Price Reactions to Dividend Announcements on the Nigerian Stock Market

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Abstract

The study uses a modified market model to investigate whether the Nigerian stock market reacts efficiently to dividend announcements in terms of price adjustments. The study finds that the cumulative excess returns (CERs) for dividend paying firms are positive and significant for 30 days from the day of the announcement, while the CERs for dividend omitting firms for the same period are significant and negative. The CERs for the subsamples are statistically significant around the event window. Overall, this provides evidence that the Nigerian stock market is not semi–strong efficient, that dividend policy matters and that share prices do react to dividend announcements.

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1. Introduction

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

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

A market is efficient with respect to publicly available information if it is impossible to make an economic profit by trading on the basis of the information set (Jensen, 1978).[1] The semi–strong efficient market requires that stock prices follow a random path and that the market price of a stock reflects all publicly available information such as earnings and dividend announcements. The efficiency tests, therefore, consist of measuring the ability of the market to anticipate new information and the speed with which it adjusts to such data (Khoury, 1983).

When a firm initiates the payment of a cash dividend or omits such a payment, the firm is making an extremely visible and qualitative change in corporate policy. The decision may have short– and long–term effects on the performance of the price and volume of the company's shares (Naranjo et al., 1998; Amihud and Murgia, 1997; Michaely et al., 1995; Dhillon and Johnson, 1994). An optimal dividend policy should ensure that the wealth of the shareholders is maximized. This will in turn help in mobilizing resources for productive investment opportunities on the stock market and ultimately result in economic growth.

Problem statement

In Nigeria, the capital market, which is "the engine of growth", is still underdeveloped and emerging. In fact, it is small even when compared with other emerging stock markets (Samuel and Yacout, 1981; Ogwumike, 1982; Umoh, 1984; Inanga and Emenuga, 1996).

The thinness of trading, low market capitalization, low turnover rates and illiquidity of the market can be attributed to barriers to foreign investors (until 1995), bottlenecks in

the clearing system, the "buy–and–hold" attitude of investors, the imposition of a price cap on share price movements and political instability, among others (Inanga and Emenuga, 1996).

The stock market became fully open to foreign investors with the abolition in 1995 of the Nigeria Enterprises Promotion Decree 1989 and the Exchange Control Act 1962, and the promulgation of the Nigeria Investment Promotion Decree 17, 1995, coupled with the abolition of capital gains tax in the 1998 budget. This has resulted in the need for companies to complement these positive actions with sound dividend policies to attract local and foreign investors.

If the Nigerian capital market is to harness funds from local and foreign investors for viable investment opportunities that will bring about economic growth, it needs to be efficient. This has made it imperative that research 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 of dividend policy is one key area that will provide important information for investors, academia and the government on the efficiency of the market and through that process, promote further interest in the market.

It is therefore the overall aim of this study to determine the importance of firm dividend policy in Nigeria by examining whether the Nigerian stock market reacts efficiently to dividend announcements in terms of price adjustments.

Motivation for the study

In developed markets (such as the United States, Britain and Japan), the efficient market hypothesis (EMH) has been the subject of considerable research by economists. The outcome of this research is a strong 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). The EMH debate has been subsequently carried into the emerging markets and although the number of studies has been limited, their conclusions have been mixed (Gandhi et al., 1980; Cooper, 1982; Parkinson, 1984, 1987; Ayadi, 1983, 1984; Dickinson and Muragu, 1994; Omole, 1997; Matome, 1998; Osei, 1998; Oludoyi, 1999; Adelegan, 2004). (See the Appendix for a summary of these studies.) Most evidence in Nigeria, however, indicates that the Nigerian capital market is efficient in the weak form, but not in the semi–strong form. Tests on strong–form efficiency are nonexistent in Nigeria as yet.

Given the large body of evidence on efficiency in developed markets, there is a need for "triangulation" in the research by providing further evidence from developing markets. This study extends the evidence on the efficiency of emerging stock markets using data from the Nigerian Stock Exchange (NSE). Cutting across the pre and post stock market liberalization period in Nigeria, the study tests for the semi–strong efficiency of the Nigerian stock market using daily stock prices between 1990 and 1999 around the dividend announcement dates. The study is carried out around the 3–day, 21–day and 61–day event windows in the short run. It also covers the period from a year before to a year after the dividend announcement dates to capture the long–term reactions. The actual returns of each firm were adjusted for systematic risk using the Treynor measures (Treynor, 1965).

Objectives and hypotheses

The overall objective of the study, which is to investigate whether the Nigerian stock market reacts efficiently to dividend announcements in terms of price adjustments, may be broken down into the following specific objectives:

- To assess the speed with which share prices adjust to the information contained in dividend announcements in the Nigerian stock market;
- To investigate market reactions to announced changes in dividend policies by Nigerian companies and determine whether there is an overreaction or a drift;
- To determine whether the reactions (both short and long run) are proportional to the change in dividend; and
- To investigate whether the market treats announcements of dividend initiations (good news) and omissions (bad news) symmetrically or whether price reactions to omissions are greater than for initiations.

The hypotheses of the study are stated in null form as follows:

- H1: The Nigerian stock market does not react efficiently to dividend announcements in terms of price adjustments.
- H2: The market does not react to announced changes in dividend policies by Nigerian companies, and therefore dividend policy does not matter.
- H3: The market treats announcements of dividend initiation (good news) and omission (bad news) symmetrically.

The paper is structured as follows. Section 2 reviews the relevant literature, discusses the theoretical framework on market efficiency and price reactions to dividend policy, and considers some empirical evidence. Section 3 explains the research methodology, while Section 4 presents the empirical results. Section 5 summarizes the major findings, conclusions and policy implications of the results.

2. Literature Review

Information plays a very important role in security markets. It aids in the establishment of security prices and, with these prices, helps the individual investor in the selection of an optimal portfolio.

The relationship between security prices and information made available to the market has been explained by the efficient market theory (EMT), which states that publicly available information is always fully reflected in share prices. Any new information of economic value subsequently becoming publicly available is instantaneously impounded in an unbiased manner. This is the semi–strong form of the EMT (Gajewski, 1999).

The primary role of the capital market is the allocation of ownership of an 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 time "fully reflect" all available information. A market in which prices always "fully reflect" available information is called "efficient".

Information transfer and dividend policy

As already mentioned, economists have undertaken considerable research into EMH in developed markets and reached a consensus on the validity of the weak and semi–strong forms of EMH. On the other hand, few studies of EMH in emerging markets have been carried out, and the conclusions reached in those studies have been mixed.

Dickinson and Muragu (1994) studied the weak–form efficiency of the Nairobi stock market and concluded that the market is not efficient. Osei (1998) arrived at a similar conclusion in his study on the efficiency of the Ghana Stock Market. Matome (1998) examined the behaviour of the Namibian stock market. Overall, there is more evidence of inefficiency than efficiency from studies on the African capital market.

Similarly, the few studies of market efficiency in the Nigerian capital market have generally focused on tests of the weak–form efficiency. These include Ayadi (1984), Omole (1997) and Adelegan (2004). Most of the studies conclude that the Nigerian stock market is weak–form efficient. Tests on the semi–strong form are even fewer (see the Appendix for highlights of literature on EMH in Nigeria).

An attempt at the semi–strong test by Emenuga (1989) using money supply information found that the structural efficiency of the stock market could not be determined using monetary data since there is no empirical relationship between money supply and stock prices.

Using monthly prices, Olowe (1998) investigated the reaction of the Nigerian stock market to stock splits. His study centred on monthly data of 86 stock splits involving 59 quoted companies between 1981 and 1992, and found that statistically and economically abnormal returns could be earned on the Nigerian stock market.

Oludoyi (1999) looked at the impact of earnings announcements on share prices in Nigeria around annual general meeting (AGM) dates between 1986 and 1994. His study, which was undertaken in the period before the cap on share price movements was expanded, used weekly stock prices and movements for a period of 21 weeks around the event window. He showed that the Nigerian capital market is not efficient in the semi–strong form as share prices still drift ten weeks after corporate earnings have become public information. There have been several economic policy changes affecting the stock market since then, however, such as the promulgation of the Nigerian Investment Promotion Decree of 1995, which fully opened the stock market to foreign investors, and the abolition of the capital gains tax in 1998.

Previous studies have established that the announcements of unexpected changes in dividend payments provide information affecting the market values of the companies making the changes. Lintner (1956) reports that managers avoid changes in dividends that would have to be reversed in the future because they believe such a reversal could have an adverse effect on the company's stock price. Subsequently, many empirical studies have tried to explain, in general, the response of the market to announced changes in dividend policy, mostly in the UK and USA (Pettit, 1972; Charest, 1978; Bernard and Thomas, 1990; Healy and Palepu, 1988; Asquith and Mullins, 1983; Christie, 1990; Dhillon and Johnson, 1994; Michaely et al., 1995, Amihud and Murgia, 1997; Naranjo et al., 1998). The results of most of these studies showed that market reaction to dividend announcements is biased.

One strand of literature found evidence for immediate and post announcement market drift as a result of dividend changes (Healy and Palepu, 1988; Asquith and Mullins, 1983; Michaely et al., 1995). Healy and Palepu (1988) examined companies that initiated dividend payments for the first time, as well as those that completely omitted their dividend payments, and found significant two–day abnormal stock returns of 3.95% and –9.5%, respectively. Overall, this research found that the short–run price impact of dividend omissions is negative and that of initiations is positive. Michaely et al. (1995) studied market reactions to dividend initiations and dividend omissions in the USA and found that omission announcements are associated with a mean price drop of about 7% and initiations with a price increase of over 3% around the event day. These studies indicate that dividend changes convey information from corporate decision makers to the investing public.

Some other studies also provide evidence to support post dividend announcement drift. (Michaely et al., 1995; Charest, 1978; Christie, 1990). Charest (1978) found small but significant price drift after dividend changes. That is, excess returns are positive in the months following the announcement of a dividend increase, but are negative in the month following the announcement of a dividend cut. The conclusion was supported by Christie (1990). Michaely et al. (1995) investigated dividend omissions and initiations to see whether there are subsequent excess returns after the market has had a chance to react to the announcement of a change in dividend policy. They found significant long–

term drifts following announcements of initiations and omissions. Prices of firms that omit dividends drift down after the immediate reaction to the omission, and prices of firms that initiate dividends drift up. In 22 out of the 25 years examined in the study, the combined initiating and omitting firms' drift results in abnormal profit. This is consistent with findings in De Bondt and Thaler (1989). Bernard and Thomas (1990) also advanced evidence for the post–earnings announcement drift (or under–reaction). This research showed that when firms made surprising quarterly earnings announcements, prices continued to move in the same direction for the next three quarters, especially on the days surrounding the next quarterly earnings announcement. Since dividend omissions and initiations are similar to earnings surprises, one might expect a similar drift in the prices following a change in dividend policy.

A second strand of literature provides some reasons to expect exactly the opposite pattern of prices. Numerous studies found evidence for over–reactions or mean reversion in prices. De Bondt and Thaler (1989) documented that those firms on the New York Stock Exchange (NYSE) that exhibit the most extreme price movements tend to display mean reverting excess returns in the subsequent time period. This tendency is stronger for losers than for winners. Similar results were obtained by other researchers in the USA and in other markets for different time periods (Bremer and Sweeny, 1991).

The literature on why one might expect excess returns following a dividend initiation or omission is in support of the clientele effect. This research showed that dividend initiation or omission would give rise to excess returns if it causes a change in the type of stockholders owning the company. The clientele effect may occur because some individual stockholders prefer cash payments, while others dislike cash dividends for tax reasons (Black and Scholes, 1974). Similarly, some institutions may have a preference for dividends or be required by charter to own stock only in dividend paying companies.

Findings of some studies of the effect of dividend changes on stock and bond prices have led to a distinction between the information content and wealth redistribution hypotheses. Information content implies that when a dividend increase is announced, bond prices should increase, while a dividend reduction is expected to bring about a reduction in bond prices. Handjinicolaou and Kalay (1984) analysed bond returns and dividend changes and reported that bond prices react to dividend reductions but are not affected by dividend increases. They argue that their data support the information content hypothesis. Woolridge (1983) obtained similar results. Jayaraman and Shastri (1978) found insignificant negative bond price reactions to special announcements. Thus, the bulk of the existing literature supports the information content hypothesis, and the evidence for wealth transfer is scanty. Wealth redistribution implies that bond prices should fall when dividend increases are announced, and this will in turn lead to wealth redistribution between bondholders and stockholders. Dhillon and Johnson (1994) analysed stock and bond prices and dividend changes and reported that there was a positive reaction to large dividend increases in the stock market and a negative price reaction in the bond market, which is consistent with the wealth redistribution hypothesis.

Other literature supports the dividend signalling hypothesis, which maintains that corporate decisions on dividend policy may signal inside information regarding expected future cash flow because of information asymmetry between a company's management and outside investors (Miller and Rock (1985). Thus, an initiation or increase of a cash

dividend may indicate cash flow strength, while a reduction or omission may indicate future cash flow weakness not evident in the company's publicly available information. A necessary condition for the signalling hypothesis to be true is that the signal must affect the market's expected cash flow for the signalling company.

Researchers have used several approaches to test for evidence of the dividend signalling effect. Some studies use actual reported earnings after dividend announcements to proxy for the change in expected future cash flows and their conclusions are mixed. Healy and Palepu (1988) report that companies in their sample have significant changes in their annual earnings in the year of the announcement of dividend changes and at least one year thereafter. Bernartzi et al., (1997) find no change in actual reported earnings after dividend changes and conclude that dividend signalling does not appear to be occurring for the companies in their sample. However, the dividend signalling hypothesis holds that a change in dividend signals a change in current expectations of future cash flow and not necessarily changes in future realizations of them. Instead of using changes in actual future realizations of earnings as a proxy for changes in expectations of future cash flow, some authors use a more direct proxy. Yoon and Starks (1995) use analysts' earnings forecasts to test the signalling power of changes in dividends. This is a more direct measure of changes in current expectations because earnings analysts specialize in helping the market set those expectations. They reported that unexpected changes in dividends are positively related to abnormal earnings forecast revisions.

Another strand of literature made a distinction between the effects of dividend announcements on share prices of announcing firms (announcers) as well as share prices of non–announcers. Two main distinctions underpin the two alternative types of information transfer documented in the literature. The first refers to industry–wide information commonalities that engender a contagion hypothesis. The industry–wide commonality influence is expected to affect all firms within that industry in a directionally similar manner. In contrast, the competitive shift scenario indicates changes in competitive structure, which implies that within a given industry, some firms will benefit while others will lose. Accordingly, the contagion hypothesis through industry–wide influences predicts positive correlated information transfers and therefore a positive price impact for non–announcing firms in the same industry. In contrast, the competitive hypothesis predicts negative correlated information transfers and hence a negative intra–industry price impact (Otchere, 2002).

Some researchers have explored the possibility that a company's announcements could affect the market value of its competitors. The evidence generally indicates an industry–wide information transfer via announcements previously thought of as company specific. Lang and Stulz (1992) report that bankruptcy announcements reduce the market value of rivals over a two–day announcement period by 1% on average – a phenomenon termed the contagion effect, as the rival companies have caught an infectious disease from the announcing company. This suggests that changes in dividends may provide important information regarding rivals' cash flow in addition to potentially signalling inside information about cash flows of announcing companies.

Some other researchers have structured the potential linkage between the information conveyed by changes in dividends and the effect that is transferred from one company to its rival. Firth (1996) examines the effect of relatively large dividend changes on the

stock market reactions and earnings forecast revisions of announcing companies and their rivals. His results show that dividend increases produce a significant positive effect on stock prices while dividend reductions produce negative effects on stock prices and forecast revisions of both the announcing companies and their rivals. On the other hand, Laux et al. (1998) study the stock market reactions of rivals to dividend changes by announcing companies and are unable to confirm Firth's findings. Howe and Shen (1998) find no average reaction to dividend initiation announcements on rivals' stock prices and their earnings forecasts. Caton et al. (2003) examine whether information embedded in dividend omissions affect the cash flow expectations of rivals. They examine abnormal stock returns and abnormal earnings forecast revisions of rivals surrounding announcements of dividend omissions by announcing companies (announcers). Their results are consistent with those of Firth (1996) and inconsistent with those of Laux et al. (1998) and Howe and Shen (1998). They found both significant negative stock returns and significant negative earnings forecast revisions for rivals to dividend omissions of announcers. The regression results reveal a significant positive relationship between stock returns and earnings forecast revisions of rivals.

Empirical studies of dividend policies in Nigeria

The earliest major attempt to explain the dividend behaviour of companies has been credited to Lintner (1956) who conducted this study on American companies in the 1950s. Since then there has been an ongoing debate on dividend policy in the developed markets resulting in mixed, controversial and inclusive results.

This issue did not receive any serious attention among academic scholars in Nigeria until 1974. Uzoaga and Alozieuwa (1974) attempted to highlight the pattern of dividend policy pursued by Nigerian firms, particularly during the period of indigenization and the participation programme defined in the first Indigenization Decree of 1973. Their study covered 52 company–years of dividend action (13 companies for four years). They reported that they found very minimal evidence to support the classical influences that determine dividend policies in Nigeria during this period. They concluded that fear and resentment seem to have taken over from the classical forces.

However, Inanga (1978) and Soyode (1975) commented on the work of Uzoaga and Alozieuwa. Inanga concluded that the problem arising from the change in dividend policy can be attributed to the share pricing policy of the Capital Issue Commission (CIC), which seemed to have ignored the classical factors that should govern the pricing of equity share issues. This in turn made companies abandon all the classical determinants of dividend policy. Soyode criticized Uzoaga and Alozieuwa's work on the grounds that it glossed over some important determinants of optimal dividend policy; he also questioned certain conclusions made in the study because they were inadequate or a mistaken evaluation.

Furthermore, Oyejide (1976) empirically tested for company dividend policy in Nigeria using Lintner's model as modified by Brittain (1964). He disagreed with previous studies and reported that the available evidence strongly supports the fact that conventional devices explain the dividend behavior of Nigerian limited liability businesses. Odife (1977)

criticized the Oyejide study for failing to adjust for stock dividends and seemed to agree with Uzoaga and Alozieuwa's conclusion. However, Izedonmi and Eriki (1996), using data from 1984–1989, found support in Nigeria for Lintner's model.

Adelegan (2003) evaluated the incremental information content of cash flows in explaining dividend changes, given earnings in Nigeria. She carried out an 882 firm–year study by analysing the dividend changes–cash flow relationship on a sample of 63 quoted firms in Nigeria over a wider testing period from 1984 to 1997. She found a significant relationship between dividend changes and cash flow, unlike previous studies. The empirical results reveal that the relationship between cash flows and dividend changes depend substantially on the level of growth, the capital structure choice, the size of each firm and economic policy changes.

With the exception of Izendomi and Eriki (1996) and Adelegan (2003), the inconclusive controversy seems to have come to a temporary halt in the late 1970s. The attention of academic scholars became diverted in the early 1980s to studies of the weak–form efficient market hypothesis (EMH) on the Nigerian stock market. For example, Ayadi (1984) and Omole (1997) found evidence to support this hypothesis. Few other scholars have attempted to find reasons to justify the semi–strong form efficiency of the Nigerian capital market, and the studies of Emenuga (1989), Olowe (1998) and Oludoyi (1999) are too scanty to draw any meaningful conclusion on this issue.

3. Methodology

Several models have been used in the economic and finance literature to empirically estimate security returns. These include the market model (MM), the capital asset pricing model (CAPM), arbitrage pricing theory (APT) and the modified market model (MMM).

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. MacKinlay (1997: 19) believes that to the extent that the market model eliminates the biases introduced by using CAPM, it dominates equilibrium–based models, that is, CAPM and APT, in event studies. Therefore, this study applies the modified market model as adopted in Michaely et al. (1995).

Model specification

This study tests whether the Nigerian stock market is semi–strong efficient with respect to its reactions to dividend announcements in terms of price adjustments and assesses how the market reacts to announced dividend policy changes in Nigeria.

The methodology is strongly influenced by Michaely et al. (1995) and Loughran and Ritter (1995). To evaluate the performance of the firms in our samples before, during and after the events, the study calculates the returns from a buy–and–hold strategy. Actual unadjusted returns of each firm's shares was calculated using the holding period return by considering both share prices and dividends as follows:

$$R_{ji} = \frac{P_{ji} - P_{j,t-1} + D_{jt}}{P_{j,t-1}} \tag{1}$$

which simplifies to:

$$R_{jt} = \frac{P_{jt} + D_{jt}}{P_{j,t-1}} - 1 \tag{2}$$

where P_{jt} is the share price of firm j in period t ; D_{jt} is the cash dividend paid on shares of firm j in period t; $P_{j,t-1}$ and 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 each firm for risk (beta). Variance or standard deviation captures the total risk of an asset, consisting of: systematic risk, which is the risk that an asset shares with the market, and unsystematic risk, which 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 defined as the ratio of an asset's systematic risk to the systematic risk of the market. Beta is measured as:

$$\beta_j = \frac{\rho_{jt}\sigma_{rt}}{\sigma_m} \tag{3}$$

where: β_j is beta, ρ_{jt} is the proportion of an asset's total risk that is systematic, σ_{rt} is the amount of systematic risk for the asset, and σ_m is the amount of the systematicrisk for 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 its 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; McInish, 2000). However, actual adjusted returns of each firm's shares are computed as follows using the Treynor measure (Treynor, 1965):

$$R_{jtT} = \frac{R_{jt} - R_f}{\beta} \tag{4}$$

where R_f is the risk free rate of return, which is defined in this study as the rate of return on short–term federal government development bonds, and β_j is defined as the covariance between returns on the risky asset and the market portfolio divided by the variance of the market portfolio using opening and closing monthly returns from 1989 to 1998.'

The study uses the Treynor measure to calculate the portfolio returns because it 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 (Sharpe, 1964, 1994). The study compares those portfolio returns with market returns. For each stock, the excess return is defined as the geometrically compounded (buy–and–hold) return on the stock minus the geometrically compounded return on the NSE's all–share index comprising all assets in the market (adjusted for dividend, changes in price quotations and capital changes).

The return on the market portfolio, MR_t, is obtained as:

$$MR_t = \frac{NSEI_t - NSEI_{t-1}}{NSEI_{t-1}} \tag{5}$$

where $NSEI_t$ is the Nigerian Stock Exchange general all–share price. Following Michaely et al. (1995) and Wilke (1999), the buy–and–hold (market adjusted) returns are calculated as:

$$ER_{t(atob)} = \prod_{1-a}^{b}(1 + R_{jt}) - \prod_{1-a}^{b}(1 + MR_t) \quad (6)$$

where $ER_t(a-b)$ is excess return for firm from time period a to b, and *(a-b)* = the time period, which is in four parts. For the 3–day event window, the time period for trading days is –1, 0 and + 1; for the 9–day event window, the time period for trading days *t* is –10 to –2; for the 21–day event window, the time period are calculated assuming 21 trading days for each month t is –10 to +10; and for the 60–day event window, the time period for trading days cover 29 days before and 30 days after the event, t is –29 to +30. R_{jt} is the raw return for observation *j* on day *t*. MR_t is the return on the NSE general price index or beta adjusted NSE price index, and is product notation.

$$E\overline{R} = \frac{1}{N}\sum_{j-1}^{N} ER_j \quad (7)$$

where $E\overline{R}$ is the average excess returns for each period. These averaged excess returns for each period are 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) as follows:

$$t_{E\overline{R}} = \frac{E\overline{R}}{S_{ER}} \quad (8)$$

where $S_{ER} = \left[\text{var}(ER)\right]^2$ with variance estimated over the four–part time period.

The study focuses on the equally weighted NSE general price index as the benchmark for measuring short–term reactions because it is the least noisy and is easily replicable by other researchers (Loughram and Ritter, 1995).

To determine the short–run reactions to the initiation and omission of dividends, we calculate market adjusted buy–and–hold returns for the initiation and omission samples for the three–day event period and for the event centred around the event days (from the day before the announcements to the day after).

In testing for the short– and long–run price responses, we calculate market adjusted buy–and–hold returns for the initiation and omission samples for the three–day event period and for the 21–day, 60–day, and 2–year periods beginning two trading days after the event day.

In Nigeria, earnings announcements are normally made concurrently with dividend announcements. Announcements of stock dividends in lieu of (omitted) cash dividends and earnings announcements are also common. The study investigates the short–run price responses and long–run performance by calculating the market adjusted buy–and–hold returns (equations 6, 7 and 8) for the sample.

The study also examines the short– and long–run performance of firms with concurrent earnings or losses announcements at the time of the omission announcements. This is investigated by calculating earnings surprises (whether positive or negative) in the year before and after the event for all the firms in the subsamples using a modified version of the seasonal random walk model of Bernard and Thomas (1990). The earnings surprise

the seasonal random walk model of Bernard and Thomas (1990). The earnings surprise is defined as the difference between this year's earnings *(EBEI$_t$)* and the expected earnings of this year adjusted for growth in earnings *(EEBEI$_t$)* scaled down by price at the end of year t-1, which is prior to the *(EBEI$_{t-1}$)* announcements. That is:

$$ES_t = \frac{EBEI_t - EEBEI_t}{PRICE_{endofyeart-1}} \tag{9}$$

where= ES is the earnings surprise in year t.
$EBEI_t$ = the earnings before extraordinary items.
$EEBEI_t$ = the expected earnings of this year adjusted for growth in earnings.
$PRICE$ = the stock price at the end of the prior measurement period.

Excess returns are calculated as market adjusted buy–and–hold returns for the three–day periods centred around the earnings or losses announcement day for each yearly report.

The study examines the earnings series and makes adjustment for the growing trend of earnings by applying the submartingale earnings expectation model to predict the expected earnings before extraordinary items for each year. However, apart from earnings in period *t-1*, investors believe that corporate earnings will grow over time and they expect earnings in period *t* to include period *t-1* earnings and a deterministic drift or growth that is independent of *t*. The submartingale earnings expectation model is represented as:

$$EEBEI = EBEI_{t-1} + \sigma \tag{10}$$

where $EEBEI_t$ = the earnings before extraordinary items, and σ = growth rate

The study assumes that the growth rate is made up of the weighted average of earnings of the past five years, since the growth or drift is obtained as a weighted average of earnings over time (that is *t-1* to *t-5*). Five years is used here because it is mandatory for quoted corporate firms to present a five–year financial summary in their annual reports as well as in the *Nigerian Stock Exchange Fact Book* each year. The growth or drift is computed as:

$$\sigma = \frac{1}{N}\sum_{t=1}^{N} EBEI_{it} \tag{11}$$

where: $N = 5$, and $\Sigma EBEI_{it} = EBEI_{t-1} + EBEI_{t-2} + ...EBEI_{t-5}$

Dividend paying firms are expected to experience positive earnings surprises and excess returns for the earnings announcement preceding the dividend initiation or payment, and omitting firms to have negative earnings surprises and excess returns before the omission announcements.

Sample selection, scope and sources of data

Data were obtained principally from the Lagos Branch of the NSE, the Securities and Exchange Commission (SEC), and the Central Bank of Nigeria (CBN). The study made extensive use of the *NSE Fact Book* (various issues), annual reports and accounts of quoted companies, and the daily official price lists and weekly reports of the NSE from 1991 to 1999.

Dividend announcement dates were obtained from the Notice to Dealing Members' File of the NSE. Data on firms' share prices as well as the price index, volume frequency and trading day were also collected from the NSE. Data on cash dividends were obtained from the annual reports of firms and the *NSE Fact Books*.

Following Michaely et al. (1995) and Pettit (1972), dividend announcements and omissions are categorized into five classes on the basis of annual changes in the payments. These are: increases, reductions, no change, initiations and omissions. The frequency distribution of all quoted firms is studied irrespective of their fiscal year end. This has prevented the samples from clustering in one particular time period since the event will be spread through time.

The study covers all companies drawn from all sectors of the Nigerian Capital Market quoted on the first and second tier securities markets that continued to pay (either increases, reductions or no change), initiated or omitted cash or stock dividends between 1991 and 1999. However, all closed–end managed funds are excluded. The following criteria are applied:

- For a firm to qualify for inclusion in the total sample of *dividend paying* firms, it must have:
  - (a.) Paid or declared a cash dividend for the year; and
  - (b.) Traded on the NSE for two years. This criterion facilitates the selection of an adequate pre–event period for comparison of returns.
- For inclusion in the *initiation* sample, the firm must have:
  - (a.) Initiated its first cash dividend or resumed payment of a dividend after a period of five years; and
  - (b.) Traded on the NSE for two years prior to the initiation of the first cash dividend. This criterion facilitates the selection of an adequate pre–event period for comparison of returns.
- For inclusion in the *omission* sample, the firm must have:
  - (a.) Omitted a dividend after paying a cash dividend for at least two years; and
  - (b.) Traded on the NSE for at least two years prior to the omission of the dividend.

Table 1 presents the sample selection criteria and data filtering process of firms used in the study. A total of 990 firms were examined covering the period from 1991 to 1999. Firms quoted on the first tier market in Nigeria are expected to present their reports on quarterly basis to the NSE, while companies quoted on the second tier market are expected to present biannual and annual announcements. Of the sample, 694 firms gave quarterly financial reports, 786 gave biannual announcements, and 718 firms gave annual announcements between 1991 and 1999. Only 596 firms made dividend announcements during this period. It should be noted that the quality of information from the Nigerian

stock market is poor given the regulatory and liquidity constraints. Unlike in the USA and UK, where dividend announcements are made separately from earnings announcements, dividend and earnings announcements in Nigeria are made concurrently. We therefore classify these as normal concurrent events and we classify dividend announcements with earnings announcements and other announcements, such as announcements of scrip issues or bonus shares, right issues and merger announcements, as other concurrent events.

In summary, there are: 146 cases of dividend omission during the period (84 cases of profit and omitted dividends, and 62 cases of losses and omitted dividends); 440 cases of a positive increase in the dividend; 34 cases of no change in the cash dividend; 29 cases of a reduction in the dividend; and 127 cases of dividend initiation. We also analysed 96 cases of bonus issues and 7 cases of scrip issues occurring concurrently with dividend and earnings announcements.

Table 1: Sample selection and data filtering of firms for dividend changes in Nigeria

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
No of cases	126	69	161	132	144	124	88	74	72	990
Quarterly ann.	36	47	55	54	144	124	88	74	72	694
Half yearly ann.	70	87	91	36	144	124	88	74	72	786
Annual ann.	116	92	132	85	72	97	40	56	28	718
Dividend ann.	95	76	108	85	68	80	27	38	19	596
Profit & omitted div.	11	6	21	5	8	11	10	7	5	84
Loss & omitted div.	9	10	7	9	8	9	3	6	1	62
Positive	73	54	79	80	68	68	27	38	19	506
No change	7	12	7	4	0	4	0	0	0	34
Reduction in div.	10	5	5	1	0	8	0	0	0	29
Other concurrent events:										
Bonus issues	15	8	9	11	17	24	8	4	0	96
Right issues	4	1	0	1	0	1	0	0	0	7

Source: Compiled by author.

4. Empirical results

Findings are grouped into three categories: price reactions to announcements of dividend payments and omissions, market reaction to dividend policy changes, and long–term price reactions to dividend announcements and omission. These are described in turn.

Price reactions to announcements of dividend payments and omissions

Table 2 presents the mean excess return and the cumulative excess return from 29 days before and 30 days after announcements for the dividend announcing firms and the dividend omitting stocks.

Table 2: Mean excess returns around the period of dividend announcements and omissions

Days	Dividend announcements			Dividend omission		
–30	**MER**	**TMER**	**CMER**	**MER**	**TMER**	**CMER**
–29	–0.0152	–0.9061		–0.0055	–1.4131	
–28	–0.0172	–1.0231	–0.0324	–0.0053	–1.3817	–0.0108
–27	–0.0143	–0.8512	–0.0467	–0.0054	–1.4009	–0.0162
–26	–0.0131	–0.7796	–0.0598	–0.0056	–1.4349	–0.0218
–25	–0.0210	–1.2508	–0.0808	–0.0054	–1.4003	–0.0272
–24	–0.0136	–0.8109	–0.0944	–0.0055	–1.4174	–0.0327
–23	–0.0134	–0.7998	–0.1078	–0.0052	–1.3515	–0.0379
–22	–0.0132	–0.7888	–0.1211	–0.0054	–1.4047	–0.0433
–21	–0.0131	–0.7786	–0.1341	–0.0057	–1.4675	–0.0490
–20	–0.0150	–0.8931	–0.1491	0.0001	0.0137	–0.0490
–19	–0.0148	–0.8819	–0.1639	–0.0055	–1.4335	–0.0545
–18	–0.0209	–1.2440	–0.1848	–0.0056	–1.4424	–0.0601
–17	–0.0121	–0.7209	–0.1969	–0.0055	–1.4176	–0.0656
–16	–0.0175	–1.0413	–0.2144	–0.0054	–1.3906	–0.0709
–15	–0.0117	–0.6943	–0.2261	–0.0053	–1.3775	–0.0763
–14	–0.0150	–0.8939	–0.2411	–0.0050	–1.3049	–0.0813
–13	–0.0136	–0.8073	–0.2546	–0.0053	–1.3732	–0.0866
–12	–0.0137	–0.8137	–0.2683	–0.0053	–1.3619	–0.0919
–11	–0.0115	–0.6872	–0.2798	–0.0052	–1.3484	–0.0971
–10	–0.0124	–0.7355	–0.2922	–0.0050	–1.2998	–0.1021
–9	–0.0093	–0.5526	–0.3014	–0.0051	–1.3288	–0.1073

Continued next page

Table 2 Continued

Days	Dividend announcements			Dividend omission		
–30	**MER**	**TMER**	**CMER**	**MER**	**TMER**	**CMER**
–8	–0.0079	–0.4702	–0.3093	–0.0051	–1.3205	–0.1124
–7	–0.0099	–0.5907	–0.3193	–0.0052	–1.3367	–0.1176
–6	–0.0087	–0.5208	–0.3280	–0.0051	–1.3276	–0.1227
–5	–0.0072	–0.4295	–0.3352	–0.0051	–1.3312	–0.1278
–4	–0.0164	–0.9756	–0.3516	–0.0052	–1.3339	–0.1330
–3	–0.0108	–0.6431	–0.3624	–0.0056	–1.4507	–0.1386
–2	–0.0043	–0.2574	–0.3667	–0.0053	–1.3792	–0.1440
–1	–0.0126	–0.7494	–0.3793	–0.0046	–1.1912	–0.1486
0	0.0267	0.1592	–0.3525 *	–0.0123	–3.1814	–0.1609 *
1	0.1303	0.7761	–0.2222 *	–0.0114	–2.9385	–0.1722 *
2	0.0969	0.5771	–0.1253 *	–0.0115	–2.9629	–0.1837 *
3	0.1954	1.1638	0.0701 *	–0.0113	–2.9204	–0.1950 *
4	0.0876	0.5220	0.1577 *	–0.0112	–2.9054	–0.2062 *
5	0.0678	0.4040	0.2255 *	–0.0124	–3.2041	–0.2186 *
6	0.0707	0.4211	0.2962 *	–0.0116	–2.9878	–0.2302 *
7	0.0983	0.5854	0.3945 *	–0.0233	–6.0362	–0.2535 *
8	0.1805	1.0749	0.5750 *	–0.0115	–2.9822	–0.2651 *
9	0.1759	1.0474	0.7509 *	–0.0115	–2.9645	–0.2765 *
10	0.1888	1.1244	0.9397 *	–0.0112	–2.9014	–0.2877 *
11	0.0272	0.1618	0.9669 *	–0.0115	–2.9713	–0.2992 *
12	0.1288	0.7670	1.0956 *	–0.0116	–3.0039	–0.3109 *
13	0.1255	0.7474	1.2211 *	–0.0115	–2.9803	–0.3224 *
14	0.1098	0.6540	1.3309 *	–0.0126	–3.2538	–0.3350 *
15	0.1939	1.1549	1.5248 *	–0.0116	–3.0007	–0.3466 *
16	0.1979	1.1791	1.7227 *	–0.0120	–3.1056	–0.3586 *
17	–0.2287	–1.3619	1.4940	–0.0120	–3.1052	–0.3706 *
18	–0.0545	–0.3245	1.4395	–0.0128	–3.2976	–0.3833 *
19	0.0402	0.2396	1.4797 *	–0.0127	–3.2886	–0.3961 *
20	0.0363	0.2160	1.5160 *	–0.0116	–2.9921	–0.4076 *
21	0.1108	0.6602	1.6268 *	–0.0116	–2.9956	–0.4192 *
22	0.1247	0.7430	1.7515 *	–0.0124	–3.2002	–0.4316 *
23	0.1192	0.7098	1.8707 *	–0.0117	–3.0341	–0.4433 *
24	0.1162	0.6919	1.9869 *	–0.0116	–3.0105	–0.4550 *
25	0.1322	0.7876	2.1191 *	–0.0117	–3.0164	–0.4666 *
26	0.6529	3.8887	2.7720 *	–0.0116	–2.9975	–0.4782 *
27	0.0923	0.5500	2.8643 *	–0.0118	–3.0523	–0.4900 *
28	0.1489	0.8866	3.0132 *	–0.0094	–2.4384	–0.4995 *
29	0.1596	0.9505	3.1728 *	–0.0095	–2.4455	–0.5089 *
30	0.1243	0.7403	3.2971 *	–0.0093	–2.4081	–0.5183
Var	0.0249		0.0822		0.3189	0.0250
var2	0.1679		0.2869		0.5647	0.15801

*significant at 5% level
Source: Computed by author

In order to discuss the adjustment of share prices to dividend announcements, we turn to the first and second hypotheses (H1 and H2). As noted earlier, the hypotheses are stated in null form as follows:

- H1: The Nigerian stock market does not react efficiently to dividend announcements in terms of price adjustments.

- H2: The market does not react to announced changes in dividend policies by Nigerian companies; therefore dividend policy does not matter.

From Table 2 we found that the mean excess returns (ER) and the cumulative excess returns (CERs) are positive and statistically significant for most of the days after dividend announcements for the dividend paying firms at the 1% and 5% levels for the 60–day event window. Negative returns are earned before the day of the announcement and positive excess returns after the day of the event. This means that investors earn excess returns from the day of a dividend announcement until 30 days after the announcement. Therefore, share prices do not react efficiently to dividend announcements on the NSE. This is consistent with findings in Oludoyi (1999) on earnings announcements and share prices.

Table 2 also shows the mean excess returns for dividend omitting firms for the sample period of 1991–1999. In all there are 46 cases of dividend omissions, compared with 577 cases of dividend payments. The cumulative abnormal returns are negative, and the mean excess returns are negative and statistically significant from the day of the announcement of a dividend omission.

Table 3, on the other hand, presents the cumulative market adjusted excess returns for 3 days, 9 days, 13 days, 21 days, 28 days and 60 days around the event windows of the announcements or omissions of dividends.The CERs for the 3–day, 21–day and 60–day event windows are positive and statistically significant for dividend announcements. This shows that the Nigerian stock market does not react efficiently to dividend announcements in terms of price adjustments. Therefore, the study accepts the null hypothesis H1.

Table 3: Market adjusted excess returns for holding period relative to event day

Day	Dividend announcement		Omission	
	CER	TCER	CER	TCER
Day –1 to +1	0.185931	2.261934 *	–0.02828	–2.4437 *
Day –10 to –2	–0.08688	–1.05693	–0.19062	–1.20641
Day –29 to –2	–0.36669	–4.46095 *	–0.14395	–0.91103
Day –2 to +10	1.30204	15.8399 *	–0.14912	–2.9658 *
Day –29 to +30	3.297127	40.11103 *	–0.50894	–2.9761 *
Day –10 to +10	1.21948	14.83552 *	–0.19709	–2.3469 *
Number of observations	577		46	

*significant at 5% level
Source: Computed by author

From Table 3, the CERs for all the event windows for dividend omissions are negative and significant. This indicates that the Nigerian stock market does react to changes in dividend policy and that dividend policy matters. Therefore, the study rejects null hypothesis H2. Market reactions to dividend omission also uphold the acceptance of H1 that the Nigerian stock market does not react efficiently to dividend announcements.

Market reactions to dividend policy changes

Mean excess returns for the observations broken down into five subsamples are presented in Table 4. These are dividend increases, reductions, no change in dividend, dividend initiation and dividend omission. The results may be summarized as follows.

- *Dividend increases:* The CERs are significant for stocks announcing increases in dividends for all the 3–day, 21–day and 60–day event windows.
- *Dividend reductions:* The CERs for reductions in dividends are negative and significant for the 3–day, 9–day, 21–day and 60–day event windows.
- *No change in dividend:* The CERs for maintenance of past year dividends, that is, no change in dividend announcements, are negative and significant for the 3–day event window around the day of announcements, but positive for the 60–day event window.
- *Dividend initiation:* The CERs for the initiation of dividends are positive and significant around the 3–day and the 60–day event windows.
- *Dividend omission:* The CERs for the omission of dividends are negative and significant before and after the announcement days except for the 3–days and 9–day event windows.

These results point to the fact that price reacts to dividend policy changes in Nigeria and therefore dividend policy matters. The study therefore rejects H2.

Table 4: Cumulative excess returns for dividend policy changes

Day	Increase	No change	Initiation	Reduction	Total dividend announce-ments	Omission
Mean price day –1 to +1(naira)	399.4	324.3	341.99	135.3	300.25	272.87
Mean price rise/(fall) (day–1 to +1)	0.29%	(0.51%)	0.30%	(1.30%)	0.29%**	(0.53%)
Day –1 to +1 (3 days)	0.0117 (2.08)*	–0.039 (2.13)*	0.0125 (2.37)*	–0.0974 (–2.17)*	0.0066 (2.05)*	–0.0033 (–2.11)*
Day –10 to +10 (21days)	0.1137 (2.25)*	–0.4171 (2.44)*	–0.2843 (2.17)*	–0.4123 (–2.48)*	0.2174 (2.17)*	–0.0655 (–2.47)*
Day –29 to +30 (60 days)	0.337 (2.49)*	1.238 (3.50)*	0.284 (2.50)*	–1.217 (–3.49)*	0.195 (2.49)*	–0.695 (2.49)*
Day –10 to –2 (9days)	0.045 (0.22)	–0.189 (0.47)	0.854 (0.47)	–0.006 (–0.32)	–0.028 (0.23)	–0.087 (–0.47)
No of observations	330	73	127	39	569	46

*significant at 5% level
**includes only dividend increase and initiation samples.
Source: Computed by author.

Market reactions are pronounced in the very short run with significant CERs for the 3–day event windows for the announcement of dividend increases, maintenance of previous year dividends and dividend initiations. The CERs for dividend reductions and omissions are negative and significant for the 3–day, 21–day and 60–day event windows. The CERs for dividend payment and initiation of dividend announcements are positive, while those of reduction and omission of dividends are negative in the short run (Table 4). This shows that market reactions are proportional to the change in dividend. This leads us to hypothesis 3, which states that:

- H3: The market treats announcements of dividend initiation (good news) and omission (bad news) symmetrically.

From Table 4, there is a mean price rise of 0.29% and 0.30% associated with announcements of an increase in dividends and dividend initiation, respectively. On the other hand, maintenance of past dividends is associated with a mean price drop of 0.51%, while announcements of dividend omission and reduction are associated with a mean price drop of 0.53% and 1.30%, respectively. Announcement of a dividend payment on the whole is associated with a mean price rise of 0.29% (when dividend reduction and no change in past dividend samples were excluded), and a price drop of 0.35% (when all samples of initiation, increase, reduction and no change in dividend are included). The result shows that reactions to omissions are more pronounced than to payments of a dividend. Reactions to dividend payments and omissions are not symmetrical, as omissions tend to be more serious events than payments. However, the study rejects this hypothesis in the short run because market reactions to dividend initiation and omission are not symmetrical.

Long–run price reactions to dividend announcements and omissions

Table 5 shows price reactions to the announcement and omission of dividends one year before the announcement, at the time of the announcement and one year after the dividend announcement period.

Table 5: Price reactions to concurrent dividend and earnings announcements from one year before to one year after the dividend announcements (%)

Panel A: Initiation of dividend

Year relative to dividend initiation day	No of observations	Mean earning surprise	Mean excess return
–1	18	–24	–14.5
0	18	3.4	2
1	18	–12	–5.1

Panel B: Omission of dividend

Year relative to omission day	No of observations	Mean earning surprise	Mean excess return
–1	40	–4	–14.8
0	40	–15	–26
1	40	–5	–31.9

Source: Computed by author.

The negative mean excess returns are higher for the dividend omissions subsample than for the dividend initiation subsamples. The result shows that reactions to omissions are more pronounced than those to payments of dividends. Reactions to dividend payments and omissions are not symmetrical, as omissions tend to be more serious events than payments. Therefore, the study rejects hypothesis H3.

5. Summary of major findings, conclusion and policy recommendations

In examining the efficiency of the Nigerian stock market at the semi–strong level, the study looked at the speed of adjustment of share prices to the announcement of dividend payments and omissions for 742 announcement dates. The study was carried out around five event windows for the short–run study and an annual event window to capture the reactions over a longer period.

The study reveals that the mean excess returns are generally negative for all the dividend omission subsamples both before and after the date of the announcement. They are also negative for the dividend paying subsamples before the day of the announcement, but positive after the announcement date. This could be because stock returns are generally low in Nigeria.

Earnings and dividend announcements are found to be normal concurrent events in Nigeria as the two are always announced together, whereas in developed stock markets such announcements are made separately. Price reactions to dividend announcements using daily stock prices around the announcement dates are consistent with the findings of Oludoyi (1999) on price reactions to earnings announcements around the AGM dates using weekly data.

The performance of stocks in Nigeria is calculated using the Treynor measure and the Sharpe ratio and both performance indicators show that returns on stocks are low in Nigeria. An implausible high proportion of the beta coefficients is negative. The negative betas have low standard errors that are statistically insignificant.

The study also shows that for 30 days from the date of the announcement, the CERs are positive and significant for dividend paying firms, but are negative and statistically significant for dividend omitting firms. The CERs for all the five sub–samples (increase in dividend, reduction, no change, initiation and omission of dividend) are also significant before and after the day of the announcement. This points to the fact that dividend policy matters and share prices do react to dividend announcements. However, one cannot completely rule out the possibility of insider trading on the Nigerian stock market.

Moreover, since the price is still drifting 30 days after the announcement, one can say that the Nigerian stock market is not semi–strong efficient. The findings support semi–strong market inefficiencies found by Olowe (1998) and Oludoyi (1999) from stock splits and earnings announcements, respectively.

Policy recommendations

A number of recommendations emerge from the findings of the study, ranging from the promotion of the exchange, encouragement of capital inflows and proper dissemination of information, to safeguarding the market from insider abuse, encouraging

globalization of the stock market through cross–border listing, and developing investment trusts and funds. There is also the need for sound macroeconomic policies to encourage stock market growth.

The key recommendations are:

- *Discourage insider abuse:* The SEC can promote the efficiency of the Nigerian stock market through increased surveillance. There is a need for SEC to further monitor the market activities at the NSE to prevent insider abuse and ensure that those caught are prosecuted.

- *Improve the communication infrastructure:* Efforts are being made to improve the communication infrastructure in Nigeria and these should be encouraged. Information about the stock market should be disseminated on a daily basis, as is done in developed markets. Most Nigerian newspapers and television stations now disseminate stock market information during the weekdays, and this can be extended to weekends. However, poor electricity supplies limit access to information disseminated through the television or radio.

- *Encourage the development of investment trusts and funds:* Brokerage managers should be encouraged to develop funds and unit trusts, since there are very few in Nigeria.

- *Encourage quoted companies to provide reports:* Companies should be given incentives by SEC and NSE to provide timely information about their activities. Delayed reports should attract penalties.

- *Provide funding for capital market research:* The government, NSE and SEC should fund research into the capital market. This will help to improve the efficiency of the market.

- *Provide the necessary education to promote the growth and development of the stock market:* SEC and NSE can do this through a public enlightenment programme, seminars, workshops, symposiums and publications. This is necessary because many Nigerians still need to be educated about the prospect of investing in the stock market. SEC and NSE can also stimulate public dialogue on topical issues, initiate policy changes and support prudent innovation for growth of the stock market.

- *Increase government participation in the stock market:* Government at the federal, state and local levels and government agencies should also be encouraged to invest their idle funds in stocks and to raise bonds in order to finance development activities when there is a liquidity problem.

- *Regularly review primary and secondary market regulations:* There is a need to periodically review primary market regulations pertaining to new issues, including disclosure, accounting and listing standards that conform to international standards. This will help boost investor confidence.

- *Relax statutory listing requirements:* There is a need to relax and simplify the statutory listing requirements in order to attract a large number of unquoted companies to the second tier securities market. Among possible areas of relaxation are the lowering of capital requirements to a level that is within the financial capabilities of most firms.

- *Follow prudent macroeconomic policies:* Prudent macroeconomic policies, followed consistently, are essential. Persistent high interest and inflation rates and budget deficits have created financial instability and uncertainty which are affecting stock market development.

- *Completely deregulate the whole trading process in the stock market:* This is necessary for prices of listed securities to be more indicative of the true value of stocks, determined exclusively by market forces based on investors' assessment of the performance of the listed companies. This will not only increase the volume of secondary trading and new issues, but also enhance the efficiency of the capital market.

- *Encourage cross listing:* There is a positive spill over effect in cross–border listing and it should be encouraged. Presently only one company (MNET) is listed on both the Johannesburg and the Nigerian stock exchanges. Incentive packages should be put in place to encourage other qualified firms to move to international cross–listing.

Limitations of the study

A major limitation is the date of announcement used in the study. We used the dividend announcement date in the Notice to Dealing Members File, which is the date when the announcement is made on the trading floor. Considering the low level of sophistication of most Nigerian investors, information about dividend announcements may not reach most investors until months later at the time of the AGM. It appears, however, that this limitation may not seriously impair the results emanating from the study because we have also tried to study price reactions to dividends around the AGM date in 1995 and our results were similar to the ones obtained using the dates in the Notice to Dealing Members File.

The study did not examine the effect of tax policy on changes in dividend policy and the resulting clientele effect. Tax policy changes are expected to have an impact on dividend changes. Increases or reductions in capital gains tax and personal income tax rates are expected to influence price reactions to dividend changes. Furthermore, the study did not examine market reactions in terms of volume of shares.

Suggestions for further study

The study concentrated on price reactions to dividend changes. We also investigated whether dividend policy matters. Tax plays an important role in the determination of dividend policy from the angle of both the investor and the corporate firm. Recently,

most developing countries including Nigeria have abolished capital gains tax to encourage the inflow of foreign direct investment, to ensure frequent trading and to boost the liquidity of their capital market. We expect different clientele effects when personal tax exceeds capital gains tax and vice versa. We suggest that a study of clientele effect on dividend policy could be undertaken.

We also suggest a more detailed study of reactions to dividend announcements around the AGM date. Further studies can also examine the impact of industry characteristics of the firm on the structure of dividend policy, and the effect of dividend announcements on the share prices of announcers (announcing firms) and non–announcers. Future studies can also use regression analysis and non–parametric tests for robustness.

Notes

1. By economic profits, we mean the risk adjusted returns net of all costs.

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Appendix: Highlights of literature review

Level of efficiency/ Author	Data/Country	Results/Findings
Weak–form:		
Samuel and Yacout (1981)	Weekly prices between 1977 and 1979 of 21 Nigerian companies.	Accept the validity.
Ayadi (1983, 1984)	Weekly closing prices of 30 shares in Nigeria between 1977 and 1980. Wald–Wolfwitz test and runs tests.	The random–walk model holds.
Ekechi (1989)	Stock prices in Nigeria. Box and Pierce test and runs test	Reject the validity.
Inanga and Asekome (1992)	Stock prices in Nigeria.	Accept the validity of weak–form EMH.
Omole (1997)	Daily Stock prices of 25 companies in Nigeria before and during financial liberalization between 1984 and 1991. Serial correlation tests for lag 1, runs tests and frequency distribution tests.	Accept the validity of weak–form EMH.
Adelegan (2004)	Daily stock prices for 50 companies in Nigeria between 1992 and 1993. Serial correlation test for lag 1 to 10 and runs test.	Inconclusive results.
Osei (1998)	Daily and weekly market returns before and after cross–border listing of Ashanti Goldfields Corporation in Ghana between 1993 and 1995. Serial correlation test for lag 1 to 10.	Ghana Stock Exchange is weak form inefficient.
Dickinson and Muragu (1994)	Bid, ask and market price series from the Nairobi Stock Exchange.	The results are consistent with weak–form efficiency.
Matome (1998)	Ljung–Box tests and variance ratio tests of Namibian data.	Inconclusive results.
Semi–Strong Efficiency:		
Emenuga (1989)	Used money supply information and stock prices in Nigeria.	There is no empirical relationship between money supply and stock prices
Olowe (1998)	Study the impact of stock splits on monthly share prices in Nigeria.	The Nigerian capital market is not efficient in the semi–strong form.
Oludoyi (1999)	Study the impact of earnings announcement on share prices in Nigeria.	The Nigerian capital market is not efficient in the semi–strong form.

Source: Compiled by author.

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