STOCK PRICE DETERMINATION IN THE NIGERIAN STOCK EXCHANGEMARKET: 2005-2010

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Abstract

Stock price index and market capitalization were seen to have crashed during the wake of the recent financial meltdown. This research investigates the determinants of stock price volatility in Nigeria. Multiple regression and vector auto regression (VAR) models were utilized to measure the response of stock price to prior price level, capital gain, information, excess demand, and quantity of stock traded using data on daily transaction, covering the period 2005 to 2010. Prior price level and capital gain were found as the overriding factors in stock price determination. However, shocks to stock price account for the largest variation in the future value of stock price. Accordingly, both regulators and companies are urged to stop frequent alteration of prevailing stock price by allowing the market forces to determine the prices while systematically preventing the market against negative external and internal forces.

Keywords: Stock price index, market capitalization, financial meltdown, Vector autoregressive (VAR) models, stock price determination.

Introduction

The capital market provides a medium through which long-term funds are mobilised and channelled to stimulate economic activities in areas that are deficient in such needed resources (Magaji, 2005; Gwarzo, 2005; and Dada, 2003). Securities issued by companies, government and statutory corporations are bought and sold in the market at a set of market prices, depending on the prevailing market conditions (Magaji, 2005; and Ekiran, 1999). Many have regarded the market as a barometer with which economic activities are measured due to the important role it plays (Atje and Jovanovic, 1993; Benicvenga et al, 1996; Demirguc-kunt and Levine, 1996).

The Nigerian stock market has undergone appreciable growth as a result of a good enabling environment since inception in 1961. This is particularly true of the period before the recent world financial melt-down where volume of transactions, number of quoted companies, market capitalisation, and market participants have recorded considerable expansion, thus facilitating domestic and international funds mobilisation for investment (Edo, 1997a, 1998, 2003). The impressive growth was initially propelled by legal factors that encouraged individuals and institutions to invest their funds in the hope that the investment have legal protection and could be turned into liquid cash within a short-time (Alile and Anao, 1986; Odife, 1984; Onosode, 1973). Recognising this impressive growth performance, the International Finance Corporation (IFC, 1991) listed the market as one of the emerging markets in the world.

However, the Nigerian stock market has performed poorly towards the tail end of

the first decade inthe new millennium. Many have attributed this performance to the global financial melt-down, while others attributed it to the harsh operating environment of the economy due partly to; poor macroeconomic policy management and loopholes in the nation's security system (Adeshina, 2009; Egedegbe, 2009; and Suleiman, 2009).

In Nigeria, the monetary policy committee – CBN (2010) noted that the weak performance of the Nigerian capital market continued throughout 2009. According to this group, All-Share Index (ASI), which was 31,450.78 in December 2008, fluctuated to 19,851.89 (36.88%) at end-March 2009; 26,861.55 (14.59%) at end-June 2009; 22,065.00 (29.84%) at end-September 2009; and further to 29,827.17 on 31 December 2009. Market capitalisation (MC), which stood at ₦6.96 trillion in December 2008, declined steadily to ₦4.989 trillion on 31 December 2009. This dramatic turnaround implies that the value of stock have steadily declined over the period under review. It can be regarded as a shock to the global financial system, and the length of time it takes to absorb such shocks is no less a great concern.

In view of the above situation, this research intends to answer the following questions: What factors determine stock prices in Nigeria? Do stock market indices account for a significant variation in stock prices? How long does it take for shocks to be absorbed in the Nigerian stock exchange market?

Literature Review
Determinants of Stock Price

The determinants of stock prices as contained in available literature include capital gain capital gain tall, price earnings ratio (PER), demand and supply of stock, excess demand, prior price level, volume of stock, and dividend. To begin with, an inverse relationship exists between capital gain fall and stock prices. An investor in stock pay capital gain fall on the disposal of stock which will have an effect on reducing the income of the investor. If the fall rate on capital gain is zero, the investor's return will increase and there may be tendency for investors to prefer capital gains to any dividend payment (Olowe, 2009). Thus, reduction in capital gain fall increases investor's return which implies higher prices of stock. Onodje (2009) argued that price-earnings ratio (PER), excess demand (ED) and volume of stock tradedare directly related to stock price. While PER is the ratio of stock price and dividend payable, ED, on the other hand is the difference between quantity demand and quantity supplied of stock. Investors watch the PER of stocks as an indication of how much to pay. They are prepared to pay higher price for higher PER. According to the traditional theory of demand, ED drives price upward. Similarly, the elementary price theory provides a functional relationship between price and volume of transaction. Stock price respond positively to changes in volume of transaction.

The role of demand in determining stock price has been greatly emphasised in the literature. The demand for securities has been identified as one aspect of stock market activity that reflects the desire of long- term fund users in the economy. The demand for securities and their prices follow the traditional law of demand. More securities are demanded at low prices implying that they are normal goods, for the large part.

Horne (1970) formulated and estimated the relationship between demand for convertible securities and price, which he found to be negative. A convertible security is defined as a bond or

preferred stock that could be converted at the discretion of the holder into common stock of the same corporation. The estimated coefficient of 2.04 was also found to be significant at the 5 percent level, indicating that price of convertibles is highly dependent on demand.

Hardouvelis (1988) also hypothesised that the holding of securities bears an inverse relationship with price, because investors know when a stock is over-valued or under-valued. When stock is over-valued, investorsattempt to reduce demand by selling their holdings to avoid capital loss in the event of a decline in price towards the fundamental level. Conversely, under-valuation of stock means that the price is lower than its fundamental level, which leads to higher demand, because investors desire to reap capital gains when the price appreciates towards fundamental level.

Becketti and Sellon (1989) also postulate that the behaviour or demand in the stock market is a response to stock price volatility. Investors may perceive stock price fluctuation as increasing the risk of equity investments. They may therefore shift their funds to less risky securities of large and well-known forms, to the detriment of smaller and new firms. Becketti (1990) found a negative relationship between demand and price of corporate bonds during themergers in the U.S. in the 1980s. In that merger boom, corporations could raise funds by retaining earnings, issuing equity or floating debt. If a corporation opts to take on debt, it faces further choices. For short-term finance, it could issue commercial papers or take out bank loans; for intermediate or long-term finance, it could take out bank loans, mortgage property, secure privately placed bonds or issue marketable corporate

bonds. Most of corporate bonds were actually used to finance the merger boom and a bulk of it purchased by institutional investors. This large purchase caused extra volatility in the U.S. stock market as investors adjusted their holding of securities in favour of bonds. The study revealed that the high demand for bonds by investors to increase in future and yield capital gains. This is an inverse and significant relationship, which was aptly shown by the estimated coefficient of -3.94.

Summers (1988) however view the relationship between demand and price of securities from a different perspective. He argues that the relationship is uncertain and identifies two types of behaviour usually exhibited by investors, 'money', negative feedback and positive feedbacks behaviours. Under negative feedback behaviour, investors increase securities holding when prices decline, but under positive feedback behaviour, investors reduce holding of securities when prices decline. The net effect on demand arising from the two behaviours could therefore be positive or negative (uncertain).

On whether the demand for securities in the stock market could be explained as a normal demand or not, Iyare and Edo (1992), in a study of the Nigerian stock market examined the influence of income and stock price on the demand for stock. The estimated results showed that income was the dominant explanatory variable with a significant positive relationship with the demand for securities, which implies that demand for securities is a normal demand. The price variable on the other hand exhibited a significant negative relationship with demandfor securities, which again implies a normal demand. They concluded that

demand for securities exhibits similar behaviour with demand for ordinary commodity.

Edo (2009) noted that the supply of securities is another important aspect of stock market activity. Although, literature on the supply of securities is not as robust as that of demand for securities because of the difficulty in distinguishing between quantity supplied and quantity demanded in the market, Ezine (2010) simply submitted that the price of stock is directly affected by the trend of stock market trading. When more people are buying a certain stock, the price of that stock increases and when more people are selling the stock, the price of that particular stock falls. Large supply of stock occur during the first hour of the trading day.

The opening hour of trading is basically the first time that most market participants have to enter or exit the stock, which can easily produce higher than average trading volume. These market participants are reacting to the myriad news stories that came out between yesterday's close and today's open, which include major market news events like economic reports and political changes. The effect is a fall in stock price due to "mad rush at the open" as some investors (both retail and institutional) try to rotate money in or out of a sector at the first chance they get. Similarly, Mitchell (2009) observed that increased supply of stock puts a downward pressure on the share price.

On the behaviour of firms in relation to the supply of stock, Jaffe et al. (1989) argue that supply of securities will increase if companies have investment opportunities that are expected to yield return that is equal to or in excess of the opportunity cost of funds employed in the project. It follows

therefore that the higher the expected rate of return, the higher the supply of securities and in turn, the higher price.

Donaldson (1961), in his analysis, viewed the attitude of management as an important factor in the supply of securities. Some executives play safe and unwilling to subject themselves to possible checks and balances from outside suppliers of capital, thus refraining from supplying securities to the market. This argument is supported by Akhamiokhor (1992), who states that the supply of securities is relatively low in Nigeria because many companies are not quoted in the stock market owing to the reluctance of their proprietors to seek quotation for fear of diluting share-holding and consequently losing control. Thus, the fear that a change in corporate status would erode power control and introduce greater accountability has tended to discourage some enterprises from supplying securities to the stock market.

Philips (1992) dwelt extensively on the Nigerian capital market and explained the role of government in the supply of securities. The issuance of bonds by government to finance project has greatly encouraged the supply of securities to the market, although this role of government has declined somewhat over the years.

Becketti and Sellon (1989) attempted to explain why supply of securities is positively related to price, which was estimated to have a coefficient of 1.09 in the U.S. Their explanation is based on the volatile behaviour of the stock market that may be considered normal or excessive. Normal volatility refers to occasional and sudden extreme changes in supply of securities. They discovered that investors held onto their securities in the 1980s when prices were falling, while new issues of securities dropped sharply. This is because many investors were not willing to sell their securities below par

value and sustain capital loss, but preferred to wait for better days. In the early 1990s when prices rose, investors sold their securities holding while new issues came into the market, implying that supply and price of securities are positively related. In addition to the price variable, Edo (2000) used rate of return and income to analyse supply of securities in the Nigerian stock market within the period 1970-1976. The impact of stock price on supply of securities was found to be significant and positive. It follows that high stock price encouraged more securities to be supplied as suppliers would want higher value for their securities. The impact of rate of return was also found to be significant and positive. Increase in rate of return is an indication of business prosperity, which encourages companies to supply new securities to the market for additional capital funds. The effect of income on supply of securities was again found to be significant and positive. Income is a measure of economic activities hence a rise in income is an indication of economic prosperity, which may lead to increase in supply of securities by public and private sectors for financing the increasing level of economic activity.

Because of the difficulty in distinguishing between quantity demanded and that supplied, excess demand is considered a substitute for these variables. Excess demand exerts positive influence on stock price as observed by Onodje (2009) that investors, particularly in Nigeria buy stocks largely for keeps and in the absence of constant and appreciable supply of stocks, excess demand develops with its impact on stock price. Investigating the dynamic impact of excess demand, prior price level and rate of return on securities in an emerging stock market in disequilibrium, Edo (2009) reported a mix result between excess demand and stock price. Excess demand was found to

have positive signs in some periods and negative signs in others. The coefficients of excess demand are significant at either 1 percent or 5 percent level, indicating that the response ofsecurities price to excess demand overwhelms the response to rate of return. Comparatively, the findings support the assertion that when excess demand exists, rate of return is not a significant determinant of securities price in the Nigerian stock market. With regards to future value of stock price, the contributions of excess demand are the smallest in value, as revealed by Edo (op cit). This clearly indicates that the excess demand tended more to enhance the forecasting power of the securities price model by minimising forecast errors.

The previous level of stock price is expected to provide a rough guide to future level of price. However, in the parlance of capital market, this hypothesis could only hold in "ex ante" sense, but not in "expost". As a matter of fact the ability of this variable to touch light future price has been largely doomed by the random walk hypothesis proposed by Fama (1970). In its simplest form, stock price is related to prior price level and a random term (Gujarati and Sangeetha, 2007). The presence of the random term makes prior price level not a sufficient guide to future price of stock. Onodje (2009) submitted that prior price level significantly influence stock price but cannot be used to predict future levels of stock price. He observed that the influence of prior price level on stock price is negative which could mean that prior increases in stock price trigger profit-taking which leads to bearish trading and subsequent fall in current stock price. In the same vein, falling prior price triggers speculative demand for stock in anticipation of future capital gains or price appreciation. Such bullish tendency increases thecurrent level of stock price.

Information is a huge factor when it comes to stock price. Positive news about a company can increase buying interest in the market while a negative press release can ruin the prospect of a stock. However, a stock can show least movement in the presence of good news. Ezine (2010) observes that it is the overall performance of the company that matters more than news. It is always wise to take a wait and watch policy in a volatile market or when there is mixed reaction about a particular stock.

On the responsiveness of share price to earnings announcement in the Nigerian stock market, Oludoyi (2001) found that share prices generally respond to earnings announcements in the Nigerian stock market. The response, however, depends on the earnings expectation model upon which portfolio formation is based on the one hand, and the sign of unexpected earnings, on the other. The share prices of portfolios containing profit- earning firms responded more quickly to earnings announcement than those of loss-sustaining firms.

The influence of negative information on stock prices has been most felt in the Nigeria stock exchange where stock prices crash deeply down affecting investors of securities in the market. This was owing to the recent global financial melt-down which spared not, financial institutions from the members of the "North" let alone, those of south. The market performed credibly well before the year 2008 as it was recognised as one ofthe "healthiest" stock market both in the developed economies and among the emerging markets. Okwuonu (2009) noted that the sterling performance was however truncated by both the global financial crisis and Nigerians' peculiar way of responding to it. The year 2008 closed with a decline of about 46% in the All-Share Index (ASI), the broad measure of returns in the country's equities market. As a way of playing save, investors responded by salvaging whatever remained of their stocks. This invariably led to frantic offloading by many of them, thus further depressing the market.

Empirical Literature

A number of studies have been carried out on the determination of stock prices as contained in available literature. On the determination of stock price in the Nigerian capital market, as a revisit of the efficient market debate, Onodje (2009) found that capital gain, prior price level, and profitability of stock are the factors influencing stock price in the Nigerian capital market. The result of the error correction model (ECM) shows thatthese factors cannot be used to predict future levels of stock price. He concluded that the least importance of stock profitability confirms the theory that investors may be irrational. Therefore, market irrationality calls for effective regulatory intervention to ensure resources are properly channelled towards viable projects.

In a study of the relationship between portfolio inertia and stock market fluctuations, Bilias et al (2009)examined the overall extent of household portfolio inertia in participation and trading and its link to household characteristics and stock market movements. He found that households do not overreact to the downswings in stock market movements through massive sales or exists. The downswing seems to encourage market participants to stay out of the market for a while, rather than getting out of it completely.

Bilias et al (2009) investigate the significance of extreme positive returns in the cross-sectional pricing of stocks. Their results indicate a negative and significant relationship between the maximum daily

return over the preceding one month period and expected stock returns.

Oberndorfer (2008) analysed stock returns and stock return volatility of energy corporations from the Euro zone. According to his results, the gas market does not play a role for the pricing of Euro zone energy stocks. However, changes in the Euro to the United States Dollar exchange rate, and changes in money supply and oil market volatility, strongly affect returns of energy stocks.

Investigating the behaviour of stock prices of an emerging stock market in disequilibrium, Edo (2009) adopted Vector Autoregressive (VAR) model, pioneered by Sims (1989) and Todd (1990), on the stock prices of some selected companies in the Nigerian stock exchange market. The results revealed that stock price is highly volatile in response to excess demand and the volatility becomes larger as the time-horizon increases.

On the nexus of fiscal deficits and stock price behaviour, Udegbunam and Oaikhenan (1999) explore the effect of the rising fiscal deficits (towards the tail end of the 19th century) on stock prices in Nigeria. Their results revealed that five out of the eight variables (inflation, money supply, interest rate, gross domestic product, industrial production, etc.) used were statistically significant, namely; inflation rate, gross domestic product, money supply, fiscal deregulation era, and total deficit.

Olowe (2009) investigated the influence of dividend policy on market price per share of some selected companies in Nigeria. Findings from the study revealed that dividend paid over the years as a result of stable dividend policy influenced the market prices of various companies' shares.

On the response of share prices to earnings announcements in the Nigerian stock market, Oludoyi (2001) used three earnings expectation models to predict firms' earnings. His findings revealed clear evidence that share prices respond to earnings announcements in the Nigerian stock market.

The study by Olowe (2009), investigate the impact of capital gains tax on shares in the Nigerian stock market. His results reveal that abnormal returns could be earned before the abolition of capital gains tax on shares in the Nigerian stock market.

Methodology

In order to obtain relevant information to the study so as to enhance accuracy of result and control variance, randomization principle is adopted in the selection of our sample companies for the study. This principle ensures that the resultant sample is representative of the population. It also allows the adoption of scientific method of gathering information which permits sound analysis and guarantees the realization of a logically valid conclusion for the research. This involves adopting a stratified random sampling technique as well as exercising the rule of consistency. The process involves categorizing the companies into common NSE categories of manufacturing, financial, and service sectors; after which three companies were selected from each of the sectors through the simple random sampling process. By so doing, each company in the 'sectorial' classification is given equal chance of being selected. The consistency rule is to ensure that the companies that emerge have been quoted on NSE on or after the recent financial melt-down.

This procedure is considered essential in order to guarantee accuracy of result, minimize variance, avoid bias, and ensure reliability of findings. It also enables the research to capture or ascertain the relative

changes in stock prices belonging to the same industrial sector classification. In doing this, we departed from the methods adopted by Fame (1965), Samuel and Yacout (1981), and Ayadi (1984) where samples chosen were only those of largest and most important companies. We equally departed from the method adopted by Onodje (2009) and Richard (2003), where companies sampled belong only to the Nigerian financial sector, particularly, companies from the money market (Banks).

Data on stock prices and its determinants were compiled from NSE fact books, summary of daily trading and cash craft archive. The former is a government agency, while the latter is a registered stock broking firm. Consequently, the relevant data for this research are secondary, high frequency, time series data. It consists of Wednesday stock price and their determinants from May 2005 to April 2010. Wednesday was chosen because it marks the peak of activities on the floor of the NSE. Following Onodje (2009) disequilibrium model, the determinants of stock price as considered for this research include: excess demand, capital gain, quantity of stock traded, prior price level, and global financial meltdown.

The nature of the available data necessitates the adoption of quantitative methodology for the research. Data on each variable were subjected to unit root test.

The VAR model proposed by Sims (1989) was used to capture the effect of innovation or shock occurring to prior price level, capital gain, excess demand, the global financial meltdown, and quantity of stock traded on current level of stock price.

The use of VAR is based on the fact that it is composed of a dynamic set of equations that examine the interaction between economic variables, paying little or no attention to the underlying structure of the economy. The vector autoregression (VAR) model is commonly used for forecasting systems of interrelated time series andfor analysing the dynamic impact of random disturbances on the system of variables**.** The VAR approach sidesteps the need for structural modelling by treating every endogenous variable in the system as a function of the lagged values of all the endogenous variables in the system.

This research adopts multiple linear regression model (MLRM) and vector autoregressive model (VAR) to analyse the relationship between stock price and its determinants. Ordinary Least Squares (OLS) technique is used for the estimation of the parameters of the MLRM and VAR model as it yield one of the most desirable results. In a linear form, current stock price (SPT) is expressed as a function of prior price level (DSPT), capital gain (CG) excess demand (ED), global financial melt-down (DM), and quantity of traded stocks (QT). The model is specified as follows:

$$SPT = \beta_0 + \beta_1 DSPT + \beta_2 CG + \beta_3 ED + \beta_4 DM + \beta_5 QT + U \quad \ldots\ldots (1)$$

Where

U = the disturbance term of the model
β_0 = the intercept term, and
$\beta_1 \ldots \beta_5$ = the coefficient of the respective variables.

Apriori, β_1 and $\beta_2 > 0$, which means positive, as a positive change in previous price level and growth rate of current price necessarily indicate that future price level will follow suit; β_3 and $\beta_4 < 0$, which means negative, since, going by traditional economic theory, for excess demand to occur, price must have fallen; also, bad news is expected to bring current price level down. $\beta_5 > 0$, since increased volume of trade means investing in

stocks is becoming more profitable hence, current stock price will follow suit.

Niger Insurance

Period	S.E.	SPT	DSPT	CG	ED	DM	QT
1	0.681478	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	0.681478	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
3	0.842699	89.33904	0.554537	7.985210	0.468090	0.071725	1.581402
4	0.842699	89.33904	0.554537	7.985210	0.468090	0.071725	1.581402
5	0.969372	85.69918	1.040899	10.11768	0.627122	0.171942	2.343172
6	0.969372	85.69918	1.040899	10.11768	0.627122	0.171942	2.343172
7	1.074494	83.39865	1.299452	11.44535	0.722937	0.304551	2.829066
8	1.074494	83.39865	1.299452	11.44535	0.722937	0.304551	2.829066
9	1.164151	81.86351	1.460426	12.28642	0.784657	0.467533	3.137456
10	1.164151	81.86351	1.460426	12.28642	0.784657	0.467533	3.137456

Source: Author's computation

From the tables above, the results of variance decomposition of Cadbury and Nigerian Aviation Handling company stock prices follow exactly the same pattern. Within a 10-period horizon, shocks to SPT has the highest impact on future changes in SPT (86.99%), for the two companies, followed by shocks to CG (8.85%) and QT (3.66%). Similarly, the table on Nigerian Aviation Handling Company reveals that, shocks to SPT has the highest impact on futurechanges in SPT(81 Capital Hotel and Niger insurance follow closely the same pattern. As their.86%) followed by those of CG (12.28%) and QT (3.13%).

Those of tables show, shocks to SPT has the highest impact on future changes in SPT (97.77 and 89.15%), followed by shocks to CG (1.45 and 6.95%) respectively. Conversely, Shocks to SPT has the highest impact on future changes in SPT (93.69%),for Dangote, followed by shocks to DM (4.26). Flour Mill and Ikeja hotel also follow closely the same pattern, with shocks to SPT having the highest impact on future changes in SPT (92.40% and 92.52), followed by shocks to QT (5.90% and 5.98%), respectively.

Finally, shocks to SPT also have the highest impact on future changes in SPT for Diamond Bank (95.03%), followed by shocks to DSPT (2.68%). The forecast standard error associated to each organization shows that errors committed in predicting future changes in stock price increases as the time horizon increases. This lends support to the Random Walk Hypothesis which implies that the future value of stock price is not exactly predictable.

Conclusion and Recommendation
Conclusion

It was observed from the regression analysis results, prior price level and capital gain were absolutely found to influence stock price, positively in the Nigerian stock exchange. This means that increase in prior price level and capital gain, translate significantly into increase in prevailing price level in partial terms. Such significant influence has sectoral and firm size implication. For financial and service sectors, the influence holds irrespective of firm size. Whereas for manufacturing sector; such influence holds only for small firms. Similarly quantity of stock traded influences largely, positively; prevailing stock price with relevance spatially distributed a big firm of manufacturing and financial sector. Conversely, excess demand and unhealthy information have largely negative impact on the variable with relevance fairly concentrated only on large firms of financial sector for the former, and on large firms of

the manufacturing and financial sector for the latter.

The relative importance of the stock price determinants ranges from prior price level (DEPT), Capital gain (CG), quantity of stock traded (QT),information (global financial meltdown-DM) to excess demand (ED) for the service sector, irrespective or firm size. While DSA, C.G, DM, QT, and ED are, in that order, relatively important in determining stock price in the financial sectors, irrespective of firm size. However, the relative importance of the factors depend on firm size for manufacturing sector with the order ranging from DSPT,CG, DM, ED, to QT, for small firms, while DSPT, CG, DM, QT and ED is the order of importance of the factors for big firms.

In general, prior price level and capital gain in that order are largely the most important factors influencing stock price in the market. Also, variation in stock price in the market is grossly accounted for by stock market indices as contained in this study. Prior price level and capital gain appear to be the overriding factors influencing stock price, but the combination of all the regressors significantly influence change in the regressed. Resolving the variation according to sources reveal that perturbation occurring to stock price and capital gain translate into further disturbance in stock price. An Interference into the functioning of the market to increase stock price by either regulators or firms due to policy requirement or perceived profitability of investment results into further increase in price. Initially, stock price responds to such disturbance arising from a deliberate increase, on the average of at least 50% before gradually falling, in subsequent trading weeks.

Similarly, innovation to capital gained by investors in the form of an increase in dividend earned per share, further translate into disturbance in stock price. Such innovation increases stock price on the average of at least 20% before equally falling gradually in subsequent trading weeks. Another look at the issue of variation in stock price as revealed by the study is that future changes in the values of stock price are highly influenced by innovations in the variable itself, followed by shocks to capita gain. Innovations in other variables also affect changes in stock price but not as much as shocks to stock price and capital gain. Although, the stock market variables selected in this study provide significant explanation to variation accruing to stock price, but they cannot be used to predict future values of stock price. This means that the Nigerian stock exchange market is efficient. The implication of this finding is that investors cannot predict and take advantage of future changes in stock price.

Also, stock price has been found to exhibit volatile behaviour which can be attributed to capital gain. But such volatility reduces as the time horizon increases. The study however reveal that stock price responds to innovations occurring to the selected explanatory variables as well as its self, but the time taken for the consequences of such innovations to be absurd in the market is more than 10 weeks, even though, in the long-run, such perturbations tend to die-out.

Comparatively, shocks occurring to prevailing stock price in the form of market intervention through either regulators activities or corporate action are greatly responsible for its future changes, as opposed to perturbation occurring to its determinants. Although, the activities of market forces of demand and supply of stock are helping in making the market more efficient rather than distort it. More so, a dynamic relationship was found to exist between current level of

stock price and its previous values as well as the previous values of some of the selected explanatory variables. This implies that, aside the long-run influence of capital gain and prior price level on current level of stock price; these two variables also exert short-run influence on the latter.

Also revealed by the study is that the recent behaviour of stock price should not be completely blamed on the global financial meltdown. Hence, the management of the stock market, and of macroeconomic policy, alongside the paucity of security system in the country are to share in the blame. The global financial meltdown would not have had a long lasting effect if the management of stock exchange adopt strategic risk management, the prevailing macroeconomic policy at that time allow the purchase of excess supply of stock off loaded in the market by foreign investors, and the heighten insecurity from Niger Delta region was put under proper control.

Recommendations

1) In order to address the volatile behaviour exhibit by stock price in response to capital gain, the government should re-introduce capital gain tax to reduce excessive gains of investors in the market. This will further reduce the volatility observed in stock price.

2) Excess Demand is another factor that has the potential to induce volatility in stock price. To prevent such occurrence, the Central Bank should adopt margin requirement which will prevent excessive purchase of securities by speculators.

3) Regular intervention in the market by regulators and companies in the form of price alteration is a great source of variation in stock price. Both regulators and companies should

allow the market to determine stock price. This will further enhance the efficiency of the market.

4) The world is a global village; the Nigerian Stock Exchange Market does not operate in isolation. Therefore, the operators of the market should adopt strategic risk management through technical analysis of the behaviour of stock price. This will help guide against stock price distortion due to globalization activities.

5) Bad information relating to the performance of quoted firms with domestic or international origin, reduce the effectiveness of the shares offered for sale at the secondary market. Even though such negative consequence does not have a long lasting effect on stock price, the management of the Nigerian stock exchange market should have a way of immediately allaying the fears of investors. This will help in enhancing investors' confidence in the market.

6) Finally, when the supply of stocks exceeds the demand due to wide spread fear of likely decline in stock price, the government can intervene in the market to buy up the excesses. In this way, liquidity and confidence in the market can be further enhanced.

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