An Assessment of Theories Underlying the Operations of the Nigerian Stock Market

Chris O. Udoka¹, Bassey I. Ibor²

| ARTICLE INFO | ABSTRACT |
|----------------------------|---|
| Available Online July 2014 | This paper aimed at determining the theories and approaches that inform |
| Key words: | the operational efficiency of the Nigerian stock market, considering the |
| Dividend; | economic, financial, political and environmental factors inducing |
| Dividend payout ratio; | shareholder behaviour in the market. Taking a desk review of the theories, |
| Market efficiency; | against the wealth maximization expectations of investors, the paper notes |
| Random Walk; | that due to imperfections in the Nigerian stock market, certain policies are |
| Stock Market; | clearly unsuitable in informing shareholder behaviour and corporate |
| Tax Preference; | managements' relationship with them. Due to the several factors affecting |
| Shareholder Behaviour; | dividend policy such as legal constraints, funding needs, control issue, debt |
| Wealth Maximization. | obligation, investment opportunity, inflation, shareholders expectations etc, good planning must be put in place. |

1.0 Introduction

Stock Market is the market for securities where organized issuance and trading of Corporate stocks take place either through trading or over the counter in electronic or physical form (Suthar, Patel & Parikh, 2012). This facilitates the flow of funds from economic agents with surplus funds to those in need of funds. The greater the transmission efficiency is, the higher the rate of capital formation and consequently the higher the growth rate of the economy. By their mere presence and efficient functioning, securities markets increase the liquidity of capital assets and, consequently, minimize transaction costs and improve rates of return (Khoury, 1983). The Capital market is considered as a highly complex and dynamic system, dealing on funds of more than one year (Olowe, 2008). Securities markets characterized by depth (i.e. size of issues) and breadth (i.e. diversity of issues, domestic and international) afford lower transaction costs and, therefore, constitute an inducement to investments in financial assets. Across jurisdictions, two types of securities markets are distinguishable: the money market and the capital markets. Whatever, the behaviour of market participants is largely informed by personal or derived experience, public knowledge or expectation or anticipation, insider knowledge as well as investment theories, which are easier to reference and replicate. Thus, the objective of this paper is to determine the theories and approaches that inform the operational efficiency of the Nigerian stock market as opposed to the extant laws and regulations governing its operations. This is done along with a consideration of the economic, political and environmental factors inducing such dispositions. The study is of significance as its recommendations would indeed be useful to the investing public and the academia in obtaining a suitable empirical evidence on the operationality and functionality of the Nigerian stock market. Earlier research work has pointed to the necessity for a study of this nature (Udoka & Anyingang, 2013).

In order to achieve this objective, the paper is delineated into four sections. Section one is on introduction, enunciating the roles of a stock market in an economy. This is followed by the review of literature by experts and scholars in the field of stock market operations. Section three then captures the discussion of the theories suitable to the Nigerian stock market, while section four dwells on conclusion and managerial implications of the findings.

2.0 Review of Stock Market Theories

Stock market exhibits daily, weekly, monthly, quarterly and annual behaviours and also respond to internal and external developments. Though, these market behaviours and trends can be monitored and analysed

¹ Senior Lecturer, Department of Banking and Finance, Faculty of Management Sciences, University of Calabar, P.M.B. 1115, Calabar, Nigeria, E-mail: udokaco@yahoo.com

² Assistant Lecturer, Department of Banking and Finance, Faculty of Management Sciences, University of Calabar, P.M.B. 1115, Calabar, Nigeria, E-mail: basseyibor @yahoo. Com.uk

through the major market averages and indices; which include market capitalization index and the various indices of fund managers, there are various approaches for predicting share price behaviour. These apparently are the Fundamental Theory, the Technical/Chartist, the Random-walk Theories etc.

2.1.1 The Fundamental Theory

The fundamental theory argues that, at any point in time, an individual security has an intrinsic or true value, which is the present value of the future receipts, accruing to the security-holder. This view is essentially the same as the basic valuation model. It is based on the assumption that the analyst needs to consider the major factors affecting the economy, the industry and the company.

To make an appropriate investment decision, the environment within the company and its reaction to that environment in terms of investment and financing policies determine the future net receipts. It is also affected by the state of the national economy, government economic policies such as the control of inflation, the balance of payments, government budgetary and interest rate policies. The effect of each of these factors is largely dependent on the nature of the company's activities.

The fundamentalists forecast stock prices on the basis of market information about the economy, industry and the company. As it is usually the case, when the market anticipates an event, such as the national budgets, fiscal policies or exchange rate policies; the share prices are affected. It may be argued that market price approaches 'intrinsic' or 'true' value 'asymptotically', that is, it gets nearer and nearer but never quite gets there. During this time, new information may alter the intrinsic value so that market prices will have to start chasing a new intrinsic value such that to calculate the intrinsic value is to predict the market price. If fundamental analysis is used as a guide to investment decision, the buy and sell decision will be based on the discrepancy between intrinsic and market prices; if the intrinsic is greater than the market, the investor should buy, and sell if the market price is greater than intrinsic price. The amount of discrepancy and speed with which the market approaches an intrinsic value may be regarded as indications of the degree of perfection in the market (Nalado & Mohammed, 2000).

2.1.2 Technical/Chartist Theory

Technical/Chartist theory is based on the view that future patterns of share prices are repetitions of the same patterns of price movement which had occurred in the past; that is, historical price patterns are repeated in the future (Akinsulire, 2006). According to Corrado et al (2002), technical analyst makes attempt to predict the direction of future stock price movement based on historical price and volume behaviour; and investment sentiment. Bodie, Kane and Marcus (1999), have supported this view that chartists is essentially the search for recurrent and predictable patterns in stock prices. Although technicians recognize the value of information regarding future economic prospects of the firm, they believe that such information is not necessary for a successful trading strategy.

This is because whatever the fundamental reason for a change in stock prices, if the price responds slowly enough; the analyst will be able to identify a trend that can be exploited during the adjustment period. It should be remembered that technical analysis is a sluggish response of stock prices to fundamental supply and demand factors.

Technical analysts, also called chartists study records or charts of past stock prices to find patterns to exploit to make profit using Dow Theory, which is a method of analyzing and interpreting stock market movement which dates back to the turn of the century. Share prices/values can be measured using primary, secondary and tertiary trends. Though, there is no real theoretical justification for this approach, it can at times be spectacularly successful. Studies outside Nigeria have suggested that the degree of success is greater than could be expected merely from chance (Udoka and Anyingang, 2013). Nevertheless, not even the most extreme chartist would claim that every major price movement can be predicted accurately and sufficiently enough to make the correct investment decision. Many critics of charting, have suggested that it is unscientific as to be of any practical value, because there is no theoretical justification of this theory except its pointing to empirical evidence of its correctness (Akinsulire, 2006).

2.1.3. The Random Walk Theory

Comparing stock and commodity prices, researchers found that there was no regular price cycle, but that each series was "a wandering one, almost as if once a week the demon of chance drew a random number and added it to the current price to determine the next week's price" (Mbat, 2001). That is, prices appeared to follow a random walk, implying that successive price changes are independent of one another (Chandra,

2005). The *walk* is the time series of prices, while its *random* aspect is the nature by which the numbers are generated (Emekekwue, 2005). Therefore, yesterday's prices do not tell us as much about tomorrow's or at least not enough to consistently earn abnormal profits based merely on price data. As a result, tomorrow's prices cannot be predicted simply because one has a series of historical prices. So, as far as the Random Walk theory goes, the best prediction you can have about tomorrow's value is today's value. The key arguments seem to be that: information is freely and instantaneously available to all the market participants; keen competition among market participants, more or less, ensures that market prices will reflect intrinsic values. This means that they (market participants) will fully impound all available information. Accordingly, prices change only in response to new information that, by definition, is unrelated to previous information (otherwise it will not be new information) and since new information cannot be predicted in advance, price changes too cannot be forecast. Hence, prices behave like random walk and yesterday's prices by themselves apparently do not tell us anything of value for forecasting tomorrow's prices (Ashanu, 2012). The random walk theory is based on the assertion that the stock prices or the market as a whole reacts instantaneously to new information whether actual or anticipated. This is because any technical information which is considered to influence a stock must influence the price of the stock. This is the foundation for the efficient market hypothesis (EMH), which discussion follows below.

2.2 Efficiency Market Hypothesis

Future cash flow expectation of Stock Market investors are reflected in the prices of the underlying stock. The accuracy and quickness with which the market translates this expectation into the prices is termed market efficiency. There are two types of market efficiencies, namely: operational efficiency and Information efficiency (Udoka and Anyingang, 2014). The former measures the time taken to execute orders and the number of defective deliveries, while the later measures the swiftness of market reaction to new information, such as economic reports, company analysis, political statements and announcements of new industrial policy. While efficient market hypothesis does not deal with the operational efficiency, it is concerned with information efficiency. Accordingly, Efficient Market Hypothesis (EMH) states that a market is efficient if security prices immediately and fully reflect all available relevant information and that the knowledge of that information would not allow anyone to profit from it because stock prices already incorporate the information. According to Omolehinwa (2006), an efficient stock market is one in which: the price of securities traded reflect all the information, which is available to the buyers and sellers such that prices change quickly to reflect all new information about future prospects, no individual dominates the market, transaction costs of buying and selling are not so high as to discourage trading significantly. There are many examples of markets which may or may not be efficient, namely: the foreign exchange market, the interest rate market, commodity markets, the money market and the capital market. Market efficiency means that the market is merely in equilibrium through the supply and demand pressures of participants/investors' actions based on their revised expectations of the worth of a given share. Under the hypothesis, an efficient market will cause the attention of investment advisors to be directed towards utility, portfolio risk and diversification to maximize risk reduction, minimize transaction costs and minimize taxation payments. The hypothesis, therefore, takes three forms depending on the extent of information deemed available to market participants or investors: weak, semi-strong and strong forms (Brealey and Myers, 1996).

2.2.1 Weak Form Market Efficiency

This form of the hypothesis asserts that security prices already reflect all information that can be derived by examining market trading data such as the history of past pieces and trading volumes. This is because information available is restricted to details of past share prices, returns and trading volumes. Hence, future prices cannot be predicted (or charted) from historical price data alone and trading rules based only on such price and volume data. According to the weak form market efficiency, no investor can earn excess returns by developing trading (buying and holding) policy based on historical price and return information That is, the chartists' methodology, a form of technical analysis, cannot consistently produce excess returns if the hypothesis holds true. This is the theoretical basis of fundamental (technical) analysis, which is the study of a company's earnings, dividends and other financial information to predict future share prices. The most important form of technical analysis is chartism, which involves the study of historic share price and volume information to see if any patterns or relationships exist (Omolehinwa, 2006). Fundamental analysis is the physical study of a company in terms of its product sales, manpower, quality, infrastructure etc. to understand it standing in the market and thereby its profitability as an investment. The technical analysis foretells the fitting time to buy or sell a share. Test results suggest that technical trading rules do not

produce superior returns after adjusting for transaction costs and taxes, which evidence supports the weak form efficiency in the major securities markets.

2.2.2 Semi-Strong Form Market Efficiency

This states that share prices quickly and without bias fully reflect all relevant publicly available information. The information set includes that available under weak form plus other information such as available in the annual accounts, press releases, etc. Reaction to public announcements, published accounting information, etc will not produce excess returns because the information content of such announcements is reflected in the shares prices posted. Evidence strongly supports this notion of semi-strong efficiency but occasional studies (e.g. the small-firm effect and the January effect) and events (e.g. the October 1987 Stock market crash) puncture this form of market efficiency and suggests that these so-called anomalies are due to data mining, which is the process of extracting knowledge from a database (Suthar, Patel and Parikh, 2012). According to the semi-strong form efficiency, no investor can earn excess returns from trading rules based on any publicly available information.

2.2.3 Strong Form Market Efficiency

This hypothesis holds that current securities market prices reflect all information, whether publicly available or privately held, that is relevant to the underlying company. Empirical evidence points to the fact that strong form efficiency does not exist because, if it does, prices would fully reflect all information whether a corporate insider exclusively holds such information. In summary, the EMH asserts that the market adjusts so quickly to information about individual securities and the economy as a whole that no technique of selecting a portfolio – using either technical or fundamental analysis – can consistently outperform a strategy of simply buying and holding a diversified group of securities.

2.3 Dividend Theories

A company has only two choices with regards to its earnings namely: to pay dividends or to retain earnings and invest to yield some rate of return. Dividends paid in any one year, can be expressed as: Dividends = Net income – Retained Earnings

Dividend decisions present a serious challenge to both academicians and practitioners, due to many unanswered questions regarding the impact of dividends on the value of the firm and the conditions under which such impact is felt. The fundamental issues regarding dividends can be summarized as: The basis for corporate payment of dividends, reasons for investors' interest in dividend-paying stock, the reasons why companies pay dividends with one hand and borrow with the other, the impact of dividends on stock prices, the impact of corporate and personal income taxes on dividend policy and the value of the firm, and the impact of dividends on portfolio strategy (Bodie, Kane and Marcus, 1999). Generally, two questions underlie the controversy surrounding the dividend issue and create the dichotomy known as the two schools of thought on dividend theory. These are: What should the individual investor do about dividends in his portfolio? What should the company do about dividend policy? Two schools of thought dominate dividend theory: one claims that dividends do not matter and the other claims that they do. That is, one school of thought sees dividends as an active decision variable in corporate finance, while the other contends with dividends as a residual sum. The theories put forward from these schools of thought are referred to as dividend relevancy and dividend irrelevancy theories, respectively (Emekekwue, 2005). In the same way the two theories revolve around the two rationalizations: the investor's and the management's.

2.3.1 Dividend Relevancy Theory

Organizations seek to improve performance and create wealth in terms of additional wealth for their shareholders and increased satisfaction to their customers and other stakeholders (Maimako and Oladele, 2013). Dividend is, therefore, relevant to management because the declaration of dividends contains substantial information (actual or extrapolated) about the performance of management and constitutes a basis for job security. Dividends, under this theory are seen as active decision variables. To the investor, dividends represent a return which can be compared to other investment opportunities (Groppeli & Nikbakht, 2006). This model shows that dividend is relevant to shareholders and potential investors because it is fundamental in determining share value and answer to the preference of shareholders for a current dividend to deferred dividend (future capital gains) because the future is most uncertain, particularly in economies like Nigeria. Accordingly, in practice management of listed companies in Nigeria decide on the amount of dividend to be paid and assesses investment opportunities thereafter. Theoretical share valuation models indicate that dividends are fundamentally important in determining share value. The flagship of these models is the dividend valuation model which holds that rationally, share values are

simply the discounted value of all future dividends to be received by the shareholders giving the following relationship (given a constant level of growth in dividends):

| VE | = | Do (1 + | g) = | D_1 |
|-------|----------------|------------------------|---------------------|---------------------------|
| | | | | <u>K</u> _E – g |
| Where | | | | |
| Ve | = | Market Price of shares | | |
| | Do | = | Current level of di | vidends |
| | K _E | = | Cost of equity (Re | turn on Equity) |
| | g | = | Rate of growth in | dividends |
| | D_1 | = | Expected dividend | d per share |
| | | | | |

If the firm increases the payout ratio, D_1 rises and causes the share price to rise. Based on this, therefore, a firm's optimal dividend policy must strike a balance between current dividends and future growth to maximize the price of its equity. This is the fullness of the dividend relevancy theory. According to the Chartered Institute of Bankers (1990) "with outside funds readily and relatively cheaply available, corporate managers no doubt felt they could reward shareholders with bigger dividends possibly to divert attention from some of their more extravagant takeover spending". The dividend policy of a company and any proposed changes to that policy are important to the shareholders of the company and stock market operators for a number of reasons:

- (i) Many investors will invest in a company solely because of its dividend policy such that investors who need regular income would choose to invest in companies with relatively high and stable dividend payout regime.
- (ii) Investors often have a preference between income and capital gains and would disinvest if the company lowers dividend payout and aims for capital gains. A few are involved in this, as many Nigerian stock market investors "buy and hold" (Mbat, 2011) or as long as the company continues in business (Akpan, 2009).
- (iii) Different investors will have different tax profiles and would seek to invest in companies whose dividend policies suit their peculiar tax position
- (iv) Many investors prefer current dividends to the promise of future capital gain because dividend paid now is more certain than capital gains and/or higher future dividends
- (v) A change in dividend policy is often perceived by the market in general, and by shareholders in the company in particular, to have information content which may be perceived to signal an upturn or downturn in the success of the company (Omolehinwa, 2006).

The benefits of dividends for shareholders are that they satisfy their desire for current income, avoid the need to sell shares, and incur transaction costs and signal the firm's prospects and risk allowing them to make choices with regard to their investment portfolios (Pandey, 2010). Both company managers and shareholders in Nigeria hold the view that there is a signaling effect conveyed by the payment of dividends. This agrees with Roemiati and Touran Rad, (2008) who stated that dividends are taken as signals that the firm is expected to have higher future cash flows. In the Nigerian stock market, when dividends are declared the share value, because the dividend will be financed from earnings and less funds will be available for reinvestment and shareholders (hence, the market) perceive possibility of reduced future earnings and dividends (Dunmade, 2013). The amount of loss in value varies, depending on the shareholders' expectation of risk and the extra funds sourced from other sources (Ashanu, 2012) such that:

 $D_A > D_{E}$, results in increase in price of underlying share

$$D_A = D_{E_i}$$
 Price of share remains

$$D_A < D_E$$
, Results decrease in share price

Where, D_A is the actual dividend declared and D_E is the expected dividend (shareholders' expectation).

2.3.2 Dividend Irrelevancy Theory

The decision to pay dividends depends on the profitability of investment opportunities available to the firm (Dunmade, 2013). According to him, dividends in this context are no longer an active decision variable but rather a residual sum and he then represents Walter's stock valuation formula:

$$MP^{s} = \frac{D_{1} + (R_{t}/K_{t})(e_{t} - D_{t})}{K_{t}}$$

Where

| R_t | = | Rate of return at time |
|-------|---|---|
| Kt | = | Market capitalization rate at time t (i.e. the cost of capital) |
| et | = | Net earnings per share |
| D_t | = | Dividend payment at end of year, t |

He further argues that if $R_t > K_t$, the firm would distribute no dividends, because any positive distribution would not maximize MP^s. If $R_t < K_t$, then no investment would be undertaken and all the earnings would be distributed to the shareholders. If $R_t = K_t$, the price of the stock would be independent of dividend payouts. Walter's important contribution is, however, in the fact that the investment decision represents the active decision variable regardless of the relationship between R_t and K_t . This school of thought argues that dividend policy has no effect on either the price of a company's shares or its cost of capital. Further that the combination of debt and corporate taxes have no effect on the irrelevancy of dividend argument and that the value of the firm is independent of dividend payments (Rose, Westerfield and Jaffe, 1996).

2.3.3 Modigliani and Miller Dividend Irrelevancy Model

The major breakthrough came in the study by Modigliani and Miller, who argue that dividends are irrelevant. The assumptions of the model are as follows:

- (i) Perfect capital markets characterized by free and equally available information (i.e.
 - securities markets are efficient)
- (ii) No transaction costs
- (iii) Equal tax rates on dividends and capital gains
- (iv) A fixed capital investment schedule for the firm
- (v) Perfect certainty regarding the investment schedules and the rates of return derived there from.
- (vi) No income taxes

The model developed by Modigliani and Miller is a simple one – period model, which argues that the value of a firm is determined only by its basic earning power and its business risk. That is, the value of the firm depends only on the income produced by its assets, not on how this income is split between dividends and retained earnings. That, as against the bird - in - the - hand theory, company's risk is dependent only on the riskiness of its cash flows from assets and its capital structure, not by how its earnings are distributed to investors. According to these theorists, what the investor misses in dividend payments, he or she will make up in the form of price appreciation, and vice versa. Holding that the relationship is one to one, they postulate that investors who have a need for income can, in a world of no transactions costs, liquidate enough of their shares to make up for the dividend payments. The Modigliani and Miller hypothesis implies, therefore, that the value of the firm is independent of whether dividends are paid or not. That is, if two firms have the same set of available investment opportunities, their value would be identical even if one paid no dividends and the other paid all its earnings in dividends provided that the two firms belong to the same risk class. The irrelevancy hypothesis also holds, so reasoned Modigliani and Miller, under conditions of uncertainty, on the assumption of "symmetric market rationality", that is, by acting rationally, an investor imputes rationality to the market. This market rationality prevents two substitutes - two firms in the same risk class - from selling at different prices given identical expected future streams of investments and earnings. If leverage is included in the model, the validity of the hypothesis is preserved given that all debt issued by the firm is default - free or that the bondholders are wise enough to insist on the "me-first" rule. In other words, it is assumed that bondholders will insist on clauses in the indenture agreement preventing expropriation of any of their wealth by ordinary shareholders – and expropriation achievable through the distribution of dividends. Fama (1978) showed later that the me-first rule is not necessary to prove the irrelevancy of dividends in the valuation process provided the firm issues bonds that do not have perfect substitutes and that the capital markets are perfect. The inclusion of taxes (personal) leads to a breakdown in the irrelevancy argument because of the differential in tax rates that apply to dividends and capital gains. The preferential treatment of capital gains argues for retention of earnings by the firm if the intent of management is to maximize the wealth of stockholders. Overall, the assumptions on which this theory is based are regarded as unrealistic.

2.3.4 The "Bird-At-Hand" Theory

This theory holds that investors perceive a naira of dividends in the hand to be less risky than a naira of potential future capital gains in the bush. That is, shareholders prefer a naira of actual dividends to a naira of retained earnings. Given two companies in the same general position, and with the same earning power, the one paying the larger dividend will always command a higher price (Pandey, 2010). On the basis of this theory, investors would regard a company with a high payout ratio as being less risky than one with low

payout ratio, holding all other things constant. Further those firms with high payout ratios would have higher values than those with low pay outs. This notwithstanding, companies usually take cognizance of extant government laws which may restrict their ability to pay dividends. The company and Allied Matter Act (CAMA) 1990 in Nigeria restrict payment of dividend to only cumulative distributable earnings (Ashanu, Abiola and Bhadmus, 2012).

2.3.5 The Tax Preference Theory

The tax preference theory recognized that there are three tax – related reasons for investors preferring a low dividend payout to a high pay out.

- (i) Capital gains are taxed at a lower rate than dividend income, in most jurisdictions.
- (ii) Taxes are not paid on capital gains until the share is sold, and
- (iii) If a share is held until death of the holder, no capital gain tax is due at all. This is because the beneficiaries who inherit the shares can use their value on the date of death as their cost basis and hence avoid capital gains tax.

In a world of taxes, a rational investor (an individual) would have a preference for capital gains over dividends, since capital gains are taxed at the preferred rate. According to this theory, shareholders trade off the benefits of dividend against the tax loss (i.e. the tax on dividends). Shareholders in high tax brackets may prefer capital gains over current dividends because capital gains tax is less than the tax on dividends, and payable only when the shares are actually sold (Pandey, 2010). On the other hand, shareholders in the low-tax bracket prefer high-payout shares (Emekekwue, 2005), while tax-exempt investors will be indifferent between dividends and capital gains.

2.3.6 The Black-Scholes Theory

Black and Scholes classified shareholders into three clienteles, based on the trade-offs they make: (i) a clientele that considers dividends are always good, (ii) a clientele that considers dividends are always bad and (iii) a clientele that is indifferent to dividends. All three clienteles exist in the real world (and in the Nigerian stock Market) as tax status and need for current incomes of investors differ and companies "supply" dividends to meet the demands of the three clienteles. According to this hypothesis, since the supply of dividends and the demand for dividends coincide, there will be no gains if a firm changes its dividend policy. This is because the investors have either already made their choices or there already exist opportunities for shareholders to shift from one firm to another. That is, the Black-Scholes hypothesis holds that the tax disadvantages of dividends is not so great as made out by some corporate finance theorists (Pandey, 2010). The Black-Scholes Theory combines portfolios rather than individual securities to overcome the measurement error problem that led to biased estimates of the securities market line (SML). Combining securities into portfolios diversifies away most of the firm-specific part of returns, thereby enhancing the precision of the estimates of beta and the expected rate of return of the portfolio of securities (Bodie, Kane and Marcus, 1999). This mitigates the statistical problems of measurement error in the beta estimates. Theory assumes that both the risk-free interest rate and the stock price volatility are constant over the life of the option. The theory led to the option-pricing formula to value a call option that uses stock prices, the exercise price, the risk free interest rate, the time to maturity, and the standard deviation of the stock return (Rose, Westerfield and Jaffe, 1996) as follows:

$$C_{0} = S_{0} N(d_{1}) - Xe^{-rT} N(d2)$$

$$\frac{d_{1} = In(S_{0} / \times) + (r + 6^{2} / 2) T}{\sigma \sqrt{T}}$$

$$d_{2} = d_{1} - \sqrt[\sigma]{T}$$

And whore

Where

| Anu wi | lere | |
|--------|------|--|
| Co | = | Current call option value |
| So | = | Current stock price |
| N(d) | = | The probability that a random draw from a standard |
| | | normal distribution will be less than d |
| х | = | Exercise price |
| e | = | 2.71828, The base of the natural log function. |
| r | = | Risk-free interest rate |
| Т | = | Time to maturity of option, in years |
| | | |

In = Natural logarithm function

$$\sigma$$
 = Standard deviation of the ar

The assumptions of this model are as follows:

- (i) The call option is exercisable only on the expiration dates
- (ii) It is possible to borrow any fraction of the price of a security to buy it or to hold it at the shortterm interest rate
- (iii) The stock price is continuous and is distributed lognormally
- (iv) There are no transaction costs and taxes
- (v) There are no restrictions on or penalties for short selling
- (vi) The stock pays no dividend
- (vii) The risk-free interest rate is known and constant (Chandra, 2005).

3.0 Discussion of the Theory Suitable to the Nigerian Stock Market

Olowe (2008) argued that, dividends resolve uncertainty in the minds of investors and as such they prefer dividends now than in the future. This is more desired in Nigeria where there is high uncertainty about the future course of economic indices (i.e. potential variability of earnings caused by the nature and type of business operations, policy summersaults, etc). Thus, the dividend relevancy theory, particularly the bird – in-the-hand variant is most applicable in Nigeria, as uncertainty about the future increases and with a lethargic market. According to Salaudeen (2012), the value of the Nigerian economic measuring unit continues to change due to inflation, as a result of the instability of the economic, financial and political environments.

4.0 Conclusion/Managerial Implications

The paper outlined the various theories guiding the operations of Stock markets and the behaviour of stakeholders operating in such markets. In the face of globalization, the Nigerian economy, and least its stock market cannot be isolated from the pervading pressure from such theories and postulations. Taking a desk review of the theories, the paper presents that some of them are clearly relevant and informing shareholder behaviour and corporate managements' relationship with them. We also find that the effects of external finance on innovation depend on the institutional environment in which firms operate. In particular, the quality of political institutions appears to moderate the asymmetric information problem between firms and potential investors. Policy implications point to the importance of efficient financial markets and institutions that potentially reduce information asymmetries between investors and innovators.

References

- Aharoni J. & Swary, I. (1980). Quarterly dividend and earnings announcements and stockholders' returns: An empirical analysis. *Journal of Finance, March, 1(1), 1 -11.*
- Akinsulire, O(2006). Financial management. Lagos: Zinol Nigeria Limited
- Akpan, I. (2009). Fundamentals of finance (3rd ed.). Uyo: Abaam Publishing Co.
- Ashanu, S. O., Abiola, J. O., & Bhadmus, S. O. (2012). Dividend policy as strategic tool of financing in public firms: Evidence from Nigeria. *European Scientific Journal.* May,8(9), 1-24.
- Black, F. & Scholes, M. (1973). The Pricing of options and corporate liabilities. *Journal o Political economy. May – June, 125-144.*

Brealey, R. A. & Myers, S. C. (1996). Principles of corporate finance. New York: McGraw Hill Companies, Inc.

Brittain, J. A. (1964). The tax structure and corporate dividend policy. *American Economic Review*, May, 272 – 287.

Bodie, Z., Kane, A. & Marcus, A. J. (1999). Investments (4th ed.) New York: Irwin McGraw Hill.

Chandra, P. (2005). Investment Analysis and Portfolio Management (2nded.). New Delhi: Tata McGraw - Hill

- Charest, G. (1978). Dividend information, stock returns and market efficiency II. *Journal of Financial Economics.* 297 – 330
- Chartered Institute of Bankers (1990). Introduction to Corporate finance. Peter R. Davies (ed). London: Bankers Books Ltd.
- Corrado, C.J. & Jordan, B.D (2002). *The fundamentals of investments valuations and management, 2nd Edition*. New York: McGraw Hill Companies Inc.
- Dunmade, A. A. (2013). *Investment Analysis and portfolio management, vol.1: An in-depth study of financial investment decisions.* Lagos: Elite Trust Ltd.
- Emekekwue, P. (2005). Corporate financial management. Kinshasha: African Bureau of Educational Services
- Fama, E. (1978). The effect of a firm's investment and financing decisions on the welfare of its security Holders. *American Economic Review*, June. 272 284.
- Groppeli A. A. & Nikbakht, E. (2006). Finance (5th ed.) New York: Barron's Educational Series, Inc.
- Hobeika, L. G. (1980). Dividend Policy. *Unpublished docotoral dissertation*. University of Pennsylvania, Department of Economics, Philadelplia.
- Khoury, S. J. (1983). *Investment Management: Theory and Application*. New York: Macmillan Publishing Co., Inc.
- Koemiadi, H. & Tourani Rad, A. (2008). The role of accruals as a signal in earnings an dividend announcements: NZ evidence. 21st Australian Finance and Banking Conference Paper, August. Available at SSRN: http://ssrn.arn/abstract=1252202
- Maimako, S. S. & Oladele, K. O. (2013). Value creation in the Nigerian Banking Industry. *ICAN Journal of Accounting and Finance*, *2* (1), 45 64.
- Mbat, D. O. (2011). *Topical issues in finance*. Calabar: University of Calabar Press.
- Modigliani, F. & Miller, M. (1961). Dividdend policy, growth and the valuation of shares *Journal of finance, October*, 34, 411 433.
- Nalado, G & Mohammed, G (2000). An investigation into the stock price behaviour in the Nigerian Stock market. Retrieved from http://hdlhandle:net/123456789/630
- Olowe, A. (2008). *Financial Management: Concepts, financial system and Business finance.* Lagos: Brierly Jones Nigeria Ltd.
- Omolehinwa, A. (2006). *Work out strategic financial management (Notes, worked examples & cases).* Ikeja Lagos: Cleo International
- Pandey, I. M. (2010). Financial management (10th ed.). New Delhi: Vikas Publishing House PVT Ltd.
- Petitt, E. R. (1972). Dividend Announcements: Security performance and capital market efficiency. *Journal of Finance*, December, 993 1007.

Rose, S. A., Westerfield, R. W. & Jaffe, J. (1996). Corp[orate finance, 4th ed. New York: Irwin/McGraw-Hill.

- Salaudeen, T. M. (2012). Modelling an inflation Accounting system for listed firms in Nigeria. *ICAN Journal of Accounting and Finance (IJAF)* October, 1 (4), 11 -21.
- Suthar, A.B., Patel, A. B., Parikh, S. M. (2012). A Comparative Study on Financial Stock Market Prediction Models. *The International Journal of Engineering and Science (IJES)*, 1(2), 188-191.
- Udoka, C.O. & Anyingang, R. A. (2013). Stock price volatility and its effect on the Nigerian stock market (1980-2009). *International Journal of Management 30* (1) 127-142
- Udoka, C.O. & Anyingang, R. A. (2014). Operational efficiency of the Nigerian stock market(1986 2010). *International Journal of Finance and Banking Studies*. 3(1), 173 185.

Watts, R. (1973). The information content of dividends. Journal of Business, April. 191-211.