

DIVIDEND POLICY AND NET BOOK VALUE OF QUOTED FIRMS: A PANEL DATA STUDY FROM NIGERIA FINANCIAL MARKET

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ABSTRACT

This paper investigated the effect of net book value of quoted manufacturing firms in Nigeria using panel data. Data were collected from financial statement of the quoted manufacturing firms. Net Book Value was modelled as the function of retain earnings, dividend payout ratio, dividend yield and dividend per share. Ordinary least square method of multiple regressions was used as data analysis method. After cross examination of the models, the fixed model was adopted. The study found that 58.8 percent variation on net book value of the quoted manufacturing firms can be attributed to changes on the dividend policy. The regression model proved that retained earnings and dividend payout ratio has positive effect on net book value while dividend per share and has positive effect on net book value. From the above, we conclude that dividend policy have significant relationship with net book value of the quoted manufacturing firms. The study recommends that corporate management should follow a generous dividend policy which will maximize the long term benefits to its stockholders and that constant and steadily increasing dividend policy should be adopted.

Keywords: Dividend Policy, Net Book Value, Quoted Firms, Panel Data Study, Financial Market

INTRODUCTION

The issue of corporate dividends has a long history and, as Frankfurter and Wood (1997) observed, is bound up with the development of the corporate form itself. Corporate dividends date back at least to the early sixteenth century in Holland and Great Britain when the captains of sixteenth century sailing ships started selling financial claims to investors, which entitled them to share in the proceeds, if any, of the voyages. At the end of each voyage, the profits and the capital were distributed to investors, liquidating and ending the venture's life. By the end of the sixteenth century, these financial claims began to be traded on open markets in Amsterdam and were gradually replaced by shares of ownership.

However, as the profitability of these ventures was established and became more regular, the process of liquidation of the assets at the conclusion of each voyage became increasingly inconvenient and costly. The successes of the ventures increased their credibility and shareholders became more confident in their management (captains), and this was accomplished by, among other things, the payment of generous dividends (Baskin, 1988). As a result, these companies began trading as going concern entities, and distributing only the profits rather than the entire invested capital. The emergence of firms as a "going concern" initiated the fundamental practice of firms to decide what proportion of the firms' income (rather than assets) to return to investors and produced the first dividend payment regulations (Frankfurter and Wood, 1997). Gradually, corporate charters began to restrict the payments of dividends to the profits only.

In the early stages of corporate history, managers realized the importance of high and stable dividend payments. In some ways, this was due to the analogy investors made with the other form of financial security then traded, namely government bonds. Bonds paid a regular and stable interest payment, and corporate managers found that investors preferred shares that performed like bonds (paid a regular and stable dividend). Bank of North America in 1781 paid dividends after only six months of operation, and the bank charter entitled the board of directors to distribute dividends regularly out of profits. Paying consistent dividends remained of paramount importance to managers during the first half of the 19th century (Frankfurter and Wood, 1997). In addition to the importance placed by investors on dividend stability, another issue of modern corporate dividend policy to emerge early in the nineteenth century was that dividends came to be seen as an important form of information. The scarcity and unreliability of financial data often resulted in investors making their assessments of corporations through their dividend payments rather than reported earnings. Investors were often faced with inaccurate information about the performance of a firm, and used dividend policy as a way of gauging what management's views about future performance might be. While there many studies on the effects of dividend policy and corporate value with findings inconclusive and controversial, this study examined the effect of dividend policy on the Net book value of quoted manufacturing firms in Nigeria.

LITERATURE REVIEW

Dividend Policy

Dividend Policy refers to a company's policy which determines the amount of dividend payments and the amount of retained earnings for reinvesting in new projects. This policy is related to dividing the firm's earnings between payments to shareholders and reinvestment in new opportunities. Dividend policy involves the determination of the payout policy that management follows in determining the size and pattern of cash distributions to shareholders over time (Lease *et al*, 2000)

In corporate finance, one of the most important decisions is concerned with the answer of this question that should the profits of firm be distributed to the shareholders as dividend or it must be reinvested in new opportunities and if it must be distributed, what proportion of profit must be paid to shareholder and what proportion must be returned to the business?. For answering this question, managers must consider which dividend policy will lead to maximization of shareholder's wealth and they should not only concentrate on this question that how much of firm's income are required for investment. Instead, they also must consider the impact of their decision on stock's price. Dividend policy is also related to capital structure indirectly and different dividend policies may require different capital structures. Since both capital structure and dividend policy can have impact on the wealth of shareholders and dividend policy can affect capital structure too, it makes decision about dividend policy is more complex and sensitive.

In preliminary corporate finance, dividend policy was just concerned with selecting between payments of earnings to shareholder as cash dividend or retaining the profit in the firm. It only determined the incidence of dividend payments and the amount of dividends. However, in today's corporate finance world, dividend policy addresses more issues such as how firms can attract investors in different tax brackets and how firms can increase the market value of firms and share repurchases instead of cash dividends and retained earnings through bonus issues.

Historical Perspective of Dividend Policy

As long ago as 1934, Graham and Dodd, writing on dividend policy, said that reinvesting a substantial part of the earnings must be clearly justified to the shareholders on the basis of concrete benefits exceeding the value of the foregone dividends. Even if the retention of earnings is a necessity, they added, stockholders should be advised of that fact. And that was said at a time before so many companies had set off on programs of random diversification away from the very business the only business in which the shareholder had consented to invest. With any decent regard for those owners, a company that makes steel would not have turned itself into a jobber of pharmaceuticals without consulting them.

A decision to retain and reinvest a significant part of the earnings should be explained to shareholders, and shareholders should insist on more than the usual bromide that dividends will "keep pace" with earnings. Think of it in this way: companies make money in order to distribute it (eventually) to shareholders. Assuming that the business is successful, some of the money must be kept to protect the business and to comply with legal and social obligations, still more money may be kept if the company can reinvest it more profitably than the shareholders can manage on their own. Beyond that, however, the dollars should be distributed. The choice is the simple one of allocating capital, of deciding where it can be better used: by the company or by its owners. (If the latter, then the distribution might take the usual form of a cash dividend or it might be done by the share repurchase, which for tax and other reasons can be an extraordinarily attractive alternative. The following opinions have been advocated by scholars on dividend policy:

1. Traditional Position: According to the traditional position expounded by Graham Benjamin and David L. Dodd, stock Market places considerable weight age on dividends than on retained earnings. They have propagated that the stock market is highly responsive to liberal dividend rather than conservative dividend. They have found that value of shares of a company is affected by dividend payments four times as that of retained earnings. This can be evident from their version of equation in which E is replaced by (D + R). $P = m [D + (D+R)/$

3 The weights arrived at by Graham and Dodd are based on their subjective judgments and not objective and empirical analysis. Notwithstanding the subjectivity of these weights, the major contention of the traditional position is that a liberal dividend payout policy has a favorable impact on stock price.

2. Walter's Model of Dividend Relevance: James E. Walter has presented a model in 1963, which explains the relevance of dividend for valuation of shares or maximization of shareholders wealth. According to Walter, investment policy of a company cannot be alienated from its dividend policy and both are interlinked. An appropriate dividend policy favorably affects the company's value. The key argument in support of the relevance proposition of Walter's model is the relationship between return on firm's investment or its internal risk of return (r) and its cost of capital or required rate (k). The firm would have an optimum dividend policy, which will be determined by the relationship of r and k . Share Valuation Formula Walter put forward the following share valuation formula:

$$P = D/k + [r (E-D)/k] / k \quad 1$$

Where, P = Price per share D = Dividend per share E = Earnings per share $(E-D)$ = Retained earnings per share r = Rate of return on investments k = Cost of capital

The above equation may alternatively be written as: $P = [D + (E - D) r / k] / k$. 2

3. Gordon's Model of Dividend Relevance: Gordon's Model is based on the principle that dividend payment is relevant to value of company. According to Myron J. Gordon, dividends are highly relevant and dividend policy significantly affects value of firm. This theory is based on compounded relationship between dividend policy and market value of shares of a company.

4. Gordon's Model versus Walter's Model: Gordon's model contends that dividend policy of the firm is relevant and the investors put a positive premium on current incomes/dividends. He argues that dividend policy affects the value of shares even in a situation in which the return on investment of a firm is equal to the required/capitalization rate ($r = ke$). Walter's model is of the view that the investors are indifferent between dividends and retention.

5. Modigliani and Miller Hypothesis of Dividend Irrelevance: Franco Modigliani and Merton H. Miller advocated that dividend policy of a firm is irrelevant, as it does not affect the wealth of the shareholders. Thus, dividends are irrelevant and the value of firm is independent of its dividend policy. The value actually depends on the firm's earnings, which results from its investment policy. Once the investment policy of a firm is formulated, dividend decisions are of no significance in influencing value of firm.

Dividend Irrelevance

Theory Modigliani and Miller (1961) observed that the dividend policy is irrelevant. The dividend policy has no effect on the price of shares and it has no impact on a shareholder's wealth under the Perfect Capital Market (PCM) which assumes rational investors. They therefore concluded that dividend policy has no impact on shareholder's wealth and that all dividend policies are equivalent. As a matter of fact, firms are continuing to pay dividend to their shareholders. According to them, the shareholder's wealth is affected by the income generated by the investment decisions a firm makes, and not by how it distributes that income. Modigliani and Miller went further to argue that regardless of how a firm distributes its income, its value is determined by its basic earning power and its investment decisions.

They stated that “given a firm’s investment policy, the dividend payout policy it chooses to follow will affect neither the current price of its shares nor the total returns to shareholders. In other words, investors calculate the value of companies based on the capitalized value of their future earnings, and this is not affected by whether firms pay dividends or not and how firms set their dividend policies. Modigliani & Miller went further to suggest that to an investor, all dividend policies are effectively the same since investors can create “homemade” dividends by adjusting their portfolios in a way that matches their preferences.

Relevance of dividend policy based on Uncertainty of future dividends Gordon (1962) suggested a valuation models relating the market value of the stock with dividend policy. Gordon studied dividend policy and market price of the shares and proposed that the dividend policy of firms affects the market value of stocks even in the perfect capital market. He stated that investors may prefer present dividend instead of future capital gains because the future situation is uncertain even if in perfect capital market. Indeed, he explained that many investors may prefer dividend in hand in order to avoid risk related to future capital gain. He also proposed that there is a direct relationship between dividend policy and market value of share even if the internal rate of return and the required rate of return will be the same. In Gordon, (1962) constant growth model, the share price of firm is subordinate of discounted flow of future dividends. Diamond (1967) selected 255 US based firms as a sample and studied the association of firm’s value with dividends and retained earnings in 1961 and 1962. Diamond (1967) reported that there is only weak evidence that investors prefer dividends to future capital gain. His findings also showed a negative association between growth of company and preference of dividend.

Relevance of Dividend Policy Based on Information Content of Dividend

Miller and Modigliani (1961) suggested that in imperfect market, dividend may affect the share price. So dividend announcements can be interpreted as a signal of future profitability of firm. Asquith and Mullins Jr, (1983) used a sample of 168 companies paying dividend for the first time or paying dividend after at least 10 -year interruption and studied the relationship between market reaction and dividend announcement. They analyzed the daily abnormal stock returns for the ten-day period prior and ten-day period following the dividend announcement. Their findings implied an approximate abnormal return of +3.7 percent for a period of two days after announcement. Furthermore, they used cross-sectional regression and reported that first dividends’ amount has significant positive impact on the excess returns on the day of dividend announcement. They concluded that the magnitude of changes in dividends can be also important. Amihud and Murgia (1997) used 200 German firms as sample and studied the stock price response to dividend announcement for the period of 1988 to 1992. They considered 255 cases of raise in dividend and 51 cases of decline in dividend. Their results reinforced this statement that dividend changes may be a signal of future prospect of firms. They presented the abnormal return of + 0.965 percent for dividend increase and abnormal return of –1.73 percent for dividend decrease. Travlos, Trigeorgis and Vafeas, (2001) studied the stock price response to announcement of stock dividend and dividend increase in the Cyprus Stock Exchange over 1985 to 1995. They considered announcements of cash dividend and 39 events of dividend increase. Their results provided strong evidence for supporting the signaling hypothesis. They reported prominent excess returns for both cash dividend announcement and cash dividend increase.

Relevance of Dividend Policy Based on Agency Cost

Jensen, Solberg and Zorn, (1992) studied the determinants of cross-sectional differences in insider ownership, debt and dividend policy by using three-stage least squares. They

considered 565 companies as sample for the year 1982 and used 632 companies as sample for the year 1987. They reported that high insider ownership companies adopt lower dividend payment and proposed that insider ownership and dividend payment have negative association. Their findings supported agency cost theory. By studying a sample of 477 US firms, Holder, Holder, Langrehr and Hexter, (1998) stated that insider ownership and dividend payout has negative association from 1980 to 1990. They also concluded that the number of shareholders and dividend payout are positively related. Their findings were consistent with agency cost hypothesis. Saxena, (1999) studied the determinants of dividend in US firms over the period of 1981 to 1990. He used 333 companies listed on the NYSE as sample. In line with Holder et al.'s findings, they found significant negative relationship between insider ownership and dividend payout. Their findings proposed that agency cost is one of the important determinants of dividend policy. Their findings were in line with Holder et al.'s findings. Chen and Dhiensiri (2009) used 75 Zelmanian companies as sample and studied the factors influencing dividend policy through 1991 to 1999. They concluded that insider ownership has negative impact on dividend payout. Their findings were consistent with agency cost hypothesis.

Relevance of Dividend Policy Based on Clientele Effects

Pettit, (1977) investigated on what extent transaction costs and taxes can affect the investor's portfolios in the United States of America. His findings provided empirical proof supporting the clientele effect theory. He studied 914 investors' portfolios and reported that investors' ages and their portfolios' dividend yield are positively related. He also reported that investors' incomes and dividend yield are negatively related. Pettit proposed that aged investors with low-income are more dependent to their portfolios for financing their current consumption. Therefore, they prefer investing in stock with high-payout for avoiding the transaction costs of selling stock. He also demonstrated that investors who have portfolios with low un-diversifiable risk prefer high-dividend stocks. His findings also supported the tax-induced clientele effect.

Lewellen, Stanley, Lease and Schlarbaum, (1978) used a sample derived from identical database applied by (Pettit, 1977) and evaluated clientele effect hypothesis. But their findings provide very weak proof for supporting the dividend clientele effect theory. In another similar research, Scholz, (1992) used self-reported data from 400 individuals in the survey of consumer finance (SCF) and developed an empirical model for testing the dividend clientele effect through analyzing the information of investors' portfolios. His findings showed that difference between tax rate for capital gains and tax rate for dividends has effect on traders' preference for having high-payout stock in their portfolio or low-payout stock. Dhaliwal, Erickson and Trezevant (1999) studied 133 dividend initiations from the period of 1982 to 1995 in US. They examined changes in institutional shareholders due to dividend initiations. Their findings showed that after dividend initiations, there are significant increases in institutional shareholders for 80 percent of their sample. Their findings provided strong support for the theory of tax-induced clienteles. They reported that clientele effect can affect the investors' decisions.

Walter's Model of dividend policy

Walter argues that the choice of dividend policies almost always affect the value of the firm. His model, one of the earlier theoretical works, shows the importance of the relationship between the firm's rate of return, r , and its cost of capital, k , in determining the dividend policy that will maximize the wealth of shareholders.

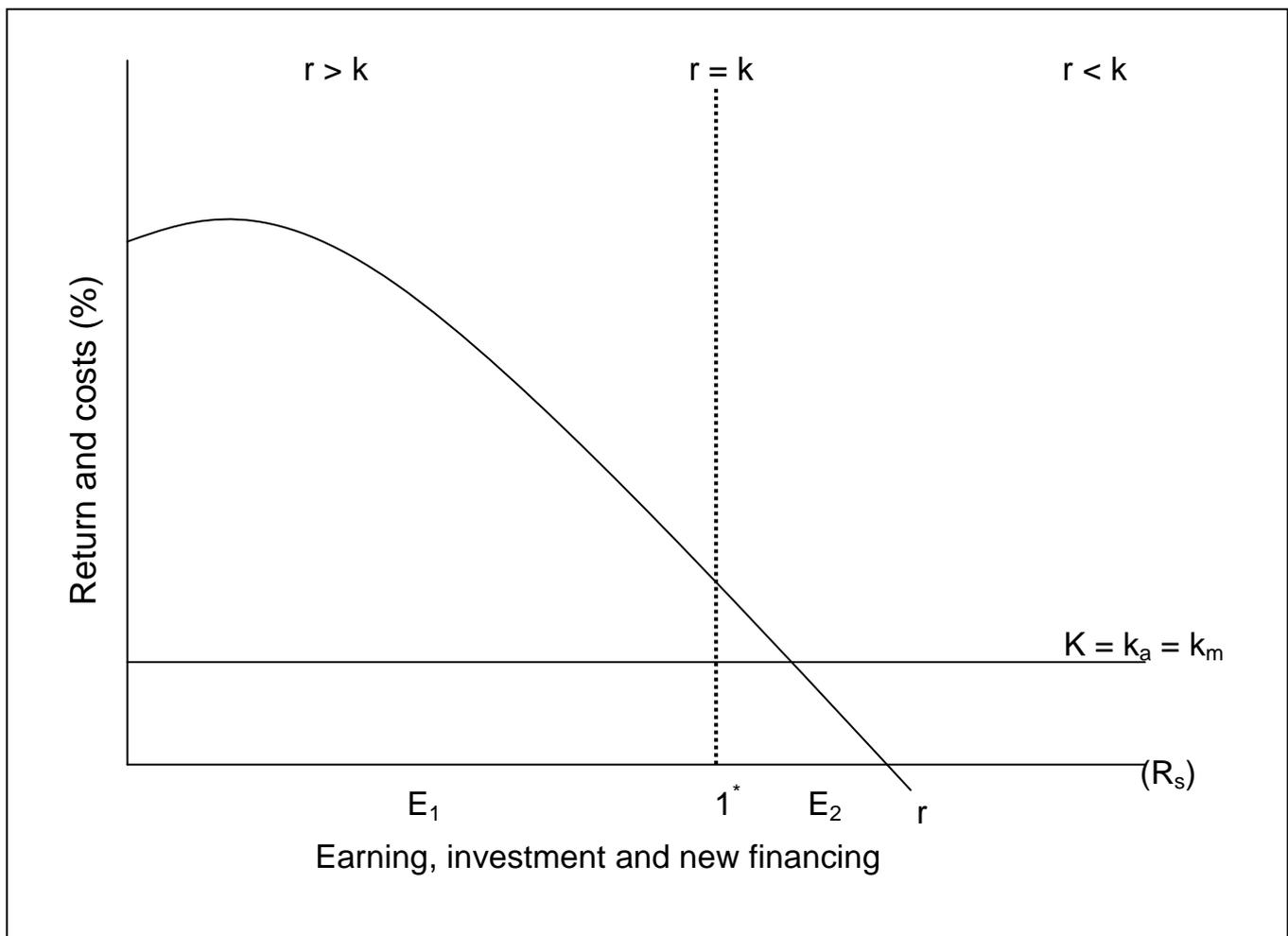
The model is specified as follows:

$$P = \frac{DIV}{k} + \frac{r(EP\text{S} - DIV)/k}{k} \quad 3$$

Where:

- P = Market Price per Share
- DIV = Dividend per Share
- EP\text{S} = Earnings per Share
- r = Firm's rate of Return (average)
- k = Firm's cost of Capital or Capitalization Rate

$$P = \frac{DIV + (r/k)(EP\text{S} - DIV)/k}{k} \quad 4$$



Relevance of Dividend Policy

Relevance of dividend policy based on uncertainty of future dividends Gordon, (1962) suggested a valuation models relating the market value of the stock with dividend policy. Gordon studied dividend policy and market price of the shares and proposed that the dividend policy is relevant.

The Miller-Modigliani (MM) Hypothesis

According to Miller and Modigliani (MM), under a perfect market situation, the dividend policy of a firm is irrelevant, as it does not affect the value of the firm.

$$r = \frac{\text{Dividends} + \text{Capital gains (or loss)}}{\text{Share Price}} \quad 5$$

$$r = \frac{DIV_1 + (P_1 + P_0)^n}{P_0} \quad 6$$

$$r = \frac{DIV_1 + (P_1 + P_0)^n}{P_0} \quad 7$$

$$P_0 = \frac{DIV_1 + P_1}{(1 + r)} = \frac{DIV_1 + P_1}{(1 + k)} \quad 8$$

$$V = nP_0 = \frac{n(DIV_1 + P_1)^n}{(1 + k)} \quad 9$$

If the firm sells m number of new shares at time 1 at a price of P₁, value of the firm at time 0 will be:

$$nP_0 = \frac{n(DIV_1 + P_1) + mP_1 - mP_1}{(1 + k)} \quad 10$$

$$= \frac{nDIV_1 + nP_1 + mP_1 - mP_1}{(1 + k)} \quad 11$$

$$= \frac{nDIV_1 + (n + m) P_1 - mP_1}{(1 + k)} \quad 12$$

MM's valuation Equation (18) allows for the issue of new shares, unlike Walter's and Gordon's models.

$$mP_1 = I_1 - (X_1 - nDIV_1) = I_1 - X_1 + nDIV_1 \quad 13$$

By substituting Equation (19) into Equation (18), MM showed that the value of the firm is unaffected by its dividend policy, thus:

$$= nP_0 = \frac{nDIV_1 + (n + m) P_1 - mP_1}{(1 + k)} \quad 14$$

$$= \frac{nDIV_1 + (n + m) P_1 - (I_1 - X_1 + nDIV_1)}{(1 + k)} \quad 15$$

$$= \frac{(n+m) P_1 + P_1 - I_1 + X_1}{(1+k)} \quad 16$$

The price of the share at the end of the current fiscal year is determined as follows:

$$P_0 = \frac{DIV_1 + P_1}{(1+k)} \quad 17$$

$$P_1 = P_0 (1+k) - DIV_1 \quad 18$$

The value of P_1 when dividend is not paid is:

$$P_1 = R_s 100(1.10) - 0 = R_s 110 \quad 19$$

The value of P_1 when dividend is paid is:

$$P_1 = R_s 100(1.10) - R_s 5 = R_s 105 \quad 20$$

Gordon's Model

Myron Gordon develops one very popular model explicitly related with market value of the firm to dividend policy.

$$P_0 = \frac{DIV_1}{(1+k)} + \frac{DIV_2}{(1+k)^2} + \dots + \frac{DIV_{00}}{(1+k)^{00}} + \sum_{t=1}^{00} \frac{DIV_t}{(1+k)^t} \quad 21$$

$$P_0 = \frac{DIV(1+g)}{(1+k)} + \frac{DIV(1+g)^2}{(1+k)^2} + \frac{DIV(1+g)^3}{(1+k)^3} + \dots + \frac{DIV(1+g)^n}{(1+k)^n} = \sum_{t=1}^n \frac{DIV(1+g)^t}{(1+k)^t} \quad 22$$

From Equation (4):

$$P_0 = \frac{DIV_1}{k-g} \quad 23$$

From Equation 5:

$$P_0 = \frac{EPS_1(1-b)}{k-br} \quad 24$$

The equation above explicitly shows the relationship of expected earnings per share, EPS_1 , dividend policy as reflected by retention ration, β , internal profitability, r , and the all-equity firm's cost of capital, k , in the determination of the value of the share. Equation (6) is particularly useful for studying the effects of dividend policy on the value of the share.

$$P_0 = \frac{EPS_1(1-b)}{k-br} = \frac{rA(1-b)}{k-br} \quad 25$$

(Since $EPS = rA$, $A =$ assets per share)

If $r = k$, then

$$P_0 = \frac{EPS_1(1-b)}{k-br} = \frac{rA(1-b)}{k-br} = \frac{EPS}{k} = \frac{rA}{r} = A \quad 26$$

$$P_0 = \frac{rA}{r} \quad (b=0) \quad 27$$

If $r < k$ then $r/k < 1$ and from Equation (9) it follows that P_0 is smaller than the firm's investment per share in assets, A . It can be shown that if the value of b increases, the value of the share continuously falls.

The Bird-in-the-Hand Argument

According to Gordon's model, dividend policy is irrelevant where $r = k$, when all other assumptions are held valid. But when the simplifying assumptions are modified to conform more closely to reality, Gordon concludes that dividend policy does affect the value of a share even when $r = k$.

$$P_0 = \frac{DIV_1}{(1+k_1)} + \frac{DIV_2}{(1+k_2)^2} + \frac{DIV_3}{(1+k_3)^3} + \dots + \frac{DIV_n}{(1+k_n)^n} = \sum_{i=1}^n \frac{DIV_i}{(1+k_i)^i} \quad 28$$

$$P_b = \frac{DIV_0(1+g)^1}{(1+k_1)^1} + \frac{DIV_0(1+g)^2}{(1+k_2)^2} + \dots + \frac{DIV_0(1+g)^n}{(1+k_n)^n} = \sum_{i=1}^n \frac{DIV_i}{(1+k_i)^i} \quad 29$$

$$P_b = \frac{DIV_0(1+g)}{(1+k_1)^1} + \frac{DIV_0(1+g)^2}{(1+k_2)^2} + \dots + \frac{DIV_0(1+g)^n}{(1+k_n)^n} = \frac{DIV_0(1+g)^n}{k'-g} = \frac{(1-b)EPS}{k'-br} \quad 30$$

Argument for the Relevance of Dividend

The dividend relevance group believes that under conditions of uncertainty, investors are not indifferent as to how the earnings stream is split between dividends and retained earnings. Williams (1938) was one of the earliest protagonists of the view that dividends were all that mattered. He stated rather sarcastically in his book, *The Theory of Investment Value*: A cow for her milk A hen for her eggs And a stock for her dividend Williams prime contention is that the sole reason for an investor to purchase shares for a common stock is to receive future income. Income to shareholders consists of dividends, capital gains or losses upon shares. Thus if dividends are forthcoming presently then the value of equity investment is calculated on the basis of the discounted value of those future dividends and capital gains. He therefore, asserts that over long period stock prices reflects the present value of the expected dividends.

Walter (1956) argued that dividend policy should be dependent on the investment opportunity available to the company or firm. He was of the opinion that so long as there are investment opportunities from which the firm earn rate of return (r) which is higher than the firm's weighted average cost of capital (K_0) the firm should pay no dividend to its shareholders. But if there are no such opportunities, the firm should payout a part of its profits. Judging Walter's suggestions, he tends to highlight the information content of dividends. That is, the payment or omission of dividend by a firm is a means of announcing to the public what the firm's future will look like. A firm that pays dividend will be looked like as a weak firm with little or no future prospect and vice-versa. Going further, Walter (1963:380) came up with model explaining how dividend policy affects the value of a share in the stock exchange:

$$P = D + r(E-D)K$$

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K K Where: P = Market price per share K = Cost of capital E = Earnings per share D = Dividend per share I = Internal rate of return.

Walter's Model portrays that an optimal dividend policy will depend on the relationship between the firm's internal rate of return (r) and the cost of capital (k). Thus, for a growth firm where (r) is greater than (k), it is assumed to have profitable investment opportunities which make the (r) to be greater than (k). All things being equal, it is assumed that all earnings should be reinvested so as to maximize that value per share over and above that rate expected by shareholders. Consequently, the optimum payout ratio for growth firm is zero. And since (r) is greater than (k) the market value per share (P) will increase but for declining firms, $r < k$. These are firms that do not have any profitable investment opportunities. For companies under this category, their investment rate of return will be less than the minimum rate required by investor. Consequently, the optimum payout ratio will be 100 percent, and since $r < k$, the value per share (P) will also increase as payout ratio increases.

The third situation is a normal firm where $r = k$. These are firms with exhaustible investment opportunities but whose internal rate of return runs at par with the rate of capitalization. In this case, the price of the stock is indifferent to the dividend policy adopted by the firm. This third category is in conformity with the dividend irrelevance school of thought. Kirshman (1963); and Graham and Dodd (1951) proved using the bird-in-hand theory; that investors are often ready to pay premium on stocks with higher than average rates of dividends just as they discount the one with the lower rate. This is in line with Gordon's claim. According to him, uncertainty increases with futurity, that is the further one looks into the future, the more uncertain dividend becomes. Solomon (1963) in his own contribution to this debate argued that a firm with stable dividends over time which steps up its level of dividends provides a concrete evidence of its ability to generate cash and profits. Thus, highlighting the informational content of dividend which may be better accepted by investors than the release of higher profits, greater expenditure on manpower training in essence, actions speak louder than words. So investors will increase their demand for shares of a firm at any time it increases its rate of dividend.

Gordon (1959) demonstrated with empirical data that dividend payout rates that changes thereto had significant effect on price earnings ratios. This, according to him was conclusive evidence that equity stock value is derived from dividends. The problem with Gordon's analysis is that it suffered from misspecification of the set of explanatory variables (size, Leverage, business risk, and retention ratio are not the same for the firms in his sample) as well as from errors of measurement of the included variables. The work by Durand (1955) on bank price of shares seems to indicate that the proportional effect of dividends on the price of shares is greater than the corresponding proportional effect of retained earnings. But he observed that bank stock prices are not suitable for regression with certain specified models using cross-section data. The limitation of his work is that it was found that logarithmic models based on book value, dividends, and earnings do not fit at all 117 banks used in his study satisfactorily owing to heterogeneity of one sort or another.

An empirical study carried out by Osaze (1985) on bank stock exchange confirmed that there is a high positive correlation between dividend payout ratio and stock prices. While a negative correlation was noticed between earnings per share and prices. This is in consonance with risk variables whose mission could have led to an upward bias in the dividend coefficient. Ezike (1985) stresses the uncertainty in the real world situation, and in his

conclusion lent support to the stand of Osaze as regard the preference of the Nigeria investors.

Bird in Hand Theory

The "Bird in Hand" theory of Gordon (1962) argues that outside shareholders prefer a higher dividend policy. They prefer a dividend today to a highly uncertain capital gain from a questionable future investment. Al-Malkawi (2007:44), asserts that in a world of uncertainty and information asymmetry, dividends are valued differently from retained earnings (capital gains). Adefila et al (2011), argued in his theory labeled the bird in hand principle. The firm with a higher dividend payment would be valued more highly than one with a lower dividend payment. Due to uncertainty of future cash flow, investors will often tend to prefer dividends to retained earnings. Though this argument has been widely criticized and has not received strong empirical support, the main assumptions are;

- i. That investors are taxed at a higher rate than when capital gain is realized on the sale of a share.
- ii. Also that dividends function as a signal of expected cash flows. Despite the tax disadvantage of paying dividends, management still go ahead to pay dividends to send a positive signal about the firm's future prospects. The cost of this signaling is that cash dividends are taxed higher than capital gains. While some investors would rather have capital gains to cut down on tax impact, others may want dividend because of immediate cash requirement. He also assumed that assets in which management invest in, outlive the stay of management in position, and that ownership of the assets is transferred to other management overtime.

Agency Cost and the Free Cash Flow Theory

Agency cost is the cost of the conflict of interest that exists between shareholders and management. (See Ross et al, 2008). This arises when management acts for themselves rather than on behalf of shareholders who own the firm. This could be direct or indirect. Though this is contrary to the assumption of Modigliani and Miller (1961), who assumed that managers are perfect agents for shareholders and no conflict of interest exist between them. This is somewhat questionable, as the owners of the firm are different from the management. Managers are bound to conduct some activities which could be costly to shareholders such as undertaking unprofitable investments that would yield excessive returns to them, and unnecessarily high management compensation (Al-Malkawi, 2007). These costs are borne by shareholders; therefore shareholders of firms with excess free cash flow would require high dividend payment instead. Agency cost may also arise between shareholders and bondholders, while shareholders require more dividends, bondholders require less dividends to shareholders by putting in place debt covenant to ensure availability of cash for their debt repayment. Easterbrook (1984) also identified two agency cost; the cost of monitoring of managers and the cost of risk aversion on the part of managers.

Signaling Hypothesis Theory

Though Modigliani and Miller (1961), assumed that there is perfect knowledge about a firm by investors and management, this has been countered by many researchers as management who look after the firm tend to have more precise and timely information about the firm than outside investors. This therefore creates a gap between managers and investors and to bridge this gap, management uses dividend as a tool to convey private information to shareholders (See Al-Malkawi, 2007). Pettit (1972) observed that the amount of dividend paid seem to

carry great information about the prospects of a firm, this can be evidenced by the movement of share price. An increase in dividend may be interpreted as good news and brighter prospects and vice versa. But Lintner (1956) observed that management is reluctant to reduce dividend even when there is the need to do so. And only increase dividend when it is believed that earnings have permanently increased.

Clientele Effects of Dividends Theory

Investors tend to prefer stocks of companies that satisfy a particular need. This is because investors face different tax treatment for dividends and capital gains. They also face some transaction cost when they trade securities. Modigliani and Miller (1961) argued that for these costs to be minimized, investors lean towards firms that would give them those desired benefits. Likewise, firms would attract different clientele effect which may change the firms' dividends policy, one clientele is as good as another, and therefore dividend policy remains irrelevant. Al-Malkawi (2007) affirms that firms in their growth stage, which tend to pay lower dividend would attract clientele that desire capital appreciation, while those firms in their maturity stage which pay higher dividends attract clientele that require immediate income in the form of dividend.

Al-Malkawi (2007) grouped the clientele effect in two, those that are driven by tax effects and those driven by transaction cost. He argued that investors that are on high tax bracket would prefer firms that pay little or no dividend to get reward in the form of share price appreciation and vice versa. Transaction cost induce clientele on the other hand, arises when small investors depend on dividend payments for their needs; prefer companies who satisfy this need because they cannot afford the high transaction cost in selling securities.

Retained earnings are one of the most significant sources of funds for financing corporate growth, but dividends constitute the cash flows that accrue to stockholders. Although, both growth and dividend are desirable, these two goals are in conflict a higher dividend rate means less retained earnings and, consequently, a slower rate of growth in earnings and stock prices (Weston and Brigham; 1977).

According to Hussainey et al (2011) dividend policy is a firm's policy with regards to paying out earnings as dividends versus retaining them for reinvestment in the firm. It is the division of profit between payments to shareholders and reinvestment in the firm. The dividend policy can be construed as the magnitude (size) and direction (timing and pattern) of dividend payments or, in other words, the size and pattern of cash distributions over time to shareholders. The essence of dividend policy is to determine what portion of firm's earnings that will be paid out as dividend or held back as retained earnings (Emekewue, 2008).

Dividend policy is related not only to a decision to pay or not to pay dividends but also to the size and pattern or magnitude and frequency of the payments (Vasuthep, 2007). Dividend policy is thus an important part of the firm's long-run financing strategies. In early corporate finance, dividend policy referred to as a corporation's choice of whether to pay its shareholders a cash dividend or to retain its earnings. It addressed the frequency of such payments (whether annually, semi-annually or quarterly) and how much the company should, if it decides to do so, pay. The most important aspect of dividend policy is to determine the amount of earnings to be distributed to shareholders and the amount to be retained in the firm. Retained earnings are the most significant internal source of financing the growth of the firm. On the other hand, dividend may be considered desirable from shareholders point of view as they tend to increase their current return. Dividend however, constitutes the use of the firm's fund (Pandey, 2005).

Shareholders wealth is mainly influenced by growth in sales, improvement in profit margin, capital investment decisions and capital structure decisions (Azhagaiah&Priya, 2008). Firm performance in this case can be viewed as how well a firm enhances its shareholders wealth and the capability of a firm to generate earnings from the capital invested by the shareholders. Dividend policy can affect the value of the firm and in turn, the wealth of shareholders (Baker et al, 2001). Dividend policy is therefore, considered to be one of the most important financial decisions that corporate managers encounter (Baker and Powell, 1999). It has potential implications for share prices and hence returns to investors, the financing of internal growth and the equity base through retentions together with its gearing and leverage (Omran&Pointon, 2004). Frankfurter and McGoun (2000) concluded that the dividend puzzle, both as a share value-enhancing feature and as a matter of policy is one of the most challenging topics of modern financial economics.

Agency Problems of Asymmetric Information

Dividends may convey information about the firm's prospects, not previously known to the market, or dividends may be used as costly signals to moderate market perceptions concerning the prospect of future earnings (Bhattacharya 2001). Essentially, the latter objective is an extension of the work of Murillo et al, (2003). Larger-than-expected dividends imply higher future earnings generated from the firm's investment. Since the market knows little about the current level of earnings, dividends may serve as credible signals, and hence are linked to positive stock price reactions (Allen and Michaely 2002). This partly explains why firms still pay out a large proportion of their earnings as dividends despite the fact that share repurchases have become a popular form of payout, especially after the mid-1990s (Fama and French 2001).

John and Williams (2000) develop a theoretical model in which taxable dividends constitute a source of information that is related to the firm's future earnings, but is not conveyed by corporate audits. In an asymmetric information environment, they argue that there is a signaling equilibrium that is associated with the payment of dividends in spite of potential costs such as transaction costs and taxes. They argue that in the equilibrium, it is optimal for corporate insiders with more favorable private information to pay more dividends as they could receive higher prices for their stocks from outside shareholders who do not have access to such information. Further, they note that some firms pay dividends while others do not, depending on the marginal benefits that insiders receive from distributing firm profits as dividends. Miller and Rock (1985) present a model in which dividend and investment policies jointly affect the level of informational asymmetry that exists within the firm. Like John and Williams (1985), they argue that dividend payments represent good signals. As noted, "in a world of rational expectations, the firm's dividend (or financing) announcements provide just enough pieces of the firm's sources and statements for the market to deduce the unobserved piece, to wit, the firm's current earnings" However, the signals perceivably become negative (or "bad") in situations where the Hakansson (2006) also presents a model examining the information content of dividends as an explanation for the prevalence and persistence of dividends. This is also true where multiple signals of dissipative dividends and investment in real and financial assets are included (Williams 2008).

Empirical Review

Adesola and Okwong (2009) tested the relevance of Nigeria stock price dividend theories with cross-sectional data from twenty-seven companies over the period 1996-2006. They commented that they have discovered the positive and significant impact of dividends on

stock prices. The A-sample activities of Nigerian companies indirectly call into question the empirical validity of the dividend insignificance.

Adeleke and Obademi (2013) showed that a positive relationship exist between the dividend policy mechanisms (DPS, PAYR, and EPS) and market price per share. The study in essence investigated the impact of dividend policy mechanisms on shareholder's value using 13 firms quoted on Nigerian Stock Exchange (NSE) from the banking and oil industries from 2008 to 2012. The variables included dividend payout, dividend per share and earnings per share as the independent variables and Market price per share as the dependent variable analyzed using on panel methodology that is based on OLS estimation.

Adesina, Uwuigbe, Uwuigbe, Asiriwa and Oriabe (2017) investigated the impact of dividend policy on Nigeria stock price valuation. During ten years (2006-2016) four of the twenty-two banks were analyzed. In their study, they noted that earnings per share have a strong impact on stock prices, while dividend yields and a percentage of stock price stability have a significant impact. However, it was concluded that Nigerian companies need to consider other companies' dividend policies in order to increase their profits and future performance.

Al- Hasan, Asaduzzaman and Al Karim (2013) examined the effect of dividend policy on market price per share using 28 companies selected from four industries in Bangladesh from 2005 to 2009. The analyses of the study involved descriptive statistics, correlation and multiple regression techniques. Market price per share was used as the dependent variable while dividend per share and retained earnings per share were the independent variables. The result showed that dividend policy has significant effect on market share price.

Amadasun (2011) tried to test the hypothesis that dividend would not increase the price of Nigerian equities using First Bank (Nig) plc as a case study. The study used a regression model that included share price per share as the explanatory variables, earnings per share, return on capital employed, retained earnings, and price-earnings ratio. The results of the study showed a statistically insignificant regression coefficient for both per-share dividend and earnings per share.

Emeni and Ogbulu (2015) conducted a study on the relationship between dividend policy and market value of firms in the financial services sector of the Nigerian economy. The study used panel data constructed from the financial statements of firms listed on the NSE for a period of 10 years, from 2002-2011. These financial statements were obtained from the NSE Fact Book. The Ordinary Least Square (OLS) statistical technique was used for the data analysis. From the results of the study, cash dividend, stock dividend and investment policy have a negative but not significant relationship with the market value of firms in the financial services sector of Nigeria, while earnings was found to have a positive and insignificant relationship with market value (though significant at 10% level of significance). Generally, the result is in tandem with the dividend irrelevant hypothesis of Miller and Modigliani, that dividend policy has no effect on market value of firms.

Iqbal, Ahmed and Shafi (2014) analyzed the effect of the dividend bubble on the stock prices of thirty Karachi listed companies over a period of eleven years. The time series of the thirty listed companies were analyzed using a linear regression model. The result showed that earnings per share, return on equity, holding ratio are positively correlated with share price, while dividend yield and price to earnings ratio have a negative impact on price activities.

However, the study concluded that the dividend has a strong positive impact on KSE stock prices and therefore supports the theory of dividend significance. There are failures in the study resulting from the use of thirty company time series over eleven years. The data obtained by the panel would have been more accurate in reaching its conclusions and conclusions.

Jakata and Nyamugure (2014) employed data from selected firms on the Stock Exchange (ZSE) to investigate the effects of dividend policy on the share price of a firm. Share price served as dependent and dividend policy, earnings per share, turnover and net profit as independent variable. The study used Pearson's Correlation Coefficient and Linear Regression Analysis from a time serial data covering 2003 to 2011 and found that Dividend policy does not affect share price.

Lucky and Uzokwe (2019) tested Miller and Modigliani dividend policy irrelevant hypothesis in Nigeria. The objective was to examine the validity of the irrelevant hypothesis. Tobins Q measure of market value was modeled as the function of dividend payout ratio, retention ratio, dividend per share and dividend yield. 20 firms were selected on the basis of availability of information necessary for conducting the study and the readiness of annual financial reports for the period of 10 years from 2008-2017. Cross sectional data was sourced from financial statement and annual reports of the firms. Based on the analysis of fixed and random effect results, random effect was used. The study revealed that 75 percent variation on the market value can be predicted by variation on independent variables in the regression model. The beta coefficient of the variables found that all the independent variables have positive and significant relationship with market value of the selected quoted firms. The study concludes that dividend policy is relevant as oppose to the irrelevant hypothesis of Miller and Modigliani.

Literature Gap

The above studies did not investigate direction of causality between dividend policies in detail. And where efforts were made to do so, they were not based on the disaggregated components of dividend policies as we intend to do in this study (Uwuigbe, 2012; Osegbu, Ifurueze and Ifurueze, 2014; M'rabet and Boujjat, 2016; Yusuf, 2005; Peter and Lyndon, 2016). Most of the studies did not address the banking sector, the studies focused on the real sector of the economy, studies that attempt to examine the banking sector failed to capture the full details of dividend. Thus, and in this study we disaggregate dividend policy structure as determined in financial market.

METHODOLOGY

Panel data were used. Ex-post facto research design was employed in obtaining, analyzing and interpreting the relevant data for hypotheses testing. The rationale for the variety is that ex-post facto research design allows the researcher the opportunity of observing one or more variables over a period of time (Uzoagulu, 1998). Specifically, panel data were adopted in data analysis. The population of the study comprises all the quoted manufacturing firms in the Nigeria stock exchange. The study adopted stratified random sampling techniques to select 22 quoted manufacturing firms classified as consumer goods manufacturing firms. Panel data used in this study were collected from financial statement of the quoted firms and Stock Exchange Factsheet.

Model Specification

Pooled regression specification

$$NBV = \alpha_0 + \alpha_1 DPR_{it} + \alpha_2 RR_{2it} + \alpha_3 DY_{3it} + \alpha_4 DPS_{4it} + \varepsilon_{1it} \quad (24)$$

Fixed Effect Model Specification

$$NBV = \alpha_0 + \alpha_1 DPR_{it} + \alpha_2 RR_{2it} + \alpha_3 DY_{3it} + \alpha_4 DPS_{4it} + \varepsilon_{1it} + \sum_{i=1}^9 \alpha_i idum + \varepsilon_{1it} \quad (25)$$

Random effect model specification

$$NBV = \alpha_0 + \alpha_1 DPR_{it} + \alpha_2 RR_{2it} + \alpha_3 DY_{3it} + \alpha_4 DPS_{4it} + \varepsilon_{1it} + \mu_i + \varepsilon_{1it} \quad (26)$$

Where:

NBV = Net book Value of Quoted manufacturing firms
 DPR = Dividend payout ratio
 RR = Retention Ratio
 DY = Dividend Yield
 DPS = Dividend per Share
 μ = Error Term

$\beta_1 - \beta_4$ = Coefficient of Independent Variables to the Dependent Variables

β_0 = Regression Intercept

Method of Data Analysis

To obtain the observed values on the expectation of the effect of dividend policy and market value, panel data survey over a ten year period was employed. Panel data structure allows us to take into account the unobservable and constant heterogeneity, that is, the specific features of each quoted firm. In addition the pooled Ordinary Least Square (OLS), Fixed Effects and Random Effects regression models were employed to test the various hypotheses. Pooled OLS regression technique is popular in financial studies owing to its ease of application and precision in prediction (Alma, 2011). These analytical techniques will enable the researcher attain justifiable and robust results.

$$Y = \beta_0 + \beta_{1Xit} + \mu \quad (27)$$

Where,

Y = Dependent Variable
 β_{1Xit} = Independent variable
 β_0 = Regression Intercept
 μ = Error Term

Table 1: Analysis of Variables and A-Priori Expectation

Variable	Measurement	Notation	Expected relationship
Net book value	Net Book Value = Total Cost of Asset- depreciation and other financial charges	NBV	Dependent variable
Price to book value	<u>Market Price per share</u> Book Value per share	PBV	Dependent variable
Dividend payout ratio	Annual Dividend Paid per Share ÷ Earnings per Share	DPR	+
Retention Ratio	1- DPR	RR	+
Dividend Yield	Dividend per share /market value per share	DY	+
Dividend per Share	Annual dividend / number of shares	DPS	+

Hausman Test

Since random effects model is invalid when heterogeneity exist, meaning that error term is correlated with explanatory variables, Hausman test is often used to test whether a variable can be treated as exogenous or whether that variable needs a separate structural equation. Hausman test refers to a test for whether a random effects approach to panel regression is valid or whether a fixed effects model is necessary (Brooks, 2014). We exercise Hausman test by E-views, with the null hypothesis that random effects model can be applied.

RESULTS AND DISCUSSION OF FINDINGS

This section deals with the presentation, analyses and interpretation of data obtained from annual reports of the quoted manufacturing firms.

Table 2: Analysis of Panel Unit Root

Method: Series: D(NBV)	Statistic	Prob.**	sections	Obs
Levin, Lin & Chu t*	-52.9029	0.0000	22	154
Im, Pesaran and Shin W-stat	-23.7892	0.0000	22	154
ADF - Fisher Chi-square	206.977	0.0000	22	154
PP - Fisher Chi-square	135.441	0.0000	22	176
Series: RR				
Levin, Lin & Chu t*	-4.87201	0.0000	22	176
Im, Pesaran and Shin W-stat	-4.31478	0.0000	22	176
ADF - Fisher Chi-square	101.359	0.0000	22	176
PP - Fisher Chi-square	213.534	0.0000	22	198
Series: D(DY,2)				
Levin, Lin & Chu t*	-6.82213	0.0000	22	132
Im, Pesaran and Shin W-stat	-5.60784	0.0000	22	132
ADF - Fisher Chi-square	120.304	0.0000	22	132
PP - Fisher Chi-square	351.324	0.0000	22	154
Series: D(DPS)				
Levin, Lin & Chu t*	-11.5810	0.0000	22	154
Im, Pesaran and Shin W-stat	-5.12390	0.0000	22	154
ADF - Fisher Chi-square	111.302	0.0000	22	154
PP - Fisher Chi-square	219.108	0.0000	22	176
Series: DPR				
Levin, Lin & Chu t*	-5.84013	0.0000	22	176
Im, Pesaran and Shin W-stat	-3.59830	0.0002	22	176
ADF - Fisher Chi-square	93.7856	0.0000	22	176
PP - Fisher Chi-square	213.292	0.0000	22	198

Source: Computed From E-View Statistical Package 9.0

Table 2 above reports (summary) panel unit root tests on the relevant variables given in the models. As can be readily seen, most of the tests (with the exception of the LLC test in one case) fail to reject the unit root null for all the variables in level form, but the tests do reject the null of a unit root in difference form. Again, the results of this test are consistent with those of LLC, IPS, and Breitung because it rejects the null in favor of a unit root for the variables in level form. Thus, the evidence suggests that the variables in question do evolve as non-stationary processes and the application of ordinary least square to equations specified in methodology. It is therefore necessary to turn to panel cointegration techniques in order to determine whether a long-run equilibrium relationship exists among the non-stationary variables in level form.

Table 3: Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.	
Pooled Regression Results for the Study					
RR	-4.478571	3.190412	-1.403760	0.1618	
DY	1.062854	0.346945	3.063465	0.0025	
DPS	0.659236	0.219192	3.007567	0.0029	
DPR	-3.453561	2.995877	-1.152771	0.2503	
C	3.523382	1.966686	1.791532	0.0746	
R-squared	0.077789	Mean dependent var		7.060773	
Adjusted R-squared	0.060631	S.D. dependent var		0.833815	
S.E. of regression	0.808143	Akaike info criterion		2.434308	
Sum squared resid	140.4153	Schwarz criterion		2.511436	
Log likelihood	-262.7739	Hannan-Quinn criter.		2.465455	
F-statistic	4.533834	Durbin-Watson stat		0.415599	
Prob(F-statistic)	0.001551				
Fixed Regression Results for the Study					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	5.963566	1.283750	4.645426	0.0000	
RR	-1.484650	2.059340	-0.720935	0.4718	
DY	0.567202	0.297868	1.904209	0.0584	
DPS	-0.031648	0.164193	-0.192746	0.8474	
DPR	-1.054605	1.920732	-0.549064	0.5836	
Effects Specification					
Cross-section fixed (dummy variables)					
R-squared	0.676153	Mean dependent var		7.060773	
Adjusted R-squared	0.634421	S.D. dependent var		0.833815	
S.E. of regression	0.504151	Akaike info criterion		1.578713	
Sum squared resid	49.30868	Schwarz criterion		1.979778	
Log likelihood	-147.6585	Hannan-Quinn criter.		1.740674	
F-statistic	16.20196	Durbin-Watson stat		1.129071	
Prob(F-statistic)	0.000000				
Random Regression Results for the Study					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
RR	-1.717189	2.054207	-0.835938	0.4041	
DY	0.608987	0.289666	2.102378	0.0367	
DPS	0.026646	0.161858	0.164627	0.8694	
DPR	-1.237273	1.916789	-0.645492	0.5193	
C	5.770034	1.285756	4.487658	0.0000	
Effects Specification					
			S.D.	Rho	
Cross-section random			0.618221	0.6006	
Idiosyncratic random			0.504151	0.3994	
Weighted Statistics					
R-squared	0.323755	Mean dependent var		1.763146	
Adjusted R-squared	0.205592	S.D. dependent var		0.509154	
S.E. of regression	0.507728	Sum squared resid		55.42446	
F-statistic	1.307875	Durbin-Watson stat		0.920697	
Prob(F-statistic)	0.268081				
Unweighted Statistics					
R-squared	0.235843	Mean dependent var		7.060773	
Sum squared resid	146.8019	Durbin-Watson stat		0.318480	
Correlated Random Effects - Hausman Test					
Test Summary			Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random			7.061926	4	0.0327

Interpretation of the Result

The fixed effects model is more appropriate than the random effects model. As the result found that the results of this test were significant (p-value = 0.0000). Hence, we reject the

null hypothesis and conclude that the fixed effects model is the most appropriate of the three models.

Table 3 above, presents the effect of the dividend policy on net book value of quoted manufacturing firms in Nigeria. The regression summary produced adjusted R^2 of 0.634421 from the fixed effect regression model which implies that 63.4 percent variation on net book value of the quoted manufacturing firms can be attributed to changes on the dividend police variables while the model is statistically significant by the value of F-statistics and F-probability. The Durbin Watson statistics is less than 1.5 which means the absence of serial autocorrelation. The effect of the independent variables found that retained earnings and dividend payout ratio has positive effect on net book value of the quoted manufacturing firms while dividend per share and has positive effect on net book value. Furthermore, the p-value of the variables indicate that retained earnings, dividend yield and dividend payout ratio have no significant relationship with net book value of the quoted firms as the probability coefficient of the variables are greater than 0.05 while dividend per share have significant relationship with net book value of the quoted manufacturing firms. The above enables us to test the long run relationship among the variables using panel cointegration test

Table 4: Pedroni Residual Cointegration Test

Panel v-Statistic	-2.948894	0.0084	-3.295868	0.0095	
Panel rho-Statistic	4.146727	0.0000	4.322823	0.0000	
Panel PP-Statistic	-1.397187	0.0812	-0.706670	0.2399	
Panel ADF-Statistic	-3.490932	0.0002	-1.292787	0.0980	
	<u>Statistic</u>	<u>Prob.</u>			
Group rho-Statistic	6.589158	0.0000			
Group PP-Statistic	-1.474618	0.0702			
Group ADF-Statistic	-1.302787	0.0963			
Cross section specific results					
Phillips-Peron results (non-parametric)					
Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Seven Bottling Co. Plc	-0.531	0.001751	0.000818	5.00	9
Cadbury Nig. Plc	0.112	0.001086	0.001086	0.00	9
Champion Breweries Plc	-0.327	0.054469	0.021951	8.00	9
Dangote Flour Plc	-0.246	0.134261	0.022101	5.00	9
Dangote Sugar RefinPlc	-0.038	0.035228	0.034066	1.00	9
DN Tyre&Rubbe	-0.085	0.062257	0.021317	8.00	9
Flour Mills	0.224	0.077756	0.077756	0.00	9
Golden Guinea Brew. Plc	0.175	0.047968	0.060500	2.00	9
Guinness Nig. Plc	0.065	0.066260	0.040375	4.00	9
Honeywell Flour Mills Plc	0.065	0.047653	0.043011	1.00	9
Int'l Breweries Plc	0.164	0.108323	0.108323	0.00	9
MC Nichols Plc	0.270	0.018857	0.023100	2.00	9
Mlti-Trex Integrated Food Plc	0.084	0.129381	0.129381	0.00	9
Northern Nig. Flour Mills Plc	-0.116	0.134043	0.028619	8.00	9
Nascon Allied Ind. Plc	0.359	0.011548	0.012144	2.00	9
Nestle Nig. Plc	0.330	0.042103	0.039353	1.00	9
Nigerian BrewriesPlc	0.500	0.016267	0.014198	1.00	9
PZ Cussons Nig. Plc	0.014	0.080024	0.047107	6.00	9
UTC Nigeria Plc	0.449	0.073758	0.052353	2.00	9
Union Dicon Salt Plc	0.244	0.062171	0.062171	0.00	9
Unilever Nigeria Plc	0.006	0.557834	0.557834	0.00	9
Vita Foam Nigeria Plc	0.241	0.107034	0.073600	3.00	9

Source: Computed From E-View Statistical Package 9.0

As advised by Pedroni (1999) and Kao (1999) for the I(1) variables, Pedroni and Kao panel cointegration tests were used for the purpose of investigating the long-run relationships

between the variables. The outcome of the Pedroni panel cointegration test is summarized in table 4 which indicates that 6 out of 11 statistics in model are significant at the 5 % level. This suggests that no cointegration null hypothesis for all models can be accepted. The findings from the Kao panel cointegration test for all models are in line with the findings from the Pedroni panel cointegration test. Hence, both results confirm the existence of a long-run cointegration relation between dividend policy and net book value of the quoted manufacturing firms.

Table 5: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
RR does not Granger Cause NBV	176	1.29943	0.2754
NBV does not Granger Cause RR		0.91271	0.4034
DY does not Granger Cause NBV	176	0.07242	0.9302
NBV does not Granger Cause DY		1.51406	0.2229
DPS does not Granger Cause NBV	176	2.05683	0.1310
NBV does not Granger Cause DPS		1.05322	0.3511
DPR does not Granger Cause NBV	176	1.22660	0.2959
NBV does not Granger Cause DPR		0.78938	0.4558

From the causality test presented in the above table, there is independent relationship from dividend policy variables and netbook value of the quoted manufacturing firms over the periods covered in this stud. This implies that there is no causal relationship among the variables in the study, we therefore accept null hypothesis.

Discussion of Findings

The estimated regression model proved that retained earnings and dividend payout ratio has positive effect on net book value of the quoted manufacturing firms while dividend per share and has positive effect on net book value. The positive effect of the variables confirms our a-priori expectations based on the dividend theory formulated by Gordon in (1956). Relevance theory explains that dividend policy has significant effect on shareholders wealth as well as firms' values. The main idea of their theory is that even in perfect markets, the uncertainty of future situation is a sufficient reason to change the price of a share. Gordon (1959) argues that investors are generally risk averse and attach less risk to current as opposed to future dividends or capital gains. The payment of dividend helps to resolve the uncertainty in the mind of investors about the future earning potentials of the company. The positive findings contradict the opinions of Modigliani and Miller (1959). Modigliani and Miller introduced dividend irrelevance theory which means that with no charge of tax or default cost, dividend policy is unimportant. They argue that dividend policy has no effect on firm's share value. Dividend irrelevance theory further explains that the investor could influence the return on a stock regardless of the stock's dividend. For instance, from an investor's point of view, if an organization's profit is too enormous then the investor can purchase more stock with the dividend as he desires.

The positive effect of the variables empirically confirm the findings of Uwuigbe, Jafaru & Ajayi (2012) whose findings indicated a significant positive association between the performance of firms and dividend policy. The findings of Zurigat and Gharaibeh (2011) that the asymmetrical partial adjustment model based on Linter (1956) idea of dividend payout targets perform well in the Jordanian. The findings of Topal (2014) that dividend payments there was a positive and statistically meaningful relationship between the dividend per share rate within groups and market based performance indicator and statistically insignificant relationship between accounting based performance indicators (ROA & ROE) and dividend per share rate. It also confirm the findings of Udobi, Iyiegbuniwe and Ezike

(2018) that current dividend has a direct (Unique) effect on share price, and at the same time has indirect effect on share price through current earnings. The findings of Umar and Saidu (2016) that dividend payout has a significant positive relationship with the financial performance of the oil and gas companies. The findings of Uwalomwa, Jimoh and Anijesushola (2012) that there is a significant positive association between the performances of firms and the dividend payout.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The estimated regression results found that 58.8 percent variation on net book value of the quoted manufacturing firms can be attributed to changes on the dividend policy variables while the model is statistically significant by the value of F-statistics and F-probability. The regression model proved that retained earnings and dividend payout ratio has positive effect on net book value of the quoted manufacturing firms while dividend per share and has positive effect on net book value. From the above, we conclude that dividend policy have significant relationship with market value of the quoted manufacturing firms.

Recommendations

1. There is insufficient empirical evidence to believe that a liberal dividend policy leads to a higher average market value of common stocks than will penurious dividend policies. In effect the study recommends that corporate management should follow a generous dividend policy which will maximize the long term benefits to its stockholders.
2. It is also recommended that the manufacturing firms should continually sustain (if possible) increase their dividend per share policy due to the benefits that are likely to perceive. In accomplishing this, constant and steadily increasing dividend policies should be adopted whilst management adopt stringent measures to curtail agency problems and other suboptimal decisions.

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