

Effect of Financial Structure and Macroeconomic Fundamentals on Firm Profitability

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Abstract: - The study examined the impact of financial structure and macroeconomic fundamentals on firm profitability. This was aimed at ascertaining how financial structure and macroeconomic fundamentals influence firm profitability. The after effect research design was adopted to examine the dependent and independent variables in retrospect. Historical data spanning 2001 to 2015 was collated and estimated employing the Least Square, Fixed Effects and Random Effects estimations. The empirical results show that debt equity ratio (DER), long term debt equity ratio (LTDER), short term debt equity ratio (STDER), real GDP growth rate (RGDP), and interest rate (IntR) play critical roles in profitability of the firms. In addition, effects of financial structure are more effective when ascertaining the sensitivity of macroeconomic variables that have the potential to improve or degrade the profitability of the firms. Also the effects of firm- specific variables (SIZE and AGE) are more significant given the place of macroeconomic environment in the life of the firms. Although further observations indicate that GDP and interest rate as indicators of overall economy in relatively to their impact on firm profitability, the authors recorded insignificant impact. The result shows that both economic indicators are negatively related with the profitability of firm in a case of non-financial sector. The study conclude that, in uncertain and turbulence economy, financial structure effects on firm profitability is found to be relatively dynamic and affects other corporate decision making process differently.

Keywords: Financial Structure; Firm profitability; Macroeconomic Fundamentals; Firm-Specific Factors; Asymmetric Information.

I. INTRODUCTION

Financial structure is the combination of debt and equity capital to undertake firm's investment decisions. The level of firm's financial structure measured by debt ratio or debt equity ratio indicates the firm's risk exposure (Chen & Chuang, 2009), and an unbalanced ratio may be prone to default risk (Nwude, Itiri, Agbadua & Udeh, 2016). Therefore, in financial structure decisions, there is need to ensure that marginal benefit accrued from use of debt capital outweigh marginal cost of debt. A proper balancing of debt and equity is imperative in order to ensure a better trade- off between risks and return (Khadka, 2006). In the spirit of Nwude, Itiri & Udeh (2016), most claims in financial structure decisions are hold on risks and returns inherent in employment of each financing mix available to the firm. The authors stressed further that firm's debt equity ratio is one of the firm-specific

strategies used by managers in the search for improved performance. This was also supported by the argument put forward by Afrasiabi & Ahmadina (2011) that "an issue that is strictly connected with the choice of financing sources is risk and return".

However, Nigeria being import dependent country exchange rate instability has increase foreign exchange risk of many firms. Foregoing has invariably triggered cost-pushed inflation with return on investment of many firms severely affected due to high operational cost. Actually, the economy has slide to recession with more than three decades lower negative GDP growth rate (CBN, 2015); and stagflation staring at Monetary Policy helpless tools. This claim is consistent with the findings of Uremadu & Efobi (2012) that high inflation rates and market risks in Nigeria business environment may not have enabled firms to optimize use of debt to maximize profitability. In a similar claim, Miller (1977) established that the year to year variation in debt ratio reflected primarily the cyclical movement of the economy. Nigerian financial markets have been characterised by weak fundamentals. In addition, investors' uncertainty with market outlook are widening asymmetric information gap and also compounding to high monitoring and bonding costs (agency cost) and in turn high weighted average cost of capital. Seemingly, the above underscore factors have unvaryingly affected the rate of interest and diminishing marginal utility of capital and consumption decisions of investors. This affirmation can be read in the context of Jeon & Nishihara (2015). Although, in the spirit of Mahmud, Herani, Rajar & Farooqi (2009), financial liberalisation have results in the development of capital market and overall financial systems, corporate investment depends mostly on output profits than macroeconomic and other policy variables.

Many attempts have been made in the framework of financial structure of a firm to broaden our horizons of understanding various issues in the real world. For instance, a number of works have examined financial structure and firm profitability as well as determinants of financial structure (Jensen & Meckling, 1976; Myers & Maufflis, 1984; Myers, 1984; Ross, 1977; Leland & Pyle, Kim, McConnell & Greenwood, 1977; Fama, 1980; Titman & Wessels, 1988; Fama & French, 1998). Also, the impact of macroeconomic indicators on firm profitability (Chun, Kim, Morck & Yeung, 2008; Louzis, Vouldis & Metaxas, 2012; Rehman, Ali & Hasan, 2014) has

always been an essential issue to be investigated given the foregoing weak fundamentals in Nigeria. Most research, however, has examined those issues separately, and little is known in Nigeria about the interaction between them, that is, the effect of financial structure on firm profitability taking macroeconomic fundamentals into account. In the present paper, we propose models that give us a comprehensive understanding of the essential issues that need to be considered; the effects of financial structure on firm profitability and investigate sensitive of the influences to macroeconomic variables instability.

II. LITERATURE REVIEW

Financial structure irrelevance theory argue that when capital markets are perfect (frictionless and perfectly competitive), no taxes and investment policy is fixed; financial structure is irrelevant to firm profitability. That is, when there are no taxes and perfect capital market, it makes no difference whether the firm borrows or individual shareholders borrow (Modigliani & Miller, 1958). Therefore, the market value of a firm is independent of its financial structure. These theories with their varying predictions are evident in the world of imperfect capital markets where internal and external capital is not perfectly substituted, and no effect on management incentives (Khadka, 2006; Majumdar & Chhibber, 1999; Bradley & Myers 1996; Tze – Sam & Heng, 2011; Suhaíl & Wan Mahmood, 2008). In line with these arguments, Adelegan (2007) found negative insignificant relations between firm profitability and leverage in pooled regression estimation. In addition, in the study of capital structure and financial performance of selected business companies in Colombo Stock Exchange, the study confirmed insignificant negative relationship between capital structure and financial performance (Paratheepkanth, 2011).

The traditional theories (relevance theories) that have been advanced to explain the financial structure of firms include the pecking order theory, tradeoff theory, the agency cost theory, signalling hypothesis, market timing hypothesis, and neutral mutation hypothesis. These theories argued many factors such as tax effects, agency effects, bankruptcy costs, signalling effects, market timing and asymmetric information, influence financing decisions and in turn the value of the firm (Jensen & Meckling, 1976; Ross, 1977; Kim, McConnell & Greenwood, 1977; Leland Pyle, 1977; Fama, 1980; Myers & Maufliis, 1984; Myers, 1984). Many empirical studies using panel data regression estimation confirmed inverse and significant relationship between financial structure and firm profitability (Foo, Jamal, Karim & Ulum, 2015; Cheng & Tzeng, 2011; Mwangi, Makau & Kosimbei, 2014; Onaolapo & Kajola, 2010; Uremadu & Efobi, 2012).

The use of debt rather than equity finance grows as the corporate tax rates rises. Therefore, high corporate tax rates may lead to greater corporate indebtedness owing to firm's need to enjoy debt tax shield benefit. The implications of corporate indebtedness at some certain level may result to

negative performance; Khan (2012) found that strong covenants owing to large dependent on leverage affected the performance of Pakistan firms. Cheng & Tzeng (2011) studying leverage and efficiency of Taiwan Manufacturing firms from 2000-2009, found that leverage is negatively related to efficiency.

In the same view, these bodies of knowledge have assumed that firm profitability is a function of financial structure. Leland & Pyle (1977) assumed statistical positive but not causal relationship between debt and value of “seemingly similar” projects. Among others the work of Dare & Sola (2010), Abu-Rub (2012), Javed, Younas & Imran (2014) confirmed financial structure to be positively related to firm profitability. Abu-Rub (2012) evidently showed that return on equity, return on assets, earnings per share, market value of equity to the book value of equity and Tobin's Q as a measure of firm performance is positively related to financial structure. In similar result, Dare & Sola (2010) employing panel data regression analysis of Nigerian Petroleum Industry found significant positive relationship between leverage ratio and corporate performance.

Miller (1977) documented that the year to year variation in debt ratio reflected primarily the cyclical movement of the economy. This outcome was strengthened with the study of 10 manufacturing firms, which documented that high corporate income tax regimes combined with high inflation rates in Nigeria business environment may not have enabled firms to optimize use of debts to maximize profitability (Uremadu & Efobi, 2012). Although these outcomes may be unsatisfactory on the assumption that financial liberalization results in the development of capital market and overall financial system, however, corporate investment depends mostly on output and profits than macroeconomic and other policy variables (Mahmud, Herani, Rajar & Farooqi, 2009). Thus, firm's profitability in most cases reflect its' corporate decisions in developed and most emerging financial system. Stock market development leads to substitution of equity for debt, the effect would be a decline in the debt-equity ratio; in a reverse case, the effect would result to an increase in the debt-equity ratio.

On the latter scenario, high debt-equity (leverage) ratio reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholders (Jensen & Meckling, 1976). But the given incentive to the firm will benefit shareholders at the expense of debt-holders. The adjustment of leverage ratio to attain incremental value may lead to high agency cost if not rationally employed. Agency theory is most relevant in situations in which contracting problems are difficult (Eisenhardt, 1989). The choice of financial structure may help mitigate these agency costs. Nwude, Itiri & Udeh (2016) argued that as the debt ratio increase, so do firm's fixed interest charges, if the debt ratio becomes too high the cash flow the firm generates during economic recessions may not be sufficient to meet the interest payment. Profitable firms

with strong growth opportunities and thus high market value can avoid agency problems by choosing lower leverage.

Shareholders of a firm incur agency cost in attempt to discourage self-interest of the managers by means of monitoring and control actions (Jensen & Meckling, 1976). Agency consideration assumes debt is valuable in reducing the agency costs of equity but at the same time debt is costly as it increase the agency cost of debt. However, debt-holders need to restrict and monitor the firm's behaviour. Onwumere, Ibe & Okpara (2011) contend that the use of debt finance which is linked to assets of the firm create a problem for the firm because management may not want to run the risk of having conflicts with debt holders. Hence, costly monitoring devices of contractual covenants are incorporated into debt agreements to protect the debt-holders, it should increase the cost of capital offered to the firm. And also firms with riskier returns will have lower leverage ratio even when there are no bankruptcy costs.

However, agency cost arises due to conflict of interest between shareholders and managers or between shareholders and bondholders (Jensen & Meckling, 1976; Eisenhardt, 1989). Agency problem between shareholders and bondholder arise due to asset substitution (Eisenhardt, 1989). Shareholders prefer high risk projects, because they can fully benefit from high earnings, while bondholders that have a fixed claim prefer low risk projects. The adjustment of leverage ratio to attain optimal capital structure may lead to high agency cost if not rationally employed.

III. VARIABLES AND SUMMARY STATISTICS

3.1.1 Firm Profitability Variable

Firm profitability as the dependent variable of the study has different measures. This study employed Return on Assets (ROA) as firm profitability measure. Ujunwa (2012), Onalapo & Kajola (2010) posits that ROA can be viewed as a measure of management efficiency in utilizing all the assets under its control, which ultimately belong to shareholders irrespective of its source of financing. This is a widely accepted measure of firm profitability.

3.1.2 Financial Structure Variables.

Financial structure is the portion of firm's asset financed by any type of fixed charge such as loan facilities, overdraft facilities, lease, etc. The management of financial structure measures the degree to which firms are employing financial leverage and, as such are of interest to creditors and owners alike, as argued by many scholars to invariably influence firm's value (Brealey & Myers, 1996). There are many relative indicators that can be used as a measure for financial structure. But three proxies measure financial structure in this study: debt equity ratio (DER) is the quantitative measures of the ratio of the total debt to residual owners' equity, long term debt equity ratio (LTDER) is the measure of the proportion of long term debt to shareholders funds in the financing mix of the firm and short term debt equity ratio (STDER) is the

measure of the proportion of short term debt to shareholders funds in the financing mix of the firm. Thus, DER is an indicator of company's financial structure and whether the company is more reliant on borrowing (debt) or shareholders capital (equity) to fund assets and activities. Many empirical studies in different jurisdictions have employed this measure of financial structure in their various studies (Zeitun & Tian, 2007; Hasan, Rukh, Ali & Rehman, 2014; Majumdar & Chhibber, 1999; Azhagaiah & Gavoury, 2011) among others. Although LTDER and STDER measures are incorporated in DER, some analysts generally use LTDER measure because most interest costs are incurred on long-term borrowed funds, and because long-term borrowing places multi-year, fixed financial obligations on a firm. Titman & Wessels (1988) contend that significant results are good reason for employment of different measures of leverage ratio because some of the theories of financial structure have different implications for not combining them as aggregate "debt equity ratio".

3.1.3 Macroeconomic Fundamentals Variables

Economic indicators drive an economy towards a certain direction and play a vital role in influencing the firms' financing decisions and in turn, the profitability of the firm (Riaz, Komal

& Din, 2014). These macroeconomic fundamentals have the potential to improve or degrade the profitability of the firm, either directly or indirectly. Apparently, reflection of systematic risk; deteriorating macroeconomic conditions will increase systematic risk which can degrade the profitability of the firm (Jubaedah & Yulivan, 2015). In the work of Jacobson, Linde & Roszbach (2011), failure of a business is an event of fundamental importance in economic life. This is an

Outstanding that shows macroeconomic variables as key importance for explaining the time- varying likelihood of corporate failure.

Considering the implications of macroeconomic variables instability on the firms, the effects of some of the macroeconomic variables on firm profitability were observed in the study. These are GDP growth rate and interest rate (Hasan et al., 2014; Rehman et al., 2014). Jacobson et al. (2011) claim that nominal interest rate and output gap as the two key macroeconomic factors affecting business defaults. The growth in firm profitability gives important information towards the value being created and what is expected in terms of future corporate investment. The profitability of the firms when relatively volatile may over the years carry some signals of business cycle turning points. This confirms that the probability of firm profitability varies in line with the business cycle, and there is no doubt that the state of the macro economy influences the rate of firm profitability.

GDP is arguably the most famous macroeconomic fundamental of all. This is for the reason that GDP growth

rate takes into account the performance of all facets of the economy. GDP growth rate is moving much in correlation with business cycle. Hasan et al. (2014) using debt equity ratio as a measure of leverage ratio found significant impact on return on assets and return on capital as measure of firm profitability. Adopting GDP and interest rate as indicators of overall economy in relatively to their impact on firm profitability, the authors recorded insignificant impact. The result shows that both economic indicators are negatively related with the profitability of firm in a case of non-financial sector

In a similar note, macroeconomic dip that can result to economic failure expenditures is likely to demoralize external financing, which in turn affect profitability of the firms (Hasan et al., 2014). Rehman et al. (2014) established that the size and profitability of firms both depend upon financial ratios and macroeconomic variables included in their study. An interesting characteristic of economic growth is to facilitate much of it takes throughout the growth in the size of existing organisation. Whether firm facing severe environmental growth restrictions perform worse than firms facing softer restrictions, is at least as important.

3.1.4 Firm-Specific Control Variables

Control variables employed in the study are firm-specific factor which are intrinsic factors that impact on firm profitability. These are firm size (SIZE) and firm age (AGE). The size of a firm determines economies of scale enjoyed by the firm. Larger firms that have a greater variety of capabilities can utilize the high leverage ratio efficiently with relative positive returns (Titman & Wessels, 1988). Several authors have suggested that profitability of a firm is related to firm size. Cheng & Tzeng (2011), Onaolapo & Kajola (2010), Zeitun (2009), and Khan (2012) provide empirical evidence that the size of a firm appear to determine a larger proportion of firms' profitability.

In addition, Titman & Wessels (1988) asserts that relatively large firms tend to be more diversified and less prone to bankruptcy. This supports the arguments that large firms should be more highly leveraged. The size of a firm determines economies of scale enjoyed by the firm. Larger firms that have a greater variety of capabilities and can utilize the high leverage ratio efficiently with relative positive returns. Conversely, larger size, if not efficiently utilized leads to negative returns. Titman & Wessels (1988) opines that the cost of issuing debt and equity securities is related to firm size. Apparently, small firms pay high cost to finance their investment needs than large firms. The size of a firm is measured by natural logarithm of total assets (Zeitun & Tian, 2007, Onaolapo & Kajola, 2010)

Different authors have considered the age of a firm as an important determinant of firm's profitability. Thus, the introduction of the control variable AGE is measured as the log of number of years since inception to the date of observation. Majumdar & Chhibber (1999), and Onaolapo &

Kajola (2010) citing the work of Stinchcombe (1965) contends that older firms can acquire experience based economies of scale and mitigate the liabilities of newness. Durand & Coeurderoy (2001) studying age, order of entry, strategic orientation, and organizational performance found that a first-mover advantage in terms of organizational performance. In the same vein, Hajipour & Gholamzadeh (2010) studying the effects of market entry strategy dimensions on the performance with a sample of 118 manufacturing firms found that order of entry and product positioning affect performance. They stressed further that pioneers gain advantages in terms of stronger competitive position and higher customer satisfaction, which in turn do increase profitability.

3.2 Data and Sample Selection

Financial structure and firm profitability data are from the financial statements of the sampled firms. The items of interest in the financial statements are assets, liabilities, shareholders' funds, and earnings. Macroeconomic fundamental data are from CBN statistical bulletin. The sample contains non-financial sectors firms listed on the NSE from 2001 to 2015. Financial sector and public utility firms were excluded because of the highly regulated nature of the institutions. The collection of data considered firms that were listed in NSE before the year of inception of the study and also availability of data for the period impacted significantly on the number of sampled firms. In addition, firms that change their financial accounting year-end within the period of the study, firms that ceased operation at any point during the period of the study and firms that had problems with NSE and SEC within the period under review were excluded in the sample. After all elimination, the sample size produced 240 firm-year observations.

3.3 Descriptive Statistics

Table 1 reports the descriptive statistics of all variables. The average ROA in the sample, account for 14% of total assets which is an indication of ₦14 earnings from every ₦100 worth of total assets of the firms. This shows that sample firms recorded low performance within the period under review. Seemingly, lower returns on ROA may have been affected by the financing mix of the firms and macroeconomic fundamentals. For example, the DER recorded a mean of 1.81, LTDER and STDER accounted for 1.16 and 0.65 respectively. This is an indication of more dependence on debt capital with 180% average DER, thus marginal depletion in assets of the sampled firms will affect bondholders' funds since owners' have less stake in the firm. In addition, RGDP and IntR recorded average of 7.4% and 22.60% respectively. Such level of RGDP stimulate earnings potential of the firms since it determine investment and financing decisions of the firms but the accounted high level of interest rate imposing high weighted average cost of debt relegate this to low earnings as observed in average ROA.

The average SIZE in the sample is 20.03% and such a level

suggests that some of the sample firms have a very low total assets. The average AGE in the sample is 3.74, which is very

low suggesting entry position of the sample firm as some of them are still in early stage in their respective industry.

Table 1: Descriptive Statistics

Variables (N = 240)	Mean	Standard Deviation	Maximum	Skewness	Kurtosis	Median	Minimum	Jarque-Bera
Dependent Variable								
ROA	0.14	0.12	0.54	-0.12	5.99	0.13	-0.40	90.08
Capital Structure Variables								
DER	1.81	4.19	36.82	3.73	33.89	1.05	-19.88	10094.55
LTDER	1.16	3.43	26.93	2.18	29.72	0.57	-20.83	7329.44
STDER	0.65	2.10	22.57	1.64	22.71	0.35	11.03	6216.71
Macroeconomic Fundamental Variables								
RGDP	7.43	2.75	14.60	0.85	3.97	7.01	2.79	38.31
IntR	22.60	3.20	30.19	0.65	2.95	22.51	18.36	16.85
Control Variables								
SIZE	20.03	3.06	25.09	-0.40	2.18	20.31	13.27	13.14
AGE	3.74	0.40	4.49	-1.10	4.10	3.85	2.30	60.36

ROA is the ratio of profit before interest and tax to total assets, DER is the total debt to equity ratio, LTDER is the ratio of long term debt to equity, STDER is the ratio of short term debt to equity, RGDP is Real Gross Domestic Product growth rate, IntR is the weighted average lending rate of commercial banks, SIZE is the natural log of total assets of the sampled firms and AGE is log of number of years since inception to the date of observation.

The evidence obtained from the standard deviation of the adopted variables depicted that data set are not far from expected rate of returns within the period under study. The positive value for most of the data set revealed that the data points are skewed to the right of the data average. Thus, the variables indicated that the data are not normally distributed as a result of sets of data not balanced normal distribution (skewness of zero). Kurtosis of the results in table 1 showed that the variables are normally distributed which revealed symmetric distribution with well-behaved tails excluding IntR and SIZE with less than expected value of 3 indicating that symmetric distribution is not well-behaved.

Although kurtosis confirmed that all the variables are heavily-tailed distribution with positive expected values. Jarque-Bera test statistic for the employed variables greater than the critical value at 5% significance level lead to the conclusion that the adopted variables follow a normal distribution.

3.4 Correlation Analysis

The results of correlation matrix for the variables are reported in table 2, which examined the correlation between the dependent and explanatory variables. The results show that ROA is significantly positively correlated with financial structure (DER, LTDER and STDER). This implies that financial structure does improve firm profitability. Observed relationship between firm profitability and macroeconomic fundamentals were mixed as the correlation matrix showed that RGDP is positively and significantly correlated with ROA, while IntR is negatively correlated with ROA. These outcomes confirmed our argument on average RGDP and average IntR as highlighted in the previous section, which appeared to have conflicting stimulus on firm performance. On a similar note, the relationship between

Table 2: Pearson Correlation Matrix

	ROA	DER	LTDER	STDER	RGDP	IntR	SIZE	AGE
ROA	1							
DER	0.041	1						
LTDER	0.166*	0.815**	1					
STDER	0.170**	0.899**	-0.019	1				
RGDP	0.163*	0.070	0.151*	0.113	1			
IntR	-0.073	-0.025	-0.054	-0.051	0.194**	1		

SIZE	0.396**	0.134*	0.231**	0.166*	0.528**	-0.410**	1	
AGE	-0.048	0.126	0.064	0.071	-0.218**	0.079	-0.041	1

ROA is the ratio of profit before interest and tax to total assets, DER is the total debt to equity ratio, LTDER is the ratio of long term debt to equity, STDER is the ratio of short term debt to equity, RGDP is Real Gross Domestic Product growth rate, IntR is the weighted average lending rate of commercial banks, SIZE is the natural log of total assets of the sampled firms and AGE is log of number of years since inception to the date of observation. ** . Correlation is significant at the 0.01 level (2-tailed) and * . Correlation is significant at the 0.05 level (2- tailed).

ROA and firm-specific characteristics depicted that firm size is positively correlated with firm profitability, while firm age on the other had established negative correlation with firm profitability. The cross sectional correlation between firm profitability and age that appeared to be insignificant suggest a weak experience effect of the sample firms in relative sector. The positive and significant correlation between firm profitability and financial structure and the observed mixed outcomes for macroeconomic fundamentals and firm-specific variables provides the preliminary evidence for examining stated models.

IV. EMPIRICAL ANALYSIS

4.1 Regression Design

This study examines the effects of financial structure on the profitability of the firms. By considering the effects of macroeconomic variables instability, this study specifically examines whether the effects of financial structure on firm profitability are sensitive to macroeconomic fundamentals. To mitigate the possible problems of unobservable and constant heterogeneity, this study performs the Panel Least Square, Fixed Effects and Random Effects estimations, following Javed et al. (2014), Foo et al (2015), and Mwangi et al. (2014).

4.2 Regression Results

The negative and significant effects of DER on firm profitability were observed. This is consistent with the pecking order theory argument that the level of asymmetric information problem between insiders and outsider of a firm determines the increase cost of external capital. In the work of Brounen et al. (2005), studying capital structure policies in Europe confirmed that the degree of asymmetric information determines the relative costs of each source of finance. In this end, financing decisions are driven by the costs of adverse selection that arise because of information asymmetry between better informed managers and less informed investors (Hovakimian et al., 2004). Thus implies a firm is better financed by internally generated funds than external funds (Myers & Majluf, 1984).

Table 3: Effect of Financial Structure and Macroeconomic Fundamentals on Firm Profitability

Intercept	-0.334	(-11.750)***
Financial Structure Variables		
DER	-0.006	(-8.653)***
LTDER	0.009	(10.307)***
STDER	0.012	(12.581)***
Macroeconomic Variables Instability		
RGDP	-0.010	(-10.418)***
IntR	0.008	(11.316)***
Control Variables		
SIZE	0.022	(25.452)***
AGE	-0.024	(-5.165)***
R-squared	0.211	

The table shows the effect of financial structure and macroeconomic fundamentals on firm profitability in panel least squares estimations. ROA is the ratio of profit before interest and tax to total assets, DER is the total debt to equity ratio, LTDER is the ratio of long term debt to equity, STDER is the ratio of short term debt to equity, RGDP is Real Gross Domestic Product growth rate, IntR is the weighted average lending rate of commercial banks, SIZE is the natural log of total assets of the sampled firms and AGE is log of number of years since inception to the date of observation.

Significant at the 1% level is denoted by ***.

On the other hand, the positive and significant coefficients of LTDER and STDER seem to be inconsistent with the outcome of DER. This confirmed the assertion made earlier on the high cost of debt capital driven by high dependent on bank loans by the sample firms. Though consistent with cost-benefit argument of trade-off theory and tax shield benefit found by Miller (1977) to contribute to incremental value of shareholders' earnings. The mixed outcomes between DER and other two measures of financial structure is also an indication of frequent changes in debt capital of sample firms which are highly associated with systematic depreciation of firms' assets attributing to high cost of debt financing. In addition, the study observed mixed outcomes between the two employed variables for macroeconomic variables instability.

The coefficient of RGDP recorded negative and significant impact on firm profitability. This is an indication that the state of the economy does not allow firms to optimize its potential. On the contrary, coefficient of IntR established positive and

significant effect on firm profitability. Opposing the findings of Hasan et al. (2014), their study found interest rate to impact negatively on performance of firm in a case of non-financial sector. The mixed outcomes however support the positions of extant literatures on the effects of macroeconomic variables instability on firm profitability. Jacobson et al. (2011) established that nominal interest rate and output gap as the two key macroeconomic factors affecting business defaults. The literature contends that macroeconomic fundamentals have the potential to improve or degrade the profitability of the firm and reflection of systematic risk deteriorating macroeconomic conditions will increase systematic risk which can degrade the performance of the firm (Jubaedah & Yulivan, 2015). In the same note, the cyclical nature of the macro economy leads to expectations that the slowdown in investments as a result of the contracting monetary policy will result to lower future profits and performance of the firms.

In addition, the evidence on the effect of macroeconomic fundamental revealed that high economic activity that drive to strong demand for credit often result to monetary policy tightening as a way to control inflation and to stop the economy from blowing bubbles. Thus shed light that interest rate is expected to increase in a period of high economic activity, as monetary policy enters a phase of contradiction. Also change in the quantity of funds available to undertake investment decisions or plans of the firms as well as changes in firm's demands for funds alters interest rates which, in turn, affect marginal utility of capital, consumption decisions and profitability of a firm.

The literature contends that firm with large size have a greater variety of capabilities can utilize the high leverage ratio efficiently with relative positive returns (Titman & Wessels, 1988). Although average firm size of 20.03% in this study is much smaller due to some sample firms with very low total assets, recorded positive and significant relationship with firm profitability. This is an indication that size of our cross sectional study is conformity with literature. However, is unclear whether the negative and significant effects of firm age on firm profitability is due to major of cross-sectional firms are in their early stage as depicted in previous section with average of 3.74% or as a result of cross-sectional firms not leveraging on their experience in their relative industry. Such outcome seemed inconsistent with Durand & Coeurderoy (2001) that found a first-mover advantage in terms of organizational performance and Hajipour & Gholamzadeh (2010) found that order of entry and product positioning affect profitability.

Apparently, this confirms the important of firm-specific factor given the prevailing condition of the economy. Hence strengthening the argument that large firms tend to be more diversified and less prone to economic failure (Titman & Wessels, 1988), also that order of entry affect firm profitability (Hajipour & Gholamzadeh, 2010). In addition, larger firms are less likely to face possibility of financial distress and have lower expected bankruptcy costs compare to

smaller firms (Song, 2005; Suhaila & Wan Mahmood, 2008). An interesting characteristic of macroeconomic fundamentals is to facilitate much of it takes throughout the growth in the size of existing organisation. Also the size and performance of firms both depend upon financial ratios and macroeconomic variables (Rehman et al., 2014).

V. CONCLUSION

This study extends the literature of financial structure theory by considering the effects of financial structure on firm profitability and investigates whether these effects are sensitive to macroeconomic fundamentals. The literature indicates that optimal financial structure ensure that marginal benefit accrued from the use of debt capital outweigh marginal cost of debt. However, weak fundamentals and high market uncertainties may lead to high monitoring and bonding costs and in turn high weighted average cost of capital. Unbalanced debt equity ratio in foregoing macroeconomic fundamentals may lead to bankruptcy if negative earnings persist. This shed light on the need for financial structure mechanism that ensures a better trade-off between risk and return. As noted earlier, the evidence indicates that financial structure of the firms are subjected to asymmetric information, high monitoring and bonding costs resulting to high weighted average cost of capital to the firms. In uncertain and turbulence economy, financial structure effects on firm profitability is found to be relatively dynamic and affects other corporate decision making process differently. In addition, the study observed the significant role of firm-specific fundamentals in a given macroeconomic fundamentals. The results of the study support the argument that with existence of asymmetric information and market uncertainty a firm is better financed by internally generated funds than external funds.

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Appendix

S/N	SAMPLE FIRMS	SECTOR
1	OKOMU OIL PALM CO. PLC	AGRICULTURE/AGRO-ALLIED
2	PRESKO PLC	AGRICULTURE/AGRO-ALLIED
3	GUINNESS NIG. PLC.	BREWERIES
4	NIGERIAN ROPES PLC.	BUILDING MATERIALS
5	BERGER PAINTS NIGERIA PLC.	CHEMICAL&PAINTS
6	TRANS-NATIONWIDE EXP. PLC.	COMMERCIAL/SERVICES
7	NCR (NIGERIA) PLC.	COMPUTER AND OFFICE EQUIPMENT
8	CHELLARAMS PLC.	CONGLOMERATES
9	UNILEVER NIG. PLC.	CONGLOMERATES
10	SMART PRODUCTS NIG. PLC	EMERGING MARKETS
11	CUTIX PLC	ENGINEERING TECHNOLOGY
12	NESTLE NIG PLC.	FOOD/BEVERAGES&TOBACCO
13	FIRST ALUMIN. NIG. PLC.	INDUSTRIAL/DOMESTIC PRODUCT
14	VITAFOAM NIG. PLC.	INDUSTRIAL/DOMESTIC PRODUCT
15	BETA GLASS CO. PLC.	PACKAGING
16	MOBIL OIL NIG. PLC.	PETROLEUM(MARKETING)