The Impact of Lease Financing on Financial Performance of Nigerian Oil and Gas Industry

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Abstract
This study is about lease financing and financial performance of companies. It aimed at examining the impact of lease financing on the financial performance (measured by Return on Asset (ROA)) of Nigerian oil and gas companies. The data for the study was collected from annual reports and accounts of 6 sampled companies in the Nigerian Oil and Gas industry, that are engaged in lease financing and were also listed on the Nigerian Stock Exchange (NSE) not later than January, 2005. Robust OLS regression analysis is used to analyze the impact of lease financing on return on assets (ROA). The results of the study revealed that lease financing has significant impact on the ROA of oil and gas companies in Nigeria. Therefore, the research recommends that firms should embrace lease financing as a method of financing their operations as evidence suggests that value is added through the use of lease financing.

Keywords: lease finance, operating lease, finance lease, financial performance, Return on Asset

1. Introduction
The leasing industry has grown significantly over the past 60 years. It begins in the 1950s in the United States and spread to UK and Japan in the 1960s, and has been extending throughout developing countries since the middle of 1970s (Nasr, 2003). Present day leasing started in Nigeria in 1960s, over the years it has been contributing significantly to the country’s economic development and has continued to be in spite of the complex working environment (ELAN, 2012). Lease finance play an important role to meet up the financial requirements of various sectors of an economy, and therefore contribute to the economic development of the country as well as to the growth of the country’s financial system. Lease financing has been a popular means of financing over the years to the entrepreneurs. The level of lease consumption is relatively low in Nigeria compared to Ghana, South Africa, Zambia, Uganda, Tanzania etc ((Oko & Essien (2014), Oko and Etuk (2013), Oko and Nnabuka (2013), Oko and Anyanwu (2012), Oko and Ogbulu and Oko (2009)).

Leasing is an alternative means of financing business assets. It is a contract between an owner of equipment (the lessor) and another party (the lessee) giving the lessee possession and use of a specific asset in return for payment of specific rentals over an agreed period. The lessee may or may not be entitled to acquire title to the goods through the exercise of an option to purchase, usually at the end of the lease term. The lessor’s role is to finance the acquisition of equipment required by the lessee who will have selected the goods and dealt directly with the supplier in determining their performance attributes and suitability (Salam, 2013).

Prior to the 1950s, leasing was most often associated with real estate, land and building, however it is possible to lease virtually any kind of fixed assets now (Hassan, 2009). Now more than ever before, all types of assets and equipment such as Computers, Printers, Typewriters, Photocopy Machines, Buses and Vehicles, Trucks, Cranes, Generators, Aircrafts, Ships and vessels, Satellites and generating Plant and Machinery of different kinds, are leased. This has led to the emergence of three core segments of leasing market that is, small, medium and large ticket markets.

Financial performance is a determinant of an organization’s income, profits, increase in value as evidenced by the appreciation in the entity’s worthiness (Asimakopoulos, Samitas & Papadogonas, 2009). Measures of financial performance fall into investor returns and accounting returns. The basic idea of investor returns is that, the return should be measured from the perspective of shareholders e.g. share price and dividend yield. Accounting returns focus on how firm earnings respond to different managerial policies, which can be measured using different accounting ratios (Alan, 2008).

Financial ratios that are usually used as measures of financial performance are further divided into three broad categories that will provide a review of the overall financial position of a company (Fulbier, Silva & Pferdehirt, 2008). These categories include; ratios that indicate the structural change within a company; ratios that indicate the profitability of a company; and ratios that have an impact on the valuation of companies from a market perspective. Financial performance was measured differently by different researchers, but the most argued measures that provide an important view and complex understanding of the financial performance of a company are the following ratios: Profitability, Liquidity and Efficiency (Radut, 2008).

Researches on the impact of leasing on financial performance of businesses was carried out by many researchers (Alazzam, 2015; Orabi, 2014; Munene, 2014; Salam, 2013; Aurangzeb & Shujaat, 2012; Jabbarzadeh,
Motavasel & mohammad, 2012; Hassan, 2009; Samaila, 2009; among others) in different countries. The outcome of the researches shows a mixed result, some researches established that leasing has positive impact on financial performance (e.g. Alazzam, 2015; Orabi, 2014; Munene, 2014; Salam, 2013; Hassan, 2009 and Samaila, 2009) while researches by other researchers (e.g. Aurangzeb & Shujaat, 2012; and Jabbarzadeh, Motavasel & mohammad, 2012) maintained that leasing has a negative impact on financial performance.

The oil and gas industry is one of the vital industries in the world, largely because of its strategic role in every economy and the world at large. The distinctive features that characterized the industry are derived from the nature of crude oil, its operations and commercial arrangements (Samaila, 2014). The oil and gas sector dominated the leasing industry with 26.3% of lease volume closely followed by transportation with 15.8% where commercial vehicles for passengers and haulage remained the major attraction to lessors (ELAN, 2014).

Those researches conducted in respect to leasing and financial performance of firms in Nigeria were carried out on Banking, Conglomerate, Manufacturing and SMEs sectors of the Nigerian economy. All the three Nigerian researches by Akinbola & Otokiti (2012); Hassan, (2009) and Samaila, (2009) on leasing and financial performance showed a positive impact.

All the three Nigerian studies reviewed in this study used finance lease alone as their independent variable, the result of which cannot be generalised on the entire lease financing by neglecting operating lease. Also, the dependent variable used by Hassan (2009) to analyse the data was the total profitability of the banks for the period which is not sufficient to show the actual profitability performance of the banks and also the researcher used pooled regression model to analyse the data which deny the heterogeneity that may exist among the companies. Similarly, Samaila (2009) research used data for only two years which is not enough to test the variations across the industry in different years of operation. In the same vein, the research by Akinbola & Otokiti (2012) was on SME’s and the data was sourced through questionnaire administration which cannot show most relevant data on leasing and performance variables and the result of the study may not be free from being bias.

This research, is therefore, aimed at examining the impact of Lease Financing on Financial Performance of companies in the Nigerian oil and Gas industry for the period 2005 to 2014.

To achieve the above objective, hypothesis is formulated in null form thus;

**H0:** that lease financing does not have significant impact on financial performance of companies in the Nigerian oil and gas industry.

### 2. Concepts of Leasing
Leasing has been defined by different authors in different ways but all the same, the meaning is anchored toward the same thing. Kurfi (2003) conceptualized leasing as “an alternative mode of financing to the traditional debt and equity capital for the acquisition of capital assets by firms”. Kraemer and Lang (2012) sees leasing as a contract between two parties where one party (the lessor) provides an asset for usage to another party (the lessee) for a specified period of time, in return for a specified payments. Nigerian Accounting Standard Board (NASB) in information circular (2010) viewed leasing as a contractual agreement between an owner (the lessor) and another party (the lessee) which conveys to the lessee the right to use the leased assets for consideration usually periodic payments called rent.

Therefore leasing can be seen as a contractual agreement granting the use of an asset to the lessee by the lessor within a specified period of time in exchange of periodic payment of an agreed rental fee by the lessee to the lessor.

#### 2.1 Types of Leases
Leases are classified currently under IAS 17, as finance (Capital) or operating leases, depending on whether substantially all the risks and rewards of ownership transfer to the lessee or not.

##### 2.1.1 Finance Lease
Finance lease otherwise called Capital lease. Under a finance lease, the lessee has substantially all of the risks and reward of ownership. Finance lease are long-term, non-cancelable lease contracts (Kurfi, 2003). It combines some of the benefits of leasing with those of ownership.

##### 2.1.2 Operating Lease
An operational lease involves the lessee only renting an asset over a time period which is substantially less than the asset’s economic life. In such cases operating lease may run for 3 to 5 years (Adekunle, 2005). The lessor is usually responsible for maintenance and insurance.

### 3. Financial Performance
Financial performance is a determinant of an organization’s income, profits, increase in value as supported by the appreciation in the entity’s worthiness (Asimakopoulos, Samitas & Papadogonas, 2009). Measures of financial performance fall into two broad categories: investor returns and accounting returns. The basic idea of investor returns is that, the return should be measured from the perspective of shareholders e.g. share price and dividend
yield. Accounting returns focus on how firm earnings respond to different managerial policies, which can be measured using different accounting ratios (Alan, 2008).

However, Fulbier, Silva & Pferdehirt (2008) maintained that financial ratios can be divided into three broad categories that will provide a review of the overall financial position of a company. These categories include; ratios that indicate the structural change within a company; ratios that indicate the profitability of a company, and ratios that have an impact on the valuation of companies from a market perspective. Table 1 below shows the category of ratios that measure profitability.

Table 1: Financial Ratios indicating the Profitability of Company

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net profit percentage</td>
<td>Net profit for the period / Revenue</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>Profit before tax / Total equity</td>
</tr>
<tr>
<td>Return on assets (ROA)</td>
<td>Profit before tax / Total assets</td>
</tr>
</tbody>
</table>

Source: De Villiers & Middleberg (2013)

The definite value of any given ratios however, is firmly governed by the specific aims of the analysis. Different methods are suitable for different reasons. Many different users are interested in the success or otherwise of a given business. Managers are responsible and accountable for operating efficiency, current and long-term profitability, and the effective deployment of capital, human effort, and other resources. Next are the owners of the business, who are principally interested in the profitability of their equity investment. They expect growing earnings and dividends. Then lenders and creditors who extend funds to the business for different length of time are mainly concerned about the ability of the business to repay. Other groups such as government, labour, and society, have specific objectives of their own, such as the ability of the business to pay tax, the wherewithal to meet various social and environmental obligations (Helfert, 2011).

In view of the above, ROA is used to measure the financial performance of companies in the Nigerian oil and gas industry. ROA is felt to be the best measure of financial performance due to the fact that it shows the ability of business asset to generate better return to the business. Financial performance is viewed by the researcher as the ability of investment in asset to generate something reasonable in return to the investors that can motivate them to remain in the business.

3.1 Measures of Lease Financing and Financial Performance of Businesses

So many researches were carried out on the impact of lease finance and financial performance of Firms of different industries and in different countries. Variables were measured differently thereby making the results of the researches different. For instance, Orabi (2014) measured Leasing by Leasing index, Total assets Turn over index and Fixed Asset turn over index variables while Financial Performance was measured by Liquidity, Profitability and Leverage ratios.

However, Salam (2013), Kelly, Khayum & Price (2013), Bostwick, fahnestock & O’keefe (2011), Alam, Raza, farham & Akram (2011) and Samaila (2009) measured Financial performance by either ROA, ROCE, ROI and ROE or combination of some, while leasing was measured by total lease. Moreover, Jabbarzadeh, Morteza and Mohammed (2012) used lease expense as a measure of operating Lease and financial performance was measured by ROE, ROI, Debt to Total Asset (D/A) ratio, Debt to Equity (D/E) ratio and Interest Coverage ratio.

Therefore this study will use ROA to measure financial performance of companies in the Nigerian oil and gas industry.

4. Review of Empirical Studies

Several studies were conducted on the impact of leasing on financial performance of businesses. For instance, Alazzam, (2015) examined the extent of the presence of the motives of the contracting companies in Irbid city to rely on finance lease and to identify the most important obstacles which restricts its viability. The most important findings of this study are the existence of motives for contracting companies in Irbid city to resort to lease financing; financial leasing gives tax savings system provides adequate liquidity and profitability ratios reassured and can cover the cost of fixed assets profitably.

Furthermore, Orabi, (2014) assesses the impact of leasing decision on the financial performance of industrial companies listed on the Amman stock exchange in the period 2002-2011. The study revealed that lease financing has statistically significant effect on the liquidity, and profitability of the companies. The study finally concluded that lease financing increases the profitability of companies, but raises the corporate risk of companies accordingly.

Moreover, Salam, (2013) examined the effects of lease finance on the financial performance of SME's located in Bangladesh. The study established that firms performance depend on lease finance activities, signifying that SMEs in Bangladesh should be consistently involved in their lease finance practices because lease finance has a momentous impact on improving their financial performance.

In addition, Kelly, Khayum & Price (2013) examined community banking data on leasing from 1992 to 2012 and the result of the study reveals that community banks involved in equipment lease financing performed
better than the community banks that had no involvement in equipment leasing.

Furthermore, Akinbola and Otokiti (2012) ascertained the effects of lease option as a source of finance on the profitability performance of SME's and whether lease option has a relationship with the productivity of organizations. A cross sectional survey research method with the use of questionnaire instrument was adopted using a multi-stage random sampling population of 300 respondents who are managers of SME's in Lagos State. Analysis of Variance and correlation analysis was used in analyzing the data. The study discovers that lease option has positively affected the profit of the SME's. Also that lease option has influenced organizational output of the companies.

In the other hand, Aurangzeb and Shujaat (2012) determined whether any relationship exists between financial lease and low profitability. However the researchers find out that the relationship of profitability with change in fixed assets due to financial lease are inversely related i.e. when profitability of the companies decreases they tend to move to finance their fixed assets through financial lease and vice versa.

In addition, Jabbarzadeh, Motavasel and Mohammad (2012) studied the effect of off-balance sheet financing on the profitability and leverage ratios. The results of the study indicated that, off-balance sheet financing do not increased profitability and leverage ratios of businesses.

Nevertheless, Hassan, (2009) examined the impact of finance lease on the profitability of Nigerian banks from the period 2001-2008. The study employed the use of OLS regression to analyse the data obtained from annual financial statements of Nigerian banks and result of the study established that finance lease has significant positive impact on the profitability of Nigerian banks.

Moreover, Samaila (2009) analyses the impact of finance lease on financial performance of conglomerate companies listed on the floor of the Nigerian stock exchange from 2005 to 2006. The data for the study was analysed using simple regression analysis and the result of the study established that finance lease have positive impact on the financial performance of conglomerate companies in Nigeria.

Joseph (2009) assesses the relationship between leasing competence and perceived performance of SMEs and also examined the relationship between lease structure and perceived performance of SME in Uganda. The study results revealed that there are significant positive relationship between leasing competence and perceived performance and also lease structure and perceived performance maintained a significant positive relationship.

Siam and Qutaishat (2007) study aimed to describe the effects of financial leasing on the financial performance of charter companies in Jordan, and the study found that the effect was positive by increasing cash, profitability and reduce risk and this is what such an incentive for some companies to come somewhat on the use of financial leasing in Jordan. And the most important recommendation by the study is encouraging companies to depend heavily on financial leasing because of its importance.

Moreover, researches on lease financing and liquidity showed a negative relationship in most cases. Bello & Almustapha (2016) examined the impact of lease financing on the liquidity of companies in the Nigerian oil and gas. The result revealed that leasing does not have positive impact on the liquidity of the companies. In the same vein, Kurfi (2005) found similar result to that of Bello & Almustapha on leasing and liquidity.

The reviewed researches showed a positive relationship between leasing and financial performance with the exception of the research by Jabbarzadeh, Motavasel and Mohammad which shows a negative relationship but it is realized that the reason for the negative relationship is because they study only operating lease, while other researches uses finance lease. Also studies by Bello and Almustapha and that of Kurfi were on liquidity. It is against this that this research is set out to examine the impact of lease financing (both finance and operating leases) on financial performance of companies in the Nigerian oil and gas industry.

5. Theoretical framework
Theories of leasing were not clearly stated by previous researchers. This section will provide an insight on the theory underpinning the study.

5.1 Agency Costs Theory
The main theoretical explanation for the relationship between the ownership structure and profitability is based on the agency theory, first established by Jensen and Meckling in 1976. Agency conflicts can arise between bondholders and shareholders, between managers and Shareholders or between lessor and lessee and can lead to asset substitution and underinvestment.

However, in case of short term operational leases, agency costs may also arise between lessor and lessee due to the separation of ownership from usage of asset. Since the lessees have no right to the residual value of the asset, they have no incentive to take proper care of it. This probably explains the reason why corporations lease office facilities much more frequently than manufacturing or Research & Development facilities.

Robicheaux & Fu (2008) examines whether lease financing, used to control the agency costs of debt, is used as a substitute or complement to mechanisms such as corporate governance, managerial incentive compensation used to control agency costs of equity. They find leasing is complementary to governance and
incentive compensation suggesting that firms try to control simultaneously the agency costs of debt as well as external equity.

For the purpose of this research work, this theory entailed that lease financing brings about increase in efficiency on the part of management of the firms, which in turn would likely contribute to the financial performance of the firms. Therefore, Agency cost theory will be adapted as underpinning the present research, that positive relationship exists between leasing and financial performance of businesses.

6. Methodology

To examine the impact of lease finance on financial performance of Businesses in Nigeria ex-post facto research design was employed because data was collected from annual report and accounts of sampled companies and Equipment Leasing Association of Nigeria (ELAN). The study population comprises of the entire ten (10) companies in the Nigerian oil and gas industry listed on the floor of Nigerian Stock Exchange. For collecting information, the study has a working population as well as the sampled of six (6) companies. The sample includes only 6 companies that do concern themselves with finance lease and are listed on the Nigerian stock exchange not later than January, 2005 and remain listed till December, 2014. The data on financial performance was generated from 2005 to 2014 annual reports. Random effect model regression analysis is used to analyze the impact of lease financing on return on assets (ROA). To examine the impact of LFS on ROA the following models is used:

$$\text{ROA} = \alpha + \beta_1 \text{FL}_{it} + \beta_2 \text{OL}_{it} + \beta_3 \text{SZ}_{it} + \beta_4 \text{DT}_{it} + \epsilon_{it}$$

Where:
- $\text{FL}_{it}$ = Finance lease (finance lease index)
- $\text{OL}_{it}$ = Operating lease (operating lease index)
- $\text{ROA}_{it}$ = Return on Asset (PBIT/Total Assets)
- $\text{SZ}_{it}$ = Size (Natural log of total assets)
- $\text{DT}_{it}$ = Debt (debt to total assets)
- $\alpha$ = the constant
- $\beta$ = the coefficient
- $\epsilon$ = error term

The dependent variable for this study is the financial performance of firms in the Nigerian oil and gas industry measured by ROA. The explanatory variables are finance lease, operating lease, size and debt.

7. Result and Discussions

Table 2 presents the regression results of the dependent variable (ROA) and the explanatory variables of the study (finance lease, operating lease, size and debt). The OLS regression does not provide efficient estimates and to check whether the variability of error terms is constant or not, a test for heteroskedasticity was conducted. The heteroskedasticity test performed reveal presence of heteroskedasticity which is corrected using the OLS robust test. In order to examine whether endogeneity exist, which could potentially lead to biased coefficient, a Hausman specification test to make the choice between Fixed Effect (FE) and Random Effect (RE) model was performed. The test also determines whether the estimates of the coefficients, taken as a group, are significantly different in the two models. Although, Table 1 presents the regression results of OLS robust, FE and RE, discussion is done on OLS Robust only. This is due to the result of the diagnostic tests which present of heteroskedaticity and the robust OLS regression being the corrected result.

Table 2: Results of Panel Regression

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variable: ROA</th>
<th>OLS-Robust</th>
<th>Co-efficient (and t-rates)</th>
<th>FE Regression</th>
<th>RE Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL</td>
<td></td>
<td>0.008 (2.40)**</td>
<td>-0.0008 (-0.17)</td>
<td>0.002 (0.38)</td>
<td></td>
</tr>
<tr>
<td>OL</td>
<td></td>
<td>0.004 (1.22)</td>
<td>0.0081 (1.25)</td>
<td>0.006 (1.24)</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.018 (-3.25)*</td>
<td>-0.017 (-2.43)**</td>
<td>-0.018 (-2.73)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEBT</td>
<td>1.217 (15.64)*</td>
<td>1.222 (27.65)*</td>
<td>1.223 (28.63)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTANT</td>
<td>0.059 (1.76)**</td>
<td>0.076 (1.13)</td>
<td>0.078 (1.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.9465</td>
<td>0.9078</td>
<td>0.9311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>(72.59)*</td>
<td>(229.12)*</td>
<td>(973.66)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significance at 1% (*), 5% (**) and 10% (***)

Source: Author’s computation using STATA.

The Robust OLS result shows that parameter estimates for finance lease was found to have positive impact on ROA at 5% (significance) level. Moreover, size and debt were found to have significant impact on ROA at 0.01 levels. However, operating lease was found to have an insignificant relationship with ROA. The $R^2$ value for robust OLS model is 0.9465 which implies that 94.65% of the variation in ROA is explained by the joint influence of the explanatory variables captured in the model. While F-value (72.59) at 0.01 levels suggest that the
model is very much adequate. Therefore, this form the basis for rejecting the null hypothesis which says that lease financing do not have significant impact on financial performance (ROA) of Nigerian oil and gas companies. Moreover, the constant parameter estimates depicts a significant relationship with ROA. The result of this study is in line with the findings of Alazzam (2015), Orabi (2014), Salam (2013), Gate (2013), Kelly, Khayum & Price (2013), akinbola & Otokiti (2012), Samaia (2009) and Siam & Qutaishat (2007). However, the result contradict the findings of Munene (2014), Aurangzeb & Shujaat (2012) and Jabbarzadeh, Morteza & Mohammad (2012) found that lease financing have a negative impact on financial performance of businesses.

8. Conclusion and Recommendations

The results of the study show that lease financing has positive impact on the ROA of companies in Nigerian oil and gas industry. The research concludes that lease financing has significant positive impact on financial performance of firms in Nigeria in oil and gas industry.

The result of this model is in line to the standard *a priori* expectations, yet there could be some reasonable explanations for this. ROA as a measure of financial performance is the result of dividing profit before tax (PBT) by total asset. Therefore, increase in lease finance (especially finance lease) increases the amount of business total asset. For that reason, the denominator for obtaining ROA may increase as lease increases which may lead to the value of ROA to decrease. Unless if an increase in PBT as a result of increase in lease finance is more than proportionate to the increase in finance lease. Therefore, the findings of this research posit that ROA of Nigerian oil and gas companies increases with more than proportional increase to increase in total asset due to finance lease.

The research finally recommends that firms should embraces lease financing as a method of financing their operations as evidence suggests that value is added through the use of lease financing. Evidence suggested a positive relationship between lease financing and ROA which suggest that increase in levels of lease financing could improve financial performance.

Furthermore, the study recommends that since size of the firms does not have positive relationship with ROA, small firms should not be hesitant to find ways of performing better in the market as their size is not currently detrimental to their performance. In fact, there is some evidence that smaller firms could outperform the large firms in terms of their ROA given the negative relationship with size. This can be done through improved efficiency in the smaller firms as they are not as complex as their larger counterparts.

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