Exchange (NSE)**

Shares and stocks trading in Kenya started way back in the 1920's when Kenya was still a British colony. From being a small stock market, the current Nairobi Stock Exchange has developed into one vibrant Capital market in Africa.

In 1991, the Nairobi Stock Exchange (NSE) faced out a call-over system in favour of the open-cry system that had been in application there before. These developments were aimed at enhancing the growth of capital market. In the 1980's the Kenyan government realized the need to design and implement policy reforms to foster sustainable economic development with an efficient a stable financial system. In particular it set out to enhance the role of the private sector in the economy, reduce the demands of public enterprises on the exchequer, rationalize operations of the public enterprise sector, to broaden the base of ownership and enhance capital market operation. This culminated in the establishment of the capital market authority (CMA) in 1989 this is the current regulatory body of the capital market in the country. In January 1995 the government removed all

exchange controls that the Nairobi Stock Exchange (NSE) allowed foreign participation in the exchange.

Among the wide range of Financial products traded in the bourse are fixed as well as the variable income securities. Variable income securities are the ordinary shares which have no fixed rate of dividend payable, as the dividend is dependable both the profitability the company and what the board of directors decides. The fixed income securities include preference shares, debenture stocks, municipal and government Stocks. These have a fixed rate of interest /dividend which is not dependent on profitability. Currently there are 48 companies listed in the Nairobi Stock Exchange (NSE), with 20 companies making up the Nairobi Stock Exchange (NSE) 20 Share Index.

## **2.6 Empirical studies.**

The use of cash dividend as signals by managers has been extensively debated in the corporate finance literature. Assuming perfect capital markets, **Modigliani and Miller (1958)** have shown that given the investment decision, the value of the firm is independent of the decision to pay cash dividends to shareholders. In a follow up article, **Miller and Modigliani (1961)** noted that any relationship between dividend announcement and security price movements should be attributed to the information concerning the future earnings prospects that are conveyed in the dividend announcements.

**Gordon and Linter (1962)** in their basic dividend model concluded that if a company pays out more cash dividend the price of its shares would increase. According to **Black and Scholes (1974)**, increase in dividend may have no definite effect on stock price. They further assert that temporary changes in share price may occur due to the change in dividend policy. While increased dividends generally increase common stock value, this may not always be the case; if a company's overall performance is questionable then raising dividends may not encourage investors (**Gitman (1998)**).

**Bhattacharya (1979), Kalay (1980), Miller and Rock (1982)**, each assuming that information asymmetries exist between managers and investors, have developed models of cash dividend signaling. In each model, security prices adjust to new equilibrium levels in response to the information, which managers convey to investors in their dividend decisions. The empirical studies of **Aharony and Swary (1980), Kwan (1981), and Woolridge (1982)** strongly support the notion that dividend contain information as evidence by share price reactions to dividend change announcements.

**Foster and Vickrey (1979)** analyzed daily stock market model residuals around the declaration day for 82 share dividend announcements over 1972-1974 and concluded that share dividend announcements are

interpreted by investors as signals from managers. Consequently the information, which Foster and Vickrey attribute to share dividends may actually result from the effective increase in total cash dividends. He, asserts that the information content of changes in cash dividends has much empirical support.

A study by **Gribblatt, Masuli's and Titman (1984)** confirm the earlier work by Foster and Vickrey. The "announcement effects" for the share dividends are large, 4.9% for a sample of 382 share dividends and 5.89% for smaller sample of 84 share dividends with no other announcement in a three-day period around the share dividend announcement. In addition, this investigation documents significantly positive excess returns on and around the ex-dates of share dividends. While the announcement returns cannot be explained by forecasts of imminent increase in cash dividends, the authors offer several signaling based explanations for them.

**Bhana (1991)** examined the share market response to substantial changes in dividend policies by JSE listed companies during the period 1970-1988. The results provide a strong support for the information content of dividend hypothesis. The empirical evidence suggests that large dividend changes on the JSE convey valuable information to investors over and above that contained in the earnings announcements. The hypothesis that investors revise their expectations in response to announcement of significant dividend changes (signaling effect) is affected.

**Weston and Copeland (1992)** suggest that firms increase their regular dividend only if they are confident of maintaining future dividends at this increased level. Therefore a cash dividend increase can be considered a positive signal to the market regarding the firm's future cash flows.

In developed markets (such as the USA, Britain, and Japan), efficient market hypothesis (EMH) has been the subject of considerable research by economists. The outcome of which is a strong measure of consensus among economists on the validity of the weak and semi- strong forms of the EMH; for the major developed countries **Fama, (1970); Ross and westerfield (1988)**.

However the EMH debate has also been carried into emerging markets. The conclusions of the studies have been mixed **Gandhi et al.,(1980 1982); Parkinson, (1984); Ayadi (1983, 1984); Dickinson and Muragu, (1994);Ojeyinka, (1985); Omole,(1997);Matome, (1998), Osei, (1998); Olowe, (1998); Oludoyi( 1999)**. **Dickinson and Muragu (1994)** studied the efficiency of the Nairobi Stock Exchange at weak form and their conclusion was that the market is not efficient. **Osei (1998)** arrived at a similar conclusion on his study on the efficiency of the Ghana stock market; **Matome (1998)** also examined the behavior of the Namibian stock market. Overall there is more evidence of inefficiency from studies on the African Capital market.

Several studies relating to dividend policy have been carried out in Kenya. A study on dividend policies in practices of publicly quoted companies in Kenya by **Karanja (1987)** asserts that the dividend policy does not only involve the decisions on whether or not to pay dividends but also how much to pay, and the mode of payment .He also points out that the firms cash flows and cash position do influence the changes in dividend policy.

In her research to examine important parameters in determination of dividend policy of publicly quoted companies, **Farida (1993)** revealed that liquidity is the most important factor in determining dividend payment of publicly quoted companies in the Nairobi stock Exchange (NSE).

An attempt by **Iminza (1997)** to investigate whether dividend payments do affect stock prices revealed that indeed dividend payment has a significant impact on share prices. She also deduced that the impact is much greater when there is a reduction in dividend paid than an increase.

**Muriithi (2001)** carried out a study to establish whether interim dividends could be used in predicting final earnings in the Nairobi stock exchange. He used regression analysis .The findings however revealed that there is no relationship between interim earnings and eventual year-end earnings.

**Njoroge (2001)** researched on the relationship between dividend payouts and financial ratios in Kenya and came up with the conclusion that in making dividend decisions, the most important variable is the return on Asset. A recent study was done by **Maina (2002)**, who sought to establish whether there is any relationship between dividend payment and the investment decision .The conclusion was that indeed it does exist.

A recent study by **Mbugua (2003)** on the impact of the share price of stock dividend announcements on share price in the Nairobi stock exchange revealed that stock dividends though a cosmetic corporate event do have a significant impact on stock returns. In her research of Market efficiency, **Makara (2004)** documented that the low P/E portfolios outperformed the high P/E portfolios in the Nairobi Stock Exchange during the period (1994-2003).



# **CHAPTER THREE**

## **RESEARCH METHODOLOGY.**

### **3.1 Population**

The population of interest in the study consisted of all firms quoted at the Nairobi Stock Exchange (NSE) (Appendix1). This was limited to quoted companies because of data availability.

### **3.2 Sample**

The sample consisted of the companies making up the 20 NSE Share Index, which as at December 2004 were: -

Uniliver Tea, Williamson tea, Kakuzi, Sasini, Uchumi, Kenya airways, TPS-Serena, Nation, Barclays, D.Trust, KCB, Stanchart, Bamburi, BAT (Kenya), BOC Limited, NIC, EABL, Firestone, KP&LC and TOTAL Kenya.

This number was considered sufficient to generalize the findings for the research for the entire stock market. The sample also cut across the segments of the Nairobi Stock Exchange.

A period of 5 years between January 2000 and December 2004 was taken since the researcher considered the period to be adequate for establishing any relationship between cash dividend announcements and the value of the firm as reflected in share prices.

### 3.3 Data collection and Data Specification

Secondary data was used in the research. The data was obtained from the Nairobi Stock Exchange (NSE) database. The data comprised of the name of the company making the dividend issue, rate of the cash dividend, date of cash dividend announcement and daily stock prices for the company.

This was specified as follows: -

1. The event of study was cash dividend announcement.

The announcement date was based on the date the Nairobi Stock Exchange was notified by the company issuing the cash dividend.

2. The event window included the date of announcement and ten trading days before and ten trading days after the cash dividend announcement.

Hence the study encompassed 21 days. As **Mc Williams et al (1997)** points out the days before the announcement were mandatory in the event window for the purpose of capturing any leakages, which could be brought about by insider trading. The ten days after the announcement were necessary so as to capture representative information since trading in the Nairobi Stock Exchange is thin.

3. All cash dividend distributions by companies for the period 1<sup>st</sup> January 2000 to December 2004 were considered.

4. For each company in the random sample, daily data on share prices was obtained from the database of Nairobi Stock Exchange. Share returns based on closing share prices from 60 days before the event through day 1

after the event were obtained from the Nairobi Stock Exchange database. These returns were characterized according to event time, with day 0 being defined as the announcement date of the cash dividend as recorded on the NSE database.

### **3.4 Data Analysis**

In line with the objectives, data was analyzed and tested to yield conclusions in respect of two null hypothesis as follows:-

#### **Null Hypothesis One**

**H0: Cash dividend announcements do not have any impact on stock returns at the Nairobi Stock Exchange (NSE).**

#### **Null Hypothesis Two**

**H0: The Nairobi Stock Exchange does not efficiently react to cash dividend announcements in price adjustments.**

The study aimed at testing if the Nairobi Stock Exchange is semi-strong efficient with respect to its reactions to dividend announcements in price adjustments. The methodology is strongly influenced by **Michaely et al (1995) and Loughran and Ritter (1995)**. To evaluate the performance of the firms in samples before, during and after the events, the returns from a buy-and hold strategy were calculated. Actual unadjusted returns of each firm's shares were calculated using the holding period return by considering both share prices and dividends (**McInish 2000**) as follows:

$$R_{jt} = \frac{P_{jt} - P_{jt-1} + D_{jt}}{P_{jt-1}}$$

This simplifies to:

$$R_{jt} = \frac{P_{jt} + D_{jt}}{P_{jt-1}} - 1$$

Where by  $P_{jt}$  is the share price of firm  $j$  in period  $t$ ; and  $D_{jt}$  is the share price of firm  $j$  in period  $t-1$

Actual adjusted returns of each firm's shares were calculated by adjusting the returns of individual firms for risk (beta). Variance or standard deviation captured the total risk of an asset. Systematic risk is the risk that an asset shares with the market, and the unsystematic risk is the risk that is unique to the asset. Efficient portfolios including the market portfolio have only systematic risk. Hence, beta is a measure of systematic risk of the market. The equation for beta is defined as:

$$\beta_j = \frac{\rho_{jt} \sigma_{rt}}{\sigma_m}$$

Where  $\beta_j$  is beta  $\rho_{jt}$  is the proportion of an asset's total risk that is systematic;  $\sigma_{rt}$  is the amount systematic risk for the market portfolio. And  $\sigma_m$  is the amount of systematic risk in the market portfolio.

Beta is the covariance between returns on the risky asset and the market portfolio divided by the standard deviation of the market portfolio. The risk free asset has a beta of zero because it's covariance with the market portfolio is zero. The market portfolio has a beta of one because the covariance of the market portfolio with itself is identical to the variance of the market portfolio (Charest (1978);Khoury (1983);Rolland Ross (1980); Knott (1998); McInish (2000)).

However actual adjusted returns of each firm's shares was computed as follows using the Treynor measure:

$$R_{jt} = R_{jt} - R_{ft}$$

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$$\beta_j$$

Where  $R_{ft}$  is the risk free rate of return, which was defined in the study as the rate of return on short-term government bond; The beta  $\beta_j$ , used to adjust returns was determined by running an ordinary least squares (OLS) regression between the actual returns of the security and the returns on the market as measured by the NSE 20 index over the 60 trading days preceding the event window.

Beta for each stock was calculated. Treynor's measure was used to calculate the portfolio returns because Treynor's portfolio performance is an index of portfolio performance that is based on systematic risk as measured by the beta coefficients, rather than on total risk like the Sharpe measure. The Treynor measure was preferred in this study because it

suggests measuring a portfolio relative to the systematic risk rather than relative to its total risk, as done by the Sharpe measure.

The project compared those returns to market returns and, for each stock, the excess return was defined as geometrically compounded; (buy-and –hold) return. The return on the market portfolio, MR was obtained as:

$$MR_t = \frac{NSE^{-20}I_t - NSE^{-20}I_{t-1}}{NSE^{-20}I_{t-1}}$$

Where  $NSE^{-20}I_t$  is the Nairobi Stock Exchange 20 share price index on day  $t$  and  $NSE^{-20}I_{t-1}$  (that is, the previous day).

The buy and hold (market adjusted) returns was calculated as:

$$ER_{j(a \text{ to } b)} = \prod_{t=a}^b (1+R_{jt}) - \prod_{t=a}^b (1+MR_t)$$

The symbol  $\Pi$  indicates the product of items,

$$\overline{ER} = \frac{1}{N} \sum_{I=t} ER_j$$

Where  $ER_{j(atob)}$  is the excess return for firm  $j$  from period  $a$  to  $b$ ; ( $a$  to  $b$ ) is the time period. For the twenty one-day event period, the period covers trading days  $t=-10,0,+10$

$R_{jt}$  is the adjusted return  $j$  for observation on day  $t$ .  $MR_t$  is the return on Nairobi Stock Exchange NSE<sup>-20</sup> price index

$\Pi$  Is product notation; and  $ER$  is the average excess returns for each period.

### Test

These averaged excess returns for each period were tested for significance by calculating the t-statistics based on the cross-sectional variance of the excess returns in the relevant period.

$$ER = \frac{\overline{ER}}{S_{ER}}$$

$$S_{ER} = \sqrt{\text{var}(ER)}$$

To achieve objective two, the cumulative market adjusted excess returns (CMER), for the following event windows were tested if they were positive and statistically significant

Dividend Payment day	CMER	tCMER
From Day -1 to +1		
From Day -5 to +5		
From Day -10 to +10		
From Day -1 to -5		
From Day -1 to +10		

Where CMER is the cumulative market adjusted excess returns.

And tCMER is the t-statistic of the cumulative market adjusted excess returns.

# CHAPTER FOUR

## DATA ANALYSIS & FINDINGS

### 4.1 Price Reactions to Dividend Announcements

Table 1(a): Market Adjusted Excess Return Trends before dividend announcement

		MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
	Before				
2000		0.010994		64.47169*	
2001		-0.05799		110.4821*	
2002		0.008932		-27.958*	
2003		0.014377		5.499782*	
2004		0.007269		-46.2898*	

Table 1(b): Market Adjusted Excess Return Trends after dividend announcement

		MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
	After				
2000		0.584864		2530.62*	
2001		0.539953		9885.553*	
2002		0.922432		5211.6*	
2003		0.681927		1412.758*	
2004		0.293482		1102.129*	

From Table 1a) and 1b) Mean Market adjusted Excess returns before dividend announcement, for the five-year period, registered mixed results but as indicated by the t-test the variation in returns was still significant (\*) by extension this trend implied a degree of stock market inefficiency.



After dividend announcement, the returns rose significantly as the prices adjusted upwards most probably occasioned by higher than expected performance of the respective listed companies. Consequently, for the five-year period market inefficiency has been prevalent as the stock market has not been able to predict, with reasonable accuracy, the financial performance of the listed firms and as a result the element of earnings surprise persist. A good example, of this trend is Kenya Airways, whose price used to be in the Kshs 25 – 30 range before announcement after which it soared to Kshs 70 – 90 range after announcement given that its earnings had tripled unexpectedly.

#### 4.2.1 Cumulative Market Adjusted Excess Returns Trends From day -1 to +1

Table 2(a): Cumulative Market Adjusted Excess Return Trends one day before dividend announcement

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
2000		0.007636	-44035.9*	
2001		0.134931	324.9484*	
2002		0.009154	-383.857*	
2003		-0.00749	-26207*	
2004		0.000591	26.17243*	

**Table 2(b): Cumulative Market Adjusted Excess Return Trends one day after dividend announcement**

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
2000		0.076885	82.15587*	
2001		0.192875	56.83074*	
2002		0.088933	50.12136*	
2003		0.15578	290.5551*	
2004		0.034491	20.67218*	

Cumulative adjusted returns a day before dividend announcement were depressed, except for 2001, with the market anticipation bordering on indifference.

Subsequently, one day after dividend announcement market correction is evident from the heightened market adjusted returns to the extent that price variation was significant.

#### **4.2.2 Cumulative Market Adjusted Excess Returns Trends** **From day -5 to +5**

**Table 3(a): Cumulative Market Adjusted Excess Return Trends five days before dividend announcement**

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
2000		0.008151	20.73362*	
2001		0.090059	133.5154*	
2002		0.074006	-10.1899*	
2003		-0.02105	30.23026*	
2004		-0.00388	-101.539*	

**Table 3(b): Cumulative Market Adjusted Excess Return Trends five days after dividend announcement**

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
2000		0.256128	313.0347*	
2001		0.355748	471.884*	
2002		0.34366	402.1013*	
2003		0.322532	338.6188*	
2004		0.102955	183.4849*	

As presented in table 3a) and 3b) above Mean Cumulative Market adjusted Excess returns five days before dividend announcement registered a mixed performance in the five-year period with the first three years recording a positive return while the latter two registered a significant negative excess return. In all the cases, there was a significant element of earnings surprise as indicated by the higher adjusted returns five days after dividend announcement as the market adjusted upwards for better than expected results.

#### **4.2.3 Cumulative Market Adjusted Excess Returns Trends From day -10 to +10**

**Table 4(a): Cumulative Market Adjusted Excess Return Trends ten days before dividend announcement**

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
2000		0.022804	80.68858*	
2001		0.075716	55.70545*	
2002		0.060197	45.26756*	
2003		0.011601	5.131221*	
2004		0.0077946	-45.304234*	

**Table 4(b): Cumulative Market Adjusted Excess Return Trends ten days after dividend announcement**

		(-10TO +10) CMER	(-10TO +10) TCMEER	SIGNIFICANT* AT 5% LEVEL
	After			
2000		0.447089	909.1836*	
2001		0.56212	1072.958*	
2002		0.668175	1072.326*	
2003		0.518118	702.5297*	
2004		0.2511763	488.6349*	

Mean Cumulative Adjusted Market Excess returns ten days before dividend announcement were modest especially in the last two years to 2004, which was an indication that the market did not expect any major changes in the earnings and dividend trends at NSE as shown in table 4a)and 4b) above.

Yet again ten days after announcement, the market is still undergoing a correction to bring it in line with the better than expected performance of listed companies. Consequently, the main trend arising is that of a consistent underestimation of earnings and dividend, which creates a price lag that subsequently, results in a knee jerk reaction in prices after announcement.

#### 4.2.4 Cumulative Market Adjusted Excess Returns Trends From day -1 to +5

Table 5(a): Cumulative Market Adjusted Excess Return Trends one day before dividend announcement

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
2000		0.007636	-44035.9*	
2001		0.134931	324.9484*	
2002		0.009154	-383.857*	
2003		-0.00749	-26207*	
2004		0.000591	26.17243*	

Table 5(b): Cumulative Market Adjusted Excess Return Trends five days after dividend announcement

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
2000		0.256128	313.0347*	
2001		0.355748	471.884*	
2002		0.34366	402.1013*	
2003		0.322532	338.6188*	
2004		0.102955	183.4849*	

Dividend anticipation by way of cumulative returns was marginal a day before dividend announcement, with perhaps the exception of 2001, and this is reflective of a prevalent atmosphere of suppressed dividend expectation in the stock market.

Five days after dividend announcement, the scenario changes as the market becomes more upbeat consequently yielding significantly greater excess returns and by implication the market correction is a pointer to existing information inefficiencies in the stock market, which cause it to continuously adjust prices after the information is made public.

## 4.2.5 Cumulative Market Adjusted Excess Returns Trends

### From day -1 to +10

Table 6(a): Cumulative Market Adjusted Excess Return Trends one day before dividend announcement

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
2000		0.007636	-44035.9*	
2001		0.134931	324.9484*	
2002		0.009154	-383.857*	
2003		-0.00749	-26207*	
2004		0.000591	26.172431*	

Table 6(b): Cumulative Market Adjusted Excess Return Trends ten days after dividend announcement

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
2000		0.461611	909.1836*	
2001		0.56212	1072.958*	
2002		0.668175	1072.326*	
2003		0.518118	702.5297*	
2004		0.251176	488.6349*	

Dividend anticipation by way of cumulative returns was marginal a day before dividend announcement, with perhaps the exception of 2001, and this is reflective of a prevalent atmosphere of suppressed dividend expectation in the stock market. Apparently, ten days after the dividend announcement the market continues to undergo a correction in form of upward price adjustments as evidenced by the significantly high levels of excess returns for all the five years. This also suggests that the stock market has a price lag of at least ten days after announcement before the stock price is able to fully reflect prevailing financial performance of the listed firms.

# CHAPTER FIVE

## SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

In this chapter, the findings of the research have been summarized and discussed in relation to the objective of the study .Included also are the limitations of the study and recommendations for further research.

### 5.1 CONCLUSION

The study examined the efficiency of the Nairobi stock exchange at the Semi strong level by looking at the speed of adjustment of share prices in cash dividend announcements between 2000 to 2004. The study was carried around the 21 day event window to capture the reactions over the period. The study revealed negative excess returns for the dividend paying samples before the day of announcements and positive returns after the date of announcement. Excess Cumulative Market adjusted returns for the five year period under study (2000 -2004) indicate speculative market activity in the period before dividend payment. To test for the robustness of the results 15 companies that paid cash dividends consistently were used.

The study also shows the cumulative market adjusted excess returns to be significant for the 10days before and 10days after dividend announcement for cash dividends paying firms. It points out to the fact that share prices

do react to cash dividend announcements. This supports **Iminza (1997)** who found out that indeed dividend payment has a significant impact on share prices. However one cannot rule out the possibility of insider trading in the Nairobi Stock Exchange. Moreover, the price still drifts until 10 days after the cash dividend announcement one can therefore deduce that Nairobi Stock Exchange is not semi strong efficient and at best may only possess the weak form of market efficiency. This supports earlier work by **Dickinson and Muragu (1994)** who studied the efficiency of the Nairobi Stock Exchange at a weak form and their conclusion was that the market is not efficient. It is also evident that cash dividend announcements caused increased volatility in the stock market through the five year period, as shown by the significance in variation of adjusted market returns after the dividend announcement hence the Nairobi Stock Exchange does react to cash dividend announcement.

Consequently the study rejected the null hypothesis one that cash dividend announcements do not have any impact on stock returns at the Nairobi Stock Exchange but it accepted the null hypothesis two that the Nairobi Stock Exchange does not efficiently react to cash dividend announcements in price adjustments.



## 5.2 LIMITATIONS

1. The reliability of share prices is questionable given the level of trading in this market. The efficiency of this market is weak because investors may not be well informed. Therefore the market prices of the shares in most cases may be the same as the intrinsic value of the stock, which is characteristic of many developing countries.
2. Another limiting factor was that the researcher focused on companies continuously quoted in the Nairobi stock exchange from (2000-2004). Private companies were not included in this study thus we cannot generalize the findings to private companies.
3. The date of the announcement used in the study is also limiting factor given that the stock market is not efficient and that such information may not reach all the willing investors in good time.
4. The other limiting factor was time thus the researcher concentrated on a few companies.

### 5.3 RECOMMENDATIONS FOR FURTHER RESEARCH

A number of recommendations spring up from the findings of this study.

There is need for more studies to be conducted in the following areas:-

1. The researcher can relax the assumptions we have made for buy and hold and see whether the same results will hold.
2. Test on the Industry effects after the cash dividend announcement i.e. Examine the effects of the other firms in an industry after one firm declares a cash dividend
3. Study the firm's history of issuing cash dividends and see if the firm's history of issuing cash dividends plays a crucial role in both the design and effects of cash dividends.
4. Examine whether managers signal their private information about future earnings.

# APPENDICES

## APPENDIX 1:LIST OF ALL COMPANIES QUOTED AT THE NAIROBI STOCK EXCHANGE

	NAME OF THE COMPANY	CODE
	<b>Agricultural</b>	
1.	Unilever Tea Kenya Ltd. Ord. 10.00	
2.	Kakuzi Ltd. Ord. 5.00	
3.	Rea Vipingo Plantations Ltd. Ord. 5.00	
4.	Sasini Tea & Coffee Ltd. Ord. 5.00	
	<b>Commercial and Services</b>	
5.	Car & General (K) Ltd. Ord. 5.00	
6.	CMC Holdings Ltd. Ord. 5.00	
7.	Hutchings Biemer Ltd. Ord. 5.00	
8.	Kenya Airways Ord. 5.00	
9.	Marshalls E. A) Ord. 5.00	
10.	Nation Media Group Ord. 5.00	
11.	Tourism Promotion Services Ltd. Ord. 5.00	
12.	Uchumi Supermarkets Ltd. Ord. 5.00	
	<b>Finance and Investment</b>	
13.	Barclays Bank Ltd. Ord. 10.00	
14.	CFC Bank Ltd. Ord. 5.00	
15.	Diamond Trust Of Kenya Ord. 5.00	
16.	Housing Finance CO. Ltd	

17.	ICDC Investment CO. Ltd. Ord. 5.00	
18.	Jubilee Insurance CO. Ltd. Ord. 5.00	
19.	Kenya Commercial Bank. Ord. 10.00	
20.	National Bank Of Kenya Ltd. Ord. 5.00	
21.	NIC Bank Ltd. Ord. 5.00	
22.	Pan Africa Insurance CO. Ltd. Ord. 5.00	
23.	Standard Chartered Bank Ord. 5.00	
	<b>Industrial and Allied</b>	
24.	Atthi River Mining Ord. 5.00	
25.	BOC Kenya Ltd.	
26.	Bamburi Cement Ltd. Ord. 5.00	
27.	British American Tobacco Kenya Ord. 5.00	
28.	Carbacid Investments Ltd. Ord. 5.00	
29.	Crown Berger Ord. 5.00	
30.	Olympia Capital Holdings Ltd. Ord. 5.00	
31.	E. A. Cables Ord. 5.00	
32.	E. A. Portland Cement Ord. 5.00	
33.	E. A. Breweries Ltd. Ord. 10.00	
34.	Firestone E. A. Ord. 5.00	
35.	Kenya Oil CO. Ltd. Ord. 5.00	
36.	Mumias Sugar CO. Ltd. Ord. 2.00	
37.	Kenya Power & Lighting CO. Ltd. Ord. 20.00	
38.	Total Kenya Ltd. Ord. 5.00	
39.	Unga Group Ltd. Ord. 5.00	
	<b>Alternative Market Segment</b>	
40.	A Baumann & CO. Ltd. Ord. 5.00	

41.	City Trust Ltd. Ord. 5.00	
42.	Eaagads Ord. 1.25	
43.	Express Kenya Ord. 5.00	
44.	Williamson Tea Kenya Ltd. Ord. 5.00	
45.	Kapchorua Tea CO. Ltd. Ord. 5.00	
46.	Kenya Orchards Ltd. Ord. 5.00	
47.	Limuru Tea Ord. 20.00	
48.	Std. Newspaper Group Ord. 5.00	

APPENDIX 2:DATA COLLECTION FORM

COMPANY \_\_\_\_\_

PERIOD	VOLUME	BEGINNING PRICE	CLOSING PRICE

## APPENDIX 3: OUTPUT DATA

Year 2000 Market Adjusted Excess Return Trends (*before and after dividend announcement*)

		MKT ADJ RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.025282	717.7996*	
BARCLAYS		-0.02805	-112.359*	
NATION		-0.2132	-493.444*	
DTB		0.055691	118.3285*	
BAMBURI		-0.00991	-238.446*	
BAT		0.228747	252.4317*	
BOC		-0.00559	-72.7265*	
NIC		0.012967	27.03702*	
CFC		0.073857	736.2123*	
EABL		-0.01892	-86.0278*	
FIRESTONE		-0.03112	-113.351*	
TOTAL		0.179317	219.9218*	
BROOKE BOND		-0.11651	-64.0665*	
CROWN BERGER		0.002333	6.878879*	
JUBILEE		0.010020	68.88623*	

		MKT ADJ RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.726214	410.0179*	
BARCLAYS		1.286352	983.4287*	
NATION		0.254635	2791.306*	
DTB		0.125559	2071.547*	
BAMBURI		0.599044	5765.138*	
BAT		1.317146	1764.338*	
BOC		0.858024	3580.786*	
NIC		0.133867	168.2529*	
CFC		0.593673	4578.213*	
EABL		0.032072	578.6468*	
FIRESTONE		0.158197	196.8411*	
TOTAL		0.366585	258.6959*	
BROOKE BOND		0.68461	266.8221*	
CROWN BERGER		1.178543	2256.075*	
JUBILEE		0.458444	12289.19*	

Year 2000 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.00216	-660392*	
BARCLAYS		0.008312	677.5252*	
NATION		-0.05425	-32.1613*	
DTB		0.010469	4.360134*	
BAMBURI		-0.00329	-92.0261*	
BAT		0.113755	289.5127*	
BOC		-0.00036	-34.0003*	
NIC		-0.02362	-936.151*	
CFC		0.014967	85.62368*	
EABL		0.061429	48.78954*	
FIRESTONE		-0.0059	-125.081*	
TOTAL		0.153514	57.51394*	
BROOKE BOND		-0.13312	-15.2113*	
CROWN BERGER		-0.02423	-48.2062*	
JUBILEE		-0.00097	-27.2643*	

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.063402	29.57039*	
BARCLAYS		0.183951	11.28062*	
NATION		0.01244	335.8663*	
DTB		0.052303	138.7018*	
BAMBURI		0.040647	64.57682*	
BAT		0.120219	202.048*	
BOC		0.058353	29.0991*	
NIC		0.019268	30.09842*	
CFC		0.061636	157.5497*	
EABL		0.050066	26.43616*	
FIRESTONE		0.022619	30.95007*	
TOTAL		0.173732	124.4226*	
BROOKE BOND		0.196902	10.07306*	
CROWN BERGER		0.057695	8.936901*	
JUBILEE		0.040047	32.72811*	



Year 2000 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-5TO +5) CMER	(-5TO +5) TCMEER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.00638	-345.264*	
BARCLAYS		0.014425	310.9562*	
NATION		-0.18155	-330.414*	
DTB		0.016738	33.25962*	
BAMBURI		-0.0083	-208.506*	
BAT		0.206434	168.5259*	
BOC		-0.00022	-10.3177*	
NIC		-0.05451	-277.014*	
CFC		0.038242	1044.876*	
EABL		0.02032	22.66324*	
FIRESTONE		-0.05479	-132.515*	
TOTAL		0.262141	116.6865*	
BROOKE BOND		-0.12646	-42.1203*	
CROWN BERGER		-0.00216	-11.2693*	
JUBILEE		-0.00167	-28.5448*	

		(-5TO +5) CMER	(-5TO +5) TCMEER	SIGNIFICANT* AT 5% LEVEL
	After			
IPS		0.364835	166.9423*	
BARCLAYS		0.478181	137.9413*	
NATION		0.121681	549.9473*	
DTB		0.092458	436.5608*	
BAMBURI		0.244423	470.2271*	
BAT		0.523069	307.4812*	
BOC		0.362721	281.9374*	
NIC		0.028511	29.23803*	
CFC		0.263104	729.7906*	
EABL		0.071477	135.6122*	
FIRESTONE		0.001942	2.327114*	
TOTAL		0.391846	672.3988*	
BROOKE BOND		0.337723	67.44338*	
CROWN BERGER		0.372407	135.0745*	
JUBILEE		0.18754	572.5986*	

Year 2000 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.024162	735.4888*	
BARCLAYS		-0.02618	-115.616*	
NATION		-0.23324	-521.011*	
DTB		0.098136	185.5037*	
BAMBURI		-0.00739	-191.551*	
BAT		0.253687	295.4401*	
BOC		-0.00842	-120.994*	
NIC		0.007026	15.9561*	
CFC		0.090924	924.405*	
EABL		0.036889	73.69602*	
FIRESTONE		-0.0389	-156.184*	
TOTAL		0.280948	177.7252*	
BROOKE BOND		-0.11682	-70.8735*	
CROWN BERGER		-0.02457	-64.9861*	
JUBILEE		0.005806	43.32841*	

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.568478	299.2297*	
BARCLAYS		0.857413	471.8678*	
NATION		0.234835	1899.379*	
DTB		-0.05764	1280.748*	
BAMBURI		0.493028	1701.521*	
BAT		0.93663	1078.338*	
BOC		0.661823	1022.177*	
NIC		0.120596	159.3715*	
CFC		0.489669	2436.078*	
EABL		0.087378	289.4611*	
FIRESTONE		0.143774	186.4164*	
TOTAL		0.445737	239.9271*	
BROOKE BOND		0.544763	210.8626*	
CROWN BERGER		0.794081	504.6299*	
JUBILEE		0.385767	1857.747*	

Year 2000 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +5) CMER	(-1TO +5) TCMEER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.00216	-660392*	
BARCLAYS		0.008312	677.5252*	
NATION		-0.05425	-32.1613*	
DTB		0.010469	4.360134*	
BAMBURI		-0.00329	-92.0261*	
BAT		0.113755	289.5127*	
BOC		-0.00036	-34.0003*	
NIC		-0.02362	-936.154*	
CFC		0.014967	85.62368*	
EABL		0.061429	48.78954*	
FIRESTONE		-0.0059	-125.081*	
TOTAL		0.153514	57.51394*	
BROOKE BOND		-0.13312	-15.2113*	
CROWN BERGER		-0.02423	-48.2062*	
JUBILEE		-0.00097	-27.2643*	

		(-1TO +5) CMER	(-1TO +5) TCMEER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.364835	166.9423*	
BARCLAYS		0.478181	137.9413*	
NATION		0.121681	549.9473*	
DTB		0.092458	436.5608*	
BAMBURI		0.244423	470.2271*	
BAT		0.523069	307.4812*	
BOC		0.362721	281.9374*	
NIC		0.028511	29.23803*	
CFC		0.263104	729.7906*	
EABL		0.071477	135.6122*	
FIRESTONE		0.001942	2.327114*	
TOTAL		0.391846	672.3988*	
BROOKE BOND		0.337723	67.44338*	
CROWN BERGER		0.372407	135.0745*	
JUBILEE		0.18754	572.5986*	

Year 2000 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1T0 +10) CMER	(-1T0 +10) tCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.00216	660.392*	
BARCLAYS		0.008312	677.5252*	
NATION		-0.05425	-32.1613*	
DTB		0.010469	4.360134*	
BAMBURI		-0.00329	-92.0261*	
BAT		0.113755	289.5127*	
BOC		-0.00036	-34.0003*	
NIC		-0.02362	-936.154*	
CFC		0.014967	85.62368*	
EABL		0.061429	48.78954*	
FIRESTONE		-0.0059	-125.081*	
TOTAL		0.153514	57.5139*	
BROOKE BOND		-0.13312	-15.2113*	
CROWN BERGER		-0.02423	-48.2062*	
JUBILEE		-0.00097	-27.2643*	

		(-1T0 +10) CMER	(-1T0 +10) tCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.568478	299.2297*	
BARCLAYS		0.857413	471.8678*	
NATION		0.234835	1899.379*	
DTB		0.160187	1280.748*	
BAMBURI		0.493028	1701.521*	
BAT		0.93663	1078.338*	
BOC		0.661823	1022.177*	
NIC		0.120596	159.3715*	
CFC		0.489669	2436.078*	
EABL		0.087378	289.4611*	
FIRESTONE		0.143774	186.4164*	
TOTAL		0.445737	239.9271*	
BROOKE BOND		0.544763	210.8626*	
CROWN BERGER		0.794081	504.6299*	
JUBILEE		0.385767	1857.747*	

Year 2001 Market Adjusted Excess Return Trends (before and after dividend announcement)

		MKT ADJ RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.67982	-15.6622*	
BARCLAYS		0.028192	1310.794*	
NATION		-0.00764	-9.52319*	
DTB		-0.01745	-92.7629*	
BAMBURI		-0.05439	-49.2789*	
BAT		0.0019	39.79203*	
BOC		-0.10064	-131.837*	
NIC		-0.07539	-189.302*	
CFC		0.051606	760.3218*	
EABL		0.029935	418.0269*	
FIRESTONE		0.03112	-113.351*	
TOTAL		-0.00114	-1.00702*	
BROOKE BOND		-0.11651	-64.0665*	
CROWN BERGER		0.002333	6.878879*	
JUBILEE		0.006926	99.03194*	

		MKT ADJ RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.928351	5303.498*	
BARCLAYS		0.380288	12136.23*	
NATION		0.201287	750.89*	
DTB		0.570974	3741.975*	
BAMBURI		0.124052	462.9926*	
BAT		0.133836	409.0131*	
BOC		0.145293	145.1096*	
NIC		0.653633	1402.047*	
CFC		0.983442	108134.7*	
EABL		0.388933	981.8758*	
FIRESTONE		0.158197	196.8411*	
TOTAL		0.52771	252.5069*	
BROOKE BOND		0.68461	266.8221*	
CROWN BERGER		1.178543	2256.075*	
JUBILEE		1.027487	10883.23*	

Year 2001 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1T0 +1) CMER	(-1T0 +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		2.033026	0.981932	
BARCLAYS		0.021129	218.3325*	
NATION		0.020982	1911.049*	
DTB		0.013653	2370.596*	
BAMBURI		-0.05022	-67.8699*	
BAT		-0.0026	-24.6151*	
BOC		0.006731	1414.936*	
NIC		0.017572	30.675*	
CFC		-0.00279	-83.0851*	
EABL		-0.00366	-7.31144*	
FIRESTONE		-0.00131	-80.0384*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.028443	201.8286*	
CROWN BERGER		-0.02421	-10.8569*	
JUBILEE		-0.01939	-242.067*	

		(-1T0 +1) CMER	(-1T0 +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		2.082751	1.056974	
BARCLAYS		0.059498	198.9431*	
NATION		0.012907	159.419*	
DTB		0.057945	69.28684*	
BAMBURI		-0.01075	-3.53712*	
BAT		0.016162	29.12322*	
BOC		0.039987	87.85295*	
NIC		0.082864	167.6247*	
CFC		0.066704	22.10171*	
EABL		0.039186	14.13246*	
FIRESTONE		0.113298	19.11311*	
TOTAL		0.151834	11.96991*	
BROOKE BOND		0.06391	46.80883*	
CROWN BERGER		0.033957	7.922105*	
JUBILEE		0.08287	20.64339*	

Year 2001 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		1.35595	1.588086*	
BARCLAYS		0.029326	467.3822*	
NATION		0.016104	29.94734*	
DTB		0.02002	1953.357*	
BAMBURI		0.014179	11.91627*	
BAT		-0.00734	-215.515*	
BOC		-0.06339	-57.6914*	
NIC		-0.03965	-56.4211*	
CFC		0.033973	357.094*	
EABL		-0.00477	-37.0489*	
FIRESTONE		-0.03694	-151.148*	
TOTAL		-0.07153	-85.1568*	
BROOKE BOND		0.139008	85.57565*	
CROWN BERGER		-0.02493	-150.823*	
JUBILEE		-0.00913	-150.325*	

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		2.351616	3.633618*	
BARCLAYS		0.17951	2451.162*	
NATION		0.114131	467.3962*	
DTB		0.238834	1002.687*	
BAMBURI		0.00119	1.439005*	
BAT		0.110803	583.7729*	
BOC		0.083363	87.90763*	
NIC		0.3563	1022.178*	
CFC		0.358178	348.8293*	
EABL		0.153265	209.4033*	
FIRESTONE		0.174354	73.43878*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.33384	229.5074*	
CROWN BERGER		0.29062	198.5858*	
JUBILEE		0.350169	338.094*	

Year 2001 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-10TO +10) CMER	(-10TO +10) tCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		1.339917	3.036546*	
BARCLAYS		0.045651	1169.909*	
NATION		0.008667	11.74847*	
DTB		-0.00863	-18.2354*	
BAMBURI		-0.09409	-82.951*	
BAT		-0.00648	-129.614*	
BOC		0.10064	141.988*	
NIC		-0.05032	-109.546*	
CFC		0.046914	655.5708*	
EABL		0.012578	121.8031*	
FIRESTONE		0.0591	-127.196*	
TOTAL		0.001332	1.307494*	
BROOKE BOND		0.029424	13.44133*	
CROWN BERGER		-0.03338	-261.893*	
JUBILEE		0.00388	60.18919*	

		(-10TO +10) CMER	(-10TO +10) tCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		2.712497	7.715228*	
BARCLAYS		0.353328	6840.786*	
NATION		0.20471	835.7138*	
DTB		0.475033	1762.77*	
BAMBURI		0.077607	145.934*	
BAT		0.118427	352.828*	
BOC		0.148508	163.3293*	
NIC		0.55652	1141.148*	
CFC		0.713655	1290.685*	
EABL		0.325041	540.4169*	
FIRESTONE		0.397124	287.3595*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.62492	838.8028*	
CROWN BERGER		0.539421	508.3617*	
JUBILEE		0.740911	1166.517*	



Year 2001 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		2.033026	0.981932	
BARCLAYS		0.021129	218.3325*	
NATION		0.020982	1941.049*	
DTB		0.013653	2370.596*	
BAMBURI		-0.05022	-67.8699*	
BAT		-0.0026	-24.6151*	
BOC		0.006731	1414.936*	
NIC		0.017572	30.675*	
CFC		-0.00279	-83.0851*	
EABL		-0.00366	-7.31144*	
FIRESTONE		-0.00131	-80.0384*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.028443	201.8286*	
CROWN BERGER		-0.02421	-40.8569*	
JUBILEE		-0.01939	-242.067*	

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		2.351616	3.633618*	
BARCLAYS		0.17951	2451.162*	
NATION		0.114131	467.3962*	
DTB		0.238834	1002.687*	
BAMBURI		0.00119	1.439005*	
BAT		0.110803	583.7729*	
BOC		0.083363	87.90763*	
NIC		0.3563	1022.178*	
CFC		0.358178	348.8293*	
EABL		0.153265	209.4033*	
FIRESTONE		0.174354	73.43878*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.33384	229.5074*	
CROWN BERGER		0.29062	198.5858*	
JUBILEE		0.350169	338.094*	

Year 2001 Cumulative Market Adjusted Excess Return Trends (*before and after dividend announcement*)

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		2.033026	0.981932	
BARCLAYS		0.021129	218.3325*	
NATION		0.020982	1941.049*	
DTB		0.013653	2370.596*	
BAMBURI		-0.05022	-67.8699*	
BAT		-0.0026	-24.6151*	
BOC		0.006731	1414.936*	
NIC		0.017572	30.675*	
CFC		-0.00279	-83.0851*	
EABL		-0.00366	-7.31144*	
FIRESTONE		-0.00131	-80.0384*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.028443	201.8286*	
CROWN BERGER		-0.02421	-40.8569*	
JUBILEE		-0.01939	-242.067*	

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		2.712497	7.715228*	
BARCLAYS		0.353328	6840.786*	
NATION		0.20471	835.7138*	
DTB		0.475033	1762.77*	
BAMBURI		0.077607	145.934*	
BAT		0.118427	352.828*	
BOC		0.148508	163.3293*	
NIC		0.55652	1141.148*	
CFC		0.713655	1290.685*	
EABL		0.325041	540.4169*	
FIRESTONE		0.397124	287.3595*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.62492	838.8028*	
CROWN BERGER		0.539421	508.3617*	
JUBILEE		0.740911	1166.517*	

Year 2002 Market Adjusted Excess Return Trends (before and after dividend announcement)

			MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
		Before				
TPS			-0.00592		-59.8124*	
BARCLAYS			0.021351		62.3267*	
NATION			0.077165		641.4149*	
DTB			-0.02949		-435.034*	
BAMBURI			-0.00715		-785.139*	
BAT			0.030354		383.8495*	
BOC			0.10187		103.3905*	
NIC			-0.00202		-1.55291	
CFC			-0.00611		-0.03084	
EABL			0.042126		564.4409*	
FIRESTONE			-0.03112		-113.351*	
TOTAL			-0.00114		-1.00702*	
BROOKE BOND			-0.11651		-64.0665*	
CROWN BERGER			0.002333		6.878879*	
JUBILEE			-0.01126		-132.045*	

			MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
		After				
TPS			0.840958		9208.155*	
BARCLAYS			2.338186		13373.33*	
NATION			0.663329		84.3537*	
DTB			0.471822		658.9097*	
BAMBURI			0.638402		5321.364*	
BAT			0.552901		6459.649*	
BOC			0.986102		10751.56*	
NIC			0.798924		3810.851*	
CFC			1.105312		8827.338*	
EABL			1.763782		2146.47*	
FIRESTONE			0.158197		196.8411*	
TOTAL			0.52771		252.5069*	
BROOKE BOND			0.68461		266.8221*	
CROWN BERGER			1.178543		2256.075*	
JUBILEE			1.284957		5310.668*	

Year 2002 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.02686	-7104.93*	
BARCLAYS		0.002944	2220.445*	
NATION		0.062577	387.0625*	
DTB		0.026571	113.3668*	
BAMBURI		0.012791	38.92016*	
BAT		0.000854	11.4049*	
BOC		-0.0237	-859.068*	
NIC		0.017926	44.58499*	
CFC		0.005377	1579.292*	
EABL		0.000678	19.22563*	
FIRESTONE		-0.03071	-1147.16*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		-0.00828	-569.292*	
CROWN BERGER		0.105239	18.82435*	
JUBILEE		0.005287	247.8041*	

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.060267	16.92869*	
BARCLAYS		0.160405	12.67552*	
NATION		0.343929	9.916697*	
DTB		0.072549	245.1855*	
BAMBURI		0.064441	190.4821*	
BAT		0.036943	31.63681*	
BOC		0.057465	21.1364*	
NIC		0.092157	87.58313*	
CFC		0.087126	27.82217*	
EABL		0.166275	10.98461*	
FIRESTONE		-0.19515	-15.8099*	
TOTAL		0.151834	11.96991*	
BROOKE BOND		0.033016	51.22466*	
CROWN BERGER		0.110176	21.68504*	
JUBILEE		0.092555	28.39904*	

Year 2002 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.0065	-41.9843*	
BARCLAYS		0.012239	82.85999*	
NATION		0.097936	433.1101*	
DTB		-0.00311	-12.323*	
BAMBURI		0.016291	215.7723*	
BAT		0.014755	145.1848*	
BOC		0.108252	90.8594*	
NIC		0.024399	37.41282*	
CFC		0.934964	3.003377*	
EABL		0.020313	261.5044*	
FIRESTONE		-0.05409	-1366.78*	
TOTAL		-0.07153	-85.1568*	
BROOKE BOND		-0.01403	-1447.16*	
CROWN BERGER		0.016692	4.134943*	
JUBILEE		0.013499	1526.718*	

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.298897	311.7703*	
BARCLAYS		0.670302	214.0128*	
NATION		0.506371	43.15094*	
DTB		0.186919	291.8293*	
BAMBURI		0.272557	1319.674*	
BAT		0.227562	402.3102*	
BOC		0.360987	290.6546*	
NIC		0.311689	1059.998*	
CFC		0.387487	430.1207*	
EABL		0.603395	161.4253*	
FIRESTONE		-0.03242	-3.83099*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.171871	740.3994*	
CROWN BERGER		0.50317	330.0132*	
JUBILEE		0.446063	379.7667*	

Year 2002 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.01758	-173.988*	
BARCLAYS		0.023708	76.83556*	
NATION		0.11653	567.8479*	
DTB		-0.0054	-42.3424*	
BAMBURI		0.012036	271.5737*	
BAT		0.025035	320.3356*	
BOC		0.083697	91.56927*	
NIC		0.026708	21.95274*	
CFC		0.59185	3.312774*	
EABL		0.038557	527.1851*	
FIRESTONE		-0.01897	-45.3992*	
TOTAL		0.001332	1.307494*	
BROOKE BOND		-0.00996	-896.467*	
CROWN BERGER		0.040686	20.08548*	
JUBILEE		-0.00526	-64.7949*	

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.625534	1034.377*	
BARCLAYS		1.289432	780.5637*	
NATION		0.609487	85.81335*	
DTB		0.435236	648.8936*	
BAMBURI		0.54458	2606.736*	
BAT		0.446397	1428.164*	
BOC		0.733755	1050.176*	
NIC		0.651063	1963.364*	
CFC		0.804186	1260.197*	
EABL		1.090915	571.9685*	
FIRESTONE		0.082591	18.39223*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.367603	2170.354*	
CROWN BERGER		1.013302	1185.983*	
JUBILEE		0.884455	1067.911*	

Year 2002 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>Before</b>			
TPS		-0.02686	-7104.93*	
BARCLAYS		0.002944	2220.445*	
NATION		0.062577	387.0625*	
DTB		0.026571	113.3668*	
BAMBURI		0.012791	38.92016*	
BAT		0.000854	11.4049*	
BOC		-0.0237	-859.068*	
NIC		0.017926	44.58499*	
CFC		0.005377	1579.292*	
EABL		0.000678	19.22563*	
FIRESTONE		-0.03071	-1147.16*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		-0.00828	-569.292*	
CROWN BERGER		0.105239	18.82435*	
JUBILEE		0.005287	247.8041*	

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>After</b>			
TPS		0.298897	311.7703*	
BARCLAYS		0.670302	214.0128*	
NATION		0.506371	43.15094*	
DTB		0.186919	291.8293*	
BAMBURI		0.272557	1319.674*	
BAT		0.227562	402.3102*	
BOC		0.360987	290.6546*	
NIC		0.311689	1059.998*	
CFC		0.387487	430.1207*	
EABL		0.603395	161.4253*	
FIRESTONE		-0.03242	-3.83099*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.171871	740.3994*	
CROWN BERGER		0.50317	330.0132*	
JUBILEE		0.446063	379.7667*	

Year 2002 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.02686	-7104.93*	
BARCLAYS		0.002944	2220.445*	
NATION		0.062577	387.0625*	
DTB		0.026571	113.3668*	
BAMBURI		0.012791	38.92016*	
BAT		0.000854	11.4049*	
BOC		-0.0237	-859.068*	
NIC		0.017926	44.58499*	
CFC		0.005377	1579.292*	
EABL		0.000678	19.22563*	
FIRESTONE		-0.03071	-1147.16*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		-0.00828	-569.292*	
CROWN BERGER		0.105239	18.82435*	
JUBILEE		0.005287	247.8041*	

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.625534	1034.377*	
BARCLAYS		1.289432	780.5637*	
NATION		0.609487	85.81335*	
DTB		0.435236	648.8936*	
BAMBURI		0.54458	2606.736*	
BAT		0.446397	1428.164*	
BOC		0.733755	1050.176*	
NIC		0.651063	1963.364*	
CFC		0.804186	1260.197*	
EABL		1.090915	571.9685*	
FIRESTONE		0.082591	18.39223*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.367603	2170.354*	
CROWN BERGER		1.013302	1185.983*	
JUBILEE		0.884455	1067.911*	



Year 2003 Market Adjusted Excess Return Trends (before and after dividend announcement)

		MKT ADJ. RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.193132	77.14715*	
BARCLAYS		0.054852	171.6844*	
NATION		0.00601	80.51493*	
DTB		-0.02571	-402.918*	
BAMBURI		0.002711	85.92127*	
BAT		0.055934	1124.406*	
BOC		0.083758	186.7206*	
NIC		0.079414	138.2465*	
CFC		0.151699	168.9551*	
EABL		0.001872	15.50196*	
FIRESTONE		-0.03112	-113.351*	
TOTAL		-0.00114	-1.00702*	
BROOKE BOND		-0.11651	-64.0665*	
CROWN BERGER		0.002333	6.878879*	
JUBILEE		-0.08659	-137.354*	

		MKT ADJ. RETURN - MER	TMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.379335	195.6558*	
BARCLAYS		0.824165	5368.482*	
NATION		0.189943	532.4469*	
DTB		0.755174	260.9359*	
BAMBURI		0.120595	2297.864*	
BAT		0.648766	646.5103*	
BOC		0.296814	1459.238*	
NIC		0.515214	345.102*	
CFC		0.573989	4509.89*	
EABL		0.873917	297.0978*	
FIRESTONE		0.158197	196.8411*	
TOTAL		0.52771	252.5069*	
BROOKE BOND		0.68461	266.8221*	
CROWN BERGER		1.178543	2256.075*	
JUBILEE		0.703983	441.8239*	

Year 2003 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>Before</b>			
TPS		0.123477	159.6425*	
BARCLAYS		-0.06887	-318566*	
NATION		-0.02319	-136.987*	
DTB		-0.00193	-51.629*	
BAMBURI		-0.00069	-11.1228*	
BAT		0.007771	765.0487*	
BOC		-0.00053	-347.996*	
NIC		0.065485	8.583414*	
CFC		-0.00193	-51.629*	
EABL		-0.13364	-10.9635*	
FIRESTONE		0.005857	73.35313*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.005754	528.7641*	
CROWN BERGER		-0.06348	-74428.2*	
JUBILEE		-0.01302	-276.342*	

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>After</b>			
TPS		0.077072	3080.101*	
BARCLAYS		0.024622	5.714507*	
NATION		0.031667	11.79997*	
DTB		0.195728	10.95764*	
BAMBURI		0.016905	803.6533*	
BAT		0.131042	18.58107*	
BOC		0.019874	114.1984*	
NIC		0.055167	6.159041*	
CFC		0.041328	69.00646*	
EABL		-0.07339	-3.13449*	
FIRESTONE		0.094997	32.46228*	
TOTAL		0.151834	11.96991*	
BROOKE BOND		0.027853	183.2783*	
CROWN BERGER		1.385582	1.317372	
JUBILEE		0.156419	12.26145*	

Year 2003 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.19624	189.9125*	
BARCLAYS		-0.02784	-39.0308*	
NATION		-0.02313	-270.631*	
DTB		-0.01777	-510.575*	
BAMBURI		0.017524	722.7468*	
BAT		0.015981	384.1898*	
BOC		0.026998	446.1792*	
NIC		0.073111	37.70129*	
CFC		0.0058	457.4317*	
EABL		-0.17131	-51.4121*	
FIRESTONE		-0.10467	-129.832*	
TOTAL		-0.07153	-85.1568*	
BROOKE BOND		0.03241	489.3748*	
CROWN BERGER		-0.17316	-1080.38*	
JUBILEE		-0.09445	-107.064*	

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.085154	102.9576*	
BARCLAYS		0.292879	156.524*	
NATION		0.082225	100.3355*	
DTB		0.358619	79.64706*	
BAMBURI		0.050016	2244.823*	
BAT		0.336906	175.1061*	
BOC		0.151593	318.2985*	
NIC		0.199072	85.78711*	
CFC		0.249038	557.9554*	
EABL		0.334874	26.36404*	
FIRESTONE		0.30473	462.6206*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.181691	597.4897*	
CROWN BERGER		1.656711	5.219393*	
JUBILEE		0.314424	105.9285*	

Year 2003 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>Before</b>			
TPS		0.230297	100.0328*	
BARCLAYS		0.021691	50.36209*	
NATION		-0.01461	-134.21*	
DTB		-0.02265	-373.385*	
BAMBURI		0.00801	261.6882*	
BAT		0.061351	1369.276*	
BOC		0.083595	204.3426*	
NIC		0.174369	145.6118*	
CFC		0.150383	183.4442*	
EABL		-0.14301	-70.7227*	
FIRESTONE		-0.02912	-15.9348*	
TOTAL		0.001332	1.307494*	
BROOKE BOND		-0.02007	-80.7135*	
CROWN BERGER		-0.24113	-1412.95*	
JUBILEE		-0.08642	-151.181*	

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>After</b>			
TPS		0.37595	214.6115*	
BARCLAYS		0.576008	599.6271*	
NATION		0.150178	332.5388*	
DTB		0.571905	199.6286*	
BAMBURI		0.117247	2321.743*	
BAT		0.517306	475.8815*	
BOC		0.261674	1080.556*	
NIC		0.507255	316.7913*	
CFC		0.448146	1670.603*	
EABL		0.491157	74.4282*	
FIRESTONE		0.534921	972.5044*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.347559	1753.015*	
CROWN BERGER		1.916594	11.07461*	
JUBILEE		0.511786	302.9422*	

Year 2003 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.123477	159.6425*	
BARCLAYS		-0.06887	-318566*	
NATION		-0.02319	-136.987*	
DTB		-0.00193	-51.629*	
BAMBURI		-0.00069	-11.1228*	
BAT		0.007771	765.0487*	
BOC		-0.00053	-347.996*	
NIC		0.065485	8.583414*	
CFC		-0.00193	-51.629*	
EABL		-0.13364	-10.9635*	
FIRESTONE		0.005857	73.35313*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.005754	528.7641*	
CROWN BERGER		-0.06348	-74428.2*	
JUBILEE		-0.01302	-276.342*	

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.085154	102.9576*	
BARCLAYS		0.292879	156.524*	
NATION		0.082225	100.3355*	
DTB		0.358619	79.64706*	
BAMBURI		0.050016	2244.823*	
BAT		0.336906	175.1061*	
BOC		0.151593	318.2985*	
NIC		0.199072	85.78711*	
CFC		0.249038	557.9554*	
EABL		0.334874	26.36404*	
FIRESTONE		0.30473	462.6206*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.181691	597.4897*	
CROWN BERGER		1.656711	5.219393*	
JUBILEE		0.314424	105.9285*	

Year 2003 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		0.123477	159.6425*	
BARCLAYS		-0.06887	-318566*	
NATION		-0.02319	-136.987*	
DTB		-0.00193	-51.629*	
BAMBURI		-0.00069	-11.1228*	
BAT		0.007771	765.0487*	
BOC		-0.00053	-347.996*	
NIC		0.065485	8.583414*	
CFC		-0.00193	-51.629*	
EABL		-0.13364	-10.9635*	
FIRESTONE		0.005857	73.35313*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.005754	528.7641*	
CROWN BERGER		-0.06348	-74428.2*	
JUBILEE		-0.01302	-276.342*	

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.37595	214.6115*	
BARCLAYS		0.576008	599.6271*	
NATION		0.150178	332.5388*	
DTB		0.571905	199.6286*	
BAMBURI		0.117247	2321.743*	
BAT		0.517306	475.8815*	
BOC		0.261674	1080.556*	
NIC		0.507255	316.7913*	
CFC		0.448146	1670.603*	
EABL		0.491157	74.4282*	
FIRESTONE		0.534921	972.5044*	
TOTAL		0.444092	212.0008*	
BROOKE BOND		0.347559	1753.015*	
CROWN BERGER		1.916594	11.07461*	
JUBILEE		0.511786	302.9422*	

Year 2004 Market Adjusted Excess Return Trends (before and after dividend announcement)

			MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
		Before				
TPS			-0.0345		-74.5615*	
BARCLAYS			0.008958		133.7817*	
NATION			-0.02669		-292.166*	
DTB			0.121746		270.7466*	
BAMBURI			-0.0724		-570.442*	
BAT			0.002577		20.72343*	
BOC			-0.02663		-429.095*	
NIC			0.012967		27.03702*	
CFC			0.022546		110.6491*	
EABL			-0.01892		-86.0278*	
FIRESTONE			-0.03112		-113.351*	
TOTAL			-0.00114		-1,00702*	
BROOKE BOND			-0.11651		-64.0665*	
CROWN BERGER			0.002333		6.878879*	
JUBILEE			0.048893		66.60674*	

			MKT ADJ RETURN - MER		TMER	SIGNIFICANT* AT 5% LEVEL
		After				
TPS			0.378869		21.13598*	
BARCLAYS			0.285959		636.4047*	
NATION			-0.02092		-28.1299*	
DTB			-0.03632		-73.344*	
BAMBURI			0.100792		28.20086*	
BAT			0.14469		778.5843*	
BOC			0.213094		10470.05*	
NIC			0.133867		168.2529*	
CFC			0.259926		210.0183*	
EABL			0.032072		578.6468*	
FIRESTONE			0.158197		196.8411*	
TOTAL			0.52771		252.5069*	
BROOKE BOND			0.68461		266.8221*	
CROWN BERGER			1.178543		2256.075*	
JUBILEE			0.386302		1462.108*	

Year 2004 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.02262	-344.947*	
BARCLAYS		-0.00539	-340.015*	
NATION		0.097965	13.34605*	
DTB		-0.037	-568.764*	
BAMBURI		0.006802	707.0072*	
BAT		0.017828	300.9224*	
BOC		0.005542	3703.695*	
NIC		-0.02362	-936.154*	
CFC		0.00411	100.6512*	
EABL		0.061429	48.78954*	
FIRESTONE		-0.03071	-1147.16*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.003684	0.978276*	
CROWN BERGER		-0.02865	-365.827*	
JUBILEE		-0.02712	-21.6041*	

		(-1TO +1) CMER	(-1TO +1) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.019615	41.3919*	
BARCLAYS		0.069969	21.33294*	
NATION		0.065187	5.501397*	
DTB		-0.00449	-4.66021*	
BAMBURI		-0.14896	-13.0018*	
BAT		0.04199	68.37017*	
BOC		0.02485	112.2881*	
NIC		0.019268	30.09842*	
CFC		0.115503	15.92775*	
EABL		0.050066	26.43616*	
FIRESTONE		-0.19515	-15.8099*	
TOTAL		0.151834	11.96991*	
BROOKE BOND		0.05384	5.741819*	
CROWN BERGER		0.257319	5.776512*	
JUBILEE		-0.00348	-1.28038*	



Year 2004 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>Before</b>			
TPS		-0.04623	-95.6587*	
BARCLAYS		0.010202	310.9562*	
NATION		0.081055	36.14434*	
DTB		0.08394	108.2578*	
BAMBURI		-0.04317	-365.979*	
BAT		-0.00678	-72.9281*	
BOC		0.009118	296.9359*	
NIC		-0.05451	-277.014*	
CFC		0.008898	44.38378*	
EABL		0.02032	22.66324*	
FIRESTONE		-0.05409	-1366.78*	
TOTAL		-0.07153	-85.1568*	
BROOKE BOND		0.023826	14.79687*	
CROWN BERGER		-0.01595	-84.9988*	
JUBILEE		-0.00333	-8.71182*	

		(-5TO +5) CMER	(-5TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	<b>After</b>			
TPS		-0.13049	-5.96866*	
BARCLAYS		0.128443	138.0215*	
NATION		0.013831	4.324169*	
DTB		-0.0175	-55.5194*	
BAMBURI		0.022485	3.652442*	
BAT		0.074252	336.4544*	
BOC		0.094626	1770.08*	
NIC		0.028511	29.23803*	
CFC		0.153845	69.9864*	
EABL		0.071477	135.6122*	
FIRESTONE		-0.03242	-3.83099*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.523003	107.7003*	
CROWN BERGER		0.21447	15.09406*	
JUBILEE		0.159741	147.2028*	

Year 2004 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.0394416	-94.617735*	
BARCLAYS		0.0036105	56.401626*	
NATION		0.0822895	66.980964*	
DTB		0.0931159	178.35429*	
BAMBURI		-0.0722514	-597.69718*	
BAT		0.0057086	50.57322*	
BOC		-0.0244406	-423.38149*	
NIC		0.0070264	15.956103*	
CFC		0.020704	111.63585*	
EABL		0.0368885	73.696021*	
FIRESTONE		-0.0189747	-45.399183*	
TOTAL		0.0013316	1.3074943*	
BROOKE BOND		0.0287904	34.259771*	
CROWN BERGER		-0.016888	-118.99009*	
JUBILEE		0.0094492	11.356842*	

		(-10TO +10) CMER	(-10TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.4341897	26.546033*	
BARCLAYS		0.2511661	509.69245*	
NATION		0.091161	50.713561*	
DTB		-0.057639	-118.77974*	
BAMBURI		0.1180346	36.581079*	
BAT		0.1489892	835.0737*	
BOC		0.193946	4260.7216*	
NIC		0.1205965	159.37148*	
CFC		0.2405469	204.02741*	
EABL		0.0873779	289.46112*	
FIRESTONE		0.0825907	18.392225*	
TOTAL		0.444092	212.00081*	
BROOKE BOND		0.9778159	379.05939*	
CROWN BERGER		0.3300798	44.341129*	
JUBILEE		0.304597	422.3213*	

Year 2004 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.02262	-344.947*	
BARCLAYS		-0.00539	-340.015*	
NATION		0.097965	13.34605*	
DTB		-0.037	-568.764*	
BAMBURI		0.006802	707.0072*	
BAT		0.017828	300.9224*	
BOC		0.005542	3703.695*	
NIC		-0.02362	-936.154*	
CFC		0.00411	100.6512*	
EABL		0.061429	48.78954*	
FIRESTONE		-0.03071	-1147.16*	
TOTAL		-0.01339	-758.329*	
BROOKE BOND		0.003684	0.978276*	
CROWN BERGER		-0.02865	-365.827*	
JUBILEE		-0.02712	-21.6041*	

		(-1TO +5) CMER	(-1TO +5) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		-0.13049	-5.96866*	
BARCLAYS		0.128443	138.0215*	
NATION		0.013831	4.324169*	
DTB		-0.0175	-55.5194*	
BAMBURI		0.022485	3.652442*	
BAT		0.074252	336.4544*	
BOC		0.094626	1770.08*	
NIC		0.028511	29.23803*	
CFC		0.153845	69.9864*	
EABL		0.071477	135.6122*	
FIRESTONE		-0.03242	-3.83099*	
TOTAL		0.240053	60.2251*	
BROOKE BOND		0.523003	107.7003*	
CROWN BERGER		0.21447	15.09406*	
JUBILEE		0.159741	147.2028*	

Year 2004 Cumulative Market Adjusted Excess Return Trends (before and after dividend announcement)

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	Before			
TPS		-0.02262	-344.9471*	
BARCLAYS		-0.00539	-340.0149*	
NATION		0.097965	13.346055*	
DTB		-0.037	-568.764*	
BAMBURI		0.006802	707.0072*	
BAT		0.017828	300.92243*	
BOC		0.005542	3703.6946*	
NIC		-0.02362	-936.1539*	
CFC		0.00411	100.65122*	
EABL		0.061429	48.789541*	
FIRESTONE		-0.03071	-1147.163*	
TOTAL		-0.01339	-758.3287*	
BROOKE BOND		0.003684	0.9782759*	
CROWN BERGER		-0.02865	-365.8272*	
JUBILEE		-0.02712	-21.60407*	

		(-1TO +10) CMER	(-1TO +10) TCMER	SIGNIFICANT* AT 5% LEVEL
	After			
TPS		0.43419	26.546033*	
BARCLAYS		0.251166	509.69245*	
NATION		0.091161	50.713561*	
DTB		-0.05764	-118.7797*	
BAMBURI		0.118035	36.581079*	
BAT		0.148989	835.0737*	
BOC		0.193946	4260.7216*	
NIC		0.120596	159.37148*	
CFC		0.240547	204.02741*	
EABL		0.087378	289.46112*	
FIRESTONE		0.082591	18.392225*	
TOTAL		0.444092	212.00081*	
BROOKE BOND		0.977816	379.05939*	
CROWN BERGER		0.33008	44.341129*	
JUBILEE		0.304697	422.3213*	

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