

**DETERMINANTS OF SHARE PRICES OF QUOTED CEMENT  
MANUFACTURING COMPANIES IN NIGERIA**

**BY**

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**JANUARY, 2020**

## DECLARATION

I hereby declare that this dissertation has been written by me and it is a report of my research work. It has not been presented in any previous application for M.Sc. Degree in Accounting and Finance. All quotations are indicated and sources of information specifically acknowledged by means of reference

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## CERTIFICATION

The dissertation entitled, “Determinants of Share Prices of Quoted Cement Manufacturing Companies in Nigeria” meets the regulations governing the award of Master of Science (MSc) Degree in Accounting and Finance, of the School of Postgraduate Studies, Nasarawa State University, Keffi and approved for its contribution to knowledge and literary presentation.

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## **DEDICATION**

This research work is dedicated to God Almighty the fountain of knowledge and wisdom.

## **ACKNOWLEDGEMENTS**

My sincere thanks and appreciation go to my supervisors, .....

## Abstract

*This study examines the determinants of share prices of quoted cement manufacturing companies in Nigeria. Ex-post facto research design was used for the study. The population of the study is the four (4) quoted cement manufacturing companies in Nigeria. Panel regression analysis was used on panel data collected from the CBN Statistical Bulletin and the Annual reports and accounts of the companies for the period of 10 years (2008-2017). The determinants used in this study are gross domestic product, monetary rate, inflation, dividend per share and earnings per share while Share prices was proxied by market price per share as explained variable. It was found from the panel regression result that, GDP has positive but insignificant determinant on MPPS, while DPS is significant and positively related to MPPS. In the case of MR, INFR and EPS, insignificant negative effects on MPPS were found. The study recommends among others that, quoted manufacturing cement in Nigeria should make efforts to ensure stable increase in dividend payments of their companies, with a view to encouraging potential investors to come and invest in the companies so that share prices of the companies will increase.*

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Stocks are financial and investment products whose prices are determined by forces of demand and supply explicitly influenced by internal and external factors. The capital market deals with the exchange of shares of publicly quoted companies, government bonds, corporate and municipal bonds among other instruments for money. As a capital market institution, the stock exchange plays an important role on the economic development. It helps mobilize domestic savings thereby bringing about re-allocation of financial resources from dormant area to active agents. Long term investments are made liquid, as the transfer of securities among participating public is facilitated. The exchange has also enable companies to engage local participation in their shares ownership, thereby giving investors' populace a chance to own shares of reputable firms. Companies can also raise extra finance essential for expansion and development from local and international sources thereby enhancing inflow of international capital and facilitates the government's privatization programmes, all with aggregate effect of fast national economic growth.

The activities of the stock is managed or regulated by NSE which was formed in 1954 as a voluntary organization of stock brokers with a supervisory body and is now one of the most active markets in Africa. Before the introduction of the Securities and Exchange Commission Act Cap 406, 1990, the Nigerian Securities and Exchange Commission (SEC) had been responsible for the determination of share price in Nigeria. The Nigerian capital market was highly regulated exhibiting different forms

of imperfections; barring of foreign investors from the market, imposition of price caps on share price movement and regulation of interest rates. All these prevent share prices from responding freely to forces of supply and demand. Thus, there were a lot of criticisms against share price determination process by SEC in the past (Adelegan, 2003). Ariyo (1991) observed that unless there were identified deficiencies in share price determination, meaningful suggestions would not be made for their rectification. The Securities and Exchange Commission Act Cap 406 (1990) transferred the pricing function from the Commission to the issuing houses/brokers. Since the transfer of the pricing function, little has been done to identify the determinants of share price and assess share valuation function in the market. Many previous capital market studies in Nigeria focused on informational efficiency, testing the validity or otherwise of efficient market hypothesis (Adelegan, 2004). The existing attempts on determinants of share price utilized accounting variables or macroeconomic variables (Oyama, 1997; Wickremasinghe, 2006; Oyerinde, 2009; and Jeroh & Edesiri 2015).

Inflation is one of the biggest fears of investors of such factors, because it reduces the real return on their investments as per stock (Schweitzer, 2000). Inflation has an adverse effect on an economy with its effect ranging from positive to negative. The negative effects are however more pronounced and comprise a decrease in the real value of money as well as other economic variables over time. Also money supply which comprises of monetary and interest rate has shown positive influence on stock price at few time occasion negative effects because frequent changes in the money supply variables unleash deviations on the steady growth rate. Any monetary expansion raises the disposable incomes of economic agents and this increases aggregate demand, business units expand production leading to increased output and share prices through the multiplier effect (Malaolu, Ogbulafor & Orji 2013).

Furthermore, another factor that affect stock price is the gross domestic product (GDP). Generally, GDP is used to measure economic growth and as a result in economic growth it encourages more investors with their capital running into stock market to obtain more returns. Also, rational investors believe that stock index movements follow the movement of real economy thus, higher the growth rate of GDP, other things being equal, the more favourable it is for the stock market, higher prices and profits from the healthy business climate (Osamwonyi & Evbayiro-Osagie, 2012; Neda, 2014; Chandra, 2004).

Dividend policy is a major factor that affects financing decision hence, it is a strong determinant of share prices. It involves the payment of cash or bond or stock to shareholders in return for their investments while Profit indicates the extent to which a company has engaged in value-added activities. Thus, because of asymmetric of information managers use these dividend and earnings to portray a good prospect of the organization when they are announced and investors as well as stock prices react to them accordingly. An increase in the firm earnings will attract a higher market price per share which will leads to increase in company value while a decrease in earnings will leads to decrease in company value (Fama & French, 2001; Al-Malkawi, 2007; Kurfi, 2005).

Share prices may rise and fall in response to fluctuations in the values of endogenous and exogenous variables within the industry, originating from government policies, arising from strategies adopted by competitors or as a result of reactions to published financial performance indicators and market forces of demand and supply. Investors are known to be interested in making investments in firms that promise good returns. The pattern of changes in share prices could determine the timing and extent to which

people are willing to invest and generally, transact with a firm. This is because share price, at every point in time, tends to reflect public perceptions about the firm with regards to the firm's worth.

The firm's earnings are influenced by general economic conditions, the performance of the financial markets, GDP, inflationary rates, money supply, interest rates, foreign currency exchange rates, changes in laws, regulations and policies of the Central Bank, capital market and other regulators as well as competitive factors on a global, federal, state and local government basis (Vanguard, 2007). This is why Naik and Padhi (2012) submits that the stock market avail long-term capital to the listed firms by pooling funds from different investors and allow them to expand in business and also offers investors alternative investment avenues to put their surplus funds in as they carefully watch the performance of stock markets.

It is against this backdrop that the study examined the determinants of share prices of quoted Cement manufacturing companies in Nigeria.

## **1.2 Statement of the Problem**

Over the years, companies in Nigeria have recognized the importance of the determinants of share prices and tried to work in line with their effect on their business by monitoring them to ascertain their negative effects or influence in the share prices in their businesses (Ademola, 2011). But the peculiarity of the industry operation, the current huge investment in cement industry and the particular factors affecting share prices in the sector has received low attention as a result there has not been enough management between the industry and its share prices determinants. This could have been the reason for low share price of cement companies despite their important to national economic development (Ademola, 2011). Though share prices

in Nigeria is determined by inflation rate, gross domestic product, interest rate, dividend per share and earning per share, the increase in share price does not ensure decrease in inflation rate, increase in gross domestic product, decrease in interest rate, increase in dividend per share and increase in earning per shares and how these variables affect stock prices particularly in the cement industry in Nigeria (Ademola, 2011).

Although researches have been conducted in this area such as the work of Oliver and Chike (2014) on the interaction between earnings per share and share price movement in Nigeria breweries plc covering the period of 2000 to 2013, Worlu and Omodero (2017) a comparative analysis of macroeconomic variables and stock market performance in Africa from 2000 to 2015, Malaolu, Lucky, Akani and Chukwuemeka (2014) studied the determinants of stock prices of commercial banks in Nigeria from 1985 to 2010. Others include Hassan (2015); Ademola (2011); Talamati and Pangemanam (2015); Uwalomwa, Olawe and Agu (2012). It can be deduced that the period covered in the previous studies cannot be applied to the determinants of share prices as at the current period due to changes in economy and other macroeconomic factors.

Furthermore, some of the above works used either micro variables or macro variables only, they used interest rate as money supply measures thirdly previous works used closing value of stock prices mostly but this work combined key micro and macro variables, used monetary rate which has effect on other rates (interest and lending rate) as money supply measurement thirdly it used average stock price making this work different from previous study on this area. Furthermore, none of these researches bothered to look at the determinants of share prices of quoted cement

manufacturing companies in Nigeria. Therefore, this study used quoted cement manufacturing companies and extend the period to more recent times as compared to other studies.

### **1.3 Research Questions**

The following research questions were formulated

- i. What is effect of Gross Domestic product on Share prices of Quoted Cement Companies in Nigeria?
- ii. To what extent does monetary rate affect share prices of Quoted Cement Companies in Nigeria?
- iii. What is the effect of inflation rate on share prices of Quoted Cement Companies in Nigeria?
- iv. What is the effect of dividend per share on share prices of Quoted Cement Companies in Nigeria?
- v. What is the effect of earning per share on share prices of Quoted Cement Companies in Nigeria?

### **1.4 Objective of the Study**

The study assessed the determinants of share prices of quoted Cement Manufacturing Companies in Nigeria. The specific objectives are to:

- i. Determine the effect of Gross Domestic product on Share prices of Quoted Cement Companies in Nigeria.

- ii. Evaluate the effect of monetary rate on share prices of Quoted Cement in Nigeria.
- iii. Examine the effect of inflation rate on share prices of Quoted of Quoted Cement Companies in Nigeria
- iv. Investigate the effect of dividend per share on share prices of Quoted Cement Companies in Nigeria
- v. Analyse the effect of earning per share on share prices of Quoted Cement Companies in Nigeria

### **1.5 Statement of Hypotheses**

The following hypotheses are formulated:

- H<sub>01</sub> Gross Domestic product has no significant effect on share prices of Quoted Cement Companies in Nigeria
- H<sub>02</sub> Interest rate has no significant effect on share prices of Quoted Cement Companies in Nigeria
- H<sub>03</sub> Monetary rate has no significant effect on share prices of Quoted Cement Companies in Nigeria
- H<sub>04</sub> Dividend per share has no significant effect on share prices of Quoted Cement Companies in Nigeria
- H<sub>05</sub> Earning per share has significant effect on share prices of Quoted Cement Companies in Nigeria

## **1.6 Significance of the Study**

Investors and government have a great interest in discovering and making use of what improve and protect their investments and national economy respectively as a the findings of variables of this study and how they determine stock prices will enable government to formulate monetary policies that regulate these variables to improve share of cement companies and it avail investors the determinants they use a criteria to make investment cement and other companies in order maximize their investment for their firms to enjoy going concerns.

Government particularly and various stakeholders in the cement industry will use the knowledge of share price determinants in cement industry from the findings of the study to improve share price of the sector that will increase capital base of firms due to increase patronage of the industry stocks thereby enjoying economies of scale with overall effect of greater output, cheap cement products and increase in civil work /construction to promote national development.

In term of scholarship, this research intends to contribute significantly to the volume of literature available in this area of finance especially factors that affect stock prices in the Nigeria growing cement manufacturing sector from the findings of the work. In academics, the unknown is never exhausted, as the list of what we do not know could go on forever or could be much. Therefore, as a contribution to this area, hints, recommendations about dividends, earnings, macro-economic variables and stock prices will be valuable empirical inputs to other studies.

In large firms, there is a diverse between management and ownership. The decision taking authority in a company lies in the hands of managers. Shareholders as owners of the Cement Manufacturing companies are the principals and managers are their

agents. Thus, there is principal-agent relationship between shareholders and managers therefore managers should and must act in the best interest of shareholders as consistent with shareholders' wealth maximization objectives of the firm. Therefore, this research will enable management to understand what must be done in order to act in the best interest of shareholders in choosing dividend policies that will maximize shareholders' value.

### **1.7 Scope of the Study**

The work will covers a study period of 2008 – 2017, Twelve (10) years of time frame. .The period is chosen to represent the current reality and to justify the industrial revolution as well the industrial building material outputs economic relevancy to the Nigeria economy with serious quest for industrialization. The study also cover all the quoted cement manufacturing companies in Nigeria.

The study is restricted to the financial determinants of share prices of Quoted cement manufacturing companies in Nigeria. The variables to be used in the study are: GDP, Monetary Rate, Inflation Rate, DPS, EPS as independent variables while Market Share Price will be used as dependent variables.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Conceptual Framework**

##### **2.1.1 Concept of Share Prices**

A share price is defined as the price of one share among a number of commercially viable stocks of a firm. A share cost or price at a particular time represents the balance that buyers and sellers strike among themselves. The price reflects the collective knowledge and wisdom concerning the market (Sharma, 2011). On the other hand, the alteration of a stock price determines the return on investment on that particular stock. Thus, the share price among the most important factors that influence investment decisions made by investors. This factor is majorly controlled by the forces of supply and demand of a certain security (Zakir & Khanna, 1982). Specialists can hotspot at share costs from the stock market exchange. The share cost of a particular organization is plainly detectible from the stock trade, a portion of the capital market's security fragment (Seitz, 2010). The most well-known securities are shares, bonds, and preference stocks. Securities market permit buyers and providers of assets to carry out exchanges of these financial assets. They likewise it permit the process of these stock transactions less stressful and quicker exchanges at sensible costs (Feldstein & Green, 2013). Therefore, it is a compromise situation where agree to give away Naira value of an amount of for economic investment value and control for future gain where by the second party agreeing in the same manner.

Market price or economic price is the amount for which a good or service is offered in the market place; it is simply the amount at which goods and services are sold or

exchanged in the market. Also, price could be seen as a financial expression of the worth of the product and this is why setting the right price is very important. In classical economics, market price is primarily determined by the interaction of supply and demand. The factors affecting the demand and supply of a commodity are many; some are within the control of the business and others are outside the control of the business. Some of the factors within the control of the business include: advertising & sales promotion, training and organization of the sales force, effectiveness of distribution, sales (e.g. access to retail outlets; trained distributor agents) and quality of after-sales service. All these factors are being referred to and influenced by unsystematic risk or micro factors. Inflation, recession, external financial shocks, Price of substitute, price of complements, consumers' disposable income, and consumer tastes and fashions are part of the factors that are outside the control of the business (Sunde & Sanderson, 2009, Olayemi, 2004 & Schotter, 2001). These factors are influenced by economic macro environment, therefore they are called systematic risk or variables. They affect every firm in the economy.

According to Oliver and Caroline (2015) share price is the value of a firm's equity per unit of the outstanding shares. Equity share is a measure of the unit of ownership of a bank. Banks make new issue of shares to the public to generate fund for expansion, diversification, investment and generally growth. In the stock exchange, price of equity shares is determined ultimately through the interactions of the forces of demand and supply. This demand and supply forces are also believed to be propelled by other forces and factors which may not be unconnected with the earnings capacity of the firm goodwill, effective advertisement, popular expert staff, good organizational culture etc. The highest market share price in the year is added to the

lowest market price of the equity share in the same year and the average is found. This average price is the market price of equity shares for the purpose of this study.

Stock market prices are incentives for the investors in their decision making to invest in the stock market. The fluctuations in stock market prices are generally irregular and unpredictable. Variability in stock market prices creates uncertainty among the international investors and to avoid risks the investors decrease their investments in the stock exchanges. In summary a market price of share is the monetary amount of Naira a rational investor will pay to acquire a unit of stock for investment, saving and control purpose.

### **2.1.2 Concept of Share Price Determinants**

The market price of the share is mainly determined by the forces of demand and supply of a particular security in the market (Zakir & Khanna, 1982). The share price is subject to extreme fluctuations depending on several factors. Knowledge of such factors and their possible impact on share prices is highly appreciable as it would help investors make wise investment decisions and enable firms to enhance their market value. The factors that influence share prices could either be internal factors, such as earnings, dividend, industry, advertisement, staff pedigree, book value etc while external factors include such as interest rate, government regulations and foreign exchange rate, monetary rate. Market price of the share depends upon many factors, such as earnings per share, dividend per share, dividend payout ratio, size of the firm and dividend yield (Sharma, 2011). Gordon (1959) asserted that share price is determined by earnings and dividends. For clarity of purpose and empirical exigency this study concentrated on GDP, Monetary Rate, Inflation Rate, DPS and EPS as possible variables determining value of share price.

**a. Gross Domestic Product**

Acronym GDP stands for gross domestic product. It is a way to measure the productivity in a specific economy such as Finnish economy or Swedish economy. It is calculated by adding together the total value of the goods and services produced in an economy in year, so in the other words the total output (Dawson, Anand & Athreye 2006). The equation for calculating the gross domestic product is as follows:  $GDP = C + I + G + (EX - IM)$ . In the equation C stands for household spending on consumer goods, for example washing machine or computer. I stands for gross private domestic investment, which means spending by firms and households on new capital that could be for example inventory. G means the government expenditure and gross investment.  $(EX - IM)$  means the exports minus imports or in the other words the spending by rest of the world on goods produced in the economy which gross domestic product is being measured (Case, Fair & Oster, 2009). The data, from which the gross domestic product can be obtained from, highly relies on collecting data on output through surveys of firms. In order to avoid double counting the focus should be only on the value added by each firm. Therefore this means the value of each firm's output from which the value of the intermediate goods (those used to produce the output) is being deducted. When these values of each company are being summed together in specific economy, the result is gross domestic product (Dawson, Anand & Athreye, 2006).

The gross domestic product (GDP) is a measure of the national income and output for a given country's economy. The gross domestic product (GDP) is equal to the total expenditures for all final goods and services produced within the country in a stipulated period of time. GDP at purchaser's prices is the sum of gross value added

by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Investors care about GDP reports because they provide the most comprehensive scorecard about the overall health of the economy. Since healthy economic growth helps boost corporate profits, over the long run stock market performance tends to mirror economic performance. In the short term markets can behave unpredictably even during periods of positive economic growth (Osamwonyi & Evbayiro-Osagie, 2012).

In developed economies, firms are recognized as the main engines of economic growth because of their significant contributions to economic growth and prosperity (Frimpong, 2013). In high-income economies such as the European Union, SMEs account for 99.8% of all enterprises, employ 67% of all workers and contribute 58% of gross value added (GVA) (Edinburgh Group, 2012). In the US, firms create more than 50% of the non-farm private GDP, create 75% of net new jobs in the economy and make up 97% of exporters and produce 29% of all export value (Aktas, 2010).

Nigeria rebased its GDP from 1990 to 2010, resulting in an 89% increase in the estimated size of the economy. As a result, the country now boasts of having the largest economy in Africa with an estimated nominal GDP of USD 510 billion, surpassing South Africa's USD 352 billion. The exercise also reveals a more diversified economy than previously thought. Nigeria has maintained its impressive growth over the past decade with a record estimated 7.4% growth of real gross domestic product (GDP) in 2013, up from 6.7% in 2012 (CBN, 2013).

## **b. Monetary Rate**

Monetary rate is the rate apex bank (CNB) lend to commercial banks which in turn lend to the populace. It is some time referred to as discounting rate. Monetary rate is one of the important macroeconomic variables, which is directly related to economic growth. It determines other rates under its component such as interest rate and lending rate. As a result increase and decrease in monetary rate has immediate direct impact on interest rate as well. Though the three types of interest rate has been used interchangeably, interest rate has been referred to frequently. Generally, interest rate is considered as the cost of capital, means the price paid for the use of money for a period of time. From the point of view of a borrower, interest rate is the cost of borrowing money (borrowing rate). From a lender's point of view, interest rate is the fee charged for lending money (lending rate) (Mahmudul & Gazi, 2009).

Interest rate is the reward for not hoarding but for parting with liquidity for a specific period of time. Adebisi (2002) defines interest rate as the return or yield on equity or opportunity cost of deferring current consumption into the future. Some examples of how interest rate has been used include the saving rate, lending rate, and the discount rate. Professor Lerner, in Jhingan (2003), defines interest as the price which equates the supply of 'Credit' or savings plus the net increase in the amount of money in the period, to the demand for credit or investment plus net 'hoarding' in the period. This definition implies that an interest rate is the price of credit which like other price is determined by the forces of demand and supply; in this case, the demand and supply of loanable funds. Ibimodo (2005) defined interest rates, as the rental payment for the use of credit by borrowers and return for parting with liquidity by lenders. Like other prices interest rates perform a rationing function by allocating limited supply of credit

among the many competing demands. Bernhardsen (2008) defined the interest rate as the real interest rate, at which inflation is stable and the production gap equals zero. That interest rate very often appears in monetary policy deliberations which is equivalent to assuming rational expectations (Bencik, 2009).

The interest rate can be defined as the annual price charged by a lender to a borrower in order for the borrower to obtain a loan. This is usually expressed as a percentage of the total amount loaned. Traditional theories define interest rate as the price of savings determined by demand and supply of loanable funds. Ngugi and Kabubo (1998) states that the primary role of interest rate is to help mobilize financial resources and ensure the efficient utilization of resources in the promotion of economic growth and development. Chen et al. (1986) indicated that interest rate had positive impact on stock return. Wongbangpo et al. (2002) observed interest rate had a negative impact on Southeast Asian countries. In the industrial analysis, Nguyen (2007) found interest rate spreads had a significant effect on the riskiness of capital-intensive industries.

### **c. Inflation Rate**

Inflation is defined as a rise in the average level of price for all goods and services over a given period of time, and it can also be defined as a permanent increase in the aggregate price level which implies a diminishing of purchasing power and an increase in the cost of living (Mousa, Al Safi, Hasonah & Abo-orabi, 2012). Hence keeping the levels of inflation in a steady state is the primary concern of monetary policy makers, as indicated by the monetary policy objective of the central bank (Mishkin, 2004). This is because the rate of inflation of a given country reflects the economic performance and the price stability of that particular country; it also affects a country's performance on the international market (Mahmudul & Gazi, 2009).

The rate of inflation measures the annual percentage increase in prices; the most usual measure is that of retail prices. The government publishes an index of consumer prices each month, and the rate of inflation is the percentage increase in that index over the previous 12 months. Johnson (1972) simply defines inflation as the sustained rise in general price level. The most common measures of inflation are the CPI and the GDP deflator with the latter measuring inflation within the whole domestic economy and the former measuring consumer prices

**d. Dividend Per Share**

Dividend“ is commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership (Sujata, 2009). They are therefore distributions made out of the company’s profits/earnings and the decision to pay out dividends is based on the firm’s dividend policy. A dividend per Share (DPS) is the sum of dividends declared by a company divided by the number of outstanding ordinary shares issued. According to Hashim, Shahid, Sajid and Umair (2013), there are varied reasons why companies pay dividends. It may either be a way to reduce the rise in agency cost between managers and shareholders or to reduce the uncertainty of the investors of the company. It could be a goal of the investor to receive returns on continuous basis, so will prefer to invest in firms paying dividends.

Dividend per share (DPS) is the sum of declared dividends issued by a company for every ordinary share outstanding (Mahmudul & Gazi, 2009). The figure is calculated by dividing the total dividends paid out by a business, including interim dividends, over a period of time by the number of outstanding ordinary shares issued. DPS is the amount of dividends that the shareholders of a company receive on a per-share basis.

It is calculated using the total dividends paid out to shareholders over one fiscal year and the number of shares outstanding (Mahmudul & Gazi, 2009).

**e. Earning Per Shares**

EPS is the measurements of managerial efficiency as well as firm performance (Umar & Musa, 2013). Tandelilin (2010) stated that Earnings per Share information of a company show the company's net profit is ready to be distributed to all shareholders of the company. High EPS can be interpreted that the company will provide a great income opportunity for investors. Earnings per share (EPS) are considered as an analytical tool that uses the level of profitability of the company.

Lev (2000) defines Earnings as the „bottom line“ or net income“ and the single most important item in the firm’s financial statements. They indicate the extent to which a company has engaged in value-added activities. An increase in the firm’s earnings represents an increase in company value while a decrease in earnings represents a decrease in company value. Earnings per Share (EPS) are the firm’s earnings divided by the number of ordinary shares issued by the firm i.e. it’s the firm’s net income per unit of ordinary shares issued. Small firms have limited access to additional capital and therefore retain a higher proportion of earnings for expansion needs (Fama & French, 2001).

## **2.2 Empirical Review**

### **2.2.1 Gross Domestic Product and Share Prices**

Arodoye (2012) investigates the impact of macroeconomic variables on the determination of stock prices in Nigeria. It also evaluates the extent to which macroeconomic variables contribute to stock price variability. This study uses quarterly time series data for stock prices covering a period of 25 years (1985 Q1-2009 Q4) in the econometric analysis. Quarterly time series data were sourced for the same period for growth of Gross Domestic Product (GDP) and Inflation rate (INFL). In the analysis of the collected data, the study applied unit root tests, test for co integration and utilize a Vector Auto Regression (VAR) model. The results show that there is a long-run relationship between stock prices, inflation rate and real gross domestic product for the period under review. Also, the salient feature of the variance decomposition results is that the predominant sources of stock market price variation are due largely to inflation rates, growth of real gross domestic product, interest rate and own shocks. The study could have extended the period to 2011 since the study was carried out in 2012.

Worlu and Omodero (2017) evaluate the impact of macroeconomic variables on stock market performance in Africa from the period of 2000 to 2015, in four major African countries investigated were: Ghana, Kenya, South Africa and Nigeria examining the following variables; GDP, inflation rate and real exchange rate effect the stock market performance represented by share price index. Time series data were employed and analyzed using multiple regression and t-test for hypotheses testing. With the use of SPSS software the result revealed negative impact of GDP, inflation and real exchange rate on SPI in Nigeria. Insignificant relationship of all the variables was

also observed. The result for South Africa's stock market showed that GDP had a negative impact on stock market price. The impact of GDP on Ghana's stock market was negative while the other countries it had no impact. The researchers therefore conclude that macroeconomic variables have to be checked by the government of the African countries to avoid this scenario of negative effects since they are major determinant of the success of the stock markets in every economy. The study does not carried out stationarity test on the independent variables which will enable the study to either adopt ordinary least square, auto-regressive distributed lag model or other model for the analysis hence, the result might be spurious.

Oliver (2015) validates the relationship between macroeconomic variables and the movement of share prices in Nigeria brewery industry. The level of association of the variables is evaluated using the ordinary least squares method, modeled in form of multiple regression. Granger causality method was applied to examine the causality relationship among the variables in the short run. Augmented Dickey-Fuller (ADF) test was conducted while the Phillip-Perron's (PP) test was applied for robustness check for stationary of the data series. All the variables except interest rate had the data series differenced at second difference. Interest rate was differenced at level and intercept. Significant relationship was found between inflationary rate and share price as well as between real gross domestic product and share price of the variations in share price could be explained by the independent variables. Positive and strong correlation exists between share price and real GDP as well as exchange rate while a weak and negative correlation is found between share price and interest rates. A strong and negative correlation exists between inflationary rate and share price. No causal relationship is indicated by Granger causality test in the short run.

Tafamel, Adekunle and Ammeh (2015) examined the impact of earnings per share, return on asset, price earnings ratio and gross domestic product on share prices of selected food and beverages listed firms on Nigerian Stock Exchange. Five firms were randomly selected from Nigerian food and beverages sector for analysis. Secondary data was sourced from the annual reports of the sampled firms and Central Bank of Nigeria statistical bulletin that range from 2003 – 2012. The study employed panel data multiple regression model to estimate the relationship between the selected determining factors of share prices. It was found that positive and significant relationships exist between earnings per share and price earnings ratio as independent variables and share prices of the sampled firms. However, return on asset and gross domestic product are not statistically significant determinants of food and beverages firms share price in Nigeria. This means that GDP does not influence firms share prices. The study period should have extent to 2014 by Tafamel, Adekunle and Ammeh (2015) because there is time lag between the period of the study and the period covered.

In a different scenario, Osinubi and Amaghionyeodiwe (2003) also examined the relationship between Nigeria stock market and economic growth during the period 1980-2000 using ordinary least squares regression (OLS). The result indicated that there is a positive relationship between the stock market and economic growth and suggest the pursuit of policies geared towards rapid development of the stock market. Also, Obamiro (2005) investigated the role of the Nigeria stock market in the light of economic growth. The authors reported that a significant positive effect of stock market on economic growth. He suggested that government should create more enabling environment so as to increase the efficiency of the stock market to attain higher economic growth.

### **2.2.2 Monetary Rate and Share Prices**

Adaramola (2011) investigate the impact of macroeconomic indicators on stock prices in Nigeria. Since none of the previous writers in this area looked at the study at the individual firm's level, the research work is therefore unique as it uses a different methodology to consider it at the micro level. Secondary data on stock prices of selected firms and six macroeconomic variables between 1985:1 and 2009:4 were used for the analysis. The macroeconomic indicators used in the research work are: money supply (BRDM), interest rate (INTR), exchange rate (ECHR), inflation rate (INF), oil price (OIL) and gross domestic product (GDP). The pooled or panel model was used to examine the impact of macroeconomic variables on stock prices of the selected firms in Nigeria. This model was considered appropriate for its ability to combine both time series and cross-sectional data. The empirical findings of the study revealed that macro-economic variables have varying significant impact on stock prices of individual firms in Nigeria. Apart from inflation rate and money supply, all the other macroeconomic variables have significant impacts on stock prices in Nigeria. Worthy to be considered here is the interest positive effect on share prices of firm. This is one of the few findings that found interest rate influencing share price positively.

Mahmudul and Gazi (2009) investigate the reasons of market inefficiency, relationship between share price and interest rate, and changes of share price and changes of interest rate were determined through both time series and panel regressions. For all of the countries it is found that interest rate has significant negative relationship with share price and for six countries it is found that changes of interest rate has significant negative relationship with changes of share price. So, if

the interest rate is considerably controlled for these countries, it will be the great benefit of these countries' stock exchange through demand pull way of more investors in share market, and supply push way of more extensional investment of companies.

Hamdan (2014) find out the connection involving stock market and interest rate (Pakistani market) and to run certain tests related to statistical analysis. These tests run with the help of month end closing stock prices of Karachi Stock Exchange and interest rates of previous ten years i.e. Jan 2004 to Dec 2013. Correlation, Regression analysis and descriptive analysis were run to find out the blow of interest rate on stock market of Pakistan. Performance of Pakistani Stock market is highly dependent on political situation not interest rate. This means that interest rate has no noticeable effect on share prices.

Trokon (2014) examines the relationship between stock prices and interest rates and attempt to determine if there's any causal link between the two. Interest rate is represented by the weighted average lending rate of commercial banks in Kenya and stock prices are proxied by the NSE 20 share index. Secondary data, in the form of weekly observations for the period January 2004 to December 2013 is utilized. Time series analysis and the Granger causality test is employed to examine the relationship. The results indicate that there is no significant causal relationship between interest rate and share price.

Maskay (2007) examined the relationship between money supply and the S&P 500 Index, the direction of the relationship; and the difference in the relationship between anticipated and unanticipated changes in money supply with stock market prices by using quarterly data and a two-stage regression model, the study found a positive relationship between changes in money supply and stock prices, as the

coefficient for the actual change in M2 is positive. It also proved that anticipated changes in money supply matter more than unanticipated changes as both unanticipated components are insignificant at 0.1% level whereas the anticipated change is highly significant at the 0.01% level. The results support the critics of the Efficient Market Hypothesis and signify that anticipated change in money supply matters too.

Raymond (2009) studied the long-run relationship between stock prices and monetary variables on the Jamaican Stock Exchange; using the Vector Error Correction Model framework. Monetary indicators used in the analysis include 180- day Government of Jamaica (GOJ) Treasury bill yields, the value of the Jamaica Dollar vis-a-vis the US dollar, inflation rate and money supply Measured by broad money supply. The monthly lag of each series was utilized and the data employed spanned the period January 1990 to March 2009 (231 observations). Coefficients from the co-integrating vector, normalized on the stock price, proved that the JSE Main Index is positively influenced by the explanatory variables.

While the study of Aamd (2015) examines the causal relationship between stock price and interest rate, using monthly data for the period from January 2007 to December 2013. All Share Price Index (ASPI) in Colombo Stock Exchange is used for the stock prices and the details on interest rate have been collected from the data released by the Central Bank of Sri Lanka. Augmented Dickey Fuller test was used to find out the stationary of the data series and the results of the test showed that, ASPI data and the interest rate was stationary at first difference. The Granger Causality test was used to check any causal relationship between stock returns and interest rate and outcomes showed that, there is one way causal relationship between variables. That is stock

returns does not Granger Cause interest rate but interest rate does Granger Cause stock returns. Finally, to check the result of the Granger Causality Test, a regression was run. The result of the regression shows that interest rate is a significant factor for stock return changes and interest rate has significant negative relationship with ASP.

In Malaolu, Ogbulafor and Orji (2013) conducted study on the determinants of stock price movements found quantitative empirical evidence to support their postulations of macroeconomic determinants of stock price movements in Nigeria using detailed econometric framework in order to provide the foundation for evidence-base long-run and short run dynamic relationships between the stock price movement and the macroeconomic variables. They analyzed time series data (real exchange rate, real interest rate and money supply) that spanned from 1985 to 2010 using the Engle-Granger two-step cointegration test. Results of the regression indicate that the money supply as determinants of stock price movements among others in Nigeria; however, inflation was found to be a major determinant of stock price movements.

Archana (2016) explore the causality relationship between interest rate and stock returns. Using monthly Daily data from January 2015 to December 2015, the study considered Weighted Lending rates as a proxy for the Interest Rate and BSE sensex for the study. The Series made stationary in order to apply the Granger Causality Test. The study reveals that there exists no causal relationship among the interest rate and stock returns through Granger causality technique. The study implies that the interest rate neither affects stock returns nor stock returns affect the interest rate. Thus, the present study empirically proves, stock market has no relation with the growth of interest rate in India and vice-versa for selected period of time. The period covered in

this study is too small to be able to draw conclusion on the relationship between interest rate and stock prices.

A contrary findings of Victor, Jonathan and Anthony (2013) who examined the macroeconomic determinants of stock price movements in Nigeria using detailed econometric framework in order to provide the foundation for evidence-based policies. Both the long-run and short run dynamic relationships between the stock price movement and the macroeconomic variables were analyzed with time series data that spanned from 1985 to 2010 using the Engle-Granger two-step cointegration test. We established that there is no cointegration between the variables, indicating the absence of long run relationship. Results of the regression indicate that the monetary policy variables (real exchange rate, real interest rate and money supply) as well as political instability are not the determinants of stock price movements in Nigeria; however, inflation was found to be a major determinant of stock price movements.

### **2.2.3 Inflation Rate and Share Prices**

In the study of Evans, Willy and Martin (2016) who examined the relationship between interest rate, inflation and stock market volatility in Kenya using both primary and secondary data. A monthly time series data for a period of 14 years from January 2001 to December 2014 was used to study the relationship. Additionally, 385 Questionnaires were distributed to individual investors to understand investor's perceptions on the relationship. The vector error correction model was used to analyse time series data for the long run causal relationship between inflation, interest rate and stock market volatility, while the granger causality test was used to analyse the short run relationship. Findings revealed that there was a positive and significant long run relationship between inflation rate and stock market volatility. Findings also show a

positive and significant short run relationship between inflation and stock market volatility. The relationship between interest rate and stock market volatility was found to be negative and weakly significant both in the short run and long run. Results from investor's perception revealed that 69% of the respondents agreed that a change in inflation rate causes fluctuation in share prices. Additionally, primary data results show that 75% of the respondents agreed that sudden changes in the interest rate have always caused variations in the stock market returns.

The above finding was contested by the work of Daniel and Johannes (2013) when they examines a relationship between inflation and stock prices for Zambia, over the period 1999–2011, using monthly all share stock prices and inflation rates. The study employed Augmented-Dickey-Fuller and Phillip-Perron for testing the stationarity of the series, Granger-causality test is used to determine the causality relationship between the variables, VAR and Cointegration techniques are employed to determine the short run and long run relationship respectively between the two variables. The unit root test results show that the series are non-stationary at level form but after differentiating they become stationary, the causality test results show a one way causal relationship running from inflation to stock prices and not vice-versa. There was no cointegration found among the variables meaning that there exists only a short run relationship. In general the results support the economic theory which suggests a negative relationship between inflation and stock prices.

In opposite finding of Umar and Ishiak (2009) when they run examination of macroeconomic variables that are responsible for share price fluctuation in Nigeria. Secondary data of Nigerian stock market share prices covering between 1980 and 2006 were used. Multiple regression was used to analyse the data. The results show

inflation, money supply, total deficits index of industrial production, interest rate and GDP influence stock prices. The study should extend the period of coverage to 2008 since the study was conducted 2009.

Silva (2016) tested the relationship between inflation rate of a country and the Stock prices during a period of ten years. Monthly inflation rate is used as independent variable and All Share Price Index as the dependent variable in developing a linear regression model. Correlation between the variables provides further contribution to the outcome. Results of the study reveal a negative relationship between Inflation rate and Stock prices. Percentage change approach in the study discloses a positive relationship between growth rate of Inflation and Stock returns.

In opposite findings, Abiodun and Elisha (2012) examined stock prices, stock market operations and economic growth in Nigeria using time series from 1980-2010 with the adoption of granger causality modelling to test the direction of granger relationship among the variables. Augmented Dickey Fuller methodology was adapted to test for the stationary of the data used and error correction modelling was adopted. The study showed that the present value of stock price adjust rapidly to changes in interest rate, inflation rate, exchange rate, broad money supply, gross domestic product, market capitalisation and volume of transaction of the Nigeria stock exchange. The study concluded that the activities of the stock market are statistically significant with the stock prices and economic growth and it revealed that there is positive insignificant relationship between inflation rate and stock prices which imply that increase in inflation rate will bring increase in the stock prices and magnitude of the relationship showed that a percent increase in the inflation rate would result on average to 13.47 percent increase in the growth of stock prices. This study contradicts

many previous findings. This means inflation can boost economic activities there by boosting share prices.

Henry and Clinton (2015) investigate empirically the effects of inflation on aggregate stock prices in Nigeria during the period of 1980-2012. Annual time series data on Stock Prices (ASP) and inflationary pressure measure were sourced from the Central Bank of Nigeria Statistical bulletin and Nigeria Stock Exchange Fact book. Employing the Engle-Granger and Johansen-Joselius method of co-integration in a Vector Error Correction Model (VECM) setting, in addition to Granger causality Test, Argumented Dickey Fuller Test (ADF) was employed. The empirical results shows that there exist a long run equilibrium negative and significantly relationship between inflation rate and aggregate stock prices, Broad money supply (M2) has a negative and significantly effects on aggregates stock prices, Narrow Money Supply (M1) shows a positive and significantly effects on aggregates stock prices while Average inflation rate show a positive and significantly relationship between aggregate stock prices. The results also show a strong relationship with an R2of 0.886 representing 89.6% variations in the explanatory variables. However, the direction of causality between the money supply measures and aggregate stock prices is mixed.

Ahmed and Igbinovia (2016) studied impact of inflation rate on stock returns in the Nigerian Stock Market. It also attempted to determine whether inflation rate had any effect on stock returns in Nigerian stock market and to ascertain whether stock prices effectively predict stock returns in the Nigerian stock market, using monthly data covering the period 1995 to 2010. Secondary data were extracted from the Nigerian Stock Exchange Fact Book and the Central Bank of Nigerian Statistical Bulletin. The result indicates that the inflation rate has a negative but weak impact on stock return;

hence, inflation is not a strong predictor of stock returns in Nigeria. Inflation variable appears to significantly respond to stock price changes. The conclusion from 2010 data cannot be generalized to 2016 because there is lag period between the scope of the study and period at which the study was conducted.

Vanita and Arnav (2014) examines long term relationship between inflation and stock returns in BRICS markets using panel data for the period from March 2000 to September 2013. Correlation results reveal a significant negative relationship between stock index and inflation rate for Russia and a significantly positive relationship for India & China. ADF, PP and KPSS unit root tests indicate non-stationary characteristic of the data. Further we find no long term co-integrating relationship between stock index values and inflation rates using Pedroni panel co integration test. These findings have important implications for policy makers, regulators and investment community at large. There may seem to be short term contemporaneous relationship between inflation and equity returns but in the long run they do not seem to be significantly integrated. Changes in inflation may bring some short run movement in stock return but certainly equity does not seem to be a good hedge against inflation in long run at least in emerging BRICS markets. This is another indication that inflation influencing stock prices changes by time.

The study of Faiza, Faiza, Laraib and Bisma (2013) investigates whether change in inflation causes changes in stock returns and if so, in what direction. Augmented Dickey Fuller (ADF) unit root test has been used to find out the stationarity of the data at level or at first differences, Johansen Cointegration Technique has been used to determine the long term equilibrium relationship between inflation rate and stock prices. Finally Granger Causality Test has been used to find out the causal

relationship between said variables. The evidence from cointegration test shows a negative relationship between KSE 100 index return and inflation rate because Pakistan is an under develop country when inflation occur it badly affect the economy which will ultimately affect the stock return and the reasons are economic condition and budget deficit along with some other factors and the Granger causality tests shows that there is no causality between KSE 100 index return and inflation rate in any direction. This study support the view that inflation influence shock prices in a more of magnitude negatively in a developing countries.

Taofik and Omosola (2013) examines the long-run relationships and dynamic interactions between stock returns and inflation in Nigeria using monthly data of the All Share Price Index from the Nigerian Stock Exchange and Nigerian Consumers Price Index from January 1997 to 2010. The analytical technique of Autoregressive Distributed Lag (ARDL) was exploited. From the results, it is evident that there is the existence of a long run relationship between stock returns and inflation. The short run dynamic model also reveals that the speed of convergence to equilibrium is moderate implying that there is a short run relationship between stock returns and inflation.

Nikolaos, Rangan and Aviral (2016) studied the relationship between stock prices and the inflation can be either negative or positive, depending on the strengths of various theoretical channels at work. While previous studies have primarily examined this relationship in a time-invariant framework, and if at all a time-varying framework is used, it has been restricted to the post World War II period. Given this, we employ a time-varying approach to examine the dynamic correlations of inflation and stock prices in the United States over the period of 1791 to 2015. The results of our empirical analysis reveal that correlations between the inflation and stock prices in the

United States evolve heterogeneously overtime. In particular, the correlations are significantly positive in the 1840s, 1860s, 1930s and 2011, and significantly negative otherwise.

#### **2.2.4 Dividend per share and Share Prices**

Abdulkarim (2014) investigated the impact of dividend –per-share on common stock returns of the Manufacturing firms listed on the Nigerian Stock Exchange. The data for the study was collected from ten companies randomly selected. The study period was from 1991-2003. The common stock returns for each of the 10 firms for the 13-years study period were calculated on weekly basis and annualized using geometric means. And, the actual dividend-per-share for each of the 13-years period was obtained from the various annual reports and accounts of the sampled firms. Multiple regressions were used to study the relationship between the dependent variable and the independent variable of this study. Pearson Moment Correlation was used for assessing the magnitude and the direction of the relationships between the variables of the study. The Pearson Correlation Coefficient was found to be 0.735, which is highly significant because it is closer to 1 than it is to 0. The regression analysis of the data conducted in order to test the research hypothesis indicates that dividend-per-share has a significant impact on the common stock returns of the sampled firms.

Irmala, Sanju and Ramachandran (2011) analysed the determinants of share prices in the Indian market. The study uses panel data pertaining to three sectors viz., auto, health care and public sector undertakings over the period 2000-2009 and employs the fully modified ordinary least squares method. The results indicate that the variables dividend, price-earnings ratio and leverage are significant determinants of share prices

for all the sectors under consideration. Further, profitability is found to influence share prices only in the case of auto sector.

In the vein, Ejuvbekpokpo and Edesiri (2014) examined by a means of robust analysis, factors that determine stock price movement in Nigeria for the period 2001 – 2011. Data were sourced from the financial statements of 99 listed firms in the Nigerian Stock Exchange. The analysis of the data sourced was done with the Ordinary Least Square (OLS) method. The results suggest that earnings per share, book value per share and dividend cover serve as factors in the determination of stock prices.

Srinivasan (2012) studied the major determinants of share price in India. It employed panel data consisting of annual time series data over the period 2006-2011 and cross-section data pertaining to 6 major sectors of the Indian economy, namely, Heavy and Manufacturing, Pharmaceutical, Energy, Information Technology and ITES, Infrastructure, and Banking. The panel data techniques are; Fixed Effects model and Random Effects model were employed to investigate the objective. The empirical results revealed that the dividend per share has negative and significant effect on the share price of manufacturing, pharmaceutical, energy, and infrastructural sectors. This findings took unpopular stand against effect of dividend on share prices.

Galgallo (2016) examine the influences of incomes and dividends on stock prices of corporations registered under the NSE. The study employed descriptive research design. The populace of the research included all firms listed at the Nairobi Securities Exchange. The people of all the listed corporations as at December 31, 2015, stood at 61. The study utilized secondary data. Data including share prices of stocks was gathered from the Nairobi Securities Exchange (NSE). The data analysis involved

correlation analysis using a multiple linear regression model. Data analysis was carried out using computer software, SPSS, to run the regression model. The study further concludes that earnings and dividends affect the value of shares of a firm in the long run and that the association is significant and constructive.

#### **2.2.5 Earnings Per Share and Share Prices**

Uwalomwa, Olowe and Agu (2012) examined the determinants of share prices in the Nigerian stock exchange market. To achieve the objective of this study, a total of 30 listed firms in the Nigerian stock exchange market were selected and analyzed for the study using the judgmental sampling technique. Also, the Nigerian stock exchange fact book and the corporate annual reports for the period 2006-2010 were used for the study. The paper basically modelled the effects of financial performance, dividend payout and financial leverage on the share price of listed firms operating in the Nigerian stock exchange market using the regression analysis method. The study as part of its findings observed that there is a significant positive relationship between firms' financial performance and the market value of share prices of the listed firms in Nigeria.

The relationship between stock prices and firm earning per share (EPS) which appears to be contestable like any other performance measures was studied by Umar and Musa (2013). This study examined the relationship between stock prices and firm EPS from 2005 to 2009. Using a simple linear regression model on a panel of 140 Nigerian firms from a total population of 216 firms' operated in Nigerian Stock Exchange (NSE), it was discovered that firm EPS has no predictive power on stock prices and should not be relied upon for the prediction of the behavior of stock prices

in Nigeria. This finding is however contrary to the findings of previous scholars. This means earnings is not defacto in share price movement.

Oliver and Caroline (2015) examining the magnitude and nature of the relationship between earnings per share and market price of ordinary shares in Nigeria banking industry from 2004 to 2013. In addition, it aims at ascertaining the impact of earnings per share on prices of ordinary shares in Nigerian banking industry. Ordinary least squares method in the form of multiple regression was applied in the analysis. Stationarity test was conducted using the Augmented Dickey-Fuller (ADF) and Phillip Perrons (PP) tests. The result reveals that earnings per share significantly and positively influence the market price of ordinary shares; with a strong and positive association too. Earnings per share also granger causes market price of ordinary shares and these characteristics are sustainable in the long run in Nigerian banking sector. The implication of the findings is that an increase in earnings has the tendency of increasing significantly the market price of shares and earnings per share is one of the key factors responsible for fluctuations in market price of ordinary shares in Nigerian banking sector.

Talamati and Pangemanan (2015) assess the determinants of share price (SP) and their relative importance on the Nigerian Stock Exchange (NSE). Dividend Share Valuation Model, where SP is the discounted value of stream of dividends conditional on information, was adopted. In a competitive stock market, these factors include: level of economic activity, interest, inflation and exchange rates, as well as firm's performance measures such as earnings, dividend and net assets per share, return on equity and assets and gearing ratio among others. Seventy-two dividend-paying firms listed on NSE between 2000 and 2011 were sampled. Generalized least squares and

stepwise regression estimation techniques were used to evaluate the panel model at 5% level of statistical significance. The results of both techniques revealed that firm performance and macroeconomic conditions are major determinants of Share Price on NSE. Thus, the study found consistency of performance affecting stock value.

Tafamel, Adekunle and Ammeh (2015) examines the impact of earnings per share, return on asset, price earnings ratio and gross domestic product on share prices of selected food and beverages listed firms on Nigerian Stock Exchange. Five firms were randomly selected from Nigerian food and beverages sector for analysis. Secondary data was sourced from the annual reports of the sampled firms and Central Bank of Nigeria statistical bulletin that range from 2003 – 2012. The study employed panel data multiple regression model to estimate the relationship between the selected determining factors of share prices. It was found that positive and significant relationships exist between earnings per share and price earnings ratio as independent variables and share prices of the sampled firms. However, return on asset and gross domestic product are not statistically significant determinants of food and beverages firms share price in Nigeria.

Zolomon, Memba and Muturi (2016) examined the relationship between accounting information variable, earnings per share and equity share investment in companies listed on Nigerian Stock Exchange. It investigated the influence of earnings per share on equity share investment decision makings. Secondary data were used for the investigation and a simple linear regression model was employed to analyse the relationship between earnings per share and equity share investment in listed Nigerian firms. The analysis was carried out on a data set of the 2004-2014 time period produced by a sample consisting of companies listed on Nigeria Stock Exchange.

Data were collected from a sample of fifty eight (58) listed companies in Nigeria. The data and information for the study were gathered from published annual reports collected online from the website of the sampled companies. Descriptive and inferential statistics were employed for the study. The findings of the study revealed that there is a significant relationship between accounting information arising from the declaration of profit and equity share investment in the listed companies in Nigeria. Specifically, the findings showed that accounting information variable, earnings per share, was be positively correlated with equity share investment in the listed companies in Nigeria.

Talamati and Pangemanan (2015) analyzing the effect of Earnings per Share (EPS) and Return on Equity (ROE) on Stock Price of banking company listed on Indonesia Stock Exchange in 2010-2014. The samples used were 5 banking companies that passed the test of purposive sampling. Correlation coefficient (R) indicates the variable has a strong relationship. Coefficient of determination shows that the Stock Price is influenced by the EPS and ROE. Simultaneously both EPS and ROE variables affect stock price. Partially, EPS have significant positive effect on Stock Price while ROE does not affect partially on Stock Price.

Mohammad (2014) identify the quantitative factors that influence share prices for the listed banks in Amman Stock Exchange over the period 2005-2011 using empirical analysis of a set of independent and dependent variables. In the present study, the ratio analysis, Correlation and a linear multiple regression models have been selected to measure the individual as well as combined effects of explanatory variables on the dependent variables. The empirical findings shows that, there is a positive correlation between the independent variables DPS, EPS, BV, PE and dependent variable MP and

it is also significant. However, further empirical findings that, there is a significant positive relationship between EPS and the MP of the listed banks in Jordan. Moreover, moreover, there is a significant relationship between banks BV and MP. Another empirical finding from the regression analysis shows a positive relationship between P/E and MP. Empirical findings from the regression analysis on the relationship between S and MP indicate that there is an inverse relationship between S and MP. Finally, other variables (DPS and DP) have insignificant impact on MP.

Oliver and Caroline (2014) determine the direction and significance of the interactions between earnings per share and market price of ordinary shares in the Nigeria brewery industry from 2000 to 2013. Engle and Granger 2-step cointegration and correlation approach was adopted in the analysis with an estimation of an error correction model. Stationarity of time series data were tested with the adoption of Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) procedures. All the study variables were integrated of the same order I(1), signaling a cointegration. Market Price of Shares has a short term positive and significant effect on Earnings Per Share while the long run coefficient shows a negative and insignificant influence in line with our initial expectations. The error correction mechanism suggests that deviations from equilibrium could be corrected at approximately 7% per annum, implying that the distortions affecting EPS in the long term could be corrected in approximately 14 years and three months (approximately 171 months). There is a unidirectional causality running from MPS to EPS at lag 1 period, implying that MPS granger causes EPS in the short run. The result further reveals that a very strong relationship exists between MPS and EPS at approximately 80%.

## **2.3 Theoretical Framework**

### **2.3.1 Rational Expectation Theory (RET)**

Rational Expectation Theory (RET) propositions, emphasize future expectation. The theory put forward that investors purchase stocks depending on their knowledge of what the prices of stocks will be in the future. Rational Expectation theory, according to its proponents, serves as a building block for the 'random walk' or efficient markets' theory of securities prices. A careful study or observation of a sequence of daily stock price reveals that it tends to follow a random walk, especially when the current value gives the best possible prediction of future values. Furthermore, another theory of stock prices called the Efficient Markets theory of stock prices uses the concept of rational expectations to draw conclusions that investors buy stocks they expect to have a higher-than-average return and sell those they expect to have lower returns. Somehow, they tend to push up the prices of stocks which is expected to have higher-than-average returns and drive down the prices of those expected to have lower-than-average returns. The prices of the stock begin to adjust until the expected returns, adjusted for risk are equal for all stocks. By equalization of expected returns, it implies that investors' forecasts or projections become built into or reflected in the prices of stocks. More precisely, it means that stock prices change to adjustment state that will absorb/reflect information like dividends, bonuses, the time value of money, and differential risks, that would equal the market's best forecast of the future price. Therefore, the only factors that can change stock price are random factors that could not be known in advance (Sergeant & Wallace, 1975).

The Efficient Market Hypothesis posits that the most direct influence on a stock's price is a change in the fundamentals of the business. It is such that when revenues and profits are rising, it is expected that there would be a rise in share price. This rise

according to the Efficient Market Hypothesis is as a result of investors bid to buy into the increasing fortunes of the company.

While investors begin to let go off stocks, if profit is flat or declining with no change in sight and as a result there will be a decline in the stock price. Part of the propositions of this theory is that share prices are usually impacted upon by changes in the underlying business operation. As a result, investors that are quick, sharp and visionary in their thought would have foreseen a change reasoning from past events even before prices are affected and would take corrective measures as deemed appropriate. Another factor which the theory identified is what is referred to as sector changes; the theory maintains that changes in the stock's sector can have positive or negative effects on its price. Mukherjee and Naka (1995) and Maysami and Koh (2000) posits that cyclical nature of some sectors or industries should be expected to have effect on share prices as well. Mukherjee and Naka (1995) stated further that forces of demand and supply also known as market forces can affect the movement of stock price. It is such that at any level where there is change in demand and supply; it would in turn cause fluctuation in share prices. For example the share price of stock rises when the demand for such stock rises. Whereas, share price falls whenever there is an increase in supply of stock.

Rationally, another factor identified as Investment returns or company profitability is also one of the determinants of share price movements. This factor is, however dependent on profitability as there is no company that can pay good investment returns in terms of dividends and/or bonus issues to its shareholders without a solid profitability report. In the meantime, most company only declare dividends when they make profit, this could be misleading since there is no compulsion on any firm by law

to declare their dividends. As such, when they do not profit they will not see need to declare dividends. It is only when such company makes profit that it can declare dividend and/or bonus issues. Obviously, it is expected more investors will be naturally attracted to a company with very sumptuous investment yields. As a result, there will be high demand for its stock and the price moves up when the returns on investment are attractive. The contrary occurs when a company's investment return is unattractive. On the other hand, a poor profitability will not attract investors as they will not like to put their money at risk. In essence, impressive profitability of a company leads to increase in demand of the company's shares and subsequently increase in its share price. Therefore, this theory explained the effect of each determinants on share prices of the cement manufacturing companies in Nigeria.

### **2.3.2 Arbitrage Pricing Theory (APT)**

The theoretical relationship between stock market prices and economic variables dates back to Ross (1976), whose arbitrage pricing theory (APT) relates stock market returns to economic variables which are sources of income volatility. The impact of these economic variables on stock market returns dependent on underlying model assumptions. The APT model was developed as an alternative to the capital asset pricing model (CAPM). As Groenewold and Fraser (1997) note the main weaknesses of the CAPM is unrealistic assumptions and empirical shortcomings. According to Groenewold and Fraser, the CAPM shows low explanatory power, overestimates the risk-free rate and underestimates the market risk premium. Groenewold and Fraser (1997) stated that the APT model was expected to overcome the weaknesses of the CAPM. The advantage of the APT over CAPM may be derived from the fact that asset returns are generated by a multi-variable model: it is expected to have more

explanatory power because it allows for more than one factor. The APT model relates the expected rate of return on a sequence of primitive securities to their factors sensitivities, suggesting that factor risk is of critical importance in asset pricing. The APT is a new and different approach to determining asset prices. It tries to capture some of the non-market influences that cause securities to move together.

Unlike the CAPM, which requires strong restrictions on return distributions and preferences, the APT gives a characterization of expected returns on assets based only on the weak assumptions that there are no arbitrage opportunities, returns follow a factor structure and there are homogeneous expectations. The APT formulated by Ross (1976) rests on the hypothesis that the equity price is influenced by limited and non-correlated common factors and by a specific factor totally independent of the other factors. By using this arbitrage reasoning it can be shown that in an efficient market, the expected return is linear combination of each factor's beta (Morel, 2001). The risk associated with holding a particular security comes from two sources (Isenmila & Erah, 2012). The first source of risk is the macroeconomic factors that affect all securities. Their influence pervades the whole asset market and cannot be diversified away. The APT assumption relates to this type of risk that has macroeconomic influence. The second source of risk is the idiosyncratic element. This element is unique to each security and, according to the APT, in a broadly diversified portfolio it can be diversified away. Broadly speaking, the APT implies that the return of an asset can be broken down into an expected return and an unexpected or surprise component. Thus, the APT predicts that "general news" will affect the rate of return on all stocks but by different amounts. In this way the APT is more general than the CAPM, because it allows larger number of factors to affect the rate of return (Cuthbertson, 2004).

### **2.3.3 The Random Walk Theory**

The theory was advocated by Fama (1965) in the journal on stock market prices. In his finding he advocates that the random walks in the prices of stock is pivoted on the premises that the successive price changes typically independent and that the price fluctuations are consistent with some form of probability distribution. He established in his argument that variations in stock prices seem to follow a stable Paretian distributions. The random walk theory developed the proposition that previous stock prices can therefore not be used to predict the expected future prices. Godwin (2010) while studying on the applicability of the random walk theory on the Nigeria Stock Exchange proved that theory applies though in a weak form of market efficiency by the substantiation that data conveyed in the past pattern of the prices of shares is compounded in the current prices. In Statistical terms, the price changes in period are not related to the price changes in the successive periods. However, Fama and Kenneth (1998) on their studies on dividend yields and expected stock returns established that the power of dividend yields to forecast stock returns increases with horizon.

### **2.3.4 Signaling Hypothesis**

Litzenberger & Ramaswamy (1979) came up with a theory that claiming that there is asymmetric of information between management and other stakeholders of a company; investors will react positive to the announce of earnings and dividends of a firms because it signal better future for the company consequently improve the value of the company share price. Also, to cross over any barrier, administration utilizes profits and income as an instrument of conveying private data to shareholders (Al-

Malkawi, 2007). Earnings announcements are just an example of marketing tools that managers use to convey information to the firm's investors and shareholders concerning the financial health of the company and its future expectations (Lonie et. al., 1996).

According to John and Williams (1985), dividends might expose the characteristics of a firm to outsiders, either complete or partial terms, regardless of the existence of dissipative costs. Optimally smooth dividend payments over time made by a company to its shareholders may be interpreted by the outsiders to mean a good firm and management reputation. Many investors will be tempted to invest in the company's shares and hence improving on the stock price and the ultimate market value of the firm as the company will be seen to be making continual positive earnings/income (even if this isn't the case).

According to Miller and Modigliani (1961), a dividend reduction conveys a message that future earnings prospects are poor. They based this on the assumption that the signaling effect of dividends conveys information about future earnings. The changes in dividend policies therefore give the message about the direction of the firm's future cash flows. Almalkawi (2007) also points out that there exists information asymmetry between the managers and outsiders contrary to MM assumptions of information being costless and available to all and the management normally uses earnings and dividends as an instrument to indicate private information to shareholders. According to Mwaura, Ganesh and Waweru (2012), investors use dividends as a signal about the firm's future prospects. These findings were established in their study on the signaling hypothesis by examining the displacement properties of dividends. This brings the findings into a local/Kenyan perspective.

Lipson et. al. (1998) also observed that in many cases, managers do not introduce dividends until they are assured that the dividends can be replaced by future revenue. Dividends are, consequently regarded as a credible signaling tool that influence market value, because of the dissipative costs involved hence the theory is relevant in this study. The theory will be important for the current study since it provides information on the involvement of all stakeholders in acquisition of data concerning an organization's forecasts and recital, which will enable them to make right decisions with regard to performance.

### **2.3.5 The Three Links Theory**

The three links theory introduced by Beaver (1998) explains the relationship between earnings and share price. The theory linking the firm's earnings numbers to changes in the firm's market value depends on three assumptions about the information contained in earnings and share prices. First, the theory assumes that earnings provides information to equity shareholders about current and expected future profitability. Second, the theory assumes that current and expected future profitability provides shareholders with information about the firm's current and expected future dividends. Third, the theory assumes share price equals the present value of expected future dividends to the shareholder. These links imply that new accounting earnings information that triggers a change in investors' expectations for future dividends should correspond with a change in the market value of the firm (Beaver, 1998).

Link 1 in the three-links theory assumes that a current period earnings number provides two important elements of information useful for developing dividends expectations: information about current period wealth creation and information about future earnings. First, firms measure earnings using accrual accounting principles, which measure the effects of transactions and events on shareholders' equity.

Therefore, the current period earnings number summarizes important information about the wealth created by the firm for equity shareholders during the period. Second, current period earnings and related financial statement data provide useful information to predict future earnings (Nichols & Wahlen, 2004). Firms' income statements commonly distinguish between operating income, which captures the results of the firm's ongoing operations that will likely recur in the future, and special items which are not part of ongoing operations and therefore are less likely to affect the firm's performance in future periods.

It is instructive to state that, firms depend on financial reporting to convey credible information about their ability to generate future wealth for equity shareholders and other stakeholders. More generally, an important objective of financial accounting is to provide information useful for assessing the amounts, timing, and uncertainty of future dividends and cash flows (Nichols & Wahlen, 2004).

### **2.3.6 Earnings Multiplier Model**

Basu (1977) in the earnings multiplier model (P/E) argued that earnings is the most important factor that determines the financial health and real value of a company and which in case of rational investors it should determine the share price. Earnings multiplier (P/E) model pioneered by Basu (1977) is a common measure used to indicate market assessment of a company's earnings relative to their current stock price. The rationale underlying the basic concept is that value of any investment is the present value of future earnings. Many investors prefer capital gain and not dividends (Al-Malkawi, 2007) therefore focusing solely on dividend is less desirable and the earnings multiplier or P/E model remains a popular approach to valuation. Since dividend is paid out of earnings, investors must estimate the growth in earnings before

they can estimate the growth in dividends or dividends themselves. To the rational investors, the earnings multiplier reflects their expectation about the growth potential of a stock and the risk involved.

### **2.3.7 The Dividend Irrelevance Theory**

Miller and Modigliani (1958) came up with the Dividend Irrelevance theory and argued that the dividend policy adopted by the company is irrelevant in evaluating worth/value received by shareholders from the shares held in the world without taxes and market imperfections. They argued that firms can distribute the profits of the firm to the shareholders either through capital gains or dividend payments. This means that the more shares held, the more dividends received when they are declared. These dividends are a form of interest for the investment. Lack of investment opportunities, earnings available for investment, the financial leverage of a firm, its debt equity ratio and the company's liquidity position are the main determinants of a payout policy. It also depends on the preferences of investors and potential investors. The Residual Theory asserts that a firm only pays dividends after factoring in the need for funds to finance positive Net Present Value (+NPV) projects. Therefore, dividends are a left-over of earnings i.e. earnings net of retained earnings (for +NPV projects) and essentially the projects will be beneficial to the shareholders in the long run. They argue that companies don't need to incur debt if they have the privilege of retaining part of its earnings and finance company growth and investments.

The issue of Dividend Tax and Capital Gains Tax also accompany this theory. In the Kenyan context, even in the wake of the introduction of the capital gains tax, dividends are still taxed at a high rate compared to the tax applied on the share value appreciation, otherwise referred to as capital gains (Miller & Scholes, 1978).

According to Al-Malkawi (2007) many investors prefer capital gains and not dividends and focusing solely on dividends is less desirable and the earnings multiplier remains a popular approach to valuation of shares.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

The research design adopted for this study is ex-post facto. It relied on past data therefore, the researcher cannot manipulate the figures. It determined the relationship between independent variables on dependent variable. In this study, it aids in analyse the determinants of share prices of quoted cement manufacturing firms in Nigeria.

#### **3.2 Population, Sample and Sampling Technique**

The population of this study comprises of all the Four (4) Quoted Cement manufacturing companies in Nigeria in Nigeria. According to Nigerian Stock Exchange report of 2017, there are 4 quoted cement manufacturing companies in Nigeria. Hence, since the population of the study is not many, the study employed all the companies as the sample of the study.

#### **3.3 Methods of Data Collection**

This study makes use of panel data which is collected using secondary source. The secondary source of data collection are collected from CBN statistical bulletin as well as the annual reports for the period. Gross domestic product, monetary rate and inflation rate were collected from the CBN statistical bulletin data while dividend per share, earnings per share and market price per share were collected from the annual report of the individual firms.

### 3.4 Technique for Data Analysis and Model Specification

The study used panel ordinary least square regression analysis collected from the Quoted Cement Manufacturing Companies in Nigeria. Thus, to ensure the validity of the analysis the pre and post residuals diagnostics test is run. Therefore, descriptive statistics is run to describe the variables of the study.

Furthermore, the test of normality is conducted which enables the study to ascertain the normality of the explanatory variables and explained variable. Hausman specification is run to choose between the fixed and the random effect models. The test of multicollinearity is run to ensure that the explanatory variables are not highly correlated. The test of Heteroskedasticity is done to ensure the homoskedasticity of the data.

#### Model Specification

$$MPPS_{it} = B_0 + B_1GDP_t + B_2MR_t + B_3INFL_t + B_4DPS_{it} + B_5EPS_{it} + e_{it} \dots \dots \dots$$

Where;

MPPS = Market Price Per Share

GDP = Gross Domestic Product

INFL = Inflation rate

MR = Monetary Rate

DPS = Divided Per Share

EPS = Earnings Per Share

$e$  = error term

$B_1$ -  $B_4$  = coefficient of parameters

### **3.5 Justification of Method of Data Collection and Analysis**

Multiple regression was used because of the linear relationship that exists between determinants used in the study and the share prices variables while the period was consider to make the study more recent. The data on inflation rate, monetary rate, gross domestic product, earning per share, dividend per share and share prices was obtained from central bank statistical bulletin and annual report because it is an existing data while ex-post facto design was adopted because it aids to ascertain the existing relationship between the independent and the dependent variable.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSIS

#### 4.1 Data Presentation

In this section, reference is made to the data collected in relation to the study variables ranging from Share Prices (MPPS), Gross Domestic Products (GDP), Interest Rate (MR), Inflation Rate (INFR), Dividend per Share (DPS), and Earnings per Share (EPS). These data are attached at the appendix.

#### 4.2 Data Analysis and Results

**Table 4.1 Descriptive Statistics**

	Market Price Per Share	Gross Domestic Product	Monetary Rate	Inflation Rate	Dividend Per Share	Earnings Per Share
Mean	38.91900	61361.60	10.15000	9.680000	1.990000	3.756250
Median	39.83500	61574.31	10.50000	9.900000	1.865000	3.085000
Maximum	62.66000	78367.47	13.00000	13.70000	4.980000	9.340000
Minimum	4.800000	46012.52	6.000000	5.100000	0.300000	0.570000
Std. Dev.	13.91643	9383.340	2.312730	2.853266	1.232198	2.230106
Skewness	-0.406009	0.043431	-0.742086	-0.309872	0.478184	1.083635
Kurtosis	2.833150	2.244520	2.315765	1.849968	2.499509	3.701875
Jarque-Bera	1.145352	0.963824	4.451570	2.844428	1.941882	8.649483
Probability	0.564014	0.617601	0.107983	0.241179	0.378727	0.013237
Sum	1556.760	2454464.	406.0000	387.2000	79.60000	150.2500
Sum Sq. Dev.	7553.009	3.43E+09	208.6000	317.5040	59.21420	193.9615
Observations	40	40	40	40	40	40

**Source: Researcher's Computation using Eviews version 9**

Table 4.1 is the table that described the characteristics of the study's variables in terms of MPPS, GDP, MR, INFR, DPS, and EPS. The average scored for the MPPS is 38.92 while the

median is 39.84. MPPS is normally distributed because it has a probability greater than 5% level of confidence while the maximum market price per share is 62.66 and the minimum market price per share is 4.80. The skewness and kurtosis are -0.406009 and 2.833150.

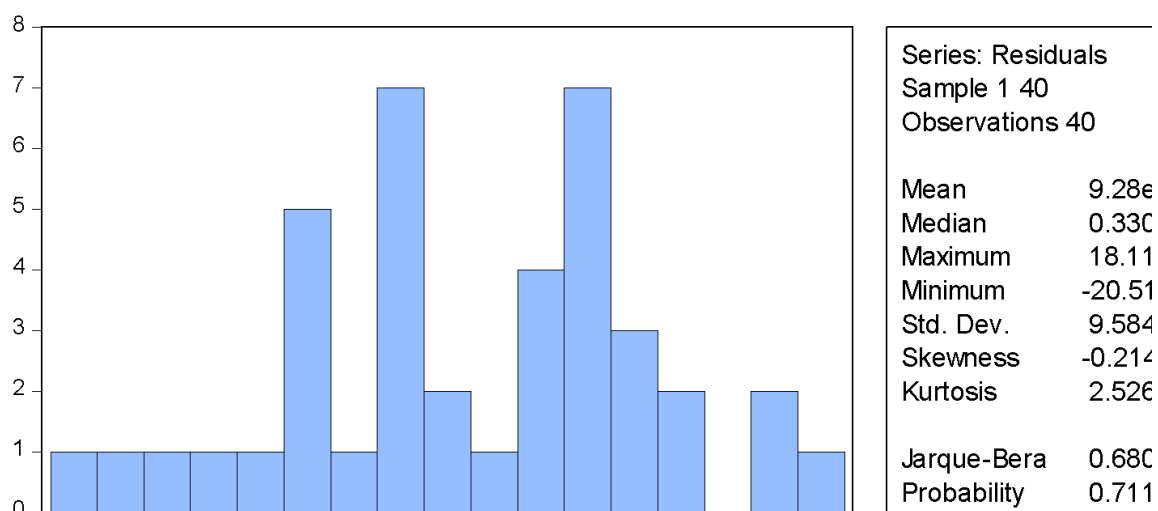
The gross domestic product mean score 61361.60 and the probability indicates that GDP is normally distributed because is greater than 5% while the median is 61574.31. The maximum and minimum gross domestic product within the scope period is 78367.47 and 46012.52 while the standard deviation is 9383.340.

Monetary rate has a probability of 0.107983 which indicates that monetary rate is normally distributed because it has probability greater than 5% level of confidence and the mean score of monetary rate is 10.15. The result also indicates that the median of median is 10.5 while the maximum and minimum monetary rate is 13 and 6. The skewness and kurtosis are -0.742086 and 2.315765.

Inflation rate has is normally distributed with probability greater than 5% level of confidence with the mean score is 9.68 while the maximum inflation rate in Nigeria within the period of this study is 13.7 and 5.1 as the minimum inflation rate. Also, the result indicates that the median, skewness and kurtosis are 9.90, -0.309872 and 1.849968 accordingly.

Dividend per share has a mean score of 1.99 with probability greater than 5% while the median is 1.865 and the maximum and minimum DPS is 4.98 and 0.30 respectively. Furthermore earnings per share has a mean score of 3.76 while probability less than 5. Hence, EPS is not normally distributed because its probability is less than 5% level of confidence. The maximum and minimum EPS is 9.34 and 0.57 accordingly.

**Table 4.2 Normality Test**



**Source: Researcher's Computation using Eviews version 9**

Table 4.2 is the histogram table for test of normality. It is therefore posited to note that, the Jarque-Bera statistics value and its corresponding p-value of 0.68 & 0.7117 indicate normally of the residual.

**Table 4.3 Correlation Matrix**

Covariance Analysis: Ordinary

Date: 02/28/19 Time: 09:09

Sample: 2008 2017

Included observations: 40

Covariance						
Correlation	Market Price Per Share	Gross Domestic Product	Monetary Rate	Inflation Rate	Dividend Per Share	Earnings Per Share
Market Price Per Share	1.000000					
Gross Domestic Product	3482.176 0.027350	85845884 1.000000				
Monetary Rate	-5.266725 -0.167835	9554.731 0.451577	5.215000 1.000000			
Inflation Rate	3.751280 0.096896	7500.078 0.287317	-2.549500 -0.396263	7.937600 1.000000		
Dividend Per Share	10.62596 0.635558	4431.528 0.393107	0.574375 0.206721	0.196400 0.057295	1.480355 1.000000	
Earnings Per Share	17.74987 0.586594	7521.441 0.368649	1.361875 0.270821	-0.094975 -0.015309	2.369320 0.884327	4.849038 1.000000

**Source: Researcher's Computation using Eviews version 9**

Table 4.3 is a correlation matrix that explains the association between the dependent and the independent variables. The table also clearly depicts positive correlation/association between the explained and the explanatory variables, except in the case of MR that a negative correlation was indicated. These are given by the respective coefficients of 0.027, -0.167,

0.096, 0.635 & 0.586 for Gross Domestic Product, Monetary Rate, Inflation Rate, Dividend Per Share & Earnings Per Share respectively.

gross domestic product has positive correlated with market price per share to the extent of 3482.176 while monetary rate has negative correlation with market price per share. Furthermore, inflation rate, dividend per share and earnings per share has positive relationship with market price per share of quoted cement manufacturing firms in Nigeria.

**Table 4.4 Hausman Specification Test**  
 Correlated Random Effects - Hausman Test  
 Equation: Untitled  
 Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	73.562365	5	0.0021

**Source: Researcher’s Computation, using Eviews version 9**

Table 4.3 is the Hausman Specification test guides the choice between Fixed and Random Effect Models. The result indicated that, fixed effect model is more appropriate compare to random effect model given the Chi-Square and its probability value of 0.0021 which is less than critical value of 0.05 (5%).

**Table 4.5 Result Summary of Panel Regression (Fixed Effect Model)**

<b>Variables</b>	<b>Coefficient</b>	<b>t- statistics</b>	<b>P-Value</b>
GDP	8.78E-05	0.353476	0.7261
MR	-1.268116	-1.365868	0.1818
INFR	-0.294540	-0.421672	0.6762
DPS	9.223458	2.974039	0.0056
EPS	-4.068477	-1.653384	0.1083
C	46.18345	4.048434	0.0003
R <sup>2</sup>	0.647970		
F-statistics	7.132589		
F-significance	0.000025		

**Source: Researcher's Computation using Eviews version 9**

Table 4.5 depicts the fixed effect regression result. Thus, the regression indicates gross domestic product has positive insignificant effect on market price per share with p-value of 0.7261 while monetary rate has negative insignificant effect on market price per share with p-value of 0.1818 which means that increase in monetary rate will decrease market price per share.

Furthermore, the inflation rate has negative insignificant effect on market price per share with p-value of 0.6762 while dividend per share has positive significant effect on market price per share with p-value of 0.0056. Also, the p-value of earnings per share indicates that earnings per share has negative insignificant effect on market price per share because is greater than 5% level of confidence.

The regression line of  $MPPS = 46.18 + 8.78GDP - 1.26MR - 0.29INFR + 9.22DPS - 4.06EPS$  indicates that, MPPS of quoted cement companies in Nigeria increases as Gross Domestic Products (GDP) and Dividend per Share increase. However, it decreases with increase in Monetary Rate (MR), Inflation Rate (INFR) and Earnings per Share (EPS) but insignificantly.

The R-Squared of 0.647 indicates that about 65% of variation in MPPS of quoted cement companies in Nigeria can be explained by Gross Domestic Products, Monetary Rate, Inflation Rate, Dividend per Share and Earnings per Share. The remaining 35% is captured by the disturbance or error term. The F-statistics of 7.132 and its p-value of 0.0000 indicate fitness of the model.

**Table 4.6 Multicollinearity Test**

Variance Inflation Factors  
 Date: 02/28/19 Time: 09:25  
 Sample: 1 40  
 Included observations: 40

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	156.2788	59.32391	NA
GDP	6.33E-08	92.48433	2.061597
MR	1.035231	42.53481	2.049373
INFR	0.586053	22.61158	1.765857
DPS	8.555088	17.66808	4.807508
EPS	2.600812	18.71722	4.787338

**Source: Researcher's Computation using Eviews version 9**

Table 4.6 is a Multicollinearity table that test whether the explanatory or independent variables are highly correlated. These variables can only be highly correlated if the Variance

Inflation Factor (VIF) is greater than 10. However, since the respective VIFs are less than 10 (i.e. 2.06, 2.04, 1.76, 4.81, & 4.79), this means that there is absence of autocorrelation.

**Table 4.7 Heteroskedasticity Test**

Heteroskedasticity Test: Breusch-Pagan-Godfrey

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F-statistic	0.572075	Prob. F(5,34)	0.7208
Obs*R-squared	3.104011	Prob. Chi-Square(5)	0.6840
Scaled explained SS	1.711529	Prob. Chi-Square(5)	0.8874

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**Source: Researcher’s Computation using Eviews version 9**

Table 4.7 is a heteroskedasticity table which explains the homokedasticity of the study’s variables. The Observed R-Squared of 3.104 and the Probability value of 0.6840 is greater than the t-value of 5% which indicates Homokedasticity of the residuals. This however, reveals absence of heteroskedasticity in the residuals, since the null hypothesis says that the residuals are Homokedasticity, and the alternative hypothesis says the residuals are heteroskedasticity.

**4.3 Discussion of Findings**

It is evident in the above results and analysis that, GDP is positively related to share prices with statistical insignificance. This implies that, market price per share of quoted cement manufacturing companies in Nigeria increases as GDP increases by 8.78E-05 proortion. This finding is consistent with the findings in the previous studies such as Obamiro (2005); Oliver (2015); Tafamel, Adekunle and Ammeh (2015); and more recently Worlu and Omodero (2017).

Also, the study aligns with signalling theory. Similarly, a positive but significant effect of DPS on share prices of quoted cement manufacturing companies in Nigeria was found. This means that, market price per share of quoted cement manufacturing companies in Nigeria increases as DPS increases. This finding is consistent with the findings in the previous works of Abdulkarim (2014); Irmala, Sanju and Ramachandran (2011); Ejuvbekpokpo and Edesiri (2014); and more recently Galgallo (2016). This is in tandem with the signalling theory which states that, investors prefer to invest where increase in investment returns are perceived. Thus when there is signal of constant dividend payments, investors will tend to invest in that profitable venture which in turn increases price per share in such companies as a result of the number of potential investors that will indicate interest.

Conversely, insignificant effects of monetary rate on MPPS were found. This can infer to say that, Market price per share of quoted cement manufacturing companies in Nigeria insignificantly decrease with increase in monetary rate. The findings agreed with the findings in the previous works of Mahmudul and Gazi (2009); Ngugi (2004); Adaramola (2011).

Furthermore, the result ascertained that inflation rate has negative effect on Market price per share of quoted cement manufacturing companies in Nigeria. This means that increase in inflation rate will decrease market price per share. The finding agreed with the findings in the previous works of Adaramola (2011); Hamdan (2014); Umar and Ishiak (2009); Henry and Clinton (2015).

Lastly, the result indicates that earnings per share has negative effect on market price per share. This means that increase in earnings per share will decrease earnings per share. The findings agreed with the findings in the previous works of Ngugi (2004); Hamdan (2014);

Umar and Ishiak (2009); Henry and Clinton (2015); and more recently, Ahmed and Igbinoia (2016). The study is supported by the theories of Arbitrage Pricing and Rational Expectation.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

This study examines the factors that determine share prices in quoted cement manufacturing companies in Nigeria. The study adopts ex-post facto research design given the secondary nature of the data used. The population of this study comprises of all the four (4) quoted cement manufacturing companies in Nigeria as at 2017. According to Nigerian Stock Exchange report of 2017, there are 4 quoted cement manufacturing companies in Nigeria. Purposive sampling method will be used to select only companies with variables data set for the study period. Such variables data of important are the report of dividend pay-out for major period the study intend to cover. Therefore, purposeful sampling technique was used to select the companies with required data for the period spanning through 2008 to 2017.

The study made use data which was collected from CBN statistical bulletin and the annual reports and accounts of the audited financial statements for the study period. The study made use of panel regression analysis given the panel data collected from the quoted cement manufacturing companies in Nigeria. Thus, to ensure the validity of the analysis the pre and post residuals diagnostics test were run to ensure robustness of the study's results. Thus, descriptive statistics, test of normality, correlation matrix, Hausman specification test, multicollinearity test, and test of Heteroskedasticity were run.

The panel regression result indicates that, GDP is positively related to share prices with statistical insignificance. This implies that, market price per share of quoted cement manufacturing companies in Nigeria increases as GDP increases. Similarly, a positive but significant effect of DPS on share prices of quoted cement manufacturing companies in Nigeria was found. This means that, market price per share of quoted cement manufacturing

companies in Nigeria increases as DPS increases. Conversely, insignificant effects of MR, INFR and EPS on MPPS were found. This can infer to say that, Market price per share of quoted cement manufacturing companies in Nigeria insignificantly decrease with increase in Interest rate, inflation rate and earnings per share of quoted cement manufacturing companies in Nigeria.

## **5.2 Conclusions**

Based on the findings of the study, it was concluded that, GDP is not the major determinant of share prices in the quoted cement manufacturing companies in Nigeria. This means that, even when there is increase in the GDP, investors are not too particularly to invest in companies that consequently will result to increase in share prices because of the increased number of patronage of the companies' shares.

Also, the study concludes that, DPS is the major factor that influences shares of quoted cement companies in Nigeria. This conclusion aligns with signalling theory which states that, investors are interested to invest in a company which signals its prospects by paying consistent dividend.

Furthermore, the study concludes that, monetary interest rate, inflation rate and earnings per share of quoted cement manufacturing companies in Nigeria, are not major determinants of share prices in the companies. It was more so concluded that, increase in inflation rate, interest rate and earnings per share of the quoted cement manufacturing companies in Nigeria decrease the share prices of the companies. Thus, increase in monetary interest rate, inflation rate and earnings per share has no significant effect on share prices of quoted cement manufacturing companies in Nigeria within the scope of the study.

### **5.3 Recommendations**

In line with the findings and conclusions drawn from the study, the following recommendations are made:

- i. The CBN should put in place a policy what will gear towards improving the GDP of the country with a view to enhancing the citizens' participation in the economic activities of the country, which will stimulate investment habit that will result in increased share prices of companies.
- ii. The quoted cement manufacturing companies in Nigeria should develop a habit of paying dividend to its investors with a view to signalling that the companies are doing. This will make potential investors to be encouraged to invest in the companies. Thus, increasing the companies' share prices as a result of the number of investors that will rush for the share of the companies.
- iii. The study also recommends that, government should make concerted efforts in reducing the inflation rate and interest rate in the country with a view to promoting savings and consequently investment so as to increase the share prices of the companies for sustainability.

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## Appendix

	Year	ID	MPPS	GDP	MR	INFR	DPS	EPS
ASHAKA	2008	1	22.5	46,012.5 2	10.00	5.10	1.7	2.54
	2009	1	34.2	49,856.1 0	9.50	5.40	2.85	2.92
	2010	1	54	54,612.2 6	9.75	11.60	2.32	3.01
	2011	1	50.55	57,511.0 4	6.00	12.50	1.5	1.63
	2012	1	17.86	59,929.8 9	6.25	13.70	1.5	0.81
	2013	1	11.04	63,218.7 2	12.00	10.80	0.3	0.57
	2014	1	26.51	67,152.7 9	12.00	12.20	0.3	0.74
	2015	1	11.5	69,023.9 3	12.00	8.50	0.3	1.31
	2016	1	4.8	67,931.2 4	13.00	8.00	0.42	1.24
	2017	1	29.98	78,367.4 7	11.00	9.00	0.42	2.43
DANGOTE	2008	2	54.9	46,012.5 2	10.00	5.10	1.32	3.24
	2009	2	58.34	49,856.1 0	9.50	5.40	1.58	3.92
	2010	2	60.86	54,612.2 6	9.75	11.60	2.19	5.34
	2011	2	61.43	57,511.0 4	6.00	12.50	2.98	4.84
	2012	2	62.66	59,929.8 9	6.25	13.70	3.01	5.21
	2013	2	43.28	63,218.7 2	12.00	10.80	3.25	7.43
	2014	2	32.98	67,152.7 9	12.00	12.20	3.87	7.99
	2015	2	48.22	69,023.9 3	12.00	8.50	4.39	8.94
	2016	2	51.29	67,931.2 4	13.00	8.00	4.98	9.19
	2017	2	53.21	78,367.4 7	11.00	9.00	4.29	9.34
WAPCO	2008	3	31.37	46,012.5 2	10.00	5.10	0.67	1.89
	2009	3	33.29	49,856.1 0	9.50	5.40	0.95	2.07
	2010	3	37.29	54,612.2 6	9.75	11.60	1.54	2.39
	2011	3	40.28	57,511.0 4	6.00	12.50	1.86	2.48

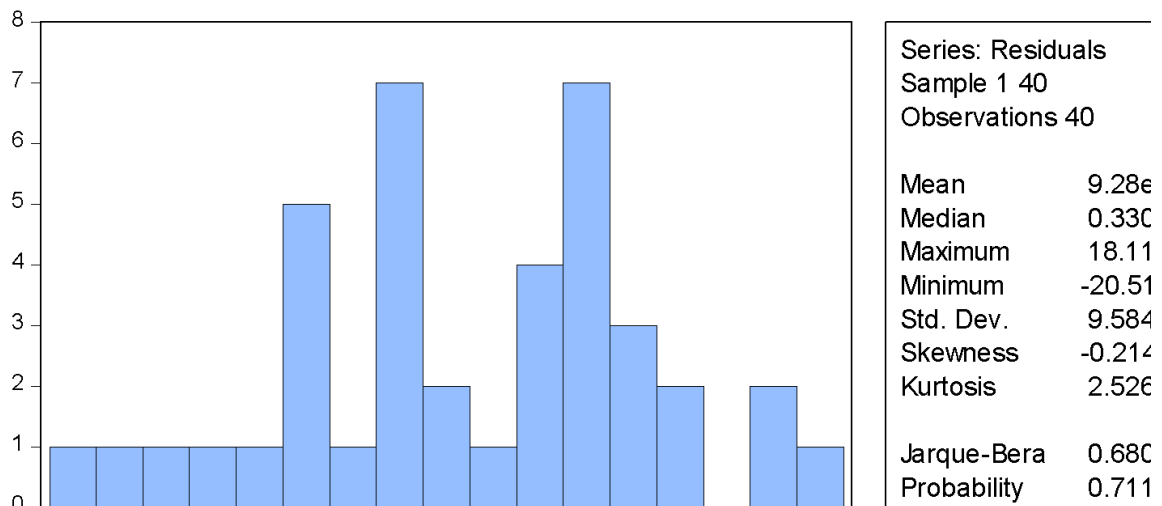
	2012	3	40.77	59,929.8 9	6.25	13.70	1.94	2.79
	2013	3	41.29	63,218.7 2	12.00	10.80	2.05	3.03
	2014	3	44.91	67,152.7 9	12.00	12.20	2.55	3.78
	2015	3	46.8	69,023.9 3	12.00	8.50	2.85	4.92
	2016	3	46.99	67,931.2 4	13.00	8.00	3.04	4.99
	2017	3	48.22	78,367.4 7	11.00	9.00	3.43	5.04
NNCC	2008	4	28.98	46,012.5 2	10.00	5.10	0.57	2.84
	2009	4	29.73	49,856.1 0	9.50	5.40	0.84	2.89
	2010	4	30.18	54,612.2 6	9.75	11.60	0.92	2.99
	2011	4	31.29	57,511.0 4	6.00	12.50	1.04	3.04
	2012	4	31.98	59,929.8 9	6.25	13.70	0.58	3.13
	2013	4	34.92	63,218.7 2	12.00	10.80	1.43	3.35
	2014	4	37.29	67,152.7 9	12.00	12.20	1.87	3.54
	2015	4	39.39	69,023.9 3	12.00	8.50	2.35	3.98
	2016	4	43.29	67,931.2 4	13.00	8.00	2.76	4.19
	2017	4	48.39	78,367.4 7	11.00	9.00	2.89	4.28

## ANALYSIS

### Descriptive Statistics

	MPPS	GDP	MR	INFR	DPS	EPS
Mean	38.91900	61361.60	10.15000	9.680000	1.990000	3.756250
Median	39.83500	61574.31	10.50000	9.900000	1.865000	3.085000
Maximum	62.66000	78367.47	13.00000	13.70000	4.980000	9.340000
Minimum	4.800000	46012.52	6.000000	5.100000	0.300000	0.570000
Std. Dev.	13.91643	9383.340	2.312730	2.853266	1.232198	2.230106
Skewness	-0.406009	0.043431	-0.742086	-0.309872	0.478184	1.083635
Kurtosis	2.833150	2.244520	2.315765	1.849968	2.499509	3.701875
Jarque-Bera	1.145352	0.963824	4.451570	2.844428	1.941882	8.649483
Probability	0.564014	0.617601	0.107983	0.241179	0.378727	0.013237
Sum	1556.760	2454464.	406.0000	387.2000	79.60000	150.2500
Sum Sq. Dev.	7553.009	3.43E+09	208.6000	317.5040	59.21420	193.9615
Observations	40	40	40	40	40	40

### Normality Test



### Correlation Matrix

Covariance Analysis: Ordinary

Date: 02/28/19 Time: 09:09

Sample: 2008 2017

Included observations: 40

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Covariance Correlation	MPPS	GDP	MR	INFR	DPS	EPS
MPPS	1.000000					
GDP	3482.176 0.027350	85845884 1.000000				
MR	-5.266725 -0.167835	9554.731 0.451577	5.215000 1.000000			
INFR	3.751280 0.096896	7500.078 0.287317	-2.549500 -0.396263	7.937600 1.000000		
DPS	10.62596 0.635558	4431.528 0.393107	0.574375 0.206721	0.196400 0.057295	1.480355 1.000000	
EPS	17.74987 0.586594	7521.441 0.368649	1.361875 0.270821	-0.094975 -0.015309	2.369320 0.884327	4.849038 1.000000

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### Hausman Specification Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

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Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	73.562365	5	0.0021

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### Regression Result (Fixed Effect)

Dependent Variable: MPPS

Method: Panel Least Squares

Date: 02/28/19 Time: 09:05

Sample: 2008 2017

Periods included: 10

Cross-sections included: 4

Total panel (balanced) observations: 40

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	46.18345	11.40773	4.048434	0.0003
GDP	8.78E-05	0.000248	0.353476	0.7261
MR	-1.268116	0.928433	-1.365868	0.1818
INFR	-0.294540	0.698506	-0.421672	0.6762
DPS	9.223458	3.101324	2.974039	0.0056
EPS	-4.068477	2.460697	-1.653384	0.1083

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#### Effects Specification

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Cross-section fixed (dummy variables)

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R-squared	0.647970	Mean dependent var	38.91900
Adjusted R-squared	0.557124	S.D. dependent var	13.91643
S.E. of regression	9.261235	Akaike info criterion	7.484660
Sum squared resid	2658.885	Schwarz criterion	7.864657
Log likelihood	-140.6932	Hannan-Quinn criter.	7.622055
F-statistic	7.132589	Durbin-Watson stat	1.697382
Prob(F-statistic)	0.000025		

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## Multicollinearity Test

Variance Inflation Factors

Date: 02/28/19 Time: 09:25

Sample: 1 40

Included observations: 40

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Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	156.2788	59.32391	NA
GDP	6.33E-08	92.48433	2.061597
MR	1.035231	42.53481	2.049373
INFR	0.586053	22.61158	1.765857
DPS	8.555088	17.66808	4.807508
EPS	2.600812	18.71722	4.787338

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## Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

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F-statistic	0.572075	Prob. F(5,34)	0.7208
Obs*R-squared	3.104011	Prob. Chi-Square(5)	0.6840
Scaled explained SS	1.711529	Prob. Chi-Square(5)	0.8874

---

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 02/28/19 Time: 09:24

Sample: 1 40

Included observations: 40

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Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	264.3045	140.3818	1.882755	0.0683
GDP	-0.003783	0.002824	-1.339215	0.1894
MR	2.614773	11.42561	0.228852	0.8204
INFR	1.457157	8.596646	0.169503	0.8664
DPS	25.91554	32.84528	0.789019	0.4356
EPS	-9.277622	18.10986	-0.512297	0.6118

---

R-squared	0.077600	Mean dependent var	89.56726
Adjusted R-squared	-0.058047	S.D. dependent var	112.0659
S.E. of regression	115.2726	Akaike info criterion	12.46996
Sum squared resid	451784.0	Schwarz criterion	12.72329
Log likelihood	-243.3991	Hannan-Quinn criter.	12.56155
F-statistic	0.572075	Durbin-Watson stat	1.220057
Prob(F-statistic)	0.720826		

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