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CAPITAL STRUCTURE AND PROFITABILITY OF QUOTED FIRMS: THE NIGERIAN PERSPECTIVE (2000-2011)

Abstract:

The study investigates the relationship between capital structure and profitability of conglomerate, consumer goods, and financial services firms quoted in Nigeria Stock Exchange. In this paper, the sample data collected from the ten randomly selected firms among the three industries were from 2000 to 2011. This comprises a sample size of 120 used for the study. The study used Return on Asset (ROA) and Return on Equity (ROE) as performance proxies. In addition, debt equity ratio (DER) and debt asset ratio (DAR) were used as capital structure proxies. The relationship between the performance and capital structure proxies were analysed using correlation coefficient and regression techniques. According to the results, the relationship between capital structure (both DER and DAR) and return on asset (ROA) is not significant across all firms except for 7up and Nestle. It also shows an insignificant relationship between return on equity (ROE) and DAR. However, there is a significant relationship in almost all firms between return on equity and debt to equity. This justifies that a highly geared firm tends to have high profitability. Moreover, the nature of the industry also determines the effect of capital structure on their profitability. In the financial firms, there is a negative significant relationship between return on equity and debt to assets ratio. In the conglomerate firms, there is also a negative relationship between return on assets (ROA) and debt to equity ratio however not significant. This explains that highly geared firms have significant relationship with return on equity while insignificant with return on assets. The study recommends that firms that want to maximise shareholders wealth should increase their leverage while firms that ensure stakeholders performance should increase their assets. Conclusively, a mix of the firms' leverage and assets at an appropriate ratio will be considered a good capital structure for the firms.

Keywords:

Equity, Debt, Asset, Returns, Capital structure, Firm profitability

JEL Classification: G30, G20, E44

Introduction

The paper addresses the broad research question of whether capital structure affects profitability among quoted firms. Specifically, we study the ability of a firm to finance its assets through debt or equity or both are an important consideration in the profitability of firm. We emphasized the return on asset (ROA) and return on equity (ROE) as they determined the capital structure mix of a firm, our paper contributes to the research agenda that justify the trade-off theory and pecking order theory.

Firms and corporations differ in the method of financing the firm. The key issue for our study is that firms can finance from a mix of financing sources. Traditional trade-off theory would argue that since capital structure has impact on cost of capital and its value, there is need to have an optimal level of indebtedness signifying a cost-benefits structure. To the contrary, the pecking order theory argued that the optimal selection of capital structure by the traditional theory may lead to adverse selection. In the words of Myers (1984), adverse selection connotes that retained earnings are better than debt and debt is better than equity. He noted that a firm which prefers internal to external financing and debt to equity follows the pecking theory. The question is what financing option will determine the profitability of firms?

A firm's debt-equity ratio serves as a signal to managers because the use of leverage implies higher bankruptcy risk for low quality firm and they will always have information advantage over the outsiders. Ross (1977) suggested that the values of firms will rise with leverage due to an increased market's perception while Modigliani and Miller (1963) showed that firm value is an increasing function of leverage due to the tax deductibility of interest payments at the corporate level.

Earlier, Modigliani and Miller (1958) had demonstrated that financial leverage is unrelated to firm value, while a tax-deductible interest payment will show that firm value and capital structure are positively related. Similarly, Miller (1977) incorporated personal taxes into the analysis and explained that optimal debt usage arise only at the macro-level while it does not exist at the firm level because interest deductibility at the firm level is set-off at the investor level.

Overtime, several researchers have added imperfections, such as bankruptcy costs (Kim, 1978), agency costs (Jensen & Meckling, 1976), and gains from leverage-induced tax shields (DeAngelo & Masulis, 1980), debt capacity (Lumby & Jones, 2011), ownership structure and managerial shareholdings, volatility, growth opportunities, size, tangibility, and profitability (Huang & Song, 2006) to the analysis and have maintained that an optimal capital structure may exist while Long and Malitz (1985) and Titman and Wessells (1988) largely supports bankruptcy costs or agency costs as partial determinants of leverage and of optimal capital structure. However, the extent to which a firm's capital mix affects its profitability is debatable.

Our study analysed the capital structure of Nigeria firms, selected from three leading sectors that comprise financial services, consumer goods and conglomerates with a view to examine the impact of capital structure on the profitability of individual firms. This is crucial in order to increase the understanding of the general practices of capital structure in Nigeria including the flexibility of capital structure on each sector. It also helps to design the optimum capital structure essential to maximize a firm profitability. Our findings revealed that an insignificant relationship between return on equity (ROE) and DAR. However, there is a significant relationship in almost all firms between return on equity and debt to equity which justifies that a highly geared firm tends to have high profitability. Moreover, the nature of the industry also determines the effect of capital structure on their profitability. In the financial firms, we established a negative significant relationship between return on equity and debt to assets ratio. In addition, the conglomerate firms also exhibit a negative relationship between return on assets (ROA) and debt to equity ratio though not significant. This explains why theories, anecdotal evidences and literatures established that highly geared firms have significant relationship with return on equity while insignificant with return on assets. Our study therefore made a contribution to the pecking order theory that debt is negatively related to firm's profitability since high debt level decreases a firm's financial performance. The remainder of the paper proceeds as follows. Section 2 discusses the literature review. Section 3 discusses our approach to data collection and model formulation. Section 4 analyzes the secondary data. Section 5 concludes.

Literature Review

The choice of the long term financing mix is often called the capital structure decision. The capital refers to the firm's sources of long-term financing which is the financial manager's second responsibility to pay for the investment in real assets (Brealey, Myers & Marcus, 2001). Many researchers believe that capital structure includes share issuance, private investment, bank debt, business debts, leasing contracts, tax debt, retirement debt, deferred compensation for executives and employees, deposits, product related-debt and other probable debt. Capital structure is usually measured by the following ratios: ratio of debt to total asset, the equity ratio to total asset, a debt ratio to the equity and equity ratio to debt. Profitability as a measure is the ability of a firm to gain profit through goal oriented financial plans and decisions. The return on asset (ROA) and return on equity (ROE) are generally applied to measure profitability (Ahmadinia, Afrasiabishani & Hesami, 2012).

Return on Assets defines the efficient management of a firm's asset to generate profits. It is an indicator which explains how profitable a firm is in relation to its total assets. In the same vein, return on equity measures the efficiency of a firm in generating profits from shareholders equity. Loth (2012) advised that return on equity between 15% and 20% is considered to be good. Debt to equity ratio indicates the percentage of shareholders

equity and debt that a firm uses in financing its assets. Peterson (1999) posits that the debt to equity is related to a company's leverage, risk or gearing position. This capital structure proxy has been described in Modigliani and Miller (1958) and well debated in literature. Debt to assets measures the proportion of a firm's total assets that were financed by liabilities, creditors, and debt.

This paper focused on the two firm performance variables and two proxy of capital structure. We measured the relationship between return on assets, debt to asset ratio and debt to equity ratio. The second measurement was to establish the relationship between return on equity, debt to asset ratio and debt to equity ratio.

Theoretical framework

Modigliani and Miller (1958) proposed the famous theory of capital structure which is considered as the basis of modern philosophy of corporate finance. They assumed that capital structure has an impact on the firms' total value since the economy is tax free, absence of agency problem and asymmetry of information. Since then, many theories have been propounded to link the capital structure decisions and firm specific characteristics such as modern dynamic trade-off theories (Stieglitz, 1972), Static trade-off theory (Jensen & Meckling, 1976), pecking order theory (Myers, 1984) etc.

Stieglitz (1972) advocates the modern dynamic trade-off theories by examining the effects of taxation from a public finance perspective. His model is not a real trade-off theory, since he took the drastic step of assuming away uncertainty. The first dynamic models to consider the tax savings and bankruptcy cost trade-off are Kane et al. (1984) and Brennan and Schwartz (1984). Both studies analyzed continuous time models with uncertainty, taxes and bankruptcy costs without transaction costs. Since firms react to adverse shocks immediately by rebalancing costlessly, firms maintain high levels of debt to take advantage of the tax savings. Most studies on dynamic trade-off models are fairly recent and so any judgments on their results must be somewhat tentative. These studies have fundamentally altered general understanding of mean reversion, the role of profits, the role of retained earnings, and path dependence. As a result, the trade-off class of models appears more promising than it did even just a few years ago (Ahmadinia et al., 2012).

Jensen and Meckling (1976) suggest that the firm's optimal capital structure will involve the tradeoff among the effects of corporate and personal taxes, bankruptcy costs and agency costs, etc. Trade-off theory suggests that a corporate organisation should consider a reasonable debt ratio and try to achieve this goal in the long term. Through this way, a firm can benefit greatly by using debt as a cheap source of financing. Tax saving is one of the advantages that results from using debt and consequently, the cost of potential financial distress is considered as a disadvantage of using debt, especially

when the firm relies on too much debt. This theory suggests a trade-off between the tax benefit and the disadvantage of higher risk of financial distress.

The pecking order theory is considered as one of the most famous theories of capital structure as Myers and Majluf (1984) introduced its empirical test which was followed by several empirical studies. Using a modified regression model, Myers and Majluf (1984) declared that information asymmetry exists among the investors since they generally have less information than insiders which amounts to under-pricing of firms' shares. This often yields a positive relationship between firms' growth and debt level as they have more growth chances than their assets.

Similarly, several academic works have focused on the determination of all costs associated with debt financing which firms often view as a trade off against a substantial corporate tax benefit. Some of the associated costs include direct bankruptcy costs, personal tax, agency cost, asymmetric information, product/input market interactions, and corporate control considerations (Harris and Raviv, 1991; Miller, 1958). However, most studies examining capital structure response to change in corporate tax exposure such as Trezevant (1992) who provide evidence supporting the trade-off theory with Myers (1984) arguing that the trade-off theory also fails to predict the wide degree of cross-sectional and time variation of observed debt ratios.

Also, firm debt level should be positively related to the value of the firm. Assuming information asymmetry, the pecking order theory predicts that a firm will follow the pecking order as an optimal financing strategy. The reason behind this theory is that if the manager acts on behalf of the owners, they will issue securities at a higher price than their true worth. The more sensitive the security, the higher the cost of equity capital, since the action of the manager is giving a signal to the market that the securities are overpriced. Stulz (1990) argues that debt can have both a positive and negative effect on the value of the firm (even in the absence of corporate taxes and bankruptcy cost). He develops a model in which debt financing can both alleviate the over-investment problem and the under-investment problem. Stulz (1990) assumes that managers have no equity ownership in the firm and receive utility by managing a larger firm. The "power of manager" may motivate the self-interested managers to undertake negative present value project. To solve this problem, shareholders force firms to issue debt. But if firms are forced to pay out funds, they may have to forgo positive present value projects. Therefore, the optimal debt structure is determined by balancing the optimal agency cost of debt and the agency cost of managerial discretion.

Empirical Framework

Chiang, Chan and Hui (2002) examined the inter-relationship between profitability, cost of capital and financial structure among property developers and contractors in Hong Kong. The result indicates that capital gearing is positively related with asset but

negatively with profit margins while Raheman, Zulfiqar and Mustafa, (2007) perform similar study using Pearson's correlation and regression analysis in the estimation of a function relating to the net operating profitability with the independent variables including debt ratio, long term debt to liabilities, equity to liabilities and size of the firm measured in terms of natural logarithm of sales. The results showed that the capital structure of the non-financial firms has a significant effect on their profitability. However, if these firms wish to increase their profitability, they will have to give due consideration to the financing mix, otherwise it may result into losses.

Ebaid (2009), using three of accounting-based measures of financial performance i.e. return on equity (ROE), return on assets (ROA), and gross profit margin, and based on a sample of non-financial Egyptian listed firms from 1997 to 2005 reveal that financial structure choice decision, in general terms, has a weak-to-no impact on firm's performance. Saeedi and Mahmoodi (2011) indicated that firm performances, which is measured by EPS and Tobin's Q, is significantly and positively associated with financial structure, negative relation between capital structure and ROA, and no significant relationship between ROE and capital structure. The study uses four performance measures (including ROA, ROE, EPS and Tobin's Q) as dependent variable and three financial structure (including long-term debt, short-term debt and total debt ratio) as independent variable for a sample of 320 firms listed on Tehran Stock exchange over the period 2002- 2009.

Chang, Lee and Lee (2007) identified growth as the most important factor in capital structure that is affected by profitability, capability of liquidation, non-taxed debt and special values. Desai, Foley and Hines (2008) studied multinational firms in United States and concluded that fluctuation of capital return in a high-risk country is more than that of other low-risk countries. Hence, multinational firms decrease their leverage level in order to diminish risk. Mahajan and Tartaroglu (2008) examined market timing theory in G7 countries and the results proved that leverage is negatively related to the historical market-to-book ratio in all G7 countries.

Yang, Lee, Gu and Lee (2010) appraised co-determination of capital structure and stock return in Taiwan Stock Market using the LISREL model on two identified external factors of profitability and growth as common determinants between debt ratio and stock return. Both are negatively related to leverage and positively to stock return. Similarly, Mishra and Tannous (2010) assessed multinational and non financial firms of Canada during 2000-2001, using the LTD (long term debt) model to test whether the stock laws of the host countries have an impact on U.S. multinational firms or not. The results proposed that long-term debt is positively related to the firm common law legal origin, burden of proof, investor protection, disclosure requirements and public enforcement but it relates negatively to political risk.

Cespedes and Molina (2010) examined the determinants of capital structure in 806 Latin American firms between 1996-2005. The results showed that ownership based firms

avoid issuing shares because they don't want to lose or to decrease the control right of the firm. While, Margaritis and Psillaki (2010) studied the relationship between capital structure, ownership and firm performance in French firms since 2002-2003. The results showed that use of debt in capital structure leads to augmentation in stock price and indicated that the impact of efficiency on leverage is positive while concentrated-ownership structure firms utilize more debt in their structures.

Muritala (2012) examined the optimum level of capital structure through which a firm can increase its financial performance in Nigeria using annual data of ten firms spanning a five-year period. The results showed that asset turnover, size, firm's age and firm's asset tangibility are positively related to firm's performance (ROA) while a negative and significant relationship was observed between asset tangibility and ROA as a measure of performance. Similarly, Babalola (2012) studied how an optimal capital structure can maximize performance of the selected firms under the same systematic risk by investigating the relationship between return on equity (ROE) and the capital structure for a sample of 10 firms in Nigeria between 2000 and 2009. He observed that the optimal capital structure and their concerning maximum value of ROE may change over time as the firm's performance and environments change while firms adjust their capital structure toward an optimal debt ratio consistent with the historical financial behaviors of firms. Our paper is to enhance a category of performance, profitability. We established the relationship between capital structure and profitability of firms.

Variables relationship among Countries

We make a little contribution to capital structure literatures by trying to look as a comparative study of capital structure among few countries. We tried in our categorization to establish the right proxies for capital structure and performance. We therefore based our research proxies on the most frequently used proxies and replicate their relationship to profitability of Nigerian Firms. Velnampy and Niresh (2012) did an extensive research in the study of capital structure and firms profitability. In their analysis of the capital structure of **Sri Lanka** banking sector, they find that there is a negative relationship between capital structure and banks' profitability however establish a positive relationship between ROE and debt to equity (D/E). This finding suggests that the sampled banks are highly geared. The positive relationship was also revealed in the study of Abor (2005) between profitability and total debt. Arguably, most studies have established a negative relationship (Kester, 1986; Titman & Wessels, 1988; Rajan & Zinglas, 1995; Velnampy & Niresh, 2012). Rajan and Zinglas (1995) established a negative degree of relationship between profitability and leverage. Velnampy and Niresh (2012) limited his finding of a negative relationship to return on asset and debt to assets ratio. The results of these studies are all consistent with the pecking order theory. **In Iran**, Mohammadzadeh, Rahimi, Rahimi, Aarabi and Salamzadeh (2013), in their study of the Iranian pharmaceutical companies between 2001-2010 used debt to asset ratio as

a measure to capture the capital structure and net profit for profitability find that there was a significant negative relationship between the profitability and the capital structure. They confirmed internal financing as a factor of high profitability. **In India**, Singh (2013) explores the extent to which corporate structure affect Indian business revenue firms and asset size firms. His study established a strong return on Assets (ROA) and return on capital employed (ROCE) and the capital structure variables of asset size and business revenue. He stressed further that high debt financing will minimize the net profit of listed manufacturing firms. Furthermore, in **Macedonia, Europe**, Ferati and Ejupi (2012) also measured the capital structure-profitability influence. The results indicate that the return rates present a positive correlation with short-term debt and equity, and an inverse correlation with long-term debt. Their study fundamentally differentiates the nature of relationship. The contributed that a negative relationship results from a short-term debt and equity while a highly geared firm is seen to have a negative relationship between capital structure and profitability. In contrary with their results, Bokhari and Khan (2013) also did good work in **Pakistan listed non-financial sector**. They find that short term debt (STD) and long term debt (LTD) have a negatively affected return on assets (ROA). They also find that return on equity (ROE) has a negative relation with all the capital structure variables except long term debt (LTD). Another study of the Karachi Stock Exchange in **Pakistan**, Fareed, Aziz, Naz, Shahzad, Arshad, and Umm-e-Amen (2014) conducted a panel analysis of listed textile firms. Fareed et al. (2014) revealed a negative weak relationship between EBIT and ROE while a weak positive relationship between EBIT and ROA. The authors also suggest that more profitable firms use more equity as financing option. **In Jordan**, Shubita and Alsawalhah (2012) explored the Jordan quoted industrial companies in their analysis during period 2004 to 2009. Their work suggests that firms with high profits depend heavily on equity as their main financing option. Thus, we may say that debt to equity has a positive relationship to profitability. We however present a summary of these finding in table 1 below.

Table 1: Capital structure and profitability practices of selected Quoted firms
Discussion of

Author(s)	Industry	Country	Period	Profitability Variable	Capital Structure Variables	Methods of Analysis	Nature of Relationship
Velnampy and Niresh (2012)	Banking sector	Sri Lanka	2002-2009	ROE, ROCE, NPR, NIM	DER, Debt to Total Funds	Correlation Analysis	Negative

					Ratio		
Derayat (2012)	Basic metals, Machinery and equipment, Food & Beverage, Non-metallic mineral, Materials and chemical.	Iran	2006-2010	ROA, EBIT	CLT, ETL, NCE	Multiple regression equation	Positive (Across industries)
Ferati and Ejupi (2012)	Small and medium enterprises (150 firms)	Macedonia, Europe	2002-2011	ROE	ECP, PL, LP/PL	Multivariable regression analysis	Negative, Positive (with LP/PL)
Shubita and Alsawalhah (2012)	Industrial companies	Jordan	2004-2009	ROE	DAR, SDA, LDA	Correlations and multiple regression analysis	Negative
Mohammadzadeh, Rahimi, Rahimi, Aarabi and Salamzadeh (2013)	Pharmaceutical companies	Iran	2001-2010	NPM, ROA, ROE	DAR	Correlation Analysis	Negative
Singh (2013)	Manufacturing firms	India	2004–2005 to 2011–2012	ROA, ROCE	DER, DAR	Coefficient of Correlation & Regression Analysis	Negative
Bokhari and Khan (2013)	Non-financial sector	Pakistan	2005-2011	ROA, ROE, NPM, EPS	STD, LTD, LEV	Ordinary Least Square (OLS)	Negative
Fareed, Aziz, Naz, Shahzad, Arshad, and Umm-e-Amen (2014)	Textile firms	Pakistan	2006-2012	EBIT	Leverage, Firm Size, ROA, ROE	Multiple regression and correlation analysis	Negative (EBIT & ROE), Positive (EBIT & ROA)

Source: Developed by the authors

Firms' profitability and capital structure variables vary from one firm to the other. A focus on table 1 reveals that seven of the selected studies examined profitability in term of return on asset (ROA) and return on equity (ROE) while one considered profitability in term of earnings before interest and tax (EBIT)

Four of the studies examined capital structure in term of debt to total assets (DAR) and debt to total equity (DER). Three firms measured capital structure in term of short term debt, long term debt, and leverage. None of the studies covers a period less than 5years. Derayat (2012) was the only author who covered a period of 5years while others are more than this. However, this limitation may be due to the number of industries studied. From the table, Derayat (2012) was the only author who studied five industries. Despite the industries he examined, he established a positive relationship between capital structure and profitability. On the contrary, other studies established a negative relationship. In the Nigeria case, there is little or no research on capital structure and firms' profitability. The majority of Nigerian literatures on capital structure did not specify the capital structure-profitability relationship (Adeyemi & Oboh, 2011; Muritala, 2012; Yinusa & Babalola, 2012; Akinyomi & Olagunju, 2013). Adeyemi and Oboh (2011) studied capital structure and firm value. Their study suggested a positively significant relationship between choice of capital structure of a firm and its market value in Nigeria. Muritala (2012) in his own case establishes a negatively significant relationship between capital structure and firm performance. However, his measures of capital structure performance are asset turnover, size, age and asset tangibility of the firm. These variables are not leverage or profitability but firms' activity variables. Digressively, Yinusa and Babalola (2012) studied corporate governance and capital structure. Their panel study of the food and beverage sector revealed that sound corporate governance influences and has impact on the financing options of firms. They measured factors affecting the capital structure decision. In addition, Akinyomi and Olagunju (2013) in their own study objectively examined the determinants of capital structure. Akinyomi and Olagunju (2013) revealed that leverage has a negative relationship with firm size and tax and a positive relationship with tangibility of assets, profitability and growth. A critical analysis of these studies shows that there is no in-depth measurement of firms' profitability as a result of capital structure practices in Nigeria. Uremadu and Efobi (2012) and Arowoshegbe and Idialu (2013) made significant contributions. Uremadu and Efobi (2012) as a former, they used only ROE as a measure of performance and SDT, LDT as measure of capital structure. However, their study span between 2000 and 2006. They established that when a firm is long-term geared, profits tend to increase thus establishing a negative relationship. However, when a firm is short-term geared firms' profits will have a positive relationship with capital structure. In the later, Arowoshegbe and Idialu (2013) did an extensive research of the non-financial firms quoted in Nigerian Stock Exchange. However, their measure of performance is related to turnover. The used both the Net Profit Margin (NPM) and Operating Profit Margin (OPM). From the two

scenarios, one rejected ROA and the second rejected both ROA and ROE. Also one used financial firms while the second used non-financial firms. To conclude, our study contributed to the literature of capital structure in Nigeria by using the ROE, ROA, conglomerate, financial services and consumer goods. To ensure quality of our study, we used a period of 12years from 2000-2011.

Methodology

The study sampled quoted firms in the Nigerian Stock Exchange based on the highest share price per unit. Ten firms were selected across three industries; conglomerate, consumers foods, and financial services. The data used for the study include annual financial statement. The sample interval is for twelve-year period from 2000 to 2011 with ratio analysis chosen as a performance measurement and indicators, since it provides methods for assessing the financial strengths and weaknesses of the firms performance based on the information obtained from their financial statements. The selection of the variables in the model specified is primarily guided by previous empirical studies and the availability of data, as two profitability ratios that were used to measures firms performance by previous studies have been identified namely return on asset (ROA) and return on equity (ROE) as a proxy for firm performance, while the proxy used for capital structure include debt to asset ratio (DAR) and debt to equity ratio (DER). Using the econometric view (e-view) software, the relation between the variables had been examined through the use of regression and correlation matrix.

Using the basic Ordinary Least Square (OLS) regression model, the study model is represented as:

$$ROE_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 DAR_{it} + \varepsilon$$

$$ROA_{it} = \beta_0 + \beta_1 DER_{it} + \beta_2 DAR_{it} + \varepsilon$$

Where,

ROE_{it} = Return on equity of firm i for time period t (Net Income/Shareholder Fund)

ROA_{it} = Return on assets of firm i for time period t (Earnings before Tax/Total Asset)

DER_{it} = Ratio of Long term loan to Shareholder Fund of firm i for time period t

DAR_{it} = Ratio of Debt to Total Assets of firm i for time period t

Hypotheses

H₁: There is relationship between return on equity, debt equity ratio and debt assets ratio.

H₂: There is an association between return on asset, debt equity ratio and debt assets ratio.

Discussion of Results and Analysis

The correlation results for the selected firms, presented in table 2 and 3 below show the individual firm correlation coefficient with the dependent variable in the model. It shows that the relationship between capital structure and firm profitability is more of firm-specific and sector determined than market oriented concept.

Table 2 Correlation Coefficient of relationship between ROE, DER, and DAR

	DER	DAR	Industry
ACCESS BANK	0.763229	0.554327	Financial Services
GTBANK	0.162441	0.039846	Financial Services
ZENITH	0.967951	0.923947	Financial Services
UAC	-0.626457	-0.632523	Conglomerate
UNILEVER	-0.587137	-0.024966	Conglomerate
NESTLE	-0.484223	-0.573206	Consumer Goods
CADBURY	-0.994385	0.028135	Consumer Goods
7UP	-0.364927	-0.262021	Consumer Goods
GUINNESS	-0.367148	-0.467207	Consumer Goods
NIG BREW	-0.025465	0.026234	Consumer Goods

Source: Eviews Output

From the table, it shows that that the relationship between return on equity, debt equity ratio and debt assets ratio. It also shows that the nature of their relationship is industrial base. From the table, there is a positive relationship between return on equity (ROE), debt equity ratio and debt asset ratio among the financial institutions. This means that the higher the level of debt financing by firms, the higher the return on equity. This means that highly geared firms tend to have high return on equity thereby maximizing shareholders wealth. Our study establishes that highly geared firms are more profitable. Also, the correlation coefficient of DER is higher than that of DAR. This also implies that debt equity ratio contributes more to profitability than debt assets ratio. In addition, there is a negative relationship between return on equity (ROE), DER, and DAR. This means that the lower the level of assets and equity financing the higher the return on equity. This connotes that if conglomerate firms must have a high return on equity, they will

prefer a minimal mix of retained earnings and equity financing. This negative relationship was also established in the consumer goods firms. There is a negative relationship between ROE and DER however, positive in some consumer goods when being financed with DAR.

Table 3 Correlation Coefficient of relationship between ROA, DER, and DAR

	DER	DAR	Industry
ACCESS BANK	0.375008	0.343913	Financial Services
GTBANK	-0.320718	-0.342574	Financial Services
ZENITH	0.867877	0.896230	Financial Services
UAC	-0.807859	-0.750556	Conglomerate
UNILEVER	-0.575887	0.215989	Conglomerate
NESTLE	-0.969784	-0.899956	Consumer Goods
CADBURY	-0.391959	0.302165	Consumer Goods
7UP	-0.272598	-0.147396	Consumer Goods
GUINNESS	-0.792240	-0.773878	Consumer Goods
NIG BREW	0.413554	0.501479	Consumer Goods

Source: Eviews Output

From the table 3, there is a positive relationship between return on assets (ROA), debt equity ratio and debt asset ratio among the financial institutions except for GTBank which shows a negative relationship in both capital structure proxies. Considering table 2, GTBank shows a positive relationship with return on equity while a negative relationship with return on assets. GTBank in practice prefers the equity financing to retained earnings. Comparing UAC foods, the firm prefers a mix of retained earnings and equity. But the firm prefers both minimal equity and retained earnings. This kind of strategy can be called a match-conservative strategy. Furthermore, Nigerian Breweries prefers financing through retained earnings as there is a positive relationship between ROA, DER, and DAR. Conclusively, this means that the higher the level of debt financing by firms, the higher the return on equity. This means that highly geared firms tend to have high return on equity thereby maximizing shareholders wealth. Our study establishes that highly geared firms are more profitable. Also, the correlation coefficient of DER is higher

than that of DAR. This also implies that debt equity ratio contributes more to profitability than debt assets ratio. In addition, there is a negative relationship between return on equity (ROE), DER, and DAR. This means that the lower the level of assets and equity financing the higher the return on equity. This connotes that if conglomerate firms must have a high return on equity, they will prefer a minimal mix of retained earnings and equity financing. This negative relationship was also established in the consumer goods firms. There is a negative relationship between ROE and DER however, positive in some consumer goods when being financed with DAR.

Table 4: OLS REGRESSION Matrix (ROA, DER, and DAR)

7UP	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-2.528619	0.660773	-3.826760	0.0065
	DAR	6.118404	1.666412	3.671604	0.0079
	C	0.102817	0.065975	1.558429	0.1631
ACCESS ROA	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.003309	0.007535	0.439122	0.6738
	DAR	0.013200	0.129040	0.102297	0.9214
	C	0.010893	0.020841	0.522677	0.6173
GTBANK	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.014279	0.045790	0.311838	0.7642
	DAR	-0.226009	0.488782	-0.462392	0.6578
	C	0.042428	0.004405	9.631768	0.0000
GUINNESS ROA	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.582342	0.787675	-0.739317	0.4838
	DAR	-0.102602	1.377173	-0.074502	0.9427
	C	0.598011	0.078465	7.621377	0.0001
UAC	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.350785	0.225300	-1.556972	0.1634
	DAR	0.268867	0.381447	0.704861	0.5037
	C	0.221491	0.017235	12.85124	0.0000
ZENITH	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.000842	0.004696	-0.179364	0.8627
	DAR	0.070542	0.052293	1.348974	0.2194
	C	0.022608	0.002529	8.938063	0.0000
NIG BREWERIES	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-5.577239	3.630838	-1.536075	0.1684

	DAR	5.578818	3.040989	1.834541	0.1092
	C	0.610430	0.203357	3.001766	0.0199
NESTLE NIG	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.286349	0.046175	-6.201416	0.0004
	DAR	0.658941	0.244996	2.689595	0.0311
	C	0.503967	0.028574	17.63717	0.0000
UNILEVER NIG	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-1.069122	0.760394	-1.406010	0.1974
	DAR	-0.241031	1.092274	-0.220669	0.8309
	C	0.872184	0.467714	1.864783	0.0992
CADBURY	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.003833	0.002919	-1.313137	0.2255
	DAR	0.616003	0.610905	1.008345	0.3428
	C	0.150049	0.119908	1.251370	0.2462

Source: Eviews Output

The relationships among ROA, DER, and DAR established in table 2 are tested to know whether they are significant. All the companies established insignificant relationships between their debt financing and profitability except for 7up and Nestle Plc. We can therefore conclude that the negative relationship between ROA, DER, and DAR of the two firms are significant. Thus, we say the two firms prefer the equity and retained earnings financing approaches help to have a significant high return on assets.

Table 5: OLS REGRESSION Matrix (ROE, DER, and DAR)

7UP	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-1.408583	0.536545	-2.625284	0.0341
	DAR	3.294998	1.353120	2.435112	0.0451
	C	0.223766	0.053571	4.176980	0.0042
ACCESS ROA	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.082389	0.033151	2.485270	0.0419
	DAR	-0.550755	0.567727	-0.970106	0.3643
	C	0.091077	0.091691	0.993300	0.3537
GTBANK	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	1.251068	0.386214	3.239314	0.0143
	DAR	-13.07490	4.122578	-3.171536	0.0157

	C	0.319468	0.037153	8.598595	0.0001
GUINNESS ROA	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.790968	0.653899	1.209618	0.2657
	DAR	-1.758946	1.143278	-1.538511	0.1678
	C	0.495492	0.065139	7.606713	0.0001
UAC	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.043919	0.265591	-0.165363	0.8733
	DAR	-0.153689	0.449663	-0.341787	0.7425
	C	0.175317	0.020317	8.628994	0.0001
ZENITH	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.120090	0.034884	3.442573	0.0108
	DAR	-0.412154	0.388463	-1.060986	0.3239
	C	0.105049	0.018790	5.590702	0.0008
NIG BREWERIES	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-3.530465	4.569799	-0.772565	0.4651
	DAR	2.957671	3.827410	0.772760	0.4650
	C	0.584680	0.255946	2.284383	0.0563
NESTLE NIG	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	0.078758	0.075053	1.049377	0.3289
	DAR	-0.595528	0.398218	-1.495483	0.1784
	C	0.979030	0.046445	21.07956	0.0000
UNILEVER NIG	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.455326	1.134119	-0.401480	0.6986
	DAR	-2.143586	1.629114	-1.315799	0.2247
	C	1.148496	0.697589	1.646379	0.1383
CADBURY	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	DER	-0.242495	0.009719	-24.94980	0.0000
	DAR	2.109700	2.034390	1.037018	0.3301
	C	-0.026745	0.399309	-0.066979	0.9482

Source: Eviews Output

The relationships among ROE, DER, and DAR established in table 2 are tested to know whether they are significant. 7up and GTBank DER, DAR and ROE are significant. There was a significant relationship between DER and ROE only in Access Bank, Zenith Bank, and Cadbury but DAR and ROE relationships are not significant in these three firms.

There were insignificant relationships between ROE, DAR, and DER in Guinness, UAC foods, Nig. Brewries, Nestle Plc, and Unilever.

Conclusively, these findings connote that capital structure is negatively related with firms performance as far as the sample of Nigeria firms are concerned as 60% of the correlation coefficient are negative across the total result. This is consistent with the pecking order theory as debt is negatively related to firm's profitability since high debt level decreases a firm's financial performance. This view is consistent with submission of Ebaid (2009), Saedi and Mahmoodi (2011) and Nor Edi Azhar and Fatihah (2012).

Conclusion and Recommendation

The objective of this study was to test the effect of capital structure on firm performance in the Nigerian economy by gathering secondary data of publicly listed companies traded on the Nigerian Stock Exchange (NSE) and employing the e-view statistical tools to analyze all the financial information. This paper contributes to bridging the gap in the literature by providing empirical evidence of the extent to which the result in Nigeria would be parallel to past enquiries in other countries. The paper also submitted that maximizing firm's profitability requires a good blend of debt and equity that will minimize the firm cost of capital and maximize return at a particular point in time. Hence, it is recommended that firms' finance managers identify the optimal capital structure that will help to attain the best financial performance in their various business dealings.

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