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ABSTRACT

Globally, plethora of empirical evidences by researchers has attempted to corroborate the theoretical underpinning of capital structure with respect to debt financing. While this has continued to be a burden, this work aimed at answering the question of whether increasing the debt proportion of firm will increase it fortune or otherwise. Ordinary Least Square (OLS) regression analysis was employed using panel data to analyse the data collected from the financial statements of ten (10) Nigeria firms over 20 years (1991 - 2010). ROA, ROE, EPS and DPS on the one hand and DC on the other hand, were surrogated for firms' performance and debt financing respectively. From the regression analysis we found that there is a positive relationship between DC and ROE, EPS, DPS; while a negative relationship exists between DC and ROA. Hence we conclude that the proportion of debt finance contained in the capital structure of a firm will considerably impact on its performance. Thus, the recommendation among others is that Nigeria government should see to the review of the cost of making credit available to businesses in order to reduce the cost of debt financing so as to encourage firms further borrow to finance their positive NPV projects as predicted by the M-M proportion II theory.

Keywords: Debt financing, Capital structure, Firm,

Introduction

Capital structure has been a subject of debates in corporate finance. Deluge of books and articles authored both in theory and empirical analysis have been circumnavigating this subject matter without a common ground to lay this age long academic altercations to rest. From the take off by Modigliani and Miller (1958) irrelevance, adjusted in 1959 and 1963, plethora of theories ranging from Static Trade-off Theory (Modigliani and Miller, 1963), agency theory (Jensen, 1988), Pecking Order Theory (Myer and Majluf 1984, Myer 1984) and the likes have been procreated.

How to increase company performance and why the performance of a company differs from those of its peers are among the major issues that preoccupy the minds of Chief Financial Officers (CFOs) of every company.

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The financing decision made by a company is pivotal to its success. Absolutely, nothing is more important to businesses than raising capital, but the way the capital is raised can have enormous impact on the success of the business (Jefferson, 2001). According to Ismail and Razak (2003), "firms' financial policies are designed to convey information to the financial market so as to minimize any underpricing of the firm's financial instrument due to investors' uncertainty of the quality of the firm". Firms may be financed by either equity, granting the holders' stakes in the ownership of the company or by debt which entitled holders' fixed claims on the returns of the business.

The way in which a firm finances its activities and the extent to which its operations involved fixed costs affect the variability of the firm's earnings and by extension its performance (Rong-Jen and Glenn, 1991), this they argued influences the riskiness of its operation. Thus, suggesting that there exist an indirect relationship between debt financing and performance. This position appears to be at variance with the M-M theory with tax which posited that because of the tax advantage on debt interest, firms' performance could be enhanced by using as much debt as possible.

The fact that firms tend to possess more positive Net Present Value (NPV) projects than they can finance, meant that they end up seeking further means of financing such projects. The major attraction to debt financing is the fact that interest payment on it is tax deductible as opposed dividend on equity form of financing. This suggests that debt financing is cheaper than equity financing as buttressed by M-M theory with tax as well as Pecking Order Theory – which tends to rank debt preference higher than those of equity to managers.

However less attention has been focused on the aftermath effect of high leverage on the performance of the levered company. More recently, works in corporate finance indicates that a positive relationship may exist between debt issues and firm value (Harris and Raviv, 1991). Put differently by Ismail and Razak (2003) as high ex-post valuation implies ex-ante firm value as well as greater likelihood of issuing debt. As a result, firms with more debts are more likely to have a higher value than their peers that are less levered. It is in view of the foregoing that this study intends to contribute to the controversies as to whether the size of debt a firm has will considerably influence its performance using Nigeria data.

Materials and Method Prior Research

Pioneered by the duo of Modigliani and Miller (1958) the debates of what constitutes the optimum capital structure of a firm, both in theory and empirical studies have been over flogged. Yet with no common ground among theorists on this all important aspect of corporate finance. Debt and equity financing constitute the main categories of the source of finance of companies thus making up the capital structure. Many arguments abound that the choice of the form of finance by a firm determines the performance of such firms whether positively or otherwise. This section is dedicated to exploring the existing works in this area.

Capital Structure in Brief

In business, capital structure is the use of debt and equity financing in a company operations. Pandey (2004) opined that, capital structure is the proportionate relationship between debt and equity financing of firms. The structure considered varied compositions of these financing (e.g. equity, preferred stocks, bond) that the firm could employ. Debts financing include the use of bank loans, bonds, debentures and the likes while equity financing represent the use of investments from venture capitalists or individual investors.

Each methods can affect company performance in different ways, as a firm value depend partly on the way it is financed couple with the efficiency of the capital market that facilitates its accumulation. Modigliani and Miller (1958) however, posited that capital structure is irrelevant base on stringent conditions put forward that could not be binding in reality. Notwithstanding, the acknowledgement of that fact gave birth to the trade-off theory, pecking order theory, market timing theory, all trying to explain the what, why and how.

The debate of whether an optimal capital structure does exist, its effect on the overall cost of capital on one hand and the value of the firm on the other hand have remained rather inconclusive and antithetical (Oloyede and Akinmulegun 1999, Andrei 2011). If leverage can increase a firm's value (Modigliani and Miller 1963, Miller 1977), then firm will have to trade off cost of financial distress, agency costs (Jensen and Meckline, 1976) and the tax benefits on debt, so as to have an optimal capital structure. To information asymmetry and pecking order theory (Myer and Majluf 1984, Myer 1984), there is no well-defined target debt ratio. While later models suggested that there tends to be a hierarchy in firm's preference for financing. For Brealey and Meyers (1996) the choice of capital structure is fundamentally a marketing problem. In their words, the firm can issue dozens of distinct securities in countless combinations and could only attempt to find the particular combination that maximizes

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it overall market value thus concurring to the fact of a firm having an optimum capital structure is desirable.

Debt financing affects company performance because companies will usually agree to a fixed repayment for a specific period thus impacting on their cost of capital, and by extension the argument for an optimum capital structure. Olowe (2011) net income approach, net operating income approach, traditional approach M-M theory on the basis of the different school of thought that have attempted answers to optimum capital structure dilemma. The net income approach he said takes the view that leverage or capital structure can affect the value of the firm or its cost of capital. If a firm increases the debt in its capital structure, the value of the firm will increase while the overall cost of capital will be reduced. This approach assumes that the cost of debt is less than the cost of equity. On its own part, the Net Operating Income Approach holds that financial leverage or capital structure changes do not affect the market value of the firm or the weighted average cost of capital. The net operating income is capitalized at the overall capitalization rate or weighted average cost of capital to obtain the total market value of the firm. This approach assumes that the weighted average cost of capital depends on the business risk and since business risk is constant, the cost of capital is constant regardless of the degree of leverage. Hence further assumes that the cost of debt is constant regardless of the degree of leverage and is cheaper than the cost of equity.

The Traditional Approach is a modification to the net income approach. Olowe (2011) affirms that it is regarded as a middle of the road position between the aforementioned. The traditional approach to leverage assumes that the value of the firm can be increased or the cost of capital reduced through judicious use of leverage. The approach suggests that the value of the firm increase or the cost of capital decreases initially within a reasonable limit of debt after which further increase in leverage reduces the value of the firm or increases the cost of capital. Thus, in the traditional approach, an optimum capital structure exists and it occurs when the market value of the firm is at maximum and the cost of capital is at minimum. Modigliani and Miller (1958) improved on the traditional view as to the effect of leverage on the cost of capital. They developed a behavioral justification support for the net operating income approach. That without taxes, the cost of capital and market value of the firm remains constant throughout all degrees of leverage. Accommodating tax relief on debt interest in their theory they admitted lowers the Weighted Average Cost of Capital because increase in equity risk will not upset the benefit of lower and then concluded firms can use debt up to 99.99%.

In order to substantiate their claims, Vermale (1981) conducted an empirical research in which his result was inconsistent with the M and M theories but agrees with the traditional view. They concluded that the cost of capital is affected by debt, apart from its tax advantage and that investors prefer corporate to personal leverage and therefore, the value of a firm rises up to a leverage range considered prudent. Other studies that arrived at similar conclusion include (Rajan and Zingales 1995, Wald 1999, Champion, 1999, David and sola 2010). Furthermore, empirical studies by Ross (1977), Noe (1988), Israel (1992) Demirguc-Kunt and Maksimovic (1999), Andy *et al.* (2002) confirmed that there is a positive correlation between leverage and the value of the firm.

Debt Financing

The sources of finances for any organization are broadly in two categories - owner equity and borrowings. Debt financing which interchangeably can be said to mean borrowing is an external obligation for which a firm have to service both the interest and the principal. A short-term debt/borrowing is a funding window for financing short-term cash requirements of a firm. There are various sources of short term funds which include bank overdraft, bank loan, leasing, trade credit and a host of others. A company would normally have available both short- and long-term finance on which management must take decision about which source of funding is most appropriate to it needs.

Traditionally, current assets were seen as short-term and fluctuating and best financed out of short term credit which could be paid up when not required. Short-term finance is usually cheaper than long-term finance. This is largely due to risks taken by creditors because it feels less exposed to risk on short-term loan. Short term finance also tends to be flexible and include such items as trade payable which are normally regarded as low cost funds notwithstanding that short term debt is generally the cheapest option; the price paid for reduced cost is increased risk for the borrower. It usually faces renewal problems as it may need to be negotiated continually as various facilities expire and renewal may not always be guaranteed. Following from this is unstable interest rates. If company constantly has to renew its funding arrangements, it will be at the mercy of fluctuations in short term interest rates.

Kaplan (2010) described debt as a source of long-term financing as a writing acknowledgement of debt by a company normally containing provisions as to payment of interests and the terms of repayment of principal. Long-term debts are usually in the form of debentures or bonds and are frequently used as sources of long-term finance as an alternative to equity.

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One option of long-term debt is securitization; which is the issue of secured debt like mortgage bonds and requires assets that can be easily used as collateral. Studies have it that the higher proportion of property, plant and equipment the more debt a company should have (Rajan and Zingales, 1995; Flannery and Rangan, 2006; Talberg et al., 2008; Antoniou et al., 2008; Byoun, 2008). Securitization has the advantage of lower costs of borrowing (an effect of smaller yields and due to the fact that the bond is secured by assets, investors' require a smaller interest that matches the lower bond risk). Another advantage is that the cost of debt will not soar after issuing this type of debt due to the low yield and implied risk. This has a beneficial advantage on the share capital because it will not trigger a large increase in the cost of capital, thus, reducing the value of stock. The fact that it allows the company to make use of otherwise illiquid assets - property, plant and equipment - and turn them into a very liquid means of raising funds constitutes an advantage. Effects on the cost of debt are also an incentive to use this instrument: it implies less chances for the cost of debt to increase very much, since the yield is smaller than in other cases; which means that the cost of capital would not increase very much either and the share price would not decrease by a considerable amount. Securitization is not without a demerit. Lower interest payments meant that company does not benefit from tax shields as much as they would with straight debt.

Another potential option of long-term debt for companies is convertible bonds - hybrid instruments between debt and equity. The advantages include lower fixed cost for borrowing due to lower yield. The option to convert the instrument into stock at the time of maturity is valuable in itself and compensates, the investor for the low interest. The effect on the cost of debt is similar to the mortgage bonds presented above and thus represent an advantage for using convertible debt as well. Where there is call protection option, the issuer will be entitled to the right to call the bond before term and therefore compel the holder to convert the bond into stock at a date prior to maturity. It is a useful feature if company earnings, along with share prices are forecasted to rise considerably, rendering the conversion to stock at maturity unprofitable for the company. So that calling the bond would mean giving up the tax advantages of the bond. As such the trade-off between current tax shields and future profitability should be considered when deciding to call the bond before maturity. The disadvantages of less tax shield also applies as well as the dilution of Earnings per Share (EPS) which takes place at the point of conversion and is most certainly undesirable to current shareholders. It also comes with it the threat of dilution of control, in the event that a large part of the debt issued is bought by one single investor.

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Zero coupon bonds or strips are another debt instrument useful to companies as a source of financing. It carries no coupon therefore less monthly costs and they can also be called before maturity. In addition, even though the company doesn't pay coupons, it still records interests' expense, which will be paid back in one lump sum at maturity or when the bond is called, hence companies benefits from tax advantages as well. The cost of capital effect would also not be of considerable impact, if the company does not cross the financial distress threshold. Demerits would include the fact that there are the most volatile instruments and their swing are closely related to fluctuations in interest rates (Andrei; 2011). At present times, interest rates have been known to change dramatically which would prompt investors to be reluctant to buy these bonds because of possible future fluctuations. Attractiveness of the instrument should thus carefully be considered before the issue.

A straight debt also known as debentures is now used to generally mean any kind of long-term marketable debt securities. It has predictable flows, cheap and does not dilute control. It is the most common type of longterm debt even though it is not flexible, increase risk at high level of gearing and must normally be repaid. It is worth noting that each debt instrument has its advantages and disadvantages for every company. A black and white decision cannot be made and the pluses and minuses of each to be traded-off are analysed from the view point of the company's financial strategy in order to decide which would be appropriate.

Debt Maturity

Not only does a firm's level of leverage affect corporate performance and failure but also its debt maturity structure (Barclay and Smiths, 1995; Ozkan, 2002). In an article by Schianterelli and Sembenelli (1999), they found that there is a positive relationship between initial debt maturity and medium-term performance. Based on an investigation of the effects of firms' debt maturity structure on profitability in Italy and the UK, Barclay and Smith (1995) provide evidence that large firms and firms with low growth rates prefer to issue long-term debt. Another study by Stohs and Mauer (1996) suggest that, larger and less risky firms usually make greater use of long-term debt and also found that debt maturity is negatively related to corporate tax, the firm's risk and earnings surprises. In other words, the choice of debt structure could have an impact on both corporate performance and failure risk.

Firm Age and Debt

Firm age is a standard measure of reputation in capital structure models. As firms continue in business, it establishes itself as an ongoing business concern and therefore increases its capacity to take on more debt; hence age is positively related to debt. Credit worthiness evaluation is usually carried out by credit provider before granting a loan and this is generally

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believed to pin high hopes on very risky projects promising high profitability rates. In particular, when it comes to highly indebted companies, they may gamble with their creditors' money. If the investment is profitable, shareholders will collect a significant share of the earnings, but if the project fails, then the creditors have to bear the consequences (Myer, 1977). To overcome such predicament, Diamond (1984) is of the view that credit worthiness evaluation should use firms' reputation. He takes reputation to mean the good name a firm has built up over the years which is recognized by the market which has observed the firms' ability to meet its obligations in a timely manner.

Target Debt Level

According to Brigham and Gapenski (1996), an optimal capital structure can be attained if there exist a tax sheltering benefits provided an increase in debt level is equal to the bankruptcy cost. Thus; it suggested that firms' managers should be able to identify when the optimal capital structure is attained and try to maintain it at that level. This is the point at which the financing costs and the cost of capital are minimized (Modiglian and Miller (1958) thereby increasing firm value and performance.

Firm Size and Debt

A firm's size is measured by the log of asset and sales it accumulates. The size of a firm is hypothesized to be positively related to the firms' performance as bankruptcy cost reduces with size. As such a firm's size is expected to have a positive influence on a firm's performance. There are two conflicting viewpoints about the relationship of size to leverage of a firm. In the first instance, that large firms do not consider the direct bankruptcy cost as an active variable in deciding the level of leverage as these costs are fixed by constitution and constitute a smaller proportion of firms total value (Titman and Wesels, 1998). They further argued that larger firms have less chances of bankruptcy because they are more diversified hence indicative of a positive relationship between size and leverage of a firm. The second view is of a contrary argument by Rajan and Zingales (1995) who argued that there is less asymmetrical information about larger firms reducing the chances of undervaluation of the new equity issue and this encourages the large firms to use equity financing, substantiating Myers and Majluf (1984) asymmetry information suggesting a negative relationship between size and leverage of a firm.

Marsh (1982) finds that large firms more often use long-term debt while small firms choose short-term debt; the argument being that large firms may be able to take advantage of economic of scale in issuing long-term debt and may even have bargaining power over creditors.

Firm Growth and Debt

The growth in the sales of a firm is often used to measure it growth opportunity. It is expected that firms with high growth opportunity have a high performance ratio as growing firms are able to generate profit from investment which are in most cases finance via debt, hence, growth opportunities are expected to positively affect firms' performance. Growth rate and debt level have aroused controversies in empirical testing. Pecking order hypothesis believed that the first preference for firms in the hierarchy of funding is internally generated revenue, which in most cases is often insufficient for growing firms and the next option is debt financing suggesting that growing firm will have a high leverage level (Drobetz and Fix, 2003). From the agency cost theory perspective, growing firms are expected to have high agency cost as they have more flexibility with respect to future investments. This is because, bondholders are scared that such firms may go for risky projects in the future as they have more chances of selecting between risky and save investment opportunities. Holding the view that their investment is at risk in future, bondholders will impose higher costs of lending on growing firms. So that facing higher cost of debt, growing firms will most likely use less debt than equity. This negative relationship between growth and debt is confirmed by Titman and Wesseles (1988), Barclay, Smith and Watts (1995), Rajan and Zingales (1995).

Myers and Majluf (1984), look at the relationship between firms' growth and debt from the requisites of information asymmetry. Information asymmetry demands an extra premium for firms to raise external funds, irrespective of the true quality of their investment project. In the case of debt issuing, the extra premium is reflected in higher required yield and high growth firms may find it too costly to rely on debt to finance growth. Based on this Myer (1977) suggests that firms with high future growth opportunities should use more equity financing because a high levered company is more likely to pass up profitable investment opportunities. He also argued that the agency problem could be mitigated if long-term debts are replaced by short-term debt suggesting that the short-term debt ratio might actually be positively related to growth rate, if growth firm substitute short-term financing for long-term financing.

Firm Profitability and Debt

According to Myers and Majluf (1984), the implication of the pecking order theory is that firms will have less amount of leverage as internally generated revenue is explored before any external financing so that there is a negative relationship between profitability and debt. There is no consistent theoretical prediction on the effects of profitability on leverage. From the trade-off theory point of view, more profitable companies should have higher leverage because they have more to shield from taxes. In the same vein, the free cash flow theory suggested that more profitable

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companies should use more debt in order to discipline mangers to induce them to pay out instead of spending money on unviable projects.

More empirical studies observed a negative relationship between leverage and profitability (Rajan and Zingales, 1995; Huang and Song, 2002; Booth *et al.*, 2001 Titman and Wessels, 1988). While models based on trade off of tax benefits - debt and the cost of financial distress - predict a positive relation; supporting the assertion that profitable firms should borrow more to take advantages of tax (Nguyen and Ramachandran, 2006) in their study of SMEs in Vietnam were opposed to the tax model perception of profitability and debt as they found that SMEs in Vietnam have difficulty in gaining access to credit and the fact that SMEs Managers are usually the owners and would not like to lose their property and control over their firms, thus prefer to use retained earnings to finance their operations.

Risk and Debt

The general perception and belief is that high leverage will precipitate into high level of risk, whether liquidity, business or financial risk. One way to measure risk is by the standard deviation of cash flow. According to the classic risk-return trade-off arguments, firms with higher variability in operating income are expected to have higher returns. The concern for liquidity risk defined as a firm's ability to refinance short-term debt may engender firms to issue long-term debt (Sharpe, 1991; Diamond, 1991a; Titman 1992). With liquidity risk, low-rated firms will tend to seek longterm debt due to the high probability that they may be denied financing in the future owing to their credit risk. On the other hand, high-rated firms are more likely to issue short-term debt due to their relatively low exposure to credit risk. The implication of this is that debt maturity will decrease with credit rating. Diamond (1991a) however posits that low quality firms may be screened out of long-term debt market into shortterm privately placed debt.

Empirical works by Guedes and Opler (1996), Stohs and Mauer (1996), Brown and Riddiough (2003) find a negative relationship between debt maturity and credit rating which is consistent with the liquidity risk hypothesis. The ultimate implication according to the financial distress theory high business risk caused by debt increases the probability of financial distress, as such firms have to trade-off between tax benefit and bankruptcy costs; predicting a negative relationship leverage and performance. Suggesting that at high level of debt performance will all things being equal be low as most of the cash flow earnings will be expended servicing the debt.

Share Price and Debt

Academics continue to struggle with the problems of linking fundamentals to stock price performance. Capital Asset Pricing Model (CAPM) was able to explain roughly 70% of price movement using beta. Fama and French (1993) improved that number to 90% by including market capitalization and book value. Other methods that use factor loadings include price to earnings, price to book, and price to dividend.

One branch that is yet to receive such attention is debt level which relate to financial leverage. Can the amount of financial leverage company have led to future excess gain in the market? Modigliani and Miller (1958) claim that the market value of any firm is independent of capital structure; they further propose that the "expected rate of return on the stock of any company is a linear function of leverage". When you factor in taxes (Miller, 1977) this effect they said might go away leaving debt and equity financing the same. Question that also abound is, if it really make any difference whether a company is equity or debt financed? Brian and Gulnur (2010) attempting to answer this question worked on finding a link between capital structure and future gains and showed that debt does matter.

Corporate Performance

The issues of performance are a controversial concept in finance largely due to its multidimensional meanings. Research on firm performance emanates from organization theory and strategic management (Murphy *et al.*, 1996). Performance measures are either financial, operational or organizational. Profit maximization, maximizing profit on assets, and maximizing shareholders' wealth as financial performance measures 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 and Sandberg, 1987).

The efficacy 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 instance, if the stock market is not highly developed and active then the market performance measures will not provide a good result. Most commonly used performance measure surrogates are return on assets (ROA) and return on equity (ROE) also interchangeably used as return on investment (ROI). These accounting measures representing the financial ratios from the statement of financial position and the statement of comprehensive income have been used by many researchers (Demsetz and Lehn, 1985, Gorton and Rosen, 1995, Mehran, 1995, and Ang, Cole and Line, 2000, Gary and Rami, 2007).

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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 (e.g., Morck, Shleifer, and Vishny, 1988, McConnel and Serveas, 1990, and Zhou, 2001). The performance measure ROA is widely regarded as the most useful measure to test firm performance (Reese and Cool, 1978 and Long and Ravenscraft, 1984, Abdel Shahid, 2003, among others). Two accounting measures, ROA and ROE, are used as proxy measures for corporate performance, and two market performance measures, P/E, DY. The stock market efficiency and other economic and political factors could affect a firm's performance and its reliability (See Abdel Shahid, 2003).

Research Methodology

This section considers the theoretical framework as well as the methodology of this research work. It contains and details the research hypotheses. It also contains the procedure for collecting and analysing the data. According to Gujarati (2004), research method can be seen as the specification of the procedure for collecting and analysing the data necessary to solve the problems at hand, such that the difference between the cost of obtaining various levels of accuracy and the expected value of the information associated with each level of accuracy is maximized.

Theoretical Framework

For the purpose of hindsight, we tend to restate the theoretical background or the theoretical underpinning for this study. The study focuses on two major areas and these are debt financing and firms' performance. The major theoretical framework for this study is found in the agency theory, bankruptcy cost and trade-off theory. These provide theoretical background for debt financing as encapsulated in the capital structure of a firm.

Agency theory proponents opined that higher level of debt is expected to lower agency costs, reduce inefficiency and thereby result in the improvement of the performance of firms. Looking at the disciplinary role of debt the authors of bankruptcy cost argued that debt financing will curtail the excesses of managers which in essence will translate to increase performance. This is because managers will have to work hard to finance debt obligation in order to avert liquidation. On the part of tradeoff theory, the argument is that more debt financing will attract considerable tax shield and at the same time reduce cost of capital. The focal point of these theories is that an increase in debt increases the performance of firms, pointing to a generalisation that there is a positive relationship between debt financing and the performance of firms.

Methodology

This study adopts a descriptive, analytic and an investigatory approach to the measurement of data available on return on asset, return on equity, earning per share, dividend per share and debt capital ratio. The study considers the relationship between the performance components (ROA, ROE, PE and DPS) and debt financing (debt to capital).

We used Return on Asset (ROA), Return on Equity (ROE), Dividend Per Share (DPS) and Earning Per Share (EPS) to measure firm performance on the one hand and Total Debt to Capital Employed (DC) to measure debt on the other hand. These measures of performance of firms have been used extensively in research in corporate governance (see, Laffont, 1988; Scholes, 1994; Xu and Wang, 1997; Milgrom and Roberts, 2000; Heracleous, 2001; Kennon, 2005; Ramy and Gary, 2007; Simon and Folabi, 2011). ROA measures how much profits a firm can achieve using one unit of assets. It helps to evaluate the result of managerial decisions on the use of assets which have been entrusted to them. ROE measures the earnings generated by shareholders' equity of a period of time, usually one year. It encompasses the three main drivers which management can utilize to ensure the health of the firm: profitability; asset management; and financial leverage. DPS refers to the annual profit after tax available to the shareholders divided by the number of ordinary shareholders ranking for dividends. DPS is an easy way to compare relative attractiveness of various dividend-paying stocks. EPS measures the amount attributable to each share from the period earnings. DC measures the proportion of the entire debt (short- and long-term) a firm has to the total capital employed. Short term debt has been included because of the relatively fixed nature of long-term debt and the fact that it's also admissible to tax relief.

The methodology employed will include the use of panel data regression model, Ordinary Least Square to estimate the dynamic relationship among the variables to be used in the study.

Sources and Measurement of Data

The nature of data for this study is basically a secondary data. Secondary data are gathered on the annual ROA, annual ROE, annual DPS, and annual EPS for performance and annual DC for debt financing, from the fact book of the NSE, 1991-2010. The time series data covering a period of twenty (20) years from 1991-2010 were gathered for ten selected Nigerian firms (appendix 1). The criteria for sample selection is based on random number sampling of 10 firms out of firms listed on the Exchange, the population size, in order to ensure that each firm has equal chance of

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being selected. The use of simple random number table or computer generated random numbers was to ensure representativeness for it universality acceptability. This randomness built and the properties of the estimators can be assessed probabilistically (Scheaffer, Mendenhall, and Ott; 1996). The samples were obtained through a cluster sampling process which saw the division of the companies listed on NSE into clusters of Thirty (30). From the cluster randomly selected, a sample size of ten (10) firms was randomly selected based on $\pm 10\%$ precision level. The firms were listed and labelled 01 to 30, and from the random number table in appendix 5; the sample firms in appendix 1 were selected. Four research hypotheses guide the model of this study; each formulated to explain each of the slope parameters of the regression model of this study. The estimation techniques include the use of the OLS, computation

study. The estimation techniques include the use of the OLS, computation of the R-Square, Adjusted R-Squared, Standard Error Test, T-test statistic and Durbin Watson Statistic.

Research Hypotheses

Hypothesis 1 Null Hypothesis (H0₁): Debt has no impact on firms' earning Per Share.

Hypothesis 2

Null Hypothesis (HO₂): Debt has no impact on firms' dividend per share.

Hypothesis 3 Null Hypothesis (HO₃): Debt has no impact on return on asset.

Hypothesis 4

Null Hypothesis (H0₄): Debt has no impact on return on equity.

Model Specification

The model adopted for this study is similar to that used by San and Heng (2011) in their study on Capital structure and corporate performance of Malaysian construction sector, but unlike their study that did not use any market ratio as surrogate for performance measure, this study uses EPS and DPS as they are believed to incorporate share price that will test the market impulse with respect to their reaction to changes in the debt component of capital structure. Thus, the model can be formulated below.

Firm Performance = f(Debt Financing)

ROA = f(DC)	(1)
ROE = f(DC)	(2)
EPS = f(DC)	(3)

Where;

DC	=	Total Debt to Capital Employed
ROA	=	Return on Asset
ROE	=	Return on Equity
EPS	=	Earnings per share
DPS	=	Dividend per Share

ROA, ROE, EPS, DPS are chosen as proxies for firms performance because they measure the extent to which investment is profitable or firms operations are viable. While ROA and ROE represent accounting measures of performance, EPS and DPS stand for market performance measure. DC is chosen to reflect the level debt financing in the firm's capital structure. The model is then split into four regression models are follows:

$ROA = \beta_0 + \beta_1 C + \mu$. (5)
$ROE = \beta_0 + \beta_2 C + \mu$. (6)
$EPS = \beta_0 + \beta_3 C + \mu \dots$. (7)
$DPS = \beta_0 + \beta_4 C + \mu$. (8)

Where;

Bo is the constant term in the equation. (5-8), *B1*, *B2*, *B3* & *B4* are the parameter of the regressors DC and μ is the stochastic or error terms.

The theoretical apriori criteria refer to the sign and size of the parameters and the relationship between the variables. The apriori expression of this regression models are that $\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 > 0$; $\beta_4 > 0$.

The Apriori expectation is that, a positive sign is expected from the coefficient of the relationship between ROA and DC, ROE and DC, EPS and DC and also DPS and DC.

Estimation Techniques

In order to achieve the objective of this research and for easy understanding and proper analysis of the cross sectional time series data (panel data), the study employs an Ordinary Least Square (OLS) to estimate and analyse the regression model specified on the basis of hypothesized functional relationship between firm performance and debt finance. The Ordinary Least Square will indicate the relative importance of the capital market performance indicator variables specified acting

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concomitantly to cause changes in dependent variable. The data analysis software that would be employed in the estimation of the parameters and the tool of analysis will be the E-VIEWS.

Results

This section presents the result of regression analysis of the effects of debt financing on the performance of firms using some selected Nigeria firms as case study. The study used Return on Asset (ROA), Return on Equity (ROE), Dividend per Share (DPS) and Earning per Share (EPS) to measure firms' performance on the one hand and Total Debt to Capital Employed (DC) to measure debt on the other hand. It also presents the results of other statistical estimations such as correlation, R², Adjusted R², t-statistic and F-statistic, Durbin Watson etc. The importance of data and empirical evidence in any work cannot be overemphasized. The data, presented in appendix 2, is used in analyzing the impact of debt financing on the performance of firms in Nigeria. Data includes both market and accounting data.

Regression Analysis

In regression analysis, the ultimate goal is estimation of the relationship between dependent and independent variables. In order to analyse the effects of debt financing on the performance of quoted firms in Nigeria, four economic models were specified which were estimated using Ordinary Least Square. In the estimated model, the sign of coefficients of independent variables indicate their relationship with dependent variable, while the magnitude of the coefficients implies the responses of dependent variables to independent variables.

The models for this study are stated below thus:

$ROA = \alpha_0 + \alpha_1 DC + \mu$	(1)
$ROE = \alpha_0 + \alpha_2 DC + \mu$	(2)
$EPS = \alpha_0 + \alpha_3 DC + \mu \dots$	
$DPS = \alpha_0 + \alpha_4 DC + \mu$	(4)

Where α_0 is the constant term in the equation (1-4), α_1 , α_2 , α_3 , α_4 are the parameter of the regressor, DC and μ is the stochastic or error terms.

A-priori

The theoretical a-priori criteria refer to the sign and size of the parameters and the relationship between the variables. The a-priori expression of this regression models are that $\alpha_1 > 0$, $\alpha_2 > 0$, $\alpha_3 > 0$, $\alpha_4 > 0$. The result of the estimated regression models are presented below with regression output in appendix 3. The interpretation of the magnitude and

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sign of coefficient of each explanatory variable; significance test is conducted.

Return on Assets (ROA) $ROA = \alpha_0 + \alpha_1 DC + \mu$ ROA = 0.2315 - 0.3666 DC

Return on Equity

 $ROE = \alpha_0 + \alpha_1 DC + \mu$ ROE = 0.0824 + 0.95407 DC

Earnings per Share

 $EPS = \alpha_0 + \alpha_1 DC + \mu$ ROE = 0.9036 + 2.7068DC

Dividend per Share

 $DPS = \alpha_0 + \alpha_1 DC + \mu$ DPS = 0.1705 + 2.7550DC

Significance Test

The regression results as contained above summarize the behaviour of ROA, ROE, EPS and DPS in relation to DC. We can test for statistical significance of this behaviour in the regression result above. The null hypothesis to be tested for significance of the explanatory variable is that the coefficient of the explanatory variable is zero (i.e H0: $\beta n = 0$). We then test for significance using the standard error test and the t-statistic.

The effect of debt financing on the performance of firms from the regression results is statistically significant, from S.E point of view, ROA on DC is significant, given that S.E(a_1) value, 0.104981 is less than $\frac{1}{2}a_1 = 0.183299$ (in absolute term), notwithstanding that it does not conform to the sign of the a-priori expectation. ROE variable is also statistically significant since the S.E. (a_2) = 0.296189 < $\frac{1}{2}a_2$ = 0.477036, as it also agrees with the sign of the a-priori expectation. Also from the result, EPS is statistically significant at a=0.05 level of significance since the S.E of $a_3 = 0.874552$ is less than $\frac{1}{2}a_3 = 1.353401$, with it sign also agreeing with the a-priori expectation. Finally, DPS is statistically significant because S.E (a_4) = 0.632230 < $\frac{1}{2}a_4 = 1.377483$, this also conform to it a-priori expectation.

Using the t-statistic test for significance, ROA, ROE, EPS and DPS are statistically significant because their p-values, 0.0006, 0.0047, 0.0023 and 0.0000 respectively are less than 0.05 at 5% significant level, hence, we reject the null hypothesis and accept the alternate hypothesis. This is further affirmed by the F-Test.

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F-Test

The F-statistic shows overall significance of the models. The F-statistic is significant at 5% level of significance because the F-statistic calculated are ROA (12.19446), ROE (10.37585), EPS (9.57945) and DPS (18.98813); with p-value of 0.000591, 0.004737, 0.002253 and 0.000021 for ROA, ROE, EPS and DPS respective. We therefore uphold the decision of the T-Test above by rejecting the null hypothesis that the model is not significant in explaining the variations in performance surrogates.

Coefficient of Determination (R^2)

The coefficient of multiple determination R-squared are 0.56, 0.77, 0.65 and 0.89 for ROA, ROE, EPS and DPS respectively. This indicates that about 56%, 77%, 65% and 89% of the total variation in ROA, ROE, EPS, and DPS are explained by the variations DC. This shows that our models explain large proportion of variations in firms' performance. The model also represents a good measure of fit; hence, the goodness of fit of the model.

Adjusted R²

The adjusted R-squared tends to substantiate the result of the R^2 especially there are more than one independent variable. Even though this test is of little or no significant impact in this study, ROE, EPS and DPS still have adjusted R^2 that is above 50% substantiating the R^2 results above; whereas ROA accounts for an adjusted R^2 that is slightly below 50%.

Durbin Watson Serial Correlation Test

The Durbin Watson statistic which is the test of autocorrelation shows no serial autocorrelation. This is because the calculated value of DW for the various models are above 1.5 which is significantly high to the range which is acceptable by the rule of thumb (any study with 50 or more observations and only a few independent variables, a DW statistic below about 1.5 is a strong indication of positive first order serial correlation). The model is thus free from autocorrelation.

Interpretation of Results

The result of the first model indicates a negative and significant relationship between ROA and debt ratio at 5% level. This means that increasing the proportion of debt in the capital of companies will decrease the Return on Asset. A unit increase in the debt employ will result in 0.3666 decreases on Return on Asset. This result defiles the a-priori expectation. Expectedly, a positive relationship should exist between the debt finance and return on asset, all other things being equal. Thus

employment of more debt plunge the firms into serious performance issues.

The second estimated model shows a positive and significant relationship between Return on Equity (ROE) and debt ratio. A unit increase in the debt ratio will result to 0.9541 increases in Return on Equity. This result is in conformity with the a-priori expectation since the debt employed by a firm is intended to earn more returns than their costs which will increase the return on owners' equity.

The third estimated model which shows the relationship between the Earning per Share (EPS) and the Debt ratio (DC) also shows a positive relationship between EPS and DC. This relationship is in accordance with a priori expectation. The estimated model is significance at 5% level. The result shows that a unit increase in the debt ratio will translate to 2.7068 increases in the Earning per Share.

The last estimated model shows the relationship between the Dividend per Share and Debt ratio. The result revealed a significant positive relationship between Dividend per Share and Debt Ratio at 5% significant level. This is expected as a result of the fact that the debt employ in financing the firm projects is expected to generate more returns than their costs which will translate to higher returns to the owners of the firm which may be in form of higher dividend depending on the dividend policy of the firm.

Discussion of Findings

The estimated result shows a negative and significant relationship between ROA and debt ratio at 5% level which opposes the a-priori expectation. It is expected that a positive relationship should exist between the Debt finance all other things being equal. The result provides evidence in support of agency cost hypothesis. It suggests that due to agency conflicts between a firm's stakeholders, firms who tend to overleveraged land themselves in negative financial performance. The result, against theoretical expectations, provides evidence of a negative and significant relationship between debt ratio and ROA as a measure of performance in the first model. The implication of this is that the sampled firms were not able to utilize their debt finance composition of their total capital judiciously to impact positively on their firms' performance. The result contradicts the a-priori expectation and general assertion but is consistent with the findings of previous studies such as Krishnan and Moyer (1997). Majumdar and Chhibber (1997), Gleason, Mathur and Mathur (2000), Tzelepis and Skuras (2004), Pratomo and Ismail (2006), Margaritis and Psillaki (2006), Zeitun and Tian (2007), Rao et al (2007), Akintoye (2008), among others.

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The second estimated model shows a positive and significant relationship between Return on Equity (ROE) and debt ratio. This result is in conformity with the a-priori expectation since the debt employed by a firm is intended to earn more returns than their costs which will increase the return on owners' equity. The third estimated model which shows the relationship between the Earning per Share (EPS) and the Debt Ratio (DC) also shows a positive relationship between EPS and DC. This relationship is in accordance with a-priori expectation. The last estimated model shows the relationship between the Dividend per Share and Debt ratio. The result revealed a significant positive relationship between Dividend per Share and Debt Ratio at 5% level. This is expected as a result of the fact that the debt employ in financing the firm projects is expected to generate more returns than their costs which will translate to higher returns to the owners of the firm which may be in form of higher dividend depending on the dividend policy of the firm.

Interestingly the finding of this study brings the issue of maximizing the wealth of shareholders to the fore, that improving firms' performance require a perfect combination of debt with equity, whereas cost of capital has a negative correlation in this decision and it has to be as minimum as possible. This is also seen that by changing the debt composition in the capital structure of a firm can increase its value in the market if the firm is able to make enough returns higher than the cost of the debt employed. Nonetheless, this could be a significant policy implication for finance managers, because they can utilize debt to form optimal capital structure to maximize the wealth of shareholders.

Conclusion and Recommendations

The study examines the effects of debt financing on the performance of firms using ten selected firms in Nigeria between the period 1991 and 2010. The study employed simple regression model specified on the basis of hypothesized functional relationship between firm performance and debt financing. For the firms' performance the Return on Asset (ROA), Return on Equity (ROE), Earning per Share (EPS) and Dividend per Share (DPS) are all used as dependent variables against Total Debt to Capital Employed (DC) as the independent variable. Relevant statistical and econometrics test were used to evaluate the model. The result of the Return on Asset obtain from the estimated regression, contravenes the apriori expectation and the general assertion that positive relationships exist Return on Asset and Total Debt to Capital Employed (DC) ratio. Although the result conforms to the research work of some scholars such as: Krishnan and Moyer (1997). Majumdar and Chhibber (1997), Gleason, Mathur and Mathur (2000), Tzelepis and Skuras (2004), Pratomo and Ismail (2006) among others who suggest that due to agency conflicts

between a firm's stakeholders, firms who tend to over-leveraged earns themselves negative financial performance.

The other three estimated models conform to the a-priori expectation which presuppose a positive relationship between Return on Equity and Total Debt to Capital Employed (DC) ratio, Earnings per Share and Total Debt to Capital Employed (DC) ratio, and Dividend Per Share and Total Debt to Capital Employed (DC) ratio. These are expectation since the debt employed by a firm is intended to earn more returns than their costs which will increase the return on owners' equity. The debt financing is meant to improve firms' performance in an enabling environment and favourable economic condition. This research work therefore find out the relationship between debt finance and corporate performance of firm in Nigeria industry using cross-sectional time series data. A linear model has been developed to estimate the effect of variation in debt financing to the variation in the firms' corporate performance. Through the analysis it is seen that debt finance has significant impact on the performance of a firm.

Hence, the study concludes that, notwithstanding the negative relationship between ROA and Debt, a prudent management of companies with considerable amount of debt in their capital structure will boost the performance of such companies. It also concludes that Nigerian data on capital structure also conform to existing researches.

from The findings this study raise some policy issues and recommendations, which will reinforce the link between firms' performance and the Total Debt to Capital Employed (DC) ratio. Given that the firms operate in a macroeconomic environment, it is therefore necessary that the environment must be an enabling one in order to realize its full potentials. The following suggestions are also put forward to increase the Company's financial performance based on Total Debt to Capital Employed (DC) ratio.

Given the importance of debt to performance as suggested by this study, it is recommended that the high interest rate regime in the country be addressed so as to reduce the cost of debt.

Secondly, proper regulations guiding capital structure in Nigeria should be introduced to align management interest with those of their investors. Also performance standards should be established and communicated to management. This will help them to achieve the standard and take better investment decisions.

Beyond capital structure issues, investment constraints may need to be identified if financial performance most be improved, because it indicates

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the area which decision should be taken. Management should be motivated to help achieve the high level of firm's financial performance. Government should adopt appropriate monetary and fiscal policies to control the inflation interest rate as the major policy issues that impact on capital structure and performance.

Further research should be conducted in the other Sub-Saharan Africa in this area to check the consistency of results across the various countries. Additional variables or other market based measures should be introduced to test the relationship of debt finance and firm performances to disclose some new insights from other countries.

Acknowledgement

I wish to acknowledge the Nigeria Stock Exchange for allowing me access to their yearbooks from which the data for analysis for this paper was sourced. Also to be acknowledged are the authors whose works form part of the literature in this paper and have been adequately referenced and cited.

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APPENDIX 1

Case Study

Guinness Nigeria Plc. (GNP) Triple-GEE & Company Plc. (TGC) John Holt Plc. (JHP) SCOA Nigeria Plc. (SCOA) UAC Nigeria Plc. (UAC) Cadbury Nigeria Plc. (CNP) Flour Mill Nigeria Plc. (FMN) Nestle Nigeria Plc. (NNP) Nigeria Bottling Company Plc. (NBC) First Aluminum Nigeria Plc. (FAN)

Appendix 2

Year	GNP					TGC				JHP					
	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC
1991	0.15	0.17	0.35	0.12	0.1	0.03	0.15	0.06	0.05	0.7	0.23	0.36	0.7	0.2	0.2
1992	0.16	0.17	0.25	0.14	0.11	0.05	0.14	0.07	0.09	0.45	0.23	0.3	1.1	0.3	0.2
1993	0.12	0.13	0.95	0.2	0.08	0.07	0.12	0.1	0.1	0.39	0.28	0.35	2	0.5	0.1
1994	0.14	0.16	1.67	0.4	0.13	0.18	0.3	0.3	0.15	0.4	0.17	0.21	1.2	0.4	0.1
1995	0.13	0.12	1.6	0.45	0.15	0.2	0.25	0.44	0.15	0.35	0.13	0.22	0.8	0.3	0.2
1996	0.08	0.1	0.81	0.8	0.1	0.13	0.15	0.43	0.35	0.25	0.14	0.15	0.7	0.3	0.6
1997	0.07	0.1	1.02	1	0.2	0.03	0.04	0.11	0	0.25	0.13	0.13	0.7	0.4	0.7
1998	0.09	0.11	1.29	0.6	0.23	0.04	0.05	0.18	0	0.29	0.03	0.03	0.2	0.2	0.7
1999	0.23	0.28	3.7	1.8	0.18	0.05	0.07	0.08	0.1	0.36	-4.1	-4.8	-4.6	0.2	0.8
2000	0.24	0.29	4.37	2.4	0.17	0.04	0.07	0.13	0.15	0.4	-0.1	-0.2	0.2	0.2	0.7
2001	0.31	0.38	4.37	2.4	0.18	0.05	0.08	0.13	0.15	0.4	-0.1	-0.2	0.3	0.2	0.4
2002	0.28	0.33	5.8	3	0.14	0.03	0.05	0.08	0.15	0.45	0.09	0.12	0.5	0.2	0.2
2003	0.35	0.47	5.86	3.75	0.26	0.02	0.04	0.06	0.15	0.43	0.11	0.09	-0.6	0.2	0.3
2004	0.38	0.52	9.37	7.92	0.28	0.04	0.08	0.08	0.15	0.47	-0.1	-0.11	0.2	0.1	0.3
2005	0.22	0.45	4.45	3	0.3	0.03	0.05	0.14	0.15	0.5	0.01	0.03	0.2	0.1	0.2
2006	0.17	0.29	6.31	3	0.42	0.02	0.03	0.06	0	0.46	-0.19	-0.21	-0.1	0.1	0.4
2007	0.24	0.34	7.84	3.46	0.3	0.04	0.07	0.16	0.13	0.43	0.01	0.01	-1.2	0.1	0.4
2008	0.24	0.32	8.04	4.5	0.25	0.08	0.13	0.31	0.15	0.36	0.11	0.1	0.1	0.1	0.3
2009	0.32	0.43	9.18	12.8	0.26	0.11	0.17	0.29	0.11	0.33	-0.5	-0.72	1	0.1	0.6
2010	0.29	0.4	931	75	0.26	-0 1	-01	-01	0 11	0 38	0 11	0.01	0	01	0.6

Company Data

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Year	UAC					CNP				FMN					
	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC
1991	0.12	0.17	0.65	0.3	0.3	0.35	0.52	0.26	0.11	0.3	0.09	0.1	0.05	0.04	0.2
1992	0.14	0.19	0.92	0.4	0.3	0.38	0.6	0.51	0.15	0.4	0.23	0.26	0.16	0.03	0.1
1993	0.09	0.12	1.15	0.6	0.2	0.35	0.41	1	0.25	0.2	1.3	0.75	1.16	0.25	0.1
1994	0.08	0.1	1.15	0.6	0.2	0.41	0.48	1.63	0.7	0.2	0.52	0.56	1.52	0.35	0.1
1995	0.1	0.2	1.01	0.6	0.3	0.45	0.47	1.25	0.5	0.5	0.27	0.43	1.76	0.4	0.1
1996	0.07	0.1	1.24	0.7	0.2	0.35	0.53	1.56	1	0.5	0.25	0.3	2.38	0.5	0.1
1997	0.05	0.06	0.88	0.6	0.2	0.26	0.38	1.34	0.67	0.4	0.17	0.18	0.76	0.29	0.1
1998	0.12	0.15	1.76	0.6	0.2	0.25	0.33	1.41	0.73	0.3	0.22	0.25	1.23	0.33	0.1
1999	0	0	0.03	0.6	0.2	0.27	0.3	1.51	1	0.2	0.11	0.13	0.7	0.36	0.2
2000	0.02	0.02	0.12	0.6	0.2	0.35	0.42	2.02	1.1	0.2	0.13	0.14	1.1	0.6	0.1
2001	0.13	0.19	1.11	0.2	0.4	0.27	0.5	2.06	1.2	0.5	0.07	0.1	0.72	0.7	0.3
2002	0.13	0.18	1.28	0.4	0.1	0.31	0.33	3	1.5	0.1	0.21	0.3	2.82	0.75	0.3
2003	0.19	0.28	2.4	0.6	0.2	0.3	0.33	3.57	1.75	0.1	0.03	0.05	0.35	0.4	0.6
2004	0.11	0.14	1.37	0.9	0.2	0.27	0.3	2.81	1.6	0.1	0.13	0.23	1.88	0.7	0.6
2005	0.09	0.11	1.27	1	0.1	0.15	0.24	2.7	1.3	0.7	0.08	0.12	1.26	0.7	0.5
2006	0.15	0.18	2.49	1	0.1	-0.8	-0.9	-4.3	-1.3	0.9	0.17	0.29	3.99	0.7	0.4
2007	0.07	0.11	2.19	1.7	0.4	-0.2	-0.3	-0.7	-1.3	1	0.22	0.33	4.18	0.9	0.5
2008	0.07	0.1	3.31	2	0.3	-0.1	-0.2	-2.4	-1.3	1.1	0.14	0.2	4.08	1	0.4
2009	0.07	0.11	3.14	1.3	0.4	-0.1	-0.1	-0.8	-1.3	0.5	0.08	0.11	2.23	0.5	0.5
2010	0.07	0.12	1.95	1.3	0.4	0.02	0.05	0	1.3	0.7	0.27	0.34	9.67	2	0.4

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Year	NNP						-	NBC				FAN			
	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC	ROA	ROE	EPS	DPS	DC
1991	0.16	0.4	0.41	0.2	0.5	0.18	0.3	0.4	0.2	0.4	0.2	0.2	0.25	0.1	0.1
1992	0.11	0.2	0.59	0.3	0.5	0.13	0.2	0.63	0.2	0.2	0.1	0.1	0.31	0.1	0.1
1993	0.12	0.3	1.04	0.8	0.6	0.18	0.2	1.13	0.4	0.2	0.1	0.2	0.44	0.2	0.3
1994	0.15	0.4	1.45	1.4	0.7	0.18	0.2	1.83	0.5	0.1	0.1	0.2	0.9	0.4	0.2
1995	0.15	0.2	2.1	1.7	0.7	0.2	0.3	1.9	0.5	0.1	0.1	0.1	0.54	0.3	0.2
1996	0.39	1.8	6.07	6	0.8	0.29	0.3	2.74	0.7	0.2	0.1	0.1	0.31	0.2	0.1
1997	0.21	0.9	1.68	1.5	0.8	0.22	0.2	2.49	0.8	0.2	0.1	0.1	0.55	0.2	0.2
1998	0.28	0.9	1.9	1.7	0.7	0.18	0.2	2.3	0.9	0.1	0.1	0.1	0.53	0.2	0.2
1999	0.35	1	2.96	2	0.6	-0.1	-0.1	-0.9	0.9	0.2	0.1	0.2	0.77	0.2	0.1
2000	0.35	1.2	3.8	3.8	0.7	0.07	0.1	0.83	0.3	0.2	0.1	0.1	0.41	0.2	0.1
2001	0.37	1.7	5.98	5.5	0.8	0.24	0.2	3.07	1	0.2	-0.1	-0.2	-0.5	0.4	0.5
2002	0.36	2.1	7.51	7.5	0.8	0.28	0.3	4.27	1.5	0.1	-0.3	-0.4	-0.7	0.4	0.6
2003	0.32	2.4	7.2	7	0.9	0.25	0.3	4.51	1.6	0.1	0.1	0.1	0.2	0.1	0.1
2004	0.29	2.3	7.26	7	0.9	0.18	0.2	2.33	1.2	0.2	0.1	0.1	0.07	0.1	0.3
2005	0.31	0.9	10	7	0.7	0.09	0.1	1.78	0.6	0.5	0.1	0.1	0.12	0.1	0.2
2006	0.3	0.9	10.7	10	0.7	0.03	0	0.8	0.3	0.6	0	0	0.07	0.1	0.2
2007	0.26	0.9	8.79	9	0.7	0.1	0.1	2.42	0.8	0.5	-0.2	-0.5	-0.4	0.1	0.6
2008	0.29	0.9	12.6	8.4	0.7	0.08	0.1	1	0	0.6	-0.1	-0.1	-0.2	0.1	0.1
2009	0.22	0.9	14.8	13	0.8	0.07	0.1	6.05	0.5	0.6	0	0.1	0.05	0.1	0.2
2010	0.25	0.7	17.7	2	0.8	0.07	0.1	0	0.5	0.7	0.1	0.2	0.09	0.1	0.2

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	SCOA											
Year	ROA	ROE	EPS	DPS	DC							
1991	-0.2	-0.3	0	0.03	0.4							
1992	0.1	0.14	0.1	0	0.4							
1993	0.4	0.47	0.8	0.05	0.1							
1994	0.1	0.16	0.2	0.11	0.1							
1995	0.1	0.18	0.2	0.15	0.1							
1996	0.1	0.12	0.2	0.1	0.2							
1997	0.1	0.09	0.2	0.07	0.1							
1998	0.1	0.05	0.1	0.05	0.1							
1999	0.1	0.12	0.2	0.1	0.1							
2000	0.2	0.2	0.4	0.15	0.1							
2001	0.2	0.19	0.4	0.15	0.1							
2002	0.1	0.05	0.4	0.15	0.1							
2003	0.1	0.12	0.3	0.15	0.1							
2004	0.2	0.2	0.1	0.15	0.1							
2005	0.2	0.19	0	0.15	0.1							
2006	0.9	0.92	1.1	0.1	0.1							
2007	0.5	0.54	1.3	0.15	0							
2008	0.1	0.2	0.4	0.1	0.1							
2009	0.3	0.31	1.1	0.1	0							
2010	0.4	0.5	1.1	0.1	0							

Source: NSE Fact Book (1991 – 2010), NSE Daily Official List (1991 – 2010), Self Computation (ROA and ROE).

APPENDIX 3

Regression Result

ROA

Dependent Variable: ROA Method: Panel Least Squares Sample: 1991 2010 Cross-sections included: 10 Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C DC	0.231496 -0.366598	0.042225 0.104981	5.482369 -3.492057	0.0000 0.0006
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood Durbin-Watson stat	0.558015 0.453258 0.341306 23.06502 -67.78768 1.715627	Mean depend S.D. depende Akaike info cr Schwarz crite F-statistic Prob(F-statist	ent var nt var iterion rion ic)	0.110500 0.350775 0.697877 0.730860 12.19446 0.000591

ROE

Dependent Variable: ROE Method: Least Squares Sample: 1991 2010 Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C DC	0.082415 0.954071	0.065705 0.296189	1.254334 3.221157	0.2258 0.0047
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood Durbin-Watson stat	0.765658 0.630417 0.112279 0.226917 16.41027 1.847597	Mean depend S.D. depende Akaike info cri Schwarz criter F-statistic Prob(F-statisti	ent var nt var iterion rion	0.278000 0.137213 -1.441027 -1.341454 10.37585 0.004737

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EPS

Dependent Variable: EPS Method: Panel Least Squares Sample: 1991 2010 Cross-sections included: 10 Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C DC	0.903620 2.706802	0.351764 0.874552	2.568824 3.095073	0.0109 0.0023
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood Durbin-Watson stat	0.646148 0.561331 2.843290 1600.691 -491.7750 1.549398	Mean depender S.D. dependent Akaike info crite Schwarz criterio F-statistic Prob(F-statistic)	it var var rion n	1.797000 2.903934 4.937750 4.970733 9.579475 0.002253

DPS

Dependent Variable: DPS Method: Panel Least Squares Sample: 1991 2010 Cross-sections included: 10 Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C DC	0.170474 2.754965	0.254297 0.632230	0.670374 4.357537	0.5034 0.0000
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood Durbin-Watson stat	0.887508 0.682899 2.055467 836.5387 -426.8833 1.783577	Mean depender S.D. dependent Akaike info crite Schwarz criteric F-statistic Prob(F-statistic)	nt var var erion on	1.079750 2.146357 4.288833 4.321816 18.98813 0.000021

Reference to this paper should be made as follows: Akande J.O. (2013), Is Debt a Blessing or a Curse? An Empirical Analysis of Some Nigeria Firm. *J. of Business and Organizational Development Vol. 5, No. 2, Pp. 74 – 107.*