# DETERMINANTS OF SHAREHOLDERS' VALUE OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE (M.Sc.) IN ACCOUNTING AND FINANCE

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## DECLARATION

I hereby declare that this study titled "Determinants of Shareholders' Value of Listed Industrial Goods Firms in Nigeria" was performed by me under the supervision of Dr. Salisu Mamman and Malam Ibrahim Yusuf. The ideas and views of this study are products of my research effort and to the best of my knowledge, it has not been previously submitted for the award of higher degree in any institution of learning. All works and articles consulted have been duly acknowledged in the text and a list of references has been provided.

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## CERTIFICATION

This is to certify that this dissertation titled "Determinants of Shareholders' Value of Listed Industrial Goods Firms in Nigeria" written by Abdullahi Ibrahim ISAH meets the regulations governing the award of Masters of Science (M.Sc.) Degree in Accounting and Finance of Ahmadu Bello University, Zaria and it is approved for its contributions to knowledge and literary presentation

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## DEDICATION

This dissertation is dedicated to my mentor - Late Aliyu Ibrahim Isah.

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I am very grateful to Allah, the Almighty Who has given me the strength, wisdom, and protection to complete this research work. To produce a Master's dissertation is not a one man affair and it is inevitable that a great number of many individuals will become involved at various stages. Allah in His infinite mercy has sent kind-hearted people in the process. I am grateful to all individuals for their help and support. However, the contributions of some individuals have been crucial and it is both pleasure and a duty to mention them by their names. This dissertation cannot be completed, let alone be successful, without the assistance of these talented individuals.

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## Abstract

Shareholders' value creation is the main objective of business organizations, but few studies use it as the measure of performance. Companies that are conscious on shareholders' value creation with large amounts of excess cash at their disposal try to create value for their investors. This study examined the determinants of shareholders' value of listed industrial goods firms in Nigeria using multiple regression. The data of the study was obtained from the annual reports and financial statements of the selected listed industrial goods firms in Nigeria for a period of ten years (2007 - 2016). The data was analysed using Generalized Lease Square method where fixed method of estimation was chosen as the best model of the study. Shareholders' value is proxied by market to book value ratio while dividend payout, working capital, sales growth, return on equity and debt are used as the determinants of shareholders' value. The findings show that dividend payout ratio, sales growth rate and return on equity have significant and positive relationship with the shareholders' value of listed industrial goods firms in Nigeria while negative and insignificant relationship between working capital ratio, debt and shareholders' value of listed industrial goods firms in Nigeria was found. The study concludes that dividend payout ratio, sales growth rate and return on equity play a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Based on the findings, the study recommends that listed industrial goods firms in Nigeria should maximize the payment of dividend to their shareholders, sales growth and return on equity in order to improve the shareholders' value of the firms.

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# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Study

Public companies typically have ownership divested from management (Mullins and Christy, 2013). The owners of the companies (called shareholders) vest their management of the firm in the hands of management team (called the Board of directors), with the expectation and understanding that the Directors will run the company in such a manner that value is created for the owners. A firm's management creates value for shareholders if the Market Value(MV) of ordinary shares surpasses the par or Book Value (BV) of ordinary shares (that is, MV is greater than BV), but destroys value if MV is less than BV and maintains value if MV equals to BV (Pandey, 2002 and Akinsulire, 2010).

The fiduciary duty which devolves upon the management of the firm requires that management should have a thorough understanding of the dynamics of underlying factors which may create or destroy value for owners, as such, the subject of value creation is too critical and important not to be ignored by any management seeking to fulfill its fiduciary duties. The theory of shareholder value, traditionally suggests that every company's primary goal is to maximize the wealth of its shareholders (Jensen, 2002; Pandey, 2005; Chikwendu, 2009; and Madan, 2013). Considering that stakeholders (including shareholders) are increasingly holding management to greater accountability by requiring the latter (management) to demonstrate how they are creating value (CIMA, 2014), the shareholders' value creation discourse has become very vital.

In spite of the vast number of studies conducted in foreign countries related to shareholders' value, the debate as to the factors determining value creation is unsettled; this is evidenced by the number of studies that have been carried out on the subject in different

parts of the world. The identification of financial factors which have the highest impact on value creation in a business can facilitate establishment of criteria for appropriate strategies selection in that direction (Marangu & Ambrose, 2014).

Finance theory contends that the ultimate goal of a company is to maximize shareholder wealth (Jensen, 2002 and Madan, 2013) this is because shareholders provide funds to the company. This means that the shareholders' wealth will be reflected in the value of the company, which is indicated by the relevant company's share price on the stock market. Shareholder wealth maximization as the goal of the company will facilitate the measurement of the performance of a company. If the stock price of a company shows an increasing trend in the long run, it indicates that the shareholders' value created is good.

Besides stock market price, shareholders usually see the company's success by its financial performance. The common question asked by the shareholders is, how does management generate adequate profits on the company's assets? How does the company finance its assets? In this respect, Van and Wachowicz (2008) contend that profitability ratio is a popular determinants of the shareholders' value creation (company's performance).

The ability of a firm to create value by paying out dividend to its shareholders depends on its ability to generate cash from its operating activities and access of additional funds through external financing (Vazakidis and Adamopoulos, 2009). The shareholder returns basically depends on prices, costs, investments, volume of products sold and riskiness of firms in an industry (Osinubi and Amaghionyeodiwe, 2003; Soyede, 2005). The variables representing these factors can be considered as determinants of shareholders' value. Working capital and fixed capital investment are the two components of investment value drivers (Rajesh, 2015). Management's investment choices and financial policy are also value drivers

in the context of riskiness of cash flows for the company (Olokoyo, Oyewo and Babajide, 2014).

Companies that are conscious of shareholders' value creation with large amounts of excess cash at their disposal but with limited value-creating investment opportunities, they return the money to shareholders through dividends and share buybacks. Not only does this give shareholders a chance to earn better returns another investment option, but it also reduces the risk that management will use the excess cash to make value-destroying investments in particular, as well as ill-advised, overpriced acquisitions (Alfred, 2006).

Economies of scale for firms in purchasing, manufacturing, distribution and research, operating margin, working capital investment and fixed capital investment can generate values for firms (Hansen and Mowen, 2000; Horngren, Datar and Foster, 2006). The link between value chains and value drivers as reflected by sales growth rate, operating profit margin, income tax rate, working capital investment, fixed capital investment and cost of capital are basic building blocks of shareholder value creation (Akinsulire, 2010; Okwo and Ugwunta, 2012; CIMA, 2014). It is in light of the above that the study examined the relationship between the variables of the study (determinants of shareholder value of listed industrial goods firms in Nigeria).

Furthermore, value delivered to shareholders as a result of management ability to increase sales rates of the products of an organisation is referred to as shareholders' value creation (Mohd, Sam, & Yasuo, 2013). Sales growth is considered as control lever of shareholder value creation (Mohd *et al*., 2013). Managers of organisations pay more attention to growth of the sales and based on the responsibility reposed on them by the owners of the firms called the principal, are expected to maximize the shareholders' value creation. Firms revenue is a function of the size of the sales of the company, the managers will strategize

their activities towards maximizing the sales amount in order to strengthen the shareholders' value. Therefore, the study expects that the shareholder value creation is positively influenced by the sales growth rate (Mohd, Sam, & Yasuo, 2013).

Ramezani, Soenen and Jung (2002) explore the relationship between sales growth and shareholder value creation. They use Jensen's alpha as a measure of shareholder value and find that beyond a certain point, growth has an adverse effect on shareholder value. The growth is considered as one of the control lever of shareholder value creation. The growth of the sales constitutes a priority objective for the managers. The managers of companies maximize the shareholder value creation through sales growth that will strengthen the prestige of the companies (Ben, 2012).

## 1.2 Statement of the Problem

Shareholders' value creation is the main objective of business organizations but few studies use shareholder value creation measures as performance indicator (Rajesh, 2015 & Fiordelisi, 2010). This makes identifying and selecting strategies that create value for shareholders a major challenge facing management in the Nigerian economy (Burlacu, 2013; Mehrnaz, 2013; Jodlbauer, 2012 and Enekwe, Nweze, & Agu, 2015).

Capital means ready funds which are necessary for the working of any concern. Basically, manufacturing companies are expected to have more current assets than fixed assets. If the firms have no adequate current assets then they have to face shortage and cannot perform their day to day operations smoothly.

Every organization whether profit oriented or not, irrespective of size and nature of business requires necessary amount of working capital which is more important factor to maintain existence, liquidity, solvency and profitability which later create more value to the

shareholder. If the firms have greater proportion of liquid assets, then there is no risk of shortage. But this will affect profitability on the other hand. Furthermore, by managing the working capital management can create value for shareholders because they are preserving the liquidity and increasing the profitability of the companies. In a situation where determining factors and their proportion of participation are not explained fully then adequacy of working capital will be undetermined which will lead to company's' bankruptcy (Robert, Mark, & Rabhi, 2008).

Studies on shareholders' value have predominantly been conducted in foreign countries (Marangu & Ambrose, 2014; Habib, Faisal, & Muhammad, 2016; Mohammad Hashemijoo, Ardekani, & Younesi, 2012 and Damar & Umar-Farouk, 2016) but very few studies were carried out in Nigeria (Chikwendu, 2009; Kolawole, 2013; Ya'u, Abdulrasheed, & Emmanuel, 2015; Oladipupo & Okafor, 2013; Asogwa, 2009 and Enekwe, Nweze, & Agu, 2015) . There are a many studies which were conducted to investigate the interaction between shareholder values and its determinants (dividend payout, working capital, Sales Growth rate, return on equity and debt) in different countries of the world which are mostly developed economies which have different peculiarities from our own developing economy and the findings of the studies documented mixed results.

The few studies on shareholders' value that have been conducted in Nigeria have focused on financial service sectors (Kolawole, 2013) leaving out listed industrial goods firms in Nigeria. However, this study focuses on industrial g goods firms as it is one of the emerging sectors in the Nigerian economy. It is of paramount importance to examine the determinants of shareholders' value creation within the Nigerian economy using the most recent data of listed industrial goods firms in Nigeria. The extant empirical literature on the determinants of shareholder value in industrial goods firms appears somehow limited

The finance literatures acknowledge various determinants of shareholders value creation. In terms of sales growth, (Davidson, Steffens & Fitzsimmons, 2009 and Amidu & Abor, 2006) suggest that sales growth has a negative relationship with company shareholder value, while Mbuvi, 2015 and Sakthivel, 2011) argue that, the sales growth is positively related to company shareholder value.

In terms of leverage (debt), Burja (2011) suggests that leverage have positive impact towards company shareholder value, meanwhile Kaplan, Ozmen and Yalcin (2006), Zeitun and Tian (2007), and Nicolescu (2010) provide evidences that leverage have negative impact on shareholders' value. On the other hand, working capital which is also part of determinant of company shareholder value has a positive impact on shareholders' value as reported by several empirical studies (Goddard, Tavakoli and Wilson, 2005; Chander and Priyanka, 2008; and Mihajlov, 2014). Conversely, Rajčaniova and Bielik (2008) and Serrasqueiro and Nunes (2008) provide evidences that working capital has a negative impact to company shareholders' value.

On dividend payout as determinant of company shareholder value, Marak and Chaipoopirutana (2014) conclude that there is a positive relationship between dividend payout and company shareholder value. In contrast, Mohd, Sam and Yasuo (2014) find that the dividend payout is negatively or not significant at all to company shareholder value.

Return on equity as determinant of company shareholder value. Damar and Umar-Farouk (2016) indicate that there is a positive relationship between return on equity and company shareholder value. In contrast, Jami and Bahar (2016) find that return on equity is negatively or not significant at all to company shareholder value.

The mixed findings of the above studies left interesting questions relating to possible factors that determine the shareholder value creation in the listed Nigeria industrial goods

firms. Do dividend payout, working capital growth, return on equity and debt influence shareholder value creation in the listed Nigeria building companies?

It is against the backdrop that this study is conducted to determine the factors that affect shareholders' value of industrial goods firms in Nigeria. It is of paramount importance to investigate the determinants of shareholders' value of industrial goods sector given that the firms are among the major contributors to economic development of any nation. The creation of such value of firms should expectedly translate to more economic development, this is because if more dividend are paid, sales growth are increased and return on equity are improved will lead to increase of disposable income which will bring more revenue to the government that will be used for economic development.

## 1.3 Research Questions

The study will provide answers to the following research questions:

i. To what extent does dividend payout affect shareholders' value of listed industrial goods firms in Nigeria?

ii. To what extent does ratio of working capital to total assets affect shareholders' value of listed industrial goods firms?

iii. To what extent does sales growth affect shareholders' value of listed industrial goods firms?

iv. To what extent does return on equity affect shareholders' value of listed industrial goods firms?

v. To what extent does ratio of debt to equity affect shareholders' value of listed industrial goods firms?

## 1.4 Research Objectives

The study will assess the determinants of shareholders' value creation in Nigeria industrial goods firms. The specific objectives are to:

i. Determine the effect of dividend payout on shareholders' value of listed industrial goods firms.

ii. Determine the effect of ratio of working capital to total assets on shareholders' value of listed industrial goods firms.

iii. Determine the effect of sales growth on shareholders' value of listed industrial goods firms.

iv, Determine the effect of return on equity on shareholders' value of listed industrial goods firms.

v. Determine the effect of ratio of debt to equity on shareholders' value of listed industrial goods firms.

## 1.5 Research Hypotheses

In line with the objectives of the study, the following hypotheses have been formulated:

i. Dividend payout does not have any significant relationship with shareholders' value of listed industrial goods firms.

ii. Working capital to total assets does not have any significant relationship with shareholders' value of listed industrial goods firms.

iii. Sales growth does not have any significant relationship with shareholders' value of listed industrial goods firms.

iv. Return on equity does not have any significant relationship with shareholders' value of listed industrial goods firms.

v. Debt to equity does not have any significant relationship with shareholders' value of listed industrial goods firms.

## 1.6 Scope of the Study

This study assesses the determinants of shareholders value of listed industrial goods firms listed on the Nigerian Stock Exchange as at 31st December, 2016. This study will cover a period of ten (10) years from 2007 to 2016. This period is considered in order to allow for a thorough investigation of the subject. The population of this study is 25 listed industrial goods firms on the NSE as at 31st December, 2016.

Five independent variables were used in this study comprising of dividend payout, working capital to total asset ratio, sales growth, return on equity and debt. The reason behind choosing these variables is that the literature reviewed concentrated on only some of the variables of the study despite the importance of the variables in explaining changes in the value of the shareholders. To the best of the researcher's knowledge there is no single study that capture all the variables of the study.

## 1.7 Significance of the Study

This study contributed to the body of knowledge by identifying the roles played independent variables of this study in determining shareholders' value specifically in the listed industrial goods firms in Nigeria. The study identified the extent to which the determinants of shareholders' value within the Nigerian context, thus enlightening interested members of the public on the subject. Real time investors are expected to benefit from the

outcome of the study Also, management of manufacturing concerns, particularly operators in the industrial goods subsector should be able to utilize this study to focus on strategies that create excess value attributed to market value compared to the book value of equity. This is because the factors that have significant effect on the shareholders' value creation were identified by this study.

Future researchers will also benefit from the study, given that the study is exploratory in nature. It is expected that the study will provoke further research on the subject matter in other sectors of the Nigerian economy. Overall, the study is also expected to contribute to the body of knowledge in relation to shareholders value, particularly in developing countries that are bedeviled with paucity of empirical research with respect to the subject.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

This chapter reviews literature on the determinants of share value creation of listed industrial goods firms. Also, the chapter reviews empirical studies and theoretical framework related to the topic under discussion.

## 2.2 The Concept of Shareholder Value

Shareholder value is derived from the market's perception of a business' ability to generate returns today and in the future. Principally, management can create Shareholder Value by growth; investing in projects which are expected to generate a return in excess of the cost of capital, or by improving the efficiency of existing operations e.g. reducing expenses or selling more profitable business with all other things remaining equal (Richard, 2000). Terry (2015) contends that value is created when management produces revenues over and above the economic costs to generate these revenues.

In other words value creation is when a company is able to generate income that is above the cost of the capital used to generate such income. The creation of shareholder value is considered as an important objective for companies (Agbor & Agborya, 2010). A company is said to have created shareholders' value in a situation where shareholders returns exceeds the share cost (Pablo, 2002). Shareholder value is created by generating future returns for equity investors which exceed the returns that those investors could expect to earn elsewhere. The assumption is that these excess returns will be reflected within the share price of the company (Minchington & Francis, 2000).

Price to book value ratio has attracted a serious attention of investment advisors, fund managers and investors. This is because selling of shares below the book value of the shares is considered as being undervalued while those shares sold above book value of the shares are considered as being overvalued. For this preposition to hold, this requires that shares with low price to book value ratios should outperform those with high price to book value ratios (Marangu & Ambrose, 2014). Based on the claim that, price to book value ratio no longer contains information that can be used to identify value shares and they assert that ranking companies on the basis of the price to book value ratio was a valid way of identifying value shares (Pontiff & Schall, 1998).

The determinants of value creation are essential in shaping the strategy of a company (Samy and Goaied, 1999; CIMA, 2014). Bandara (2015) asserts that market value is seen as the difference between market value of the firm's stock and the amount of equity capital supplied by investors. Value creation has been in existence as a concept as long as humanity has conducted trade and accumulated capital and wealth. It has been the consistency of measurement used by those with freedom of choice to trade, invest and preserve capital (Black, 1998). Creating value for shareholders is now a widely accepted corporate objective and shareholder value creation is the key to succeed in today's marketplace (Burlacu, 2013). It measures the effect on value of management's decisions since the firm's inception.

Furthermore, shareholder value creation reveals how much management has added to shareholder value over the company's history. Shareholder value is seen as the value delivered to shareholders because of management's ability to grow earnings, dividends and share price. In other words, shareholder value is the sum of all strategic decisions that affect the firm's ability to efficiently increase the amount of free cash flow over time (Kapoor, 2009).The concept of shareholder value implies that the ultimate measure of the success of a

company is shareholders enrichment (Mehrnaz, 2013).Creating value for shareholders leads to growing interest in the fields of management science in recent researches (Salih & Abdessatar, 2011).

Shareholders' value can be created if the worth of shareholders' is increased or enhanced by a firm and the value created is determined by the ratio of the market value of shares to the book value of shares (Jensen, 2002; Pandey, 2007; Kolawole, 2013). It is also defined as the increase in the financial worth of shareholders, as measured by ratio of market value of shares to the book value of shares, which is highlighted by the performance of an organization (Pandey, 2002). Maximizing the wealth of the shareholders through maximization of the market price of the shares is seen as one of the corporate objectives of any firm. In other words, performance on the stock market is an index of corporate success. Any corporate entity experiencing a rise in the market price of its stocks is considered a good bet by the investors (Pandya & Parmar, 2011).

Shareholder value analysis requires the management of organisations to take decisions that have the tendency of creating value for the shareholders. While taking investment and financing decisions, the management is required to pay more attention to such activities that can create value for shareholders rather than short term profitability (Shrikant, Zainuddini, & Azizan, 2014). Jodlbauer (2012) asserted that, shareholder value are rooted in the idea that the interest rate the business has to pay for the capital lenders and shareholders should be lower than return on the capital required for doing business. One of the shareholder value measures and most direct measures of the return received by shareholders is total return to shareholders (Powers, 2010). Firms with higher required equity returns will have higher ratios of book to market (Rajesh, 2015). Return on equity is the return that shareholders expect to obtain in order to feel sufficiently remunerated.

Value conscious firms with large amount of cash at their disposal and limited investments for value creation to their shareholders, return the excess cash to their shareholders through dividend. This will not only give the shareholders chance to earn better return elsewhere but it also reduces the risk that management will use the excess cash to make value-destroying investments (Pandey & Deeksha, 2015).

Shareholders' value creation assists in reducing agency costs by reducing the discretionary funds available to managers for perquisite consumption and investment opportunities and require managers to seek financing in capital markets. This may encourage the mangers to be more disciplined and act in owners' best interest(Million, Metewos, & Sujata, 2014). In a legal environment like UK where strong legal protection is strong, the law provides strong protection to shareholder to force companies to pay dividend(La Porta, Silanes, Shleifer, & Vishny, 2000). The value created by a firm is considered as the total outcome of the decisions made at all levels within the organization (Koller, Goedhart, & Wessels, 2010). Dividend policy is part of the decisions that are expected to be taken by management in order to increase shareholders' value.

### 2.2.1 Determinants of Shareholders' Value

Many researchers have identified various factors that help in the determination of shareholders value creation, however this work considered those factors that are only relevant to our research which may be slightly different to other factors used in other situations thus this study is basically centered around finding the factors that lead to the determination of shareholders value creation of listed industrial goods firms.

#### 2.2.1.1 Working Capital to Total Asset

Umara, Sabeen and Qaisar (2009) are of the opinion that Working capital refers to the lifeblood of any organization and at the same time considered as the lifeblood of business. This implies that without working capital there will be no business at all. Working capital to total asset ratio is expressed in percentages and may indicate the extent to which a firm utilizes its working capital assets. It can also be used to study if such a composition is sound given the nature of the activities the firm is in(Ali, 2009).Working capital management is considered as simple and straight forward concept of providing for organization the opportunity to be able to fund the difference between the short-term assets and short-term liabilities (Harris, 2005). Working capital management is one of the most important issues in organizations. This makes financial executives to be struggle in identifying the drivers of working capital and the required level of working capital (Lamberson, 1995).

The management of working capital is defined as the, management of current assets and current liabilities, and financing these current assets. Working capital management is important for creating value for shareholders (Shin & Soenen, 1998). A firm may adopt working capital management policy with a low level of current assets as a percentage of total assets, or it may also be used for financing decisions of the firm in the form of high level of current liabilities as a percentage of total liabilities. Management of organizations have to strike a balance between excessive and lower working capital because excessive levels of current assets may have a negative effect on the shareholders' value, whereas a low level of current assets may lead to a lower level of liquidity and stock outs, resulting in difficulties in maintaining smooth operations (Van Horne and Wachowicz, 2004).

Robert, Mark, and Rabhi (2008) assert that, firm value is considered as the present value of the expected future flows discounted at the rate of return required by investors. Any

investment in working capital over and above the optimum has the tendency of increasing the firm's assets without a proportionate increase in its returns and thus lowering the rate of return on investment. Weston and Copeland (1992) suggest that, given the optimum, increasing the cash holding which is one of the working capital components of the company, negatively affects the shareholder value. Ali (2009) views working capital as, the heart of business and asserts that if working capital of an organization becomes weak, the business can hardly prosper and survive. This study will adopt the definition of working capital to total asset ratio provided by (Ali, 2009).

#### 2.2.1.2 Sales Growth Ratio

The revenue generated by any company serves as the function of sales of goods or services of the company (Samy and Mohamed, 2002; Leah, 2004). Sales play a vital role in determining the success or failure of a company. As the rate of sales increases in any organization, all things being equal, the revenue generated by such organizations will also increase. Pandey(2005) investigated the effect of growth on shareholder value creation, measured as the market to book (M/B) ratio and opines that, sales growth plays a vital role in determining shareholders' value creation.

Sales growth is the percentage increment of sales expected in a period. It shows the market growth potential of a company. Normally, the higher the sales growth, the higher the value of the company. Sales growth plays in the world of managers, and its central role in agency theory (Brush, Philip, & Hendrickx, 2000). The main goal of managers in companies is to maximize the revenue and that the increase in sales will always continue, even at the expense of lower profits. Total sales are viewed as a function of output and prices (Mohd et al., 2013). The most important goal of mangers in companies is to maximize the revenue and

that the increase in sales will always continue, even at the expense of lower profits, in both the short and long-term (Baumol, 1962).

#### 2.2.1.3 Return on Equity

Return on equity is seen as a measure of the rate of return on the shareholders' equity of common stockholders. Therefore, it shows how well a company uses investment funds to generate earnings growth (Boundless, 2015). Return on equity offers a useful signal of financial success since it might indicate whether the company is growing profits without pouring new equity capital into the business. Return on equity signals shareholder value creation (Carlo, 2011). A steadily increasing ROE is a hint that management is giving shareholders more for their money, which is represented by shareholders' equity. Reimann (1989) asserts that ROE was used extensively for measuring whether value was being created for shareholders (Akinsulire, 2010).

The Return on equity ratio is obviously of interest to present or prospective shareholders, and is also of concern to management, because this measure is viewed as an important indicator of shareholder value creation. This Ratio provides management and investors with the rate of return earned on the invested equity. It can also be said that, Return on equity indicates the profitability of the institution and is a measure most often used as a proxy for commercial viability (Ramesh, 2006).

Profitability is seen by many as a very important value driver which can be improved by achieving relevant economies of scale. If firms' profitability is increased, it will significantly improve their market capitalization. Therefore, to examine the impacts of profitability on the creation of shareholder value, the relevant profitability and efficiency ratios were taken into consideration. It is important to note that, these ratios have been used

over the years to evaluate the profitability and efficiency of the Nigerian banking industry (Kolawole, 2013). The definition of (Boundless, 2015) will be utilized.

#### 2.2.1.4 Debt to Equity

Pandey (2002) has established the relationship between debt and value creation and it was argued that the primary objective of using financial leverage is to magnify the shareholders' return under favorable economic conditions. Financial leverage increases the shareholders' value. Debts within the capital structure of a firm is employed to discipline the managers, it is used to decrease the agency costs of stockholders' equity and to improve the firms' value (CIMA, 2014). Besides, debt serves as the instrument of resolving conflicts among the stakeholders, as far as it incites the leaders to be successful to avoid the risks of bankruptcy and the loss of their employment.

The debt represents a positive signal as for the future cash flows of the company (Ben, 2012; Okwo and Ugwunta, 2012).The debt-to-equity ratio indicates the proportion of the company's assets that are being financed through debt. Debt to equity ratio is a long term solvency ratio that indicates the soundness of long-term financial policies of the company. Debt is generally considered to possess characteristics of commitment to make fixed payments in the future, the fixed payments are tax deductible and failure to make the payments can lead to either default or loss of control of the firm to the party to whom payments are due (Damodaran, 2010).

#### 2.2.1.5 Dividend Payout

The issue of dividend payout is a very critical in the current business environment. Dividend payout is the regulations and guidelines that a company adopts to take a decision

on whether to make dividend payments to shareholders or not. The dividend payment decisions of firms are the primary element of any corporate policy which is basically the benefit of shareholders in return for investing their money in the organization (Enekwe et al., 2015).

Dividends are referred to as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership. Dividend policy connotes to the payout policy which managers pursue in deciding the size and pattern of cash distribution to shareholders over time. Managements' primary goal is shareholders' wealth maximization, which translates into maximizing the value of the company as measured by the price of the company's common stock (Frankfurter, George, & Wood, 2003).

Hashemijoo, Ardekani and Younesi (2012) asserts that, dividend policy is a company's policy which determines the amount of dividend to be paid to shareholders and the portion of earnings to be retained in a company for reinvestment in new projects. Investors are not expected to accept any dividend that is not up to their expectation except they have the conviction that the investment to which the retained earnings are committed would yield returns over and above what they could be opportune to earn elsewhere.

## 2.3 Review of Past Studies on the Determinants of Shareholders' Value

In this section, the study will review related and relevant empirical studies related to determinants of shareholder value creation. The study will review the variables by starting with the studies that linked dividend payout and market value ratio, working capital to total asset ratio and market to book value ratio, sales growth rate and market to book value ratio, return on equity and market to book value ratio and finally ends with the studies that linked debt and market to book value ratio.

### 2.3.1 Dividend Payout and Shareholders' Value

Rajesh (2015) conducted a study to examine the determinants of value creation for 50 sampled listed Firms over a period of five years from 2009 to 2013. The data for the study were sourced from the annual reports and financial statements of the firms. The partial least squares structural equations modeling (PLS-SEM) was used to test the determinants of value creation in the United Arab Emirates (UAE) firms. The result of the study revealed that dividend payout and shareholders value creation of the firm are positively related. The shortcoming of this study is that the research data should have been extended to 2014. Thus, this study intends to covered ten years (2007 - 2016)

In a study conducted by Mbuvi (2015) sought to establish the effect of dividend policy on value creation for shareholders of companies listed in the Nairobi Securities Exchange. A questionnaire was used to collect primary data from the Finance Managers of the public companies. The data was analysed using Regression Analysis, and descriptive statistics through the use of SPSS. The findings indicated that dividend payout contributed positively to value creation of shareholders of companies listed in the NSE.

Ya'u, Abdulrasheed, and Emmanuel (2015) empirically investigated the determinants of shareholder value creation among quoted commercial banks in Nigeria. The whole 21quoted commercial banks in Nigeria were used spanning the period of 2005-2009. The used multiple regression method was used in estimating the relationship. The results however showed that dividend payments has a positive and significant influence on the shareholder value creation, the argument here is that the data of the study should have been extended to cover 2014. Thus, in essence, this work intends to cover 2007 – 2016 but also conducted

robustness tests in order to arrive at the best model that estimate the relationship among the variables of the study.

The study conducted by Kenneth and Ambrose (2014) to establish the relationship between price to book value ratio and financial statement variables for companies quoted at the Nairobi Stock Exchange (NSE) documented an empirical evidence between the studied variables. The study sampled 20 quoted companies on the NSE. The study utilized secondary data obtained from the NSE and audited financial statements of listed companies during the period of thirteen years (1991 - 2003). The data obtained was analyzed using inferential statistics including multiple regression analysis and analysis of variance. The findings of the study revealed that dividend payout has a negative influence on the shareholders' value creation. The data of the study should have covered up to 2013; the findings of 2003 might be of no use because a lot of things must have happened from 2003 to 2016 which may warrant conducting a research.

Another study by Thomas (2013) aimed at examining the determinants of shareholder value creation of listed banks in Ghana. The analyses are performed using panel data derived from the financial statements of the listed banks on the Ghana Stock Exchange (GSE) from 2006 to 2010 financial years inclusive. The result of the analysis shows that dividend payout is having a significant positive impact on the determinants of shareholder value. The study should have captured data of to 2012. The study should have covered up to 2012. In addition, Thomas (2013) was conducted in Ghana, a country with different financial regulations to those of Nigeria as such the need for the present study.

Kolawole (2013) conducted a study to examine the determinants of shareholders' value creation. The study utilized secondary data from the 21 listed deposit money banks listed on the Nigerian Stock Exchange and Annual Reports and Accounts of the all the banks

listed over the period of ten years, 2000 to 2009. The data were analyzed using the Multiple Regression method. The results of the regression analyses revealed that there is a significant positive relationship between dividend payout and value creation in the Nigerian banking industry. The probability of creating future values is positively and significantly correlated with dividend policy (Pay-Out) and profitability factor (ROA). Basically a very profitable company which distributes a great deal of its earning as dividends convey signals of the quality of management and therefore, result in a value creation. The debt effect is negative but insignificant in the REPM. The research data should have been extended to 2012. In addition, this study was conducted on listed Industrial goods Firms not banks.

In a study conducted by Azhagaiah and Sabari (2008) which examine the impact of dividend policy of shareholders' wealth in Organic and Inorganic Chemical Companies in India between 1997and 2006 using multiple regression method and stepwise regression models were used in analysing the data. The result of the study documents that shareholders value is greatly and positively influenced by dividend payout as far as Inorganic Chemical Companies are concerned.

### 2.3.2 Working Capital to Total Asset Ratio and Shareholders' Value

In a research conducted by Rajesh (2015) for 50 selected firms in the United Arab Emirates (UAE) covering a 5-year period (2009 to 2013), the study examines the determinants of shareholders' value creation. Annual reports and financial statements of the firms were used in the data collection process. The partial least squares structural equations modeling (PLS-SEM) was employed to analyze the research data. The findings of the study document, amongst others, that working capital relates positively and significantly with shareholders' value creation of the firm.

Bandara (2015) conducts a study to investigate the impact of working capital management policy on market value addition for a sample of 74 companies selected from seven different sectors in the Colombo Stock Exchange (CSE) out of the twenty sectors in the CSE sector categorization. The study was based on secondary quantitative data. Therefore, the researcher used panel data from the year 2009 to 2014. The findings of the study revealed that working capital investment leads to decrease in the market value addition of the firm. The result demonstrates that managers can create value by reducing their firm's number of day's accounts receivable and inventories, that is, by reducing the level of current assets. The study was conducted in foreign country as such it is important for such a study to be conducted in Nigeria.

Ali (2009) conducts a study with an aim of reporting the findings of a survey of working capital management practices of private agribusiness firms in 2008. The data are analyzed with the help of a two dimensional approach for working capital decision making. This approach is based on optimizing the cash flows, for shareholder value creation, through the management of current assets, current liabilities, sales and purchase operations as well as relationship with the customers and suppliers. The findings of the study reveal that the private firms are improving their working capital management; employing management with academic and practical experience, the use of proper technology and enhancing market competition to determine the firms' efficiency and value creation.

Azhagaiah and Sabari (2008) investigates the impact of dividend policy of shareholders' wealth in Organic and Inorganic Chemical Companies in India during 1997 to 2006. Multiple regression method and stepwise regression models were used in analysing the data. The result of the study reveals that shareholders value is related greatly and positively with working capital.

Afza and Nazir (2007) study the association between the aggressive and conservative working capital policies for seventeen industrial groups consisting of 263 public limited companies listed at Karachi Stock Exchange for a period of 1998 to 2003. The results of the study documented that there was significant differences among their working capital investment and financing policies across different industries. Moreover, rank order correlation confirmed that these significant differences were remarkably stable over the period of six years of study. Finally, ordinary least regression analysis found a negative relationship between the value of firms' value and degree of aggressiveness of working capital investment and financing policies.

Shin and Soenen (1998) examines the relationship between working capital management and value creation for shareholders. The study used net-trade cycle (NTC) as a measure of working capital; NTC may be used as a proxy for additional working capital needs as a function of the projected sales growth. They examine the relationship by using correlation and regression analysis, in industry using a sample of 58,985 firms covering the period 1975-1994, they found a strong negative relationship between the length of the firm's net-trade cycle and its shareholders' value. Based on the findings, they suggest that one possible way to create shareholder value is to reduce firm's NTC.

Nguyen, Tran and Nguyen (2016) investigated the effect of Working Capital Management on Shareholders Value Creation using the sample data of 127 public companies for the period of 9 years (2006-2014) and found that Working Capital is significantly improving Value Creation of the Shareholders.

Ahmed, Awan, Safdar, Hasnain and Kamran (2016) investigated the working capital relationship with shareholders' value (represented by profitability) in the Pharmaceutical

Industries of Pakistan, using the sample of 7 companies from 2005 to 2012 and find that working capital is negatively and significantly associated with shareholders' value.

Anthony and Wijayanayake (2016) analysed the working capital management and its impact on the value creation of Sri Lanka Manufacturing Companies for period of 15 years (2001-2015). The study found that effective working capital improve the value creation of shareholders wealth.

Famil and Ali (2016) examine the relationship between working capital management and value creation for shareholders in Turkey Manufacturing Industry using the sample of 120 listed companies and finds that working capital have negative and significant relationship with value creation for shareholders.

Muhammad, Ahmad, Haider, and Saif-ur-rehman (2016) in Pakistan, examine the association between working capital management and value creation for shareholders considering the sample of 92 Textile firms for the period from 2006 to 2014. The study revealed that working capital management has significant negative relationship with shareholders value creation in Pakistan Textiles Industries.

### 2.3.3 Sales Growth Rate and Shareholders' Value

In the same study conducted by Rajesh (2015) in which he studies fifty listed firms for a 5-year period (2009 to 2013) revealed that dividend payout and shareholders value creation of the firms are positively related, Varaiya (1987) documented a contrary result. Varaiya (1987), upon examining the relationship between Growth, Return on Equity and Firm Value found that growth influences shareholder value and market to book value of equity ratio negatively.

Sakthivel (2011) analyzed shareholder's value in Indian pharmaceutical industry for the period of 1998 to 2007. The research data were collected from secondary source of data and the data were analysed using EVA. The findings of the study reveals that the companies under pharmaceutical industry have succeeded in meeting public expectations in terms of shareholders' value creation by increasing sales. This study showed that shareholders' value creation tend to go up every year for pharmaceutical industries. This implies that there is positive and significant relationship between sales growth and shareholder's value

Azhagaiah and Sabari, (2008) conducts a study with an aim of determining the impact of dividend policy of shareholders' wealth in Organic and Inorganic Chemical Companies in India during 1997 to 2006. Multiple regression method and stepwise regression models were used in analysing the data. The result of the study reveals that shareholders value is positively associated with Growth in sales.

Also, in a study conducted by Varaiya (1987), a contrary result was documented. The researcher examined the relationship between Growth, Return on Equity and Firm Value. The dependent variable of the study is firm value while the independent variables were return on equity and growth. The data related to the variables studied were gathered from the financial statements of the selected firms. The results of this study revealed that growth influences shareholder value and market to book value of equity ratio negatively.

Habib, Faisal and Muhammad (2016) tested the linear relationship between Debt and Value Creation of shareholders fund for listed non-financial sectors of Pakistan, using the sample of 10 years period (2003-2012) and found that Sales Growth is negatively and significantly affects shareholders' value creation.

Adnan, Amir, Pir, Naveed and Wasiq (2016) examine the impact of Capital Structure on the value creation (using profitability as proxy) using seven (7) years for 28 listed

companies in Pakistan and find that Sales Growth has negative influence on the shareholders' value creation in Pakistan.

Amidu and Abor (2006) identify the determinants of Dividend payout ratio in Ghana using 22 firms for six (6) listed firms in between 1995-2003 and found that Sales growth has negative significant influence on the shareholders' value creation for the period.

Mula, Farooq, Sherwani, Fahad and Ghulam (2016) investigated the impact of capital structure and dividend payout policy on firm's shareholders value creation of Pakistan Manufacturing Sector and find that Sales growth has no effect on shareholders' value creation

Oladipupo and Okafor (2013) examines the relative contribution of working capital management to shareholders value creation in Nigeria using twelve (12) manufacturing companies for a period of five years (202-2006) and discovered that Sales growth is insignificantly related to shareholders' value creation.

### 2.3.4 Return on Equity and Shareholders' Value

Rajesh (2015) conducted a study to examine the determinants of value creation for 50 sampled listed Firms over a period of five years from 2009 to 2013. The data for the study were sourced from the annual reports and financial statements of the firms. The Partial Least Squares Structural Equations Modeling (PLS-SEM) was used to test the determinants of value creation in firms. It was found that Return on Equity relates positively with shareholders' value creation of the firm.

Kenneth and Ambrose (2014) examined the relationship between market to book value ratio and financial statement variables of quoted companies at the Nairobi Stock Exchange (NSE). The study used a sample of 20 companies. The study employed secondary

data obtained from audited financial statements of listed companies over a period of thirteen years that is from 1991 to 2003. Multiple regression techniques of data analysis were used by the study to analyze the data. The result of the study revealed that return on equity significantly influenced the shareholders' value creation positively.

Thomas (2013) investigated the determinants of shareholder value creation of listed banks in Ghana. The analyses are performed using panel data derived from the financial statements of the listed banks on the Ghana Stock Exchange (GSE) from 2006 to 2010 financial years. The results of the analysis show that return on equity is statistically significant positive determinants of shareholder value.

In a study by Kolawole (2013) which examines the factors that determine the shareholders' value creation, a secondary data were collected from the 21 deposit money banks selected for the study listed on the Nigerian Stock Exchange and Annual Reports and Accounts of the all the banks. The data were analyzed using the multiple regression method. The results of the regression analyses revealed that there is a significant positive relationship between return on equity and value creation in the Nigerian banking industry.

Asogwa (2009) conducted a study in Nigeria to measure the determinants of value creation for listed banks on the Nigerian Stock Exchange over a period of five years (2004 - 2008). The research data were analysed using a random effects probit (rep) model. The findings of the study revealed that profitability and shareholders value are positively and significantly related.

The study by Varaiya (1987) documents a contrary result compared to the study by Rajesh (2015). The researcher examined the relationship between growth, Return on Equity and firm value using firm value as the dependent variable of the study is firm value while return on equity and growth as the independent variables of the study. The data of the study

were collected from the financial statements of the studied firms. The results of this study indicated that return on equity has negative effect on shareholders' value and the market to book value of equity ratio of the firms under study.

Abraham *et al* (2017) examine the shareholders' value creation as a function of return on asset using full sample across listed industries and find return on capital and return on assets significantly improve the shareholders' value for the period of 2010-2014 of NASDAQ Stocks.

Mohebbimoghaddam, Talebnia and Rasoul (2016) examine the return on equity on the shareholders' value (market value) using 630 companies' year observations for the period of 2008-2013 in Tehran Stock Exchange. The Study disclosed that return on equity has significantly improved shareholders' value.

Damar and Umar-Farouk (2016) analyse the effect of return on asset on value creation of shareholders in the Indonesian Stock Exchange Market within the period of 2010-2014 using 15 companies of wholesale and retail trading sub-sector and found that return on equity has positively and significantly increased shareholders value.

Jami and Bahar (2016) fund that return on equity has no effect on shareholders' value creation using the automobile Industry for the period of 7 years (2008-2014) in Bombay Stock Exchange in India.

### 2.3.5 Debt and Shareholders' Value

Rajesh (2015) examines the determinants of value creation of listed firms over a period of five years from 2009 to 2013. The data for the study were sourced from the annual reports and financial statements of the firms. The partial least squares structural equations

modeling (PLS-SEM) was used to test the determinants of value creation in the GCC firms. The study documents that debt and value creation of the firms is negatively related.

The study of Siyanbola (2015) utilizes panel data which consist of time series and cross-section data. The data for all the variables in the study were extracted from published account of five selected deposit money banks in Nigeria covering the years 2005 to 2014. Ordinary Least Square (OLS) technique of data analysis was employed to estimate the specified model equation. The result of the study reveals that debt is having a positive effect on the shareholders' value creation of the selected firms.

The secondary data for were collected from the 21 deposit money banks listed on the Nigerian Stock Exchange and Annual Reports and Accounts of the all the banks. The data were analyzed using the Multiple Regression method. The results of the regression analyses reveals that there is no significant relationship between debt and value creation in the Nigerian banking industry and the nature of relation is negative (Kolawole, 2013).

Thomas (2013) study aims at determining the determinants of shareholder value creation of listed banks in Ghana. The analyses are performed using panel data derived from the financial statements of the listed banks on the Ghana Stock Exchange (GSE) from 2006 to 2010 financial years inclusive. The results of the analysis show that leverage statistically significant positive determinants of shareholder value.

Habib *et al.* (2016) tested the linear relationship between Debt and Value Creation of shareholders fund for listed non-financial sectors of Pakistan, using the sample of 10 companies for the periods from 2003 to 2012 and find that Debt significant reduces shareholders' value creation.

Dwilaksono (2010) identifies the linear relationship between Debt and shareholders' value creation using the listed mining industries in Indonesian Stock Exchange for the

periods between 2003 and 2007. The study finds that Debt has significant influence on shareholders' value creation. Bandopadhyay and Roy (2016) the BSE 500 companies of listed India for the period of 15 years (2000-2015). The study acknowledges statistically the significant improvement of Debt on shareholders' value creation.

Adnan *et al*. (2016) examine the impact of Capital Structure on the value creation (profitability as proxy) using seven (7) years for 28 listed companies in Pakistan and find that short term debt has significant negative influence on shareholders' value creation while long term debt has positive and significant influence on the shareholders' value creation in Pakistan.

Nasimi (2016) examines the effect of capital structure on the shareholders' value creation using sample of 30 listed firms from FTSE 100 Index of London Stock Exchange between the periods of 2005 to 2015. The study find out that Debt has positive and significant effect on the shareholders' value creation (using ROA as proxy for shareholders value creation).

Anandasayanan and Velnampy (2016) investigated the Dividend policy of Sri Lankan listed manufacturing companies between 2009 and 2014 for 23 firms and revealed that Debt has negative and significant influence on shareholders' value creation.

Amidu and Abor (2016) identify the determinants of dividend payout ratio in Ghana using 22 firms for six (6) listed firms in between 1995-2003 and find that Dividend Payout has positive and significant influence on the shareholders' value for the period. The limitation of the study is that it covered only up to 2003 leaving out twelve years untouched (2004-2015).

Nazar-Khan *etal*. (2016) investigated the impact of capital structure and dividend payout policy on firm's shareholders value creation of Pakistan Manufacturing Sector and

find that short term and long term debt have significant negative influence on the shareholders' value creation. Dividend policy is significantly and negatively affecting shareholders value creation.

Oladipupo and Okafor (2013) examined the relative contribution of working capital management to shareholders value creation in Nigeria using twelve (12) manufacturing companies for a period of five years (2002-2006) and discovered that debt ratio is not influencing value creation of shareholders. One of the shortcomings of Oladipupo and Okafor (2013) research is that their data is not current data, this is because a study of 2013 covered 2002 to 2006. The data should have been extended to 2012.

## 2.4 Theoretical framework

There is a large body of theories on determinants of shareholder value creation. The major ones are Agency Theory, Signaling Theory and Debt Contracting Theory. However, agency theory is used in underpinning this study.

### 2.4.1 Agency Theory

According to the agency theory, the debts are a means to discipline the managers by the financial market, which is to reduce the agency costs of stockholders' equity and to increase the company value. Besides, the debt constitutes a mechanism of resolution of the conflicts, as far as it incites the leaders to be successful to avoid the risks of bankruptcy and the loss of their employment (Sakthivel, 2011). Agency relationship is defined as a contract in which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximizers there is good reason to

believe that the agent will not always act in the best interests of the principal (Michael & William, 1976).

Information frictions play important roles in firms' financing decisions. However, asymmetric information about the value of a firm's assets causes equity to be used only as a last resort. Indeed equity is the predominant source of finance in situations, such as profit shortfalls, investment in intangible assets, and internally generated growth opportunities, where informational asymmetries and agency costs are likely to be high. In financing fixed assets, high asymmetric information firms use more short-term debt and less long-term debt, whereas firms with high potential agency problems use significantly more equity and less long-term debt and cash (Vladimir, Paul, & Vefa, 2009).

### 2.4.2 Signaling Theory

Signaling theory suggests that company announcements of an increase in dividend payouts act as an indicator of the firm possessing strong future prospects. A manager who has good investment opportunities is more likely to "signal" than one who does not. The information content of dividends, firms, despite the distortion of investment decisions to capital gains, may pay dividends to signal their future. The intuition underlying this argument is based on the information asymmetry between managers (insiders) and outside investors, where managers have private information about the current and future fortunes of the firm that is not available to outsiders (Pandey & Deeksha, 2015). This study is underpinned by adopting the signaling theory because it incorporate some of the features that are earlier highlighted in the literature and it provides information to both actual and prospective investors about the firm performance of a firm. This theory is used in this study to tie dividend payout and shareholders' value.

### 2.4.3 Debt Contracting Theory

Contracts play unquantifiable roles in resolving agency conflicts between managers, shareholders and creditors (Michael & Sufi, 2009). Creditors are concerned with actions by owner/managers that increase the risk or probability that the creditors will not see their investment returned. Managers usually increase firm leverage by making cash payouts to shareholders in the form of dividends or share repurchases, or increasing the riskiness of the firm's assets through various investment decisions (Jensen & Meckling, 1976; Myers & Majluf, 1984). Creditors anticipate such actions through either price-protect their claims to account for potential losses (and monitoring costs), or choose not to lend. Price protection and monitoring costs give rise to agency costs that are borne by the firm's shareholders. This theory is used to link debt and shareholders' value.

Therefore, shareholders have incentives, ex ante, to use contracting mechanisms that reduce the manager's ability to expropriate wealth from creditors, ex post. Such contracts can reduce agency costs and increase the efficiency of the contracting process. Bandopadhyay and Roy (2016b) contended that when a firm chooses to raise debt capital, it enters into formal and, to some extent, informal contractual arrangements with its creditors to resolve agency conflicts. Formal contracts with creditors include details on the amount that is (or can be) borrowed, the interest rates charged, covenant thresholds, and the maturity date of the loan. Informal relationships, however, can also influence lending and borrowing decisions because financing decisions, in part, depend upon the reputation the firm has established with respect to financial transparency, corporate governance, risk management, and other strategic and operating policies (Ball, Bushman, & Vasvari, 2006).

## 2.6 Summary

In summary, chapter two of the study conceptualized the dependent variable of the study (shareholders value creation) proxied with ratio of market to book value and the independent variables of the study (dividend payout, ratio of working capital to total asset, sales growth rate, return on assets and debt) of listed industrial goods firms listed on the NSE as at 31st December, 2015. In addition, empirical studies related to the variables of the study have been reviewed in this section and finally, theories that connects the dependent and independent variables of the study have been reviewed in order to bring out the connectivity of the variables of the study.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter explains the research design, method of data collection, population and sampling techniques. Data analysis techniques of the study will also be discussed as well as variable specification and measurement.

## 3.2 Research Design

This study utilizes a positivism research paradigm that is quantitative in nature. Panel research data was used in this study. That is, seventeen industrial goods firms were studied over a period of ten years, from 2007 to 2016. The study examined the relationship that exists among factors that determined shareholders' value of listed industrial goods firms in Nigeria, this warrant the use of correlational research design.

## 3.3 Population of the Study

The population of this study consists of all the listed industrial goods firms on the Nigerian Stock Exchange (NSE) as at 31st December, 2016. A total of 25 industrial goods firms were listed on the NSE as at 31st December, 2016 (Factbook, 2016). The list of the firms is attached in appendix "A".

## 3.4 Sample Size and Sampling Techniques

The industrial goods firms selected as sample of the study was based on the availability of data and therefore only seventeen (17) industrial goods firms were chosen for this research as their data is available throughout the period of this study. The choice of

industrial goods firms is justified on the ground that little has been done in investigating the determinants of shareholders value creation in industrial goods firms.

### 3.5 Sources and Method of Data Collection

The data of this study was obtained from secondary source of research data. That is, annual reports and final statements of listed industrial goods firms on the Nigerian Stock Exchange (NSE) as at 31st December, 2016 were utilized in the process of data collection, covering a period of 10 years (2007 - 2016). This is because the study conducted belongs to positivism paradigm

### 3.6 Techniques of Data Analysis and Justification

In order to achieve the objectives of this study, the data was first analysed using Ordinary Least Square (OLS) method of estimation, however, the data failed to meet the assumptions of OLS which necessitated the exposer of data to the Generalized Least Square (GLS) method of estimation where fixed and random effect was estimated. Hausman test was conducted to choose between fixed and random effect. Multiple regression technique was employed on the panel data of the study. Gujarati and Porter (2009) justified the usage of multiple regression technique as adequate.

In addition, other robustness tests were conducted such as normality test, heteroskedasticity test, and multicollinearity test. The Multicollinearity test assists the researcher to determine the relationship between the dependent and independent variables and also the relationship among the independent variables. The data was analyzed using STATA software. The justification for the use of panel data was on the ground that the firms studied were many and the number of years studied is more than one year.

### 3.7 Variable Measurements and Model Specification

In order to investigate the determinants of shareholders' value creation of listed industrial goods firms in Nigeria, one regression model was developed to test the linear relationship between independent and dependent variables.

Regression is used to estimate the linear relationship between independent and dependent variables. The multiple regression equation for this study is as follows:

$$MKBV = f (DVPY, WKCT, SLGT, RTEQ, DEBT) \quad (1)$$

However, the econometric form for the model is specified as:

$$MKBV_{it} = \alpha + \beta_1 DVPY_{it} + \beta_2 WKCT_{it} + \beta_3 SLGT_{it} + \beta_4 RTEQ_{it} + \beta_5 DEBT_{it} + \varepsilon_{it} \quad (2)$$

Where:

$\alpha$ = Intercept

$\beta$ = Parameter of explanatory variable

$\varepsilon$ = Error term

i = Industrial goods Firms involved in the study

t = time period involved

MKBV = Shareholders' Value

DEBT = Debt

DVPY = Dividend Payout

WKCT = Working capital Ratio

SLGT = Sales Growth rate

RTEQ = Return on Equity

Table 3.1: Variables Measurement

| Variables | Acronyms | Measurement | Source |
|---|---|---|---|
| Market to Book Value | MKBV | Ratio of the market value of shares to the book value of shares | Kolawole, (2013) |
| Dividend Payout | DVPY | Total Dividends / Total Earnings | Kumar, (2015) |
| Working capital Ratio | WKCT | Current Assets – Current Liabilities | Rajesh, (2015) |
| Sales Growth Rate | SLGT | 1 Year growth rate of net sales | Kumar, (2015) |
| Return on Equity | RTEQ | Net Income / Total Equity | Li and Yijun (2014) |
| Debt | DEBT | Total liabilities divided by total assets | Samy & Goaied, (1999) |

Source: Compiled by the Author, 2017

### 3.8 Summary

In summary, this chapter concentrates on explaining the design of the study adopted in this study which is correlational in nature. The population of the study is twenty five industrial goods firms listed on the NSE, as at 31st December, 2015. Out of which seventeen firms were selected as sample size of the study and this was done based on the availability of the financial statements of the firms. The data of the study was generated from the financial statements of the industrial goods firms listed on the NSE, as at 31st December, 2016. The techniques used was panel data, regression analysis and robustness tests (heteroskedasticity test, multicollinearity test, lagrangian multiplier test etc) was conducted to justify the use of OLS or GLS in the study. The variables of the study are measured based on the previous studies related to this study and all the works used in this study were cited and referenced.

# CHAPTER FOUR

# DATA PRESENTATION AND ANALYSIS

## 4.1 Introduction

This chapter presents the result of the study on the Determinants of Shareholders' Value of Listed Industrial Goods Firms in Nigeria. The descriptive statistics of the variables of the study were presented using tables that indicate the number of observations, means, standard deviations, minimum, maximum, skewness and kurtosis of the variables of the study. In addition, the result of correlation matrix as well as other robustness tests and inferential statistics are presented and discussed in this chapter.

## 4.2 Descriptive Statistics

Table 4.1 presents the number of observations, mean, standard deviation, minimum, maximum, skewness and kurtosis values of the variables of the study.

**Table 4.1 Descriptive Statistics of the variables**

| Variable | Obs | Mean | Std.Dev | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Mkbv | 170 | 0.710 | 0.178 | 0.123 | 1.727 | 0.000 | 0.366 |
| Dvpy | 170 | 0.695 | 0.097 | 0.000 | 0.876 | 0.040 | 0.832 |
| Wkct | 170 | 0.692 | 0.139 | 0.112 | 0.877 | 0.000 | 0.258 |
| Slgt | 170 | 0.415 | 0.107 | 0.101 | 0.569 | 0.040 | 0.027 |
| Rteq | 170 | 0.592 | 0.209 | 0.034 | 1.002 | 0.000 | 0.000 |
| Debt | 170 | 0.390 | 0.251 | 0.015 | 0.809 | 0.125 | 0.006 |

**Source**: STATA Output (2017)

The data skewed from 0.000 to 0.125 indicating that the data is normally distributed. It can be seen from Table 4.1 that the mean value of shareholders value which is measured by market to book value (mkbv) is 0.710. This implies that on the average, the shareholders' value of listed industrial goods firms in Nigeria appreciated over the period of the study. The minimum and maximum values of shareholder value of listed industrial goods firms in Nigeria are 0.123 and 1.727. This implies that the least shareholders' values created by the

firms is 12.3% and the highest shareholder' value created is 172.7%. The value of standard deviation of shareholders' value creation is 0.178 which implies that there is no wide variation from the mean. That is, the shareholders' value created by the firms deviates from the mean from both sides by 17.8%. The value of kurtosis of shareholders' value creation of listed industrial goods firms in Nigeria stands as 0.366 which provides evidence that the data is normally distributed.

Furthermore, Table 4.1 indicates that the dividend payout ratio of listed industrial goods firms in Nigeria has a minimum and maximum value of 0.000 and 0.876 respectively. The maximum value of 0.876 implies that premier paints pay up to 87.6% of the profit generated as dividend. On average, listed industrial goods firms in Nigeria paid 69.5% as dividend. The standard deviation value of dividend payout ratio is 0.097. This implies that the deviation from the mean was 9.7%. On the other hand, the coefficient of skewness of 0.040 which implies that, the data is positively skewed and it deviates from the condition of being symmetrically distributed. Therefore, it means the data is not normally distributed.

Similarly, it is further reported in Table 4.1 that the mean value of working capital to total assets of listed industrial goods firms in Nigeria is 0.692. This implies that on the average, the ratio of working capital to total assets of listed industrial goods firms in Nigeria is 69.2%. The minimum and maximum values of working capital to total assets of listed industrial goods firms in Nigeria are 0.112 and 0.877 respectively. This implies that the least working capital to total assets is 11.2% while the maximum working capital to total assets is 87.7%. The coefficient of skewness of 0.000 implies that the data conforms to the symmetrical distribution requirement of normal data. Similarly, the coefficient of kurtosis of 0.258 supports the idea that the variable does not meet the Gaussian distribution criterion of normal data.

The descriptive statistics in Table 4.1 also shows that the sales growth ratio of listed industrial goods firms in Nigeria has a minimum and maximum values of 0.101 and 0.569 respectively. This implies that the minimum sales growth within the listed industrial goods firms in Nigeria is 10.1% with maximum of 56.9%. On the average, listed industrial goods firms in Nigeria experienced sales growth of 0.415 with standard deviation of 0.107. This implies that the data of the firms under study deviates from the mean by 10.7%. The coefficient of skewness is 0.040 which implies that the data normally distributed and therefore, conform to the symmetrical distribution requirement. Similarly, the coefficient of kurtosis of sales growth at 0.027 indicates that the data does not meet the Gausian distribution criterion.

Furthermore, Table 4.1 indicates that the return on equity of listed industrial goods firms in Nigeria has a minimum and maximum value of 0.034 and 1.002 respectively. This implies that some of the shareholders made profit to the tune of 3.4% while others got return on equity up to 100.2%. On the average, return on equity of listed industrial goods firms in Nigeria is 0.719%. The standard deviation value of return on equity is 0.592. This implies that the deviation from the mean was 59.2%. On the other hand, the coefficient of skewness is 0.000 which implies that the data is normally distributed.

Similarly, it is reported in Table 4.1 that the mean value of debt of listed industrial goods firms in Nigeria is 0.390. This implies that on the average, the debt of listed industrial goods firms in Nigeria is 39%. The minimum and maximum values of debt of listed industrial goods firms in Nigeria are 0.015 and 0.809 respectively. This implies that the least debt is 1.5% while the maximum debt is 80.9% within the firms under study. The coefficient of skewness of 0.125 implies that the data conform to the symmetrical distribution

requirement of normal data. Similarly, the coefficient of kurtosis of 0.006 supports that the variable does not meet the Gaussian distribution criterion of normal data.

Therefore, the analysis and interpretation of the descriptive statistics of the data for the variables of the study indicates that the data is averagely normally distributed. The study employed Shapiro Wilk test to find statistical evidence as to whether the data of the variables of the study follow the normal curve or not. The result of the Shapiro-Wilk test in Appendix "B" indicates that the data from the variables of the study are normally distributed because the p-values are significant at 1%. If the data is not normally distributed, it may lead to problems in the use of Ordinary Least Square method as method of estimation in this study and hence the need for more Generalized Least Square method of estimation. In order to correct the problem of non-normality of the data set, the non-normal data sets of the study were transformed. Natural log and square roots were used to transform the non-normal variables of the study.

### 4.3 Correlation Matrix

Correlation matrix indicates the relationship between dependent and independent variables and the relationship among the independent variables. The correlations of the explanatory variables were tested for multicollinearity as a pre-condition for running the simple linear regression. Table 4.2 presents the result of correlation matrix of the study.

**Table 4.2: Pearson Correlation Matrix**

| Variable | mkbt | dvpy | wkct | rted | debt |
|---|---|---|---|---|---|
| Mkbv | 1.000 | | | | |
| Dvpy | 0.448*** | 1.000 | | | |
| Wkct | -0.026 | 0.128 | 1.000 | | |
| Slgt | 0.358*** | 0.465*** | 0.213** | 1.000 | |
| Rted | 0.271*** | -0.078 | -0.124 | -0.009 | 1.000 |
| Debt | 0.019 | 0.069 | 0.069 | -0.523*** | 0.070 |

**Source:** STATA Output, (2016) (***, **, * sig @ 1%, 5% & 10% respectively)

Table 4.2 reveals the result of the correlation matrix for the dependent and independent variables of the study. It can be seen from the table that market to book value of ratio (mkbv) is negatively and significantly related to working capital ratio (wkct). However, market to book value of ratio (mkbv) is positively related to debt (debt), dividend payout (dvpy), return on equity (rted) and sales growth rate (slgt), the correlation is significant at 5% level of significance.

The relationship between dividend payout and sales growth is positive and significant, while dividend payout relationship with working capital and debt is positive and not significant. Dividend payout relationship with return on equity is negative but not significant. Working capital is positively related to debt and sales growth but negatively related to return on equity. Returned on equity is negatively and significantly related to debt. Return on equity is positively but not significantly related to debt.

The result in Table 4.2 shows that the highest correlated variables are dividend payout and sales growth with a value of 0.465, followed by sales growth and working capital with a value of 0.213. The correlation values are acceptable based on the rule of thumb that correlation value should not be more than 0.8 (Damodar & Gujarati, 2004; Hair, Black, Babin, & Anderson, 2010). Furthermore, the correlation test is subjected to further test for multicollinearity.

## 4.4 Robustness Tests

In order to arrive at the appropriate model of the study, multicollinearity, heteroskedasticity, hausman and VIF tests were conducted. The following are the results of the tests conducted and their interpretations.

### 4.4.1 Multicollinearity Test

The multicollinearity test of the independent variables of the study is shown in Table 4.4. The multicollinearity test result of each variable falls within the acceptable level. The value of VIF should not be more than 10 (Gujarati & Porter, 2009). In the variables of the research Model, the highest VIF value comes from sales growth with a value of 1.92 and the least VIF is 1.030 for return on equity. The VIF mean is 1.37, which testifies that multicollinearity is not an issue in the Model.

**Table 4.4: Multicollinearity Test**

| Variable | VIF | 1/VIF |
|---|---|---|
| Slgt | 1.920 | 0.521 |
| Debt | 1.470 | 0.679 |
| Dvpy | 1.360 | 0.734 |
| Wkct | 1.070 | 0.936 |
| Rted | 1.030 | 0.967 |
| Mean VIF | 1.370 | |

**Source:** STATA Output (2016)

### 4.4.2 Heteroskedasticity

Homoscedasticity of variance is the consistency of the residuals which are randomly distributed through various estimations in the presence of unequal variance (Hair *et al*. 2010). The rule of thumb is to accept the $H_0$ if the p-value is greater than 0.05, indicating that the variance is homoscedastic. The study used the STATA statistical package and tested (Breusch-Pagan/ Cook-Weisberg test) for heteroskedasticity, i.e., to establish the behaviour of variance. The result ($chi^2$ (1) = 37.35, prob > $chi^2$ = 0.000) indicates that the variance is heteroskedastic because the chi-square is significant at all levels. Since heteroskedasticity is present in the data set, the assumption of Ordinary Least Square Method of estimation is not met. This makes the study to move to Generalised Least Square Method of estimation.

### 4.4.3 Hausman Test

Hausman test was conducted in this study in order to choose between Fixed Effect model of estimation and Random Effect model of estimation. The p. value (0.000) of hausman test is significant which implies that fixed effect model of estimation should be used in this study.

## 4.5 Test of Hypotheses

The Guss-marker theorem views that the OLS method is the best method of estimation if error terms are independent and identically distributed (Cottrell & Lucchetti, 2007), but where data fails the OLS assumption, the study should proceed to Generalized Least Squares (GLS) that suit the data. Thus, the study estimated regression analysis using pooled GLS and the Hausman Test suggests fixed method of estimation to be used. The analyses of the determinants of shareholders' value of listed industrial goods firms in Nigeria are shown in Table 4.5.

**Table 4.5: Regression Result**

Result of the model: Determinants of Shareholders' Value of Listed industrial goods firms in Nigeria

| | Coefficient | t-value | p. value |
|---|---|---|---|
| dvpy | 0.390 | 4.750*** | 0.000 |
| wkct | -0.067 | -1.710* | 0.089 |
| slgt | 1.019 | 2.890*** | 0.004 |
| rteq | 0.911 | 4.100*** | 0.000 |
| debt | -0.771 | -0.420 | 0.678 |
| CONST | 2.300 | 7.150 | 0.000 |
| $R^2$ WTH | | 0.348 | |
| $R^2$ B/W | | 0.240 | |
| $R^2$ OV | | 0.330 | |
| F-Stat | | 15.800 | |
| Sig | | 0.000 | |

**Source:** STATA output (2017) (***, **, * significance @ 1%, 5% & 10% respectively)

Regression results in Table 4.5 indicated that the independent variables of the study (dividend payout, working capital, return on equity, debt and sales growth) explained around 33.09% of the variations in the shareholders' value created of listed industrial goods firms, from the overall coefficient of determination of $R^2$ values of 0.3309. The remaining 66.91% were explained by other factors that affect the shareholders' value of listed industrial goods firms in Nigeria which were not captured in the model of this study. Table 4.5 shows that the model is fitted as evident by the F-value of 15.80 which is at 99% confidence level as shown by the p-value of 0.000. This means, the independent variables collectively, are good factors that affect shareholder's value of listed industrial goods firms in Nigeria.

In Chapter One, five null hypotheses were formulated in order to assess the determinants of shareholder's value of listed industrial goods firms in Nigeria. The study tested the formulated hypotheses in view of the robustness of the results, which can be considered as best unbiased estimator. The decision rule is based on the significances of the t-statistics which are represented by the p- values against each variable of the study. The hypotheses are presented as follows:

### 4.5.1 Dividend Payout and Shareholders' Value

The study states that dividend payout does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria. The coefficient and t-statistic values of dividend payout in Table 4.5 are 0.390 and 4.75 respectively. The t-statistic value of 4.75 indicates that dividend payout plays a significant role in explaining the changes in shareholders' value and the level of significance is at 5%. Therefore, the study rejects the null hypothesis of the study which states that dividend payout does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria. This also

implies that as the firms payout dividend, their market to book value will appreciate. The significant positive relationship found between dividend payout and market to book value is consistent with the findings of Kumar (2015) and Ya'u, Abdulrasheed, & Emmanuel (2015). The result however, differs from the findings of Kenneth and Ambrose (2014) who established that shareholders' value is negatively affected by dividend payout.

### 4.5.2 Working Capital to Total Assets and Shareholders' Value

The study states that working capital to total assets does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria. From the results of the study in Table 4.5, the regression coefficient of working capital to total asset is -0.067, with a t-value of -1.710 which is not significant at 5%. This means, working capital to total asset ratio is not important in reducing shareholders' value of listed industrial goods firms in Nigeria.

Therefore, the study fails to reject the null hypothesis of the study which states that working capital to total assets does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria. It follows that working capital to total assets does not plays vital role in explaining shareholders' value. This finding is contrary to the findings of Rajesh (2015), Ali (2009) and Nguyen, Tran and Nguyen (2016) who documented that working capital to total asset is positively related to shareholders' value. The result is in line with the findings of Bandara (2015), Afza & Nazir (2007) and Ahmed, Awan, Muhammad, Tafakhar and Muhammad (2016) that found negative relationship between ratio of working capital to total assets and ratio of market to book value.

### 4.5.3 Sales Growth and Shareholders' Value

Conversely, the result of the study from Table 4.5 indicates that ratio of sales growth has a significant positive effect on the ratio of market to book value of listed industrial goods firms in Nigeria. From the analysis, the regression coefficient of ratio of sales growth is 1.019, with a t-value of 2.89 which is significant at 1% level of significance. Thus, based on the statistical evidence, this study rejects the null hypothesis which states that sales growth does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria.

It therefore follows that, the ratio of sales growth plays a vital role in explaining shareholders' value of listed industrial goods firms in Nigeria. The finding of this study is in line with the findings of Rajesh (2015) and Sakthivel (2011a) that found that ratio of sales growth positively affect the shareholders' value of listed industrial goods firms in Nigeria. The result of this study is, however, contrary to the findings of Adnan, Amir, Pir, Naveed and Wasiq (2016), Habib & Khn ( 2016) and Varaiya (1987) who documented that, shareholders' value is negatively affected by sales growth.

### 4.5.4 Return on Equity and Shareholders' Value

The study states that return on equity does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria. The coefficient and t-statistic values of return on equity in Table 4.5 are 0.911 and 4.100 respectively. The t-statistic value of 0.390 indicates that return on equity played a significant role in explaining the changes in shareholders' value. Therefore, the study rejects the null hypothesis that states that return on equity does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria.

The significant positive relationship found between return on equity and market to book value is consistent with the findings of Kenneth and Ambrose (2014), Kenneth & Ambrose (2014) and Abraham, Harris, & Auerbach (2017) who documented that shareholders' value is positively affected by dividend payout. The result however, differs from the findings of Varaiya (1987) who established that shareholders' value is negatively affected by dividend payout.

### 4.5.5 Debt and Shareholders' Value

Lastly, it can be seen from the analysis in Table 4.5 that debt has an insignificant negative effect on shareholders' value of listed industrial goods firms in Nigeria. From the analysis, the regression coefficient debt is -0.771, with a t-value of -0.420 which is insignificant at 5%. Thus, based on the statistical evidence, this study fails to reject the null hypothesis which states that debt does not have any significant relationship with shareholders' value of listed industrial goods firms in Nigeria.

It therefore follows that, debt does not play a vital role in explaining shareholders' value of listed industrial goods firms in Nigeria. The finding of this study is contrary to the findings of Siyanbola (2015) and Thomas (2013) who documented that sales growth positively affect the ratio of shareholders' value. However, the result of this study is however in line with the findings of Habib *et al*. (2016), Rajesh (2015) and Anandasayanan, Velnampy (2016) who documented that shareholders' value is negatively affected by debt.

## 4.6 Policy Implication of the Results

The findings of the study show that dividend payout ratio, sales growth and return on equity play a vital role in creating shareholders value. From the findings of the study it can be

seen that dividend payout has a positive relationship with shareholders' value of listed industrial goods firms in Nigeria. A positive relationship between dividend payout and shareholders' value of listed industrial goods firms in Nigeria implies that increasing the amount of dividend payout will lead to an increase in the shareholders' value of the firms.

Also, the study found a positive relationship between sales growth and shareholders' value of listed industrial goods firms in Nigeria. This implies that as the volume of sales increases, the shareholders' value of listed industrial goods firms in Nigeria will also improve. This means that as sales increases so long it is higher than the cost incurred is less then shareholders value will increase.

Finally, the findings of the study revealed positive relationship between return on equity and shareholders' value of industrial goods firms in Nigeria. This implies that increasing the level of return on equity to a certain level will improve the shareholders' value of the firms.

## 4.7 Summary

In this chapter, the study describes the nature of the data of the study where mean, minimum, maximum, kurtosis and skewness of the data were discussed. In addition, the interrelationship among the variables of the study were analysed using correlation matrix. Furthermore, multicollinearity of the variables were tested using lagrangian multiplier test. And finally, the hypotheses of the study were tested.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Summary

The study discussed the variables of the study and current issues related to them under background of the study. In addition, the hypotheses of the study were drawn in line with the objective of the study stated in chapter one. In chapter two, all the variables were conceptualized and related study were empirically reviewed and the theories used in this study were explained in relation to the variables of the study.

The study examined the determinants of shareholders' value of listed industrial goods firms in Nigeria. Determinants of shareholders' value used in this study are dividend payout, working capital to total assets, sales growth, return on equity and debt while shareholders' value was proxied with ratio of market to book value. The data of seventeen listed industrial goods firms on the Nigerian Stock Exchange as at 31st December, 2016 over the period of 2007 to 2016 were obtained from the annual reports and financial statements of the firms.

The model used for the study estimated the relation among the determinants of shareholders' value of listed industrial goods firms in Nigeria. The study, in the process of data analysis, employed three methods of regression estimations which are Ordinary Least Square, Generalized Least Square (Fixed Effect and Random Effect) methods of estimations. Hausman specification test was conducted and the result is in favour of fixed effect method of estimation. All the results interpretation and conclusions drawn in this study are done using fixed effect method of estimation. The results of the analysis of the study revealed that three out of five independent variables of the study are significant in determining the shareholders' value. The study found that:

i. Dividend payout significantly and positively affects shareholders' value of listed industrial goods firms in Nigeria.

ii. Sales growth significantly and positively affects shareholders' value of listed industrial goods firms in Nigeria.

iii. Return on equity significantly and positively affects shareholders' value of listed industrial goods firms in Nigeria.

iv. Also, the study reveals that 33.09% of the changes in shareholders' value of listed industrial goods firms in Nigeria is as a result of the combination of joint effect of dividend payout, working capital to total assets, sales growth, return on equity and debt

## 5.2 Conclusions

The study investigated the determinants of shareholders' value creation of listed industrial goods firms in Nigeria. From the tests conducted on the data collected and the analysis of the result, this study found that dividend payout, sales growth and return on equity are strongly associated with shareholders' value in Nigeria.

Based on the findings of the study, it is documented that dividend payout plays a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Therefore, the study concludes that dividend payout ratio is one the factors that determine the shareholders' value of listed industrial goods firms in Nigeria.

Likewise, the findings of the study documented that sales growth ratio plays a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Therefore, the study concludes that sales growth ratio is one of the factors that determine shareholders' value of listed industrial goods firms in Nigeria.

Similarly, the findings of the study documented that return on equity play a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Therefore, the study concludes that return on equity is one of the factors that determine shareholders' value of listed industrial goods firms in Nigeria.

Also, working capital ratio does not play a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Therefore, the study concludes that working capital ratio does not play vital role in determining shareholders' value of listed industrial goods firms in Nigeria

Finally, the findings of the study documented that debt does not play a vital role in determining the shareholders' value of listed industrial goods firms in Nigeria. Therefore, the study concludes that debt does not influence the changes in shareholders' value of listed industrial goods firms in Nigeria.

## 5.3 Recommendations

In line with the findings and the conclusions drawn therefore, the study recommends the following:

Relevant policy makers and regulators should formulate policies that will make listed industrial goods firms in Nigeria to be increasing their dividend payout so that the shareholders' value to be created.

The management of listed industrial goods firms in Nigeria should concentrate on the activities that will improve their return on equity so that the shareholders' value of the firms will be created.

Finally, the management of the firms should engage in marketing strategies that will increase the volume of their sales. This is because as sales increases the shareholders' value will be created.

## 5.4 Limitations of the study

The study was limited to determining the factors the determine shareholders' value of listed industrial goods firms in Nigeria. For this reason, other industries such as banking sector insurance companies and microfinance institutions were not captured in the study. Therefore, the findings and recommendations are only applicable to listed industrial goods firms in Nigeria.

**References:**


Abraham, R., Harris, J., & Auerbach, J. (2017). Earnings Yield as a Predictor of Return on Assets , Return on Equity , Economic Value Added and the Equity Multiplier, 10–24. http://doi.org/10.4236/me.2017.81002

Adnan, A., Amir, U., Pir, Q. S., Naveed, S., & Wasiq, N. (2016). *Impact of capital structure on profitability: A comparative study of cement & automobile sector of Pakistan*.

Afza, T., & Nazir, M. S. (2007). Working Capital Management Policies of Firms: Empirical Evidence from Pakistan. In *Presented at 9th South Asian Management Forum (SAMF) on February 24-25, North South University, Dhaka, Bangladesh.*

Agbor, N., & Agborya, E. (2010). *Financial regulations, risk management and value creation in financial institutions: evidence from Europe and USA.*

Ahmed, Z., Awan, M. Z., Muhammad, Z. S., Tafakhar, H., & Muhammad, K. (2016). A nexus between working capital management and profitability: A Case study of pharmaceutical sector in Pakistan. *International Journal of Economics and Financial Issues*, *6*(s3), 153–160.

Ahmed, Z., Awan, M. Z., Safdar, M. Z., Hasnain, T., & Kamran, M. (2016). A Nexus between Working Capital Management and Profitability : A Case Study of Pharmaceutical Sector in Pakistan, *6*(2004), 153–160.

Akinsulire, O. (2010). *Financial Management*. Lagos: Ceemol Nigeria Limited.

Alfred, R. (2006). Ten ways to create shareholder value. *Harvard Business Review*.

Ali, V. B. (2009). Working capital management as a key for value creation: case study of agribusiness private dairy firms. *Management and Change*, *13*(1), 46–86.

Amidu, M., & Abor, J. (2006). Determinants of dividend payout ratios in Ghana. *The Journal of Risk Finance*, *7*(2), 136–145.

Anandasayanan, S. Velnampy, T. (2016). Dividend policy and corporate profitability econometric analysis of listed manufacturing firms in Sri Lanka. *International Journal of Commerce and Management Research*, *2*(1), 53–58.

Anthony, G., & Wijayanayake, A. (2016). A study on working capital management and its impact to the firm's profitability: Case study in leading leather garment manufacturer, Sri Lanka. *International Postgraduate Research Conference*.

Asogwa, C. R. (2009). Measuring the determinants of value creation for listed banks in Nigeria, a random effects probit (rep) model analysis. In *African Econometric Society 14th Annual Conference on Econometric Modelling for Africa, 8th – 10th August 2009.*

Azhagaiah, R., & Sabari, P. . . (2008). The Impact of Dividend Policy on Shareholders' Wealth. *International Research Journal of Finance and Economics*, (20), 180–187.

Ball, R., Bushman, R., & Vasvari, F. P. (2006). The debt-contracting value of accounting information and loan syndicate structure.

Bandara, R. M. S. (2015). Impact of Working Capital Management Policy on Market Value

Addition. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics (GJCRA) An Online International Research Journal*, *1*(2), 354–373.

Bandopadhyay, K., & Roy, K. (2016a). Debt financing and shareholders' return: A study of BSE 500 companies. *Vidyasagar University Journal of Commerce*, *21*, 1–12.

Bandopadhyay, K., & Roy, K. (2016b). Debt financing and shareholders ' return : a study of bse 500 companies, *21*(1976).

Baumol, W. J. (1962). On the Theory of Expansion of the Firm. *American Economic Review*, *52*(5), 1078–1087.

Ben, A. A. (2012). The Impact of Financing Decision on the Shareholder Value Creation. *Journal of Business Studies Quarterly*, *4*(1), 44–63.

Black, E. L. (1998). Life-cycle Impacts on the Incremental Value –Relevance of Earnings and cash Flow measures. *The Journal of Financial Statement Analysis*, 40–56.

Boundless, P. (2015). Relationships between ROA, ROE, and Growth. Retrieved March 29, 2016, from https://www.boundless.com/finance/textbooks/boundless-finance-textbook/analyzing-financial-statements-3/the-dupont-equation-roe-roa-and-growth-44/relationships-between-roa-roe-and-growth-224-3899/

Brush, T. H., Philip, B., & Hendrickx, M. (2000). The free cash flow hypothesis for sales Growth and firm performance. *Strategic Management Journal*, *21*, 455–472.

Burlacu, L. O. (2013). Indicators used for measuring shareholders value. *Journal of Accounting and Auditing: Research & Practice*, *4*(1), 1–9.

Carlo, A. M. (2011). *Return on equity, market value added and shareholder value creation*. University of Modena and Reggio Emilia.

Chikwendu, R. A. (2009). Measuring the determinant of value creation for publicly listed banks in Nigeria: A random effect probit model analsis. In *14th Annual conference on ecometric modelling for Africa*.

Cottrell, A., & Lucchetti, R. (2007). Grelt user's guide-gnu regression. In *Econometrics and Time-Series* (p. Septermber, 2008).

Damar, H., & Umar-Farouk, W. (2016). Analysis of the effect of financial leverage and liquidity towards stock value and profitability as the intervening variable in trading companies listed at Indonesia stock exchange 2010-2014. *Journal of Business Studies*, 109–116.

Damodaran, A. (2010). The debt-equity trade off: the capital structure decision. *Journal of Accounting and Auditing: Research & Practice*, *5*, 1–15.

Dwilaksono, H. (2010). Effect of short and long term debt to profitability in the mining industry listed in JSX. *Business and Entrepreneurial Review*, *10*(1), 77–87.

Enekwe, C. I., Nweze, A. U., & Agu, C. I. (2015). The effect of dividend payout on performance evaluation: evidence of quoted cement companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, *3*(11), 40–59.

Famil, Ş., & Ali, I. A. (2016). The relationship between working capital management and profitability: Evidence from Turkey. *Business and Economics Research Journal*, *7*(2), 1–14.

Fiordelisi, F. (2010). The determinants of shareholder value in European banking. J Bank Finance. *JOURNAL OF BANKING & FINANCE*. http://doi.org/10.1016/j.jbankfin.2009.11.018

Frankfurter, M., George, T., & Wood, B. G. (2003). *"Dividend Policy Theory and Practice."* Academic Press.

Gujarati, D. N. (2004). *Basic Econometrics* (Fourth Edi). The McGraw-Hill.

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometric* (5th ed.). Newyork: McGraw Hill/Irwin.

Habib, H. J., Faisal, K., & Muhammad, I. W. (2016). Impact of debt on profitability of firms: Evidence from non-financial sector of Pakistan. *City University Research Journal*, *6*(1), 70–80.

Habib, H. J., & Khan, F. (2016). Impact of debt on profitability of firms ; evidence from non-financial sector of pakistan, *6*(1), 70–80.

Hair JR, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*.

Hashemijoo, M., Ardekani, A. M., & Younesi, N. (2012). The Impact of Dividend Policy on Share Price Volatility in the Malaysian Stock Market. *Journal of Business Studies Quarterly*, *4*(1), 119–129.

Hashemijoo, M., Ardekani, A. M., & Younesi, N. (2012). The Impact of dividend policy on share price volatility in the Malaysian Stock Market. *Journal of Business Studies Quarterly*, *4*(1), 111–129.

Jami, M., & Bahar, M. N. (2016). Analysis of profitability ratios to evaluation of performance of Indian automobile industry. *Journal of Current Research in Science*, (S1), 747–755.

Jensen, M. C. (2002). Value maximization, stakeholder theory, and the corporate objective function. *Business Ethics Quarterly*, *12*(2), 235–256.

Jensen, M. C. (2002). *Value Maximization , Stakeholder Theory , and the Corporate Objective Function Value Maximization , Stakeholder Theory , and the Corporate Objective Function*.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*, 305–360.

Jodlbauer, H. (2012). *Modelling Value: Selected Papers of the 1st International Conference on Value Chain Management: Springer*.

Kapoor, S. (2009). *Impact of dividend policy on shareholders' value: a study of Indian firms*. Jaypee Institute of Information Technology, Noida.

Kenneth, M., & Ambrose, J. (2014). Price to Book Value Ratio and Financial Statement Variables (An Empirical Study of Companies Quoted At Nairobi Securities Exchange, Kenya). *Global Journal of Commerce and Management Perspective*, *3*(6), 50–56.

Kolawole, O. O. (2013). The Determinants of Value Creation in the Nigerian Banking Industry: Panel Evidence. *International Journal of Business and Social Science*, *4*(3), 89–101.

Koller, T., Goedhart, M., & Wessels, D. (2010). *Valuation: Measuring and Managing the Value of Companies* (5th ed.). New Jersey: John Wiley & Sons. Inc, Hoboken.

Kumar, B. R. (2015). Determinants of Value Creation: An Empirical Examination from UAE Market. *International Journal of Economics and Financial Issues*, *5*(1), 75–85. Retrieved from www.econjournals.com

La Porta, R., Silanes, L., Shleifer, A. F., & Vishny, R. (2000). "Agency problems and dividend policies around the world." *Journal of Finance, 55*(1), 1–33.

Madan, L. B. (2013). Economic value added and shareholders' wealth creation: Evidence from a developing country. *International Journal of Finance and Accounting*, *2*(4), 185–198. http://doi.org/10.5923/j.ijfa.20130204.01

Marangu, K., & Ambrose, J. (2014). Price to Book Value Ratio and Financial Statement Variables (An Empirical Study of Companies Quoted At Nairobi Securities Exchange, Kenya). *Global Journal of Commerce and Management Perspective*, *3*(6), 50–56.

Mbuvi, J. N. (2015). Effect of Dividend Policy on Value Creation for Shareholders of Companies Listed In the Nairobi Securities Exchange. *IOSR Journal of Economics and Finance*, *6*(2), 35–41.

Mehrnaz, S. (2013). Exploring the relationship between financial ratios and created shareholders value: A life cycle perspective. *European Online Journal of Natural and Social Sciences*, *2*(3), 195–206.

Michael, C. J., & William, H. M. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*, 305–360.

Michael, R. R., & Sufi, A. (2009). Control rights and capital structure: An empirical investigation. *The Journal of Finance*, *LXIV*(4), 1657–1695.

Million, G., Metewos, K., & Sujata, S. (2014). The impact of credit risk on profitability performance of commercial banks in Ethopia. *African Journal of Business Management*, *9*(2), 59–66. http://doi.org/10.5897/AJBM.7171

Minchington, C., & Francis, G. (2000). Shareholder Value. *Management Quarterly*, *6*, 23–31.

Mohd, F., Sam, M., & Yasuo, H. (2013). Sales Growth, Profitability and Performance: Empirical Study of Japanese ICT Industries with Three Asean Countries. *Interdisciplinary journal of contemporary research in business*, *4*(11), 138–156.

Mohebbimoghaddam, B., Talebnia, G., & Rasoul, B. H. (2016). Review the effect of growth opportunities, return on equity, volatility of stock price and operational risk on companies' market value. *International Journal of Humanities and Cultural Studies*.

Muhammad, H., Ahmad, S., Haider, Z., & Saif-ur-rehman, A. (2016). *Relationship between working capital management and profitability: A case study from textile sector of Pakistan.*

Mula, N. K., Farooq, A. K., Sherwani, A., Fahad, I., & Ghulam, K. (2016). Impact of capital structure and dividend payout policy on firm's financial performance: Evidence from manufacturing sector of Pakistan. *American Journal of Business and Society*, *2*(1), 9–35.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*, 187–221.

Nasimi, A. N. (2016). Effect of capital structure on firm profitability (An empirical evidence from London, UK). *Global Journal of Management and Business Research: C Finance*, *16*(4).

Nguyen, H., Tran, M., & Nguyen, D. (2016). Working Capital Management and Firms ' Profitability : Evidence from Vietnam ' s Stock Exchange, *8*(5), 55–62. http://doi.org/10.5539/ijef.v8n5p55

Oladipupo, A. O., & Okafor, C. A. (2013). Relative contribution of working capital management to corporate profitability and dividend payout ratio: Evidence from Nigeria. *International Journal of Business and Finance Management Research*, *1*, 11–20.

Pablo, F. (2002). A defination shareholder value creation. *IESE Research Division*, *21*.

Pandey, I. . (2005). *"What drives Shareholder Value"* (No. 2005-9–4). India.

Pandey, I. M. (2002). *Financial Management* (8th ed.). New Delhi: VIKAS Publishing PVT Ltd.

Pandey, I. M. (2005). *Financial Management* (9th ed.). New Delhi: Vikas Publishing House.

Pandey, M., & Deeksha, A. (2015). Shareholder Value Analysis: A Review. *International Journal of Science and Research*, *4*(5), 2129–2132.

Pandya, H., & Parmar, C. (2011). Measuring corporate success: Statistical analysis of financial performance indicators. *International Journal of Research in Commerce, Economics & Management*, *1*(3), 121–125.

Pontiff, J., & Schall, L. (1998). Book to Market Ratios as Predictors of Market Returns. *Journal of Financial Economics*, *49*, 14–16.

Powers, G. T. (2010). *Economic Profitability of Regulated vs. Unregulated Industries*.

Rajesh, K. B. (2015). Determinants of value creation of GCC firms - An application of PLS SEM model. *Asian Journal of Finance & Accounting*, *7*(1). http://doi.org/10.5296/ajfa.v7i1.6464

Ramesh, S. A. (2006). What is Return on Equity? How to use it in Micro finance? Retrieved March 29, 2016, from http://www.sa-dhan.net/Adls/Technicalnotes/Technical_Notes_19.pdf

Ramezani, C., Soenen, L., & Jung, A. (2002). "Growth, Corporate Profitability and Value Creation." *Financial Analysts Journal*, *58*(2), 58 – 67.

Reimann, B. C. (1989). *Managing for value: a guide to value based strategic management*. Oxford: Basil Blackwell.

Richard, R. (2000). *Shareholder value measures in general insurance working party*.

Robert, K., Mark, L., & Rabhi, M. (2008). Working Capital Management, Access to Financing, and Firm Value. *Journal of Applied Corporate Finance*, *19*(2), 114–135.

Sakthivel, N. (2011a). Shareholders' Value in Indian Pharmaceutical Industry: An Empirical Analysis. *Indian Journal of Commerce & Management Studies*, *II*(1), 87–99.

Sakthivel, N. . (2011b). "Shareholders' Value in Indian Pharmaceutical Industry: An Empirical Analysis." *Indian Journal of Commerce & Management Studies*, *II*(1), 87–99.

Salih, T., & Abdessatar, A. (2011). The Importance of Relationship Management whit Small Shareholders in value Creation: Illustration by French and Tunisian Backgrounds. *International Research Journal of Finance and Economics*, *81*.

Samy, B. N., & Goaied, M. (1999). *The Value Creation Process in the Tunisian Stock Exchange*.

Shin, H. H., & Soenen, L. (1998). Efficiency of working capital management and value creation for shareholders. *Financial Practice and Education*, *8*, 37–45.

Shrikant, K. P., Zainuddini, Y., & Azizan, A. (2014). Comparing Traditional and Economic Performance Measures for Creating Shareholder's Value: a Perspective from Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *4*(4), 1–10.

Siyanbola, T. T. (2015). Determinants of value creation and appropriation by bank: stakeholders' theory perspective. *Journal Of Economics And International Business Research*, *3*(4), 8–21.

Terry, S. (2015). What exactly do we mean by "shareholder value"? *Finance Times*.

Thomas, K. (2013). Determinants of Shareholder Value Creation of Listed Banks in Ghana. *International Journal of Empirical Finance*, *1*(1), 7–12.

Umara, N., Sabeen, K. K., & Qaisar, A. (2009). International working capital practices in Pakistan. *International Research Journal of Finance and Economics*, *32*, 160–170.

Varaiya, N. (1987). The relationship between growth, profitability and firm value. *Strategic Management Journal*, *8*(2), 487–497.

Vladimir, A. G., Paul, A. S., & Vefa, T. (2009). How do firms finance their investments?: The relative importance of equity issuance and debt contracting costs. *Journal of Corporate Finance*, *15*(2), 179–195.

Weston, J. F., & Copeland, T. E. (1992). *Managerial Finance* (9th ed.). The Dryden Press, New York.

Wooldridge, J. A. (2003). *Introductory Econometrics: A Modern Approach* (2nd ED). U S A:

Thomson South-Western.

Ya'u, M. D., Abdulrasheed, B., & Emmanuel, C. (2015). An Empirical Investigation into Determinants of Shareholders Value Creation among Banks in Nigeria. *International Journal of Empirical Finance*, *4*(6), 345–353.

**Appendix "A"**

**Population**

1. African Paint (NIG) LMD
2. Ashaka Cement PLC
3. Berger Paints Nigerian PLC
4. Chemical and Allied Product PLC
5. Cement Company of Northern Nigeria PLC
6. Dangote Cement PLC
7. DN Meyer PLC
8. First Aluminum Nigerian PLC
9. IPWA PLC
10. Laparge Cement Wapco Nigerian PLC
11. Paint and Cuttings Manufacturers NIG PLC
12. Portland Paint and Product NIG PLC
13. Premier Paints
14. Cutix PLC
15. Nigerian Wire and Cables PLC
16. Nigeria Wire Industries PLC
17. Abplast Products PLC
18. Avon Crowncaps and Containers NIG PLC
19. Grief Nigerian PLC
20. Nigerian Bags Manufacturing Company PLC
21. Poly Products NIG PLC
22. West African Grass Industry PLC
23. Nigerian Sewing Machine Manufacturing PLC
24. Nigerian Ropes PLC
25. Stokvis Nigerian PLC

**Sample**

1. African Paint (NIG) LMD
2. Ashaka Cement PLC
3. Berger Paints Nigerian PLC
4. Chemical and Allied Product PLC
5. Cement Company of Northern Nigeria PLC
6. DN Meyer PLC
7. First Aluminum Nigerian PLC
8. Laparge Cement Wapco Nigerian PLC
9. Portland Paint and Product NIG PLC
10. Premier Paints
11. Cutix PLC
12. Nigerian Wire and Cables PLC
13. Nigeria Wire Industries PLC
14. Abplast Products PLC
15. Avon Crowncaps and Containers NIG PLC
16. Grief Nigerian PLC
17. Nigerian Ropes PLC

# Appendix "B"

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   11.0   Copyright 1984-2009
  Statistics/Data Analysis             StataCorp
                                       4905 Lakeway Drive
     Special Edition                   College Station, Texas 77845 USA
                                       800-STATA-PC        http://www.stata.com
                                       979-696-4600        stata@stata.com
                                       979-696-4601 (fax)

Single-user Stata license expires 31 Dec 9999:
       Serial number:  71606281563
         Licensed to:  STATAForAll
                       STATA


Notes:
      1.  (/m# option or -set memory-) 50.00 MB allocated to data
      2.  (/v# option or -set maxvar-) 5000 maximum variables

. *(8 variables, 170 observations pasted into data editor)
```

. su mkbv dvpy wkct slgt rteq debt

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| mkbv | 170 | .7097553 | .1779512 | .1234 | 1.7274 |
| dvpy | 170 | .6945535 | .0967729 | 0 | .8761 |
| wkct | 170 | .6921465 | .1392421 | .112 | .8765 |
| slgt | 170 | .4150012 | .1067697 | .1012 | .5687 |
| rteq | 170 | .5925518 | .2089093 | .0341 | 1.0023 |
| debt | 170 | .3902607 | .2518073 | .014651 | .80929 |

.

. sktest mkbv dvpy wkct slgt rteq debt

Skewness/Kurtosis tests for Normality

| Variable | Obs | Pr(Skewness) | Pr(Kurtosis) | joint adj chi2(2) | joint Prob>chi2 |
|---|---|---|---|---|---|
| mkbv | 170 | 0.0000 | 0.3655 | 20.81 | 0.0000 |
| dvpy | 170 | 0.0402 | 0.8323 | 4.31 | 0.1157 |
| wkct | 170 | 0.0002 | 0.2575 | 12.95 | 0.0015 |
| slgt | 170 | 0.0400 | 0.0272 | 8.26 | 0.0161 |
| rteq | 170 | 0.0000 | 0.0001 | 28.38 | 0.0000 |
| debt | 170 | 0.1250 | 0.0057 | 8.94 | 0.0115 |

. swilk mkbv dvpy wkct slgt rteq debt

Shapiro-Wilk W test for normal data

| Variable | Obs | W | V | z | Prob>z |
|---|---|---|---|---|---|
| mkbv | 170 | 0.87225 | 16.554 | 6.404 | 0.00000 |
| dvpy | 170 | 0.94967 | 6.522 | 4.279 | 0.00001 |
| wkct | 170 | 0.95855 | 5.371 | 3.836 | 0.00006 |
| slgt | 170 | 0.96742 | 4.221 | 3.286 | 0.00051 |
| rteq | 170 | 0.91861 | 10.547 | 5.376 | 0.00000 |
| debt | 170 | 0.97488 | 3.255 | 2.693 | 0.00354 |

```
. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2007 to 2016
                delta:  1 year
```

```
. pwcorr mkbv dvpy wkct slgt rteq debt, star (0.05) sig
```

| | mkbv | dvpy | wkct | slgt | rteq | debt |
|---|---|---|---|---|---|---|
| mkbv | 1.0000 | | | | | |
| dvpy | 0.4482* | 1.0000 | | | | |
| | 0.0000 | | | | | |
| wkct | -0.0256 | 0.1279 | 1.0000 | | | |
| | 0.7399 | 0.0964 | | | | |
| slgt | 0.3569* | 0.4645* | 0.2133* | 1.0000 | | |
| | 0.0000 | 0.0000 | 0.0052 | | | |
| rteq | 0.2706* | -0.0797 | -0.1244 | -0.0090 | 1.0000 | |
| | 0.0004 | 0.3017 | 0.1061 | 0.9071 | | |
| debt | 0.0104 | 0.0685 | 0.0694 | 0.5225* | -0.0697 | 1.0000 |
| | 0.8932 | 0.3750 | 0.3685 | 0.0000 | 0.3666 | |

```
. reg mkbv dvpy wkct slgt rteq debt
```

| Source | SS | df | MS | | |
|---|---|---|---|---|---|
| Model | 156.155487 | 5 | 31.2310974 | Number of obs | = 170 |
| Residual | 304.425893 | 164 | 1.85625545 | F( 5, 164) | = 16.82 |
| | | | | Prob > F | = 0.0000 |
| Total | 460.58138 | 169 | 2.72533361 | R-squared | = 0.3390 |
| | | | | Adj R-squared | = 0.3189 |
| | | | | Root MSE | = 1.3624 |

| mkbv | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| dvpy | .3830531 | .0787795 | 4.86 | 0.000 | .2275002 | .5386059 |
| wkct | -.050126 | .0376503 | -1.33 | 0.185 | -.1244679 | .0242159 |
| slgt | 1.08886 | .340011 | 3.20 | 0.002 | .4174963 | 1.760223 |
| rteq | .8285282 | .1900069 | 4.36 | 0.000 | .453353 | 1.203703 |
| debt | -2.511811 | 1.424798 | -1.76 | 0.080 | -5.325123 | .3015015 |
| _cons | 2.402157 | .3162155 | 7.60 | 0.000 | 1.777779 | 3.026535 |

```
. vif
```

| Variable | VIF | 1/VIF |
|---|---|---|
| slgt | 1.92 | 0.521019 |
| debt | 1.47 | 0.679278 |
| dvpy | 1.36 | 0.734017 |
| wkct | 1.07 | 0.936003 |
| rteq | 1.03 | 0.966815 |
| Mean VIF | 1.37 | |

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of mkbv

         chi2(1)      =    37.35
         Prob > chi2  =   0.0000
```

```
. xtreg mkbv dvpy wkct slgt rteq debt, fe

Fixed-effects (within) regression               Number of obs      =       170
Group variable: id                              Number of groups   =        17

R-sq:  within  = 0.3480                         Obs per group: min =        10
       between = 0.2403                                        avg =      10.0
       overall = 0.3309                                        max =        10

                                                F(5,148)           =     15.80
corr(u_i, Xb)  = -0.0757                        Prob > F           =    0.0000

------------------------------------------------------------------------------
        mkbv |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        dvpy |    .389923   .0820702     4.75   0.000     .2277423    .5521037
        wkct |  -.0671131   .0391407    -1.71   0.089    -.1444599    .0102338
        slgt |    1.01913   .3527178     2.89   0.004     .3221164    1.716144
        rteq |    .9111618  .2222646     4.10   0.000     .4719398    1.350384
        debt |  -.7713224   1.852815    -0.42   0.678    -4.432712    2.890067
       _cons |   2.299701   .3217607     7.15   0.000     1.663862     2.93554
-------------+----------------------------------------------------------------
     sigma_u |  .54189886
     sigma_e |  1.3291107
         rho |  .14253754   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(16, 148) =     1.52                 Prob > F = 0.0994

. est store fixed


. xtreg mkbv dvpy wkct slgt rteq debt, re

Random-effects GLS regression                   Number of obs      =       170
Group variable: id                              Number of groups   =        17

R-sq:  within  = 0.3453                         Obs per group: min =        10
       between = 0.2954                                        avg =      10.0
       overall = 0.3383                                        max =        10

Random effects u_i ~ Gaussian                   Wald chi2(5)       =     84.87
corr(u_i, X)       = 0 (assumed)                Prob > chi2        =    0.0000

------------------------------------------------------------------------------
        mkbv |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        dvpy |   .3860546   .0784993     4.92   0.000     .2321988    .5399103
        wkct |  -.0576718   .0374481    -1.54   0.124    -.1310687    .0157251
        slgt |   1.065328   .3379867     3.15   0.002     .4028867     1.72777
        rteq |   .8466999   .1963824     4.31   0.000     .4617974    1.231602
        debt |  -2.042595   1.513994    -1.35   0.177    -5.009968    .9247778
       _cons |   2.366574   .3238934     7.31   0.000     1.731755    3.001393
-------------+----------------------------------------------------------------
     sigma_u |  .35873745
     sigma_e |  1.3291107
         rho |  .06790347   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store random


. hausman fixed random

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |    fixed        random       Difference          S.E.
-------------+------------------------------------------------------------
        dvpy |  -.5197562    -.5707649        .0510087        .0208287
        wkct |   -.218879    -.2687805        .0499014        .0230137
        slgt |  -.0688257    -.0799361        .0111104        .0158497
        rteq |    .060351     .0493114        .0110396              .
        debt |   .4642063     .3939212        .0702851        .0095898
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       11.72
                Prob>chi2 =      0.0388
                (V_b-V_B is not positive definite)
```