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Research Article

Empirical Investigation of Determinants of Financial Performance of Listed Oil and Gas Companies in Nigeria

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Abstract: The Oil and Gas sector has been the main stay of the Nigerian economy since independence in 1960. It is one of the choice sectors in Nigeria, unfortunately a review of financials of firms in that sector does not show significant growth in profitability over the years. This study was therefore conducted to ascertain the determinants of financial performance of the listed oil and gas companies in Nigeria. The ex-post facto research design technique was adopted as the study was experimental. This was to enable the researchers examine the influence of both the internal and external variables on the financial performance of the listed oil and gas companies in Nigeria. The dependent variable was: Returns on Assets (ROA) and while the independent variables were: Internal Variables-Capital Structure (CAS), Liquidity (LQ), Size (SZ), Age (AG), Sale Revenue Growth (SRG), Profit Margin (PM) and Tangibility (TAN) and the External Variables-Inflation Rate (IFR) and Growth Rate of Real Gross Domestic Product (RGDP). The Statistical Package for Social Sciences (SPSS) was used to analyze the data collected and multiple linear regression was used to test the hypotheses at 5% level of significance. Out of a total of 12 listed Oil and Gas companies as at 31st December 2018, 6 were selected using judgmental sampling technique. From the regression results, CAS, SZ, AG and PM were significant in the model. Adjusted R-Square showed that 80% variations in ROA was explained by the influence of internal and external variables (CAS, LQ, SZ, AG, SRG, PM, TAN, IFR and RGDP). It was discovered that capital structure, profit margin, size and age had a significant impact on the financial performance of the listed oil and gas companies in Nigeria and that both the internal and external variables had joint significant influence on the financial performance of the listed oil and gas companies in Nigeria. It was recommended that the liquidity of the oil and gas companies should be effectively managed by reducing excessive current assets in their financial statements, the total assets should be reduced by either disposing some the investments or cease from acquiring more assets in the companies and also more debt capital should be obtained in the listed oil and gas companies by new issues of debts instruments.

Keywords: Financial performance, Capital structure, Liquidity, Sales revenue growth, Inflation rate, Real Gross Domestic Product.

1.0 INTRODUCTION

The Nigerian oil and gas industry has been in existence since the discovery of crude oil in 1956 by the Shell Group. However, the sector was mostly controlled by multinational corporations until the early 1990s when Nigerian companies began to enter into the industry. The participation of indigenous companies in the oil and gas industry in Nigeria was boosted with the implementation of the Nigerian Content Directives issued by the Nigerian National Petroleum Corporation (NNPC) in 1977 and eventually, by the promulgation of the Nigerian Oil and Gas Industry Content Development (NOGICD) Act in 2010 (Obara & Nangih, 2017). The Act seeks to stimulate the use of Nigerian companies/resources in the award of oil licenses, contracts and projects (Effiong, 2010; KPMG, 2014.

The oil and gas sector is an important sector that have undergone series of reforms in Nigeria. These reforms were to ensure that the operations of oil and gas companies in Nigeria impact positively to economic growth and development (Adelegan, 2017). The oil and gas sector is not commonly found in other countries'

economy. This is owing to the fact that not every country is endowed with the natural resources known as crude oil. The Nigerian economy is mostly dependent on the oil and gas sector, which accounts for about 95% of its foreign exchange earnings, 40% or more of its GDP and 75% of Federal Government total revenue (Nwaolisa & Chijindu, 2016; KPMG, 2014). This encouraged the Federal Government of Nigeria to initiate policies and regulatory framework to attract more investment, guarantee increase production capacity and ensure a sustainable environment.

The financial performance of entities, in terms of profitability, is mainly influenced by the nature of businesses operated, the possible legal, political and environmental regulations, which constitute an important item of public policy within the scope of their operation. The nature of business a firm operates defines the risks attached to such business and risk constitutes a significant factor in the profitability of the firm's operation. Higher financial risks establish enormous threats to firms' profitability, but they are likely to attract huge amount of profits (Nwaiwu & Oluka, 2018).

Oil and gas firms is one of the fastest growing and highly-risky companies in Nigeria. But unfortunately, from the annual reports of the listed oil and gas companies in Nigeria, it seems that the profitability is not growing significantly over the years. The profits of each of the listed companies over years is fluctuating and some of the companies declared losses inclusion of Forte Oil Company (2010-2011); MRS Oil Nigeria Plc (2018) and Oando Plc (2014-2018). The role of oil and gas firms in the economy of Nigeria call for the essence of this research study to be conducted as to ascertain those variables, both internal and external, that determine the financial performance of the oil and gas firms in Nigeria. Researchers (both local and international) have carried out studies to investigate the determinants of financial performance of firms generally other than the oil and gas firms (Ani, Ugwunta, Ezeudu, & Ugwuanyi, 2012; Bashir, Abbas, Manzoor, & Akram, 2013; Olalekan & Adeyinka, 2013; Ejoh & Iwara, 2014; Enekwe, Agu & Eziedo, 2014). They had ascertained that the internal variables that determine the financial performance of firms are: firm's size, firm's age, tangible assets, leverage, capital structure, liquidity, capital adequacy and among others and the external variables are: inflation, Gross Domestic Product (GDP) (economic growth), interest rates and among others.

Researchers have agreed that there are many financial performance indicators (Ogunbiyi & Ihejirika, 2014; Olaoye & Olarewaju, 2015; Muraina, 2018; Ejike &Agha, 2018). These include: Returns on Assets (ROA), Returns on Equity (ROE), Returns on Capital Employed (ROCE), Earnings per Share (EPS), Revenue growth and among others. The higher the financial performance indicators, the better the financial performance for the year (Chai, 2009). Higher rate of any financial performance indicator is influenced by certain variables (Ejoh & Iwara, 2014; Olaoye & Olarewaju, 2015). This is the focus of the study as to identify those variables that affect the financial performance either positively or negatively in the listed oil and gas companies in Nigeria.

All the sectors in Nigeria is expected to contribute to economic growth and development in the country. Oil and gas sector is very essential to the economy of Nigeria and also contribute most to the development of the economy because of the role of the firms. The sector contribute about 75% in average to the Federal Government total revenue in Nigeria (Nwaolisa & Chijindu, 2016; KPMG, 2014). Determinants of financial performance of firms other than oil and gas had been conducted such as deposit money banks, insurance companies and among others (Olaoye and Olarewaju, 2015). But in the area of oil and gas companies, limited studies were carried out. Listed oil and gas companies are supposed to declare larger profits every year because of the patronage the sector has. What are the key variables that can contribute to the improvement in performance of the listed oil and gas companies in Nigeria? The determinants of financial performance of oil and gas firms in Nigeria is essential owing to the fact that higher performance drives long-term growth, survival of the firms and maximization of shareholders' wealth, which in turn can influence the economy of Nigeria positively.

1.1 Objectives and hypotheses of the study Is To Ascertain the Determinants of Financial Performance of the Listed Oil and Gas Companies in Nigeria.

The Specific Objectives Of The Study Are To:
➢ Examine the influence of internal variables on financial performance of the listed oil and gas companies in Nigeria.
➢ Evaluate the effect of external variables on financial performance of the listed oil and gas companies in Nigeria.
➢ Determine the influence of internal and external variables on financial performance of the listed oil and gas companies in Nigeria.

The Following Hypotheses Were Formulated In Line With The Objectives Of The Study And Stated In Null Forms:

Ho₁: There is no significant influence of internal variables on financial performance of the listed oil and gas companies in Nigeria.

Ho₂: There is no significant effect of external variables on financial performance of the listed oil and gas companies in Nigeria.

Ho₃: There is no significant impact of internal and external variables on financial performance of the listed oil and gas companies in Nigeria.

1.2 The Historical Development of Oil and Gas Production in Nigeria

Oil and gas exploratory activities in Nigeria commenced in 1908 when the colonial government gave a royal contract to the Nigerian Bitumen Corporation (a German entity) and British Colonial Petroleum (a colonial chartered corporation) (Iledare, 2008). The exploratory activities started in Araromi area in Western Nigeria (Obara and Nangih 2017). However, the activities were abruptly terminated due to the First World War in 1914. Exploratory activities resumed in 1937 when Shell Petroleum Development Company of Nigeria was awarded the sole exploratory license covering the whole territory of Nigeria to extract oil. This effort was also interrupted by the outbreak of the Second World War, but resumed in 1947. After some years of intensive and rigorous effort in drilling, oil was discovered in commercial quantities at Oloibiri in Bayelsa State in 1956. Actual production of adequate quantity of oil was recorded in 1958.

After Nigeria got independence in 1960, the indigenous government opened up the oil industry by giving exploratory rights in onshore and offshore areas of the Niger Delta region to Mobil, Agip, Safrap (now Elf), Tenneco (now Texaco) and Amoseas (now Chevron) (KPMG, 2014). This act divested Shell of its monopoly status, though it was and still the largest international oil company operating in Nigeria. As more companies joined in the production, Nigeria's oil production rose in quantity and thereby making Nigeria to be a major oil producing country in the world. Initially government interest in the oil industry was limited to the collection of royalties, lease rentals and taxes, but there was a change with the United Nations Resolution on Permanent Sovereignty over Natural Resources which prompted the Nigerian Government into taking positive steps to control the oil and gas industry by enacting the Petroleum Act in 1969, which vested the ownership and control of all petroleum resources in the Federal Government.

Subsequently Nigeria joined the Organization of Petroleum Exporting Countries (OPEC) in 1971 and in furtherance of OPEC's resolution urging member states to acquire controlling interest in businesses held by foreign companies, Nigeria's military government established the Nigerian National Oil Corporation (NNOC) by a Decree in 1971 (KPMG, 2014; Nwaiwu and Oluka, 2018). In pursuit of the powers granted by the Decree in 1971, the NNOC (which later became NNPC in1977) acquired controlling interests in the oil companies operating in the country. Presently, the Nigeria National Petroleum Corporation (NNPC) have Joint Venture Contracts (JVCs) with some major International Oil Companies (IOCs) in the world and they include:

(i) Shell (SPDC), which accounts for about 40 percent of Nigeria's total oil production. The joint venture is composed of NNPC (55%), Shell (30%), Elf (10%), and Agip (5%).
(ii) Chevron (CNL) composed of NNPC (60%) and Chevron (40%).
(iii) Mobil (MPNU) composed of NNPC (60%) and Mobil (40%).
(iv) Agip (NAOC) composed of NNPC (60%), Agip (20%) and Phillips Petroleum (20%).
(v) Elf (EPNL) composed of NNPC (60%) and Elf (40%).
(vi) Texaco Overseas (TOPCON) composed of NNPC (60%), Texaco (20%) and Chevron (20%).

In the downstream, NNPC has four refineries in Kaduna, Port Harcourt and Warri that were built between 1978 and 1985 with a total installed capacity of 445,000bpd and these refineries are linked with a network of pipelines and Depots. In 1977, when NNPC was created, its primary function was to oversee the regulation of the Nigerian oil and gas industry with a secondary mandate for upstream and downstream developments, but today it has been transformed into a regulatory and business corporation. The Nigerian government in 1988 restructured the NNPC into six Directorates namely; Exploration and Production, Refineries and Petrochemicals, Finance and Accounts, Commercial and Investment, Corporate Services, and Gas and Power under a Group Managing Director.

The Petroleum Act of 1969 provided for three types of licenses for upstream operations and these are: Oil Exploration License (OEL), Oil Prospecting License (OPL) and Oil Mining Lease (OML). The Minister of Petroleum Resources is empowered to grant licenses to only Nigerian citizens or companies incorporated in Nigeria. The OPL and OML confer on the grantee the exclusive right to conduct petroleum operations in the granted area and to produce and dispose of the produced hydrocarbons. The OPL is granted for a primary term of five years for onshore and ten years for offshore and inland basins, while the primary term of the OML is granted for twenty years, renewable for another twenty years. The OPL or OML is deemed to have attained commercial quantity if there is a production of 10,000 bpd from the lease area.

Finally, in Nigeria, the principal agencies responsible for regulating the oil and gas firms are: Ministry of Petroleum Resources (MPR), Directorate of Petroleum Resources, Nigerian National Petroleum Corporation (NNPC), Federal Ministry of Environment (FME) and Federal Inland Revenue Service (FIRS).

The study is divided into five sections. Section one is the introduction, section two is the literature review and theoretical framework, section three is the methodology, section four is the data analysis and results; and section five is the conclusion and recommendations.

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The review of the related literature was conducted fundamentally under three headings known as the conceptual review, the theoretical review and as well as the empirical review.

The conceptual review was carried out on the following such as: the concept of financial performance, internal variables, which include, capital structure, liquidity, size, age, sales revenue growth, profit margin and tangibility. On the other hand, the external variables include inflation and economic growth.

2.1 Financial Performance

The concept of performance has gained increasing attention in recent decades, being universal in almost all spheres of the human activities (Folan, Browne & Jagdev, 2007). Performance is a subjective perception of reality, which explains the crowd of critical reflections on the concept and its measuring instruments. The concept of entity's performance is often used in the scholarly literature, but it has not been defined and be given a clear and specific meaning that can be understood by everybody. Despite the fact that large number of concepts has been employed in defining performance, but it is more confusing. In this case, it is defined based on what an individual considers to be yardsticks that are capable of driving some benefits to entities. Some of this yardsticks are: productivity, efficiency, effectiveness, economy, earning capacity, profitability, competitiveness and so on (Rolstadas, 1998).

Currently there are a variety of definitions attributed to the concept of performance due to its subjective nature. In the literature there are many articles or studies that define the concept of performance. Folan, *et al.*, (2007) believed that the performance is concerned with achieving the goals that were given or assigned to individual employee in conjunction of enterprise orientations. In his opinion, performance is not a mere finding of an outcome, but rather it is the result of a comparison between the outcome and the objective stated. Unlike other researchers, Folan, *et al.*, (2007) consider that this concept is actually a comparison of the outcome and the objective. described the performance as future-oriented, designed to reflect particularities of each entity/individual and is based on a causal model linking components and products. He defines a successful entity as one that will achieve the goals set by the management alliance and not necessarily one that

achieved them. Thus, performance is dependent as much of capability and future.

For Chai (2009), performance is not an objective reality waiting somewhere to be measured and assessed, but a socially constructed reality that exists in people's minds, if it exists somewhere. According to the author, performance may include: components, products, consequences, impact and can also be linked to economy, efficiency, effectiveness, cost effectiveness or equity. Both Lebas (1995) and Chai (2009) consider performance as subjective and explanatory and not being related to the cost lines, which emphasizes the ambiguous nature of the concept. Rolstadas (1998) believed that the performance of an organizational system is a complex relationship involving seven performance criteria that must be followed and these include: effectiveness, efficiency, quality, productivity, quality of work, innovation and profitability. Performance is closely related to the achievement of the benchmarks listed above which can be regarded as performance objectives.

The researchers' focus is on the accounting perspective. One of the main purpose of every companies is to maximize profits. This is why strategies are formulated by management of companies in order to guide the smooth running of the firm. Financial performance of an entity is captured in the statement of profit or loss account and other comprehensive incomes. Profit is the indicator of financial performance of an entity (Matar & Eneizan, 2018) . One can simply say that the higher the profit of an entity for a given period of time, the higher the financial performance and vice versa. The statement of profit or loss account and other comprehensive income as stipulated by the International Accounting Standard (IAS 1: Presentation of Financial Statements) usually presents different types of profits such as gross profit, operating profit, Profit before tax and Profit for the year. The financial statements of the listed oil and gas companies in Nigeria usually presents all these types of profits mentioned.

Financial performance of an entity cut-across the different kinds of financial ratios in accounting such as profitability, liquidity, leverage, investment and efficiency ratios (Pandey, 2010; Enekwe, *et al.*, 2014). Profitability ratios are ratios computed from profits of firms. They include gross profit margin, net profit margin, ROA, ROE and among others. Liquidity ratios show the degree of solvency of an entity in a short-term. They include current ratio, quick ratio and cash ratio. Leverage ratios show the relationship between debts and equity in the capital structure of firm. They include debt ratio, debt-equity ratio and interest coverage ratio. Investment ratios are ratios computed from worth of shareholders. They include price/earnings ratios, EPS, dividend yield ratio, dividend covered and among others. Efficiency ratios

are ratios that show the ability of management of entities in utilizing their assets effectively to generate revenue. They include inventory turnover, payable period, receivable collection period, asset turnover ratio and among others. In this study, the researcher concentrated on the profitability ratios as measures of financial performance of entities.

The researchers use the ROA as financial performance indicator or proxy. This because of the fact that the oil and gas companies in Nigeria are driving towards expansion and one of the yardstick for measuring the level of expansion of an entity is the total assets. This is considered appropriate because the researcher will want to see how far the various independent variables, both the internal and the external variables, have contributed to the financial performance of the oil and gas companies in Nigeria.

2.2 Internal Variables That Determine Financial Performance

The variables that determine financial performance internally considered by the researcher in the present study are capital structure, liquidity, size, age, revenue growth, profit margin and tangibility.

2.2.1 Capital Structure

The capital structure of a firm is an essential tool in the existence of entities because it supports in determining their growth, development and sustainability for period of time. Capital structure is the total combination of sources of finance used by an entity in financing its operations which include retained earnings, equity and debt finance (Akeem, Edwin, Kiyanjui & Kayode, 2014). Capital structure has been considered as one of the most significant factors in firm financing policy due to its critical role in corporate performance. Capital structure decision is essential for different kind of business establishment arising from the need to maximize the wealth of businesses' stakeholders and because of the fact that such decision has a substantial impact on the entities' ability to compete in the competitive business environment (Cekrezi, 2015). The capital structure is a framework which depicts how equity and debt are employed for financing the firm's operations to yield optimum return for the stakeholders to maximize their wealth at a given time.

The problem of choosing between equity and debt are confronted by many firms, especially in funding their long term investment opportunities. To finance the larger volume of a debt depends on the amount of interest on debt, income taxes, imperfections in the market and corporate income. Long term debt will bring about expansion desire of a firm when the rate of interest is minimal. When there is an increase in leverage, there is a possibility that the company can be confronted with financial distress. However, the negative effect of an increase in leverage of a firm will lead to firm's stock unattractive to investors and this can lead to financial distress. Firms might find it difficult to satisfy a required service obligation, which could lead to not only administrative expenses and legal expenses not paid but also bankruptcy.

2.2.2 Liquidity

Liquidity, of a company, refers to the degree to which current liabilities that will mature in the next one accounting year can be paid from the total current assets of the company without altering the operating processes of the company. Current assets of a company include inventory, account receivable, cash and bank balance, payments in advance, marketable securities (Treasury bill), among others (Ejike & Agha, 2018). Current assets are assets that can be easily converted into cash within one accounting period. On the other hand, current liabilities include trade payable, bank overdraft, outstanding expenses, income tax liability and among others. Current liabilities are present obligations that are expected to be paid within one accounting year. It can be measured by calculating the ratio between current assets to current liabilities (current ratio).

A company is highly liquid when its total current assets is greater than the total current liabilities at a particular period of time (Bashir, *et al.,* 2013). Higher liquidity allows a company to manage the unforeseen risk factors and fulfill the needs to pay off its obligations even when the earnings are at low level. Current ratio is one of the most familiar measure of working capital among the accountants and financial analysts. Current ratio is a measure of relative liquidity that takes into account differences in absolute size. It is used to compare companies with different total current assets and liabilities. Liquidity of an entity shows the solvency of the company in a short-term. When the liquidity of a firm is properly managed, it can have a positive impact on the financial performance of the company.

2.2.3 Size

The size of a company refers to the total assets of the company (Olaoye & Olarewaju, 2015). An asset is defined as a resource controlled by an entity as a result of past transactions from which future economic benefits can flow into the entity (IAS 1: Presentation of financial statements). The total assets of a company are made up of current assets and non-current assets (Cekrezi, 2015). Current assets are assets that can be easily converted into cash within one accounting period. Non-current assets are fixed assets that are used by an entity to generate income for a longer period of time. Every entity is a going concern and as such, for the fact that they want to remain in business, they continue to invest and acquire more assets for the purpose of the continuous existence (Abubakar, Sulaiman and Haruna, 2018). By so doing, the size is growing continuously too. Increase in profitability of entities determine the possibility of acquiring more assets in the companies.

This is because as the profits are growing the management of companies continue to invest the available funds and thus acquire more assets.

2.2.4 Age of the Company

Age of a company has to do with the duration or the period a company has been in business since its establishment. In this case, the age of any company can be regarded as the number of years of the company from the date of incorporation or the date listed in the stock market. It is expected that the longer the age of a company, the greater the market share of the products produced by the company and vice versa. When the products of a company are being patronized by various customers as a result of duration of the company in business, the financial performance of the company will improve simply because of the fact that the profitability will rise as a result of increase in sales volumes (Wanjugu, 2014). The management of the listed oil and gas companies in Nigeria will also expect to increase the market share. It is possible to say that the age of a company should have a positive relationship with the financial performance of the firm because of the reputations that the company has as a result of the age of the company in business (Omondi and Muturi, 2013).

2.2.5 Sales Revenue Growth

Sales growth denotes an increase in revenue arising from sales of products over a period of time (Grace, Ann and Onodugo, 2016). When decreases in sales occur, the outcome becomes a negative growth. The ratio is calculated by trend analysis. Sales growth is measured using the sales growth ratio and the measurement helps to show how fast the firm is growing in terms of its revenue. It tries to show the rate of growth achieved by a company in its operating revenue from the previous period. The ratio is usually expected to be high every year over the previous year if the business must achieve increase in financial performance. The expectation is that increase in sales revenue will generate a comparable increase in the profitability of the firm.

2.2.6 Profit Margin

Profit margin is one of the profitability ratios used to indicate the relationship between total profits after tax and the revenue for a particular period of time. The higher the ratio, the better the financial performance of company (Onyekwelu, Nnadi & Iyidiobi, 2018). Profit margin is calculated as profit after tax divided by revenue of company. So, in order for the financial performance of entities to be improved, there must be an improvement in profit margin because the changes determine financial performance of the entities.

2.2.7 Tangibility

Tangibility of a company has to do with the total non-current assets of the company. Tangible assets are referred to as property, plant and equipment (PPE) of an entity.

According to IAS 16, PPE is defined as non-current assets held for rent, administrative purpose and for supply of goods and services. It includes: plant and machinery, motor vehicle, land and building and among others. From the definition of tangible assets (PPE), it can be said that tangibility is a principal components of profit generation which can affect the financial performance of an entity (Bashir, *et al.*, 2013). It is calculated as property, plant and equipment (PPE) divided by total assets. Investment in non-current assets is one of the main strategy of management of entities. This is because of the impact that non-current assets have on revenue generation of entities which in turn determine the financial performance. Due to technological changes, management of companies will always consider the appropriate time to acquire non-current asset that can help to ease the various tasks of the entity and raise the profitability as well.

2.3 External Variables That Determine Financial Performance

The main external variables considered by the researcher to be the determinants of financial performance of companies in Nigeria are: inflation and economic growth (GDP). These are elaborated below:

2.3.1 Inflation

The concept of inflation has been defined as a persistent rise in the general price level of goods and services in a country over a long period of time (Ahuja, 2016).

Inflation has been inherently linked to money supply in an economy and it is a situation when there is a continuous rise in price of goods and services for a longer period of time and not for a shorter period of time. Inflation has been widely described as an economic situation when the increase in money supply is faster than the new production of goods and services in the same economy. Economists usually try to distinguish inflation from an economic phenomenon of a onetime increase in prices or when there are price increases in a narrow group of economic goods or services. The term inflation describes a general and persistent increase in the prices of goods and services in an economy (Muraina, 2018; Ali, Mahmoud, Fadi & Mohammad, 2018). This is why inflation is one of the macroeconomic issues often handled by the government of a country because of its inimical effect. To tackle the negative effect of inflation in a country by government, it is often captured by the policy makers as one of the macroeconomic objectives known as relative price stability.

There are three major types of inflation according to neo-Keynesians. The first is the demand-pull inflation, which occurs when aggregate demand is

in excess of available supply (capacity). The second is known as cost-push inflation, which occurs in the event of a sudden decrease in aggregate supply, due to an increase in the cost of production where there are no suitable alternatives. This type of inflation is becoming more common today than before, as evident in the rising price of housing, energy and food. It is often reflected in price/wage spirals in firms, whereby workers try to keep up their wages with the change in the price level and employers pass on the burden of higher costs of consumers through increase in prices. The third type of inflation is referred to as structural inflation which is also known as built-in inflation, usually prompted by changes in monetary policy. High inflation in an economy affect the financial performance of companies negatively because of the fact that resources used by companies are purchased from the external environment that takes into consideration the economy situation of the country at a particular time (Olaoye &Olarewaju, 2015) . This is why it is considered by researchers as one of the factors that affect the financial performance of companies externally.

2.3.2   Economic Growth

Economic growth is defined as an increase in economic performance indicators of any country at a particular period of time. The most important economic indicator is the Gross Domestic Product (GDP) of a country. The GDP is one of the most common measures on the state of the economy for any country as stated earlier. GDP is the total market value of all goods and services produced in a country for a given time period (Muraina, 2018) . The time period most often used is one year, which is then compared to past years as a way to measure the improvement or decline of a country's economic situation. Generally, the higher the GDP, the better the economy is doing (Adeusi, Kolapo & Aluko, 2014) . If the GDP number drops below the point where it stood during the prior year, then it is assumed that the economy is declining and if the GDP number increases above the point where it stood during the last year, then it is assumed that the economy is improving or making progress (Ahuja, 2016). Basically, there are two types of GDP such as nominal and the real. The real GDP indicates the purchasing power of money in the economy and the nominal GDP is the GDP with inflation. Growth rate of real GDP is often used by researchers because it is considered a better measure of the economic situation at a particular period of time than the nominal GDP (Olaoye & Olarewaju, 2015). When there is economic growth, it is believed that the financial performance of companies should also improve (Adeusi, Kolapo & Aluko, 2014; Olaoye and Olarewaju, 2015; Muraina, 2018). This is because of the fact that companies can invest its available funds and also source for input at cheaper price.

2.4 THEORETICAL REVIEW

Four theories are adopted in this study and they are: stakeholder theory, agency theory, pecking order theory and opened system theory. These are explained below:

2.4.1 Stakeholder Theory

In the middle of 1980, a stakeholder approach to strategy came up. One principal point in this movement was the publication of Richard Edward Freeman. He was generally credited with popularizing the stakeholder concept. The general idea of the stakeholder concept is a redefinition of company. In general, the concept is about what company should be and how it should be theorized. Friedman (2006) states that the company itself should be thought of as grouping of stakeholders and the purpose of the company should be to manage their interests, needs and perspectives.

This theory is related to the present study because of the fact the primary expectation of all the stakeholders of oil and gas companies is that the financial performance should continue to rise so that the oil and gas companies will be in the industry perpetually. From these views, we can see that managers have role to play in the determination of financial performance of companies. Most especially, the internal variables, such as capital structure, liquidity, size and so on, which are under the control of the management (Wanjugu, 2014). This is because of the fact that poor performance of any company must always affect some group of stakeholders negatively. So, it is the duty of the management of company to ensure that sound policies are made in order to cause the internal variables to affect the financial performance positively (Hassan & Farouk, 2014). Hence, the researchers adopted this theory in this study.

2.4.2 Agency Theory

Agency theory was developed by Jensen and Meckling (1976). They defined an agent as a person who acts on behalf of another person- the principal, in dealing with other people. The agent acts on the name of the principal and commits the principal to agreements and transactions. In company law, the directors act as agents of the company. The board of directors as a whole, and individual director, have the authority to bind the company to contractual agreements with other parties.

As agents of the company, directors have a fiduciary duty to the company. A fiduciary duty is a duty of trust. A director must act on behalf of the company in total good faith and must not put his personal interests before the interests of the company

This theory relates to the present study because of the fact that it is concerned with long-term wealth of the shareholders who are the principal owners of the oil

and gas companies. Determinants of financial performance oil and gas companies is very essential to the management of these companies as it can help to reduce the conflict of interest between the management (agent) and the shareholders (principal) of entities. This is possible because the theory points out clearly the main goal and objective the management should focus for the purpose of maximizing the wealth of the shareholders. So, as the key financial performance indicators, the management of oil and gas companies can then focus on those variables. The theory is adopted in the present study.

2.4.3 Pecking Order Theory

The pecking order theory states that companies have a preferred hierarchy for financing decisions and maximize value by systematically choosing to finance new investments using the cheapest available source of funds. This theory was developed by Myers and Majluf (1984). According to Myers and Majluf (1984) companies would only issue equity as a last resort when debt capacity has been exhausted. This theory is based on two assumptions about financial managers-firstly, that there is asymmetric information where managers know more about the firm's current earnings and future growth opportunities than the shareholders and there is a strong desire to keep such information proprietary. Secondly, managers will act in the best interests of existing shareholders. In this case, they will forgo a positive NPV project if raising fresh equity would give more value to the firms than committing funds on projects (Myers and Majluf, 1984).

This theory relates to the present study because of the fact that it is concerned with capital structure of companies. Capital structure is one of the internal variables considered by the researcher in the present study to influence the financial performance of the oil and gas companies in Nigeria. So, the relationship between debt and equity capital in the listed oil and gas companies can affect the financial performance either positively or negatively. This is how related the theory is to the study. Thus, the theory is adopted in the present study.

2.4.4 Opened System Theory

Opened system theory was initially developed by Ludwig von Bertanlanffy (1956), a biologist, but it was immediately applicable across all disciplines. Traditional theorists regarded organizations as closed systems that are autonomous and isolated from the outside world. In the 1960s, however, more holistic and humanistic ideologies emerged. Recognizing that traditional theory had failed to take into account many environmental influences that impacted on the organizational efficiency and effectiveness. In modern time, the opened system theory is embraced by theorists and researchers because of how external environment influence the performance an entity. The term opened system reflected the recent belief that all organizations are unique in part because of the unique environment in which they operate and that they should be structured to accommodate unique problems and opportunities.

From the economic perspective, opened system theory considers the variables that can affect the financial performance of oil and gas companies in Nigeria, which are inflation, economic growth, unemployment and among others. In the present study, the external variables examined are inflation and economic growth. High inflation is detrimental to the financial performance of companies for the fact that it lowers the profitability of companies because of the high cost of raw materials acquired from the external environment (Muraina, 2018; Cekrzi, 2015). Also, growing economic affect the performance of entities positively because in that period, other economic indicators are maintained at minimum level. Economic growth implies that macroeconomic problems are reduced to their barest by the government in an economy. This is how related the theory is to the study. Thus, the theory is adopted by the researcher in the present study.

2.5 EMPIRICAL REVIEW

The empirical review is carried out on the previous studies of other researchers that are related to the present study. However, the review is organized into two categories such as: Studies conducted in Nigeria and studies conducted internationally.

The Studies Conducted In Nigeria Include The Following But Not Limited To:

Olaoye and Olarewaju (2015) conducted a study on determinants of deposit money banks' profitability in Nigeria. The objective of the study was to examine the contribution of bank-specific and as well as macroeconomic factors to the variation in profitability across banks and over time in Nigeria. The ex-post facto method of design was adopted. The data used for the study were secondary in nature and they were obtained from annual audited account and financial report of banks published in the Nigerian Stock Exchange fact book. A panel data of the total fifteen (15) quoted banks covering a period of nine (9) years, from 2004 to 2012, were employed. The fifteen banks were selected because they were listed on the Nigeria Stock Exchange and they had their data readily available at the Nigerian Stock Exchange. The dependent variable was Return on Assets (ROA) which was a proxy of profitability. The results of the findings indicated that variations in ROA that is explained by changes in both internal and external variables in the model was 84.8% (Adjusted-R^2). The researchers concluded that the regression results in the model revealed that there was either positive or inverse relationship between Return on Asset (ROA) and banks specific and macroeconomic variables and recommended that, since Nigerian banking industry is undergoing some technological innovations with

different means of electronic banking and recent embracement of cashless policy, Nigerian deposit money banks must, as a matter of urgency, reshape their loan and advances structure.

Nwaolisa and Chijindu (2016) conducted a study on the influence of financial structure on profitability with special reference to oil and gas firms in Nigeria. The objective of the study was to determine the influence of financial structure on profitability with special reference to oil and gas firms in Nigeria.

The ex-post facto method of design was adopted. The data for the study were gotten from the published annual reports and accounts of ten (10) oil and gas firms listed on the Nigerian Stock Exchange (NSE), which were collected from the Nigerian Stock Exchange (NSE) fact book. The period 1993 to 2013 was carefully chosen for this study. Return on Assets (ROA), Return on Equity (ROE), Profit before Tax (PBT) and Earnings per Share (EPS) were the dependent variables signifying profitability indices of firms. Debt-Equity Amalgam (DEA) and Tax are in independent variables. Debt-Equity amalgam represent the financial structure while tax was a control variable capable of influencing profitability of firms. Panel data analysis was used to analyze the data collected. The overall result of this study indicated that financial structure has negative effect on the profitability of oil and gas firms in Nigeria. The researchers concluded that financial structure had negative influence on profitability of oil and gas firms measured by ROA, ROE, profit before tax and EPS and recommended that oil and gas firms in Nigeria should finance their operations with more of equity capital.

Enekwe, *et al.*, (2014) conducted a study on the effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies in Nigeria. The objective of the study was to investigate the effect of financial leverage on financial performance of companies with particular reference to quoted pharmaceutical companies in Nigeria. The ex-post facto method of design was adopted by the researcher. The research depended heavily on historical data as data used in the analysis were generated from annual financial reports of the selected quoted pharmaceutical companies in Nigeria from 2001-2012, a period of twelve (12) years. The variables that were tested in this study were Return on Assets (ROA), Debt ratio (DR), Debt-equity-ratio (DER) and Interest coverage ratio (ICR). In this study, Financial Performance Proxy Return on Assets (ROA) is our dependent variable while Financial Leverage measured by DR, DER and ICR are our independent variables. From the analysis, DR and the DER had negative effect on the ROA while the ICR had a positive effect on the ROA of the quoted pharmaceutical companies in Nigeria. However, the t-statistics calculated for each of the independent variables were not significant. The

researchers concluded that financial leverage had no significant effect on the financial performance of the quoted pharmaceutical companies in Nigeria and recommended that companies' management should ensure that financial decisions made by them are in consonance with shareholders' wealth maximization objectives which encompasses the profit maximization objective of the firm.

Abubakar, *et al.*, (2018) conducted a study on effect of firms' characteristics on financial performance of listed insurance companies in Nigeria. The objective of the study was to examine the impact of liquidity, size and age on financial performance of Insurance companies in Nigeria. The research design adopted for the study was the ex-post facto design. The study population consisted of all Insurance Companies quoted in the NSE within the period of 2007 and 2016. The sampling technique adopted for the study was census sampling technique. The data used for the study was secondary data obtained from the Annual Reports and Accounts of the companies. Robust regression model was used to test the hypothesis at 1% level of significance. The robust regression results indicated that parameter estimated for Liquidity and Age were found to have significant negative impact on profitability of Nigerian insurance companies at 1% level of significance. Size was found to have significant positive impact on the profitability of Nigerian insurance companies at 1% significance level. R-Squared of 28.15% was an indication that about 28% variation in the profitability of insurance companies in Nigeria was explained by join influence of Liquidity, Age and Size. Significant F-value (47, 45) at 1% level of significance was an evidence that the model was very much adequate to explain the relationship between the variables. The researchers concluded that size of company asset was a determinant of the company's performance and also recommended that companies should convert significant part of their cash and cash equivalent into productive assets that can improve their financial performance.

Grace, *et al.*, (2016) conducted a study on liquidity management and profit performance of pharmaceutical manufacturing firms listed in Nigeria stock exchange. The objective of the study was to examine the impact of liquidity management on the profitability of pharmaceutical companies that are quoted on Nigerian stock exchange. The ex-post facto research design was adopted in the study. The variables studied were liquidity ratio, debt ratio, receivable ratio and sales growth ratio. The researchers used secondary sources of data. The data were extracted from the annual report and financial statements of selected manufacturing pharmaceutical entities in Nigeria from 2000 to 2011. The multiple regression analytical tool was used to analyse the data collected. The findings indicated that liquidity ratio and profitability of the companies' studies are significantly and positively

related. The debt ratio and sales growth ratio had positive but insignificant impact on profitability of the firms. The receivable ratio has a negative impact on the profitability but the relationship was insignificant. The researchers concluded that liquidity ratio had impact on the financial performance of firms and also recommended that the companies should engage experts in the management of their receivables, or train and retrain their managers on management of liquidity.

Ajibola, *et al.*, (2018) conducted a study on capital structure and financial performance of listed manufacturing firms in Nigeria. The objective of the study was to examine the impact of capital structure on financial performance of listed manufacturing firms in Nigeria. The longitudinal design was considered suitable for this study because data on the variables were based within a selected period of time. The study obtained data from published reports of the listed manufacturing companies for each of the periods from 2005-2014. Panel methodology was applied to analyze the impact of capital structure on financial performance of listed manufacturing firms in Nigeria. The findings of the panel ordinary least square showed that a positive statistically significant relationship existed between long term debt ratio (LTD), total debt ratio (TD) and return on equity (ROE) while a positive statistically insignificant relationship between STD (Short term debt ratio) and ROE (return on equity). The researchers concluded that capital structure has a positive impact on financial performance of firms and recommended that companies should employ more of long term debts and also make good capital structures decision to earn profit and carry on their business successfully.

Muraina (2018) conducted a study on determinants of listed deposit money banks' profitability in Nigeria. The objective of the study was to examine the internal factors and external factor affecting profitability of Deposit Money Banks (DMBs) in Nigeria. The study used correlational research design to examine the determinants of profitability of the Deposit Money Banks in Nigeria. Secondary data obtained from the listed Deposit Money Banks' financial statements were analyzed. The independent variables were proxy by Capital Adequacy, Credit Risk and Inflation while profitability was proxy by Return on Assets (ROA). Panel data techniques (fixed and random effects model) were adopted to ascertain the effect of internal and external factors on profitability of the sampled listed Deposit Money Banks. The researcher used Feasible Generalized Least Square (FGLS) to strengthen the outcome of the Hausman specification. The researcher found that internal factors had significantly influenced the deposit money banks' profitability over the study period. The Capital Adequacy had a positive and significant relationship with bank profitability while Credit Risk had a negative and significant relationship with bank profitability during the study period. Also, inflation was also found

to be positively associated with bank profitability and statistically insignificant. It was concluded that the internal factors determined the profitability of the deposit money banks in Nigeria and recommended that the Central Bank of Nigeria (CBN) should maintain a central database called Credit Risk Management System across banks in the country, which would be generating accurate and reliable credit information on bank borrowers as a way of evaluating the repayment capabilities of the customers to be granted credit facilities.

Onyekwelu, *et al.*, (2018) conducted a study on evaluation of firms' corporate financial indicators and operational performance of selected firms in Nigeria. The objective of the study was to examine the effect of firms' growth indicators on operational performance of selected firms in Nigeria. The study adopted the ex-post facto research design. Two oil and gas firms were selected as sample size for the study and they were Total Nigeria Plc, and Oando Plc. Firm size and profit margin of firms were the proxies for operational performance while ROA was the measure for financial performance. Data were sourced from the financial statement of firms studied. Multiple regression was used for analysis of the data collected for the study. Results indicated that both firm size and profit margin had negative and insignificant effect on ROA of the companies studied. The researchers concluded that firm characteristics had negative and insignificant effect on firm performance and recommended that firms should strive to increase their size and profit margin at a level that will positively and significantly affect ROA.

Hassan and Farouk (2014) conducted a study on firm attributes and earnings quality of listed oil and gas companies in Nigeria. The objective of the study was to determine the degree to which firm attributes influences the earnings quality of listed Oil and Gas firms in Nigeria. The population of the study were nine (9) in numbers out of which a sample of Seven (7) were used for the study. Firm attributes as the independent variable was proxy with firm size, leverage, institutional ownership, profitability, liquidity and firm growth), while the residuals from the modified was used to proxy earnings quality. The study covered the period from 2007-2011. The researchers adopted multiple panel regression techniques and data were collected from secondary source through the annual reports and accounts of the firms. The findings revealed that leverage, liquidity and firm growth has a significant positive impact on earnings quality while firm size, institutional ownership and profitability had a significant but negative influence on earnings quality of listed oil and gas companies in Nigeria. It was recommended that the oil and gas companies may choose to go for more debt especially where the interest rate is considerably low and also increase their liquidity asset and turnover.

The Following Studies Were Carried Out Internationally In Relation To The Present Study:

Matar and Eneizan (2018) conducted a study on determinants of financial performance in the industrial firms: Evidence from Jordan. The objective of the study was to examine the factors affecting the financial performance of the Jordanian manufacturing companies. The ex-post facto method of design was adopted in the study. Secondary data were used and has been produced from the Amman Stock Exchange Annual Publication-Financial Statement of industrial companies listed in Amman Stock Exchange for the period 2005-2015. The sample consisted of twenty-three (23) industrial companies. The financial performance was proxy by Return on Assets (ROA). The results showed that the variables of liquidity, profitability and revenues are positively related with the ROA and the variables of leverage and firm size were negatively related with ROA. In addition, the regression results showed that all variables were significant in the model. The researchers concluded that there was significant relationship between the independent variables and the financial performance (ROA) of the Jordanian manufacturing companies and also recommended that manufacturing companies should maintain certain ratios at a particular level so as to achieve competitiveness not only at the local level but also at the global level.

Bashir. *et al.*, (2013) empirically investigated the factors that affect firm's performance: A study of food sector of Pakistan. The objective was to examine the different factors which are significantly affecting firm's performance in food sector of Pakistan for the period 2005-2010. The quantitative research design was adopted and the type of data used was panel/longitudinal and had been collected from the State Bank of Pakistan's Annual Publication-Financial Statement Analysis of companies (non-financial) listed in Karachi Stock Exchange for the period 2005-2010. The researcher selected two companies from the Food sector for comparison as both companies covers the greatest part of overall population of non-financial industry in Pakistan. The multiple linear regression model was used to analyze the data collected for the study. The financial performance was proxy by the return on investment (ROI) and the independent variables were: Long-Term Leverage (LLV), Short-Term Leverage (SLV), Growth (GR), Size (SZ), Risk (RK), Tax (TX), Tangibility (TN), Liquidity (LQ) and Non-Debt Tax shield (NDTS). From the analysis, SLV indicated insignificant and negative relationship with ROI and the LLV indicated significant and positive influence on ROI in food sector of Pakistan. GR showed negative and insignificant relationship with ROI in food sector of Pakistan. SZ showed positive and significant relationship with ROI in food sector of Pakistan. RK showed positive and significant relationship with ROI in food sector of Pakistan. TX showed negative and insignificant relationship with ROI in food sector of Pakistan. TN showed positive and significant relationship with ROI in food sector of Pakistan. LQ showed positive and insignificant relationship with ROI in food sector of Pakistan. NDTS showed positive and significant relationship with ROI in food sector of Pakistan. The researchers concluded that firm's performance in food sector of Pakistan was significantly affected by long term leverage; size, risk, tangibility and non-debt tax shield were the important and significant determinants of firm's performance and also recommended that companies in food sector of Pakistan should keep in mind the above said factor while making financial decision regarding firm's performance in this sector.

Cekrezi (2015) conducted a study on determinants of financial performance of the insurance companies: A Case of Albania. The objective of the study was to provide empirical evidence on the relationship between the performance of insurance companies in Albania and five independent variables (leverage, tangibility, flexibility, size and risk). The ex-post facto design was adopted. Depending on data availability, the study was based on data collected from five insurance companies which operate in Albania. The data were collected from the annual reports published online from the insurers' and from the annual reports delivered to the State Office of Tax during the six-year period 2008-2013. The financial performance was proxy by ROA. From the analysis, total debt ratio has a negative and significant relation to ROA, tangibility has a positive and significant relation to ROA, risk has a negative and significant relation to ROA and flexibility and size was not significant determinants of the level of performance of the insurance companies. The researcher concluded that insurance companies should avoid situations of high levels of leverage since this may lead to bankruptcy if they are unable to make payment on their debt and also recommended that, since the study was only limited to five factors that affect the financial performance of five companies in Albanian insurance market, another research should be conducted to determine other factors that may affect financial performance.

Wanjugu (2014) carried out a study on the determinants of financial performance in general insurance companies in Kenya. The objective of the study was to ascertain the factors determine profitability of non-life insurers operating in Kenya. The descriptive survey research design was adopted in the study. The sample size for the study encompassed all the twenty-three (23) general insurance companies in Kenya from year 2009-2012.

The independent variables were leverage, retention ratio, liquidity, underwriting risk, equity capital, size, management competence index, ownership and age and were regressed against ROA. From the analysis, it was concluded that profitability of general

insurers in Kenya was positively and significantly influenced by leverage, equity capital, and management competence index. Size of the firm (measured as the natural logarithm of total assets) and ownership structure (foreign ownership) have a negative and significant effect on performance of general insurers in Kenya. Liquidity has a negative and an insignificant effect on performance of general insurers in Kenya. However, retention ratio of the firm was not significant on the financial performance of general insurers in Kenya and also there was no evidence for the effect of age of the firm on financial performance of general insurers in Kenya. The researcher recommended that for general insurers in Kenya to perform better in terms of their ROA, they should increase on their leverages, equity capital and quality of staff.

Ali. *et al.*, (2018) conducted a study on factors affecting the corporate performance: Panel data analysis for listed firms in Jordan. The main objective of the study was to investigate the impact posed by macroeconomic factors and firm-specific factors towards corporate performance. The ex-post facto research design was adopted in the study. The researchers used sample of Jordanian industrial and services firms during the duration between 2007 and 2016. The macroeconomic factors have been demonstrated using Gross Domestic Product (GDP), Inflation rate (INF) and Interest Rate (IR) respectively, whereas firm-specific factors consisted of firm size, financial leverage, investment, liquidity and sales growth. The financial performance was proxy by Return on Asset (ROA) and Market to Book Value (MBV). From the analysis, it was concluded that GDP and INF respectively were impactful towards corporate performance, whereas IR posed less effect. In contrast, only the accounting based measure ROA has been influenced by firm-specific factors.

Batool and Sahi (2019) conducted a study on determinants of financial performance of insurance companies of USA and UK during global financial crisis (2007–2016). The researchers compared two insurance industries, analysis possible determinants of financial performance during global financial crisis, collected 24 insurance companies' Quarterly data from 2007-16 and applied panel data techniques. The ex-post facto research design was adopted in the study.

Explanatory variables based on internal (Size of firm, liquidity, leverage and asset turnover) and external factors (GDP (Gross Domestic Product), CPI (Cost per Impression), interest rate and WTI (West Texas Intermediate). Dependent variable: ROA (Return on Assets) and ROE (Return on Equity) (profitability indicators). From the findings; In USA size of firm, liquidity, leverage, asset turnover, GDP and WTI had positive and significant impact on financial performance while CPI and interest rate had negative

and significant impact on financial performance. In UK size of firm, liquidity, GDP, CPI and WTI had positive and significant impact on financial performance but leverage, asset turnover and interest rate had negative and significant impact on financial performance. The researchers concluded that USA insurance is efficient as compare to UK.

In all the studies reviewed both locally and internationally conducted by previous researchers, to the best of the researchers' view, none of the studies examined the determinants of financial performance of the listed oil and gas companies in Nigeria by taking into consideration both the internal and the external variables as stated in the present study. Thus, the present study will add to the literature by taking into consideration the internal variables, such as capital structure, liquidity ratio, size, age, sales revenue growth, profit margin and tangibility and the external variables, such as inflation and economic growth and how they affect the financial performance of the listed oil and gas companies in Nigeria. Hence, the need for the study.

3.0 METHODOLOGY

The ex-post-facto research design technique is adopted as the study is experimental. The adoption of this research design was to enable the researcher to examine the influence of both the internal and external variables on the financial performance of the listed oil and gas companies in Nigeria. The listed oil and gas companies in Nigeria as at 31st December, 2018 were twelve (12) in number and these are presented in Table A2 in Appendices

The sample size of the study is drawn from the total population of twelve (12) listed oil and companies in Nigeria. The sample size is taken to be half of the population size. It included the first six listed oil and gas companies with longest valid date of incorporation and up to date published financial statements. These are presented in Table A3 in Appendices.

The non-probability technique of sampling known as judgmental method was used in the study. In drawing the sample size, company with longest valid date of incorporation and up to date published financial statements was considered appropriate as sample for the study. The data for the study were obtained from the annual reports of the listed oil and gas companies in Nigeria and the Central Bank of Nigeria (CBN) annual reports for various years for some of the variables of macroeconomic indicators, which are inflation rate and growth rate of real GDP. The type of data used were time series data obtained from the year 2012 to 2018. The method of data collection was secondary.

The measurement and the *apriori* expectation for each of the independent variables on the dependent are presented in Table 1 below:

Table 1: Variable Description

S/N	Variable	Abbr.	Measurement	Expectation
1.	Financial Performance	ROA	Profit after tax/Total Assets	-
2.	Capital Structure	CAS	Total Debts/Total Equity	Positive
3.	Liquidity	LQ	Current Assets /Current Liabilities	Positive
4.	Size	SZ	Logarithm of Total Assets	Positive
5.	Age	AG	Year of Incorporation	Positive
6.	Sales Revenue Growth	SRG	Trend Analysis of Revenue	Positive
7.	Profit Margin	PM	Profit after tax/ Sales Revenue	Positive
8.	Tangibility	TAN	PPE/Total Assets	Positive
9.	Inflation Rate	IFR	Annual Rate of Inflation	Negative
10.	Growth Rate of Real GDP	RGDP	$GDP_n - GDP_{(n-1)} / GDP_{(n-1)}$	Positive

Source: *Researcher's Compilation, 2019*

The dependent variable is Returns on Assets (ROA) while the independent variables are Internal Variables-Capital Structure (CAS), Liquidity (LQ), Size (SZ), Age (AG), Sale Revenue Growth (SRG), Profit Margin (PM) and Tangibility (TAN). External Variables-Inflation Rate (IFR) and Growth Rate of Real Gross Domestic Product (RGDP).

$$ROA = \beta_o + \beta_1 CAS + \beta_2 LQ + \beta_3 SZ + \beta_4 AG + \beta_5 SRG + \beta_6 PM + \beta_7 TAN + \beta_8 IFR + \beta_9 RGDP + e_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad \text{Equation 1}$$

The multiple linear regression model, correlation coefficient (R), R-Square, Adjusted R-Square, F-Statistic (F-Stat), VIF, Tolerance, Durbin-Watson (DW) Statistic and *P*-value were used to analyze the data collected and to test the hypotheses stated as well. The level of significance was 5%. The DW statistic of 0 - 1.4 implies that there is positive autocorrelation, 1.5 - 2.4 implies that there is no autocorrelation and 2.5-4.0 implies that there is negative autocorrelation in the data (Gujarati, 2013; Kothari & Garg, 2014).

4.0 DATA ANALYSIS AND RESULTS

The computed data for the study and the correlation matrix shows that... (Reference to the appendices should be removed if they are not attached), there is no multi-collinearity in all the independent variables because they all have correlation coefficient with each independent variables less than 0.8 (80%).

4.1 Models Evaluation

Table 2 : Summary of Model 1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.697	.239		2.923	.006		
	CAS	.003	.001	.223	2.952	.006	.818	1.223
	LQ	.021	.031	.052	.660	.514	.761	1.313
	SZ	-.103	.030	-.335	3.469	.001	.498	2.009
	AG	.002	.001	.324	4.129	.000	.756	1.323
	SRG	-.003	.015	-.016	-.225	.823	.899	1.112
	PM	.035	.005	.683	7.727	.000	.596	1.678
	TAN	-.010	.015	-.049	-.693	.493	.936	1.068
a. Dependent Variable: ROA, Adjusted R^2= 0.809, DW = 2.276, F_{cal} = 25.836, F_{tab}= 2.25								

Source: *Researcher's Computation Using SPSS Version 25*

From the regression results, CAS (*β=0.223, p-value<0.05)*; SZ (*β= -0.335, p-value<0.05)*; AG (*β=0.324, p-value<0.05)* and PM (*β=0.683, p-value<0.05)* were significant in the model. The VIF and the Tolerance showed that there was no multi-collinearity among the independent variables. The DW statistic of 2.276 showed that there was no first order autocorrelation in the model. Adjusted R-Square showed that 80.9% variations in ROA was explained by the influence of internal variables (CAS, LQ, SZ, AG, SRG, PM and TAN). The $F_{cal} > F_{tab}$, hence the null hypothesis (Ho_1) is rejected.

$$ROA = \beta_o + \beta_1 IFR + \beta_2 RGDP + e_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots..Model\ 2$$

Table 3: Summary of Model 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
2	(Constant)	.020	.184		.106	.916		
	IFR	.046	1.167	.018	.039	.969	.118	8.491
	RGDP	-.130	1.724	-.035	-.075	.940	.118	8.491
a. Dependent Variable: ROA, Adjusted R^2= 0.048, DW = 1.606, F_{cal} = 0.054, F_{tab}= 3.23								

Source: *Researcher's Computation Using SPSS Version 25*

From the regression results, the two external variables were not significant in the model. The VIF and the Tolerance showed that there was no multi-collinearity between the independent variables. The DW statistic of 1.606 showed that there was no first order autocorrelation in the model. Adjusted R-Square showed that -4.8% variations in ROA was explained by the influence of external variables (IFR and RGDP). The F_{cal} < F_{tab}, hence the null hypothesis (Ho2) is confirmed

$$ROA=\beta_o+\beta_1CAS+\beta_2LQ+\beta_3SZ+\beta_4AG+\beta_5SRG+\beta_6PM+\beta_7TAN+\beta_8IFR+\beta_9RGDP+e_t……Model\ 3$$

Table 4: Summary of Model 3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.851	.270		3.154	.003		
	CAS	.003	.001	.224	2.897	.007	.784	1.275
	LQ	.006	.033	.016	.187	.853	.669	1.494
	SZ	-.113	.031	-.368	-3.676	.001	.466	2.145
	AG	.002	.001	.317	4.013	.000	.752	1.330
	SRG	-.007	.015	-.034	-.459	.649	.834	1.199
	PM	.035	.005	.677	7.632	.000	.594	1.683
	TAN	-.011	.015	-.050	-.703	.487	.926	1.079
	IFR	-.299	.527	-.120	-.568	.574	.106	9.452
	RGDP	-.753	.785	-.204	-.960	.344	.104	9.610
a. Dependent Variable: ROA, Adjusted R^2= 0.808, DW = 2. 152, F_{cal} = 20.185, F_{tab}= 2.25								

Source: *Researcher's Computation Using SPSS Version 25*

From the regression results, CAS (*β=0.224, p-value<0.05*); SZ (*β= -0.368, p-value<0.05*); AG (*β=0.317, p-value<0.05*) and PM (*β=0.677, p-value<0.05*) were significant in the model. The VIF and the Tolerance showed that there was no multi-collinearity among the independent variables. The DW statistic of 2.152 showed that there was no first order autocorrelation in the model. Adjusted R-Square showed that 80.8% variations in ROA was explained by the influence of internal and external variables (CAS, LQ, SZ, AG, SRG, PM, TAN, IFR and RGDP). This is not significantly different from the result of the internal factor only in Model 1 which was 80.9%. It further confirms that the external factors do not significantly influence the financial performance of Oil and Gas companies in Nigeria. The F_{cal} > F_{tab}, hence the null hypothesis (Ho3) is rejected.

4.2 Discussion of the Findings

From the analysis presented on the tables above, the internal variables (CAS, LQ, SZ, AG, SRG, PM and TAN) had a significant influence on the financial performance (ROA) of the listed oil and gas companies in Nigeria (85.9%), the external variables (IFR and RGDP) had insignificant influence on the financial performance (ROA) of the listed oil and gas companies in Nigeria (-4.8%) and both the internal and external variables (CAS, LQ, SZ, AG, SRG, PM, TAN, IFR and RGDP) had jointly significant impact on the financial performance (ROA) of the listed oil and gas companies in Nigeria (80.8-%). This study is in consistent with Olaoye and Olarewaju (2015). In the test of model one and model three, CAS, SZ, AG and PM were found to be significant. CAS showed a positive relationship with financial performance (ROA). Also, it was in consistent with Muraina (2018) who conducted a study on determinants of listed deposit money banks' profitability in Nigeria and from the analysis, the researcher found that internal factors had significantly influenced the deposit money banks' profitability over the study period. The study was not in lined with Enekwe, *et al.*, (2014) who conducted a study on the effect of financial leverage on financial performance: Evidence of quoted pharmaceutical companies in Nigeria. From the analysis, DER had negative effect on the ROA of the quoted pharmaceutical companies in Nigeria.

Size of the company (SZ) indicated a negative relationship with financial performance (ROA). This result is not in consistent with Abubakar, *et al.*, (2018) who conducted a study on effect of firms' characteristics on financial performance of listed insurance companies in Nigeria and from the analysis,

the size of company asset was a determinant of the company's performance. However, it was in lined with Hassan and Farouk (2014) who conducted a study on firm attributes and earnings quality of listed oil and gas companies in Nigeria and from the analysis, firm size has a significant but negative influence on earnings quality of listed oil and gas companies in Nigeria.

Age of the company (AG) showed a positive relationship with ROA and PM indicated a positive relationship with financial performance (ROA). This study was not in lined with Onyekwelu, *et al.*, (2018) who conducted a study on evaluation of firms' corporate financial indicators and operational performance of selected firms in Nigeria and from the analysis, profit margin had negative and insignificant effect on ROA of the companies studied.

Size of the company (SZ) deviated from the *apriori* expectation of a positive relationship. From the analysis, SZ indicated negative and significant relationship with the financial performance of the listed oil and gas companies in Nigeria. This was owing to the fact that the total assets of the listed oil and gas companies accumulated is at optimum level that it cannot affect the financial performance positively. Both the two macroeconomic indicators (inflation rate and growth rate of GDP) indicated positive and insignificant impact on the financial performance *(β=0.075, p-value>0.05)* and *(β=0.023, p-value>0.05)* respectively of the listed oil and gas companies in Nigeria. This study was not in consistent with Adeusi, *et al.,* (2014) who carried out a study on determinants of commercial banks' profitability: Panel evidence from Nigeria and discovered that economic growth are the determinants of commercial banks' profitability. LQ, SRG, TAN and RGDP deviated from the *apriori* expectation but not significant in model three. LQ, SRG and TAN indicated a negative and insignificant impact on financial performance of the listed Oil and Gas companies in Nigeria.

5.0 CONCLUSION AND RECOMMENDATIONS

The study was conducted to ascertain the determinants of financial performance of the listed oil and gas companies in Nigeria. Specifically, the study was conducted to examine the impact of both internal and external variables on the financial performance of the listed oil and gas companies in Nigeria. From the analysis of data and the discussion of findings, the researcher concluded that capital structure, profit margin, size and age had a significant impact on the financial performance of the listed oil and gas companies in Nigeria and both the internal and external variables had jointly significant influence on the financial performance of the listed oil and gas companies in Nigeria. However, the following recommendations were made:

a) The liquidity of the oil and gas companies should be effectively managed by reducing excessive current assets in their financial statements.
b) The total assets should be reduced by either disposing some of the investments or by not acquiring more assets in the companies.
c) Debt capital should be acquired more in the listed oil and gas companies by new issues of debts instruments.

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