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Survey of share pricing securities in some selected commercial banks in Nigeria

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Abstract

The study surveyed share pricing securities in some selected commercial banks in Nigeria. As a survey research design study using ordinary least square method of multiple regressions to analyze the trends in commercial banks in Lagos State, instrument used to collect data was secondary in nature and in time series of twenty (20) years from 1988 to 2007. Two research hypotheses were raised and analyzed through linear regression and Durbin Watson's statistical analysis. Findings showed correlation co-efficient (R) equals to 0.307 which depicts that the level of correlation coefficient between the commercial banks' profit and All Share Index of the industry during the period under review (1988 to 2007) with Durbin Watson (DW) test of commercial banks as 1.054 showing that there is evidence of auto correlation between the identified variables. Also, there was correlation co-efficient (R) of bank equal to 0.237 which means there is correlation between the profitability and All Share Index during the period of under review (1988-2007), and the co-efficient of Multiple Determination (R^2) is 0.056 showing that the 'Goodness of fit' between profitability and All share Index is 5.6 percent. It observed that there is relationship between banks profitability on shares and securities pricing in commercial banks. Study confirmed that 13.3 percent correlations exist in first bank and 20 percent in second bank with $R^2 = 0.018$ depicting a 'goodness of fit' of 1.8 percent, showing that only 1.8 percent changes in Dividend Per Share declared at the period could be attributed to Return on Capital Employed (ROCE), and so there is relationship between corporate governance practices on market price of shares and securities in commercial banks. Discussions, conclusion and recommendations to the study were extensively made in the paper.

Keywords: Survey, commercial banks, shares, pricing-securities, roce, asi

Introduction

There are different contributions as far as the history of stock exchange is concerned. Some traced the history to France in the 12th century while some traced it to Roman Empire in the 16th century. History reveals that the practice that have gradually metamorphosed into stock exchange, as it is known today, started from the burgeoning trade in agricultural and other commodities developed in some of the major European centers during the Middle Ages. It was the practice in this trade fairs for traders to gather at a place on appointed days to strike bargains in commodities as trade was frequently conducted on credit terms and with time instruments such as Bills of Exchange and Notes, which came to be in use as evidence of the credit and as an instruments for effecting settlement.

The emerging pattern of the institutional framework for the creation of wealth in free enterprise economics which brought the institution of the Stock Exchange into being in medieval Europe has, throughout the succeeding centuries, continued to support the institution and to justify its existence, ensuring its current placing today as the pivot of the capitalist economic system. Today the institution has sprouted in many countries spanning across the globe. In many of these countries the stock exchange has served to facilitate the accumulation of savings and their efficient channeling into competing productive uses without violating the basic principle of free enterprises or private entrepreneurships.

The tremendous impact which the Stock exchange introduces to the capital formation and investment process, and ultimately to the promotion of individual and national well-being and prosperity, makes it today a vital component of the total strategy for promoting national economic development. It was probably because of these attractions that the emerging Nigerian nation in 1961 subscribed to the establishment of a Stock Exchange in Lagos. Stock Exchange of Nigeria and by Nigerians is called "Nigerian Stock Exchange". Nigerian Stock Exchange (NSE) was established in 1960 as the Lagos Stock Exchange and got legal backing in 1961 when the Federal parliament passed "The Lagos Stock Exchange Act, 1961." It commenced operations with nineteen securities enrolled for trading and by December 1977 its name was changed to "The Nigerian Stock Exchange". Currently, it consists of eight branches and the Head Office, launched in 1961, in Lagos. The eight branches are as follows: Kaduna, 1978; Port Harcourt, 1980; Kano, 1989; Onitsha, February 1990; Ibadan, August 1990; Abuja, October 1999, Yola, April 2002 and Abeokuta, November 2008 with each branch has a trading floor.

The trading system on the NSF is fully automatic as its guiding principle has been the attainment of the Universal motto of "My Word Is My Bond". When the Exchange was opened in 1961, it was expected to make certain vital contributions to national development. The Exchange found itself in an environment that is neither simple nor static because of the conditions under which the stock market traditionally operates are also neither simple nor static. They present varying degrees of complexities.

As at December 31, 1999, there were two hundred and sixty-eight securities made up of fifteen government stocks, fifty-eight industrial Loan (Debenture/Preference stocks) and one hundred and ninety-five Equities (Ordinary Shares) of companies, all with a total market capitalization of approximate N300 billion. On August 18, 2006, The Nigerian Stock Exchange (NSF) had about 282 enrolled companies with a total market capitalization of approximately N4 trillion ($31.5 billion then). As at the close of trading activities on the floor of the Nigerian Stock Exchange on Tuesday, September 30, 2008; equities in 1st tier security market alone were two hundred and three (203) as depicted in table below:

Table 1: Sectors and the number of Equities listed in 1st Tier Security Market

S/N	Sectors	Number	S/N	Sectors	Number
1	Agriculture and Agro-Allied	8	18	Commercial/Services	3
2.	Airline Services	2	19	Computer & Office Equipment	6
3	Automobile and tyres	4	20	Conglomerates	8
4	Aviation	2	21	Construction	6
5	Banking	21	22	Engineering Technology	4
6	Breweries	7	23	Food/Beverages & Tobacco	16
7	Footwear	2	24	Media	1
8	Healthcare	12	25	Mortgage Companies	2
9	Hotel & Tourism	3	26	Other Financial Institutions	6
10	Industrial/Domestic Products	12	27	Packaging	9
11	Inform. Comm. & Telecom.	2	28	Petroleum(Marketing)	8
12	Insurance	29	29	Printing & Publishing	4
13	Leasing	1	30	Real Estate	1
14	Machinery (Marketing)	2	31	Real Estate Investment Trust	1
15	Maritime	1	32	Road Transportation	1
16	Building	7	33	Textiles	4
17	Chemical and Paints	7	34	The Foreign Listings	1
	Grand Total				203

Source: Daily Official List, Tuesday, September 30, 2010.

Price quotation on the Exchange Market is made by members based on specific orders by clients or in certain cases on their independent judgment or assessment of the market. Buying and selling orders are indicated by two prices, e.g. 60k-70k, the lower representing buying interest and the higher a selling interest. It is very common to have only a single quotation in which there is either a buying or selling interest followed by either a plus or minus sign where plus indicating buyers and minus indicating sellers such as 60k+ and/or 60k . The normal is that the independent forces of supply and demand determine the gap between buying and selling quotation but occasionally certain privileged information which are not otherwise available to the investing public may force the established process to be put temporarily in abeyance. However, no Security Exchange worth its reputation would allow prices to be fixed indiscriminately without some amount of monitoring as one of the major duties of stock exchange is to stop insider information that market participants could be used for personal gain.

Stockbrokers perform the role of intermediary between the sellers and buyers of a share on one hand and the Stock Exchange on the other hand. The share price of any company at any given date on the Stock Market is arrived at through technical processes that appear reasonable and fair. Having debated the price movement of security, through logical arguments, stockbrokers react by increasing or stay action on price movement. There may be occasions when price movements may not be unanimous as a result of personal perception and understanding of the corporate data available to stockbrokers. This normally gives room for concessions to be arrived at. "Call-over" system of trading has been in operation since the inception of the NSE until 1998 when "Automatic Trading System" (ATS) was introduced to conform to the trading system of other Stock Exchange in the developed countries.

On the other hand, securities are documentary evidence of ownership or entitlement to claim up the assets of the issuing organization, which may be a business firm, government, or a quasi-government institution. These documentary evidences usually have no fixed or absolute value but are traded on the Stock Exchange at value, which are subjectively determined by those buying and selling them through forces of demand and supply, and through 'real-time online' information that concerns the organization whose shares are being traded. There is certain to be found, at any one

tune and at a certain level of price, some people who would be willing to rush into the ownership of a security just as other persons are eager to get out of it.

A Stock Exchange has many things at the same time. First, it is a place where securities (bonds, stocks and shares) of various types are traded openly and where one could purchase or sell any of such securities relatively ease. It is really a place where the enormous capital which is required to operate the huge industrial and commercial corporation could be raised in such a large amount and at such competitive terms (cost, conditions, length of negotiations and so.).

Conceptual and Empirical Framework on share pricing securities

It has been observed that pricing of securities in the capital market is a mixture of qualitative analysis and forces of demand and supply. Price movements in the Secondary market are determined in the main by the forces of demand and supply. Other factors such as political and economic considerations are far beyond the "day-to-day affair of individual companies". Yohannes and Lulseged (1997) were of the opinion that the usual thing in advanced economic system where efficient capital market conditions exist is that free market forces are usually relied upon to determine rational prices for new securities. He added that the Nigerian Capital Market situation does not operate along such lines for Government intervenes in setting prices for public issues of security. He gave the reasons for such intervention on the part of government as the overt imperfection of the Nigerian Capital Market, and the ignorance of ill-equipped investors to appreciate the technicalities of the market. The pricing of securities, particularly equities in the secondary market in Nigeria, has been a subject of controversy if not of criticism. He explained that criticisms have come not only from senior executives of quoted companies who, at time, perceived that their shares have been undervalued but also from investors generally (both institutional and private), experts in securities pricing, stockbrokers in developed Exchanges, and other keen observers of the Nigerian Capital Market.

A vivid look at price movement in the Nigerian Stock Exchange showed that due to the global market collapse of 1987, it was agreed by members of the International Federation of Stock Exchange and its Security Exchange Commission equivalent that volatility of the market be reduced by limiting the daily movement of prices. While some countries opted for percentage limit ranging from 5% to 10%, Nigeria regulatory institutions chose a limit of 10 Kobo daily (then changed to 20 kobo daily). The push to make Nigeria adopt a percentage limit was finally accepted in 1996.

On the other hand, empirical evidence in support of efficiency is much less than that from developed markets. Fama (1965), using the 30 US companies which make up the Dow Jones industrial index found evidence of dependence in the price changes. Conrad and Juttner (1973) applied parametric and non-parametric tests to daily stock price changes in the German Stock Market. They found that the random walk hypothesis is inappropriate to explain the price changes. With respect to the USA and the UK, the evidence supports the random walk hypothesis but for all other markets, but the random walk hypothesis was rejected. Frennberg and Hansson (1993) examined the random walk hypothesis using Swedish data from 1919 to 1990 when they found that Swedish stock prices have not followed a random walk in that period. Scholes (1972) found that movement in security prices is associated with market wide information that differentially affects the value of security and the volume of each security. When the size of stock is increased in the market due to fresh issue, there is a belief that price of the stock must fall to induce investors to purchase the additional share. This would be so if the excess demand curves be held at lower prices.

Jagadeesh (1990) concluded his study on predictability of returns on securities by rejecting the hypothesis that the stock prices follow random walks. To him predictability of stock returns could be attributed to either market inefficiency or to systematic changes in expected stock returns. The finding of Scholes (Op cit) on the effect of share volatility has on the behaviour of its price was landmark study in the sense that there was a negative relationship between stock prices and future stock volatility, a phenomenon attributable to the leverage effect. Their results showed that small

firm's stock volatility tends to be more responsive to changes in their stock prices. Conditional variances of stock returns on the average become less sensitive to changes in stock prices. The result of their study showed a consistent pattern in time series properties of security returns across firms of different market values. The nature of the relations between stock's price dynamics and firm size was maintained but the non-parametric tests show that the strength of the relations change overtime.

The findings of Conrad and Juttner (1973) strongly indicated that low-priced stocks do not fluctuate more widely than high-price stocks, other factors being constant. Studying the behaviour of stock prices, Pearce Douglas, and Roley (1983) concluded that low-priced stocks have a probability of advancing or declining more than higher priced stocks, and this changes in movement of stock prices and its predictability in another perspective. Infact, the Daily Official List is obviously a dependable instrument for ascertaining share price movement and as a tool to assist in predicting future performance of share prices to some extent, everything being equal. Daily Official List is an authoritative document issued by the council of Stock Exchange, showing useful corporate data on daily business rating for all quoted securities to an investor in appraising or monitoring their portfolio performance for best results.

Infact, the prices follow trend pattern, and markets trend up, down, and sideways (that is, flat) made it clear of the principles of Technical analysis which is based on the premise that a market's price reflects all relevant information, so, their analysis looks more at "internals" than at "external" such as news and events. Price action also tends to repeat itself because investors collectively tend toward patterned behaviour, hence technicians' focus on identifiable trends and conditions. As result, the study surveyed influence of shares pricing and securities in banks on one hand, and performance in commercial banks which involve the mechanism for share and securities pricing in Nigeria.

Statement of the Problem

The study surveyed share pricing and securities on the performance of selected commercial banks in Nigeria. This was to determine the relationship between organization performance along with shares and securities pricing in the stock market on one hand, and to enumerate the influence of corporate governance on market price of shares and securities of the selected commercial banks. This however necessitated the two hypotheses below:

Hypotheses

H_{O1}: There is no relationship between banks profitability on shares and securities pricing in Nigerian commercial banks

H_{O2}: There is no relationship between corporate governance practices on market price of shares and securities in Nigerian commercial banks

Methodology

As a survey research design study via the adoption of the ordinary least square method of multiple regressions to analyze the trend of financial institutions in the effort of economic growth, population comprised of all the commercial banks and allied corporations that engaged in the share pricing securities in Lagos State of Nigeria with sample to the study included the commercial banks within Lagos State metropolitan.

Instrument

The instrument used to collect data was secondary in nature and in time series of twenty (20) years from 1988 to 2007 as these data were in accordance to the hypotheses formulated. Besides, documented materials provide tools for further reading and hence make is relevance in the present study.

Data collection method

The data used were gathered from secondary sources which constituted annual reports of the banks under study. The document sources usually provide a frame work on which the central idea and research work is usually based on.

Model specification

In a bid to present a justified result of surveying of share pricing securities in some selected commercial banks in Nigeria, a model has to be developed. In this regard, multiple regression model which is transformed into mathematical form for an empirical analysis in form of dependent and independent variables as $Y= f(X)$ where $Y = \beta_0 + \beta_1X_1+ \beta_2X_2+ \beta_3X_3 + \mu$ such that Y= Dependent Variable, X= Independent variable, β_0 = constant term, β_1 = coefficient of X_1, μ = Error term with hypothesis one becoming $Y = \beta_0 + \beta_1X_1+ \beta_2X_2 + \beta_3X_3 + \mu$, where Y= Bank profitability (GDP, Dependent Variables), X = All Share Index (asi, Dependent Variables), β_0 = Constant Term, β_1 = Coefficient of X_1 and μ = Error term.

The underline assumptions is the application of Multiple Ordinary Least Square (OLS) under Random stochastic term of zero mean of stochastic term $(\mu)=0$ where constant variance of stochastic term at all levels of explanatory variable Var $(\mu) = \sigma\mu^2$. Independent stochastic terms at different levels of the explanatory variable Cov $(\mu'i\ \mu'j) = 0$ such that Independent stochastic term of the explanatory variable Cov. $(\mu'i\ Xi) =0$ with Stochastic term normally distributed μ'_i - N (0, $\mu'i$) and objective variable in a random variable with a constant variance at all levels of explanatory variables are normally distributed. An Independence explanatory variables Cov $(X_l\ Xj)=0$.

After estimating the model, one evaluates the result in order to determine the reliability. Here evaluation consists of deciding whether the estimates of the parameters are theoretically meaningful and statistical satisfactory.

As a result, various criteria may be classified into three groups namely the Economic A Priori criterion, which refers to the sign and the size of the parameter of economic relationship, in most cases the wrong sign and size of the parameter may be attributed to deficiencies of empirical data employed for the estimation of the model.

Secondly, statistical Criteria which are determination by statistical reliability of the estimates of the parameters of the models with most widely used statistical criteria of correlation co-efficient and the standard deviation (standard error) of the estimate, F-statistics and t-statistics.

The last was by Coefficient of Multiple Determination (R^2) which is the square of the correlation coefficient that measures the goodness of fit of the parameters estimated; it shows the percentage of the total variation of the dependent variables that can be explained by the changes of the explanatory variables. The value of R^2 lies between 0 and 1but the higher the R^2 the greater the percentage of the variation of Y explained by the regression line, the close R^2 to zero, the worse of fit.

Also standard deviation of standard error is a measure of the dispersion of the estimates around the true parameter though less reliable it is and vice versa. The F- Statistical is the ratio of a two independent estimates of a variance which have been obtained from sampled data. Each estimate involves some less of degrees of freedom decision rule. If F* is greater than F, one rejects the null hypothesis but if F* is less than F one does not reject the null hypothesis as F* equal estimate variance form 'between' the means variation and estimate variance from "with" the samples variation.

T-statistical is the observed value of t-ratio which composed the theoretical value of t obtained from the t-table with n-k = n-4 degrees of freedom. If t* falls in the critical region, one rejects the null hypothesis where

$$t = \frac{X_1 - U}{Sx} \quad \frac{t^*Bi}{6B}$$

Econometric Criteria are set by the theory of econometrics and aim at the investigation of whether the assumption of the economic methods employed is satisfied or not in any particular case. They determine the reliability of the standard criteria and help to establish whether the estimates have the desirable properties of unbiased, consistency etc. To test the validity of the assumption of non-auto correlated disturbances, one may compute a statistic known as 'Durbin–Watson statistics" denoted by

$$d^* = \frac{\sum:(et-et-1)}{Ee^2 t}$$

where Decision Rule $d^* < d_l$ = Positive auto - correlation and otherwise

Findings

H_{O1}: There is no relationship between banks profitability on shares and securities pricing in Nigerian commercial banks.

By model specification applied to the data obtained from the commercial banks used as represented by All Share Index(asi), $Y = \beta_0 + \beta_1 X_1 + \mu$ such that profit = $\beta_0 + \beta_1$asi + μ and the linear regression line $Y=\beta_0+\beta_1 X$ with its respective standard errors is written (for the first commercial bank) profit = 523249.9 -2101.111asi, S.E = (194367.50) (1804.663) and 't-statistic' = (2.692)(-1.164). The regression line shows that there is a negative relationship between profitability and *All Share Index* (asi) with slope of 523249.9, where R = 0.307, R^2 = 0.094 and F = 1.356 with Durbin Watson =1.054

By this result and within the neighborhood of the model specification above, Correlation Co-efficient (R) equals to 0.307 which depicts that the level of correlation cot between the commercial banks' profit and All Share Index of the industry during the period under review (1988 to 2007).

The Co-efficient of Multiple Determination (R^2) or ('Goodness of fit') showed that the closer to *one* the value of R^2 the better the 'Goodness of fit' and the closer the value to *zero* the value the worse of fit. Furthermore, the profitability and All Share Index is 0.094 which means that the 'goodness of fit' between the variable is up to 9.4 percent. By close reference to Durbin Watson (DW) test of (d*-Statistics) of autocorrelation which states that where the value is in the range of 1.5 and 2.5 depicts positive autocorrelation. In this case, But the Durbin Watson (DW) test of commercial banks is 1.054 showing that there is evidence of auto correlation between the identified variables.

Similarly in commercial bank where profit = 8241.132+35.554asi, S.E = (4355.605) (40.441),'t' = (1.892) (0.879), the regression line showed that there is a positive relationship between profitability and All Share Index (asi) with slope of 8241.132, where R = 0.237, R^2 = 0.056, F = 0.773 and Durbin Watson(DW) =1.054. Here, the Correlation Co-efficient (R) of bank equal to 0.237 which means there is correlation between the profitability and All Share Index during the period of under review (1988-2007), and the Co-efficient of Multiple Determination (R^2) is 0.056 showing that the 'Goodness of fit' between profitability and All share Index is 5.6 percent. The Durbin Watson (DW) analysis is 1.054 showing that there is evidence of auto correlation between the identified variables. Finding showed that there is relationship between banks profitability on shares and securities pricing in Nigerian commercial banks.

H_{O2}: There is no relationship between corporate governance practices on market price of shares and securities in Nigerian commercial banks

By model specification applied to the data obtained from the commercial banks used as represented by Dividend Per Share (dps) and shareholders' wealth represented by Return on Capital Employed (roce) =f(dps) and $Y = \beta_0 + \beta_1 X + \mu$ with roce = $\beta_0 + \beta_1$dps + μ, the linear regression line $Y = \beta_0 + \beta_1 X + \mu$ with its respective standard errors could now be written as first commercial bank's

roce = 232420.96 + 423141.180dps + 682962.709, S.E = (262746.789) (743680.903), 't'= (0.885) (0.569) , R = 0.133, R^2 = 0.018, F =0.324, Standard Error = 682962.709 with Durbin Watson =1.722.

Similarly, roce = 274405.217-679.346dps + 682962.709, S.E = (21040.559) (783.061), 't' = (13.042) (-0.868) , R = 0.200, R^2 = 0.040, F =0.753, Standard Error = 90532.735 with Durbin Watson =1.297

Here the level of co-efficient of correlation (R) is 0.133 in first bank and second bank had 0.200 which means positive correlation existed between Dividend Per Share (dps) and Return on Capital Employed (roce) in period under review. That is 13.3 percent correlations exist in first bank and 20 percent in second bank. The Co-efficient of Multiple Determination (R^2) which termed 'goodness of fit' in the first bank is R^2= 0.018 depicts a 'goodness of fit' of 1.8 percent, showing that only 1.8 percent changes in Dividend Per Share declared at the period could be attributed to Return on Capital Employed (ROCE). While in other bank the 'goodness of fit' was 0.040, that is 4 percent of the changes in Dividend Per Share (dps) in the bank could be attributed to return on Capital employed (roce) within the period under review. By criterion, Durbin Watson(DW) analysis for first bank is 1.722 and that of second bank is 1.297 which shows that there is evidence of positive auto correlation between the identified variables. This test shows that β_1 (the slope of the regression line) is statistically significant and different from zero i.e. $\beta_1 \neq 0$. Hence, there is relationship between corporate governance practices on market price of shares and securities in Nigerian commercial banks.

Discussions

Dividends continue to be the most important distribution mechanism with the similar policy of the two banks under review. Study found that relationship between banks profitability on shares and securities pricing in Nigerian commercial banks. This shows that those dividend policies of quoted banks are significantly influenced by their earnings and previous year dividends. Also, the reluctance to cut dividends makes banks to partially adjust their dividends to changes in their earnings with dividend policy having significant effect on shareholders' wealth. Furthermore, the average earning per share is the significant a determinant of Average dividend payment, which confirms the fact that the most important decision for payment of dividend is the current earning. However, the growth prospect and bank size has no impact on the dividend behavior of quoted banks for the period under review. Both current dividend and earnings per share explained the observed differential share market prices of the banks. The magnitude of the effect of earnings share market prices is greater than that of dividend payment suggested that the main determinant of market share value for banks is no longer dividend but earnings for recent data.

Conclusion

Study showed that the average earnings per share is still the most significant determinant of average dividend payment in the commercial banks' operation though at variance to the magnitude of the impact of the earnings now greater than that of current dividend payment.

Recommendations

As long as dividend remains an important determinant of share market prices means that banks may increase their share market price through an increase in the rate of dividend paid. In order words, there is sufficient empirical evidence to believe that a liberal dividend policy lead to a higher average market value of common stocks than penurious dividend policies. In effect banks' management should follow generous dividend policies which maximize the long term benefits to its stockholders. Banks should try all their possible best in improving their total earnings from each transaction year, since recent study reveals that it has greater impact than any other factor in determining the market share value for commercial banks from year to year. Apart, government

should assist in improving the quality and availability of secondary data of banks and make available for further research. Government should further encourage economic empowerment of the citizenry via consumption of locally produced goods, and assistance be given to exporters of locally produced goods through reduction in export duties. This helps the nation's economy in the medium or long run.

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