EFFECT OF LEVERAGE ON FINANCIAL PERFORMANCE OF QUOTED PHARMACEUTICAL COMPANIES IN NIGERIA

BY

YUSUF, Abdullahi Abdulsalam

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, NASARAWA STATE UNIVERSITY, KEFFI, IN PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ACCOUNTING AND FINANCE

DEPARTMENT OF ACCOUNTING
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NIGERIA

MAY, 2017

DECLARATION

I hereby declare that this Dissertation entitled “Effect of Leverage on Financial Performance of Quoted Pharmaceutical Companies in Nigeria” has been written by me and it is a report of my research work. To the best of my knowledge, this work has never been presented in any previous application anywhere for the award of any degree or certificate of any kind. However, all borrowed materials used from other sources are duly and properly acknowledged in the bibliography.

YUSUF AbdullahiAbdulsalam	________________	______________
NSU/ADM/MSC/ACC/005/14/15	**Sign**	**Date**

CERTIFICATION

This dissertation entitled "Effect of Leverage on Financial Performance of Quoted Pharmaceutical Companies in Nigeria" meets the regulations governing the award of Master of Science (M.Sc.) degree in Accounting and Finance, of the School of Postgraduate Studies, Nasarawa State University, Keffi for its contribution to knowledge and literary presentation

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DEDICATION

I dedicate this research work to Almighty Allah.

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Abstract

The study examines the effect of leverage on financial performance of quoted pharmaceutical companies in Nigeria over a period of 2006-2015. Five pharmaceutical companies quoted on the Nigeria Stock Exchange were examined. The study employs Debt Ratio (DR) and Debt to Equity ratio (DER) to proxy for financial leverage which serves as the independent variables and ROA as dependent variable of the study. Ex-post facto research design was used for study. Secondary data were obtained from financial statement of selected pharmaceutical companies listed on the Nigeria Stock Exchange (NSE). Descriptive statistics, correlation matrix, panel regression (Radom effect) were employed in the study. The results of the analysis showed that Debt Ratio has significant positive effect on Return on Asset (ROA) of pharmaceutical companies in Nigeria. While Debt to Equity (DER) has no significant effect on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria. The analysis also revealed that debt ratio has significant effect while debt to equity has no significant effect on return on asset of quoted pharmaceutical companies in Nigeria, when combined together. Based on the findings, the study recommends that the level of finance Debt ratio of quoted pharmaceutical companies in Nigeria should be increased since this study found that debt ratio has positive significant effect on the return on asset (ROA). The higher the debt ratio the more return on asset of quoted pharmaceutical companies in Nigeria. Debt to equity ratio was found be insignificant to the return on asset of pharmaceutical companies in Nigeria, it is recommended that the companies should reduce the level of debt to equity ratio of founding. The financial leverage of quoted pharmaceutical companies should be properly mix, owning to the fact that when debt and debt to equity ratios are combined, debt ratio contribute significantly to the return on asset of quoted pharmaceutical companies in Nigeria, while the debt to equity ratio is insignificant to return on asset. Therefore, the proportion of debt ratio should be higher than that of debt to equity ratio when combining the two ratios.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The proportionate mix of equity and debt in financing a firm's investment proposals has been the subject of intensive theoretical, modeling and empirical examination, over the years having its tenet in the implication of such a mix on corporate performance. The mix has been defined in terms of financial leverage in the literature (Grinblatt & Titman, 2003; Pandey, 2008).

Financial leverage is a measure of how much firms use equity and debt to finance its assets. A company can finance its investments by debt and equity. A company may also use preference capital. The rate of interest on debt is fixed irrespective of the company's rate of return on assets. The financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs. As debt increases, financial leverage increases. It has been seen in other studies that financial leverage has effect on corporate performance of companies. The primary motive of a company in using financial leverage is to magnify the shareholders' return under favourable economic conditions. The role of financial leverage in magnifying the return of the shareholders' is based on the assumptions that the fixed- charges funds (such as the loan from financial institutions and other sources or debentures) can be obtained at a cost lower than the firm's rate of return on net assets. Damouri, Khanagha and Kaffas (2013) states that leverage ratios contribute in measuring the risk of using equity costs. They further add that there are various measures known for the financial leverage among which the most important are book value based measures, market value based measures and semi- market value based measures (adjusted market value). Financial leverage affects profit after tax or earnings per share. The combined effect of two leverages can be quite significant for the earnings available to ordinary shareholders (Pandey, 2010).

The use of fixed-charged funds, such as debt and preference capital along with the owner's equity in the capital structure is described as financial leverage or gearing (Dare & Sola, 2010). An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt. Financial leverage takes the form of a loan or other borrowing (debt), the proceeds of which are (re)invested with the intent to earn a greater rate of return than the cost of interest. If the firm's marginal rate of Return on Asset (ROA) is higher than the rate of interest payable on the loan, then its overall Return on Equity (ROE) will be higher than if it did not borrow (Laurent, 2005). On the other hand, if the firm's Return on Assets (ROA) is lower than the interest rate, then its Return on Equity (ROE) will be lower than if it did not borrow.

Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater, if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid (Andy, Chuck & Alison 2002). This constitutes financial risk (Pandey, 2005). The degree of this financial risk is related to the firm's financial structure. The total combination of common equity, preferred stock and short and long term liabilities is referred to as financial structure. That is, the manner in which the firm finances its assets constitutes its financial structure. If short-term liabilities are subtracted from the firm's financial structure, we obtain its capital structure. In other words, the firm's permanent or long-term financing consisting of common equity, preferred stock and long term debt is called capital structure (Van Horne, 2002). Hence, the objective of financial management in structuring a firm's capital components is to maximize the shareholders‟ wealth, as a measure of performance. Based on the above the problem of this study is to analyze the implications of financial leverage on performance.

There are many empirical works on the relationship between leverage and financial performance. However, the findings from these studies were mixed. Some studies found positive relationships between leverage and financial performance while others found a negative relationship. A few others found no relationship between the two. Studies by Robb and Robinson (2009), Ruland and Zhou (2005) believe that there is a positive relationship between leverage and financial performance. According to Jensen (1986), profitable firms signal quality by leveraging up, resulting in a positive relation between leverage and profitability. This agrees with Modigliani and Miller (1963). Robb and Robinson (2009) found that gains from leverage are quite significant, and the use of debt enhances the firm market value. It is argued that financial leverage has a positive effect on the firm's return on equity given the earning powers of the firm's assets is greater than the average interest cost of debt to the firm.

Therefore, this research examined the effect of leverage on financial performance of quoted pharmaceutical companies in Nigeria.

1.2 Statement of the Problem

In spite of quite a few decades of research, there has been no general consensus on the relationship between financial leverage and firm financial performance. These unresolved issue stems from the contradictory arguments in literature that leverage affects firm performance or not. A vital subject in finance hooves around whether financial leverage influences firm performance. Laurent (2002) notes that two elements may have influenced these arguments, such as the various measures of performance (either basic accounting ratios or more sophisticated measures on the one hand and on the other hand, some of the studies were performed on one country. The results of such studies may be influenced by the institutional framework in that country where the study was carried out, leading to the divergent results on the effect of financial leverage and financial performance.

Many studies have been carried out on financial leverage and firms' performance; however, these studies have failed to reach an agreement that is applicable to firms in all circumstance (Al-Tally, 2013). Myers (2001) argued that that there is no complete theory of the debt-equity choice and no reason to expect one. Additionally, Brealey and Myers (1991) identified financial leverage as one of the ten unresolved problems in corporate finance.

Surveys of empirical studies revealed that consensus have not been reached and no much studies have been done on the relationship between financial leverage and financial performance in pharmaceutical companies in Nigeria. Many researchers found a significant negative relationship between leverage and firms' performance (Majumdar&Chhibber, 1999;Onaolapo&Kajola, 2010; Chinaemerem& Anthony, 2012; Al-Taani, 2013; Ogebe, Ogebe&Alewi, 2013; Al-Tally, 2014; Arowoshegbe&Emeni, 2014;).

Despite the negative relationship revealed by the above empirical studies, many researchers also found a significant positive relationship between financial leverage and financial performance (Bonaccorsi di Patti, 2006 Akhtar, Maryam & Sadia, 2012;Ojo, 2012;Fosu, 2013;Rehman, 2013; Gweji&Karanja, 2014).

However, empirical studies have not reached a consensus about the relationship between leverage and firms' financial performance. This study is therefore, an attempt to contribute to the empirical studies by investigating the relationship between financial leverage and financial performance using Return on Asset(ROA) as proxy for financial performance which to the best of the researcher's knowledge no prior study has used it to measure financial performance of listed pharmaceutical companies in Nigeria. This study also looks at the period of study from 2006 to 2015 which makes the study to be current.

1.3 Research Questions

The study provides answers to the following research questions;

i. What is the effect of Debt ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria?

ii. What is the effect of Debt to Equity ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria?

iii. What is the combine effect of Debt Ratio and Debt to Equity ratio on Return on Asset (ROA) of listed pharmaceutical companies in Nigeria?

1.4 Objectives of the Study

The main objective of this study is to examine the effect of financial leverage on financial performance of quoted pharmaceutical companies in Nigeria while the specific objectives of the study are as follows:

i. To examine the effect of Debt ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

ii. To determine the effect of Debt to Equity ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

iii. To check the combine effect of Debt Ratio and Debt to Equity ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

1.5 Research Hypotheses

In line with the research questions formulated above the following null hypotheses are set;

HO_1 There is no significant effect of Debt ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

HO_2 Debt to Equity ratio has no significant effect on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

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HO_3 There is no significant effect of Debt Ratio and Debt to Equity ratio on Return on Asset (ROA) of quoted pharmaceutical companies in Nigeria.

1.6 Significance of the Study

There are very few studies on the effect of leverage on financial performance in Nigeria. It is an opportunity for the researcher to explore the relationship about the above mention topic and there is a need of the study in Nigeria. The study is intended to help researchers, regulators and shareholders in Nigeria to comprehend the resultant effects of leverage on financial performance in sector of the economy.

The result of this study will assist the general public to assess the extent to which pharmaceutical companies in Nigeria is financed. Prospective researchers stand to benefit from the study because it would be available for literature, thereby contributing to the frontier of knowledge.

1.7 Scope of the Study

This research study focuses on finding the effect of firm's leverage on financial performance of listed pharmaceutical companies in Nigeria. The study is restricted to firms in pharmaceutical companies under the health care sector of the Nigerian economy.

The study also focused on pharmaceutical firms listed on the floor of Nigerian stock exchange (NSE) between the periods of 2006 to 2015.

The independent and dependent variables would be extracted or computed from the annual financial reports of pharmaceutical companies. Accounting measures are used to evaluate the financial performance of firms. The financial performance indicator that was used is ROA measure as the proportion of profit after tax to Total Asset.

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept of Financial Leverage

Leverage has been defined as the ability of a company to use the assets or funds that have a fixed load to increase the level of income for the owner of the company (Syamsudin, 2001). Leverage is used to determine the amount of financial resources needed to consider the finances of a company that aims at increase profit.

Financial leverage is a measure of how much a firms use equity and debt to finance its assets. As debt increases, financial leverage increases. Management tends to prefer equity financing over debt since it carries less risk (Matt, 2000). Financial leverage takes the form of a loan or other borrowing (debt), the proceeds of which are re-invested with the intent to earn a greater rate of return than cost of interest. An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt (Andy, Chuck & Alison, 2002). Leverage allows a greater potential returns to the investor than otherwise would have been available, but the potential loss is also greater if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid (Andy, Chuck & Alison, 2002).

Similarly, Pandey (2010) assert that the financial leverage employed by a company is intended to earn more return on the fixed-charge funds than their costs. The surplus (or deficit) will increase (or decrease) the return on the owners' equity. The rate of return on the owners' equity is levered above or below the rate of return on total assets. Thus, financial leverage is considered as a double-edged sword because it provides the potentials of increasing the shareholders' earnings as well as creating the risks of loss to them.

Companies that are highly levered are at the risk of going into bankruptcy if they fail to pay interest on the debt and will not be able to get loans in future time period. Financial leverage is often considered as negative indicator for the company. It can increase the wealth of the shareholders of the company and there is also tax advantages associated with the borrowing leverage. As financial leverage is increased, finance cost is also increased as a result. In the math of high finance cost, Earnings per Share (EPS) is also affected negatively. As Earnings per Share (EPS) decreases because of high interest payments as a result of increased financial leverage.

Ross, Westerfield and Jordan (1998), retreated that the use of debt in a firm's capital structure is called financial leverage. The more debt a firm has (as a percentage of assets), the greater is its degree of financial leverage. To them, debt acts as a lever in the sense that using it can greatly magnify both gains and losses. Hence, financial leverage increases the potential reward to shareholders, but it also increases the potential for financial distress and business failures.

Gaius(2007) Opines that operating leverage is created by fixed operating costs, such as general administrative overhead expenses, contractional employees' salaries and mortgage or lease payment, these tend to elevate business risk. The impact of operating leverage is evident, when a given percentage changes in net sales results in a greater percentage change in operating income (EBIT).

Operating leverage is simply the extent to which a firm uses fixed costs in producing its goods or offering its services. This also relates to the result of different combinations of fixed costs and variable costs. Specifically, the ratio of fixed and variable costs that a company uses determines the amount of operating leverage employed. A company with a greater ratio of fixed to variable costs is said to be using more operating leverage. If a company's variable costs are higher than its fixed costs, the company is said to be using less operating leverage. The way that a business makes sales is also a factor in how much leverage it employs. A firm with few sales and high margins is said to be highly leveraged. On the other hand, a firm with a high volume of sales and lower margins is said to be less leveraged.

According to Pandey (1999), the financial leverage employed by a company is intended to earn more on the fixed charges funds than their costs. The surplus (deficit) will increase (or decrease) the return on the owners equity, referred to as a double edged sword, financial leverage provides the potentials of increasing the shareholders' wealth as well as creating the risks of loss to them. Therefore, the degree of financial leverage indicates the percentage change in EPS emanating from a unit percentage change in EBIT. In general, a firm's short term financing needs are influenced by current sales growth and how effectively and efficiently the firm manages its net working capital. Note that on-going short term financing needs may reflect a need for permanent long term financing, including an evaluation of the appropriate mix and the use of debt and equity.

Mandelker and Rhee(1984) observe that, DOL and DFL combine to magnify a given percentage change in sales to a potentially much greater percentage in EBIT. In fact, operating and financial leverages together cause wide fluctuation in EPS for a given change in sales. If a company employs a high level of operating and financial leverage, even a small change in the level of sales, will have dramatic effect on EPS. A company with cyclical sales will have a fluctuating EPS, but the swings in EPS will be more pronounced if the company also uses a high amount of operating and financial leverage.

Therefore, there is the need to combine degree of operating and financial leverages to see the effect of total leverage on EPS associated with a given change in turnover as a result of improved purchasing power enabled by capital structure.

Financial leverage measures a firm's exposure to financial risk. Financial leverage involves changes in shareholders' income in response to changes in operating profits, resulting from financing a company's assets with debt or preferred stock. This relates to fixed debt costs and it also increases a firm's financial risk.

Financial leverage takes the form of a loan or other borrowings (debt), the proceeds of which are (re)invested with the intent to earn a greater rate of return than the cost of interest. The total leverage of a firm is given by a firm's use of both fixed operating costs and debt costs. This implies that, a firm's total risk equals business risk plus financial risk Brealey and Myers (2003). Financial leverage can accelerate EPS under favorable economic conditions but depresses EPS when the goings is not good for the firm. The unfavorable effect of financial leverage on EPS is more severe with more debt in the capital structure when EBIT is negative. Similarly the firm's financial leverage can increase shareholders' return and as well could increase their risk.

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2.2 Concept of Firm Performance

Financial performance can be characterized as a level of execution of business over a determined time of a period. Communicated regarding general benefits and misfortunes amid that time it is measured in connection to possessions, value and obligation utilizes by the organization. Assessing monetary execution of business permits chiefs to make judgment on the consequence of business methods and exercises in the destination in financial terms.

As multiple concepts of firm performance exist depending on the level of aggregation and the difference in dimensionality, it should not be surprising that multiple measures of firm performance are found in empirical literature. The appropriate measures of performance depend on the performance concept selected.

Performance measures are either financial or organizational. Financial performance such as profit maximization, maximizing profit on assets, and maximizing shareholders' benefits are at the core of the firm's effectiveness (Chakravarthy, 1986).

Operational performance measures, such as growth in sales and growth in market share, provide a broad definition of performance as they focus on the factors that ultimately lead to financial performance (Hoffer & Sandberg, 1987). The usefulness of a measure of performance may be affected by the objective of a firm that could affect its choice of performance measure and the development of the stock and capital market.

For example, if the stock market is not highly developed and active then the market performance measures will not provide a good result. The most commonly used performance proxies are return on assets (ROA), return on equity (ROE) and return on investment (ROI). These accounting measures representing the financial ratios from balance sheet and income statements have been used by many researchers (Demsetz & Lehn, 1985, Gorton & Rosen, 1995, Mehran, 1995, Ang, Cole &Line, 2000).

However, there are other measures of performance called market performance measures, such as price per share to the earnings per share (P/E) (Abdel Shahid, 2003), market value of equity to book value of equity (MBVR), and Tobin's Q. Tobin's Q mixes market value with accounting value and is used to measure the firm's value in many studies (Morck, Shleifer, & Vishny, 1988, McConnel & Serveas, 1990, and Zhou, 2001). The performance measure ROA is widely regarded as the most useful measure to test firm performance (Reese &Cool, 1978 and Long & Ravenscraft, 1984, Abdel Shahid, 2003, among others). Two accounting measures, ROA and ROE, are used as proxy measures for corporate performance, and three market performance measures, P/E, MBVR, and Tobin's Q. The stock market efficiency and other economic and political factors could affect a firm's performance and its reliability (Abdel Shahid, 2003).

As earlier mentioned, the measures of firm performance are usually ratios fashioned from financial statements or stock market prices, such as industry-adjusted operating margins or stock market returns. These measures do not net out the effects of differences in exogenous market factors that affect firm value, but are beyond management's control. Profit efficiency evaluates how close a firm is to earning the profit that a best-practice firm would earn facing the same exogenous conditions.

In contrast, comparisons of standard financial ratios, stock market returns, and similar measures typically do not control for these exogenous factors. Even when the measures used in the literature are industry adjusted, they may not account for important differences across firms within an industry such as local market conditions. In addition, the performance of a best practice firm under the same exogenous conditions is a reasonable benchmark for how the firm would be expected to perform if agency costs were minimized.

Summarily, a firm's performance can be affected by the capital structure choice and by the structure of debt maturity. Debt maturity affects a firm's investment options.

Also, the tax rate is expected to have an impact on a firm's performance. So, investigating the impact of capital structure variables on a firm's performance will provide evidence of the effect of capital structure on firm performance.

2.3 Leverage and Financial Performance

The reviews of various literatures on financial leverage provide different views on the relationship between financial leverage and financial performance. While some found positive relationship between leverage and firm’s performance, others found negative relationship.

Aydemir, Gallmeyer and Hollifield(2007), quantify the effect of financial leverage on stock return instability in a dynamic general equilibrium economy with debt and equity claims. The effect of financial leverage is studied both at a market and a firm level. They apply descriptive and Pearson correlation Statistics and Regression models, taking market return, market instability, Market price of Risk, financial leverage as dependent and independent variables. Their findings are for the market as a whole, financial leverage increases the level of equity volatility but the dynamics of equity volatility are mostly driven by a time-varying interest rate and a time-varying market price of risk.Financial leverage contributes more to the dynamics of stock instability for a small firm exposed to both individual risk and market risk.

Long and Malitz (1985) explored the influence of Investment Patterns on Financial Leverage. For this purpose they took the sample of 545 firms that are listed on NYSE and AMEX for the period of 1978-80 and develop a model showing cause and effect relationship between underinvestment and asset substitution. Taking investment choices firm specific assets, tangible or intangible assets, capital assets as independent variable and financial leverage as dependent variables. Researchers find moral hazard problem. It is a major determinant of corporate leverage which affects a firm's investment decisions. Results provide direct empirical evidence that the moral hazard problem is important and that investment and financing decisions are not independent.

Pachori and Totala (2012) in their research paper ” Influence of Financial Leverage on Shareholders Return and Market Capitalization: A Study of Automotive Cluster Companies of Pithampur, (M.P.), India” aimed to find out influence of financial leverage of automotive cluster companies on shareholders’ return and market capitalization by using statistical tools. They took the sample of seven major automotive public companies.

The study covered a five years' time period, that is, from 2006 –07 to 2010-11. Linear simple regression has been used as a tool to analyze the data by SPSS IBM-19 version by taking independent variables as financial leverage and the dependent variables are shareholders’ return and market capitalization. The results indicate that there is no significant influence of financial leverage on shareholder’s return and market capitalization. The study also concludes that there might be other non quantitative factors which may lead to nullify the impact of financial leverage on shareholders return like recession, saturation of auto industry, competition and government policy.

Cheng and Tzeng (2010) had investigated the Effect of Leverage on Firm Value and how the firm financial quality influences on this effect. For this purpose they took the sample consist of 645 companies listed in Taiwan Securities Exchange (TSE) that provide annual report from 2000-2009 consecutively. They took value of firm as dependent variable and financial leverage as independent variable. Apply descriptive and Pearson correlation Statistics and Regression models. They conclude that the values of leveraged firm aregreater than that of an unleveraged firm if we don't consider bankruptcy probability. Secondly, if we consider the benefit and cost of debt instantaneously, the leverage is significantly positively related to the firm value before reaching firm optimal capital structure.

Achchuthan and Jasinthan (2012) had investigated the "influence of financial and operating leverage on the financial performance of Lanka Orix leasing company Plc in Sri-Lanka. Data collected from lankaorix leasing company Plcin Sri-Lanka (During the year 2001-2010). By taking financial performance as dependent and financial and operating leverage as independent leverage and perform ratio analysis and inferential statistics. Analyses of the data showed that only operating leverage has a significant on the financial performance of LOLC plc in Sri-Lanka. The outcomes revealed that no main difference was found between financial leverage and financial performance.

Hasanzadeh, Torabynia, Esgandari and Kordbacheh, (2013) had investigated Evaluating Effects of Financial Leverage on Future Stock Value at Stock Exchange. The research statistical population was consisted of those Tehran stock exchange listed active cement industry companies analyzed from 2005 to 2008. By taking financial leverage and market to book value ratio as variable and to analyze data and test hypothesis of the present research, descriptive and inferential analyzing methods and SPSS statistical software were applied. They concluded that leverage does not affect future stock value of the firm. The results indicate non-response of capital market against levered nature of the firm. Lack of relationship between leverage and firm value approves net operational income (NOI) theory14 and Miller and Modigliani (M.M) theory 15.

Akhtar, Javed, Maryam and Sadia, (2012) examines the relationship between financial leverage and financial performance, evidence from fuel and energy sector of Pakistan. The result shows that there is a general perception that a relationship exists between the financial leverage and the performance of the companies' that is most of the financial performance indicators have positive relationship among leverage and the financial performance when compare with debt to equity ratio while the gearing ratio indicates negative relationships with the leverage indicators. The gearing ratio also takes into account the effect of capital with return numerator which not only accommodates the debt but also the outstanding shares of preferred stock. The result adds that gearing ratio may differ from that of debt to equity ratio while debt equity ratio takes into account the long term debt.

Akinmulegun (2012) examines the effect of financial leverage on selected indicators of corporate performance in Nigeria. This shows that financial leverage significantly affects corporate performance in Nigeria. Rajin (2012) investigates the influence of financial leverage on shareholders return and market capitalization, evidence of telecommunication sector companies in India. He find out that the nature of relationship and the state of influence of the financial leverage on shareholder's return and market capitalization individually indicates positive relationship between financial leverage and shareholder return but negative relationship between financial leverage and market capitalization. Ujah and Brusa (2013) suggest that financial leverage and cash flow impact the degrees to which firms manage their earnings. They continue that it depends on economic group or industry a firm belongs to their degree and extent of managed earnings varies.

Obradovich and Gill (2013) indicates that larger board size negatively impacts the value of American firms and CEO duality, audit committee, financial leverage, firm size, return on assets and insider holdings positively impact the value of American firms. Pandey (2010) says that the variance and covariance and therefore beta depend on three fundamental factors such as; the nature of business, the operating leverage and financial leverage.

Nasrollah, Mohammad and Seyed (2013), studies effect of financial leverage and investment diversification on income-increasing earning management. The results show that financial leverage coefficient is meaningful at level of 95% of confidence, consequently, it can be concluded that financial leverage has an influence on income-increasing earnings management.

Enuju and Soocheong (2005) examine the effect of financial leverage on profitability and risk of Restaurant firms. They find that financial leverage does not influence the restaurant firms' profitability. It is noteworthy that the sign of financial leverage is positive meaning that more leveraged firms had more profits on average even though it was not statistically significant. Nazir and Saita (2013) studies financial leverage and agency cost, an empirical evidence of Pakistan. The study found out that general and admin expense into to sales ratio is negatively related to all four leverage ratio. Taani (2012) investigates impact of working capital management policy and financial leverage on financial performance. The study shows that firm's working capital management policy, financial leverage and firm size have significant relation to net income and also no significant impact on return on equity (ROE) and return on Assets (ROA).

Akbarian (2013) examines the investigation effect of financial leverage and environment risk on performance firms of listed companies in Tehran stock exchange. The result shows that there is a negative relation between financial leverage and cash flow per share and between variables market risk and economic risk with free cash flow per share positive significant. It also indicates that financial leverage, market risk and economic risk with return on equity have positive significant relationship.

Gleason,Mathur and Mathur (2000) in their study of European countries, found a significant negative relationship between the financial leverage and return on assets and profit margin. Deesomsak (2004) in Malaysia also found a negative relationship between financial leverage and net profit margin. Huang and Song (2004) studies on Chinese companies found a negative relationship between long-term debt and return on assets, as well as between all the liability and return of assets. Berger and Bonaccorsi (2006), evidence that neither high level of financial leverage nor small capital of the company, are associate with higher efficiency of company's performance.

Rao, Bathala and Moon (2007) also confirm the negative relationship between leverage and performance result. Jelinek (2007) examines the effect of financial leverage and free cash flow and firm growth on earnings management. The results indicate that firm experiencing an increase in financial leverage during a five year period gradually compared to those which had high leverage degree in the same period has performed less earnings management. Alocock, Baum, Colley, and Steiner (2013) examine the role of financial leverage in the performance of private equity real Estate funds. The results indicates that funds overall are unable to deliver significant positive out performance on the basis of managerial skill that is unrelated to the exposure to the variation in the underlying market return. It also reveals that the impact of transaction costs, fees and other market frictions that are especially prevalent in the direct real estate investment industry, given the relatively low level of liquidity of the underlying assets. It further shows that excess fund return were approximately proportional to the excess market return, implying that these fund offers their investors effective exposure to the performance of the underlying property markets.

Paydar (2010) investigate leverage behavior of Malaysian manufacturing companies a case observation of the industrial sector's companies in Bursa Malaysia, using a multiple least square regression of 117 manufacturing companies for the period of seven years (2004 to 2010). The study used firm size, profitability, risk growth rate, Tangibility, liquid and economic growth as proxies for performance. The result shows that among all the possible explanatory variables, only three variables which are tangibility, profitability and liquidity affect the capital structure. The results also indicate that firm size; growth and risk variables have insignificant effect on leverage ratio.

Aasia, Waqas and Yasir (2011) examined the relationship between dividend policy and financial leverage of 403 companies, listed with Karachi stock exchange during the period 2002 to 2008. Dividend policy, vastly followed by the companies was tested by applying the extended model of Linter (1956) with the debt ratio of the firm, the previous year's dividend yield as its independent variables and change in earnings as a dummy variable. The descriptive statistics for entire variables were calculated and then correlation matrix was calculated to identify the relationship among all the variables, followed by regression analysis on panel data to examine the significance and magnitude through fixed and random effects models. The result found that, financial leverage have a negative impact on dividend payout, indicating less dividend payments by high-debt firms. The findings also revealed/ confirmed that change in earnings has no significant impact on dividend policy in case of Pakistani firm while the dividend yield has positive impact and vice versa.

Olayinka and Taiwo (2012) carried out a study on profitability and leverage evidence from Nigerian firms. The study examines the profit profile of firms in Nigeria and analyzes the impact of leverage on profitability for the period 1999-2007. The results show that aggregate profit level for the firms decreased by 0.02% yearly over the study period. However, when disaggregated into sectors, a few firms actually experienced an increased profit level. The result shows that firm size has a significant positive effect on profitability, while leverage (debt ratio) has negative effect.

Ojo (2013) in a study conducted on the effect of financial leverage on selected indicators of corporate performance in Nigeria. In an attempt to juxtapose the earlier finds that were specific of developed nations econometric technique of vector Auto regression model was employed. The findings of the study demonstrate that leverage stock (Debt-Equity ratio) have substantial effect on corporate performance especially when the net assets per share (NAPS) is used as an indicator of corporate performance in Nigeria over the period covered by the study. Earnings per share depend on feedback shock and less on leverage shock.

Rehman (2013) studied the relationship between leverage and financial performance evidence of listed sugar companies of Pakistan. The result shows positive relationship of Debt-Equity ratio with return on asset and sales growth, while a negative relationship of Debt-Equity ratio with earnings per share, net profit margin and return on equity.

Edesiri (2013) investigate financial leverage behavior and firm performance evidence from publicly quoted companies in Nigeria. Data of leverage, profitability and firm size were sourced from the annual report and accounts of 120 publicly quoted companies in Nigerian stock exchange (NSE) for the period of 1990 to 2013. The study found that two (2) factors affect financial leverage behavior positively. The implication of this finding is that profitability and firm size had a negative effect on financial leverage of publicly quoted companies in Nigeria.

Karami and Akhgar (2014) this study investigate the effects of company's size and leverage features on the quality of financial reporting of companies, using systematic elimination sampling method, 120 active companies in Tehran stock exchange during the period of 2003-2012 were selected. The study evaluates the model by using panel data method. First, F- Test of Limer and Hausman was used to select the best model among the panel data fixed effects and random effects. The study revealed that company's size and leverage have negative and significant relationship with financial reporting of companies and also a positive and significant relationship with financial reporting quality.

Gweyi and Karanja (2014) carried out a study to investigate the effect of financial leverage on financial performance of deposit taking Saccos in Kenya. The sample data extracted from 40 savings and credit co-operative societies (Saccos) from the period 2010 to 2012. Two basic approaches descriptive and analytical design were adopted. The result shows perfect positive correlation between debt-equity ratio with return on equity and profit after tax at 99% confidence internal and a weak positive correlation between debt-equity with return on assets and income growth.

Aries (2015) in the study conducted as the influence of leverage and its size on the earnings management a purposive sampling was done with the criteria listed in Indonesia stock exchange. The study consisted of 30 manufacturing companies, used multiple regression techniques for analysis, the value of operating leverage coefficient of 0.215 significant operating leverage affect earnings management by 21.5%. Financial leverage coefficient of 0.505 meaning financial leverage affects earnings management by 50.5%. The size of company coefficient of 0.417 meaning the size of the company affects earnings management of 41.7%.

Robert (2015), the research sought to analyze and understand the effects of financial leverage on the financial performance of mining companies listed at the Nairobi securities exchange. It further analyzed the relationship between financial leverage and earnings per share as a measure of performance of the sector. It also looked at the relationship between earnings before interest and taxes and earnings per share. Person correlation analysis was used to test correlation of data. The outcome of the study revealed that there is a positive relationship between financial leverage and earnings per share as a measure of financial performance of companies in the construction and allied sector at the Nairobi securities exchange market in Kenya. There is also a strong positive correlation between earnings before interest and tax and earnings per share as a measure of financial performance of companies in construction and allied sector. There is also a linear relationship between EBIT and EPS in financial leverage cases only up to sustainable limits corroborating the theory postulated by Pandy (2007) that there is a linear relationship between EBIT and EPS in all leverage cases.

Kimathi, Galo and Melissa (2015) studied the effect of leverage on performance of non-financial firms listed at the Nairobi securities exchange. The study revealed that there was no significant difference in financial performance between highly levered and lowly levered firms and that there exist a negative relationship between leverage and firm's performance. There were also no significant differences in financial performance between high growth levered firms and low levered firms and that there exist negative relationship between a firms growth opportunity and financial leverage ratio. There was no significant difference in financial performance between large levered firms and small levered firms.

Abubakar (2015) examined relationship between financial leverage and financial performance of deposit money banks in Nigeria, using debt-equity ratio, debt ratio and return on equity. The findings show that there is significant relationship between debt-equity ratio and financial performance proxy by return on equity.

However, the findings also indicate that there is no significant relationship between debt ratio and financial performance surrogated by return on equity.

Enekwe, Agu and Eziedo (2014) investigated the effect of financial leverage on financial performance evidence of quoted pharmaceutical companies in Nigeria. The result of the analysis shows that debt ratio (DR) and debt-equity ratio (DER) have negative relationship with return on asset (ROA) while interest coverage ratio (ICR) has positive relationship with ROA in Nigerian pharmaceutical industry. The study further revealed that all the independent variables have no significant effect on financial performance of sampled companies. The result also suggested that only 16.4% of the variations on the dependent variables are caused by the independent variations in the model suggesting that 83.6% of the variations in financial performance are caused by other factors outside the study model.

2.4 Theoretical Framework

Three theories of Capital Structure have been developed following the pioneering work of Modigliani and Miller (1958) about the existence of an optimal capital structure. These are: Static trade-off, Pecking order and Agency cost theories.

The four theories adopted relate to optimal capital structure and it relationship with the value of a firm and this correlates with the problem of this study.

2.4.1 Traditional Theory: According to this theory, the Weighted Average Cost of Capital **(**WACC) drops up to a point and then increases as the level of indebtedness rises. The optimum capital structure will be at the point of minimum WACC. Therefore, according to this theory, there is such thing as an optimal capital structure and a company can increase its value by using it wisely.

2.4.2 Modigliani-Miller Theory (MM): In a subsequent paper, Modigliani and Miller (1963) eased the conditions in his earlier theory and showed that under capital market imperfection where interest expenses are tax deductible, firm value will increase with higher financial leverage. Models based on impact of tax, suggest that profitable companies should have more debts these firms have more need for tax management in corporation's profit. However, increasing debt results in an increased probability of bankruptcy. Hence, the optimal capital structure represents a level of leverage that balances bankruptcy costs and benefits of debt finance.

2.4.3 The Static Trade-Off Theory: The theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. The classical version of the hypothesis goes back to Kraus and Litzenberger (1973), who considered a balance between the dead-weight costs of bankruptcy and tax saving benefits of debt. This theory is often set up as a competitor theory to the pecking order theory of capital structure (Kraus & Litzenberger, 1973). The important purpose of the theory is to explain the fact that corporations usually are financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefits of debt and there is accost of financing with debt the costs of financial distress including bankruptcy of debt and non-bankruptcy cost. The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases , so that a firm that is trade-off when choosing how much debt and equity to use for financing. (Frank and Goyal, 2011).

This theory of capital structure (also referred to as the tax based theory) states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment decisions constant (Baxter, 1967 and Altman 1984, 2002). In view of this theory, issuing equity means moving away from the optimum and should therefore be considered bad news. According to Myers (1984), firms adopting this theory could be regarded as setting a target debt-to-value ratio with a gradual attempt to achieve it. Myers (1984), however, suggests that managers will be reluctant to issue equity if they feel it is undervalued in the market. The consequence is that investors perceive equity issues to only occur if equity is either fairly priced or overpriced. As a result investors tend to react negatively to an equity issue and management is reluctant to issue equity. Um (2001) suggests that a high profit level gives rise to a higher debt capacity and accompanying tax shields. Hence, it is expected that a positive relationship should exist between profitability and financial leverage. Firms with high levels of tangible assets will be in a position to provide collateral for debts. If the company then defaults on the debt, the assets will be seized but the company may be in a position to avoid bankruptcy. It is expected, therefore, that companies with high levels of tangible assets are less likely to default and will take on relatively more debt resulting in a positive relationship between tangibility and financial leverage.

Wiwattanakantang (1999), Booth,Aivazian,Demirguc-Kunt, and Maksimovic (2001), Pandey (2001), Al-Sakran(2001), and Huang and Song (2002) find a significant positive relationship between leverage ratios and size in developing countries. While Rajan and Zingales (1995) find a positive relationship between size and leverage in G-7 countries, Titman and Wessels (1988) report a positive correlation between the size of the firm and the total debt ratio and the long-term debt ratio. On the other hand, Bevan and Danbolt (2002) report that size is found to be negatively related to short-term debt and positively related to long-term debt. The trade-off theory of the capital structure suggests that a firm's target leverage is driven by three competing forces: (i) taxes, (ii) costs of financial distress (bankruptcy costs), and (iii) agency conflicts. Taxes add debt to a firm's capital structure and lower its (corporate) tax liability and increase the after-tax cash flow available to the providers of capital.

Thus, there is a positive relationship between the (corporate) tax shield and the value of the firm. Bankruptcy costs when a firm raises excessive debt to finance its operations, it may default on this debt. However, it is not bankruptcy per se that is the problem. If the bond payments are not met when they become due and the bond defaults, the firm is simply transferred to the bondholders. However, there are deadweight (opportunity) costs that arise in the case of corporate bankruptcy. They come in two forms, direct and indirect deadweight costs. Direct out-of-pocket expenses for the administration of the bankruptcy process (legal fees and management time) are relatively small compared to the market values of the firms. Besides, bankruptcy hampers conduct with customers. They are usually lost because of both fear of impaired service and loss of trust. To sum up, the trade-off theory of the capital structure posits that there is an optimal debt-equity ratio. Firms attempt to balance the tax benefits of higher leverage and the greater probability (and the possibly higher associated costs) of financial distress.

2.4.4 Pecking Order Theory: Pecking order theory (also referred to as the information asymmetry theory) was proposed by Myers. Myers opine that firms prefer to finance new investment, first internally with retained earnings, then with debt, and finally with an issue of new equity. Myers argues that an optimal capital structure is difficult to define as equity appears at the top and the bottom of the 'pecking order'. Internal funds incur no flotation costs and require no disclosure of the firm's proprietary financial information that may include firm's potential investment opportunities and gains that are expected to accrue as a result of undertaking such investments.

The pecking order theory is about what firm’s management prefer; a pecking order of alternative sources of finance that firm faces (Myers, 1984; Wramsby & Osterlund, 2004). First, firms chose internal finance that is using profits from previous years. Second, if there is no internal finance available, firms chose to borrow money from credit institutions such as banks. Third, only as a last option will firms issue new shares. Basically, the pecking order theory says that management favours internal financing to external financing (Wramsby & Osterlund, 2004).

Myers (1984) discusses in his article the capital structure puzzle why this pecking order is used by numerous firms, because it clearly goes against shareholder’s interests in returns. In a managerial view it has been stated that “professional managers avoid relying on external finance because it would subject them to the discipline of the capital. The pecking order theory tries to explain why most profitable firms use internal financing; the easy reason for this is that they do not need to make use of external funding. The other extreme, less profitable businesses do not possess enough internal capital and have to seek for external funding (Myers, 1984). Hutchinson (1995) points out that profit retention has an opportunity cost. The more business owners are willing to risk, the higher the possible profits.

The pecking order approach is relevant for small businesses since costs associated with external financing are higher for small firms than for large businesses

(Chittenden, Hall & Hutchinson, 1996). Sogrob-Mira (2005) argues that the pecking order theory could easily be applied on SMEs since managers usually are at the same time shareholders and they do not want to lose control of their businesses. The information costs associated with debt and equity issues has led Myers (1984) to argue that a firm's capital structure reflects the accumulation of past financial requirements. Bevan and Danbolt (2002) state that, the more profitable firms should hold less debt because high levels of profits provide a high level of internal funds. Consistent with the pecking order theory, work of Titman and Wessels (1988), Rajan and Zingales (1995), Antoniou, Guney and Paudyal(2002) and Bevan and Danbolt (2002) in developed countries, Booth et al, (2001), Pandey (2001), Um (2001), Wiwattanakantang (1999), Chen (2004) and Al-Sakran (2001) in developing countries all find a negative relationship between leverage ratios and profitability. Um (2001) argues that growing companies' funding pressure for investment opportunities is likely to exceed their retained earnings and, according to the 'pecking order' are likely to choose debt rather than equity. Thus, if the information asymmetry theory is pertinent in Libya, a positive relationship is expected between financial leverage and growth. Booth *et al*, (2001) argue that this relation is generally positive in all countries in their sample, except for South Korea and Pakistan. Pandey (2001) finds a positive relationship between growth and both long-term and short-term debt ratios in Malaysia. In contrast to the trade-off theory, there is no well-defined target leverage ratio in the pecking order theory. There are two kinds of equity, internal and external; one is at the top of the pecking order and one at the bottom. A firm's leverage ratio thus reflects its past cumulative requirement for external finance. The pecking order theory can explain why the most profitable firms tend to borrow less; they simply do not need external funds.

Less profitable firms issue debt because they do not have sufficient internal funds and because debt has lower flotation and information cost compared to equity. Debt is the first source of external finance on the pecking order. Equity is issued only as a last resort, when the debt capacity is fully exhausted. Tax benefits of debt are a second order effect. The debt ratio changes when there is an imbalance between internal funds and real investment opportunities.

Thus this study hereby align with the pecking order theory of leverage as it has been found to have an allure or influence in the real academic literature that corporate firms prefer internal financing rather than the external financing such as debt and equity financing.

2.4.5 The Agency Cost Theory: This theory of capital structure states that an optimal capital structure will be determined by minimizing the costs arising from conflicts between the parties involved.

Jensen and Meckling (1976) argue that agency costs play an important role in financing decisions due to the conflict that may exist between shareholders and debt holders. If companies are approaching financial distress, shareholders can encourage management to take decisions, which in effect, expropriate funds from debt holders to equity holders.

Sophisticated debt holders will then require a higher return for their funds if there is potential for this transfer of wealth. Debt and the accompanying interest payments, however, may reduce the agency conflict between shareholders and managers. Debt holders have legal redress if management fails to make interest payments when they are due, hence managers concerned about potential loss of job, will be more likely to operate the firm as efficiently as possible in order to meet the interest payments, thus aligning their behaviour closer to shareholder wealth maximization.

Jensen and Meckling (1976) see agency costs as the sum of the monitoring expenditures by the principal, bonding costs by the agent, and a residual loss. Jensen and Meckling (1976) argue that the use of secured debt might reduce the agency cost of debt. Um (2001), however, suggests that if a firm's level of tangible assets is low, the management for monitoring cost reasons may choose a high level of debt to mitigate equity agency costs. Therefore, a negative relationship between debt and tangibility is consistent with an equity agency cost explanation (Um, 2001). Um also argues that firm size may proxy for the debt agency costs (monitoring cost) arising from conflicts between managers and investors. Um (2001) emphasizes that the monitoring cost is lower for large firms than for small firms. Therefore, larger firms will be induced to use more debt than smaller ones.

In much of the corporate finance literature it is assumed that agency costs are important determinants of firms' capital structure (Harris & Raviv,1991). Three forms of agency problems have received particular attraction thus, (i) risk shifting (or asset substitution), (ii) the underinvestment problem and (iii) the free cash flow hypothesis.

2.5 Summary

This study discussed on conceptual issues that relates to financial leverage and financial performance. Relationship between financial leverage and financial performance will be analyzed. Prior studies on financial leverage and financial performance were reviewed. The different theories on financial leverage which includes; Traditional theory, Modigliani-Miller theory (MM), the static trade-off theory, pecking order theory, the agency cost theory were examined.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This study employed ex-post facto research design. Ex-post facto research design was employed because the study relied heavily on already existing secondary data on financial leverage and financial performance of listed pharmaceutical companies in Nigeria, which were extracted from annual financial statements.

3.2 Population, Sample and Sampling Techniques

The population of this study is all the listed pharmaceutical companies on the floor of Nigerian stock exchange (NSE) over the period of ten years (2006-2015). The pharmaceutical companies listed on the floor of NSE as at 2015 includes; Afrik pharmaceutical Plc, Evans medical Plc, Fidson Healthcare Plc, Ekocorp Plc, GlaxoSmithkline Plc (gsk), May & Baker Nigeria Plc, Morison Industries Plc, Neimeth Industrial Plc, Nigerian German Chemical Plc, Pharmadeko Plc, Union Diagnostic and Clinical Services Plc.

The above are the eleven (11) firms listed in health care sector (pharmaceutical) firms available on the NSE. Criteria were set for firms to be included in the sample. These criteria are

i. Only pharmaceutical companies that were listed throughout the period of this study were selected.

ii. Companies financial statement must cover the study period (2006-2015).

3.3 Method of Data Collection

This study makes use of secondary method of data collection. The secondary data were collected from Nigerian Stock Exchange fact books and annual financial statements of the pharmaceutical companies in Nigeria for the periods 2006 to 2015.

3.4 Technique for Data Analysis

This study used panel regression model with the aid of E-view to determine and analyze the effect of leverage on financial performance. Pre estimation test was carried out, which includes the use of Hausman test to choose the appropriate model between fixed effect and random effect model.

The Model for the study is specified below:

$ROA_{it}= \alpha_{it} +\beta_{it}DR_{it}+\mu_{it}$ …………………….. (1)

$ROA_{it}= \alpha_{it} +\beta_{it}DER_{it}+\mu_{it}$ …………………... (2)

$ROA_{it}= \alpha_{it} +\beta_{it}DR_{it}+\beta_{it}DER_{it}+\mu_{it}$………….... (3)

Where:

ROA= Return on Asset

DR= Debt Ratio

DER= Debt to Equity Ratio

α = Intercept (Constant value of financial performance in the absence of leverage)

μ = error term (other explanations not by leverage)

β_{it}=time series parameter (coefficient to explain the variation caused by leverage)

3.4.1 Variables Measurement

$$ROA = \frac{\text{Net profit after tax}}{\text{Total Assets}}$$

This measure how much shareholders earned from its investment. Ratio indicates how profitable a company is by comparing its net income to average shareholder's equity. The higher the percentage, the more efficient equity holders fund is been utilized. (Kurfi, 2003)

$$DR = \frac{\text{Total Debt}}{\text{Total Assets}}$$

This measures the amount of the total funds provided by creditors in relation to the total assets of the firm. (Kurfi, 2003)

$$DER = \frac{\text{Total Debt}}{\text{Shareholder's Equity}}$$

Creditors would like this ratio to be low because the lower the ratio, the higher the level of the firm's financing that is being provided shareholders, and the larger cushion (margin of protection) in the event shrinking asset values or outright losses. (Kurfi, 2003)

3.5 Justification of Methods

Ex-post facto research design were employed because this study relied heavily on already established secondary data on financial leverage and financial performance of listed pharmaceutical companies in Nigeria, which are extracted from annual financial statements. The eleven (11) firms listed in health care sector (pharmaceutical) firms available on the NSE as at December 31st 2015. The secondary source of data collection was employed because there is availability of this data in the annual financial reports of the sample of this study. Panel regression analysis was used because it is known as the best unbiased and efficient estimator, and it also minimized the error term with the view of finding the model or regression equation that explains the data.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation

The data presentation as extracted from the financial statement of pharmaceutical companies in Nigeria. The cross represents the numbers of companies; Profit after Tax is denoted by (PT), Total Asset (TA), Total Debt (TD), While Shareholders Equity (SE), Return on Asset is denoted by (ROA), Debt Ratio as (DR) and Debt to Equity Ratio as (DER) respectively. See appendix VI

4.1.1 Descriptive Statistics of Variables

Table 4.1 Descriptive Statistics

	LOG(ROA)	LOG(DR)	LOG(DER)
Mean	-2.950214	-1.457450	-1.410507
Median	-3.107072	-1.351682	-1.566100
Maximum	0.124273	0.324547	1.417035
Minimum	-5.673351	-3.517322	-3.776423
Std. Dev.	1.084098	0.943098	1.226277
Skewness	-0.012243	-0.353375	0.394096
Kurtosis	3.460909	2.570550	2.721432
Jarque-Bera	0.443827	1.424838	1.455934
Probability	0.800985	0.490456	0.482890
Sum	-147.5107	-72.87252	-70.52534
Sum Sq. Dev.	57.58810	43.58224	73.68400
Observations	50	50	50

Source: E-View 9 output

Table 4.1 shows that the mean of Return on Asset, Debt Ratio and Debt to Equity Ratio are -2.950214, -1.457450 and -1.410507 respectively. The comparison of the mean responses with maximum values for each of the variables indicates that pharmaceutical companies presently operates at a Return on Asset -2.95, Debt Ratio is -1.46 and Debt to Equity Ratio is -1.41. The probability value of Jarque-

Bera test of all the variables are 5% and above. This indicates that all the variables are normally distributed. Also the skewness value of the variables is close to zero, it means that the distribution of the variables is symmetric in nature. The Kurtosis values is also closer to 3, it means that the shape is normal distribution. The initial data in their raw form were not normally distributed, so the data were log to be transformed and the result indicated that the data are normally distributed (see appendix I.)

4.1.2 Correlation Matrix

The correlation matrix is used to determine the correlation between the dependent and independent variables of the study. The table below represents the correlation matrix for the sample observations.

Table4.2 Correlation Matrix

	ROA	DR	DER
ROA	1	0.635498108	0.150468598
DR	0.635498108	1	0.071000861
DER	0.150468598	0.071000861	1

Source: E-View 9 output

Table 4.2 presents the correlation matrix of the independent variables. It is observed that the variables correlate fairly well (between 0.07 and 0.64). There is no correlation coefficient greater than 0.80, hence there is no problem of multicollinearity of data.

Table4.3 Variance Inflation Factor

Variance Inflation Factors

Date: 02/15/17 Time: 20:10
Sample: 1 50
Included observations: 50

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.071036	3.836966	NA
LOG(DR)	0.087514	14.16110	4.120241
LOG(DER)	0.089356	8.636101	4.120241

Table 4.3 above presents the Variance Inflation Factor (VIF) and tolerance coefficient of each of the variable. It is observed that the collinearity diagnosis revealed a VIF well below 10, and a tolerance 0.2. This shows that there is no threat of multicollinearity or independent error. Researcher suggested that multicollinearity does not constitute a problem when the VIF does not 10% and when the tolerance for each of the variables is above 0.2 (Wasserman & Kutner, 1990)

Table 4.4 Hetroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.106733	Prob. F(2,47)	0.3391
Obs*R-squared	2.248842	Prob. Chi-Square(2)	0.3248
Scaled explained SS	2.267986	Prob. Chi-Square(2)	0.3217

The Breush-Pagan-Godfrey test for heteroskedasticity shown above in table 4.4 was conducted on the residual and the result showed probability chi-square in excess of 0.05 which lead to reject the presence of heteroskedasticity in the residual.

Table 4.5 Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.177031	Prob. F(2,45)	0.8383
Obs*R-squared	0.390331	Prob. Chi-Square(2)	0.8227

The Breusch-Godfrey serial correlation LM Test indicates that, there is no autocorrelation. This is given by the R-squared of the auxiliary regression P-value 0.8227. Thus, the null hypothesis of no serial correlation in the residual is rejected since the P-value is greater than 5% level of significant.

4.2 Data Analysis and Results

H_0: Random effect is appropriate

H_1: Fixed effect is appropriate

Based on the Hausman test, this study accepts null hypothesis which states that the Random effect is appropriate (see appendix for the result of Hausman test)

4.2.1 Test of Hypotheses

Test of Hypothesis One

H_{01}: Debt Ratio has no significant effect on Return on Asset of quoted pharmaceutical companies in Nigeria.

Table 4.6 Result of Random Effects

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 01/08/17 Time: 12:11
Sample: 2005 2015
Periods included: 11

Cross-sections included: 5
Total panel (unbalanced) observations: 50
Wansbeek and Kapteyn estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.029069	0.034217	-0.849550	0.3998
DR	0.362832	0.059115	6.137723	0.0000
	Effects Specification			
			S.D.	Rho
Cross-section random			0.047431	0.1348
Idiosyncratic random			0.120185	0.8652
	Weighted Statistics			
R-squared	0.440963	Mean dependent var		0.059816
Adjusted R-squared	0.429316	S.D. dependent var		0.158921
S.E. of regression	0.119883	Sum squared resid		0.689847
F-statistic	37.86188	Durbin-Watson stat		2.155460
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.401904	Mean dependent var		0.095704
Sum squared resid	0.780140	Durbin-Watson stat		1.905988

Source: E-View 9 output

Table 4.6 presents the results of Random Effects model. The result shows that the P value of F-statistics is 0.00 which is less than 5%, this shows that the model is fit and that the model is statistically significant as it implies that the independent variable is statistically significant in explaining variation in ROA. The result indicates that 40.2 present of the variation in Return on Asset can be explained by variability in Debt Ratio. The Adjusted R square of 0.43 indicates that any variations that can occur as a result of introduction of additional independent variables are being taken care of and cannot affect R square.

The regression line ROA= -0.029069 + 0.362832DR shows that for every 1 naira increase in Debt Ratio, Return on Asset increases by 0.36 naira. The P value of

0.00 is less than 0.05. This implies that the alternative hypothesis is accepted that Debt Ratio has significant positive effect on Return on Asset of quoted pharmaceutical companies in Nigeria.

4.1.2 Test of Hypothesis Two

$H0_2$: debt/equity ratio has no significant effect on return on asset of quoted pharmaceutical companies in Nigeria.

Table 4.7 Result of Test of Hypothesis Two

Dependent Variable: ROA
Method: Panel EGLS (Cross-section random effects)
Date: 01/08/17 Time: 12:25
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50
Wansbeek and Kapteyn estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.080580	0.027305	2.951077	0.0049
DER	0.028003	0.026581	1.053476	0.2974
	Effects Specification			
			S.D.	Rho
Cross-section random			0.006318	0.0015
Idiosyncratic random			0.162846	0.9985
	Weighted Statistics			
R-squared	0.022594	Mean dependent var		0.094978
Adjusted R-squared	0.002232	S.D. dependent var		0.163052
S.E. of regression	0.162862	Sum squared resid		1.273149
F-statistic	1.109590	Durbin-Watson stat		1.756033
Prob(F-statistic)	0.047445			
	Unweighted Statistics			
R-squared	0.022641	Mean dependent var		0.095704
Sum squared resid	1.274841	Durbin-Watson stat		1.753702

The regression line ROA= 0.080580 + 0.028003DER shows that for every 1 naira increase in Debt to Equity Ratio, Return on Asset increases by 0.03 naira. The P value 0.2974 is greater than t- value of 0.05. This implies that the null hypothesis is accepted that stated that Debt to Equity Ratio has no significant Effect on Return on Asset of quoted pharmaceutical companies in Nigeria.

4.1.3 Test of Hypothesis Three

$H0_2$: there is no significant effect of debt ratio and debt/equity ratio on return on asset of quoted pharmaceutical companies in Nigeria.

Table 4.8 Result of Test of Hypothesis Three

Method: Panel EGLS (Cross-section random effects)
Date: 01/08/17 Time: 12:29
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50
Wansbeek and Kapteyn estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.037566	0.035222	-1.066540	0.2916
DR	0.358770	0.059319	6.048159	0.0000
DER	0.018699	0.019810	0.943933	0.3500
	Effects Specification			
			S.D.	Rho
Cross-section random			0.046572	0.1301
Idiosyncratic random			0.120444	0.8699
	Weighted Statistics			
R-squared	0.450808	Mean dependent var		0.060553
Adjusted R-squared	0.427438	S.D. dependent var		0.158990
S.E. of regression	0.120132	Sum squared resid		0.678293
F-statistic	19.29010	Durbin-Watson stat		2.065609
Prob(F-statistic)	0.000001			
	Unweighted Statistics			
R-squared	0.413083	Mean dependent var		0.095704

Sum squared resid	0.765558	Durbin-Watson stat	1.830153

Table 4.8 above shows the P value of F- statistics is 0.000001 which is less than 5% this show that the model is fit and that the model is statistically significant as it implies that all independent variables are statistically significant. The R square value of 0.450808 means that the independent variables contribute 45% to the dependent variable. It also implies that 45% of variation on Return on Asset can be explained by variability in Debt Ratio and Debt to Equity Ratio. The adjusted R square of 0.43 indicates that any variations that can occur as a result of the introduction of additional independent variable are taken care of and cannot affect the R square. Durbin-Watson value of 1.83 shows there is no serial or auto correlation. Durbin (1970), states that when the Durbin Watson statistic value is above 0.5 or 50%, independent observation is assumed. In other words, there is no auto correlation among the residuals of the study.

4.3 Discussion of Findings

The empirical evidence derived from the Random regression model indicates that debt ratio is statistically related to the level of profitability. This implies that Debt Ratio has significant positive effect on Return on Asset of quoted pharmaceutical companies in Nigeria. The positive sign on the coefficient suggests that debt ratio has a direct influence on return on asset of quoted pharmaceutical companies in Nigeria. There is a positive and significant association between debt ratio and return on asset, the study is contradict the prior studies of Olayinka and Tiawo

(2012) Enekwe, Agu and Eziedo (2014) Abubakar (2015) which found that there is a negative effect of Debt Ratio on profitability of companies in Nigeria.

Debt to Equity was found to have no significant Effect on Return on Asset of quoted pharmaceutical companies in Nigeria. This result supports the findings of Abubakar (2015) and Rehman (2013) who found that there is no significant relationship between debt ratio and financial performance surrogated by return on equity. It was also found that this findings contradict that of Akhtar, Javed, Maryam and Sadia, (2012), Ojo (2013) and Gweyi and Karanja (2014).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Summary

The main objective of this study is to investigate the effect of leverage on financial performance of quoted pharmaceutical companies in Nigeria from 2006 to 2015.

In an effort to achieve that, the study hypothesized that there is no significant effect of leverage on financial performance of quoted pharmaceutical companies in Nigeria. The study used panel regression as research design in finding whether there is a significant effect on Debt ratio and Debt to Equity ratio on Return on Asset of pharmaceutical companies in Nigeria. Data for the study are secondary data and were sourced from Annual Reports and Financial Statements of pharmaceutical companies in Nigeria from 2006 to 2015, and the Nigeria Stock Exchange Fact Books.

The findings from study showed that debt ratio has significant positive effect on the financial performance of pharmaceutical companies in Nigeria, while debt to equity ratio has no significant effect on the financial performance of pharmaceutical firms in Nigeria.

5.2 Conclusions

After careful review of relevant literature and based on the data collected and analyzed and hypothesis tested, the study concludes that debt ratio has significant positive effect on financial performance of quoted pharmaceutical companies in Nigeria. The independent variables in the model which include debt ratio and debt to equity ratio were able to account for 86% of variations in the performance of the firms. The remaining 14% is accounted for other variables not captured in the model. This strong indication shows that debt ratio has positive significant effect on return on asset of quoted pharmaceutical companies in Nigeria. And that debt to equity ratio has no significant effect on return on asset of quoted pharmaceutical companies in Nigeria from 2006 to 2015.

5.3 Recommendation

On the basis of the findings outlined in this study, the following recommendations are considered necessary:

i. Debt ratio of quoted pharmaceutical companies in Nigeria should be increased since this study found that debt ratio has positive significant effect on the return on asset (ROA). The higher the debt ratio the more return on asset of quoted pharmaceutical companies in Nigeria. But in doing this the companies should increase Debt Ratio with caution to avoid outsiders taken over the ownership of the companies.

ii. Debt to equity ratio was found be insignificant to the return on asset of pharmaceutical companies in Nigeria, it is recommended that the companies should reduce the level of debt to equity ratio of founding.

iii. The financial leverage of quoted pharmaceutical companies should be properly mix, owning to the fact that when debt and debt to equity ratios are combined, debt ratio contribute significantly to the return on asset of quoted pharmaceutical companies in Nigeria. While the debt to equity ratio is insignificant to return on asset. Therefore, the proportion of debt ratio should be higher than that of debt to equity ratio when combining the two ratios.

5.4 Suggestion for Further Studies

To improve on this study, it is suggested that further researches based on the limitations encountered, especially on independent variables (Debt and Debt to Equity Ratios) and performance besides using profit and Return on asset.

Therefore researchers should conduct more researches in this direction, so as to obtain adequate findings that could be of immense benefit on the performance of quoted pharmaceutical companies in Nigeria.

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Appendix I. Show data before log transformation

	ROA	DR	DER
Mean	0.095704	0.341493	0.541338
Median	0.044732	0.258807	0.208868
Maximum	1.132325	1.383403	4.124872
Minimum	0.003436	0.029679	0.022904
Std. Dev.	0.163156	0.305497	0.875303
Skewness	5.304349	1.768983	2.909803
Kurtosis	34.01275	6.106327	11.35322
Jarque-Bera	2238.198	46.18014	215.9252
Probability	0.000000	0.000000	0.000000
Sum	4.785206	17.07465	27.06689
Sum Sq. Dev.	1.304373	4.573086	37.54162
Observations	50	50	50

Appendix II. Result of fixed effect model for Model 1.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:09
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.034063	0.026951	-1.263867	0.2129
DR	0.379999	0.061250	6.204112	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.512752	Mean dependent var	0.095704
Adjusted R-squared	0.457383	S.D. dependent var	0.163156
S.E. of regression	0.120185	Akaike info criterion	-1.287406
Sum squared resid	0.635553	Schwarz criterion	-1.057963
Log likelihood	38.18514	Hannan-Quinn criter.	-1.200033
F-statistic	9.260621	Durbin-Watson stat	2.327037
Prob(F-statistic)	0.000004		

Appendix III. Show the result of Hausman Test for Model 1

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.147136	1	0.2841

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DR	0.379999	0.362832	0.000257	0.2841

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:12
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.034063	0.026951	-1.263867	0.2129
DR	0.379999	0.061250	6.204112	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.512752	Mean dependent var	0.095704
Adjusted R-squared	0.457383	S.D. dependent var	0.163156
S.E. of regression	0.120185	Akaike info criterion	-1.287406
Sum squared resid	0.635553	Schwarz criterion	-1.057963
Log likelihood	38.18514	Hannan-Quinn criter.	-1.200033
F-statistic	9.260621	Durbin-Watson stat	2.327037
Prob(F-statistic)	0.000004		

Appendix IV. Shows Result of fixed effect model for model 2.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:21
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.081676	0.027231	2.999331	0.0044
DER	0.025913	0.026845	0.965312	0.3397

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.105454	Mean dependent var	0.095704
Adjusted R-squared	0.003801	S.D. dependent var	0.163156
S.E. of regression	0.162846	Akaike info criterion	-0.679863
Sum squared resid	1.166821	Schwarz criterion	-0.450420
Log likelihood	22.99657	Hannan-Quinn criter.	-0.592490
F-statistic	1.037396	Durbin-Watson stat	1.922414
Prob(F-statistic)	0.407783		

Appendix V. Result of Hausman test for Model 2.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.310207	1	0.5776

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DER	0.025913	0.028003	0.000014	0.5776

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:26
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	0.081676	0.027231	2.999331	0.0044
DER	0.025913	0.026845	0.965312	0.3397

	Effects Specification		
Cross-section fixed (dummy variables)			
R-squared	0.105454	Mean dependent var	0.095704
Adjusted R-squared	0.003801	S.D. dependent var	0.163156
S.E. of regression	0.162846	Akaike info criterion	-0.679863
Sum squared resid	1.166821	Schwarz criterion	-0.450420
Log likelihood	22.99657	Hannan-Quinn criter.	-0.592490
F-statistic	1.037396	Durbin-Watson stat	1.922414
Prob(F-statistic)	0.407783		

Appendix VI.Result of Fixed Effect Model for Model 3.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:28
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.042522	0.028596	-1.487003	0.1443
DR	0.376362	0.061514	6.118298	0.0000
DER	0.017921	0.019898	0.900651	0.3728

	Effects Specification		
Cross-section fixed (dummy variables)			
R-squared	0.521774	Mean dependent var	0.095704
Adjusted R-squared	0.455044	S.D. dependent var	0.163156
S.E. of regression	0.120444	Akaike info criterion	-1.266094
Sum squared resid	0.623786	Schwarz criterion	-0.998411
Log likelihood	38.65236	Hannan-Quinn criter.	-1.164159
F-statistic	7.819260	Durbin-Watson stat	2.238082
Prob(F-statistic)	0.000010		

Appendix VII. Result of Hausman test for Model 3.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.251310	2	0.5349

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DR	0.376362	0.358770	0.000265	0.2801
DER	0.017921	0.018699	0.000003	0.6775

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 01/08/17 Time: 12:30
Sample: 2005 2015
Periods included: 11
Cross-sections included: 5
Total panel (unbalanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.042522	0.028596	-1.487003	0.1443
DR	0.376362	0.061514	6.118298	0.0000
DER	0.017921	0.019898	0.900651	0.3728

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.521774	Mean dependent var	0.095704
Adjusted R-squared	0.455044	S.D. dependent var	0.163156
S.E. of regression	0.120444	Akaike info criterion	-1.266094
Sum squared resid	0.623786	Schwarz criterion	-0.998411
Log likelihood	38.65236	Hannan-Quinn criter.	-1.164159
F-statistic	7.819260	Durbin-Watson stat	2.238082
Prob(F-statistic)	0.000010		

Appendix VIII. Data presentation as extracted from the companies' financial statement

Year	Cross	Companies	Sector	Profit after Tax	Total Asset	Total Debt	Shareholders Equity	Return On Asset	Debt Ratio	Debt/Equity Ratio
2006	1	NEI	Health care	82228	2513726	-335301	1576000	0.032712	-0.13339	0.319743
2007	1	NEI	Health care	116415	2730454	-311840	1623717	0.042636	-0.11421	-3.9569
2008	1	NEI	Health care	79391	3270432	-751199	1634075	0.024275	-0.22969	-0.06943
2009	1	NEI	Health care	-455206	402010	-556142	1072787	-1.13233	-1.3834	-1.62918
2010	1	NEI	Health care	-126133	467260	-552835	950740	-0.26994	-1.18314	-0.11795
2011	1	NEI	Health care	113077	2523433	-725140	1015504	0.044811	-0.28736	0.17378
2012	1	NEI	Health care	-69304	2891344	-216749	1582293	-0.02397	-0.07496	0.255092
2013	1	NEI	Health care	130578	2891079	-237785	1733789	0.045166	-0.08225	-0.05185
2014	1	NEI	Health care	-68088	2828664	-173024	1493009	-0.02407	-0.06117	0.039387
2015	1	NEI	Health care	-335684	2200244	-211107	1157325	-0.15257	-0.09595	-0.18241
2006	2	FID	Health care	370430	3025862	-89804	1068571	0.122421	-0.02968	-0.54914
2007	2	FID	Health care	505304	3561082	-127702	1426726	0.141896	-0.03586	-0.76386
2008	2	FID	Health care	189300	7316742	-247819	4965948	0.025872	-0.03387	-0.05375
2009	2	FID	Health care	429073	3437659	-172303	5095021	0.124815	-0.05012	-0.31357
2010	2	FID	Health care	465893	5075986	-348893	5319386	0.091784	-0.06873	-0.04018
2011	2	FID	Health care	55590	9415064	-2427036	5190377	0.005904	-0.25778	0.279527
2012	2	FID	Health care	206889	10780936	-2979957	5228436	0.01919	-0.27641	0.21092
2013	2	FID	Health care	154980	12243088	-2883607	5245335	0.012659	-0.23553	-0.11608
2014	2	FID	Health care	631825	15772494	-4098187	5765281	0.040059	-0.25983	-0.19471
2015	2	FID	Health care	744378	16670325	6646547	16670325	0.044653	0.398705	0.398705
2006	3	MAY	Health care	208318	3964572	-720606	2617346	0.052545	-0.18176	0.393518
2007	3	MAY	Health care	417962	4455001	-256548	2615664	0.093819	-0.05759	-2.49022
2008	3	MAY	Health care	232081	5730109	-740117	2753626	0.040502	-0.12916	-0.15417

2009	3	MAY	Health care	232081	3515948	-810241	2705707	0.066008	-0.23045	-0.28643
2010	3	MAY	Health care	192977	4343789	-1460405	2883384	0.044426	-0.33621	0.05561
2011	3	MAY	Health care	192977	6816916	-939942	3154353	0.028309	-0.13788	0.309698
2012	3	MAY	Health care	255472	7045658	-2165859	3132296	0.036259	-0.3074	0.123069
2013	3	MAY	Health care	75943	8069406	-1890197	3029207	0.009411	-0.23424	-0.13316
2014	3	MAY	Health care	-103089	8160048	-1853800	3092547	-0.01263	-0.22718	-0.69486
2015	3	MAY	Health care	63341	8095707	-1615548	3111580	0.007824	-0.19956	-0.51921
2006	4	GLA	Health care	967098	8869207	4676132	4193074	0.10904	0.527232	1.590113
2007	4	GLA	Health care	715488	8719161	4117210	4601951	0.082059	0.472203	-1.33535
2008	4	GLA	Health care	1162783	9611281	4159822	5451459	0.120981	0.432806	0.111995
2009	4	GLA	Health care	1701829	12078362	5495121	6583241	0.140899	0.454956	-0.13214
2010	4	GLA	Health care	2461395	14737912	6407503	8330408	0.167011	0.434763	-0.03921
2011	4	GLA	Health care	2294988	17940156	17597564	8911597	0.127925	0.980904	0.384143
2012	4	GLA	Health care	2823526	21792721	11068641	10502627	0.129563	0.507905	0.053237
2013	4	GLA	Health care	2919170	26213663	13840146	12182007	0.111361	0.527975	-0.09529
2014	4	GLA	Health care	1848842	27992866	15022810	12766228	0.066047	0.536666	-0.54066
2015	4	GLA	Health care	965047	31329713	18127398	12874878	0.030803	0.578601	1.407967
2006	5	MOR	Health care	8147	223907	-103952	119955	0.036386	-0.46426	-4.12487
2007	5	MOR	Health care	5490	231333	-105888	125445	0.023732	-0.45773	-0.0229
2008	5	MOR	Health care	14449	589416	-124474	464942	0.024514	-0.21118	-0.28909
2009	5	MOR	Health care	-20857	593104	156628	436476	-0.03517	0.264082	-0.20531
2010	5	MOR	Health care	-33127	557713	347636	403349	-0.0594	0.623324	0.206816
2011	5	MOR	Health care	-26137	118007	144607	432943	-0.22149	1.22541	0.130415
2012	5	MOR	Health care	2014	586090	51133	434957	0.003436	0.087244	-0.07837
2013	5	MOR	Health care	-22065	526215	113323	412892	-0.04193	0.215355	-0.18075

2014	5	MOR	Health care	-82331	449047	118486	330561	-0.18335	0.263861	0.358439
2015	5	MOR	Health care	-108500	422741	200680	222061	-0.25666	0.474711	0.903716