

Effect of Economic Recession on Finance Lease Use by Listed Non-Financial Firms in Nigeria

¹Musa-Mubi, Aliya & ²Badara, Mu'azu S.

^{1&2}Department of Accounting, Business School, Ahmadu Bello University, Zaria

¹aliyam.mubi@yahoo.com & ²muazubadara@yahoo.com

Abstract

Economic recessions generate uncertainties that exacerbate the problem of information asymmetry and limit availability and access to finance by listed firms. In view of the fact that these firms adhere to a pecking order in corporate financing, necessitated by the costs of information asymmetry, the paper sought to examine the effect of the recent economic recession on finance lease use by listed non-financial firms in Nigeria. A correlation research design was adopted for a sample of 20 listed non-financial firms, studied over the period 2010-2017. Controlling for firm size, Generalized Least Square (GLS) Regression was run with the aid of statistical software, STATA. The results suggest that economic recession has a positive and statistically significant effect on finance lease use. The paper concludes that economic recession poses constraints on firms' internal financing capacities and external finance contracting thus, lease finance tends to be employed as a last resort alternative. Recommendation is made for lessors' capacity to be enhanced in order to meet increasing demand for lease finance in the aftermath of a recession. This could be achieved through facilitating access by lessors to insurance and pension funds. The resulting investments in general and specialized assets would ensure varying capital asset needs of diverse corporate firms can be met in tandem with expanding the market base of leasing businesses.

Keywords: Finance Lease, Economic Recession, Pecking Order Theory, Listed Non-Financial Firms, Nigeria

1. Introduction

The funding decision is instrumental to operational feasibilities and creation of economic value by business entities. Financial resources are necessary inputs towards asset acquisition and capitalization on investment opportunities that will sustain the existence of firms in the long run. This financing need, therefore, translates to an active demand by firms that in response, is met with an array of options provided by financial institutions. Management of corporate firms in deciding on a source of finance examine a number of factors that are of importance. For instance, the decision to use internal sources at no cost, may have to be appraised against the dividend decision and possible negative signalling effects. Assessment of external sources of finance, involves consideration of the cost of capital and attendant impact on firm value as proposed by Modigliani and Miller (1963). The question facing firms thus, is what source of finance would be most optimum to employ.

The foregoing informs the proposition of the pecking order theory (Myers & Majluf, 1984) which asserts that firms have a scale of

preference for finance sources and comply with the order of using internal funds first, progressing to external funds (with preference for debt) and lastly, equity. This is supported by the fact that internal funds are adjudged to be cost free though, it could be argued that re-invested funds being attributable to shareholders, have a cost that should be synonymous to the cost of equity. The use of debt by firms lowers the overall cost of capital due to tax-deductible interest expense (Modigliani & Miller, 1963) whereas, equity is deemed expensive as a result of investor perception of overvaluation leading to a discount of issuing firms' share price (Myers & Majluf, 1984).

Inference can therefore, be made from the preceding, on the suitability of debt use by firms. However, within the category of debt compared to other identified sources of finance, there are distinctions in that debt can either be liquid (conventional debt) or asset-based. This distinction in classification begets a financing decision within the choice of debt- a decision to use either traditional forms (cash- based and payable accruals) or leases. Finance lease, a

typical representation of an asset-based debt, is a structured non-cancellable agreement with asset use granted in consideration of payments that cover cost and interest over a substantial period of the asset economic life. At termination of the agreement, an option for asset acquisition at a nominal price can be exercised (Revised Guidelines for Finance companies in Nigeria, 2014).

In Nigeria, Micro, Small and Medium scale Enterprises (MSMEs) majorly account for lease patronage compared to listed corporate firms (Equipment Leasing Association of Nigeria, 2018). However, in 2016, Nigeria experienced an economic recession last observed 25 years earlier (Business Day, 2017) with a probable effect on the dynamics of lease use. Economic recession as defined by the National Bureau of Economic Research (NBER, 2003) represents a decline in economic activity levels for more than a few months and evident in terms of contraction in real Gross Domestic Product (GDP) growth, unemployment, decline in income, decelerated production and fall in wholesale-retail sales. The implications of a recession are far reaching as it affects firms at the micro-level of an economy. In Nigeria, these affected firms are notably identifiable under the manufacturing, construction, real estate, trade and service industries (Oxford Business Group, 2017).

Davis (2019) suggests that revenues, growth and credit ratings tend to be negatively affected during a recession. This consequently impairs availability and access to finance by firms, from internal as well as external sources. For instance, losses, besides hindering retention of earnings, lead to a decline in dividend payment that could in turn affect share valuation and increase costs of raising equity. Low revenues, in addition to impairing growth in firms, breed grounds for defaults on financial obligations. Poor interest coverage, information asymmetries and increased risk, result in a downgrade in credit ratings and restrict access to conventional forms of debt finance (Davis, 2019). In collective terms, these consequences adversely affect stimulation of productive activities by placing a constraint on firms' procurement of finance, necessary for capital asset investment.

The aforementioned therefore, compels firms to explore alternative means of financing such as leases. This informs the thesis of the paper that

finance lease use be significantly affected by the recent economic recession in Nigeria. Finance leases tend to present with lower finance costs compared to conventional debt which in part, is due to priority of lessor claims and repossession feasibilities in the event of bankruptcy- a scenario obtainable in a recession (Smith & Wakeman, 1985). Firms' use of lease finance secures the engagement in productive ventures key to economic growth. As such, expectation holds that findings would highlight the importance (via demand) of lease finance in an economic recession as well as drive policies that would enhance the capacities of the lease industry in financing capital asset investment in Nigeria.

2. Literature Review

This Section presents a review of the concepts of finance lease and economic recession. The theoretical linkage between these variables of interest is explained and serves as the basis for development of the hypothesis tested in the paper. A review of empirical studies on the subject matter is provided with an establishment of the gap addressed by this paper. Pecking order theory is identified and aligned with as the theoretical framework for the study.

2.1 Finance Lease

Section 44 of the Equipment Leasing Act of Nigeria (2015) defines a finance lease as a contractual agreement for asset use requiring the payment of an amount over a defined period of time which, in addition to recovering the cost of asset acquisition by a lessor, provides for the realization of a return. The Revised Guidelines for Finance Companies in Nigeria (2014) correspondingly notes the option available to a lessee, to obtain title to the asset on payment of a nominal amount (below market value) at the expiration of either the primary tenor of the lease, or subsequent extended periods. The retention of title by the lessor, prior to an exercise of option by the lessee, makes finance leases to be classified as a form of 'secured borrowing' (Landry, Fortin & Callimaci, 2013). Yau (2017) highlights other key peculiarities of a finance lease to include; term of lease covering 75% or greater of the asset economic life, present value of lease payments being not less than 90% of asset cost and transfer of insurance, maintenance and tax savings to a

lessee. Under the repealed International Accounting Standard (IAS) 17, Section 8 (IASB, 2010), a finance lease was defined by the transfer of risks and rewards of ownership to a lessee and which required the recognition of an asset and a liability on its statement of financial position. This was premised on the logic of presumed ownership resulting in rewards such as economic benefits from use, and risks in terms of obsolescence as well as disposal infeasibilities.

However, with the broadening of asset definition to include resources subject to firm control, and that of liabilities to imply financial obligations resulting from a transaction (as contained in the Conceptual Framework for Financial Reporting issued by the International Accounting Standards Board in 2010), the distinction between finance leases and other variants of a lease has been eliminated. The notable consequence of this, is the release of a new reporting standard, International Financial Reporting Standard 16 (effective 2019) which by Section 9, defines all leases as a transfer of 'right-of-use' to an asset mandating the recognition of such asset and its corresponding liability on the statement of financial position (IASB 2016). This is exclusive of leases of a short term nature (less than 12 months) otherwise referred to as services.

The expectation from this development, is an increase in reported finance lease obligations on the financial statements of entities. For the purpose of the paper, the study aligns itself with the definition of finance leases as given by IFRS 16 (IASB, 2016), Equipment Leasing Act (2015) and Revised Guidelines for Finance Companies in Nigeria (2014). The reporting standard definition (IFRS 16) accounts for the economic realities inferred from the definitions of the latter. Finance lease is examined as a dependent variable in the study and measured as the ratio of value of finance lease obligations to total assets reported on the statement of financial position of sample firms.

2.2 Economic Recession

Economic recession is predominantly defined as a decline in Gross Domestic Product (GDP) growth such that at least two quarters of a year record values in the negative (Davis, 2019). This definition has however, been adjudged to be limiting and exclusive of other key macroeconomic indicators that collectively

account for a general downturn in the economy. (Adaranijo, Bakare & Ajiteru, 2018). A revised definition by the National Bureau of Economic Research (NBER, 2003) posits an economic recession as a significant reduction in economic activities persisting for more than a few months and evident in terms of worsening levels of real GDP, real income, industrial production, wholesale-retail sales and employment. Lasisi and Shodiya (2017) note the mono-cultural nature of the Nigerian economy (dependent on oil production) and prices as a precipitating factor for the 2016 recession. Economic analysis as reported in Business Day (2017) further attribute the recession to inadequacy of investments, unemployment, currency depreciation and abysmal productivity in the non-oil sector. Manufacturing, construction and trade registered -4.3%, -6% and -0.2% in terms of growth respectively whereas in real estate and services, contraction of 6.9% and 0.8% were recorded (Oxford Business Group, 2017). This study deems it imperative to examine the effect of economic recession on finance lease use by listed non-financial firms in Nigeria, given that the sample firms cut across the aforementioned industries affected by the recession. This is also in consideration of recession impact on operational feasibilities and going concern status of businesses, the diversification plans by Government as embodied in the Economic Recovery and Growth Plan (ERGP) to stimulate the economy towards the path of recovery (Ministry of Budget & National Planning, 2017) and the role that leases can play in aiding infrastructural investment and economic productivity.

The paper theorizes that during an economic recession, revenues tend to fall with negative effects on internal sources of finance that a firm can utilize in capital asset investment. This could affect growth of firms and further impair capacity to rely on internal financing. With the increase in information asymmetry due to uncertainties that portend during a recession, firms may further be limited in external sources of finance accessible especially conventional debt as a result of high premiums required on cost of capital. This consequently would propel the use of lease finance by firms, as a last resort alternative. The paper hypothesises as follows; H1: *Economic recession has a significant effect on finance lease use in listed non-financial firms in Nigeria*

To the knowledge of the researcher, empirical studies on finance leases are yet to document the effect of an economic recession on its employment by firms. This study is an attempt to provide empirical evidence on the hypothesised relationship between economic recession and finance lease use specifically, in listed non-financial firms in Nigeria.

2.3 Theoretical Framework

The study is anchored on the pecking order theory of Donaldson (1961) modified by Myers and Majluf (1984). The theory posits that corporate entities comply with a preference scale in sources of finance that is largely driven by the consequences of information asymmetry- a situation whereby insiders (management) are better informed as to value and prospects of a firm than external stakeholders. Equity tends to be most expensive followed by debt and lastly, retained earnings. However, with an economic recession, revenues are adversely affected impairing reliance on internal financing. Economic recession also increases information asymmetry thereby, limiting firms' ability to contract conventional debt and equity, due to high cost of capital. These aggregate effects of a recession should compel firms to utilize lease finance as it presents with low costs and risks compared to conventional debt.

3. Methodology

The paper adopts a correlation-explanatory research design which enables the determination of association between variables and provision of explanation as to the causes or implications. The research can be contextualized within the positivist paradigm as it is based on empiricism- the objective investigation of a phenomenon as it manifests, independent of judgments and subjective interpretations. The population of the study comprises all listed non-financial firms in Nigeria as at 31st December, 2018, which amounts to 109. A filter was applied to arrive at a population having finance lease obligations disclosed in the audited financial statements between the period 2010 and 2017. The adjusted population consequently totals 20 firms and represents the sample adopted for the study. Listed financial firms were excluded due to peculiarities of duality as lessors and lessees. The objective of the paper would be optimally achieved by the examination of firms strictly as lessees and is in line with extant studies on finance lease use. Study scope is selected post-2009 in order to exclusively assess the effect of economic recession in Nigeria. The pre-2010 period that recorded the global financial crises is thus, not included in the analysis. Definitions and measurements of the study variables are presented in Table 3.1;

Table 3.1 Variable Definition and Measurement

Variable	Type	Definition	Measurement	Sources
Finance Leases	Dependent	Portion of total assets funded by the use of finance lease	Ratio of finance lease obligations to total assets	Modified construct of measure used in Lasfer and Levis (1998), Kang and Long (2001)
Economic Recession	Independent	Year of economic recession in Nigeria within the period 2010-2017	Dummy variable of 1 and 0. 1, for year of recession and 0, otherwise.	Innovation of Study
Firm Size	Control	Annual Turnover	Log of Turnover	Sharpe and Nguyen (1995), Landry, Fortin and Callimaci (2013).

Source: Author's Construction, 2019

The model of the study is expressed as;

$$FINL_{it} = \beta_{0it} + \beta_1 ECRECESS_{it} + \beta_2 FSIZE_{it} + \varepsilon_{it}$$

Where; FINL= Finance Leases, ECRECESS= Economic Recession, FSIZE= Firm Size, β_0 = Constant, $\beta_{1,2}$ = Coefficients for Estimation, ε = Error term, i= Cross-section and t= Time.

Technique of data analysis used was Generalised Least Square (GLS) Regression with the aid of statistical software, STATA. This was informed by the conduct of robustness tests such as multicollinearity, heteroscedasticity and hausman specification in order to enhance validity of results used in the

analysis. Multicollinearity test assesses the level of collinearity between the independent variables of the study which is preferred to be less than 10 and greater than 0.1 in terms of Variance Inflation Factors (VIF) and Tolerance Values (TV) respectively (Chatterjee & Price, 1991). Heteroscedasticity test provides insight into the absence or otherwise of constancy in variation of the error term. The problem of

heteroscedasticity is usually corrected for through the report of either Fixed Effects regression with robust standard errors or Generalised Least Square (GLS) Regression. The decision to select either Fixed Effects or GLS regression is informed by the hausman specification test. Statistical decisions were made at the 5% level of significance.

4. Results and Discussion of Findings

4.1 Descriptive Statistics

This section presents an analysis of the descriptive statistics of the study variables. Table 4.1 is a highlight of the mean, standard deviation, minimum and maximum values for each variable. The results of the Shapiro-Wilk test for normality are equally provided.

Table 4.1 Descriptive Statistics

Var.	Obs.	Mean	Std. Dev.	Min.	Max.	S-W (z)	pr>z
Finl	107	0.0340	0.0678	0	0.3917	7.966	0.0000
Ecrecess	107	0.3364	0.4747	0	1	0.558	0.2884
Fsize	107	6.7652	0.8081	4.6193	8.4638	3.813	0.0000
FSz Rev	107	2.82e+10	6.27e+10	4.16e+07	2.91e+11	8.561	0.0000

Source: STATA Output, 2019

In Table 4.1, the dependent variable, finance lease (Finl) has a minimum value of 0, implying that some firms in the sample recorded no observation of finance lease obligations for some years within the study period. The maximum value indicates the highest observed portion of total assets financed by leases which is 39%. On average, firms use leases to finance up to 3% of total assets. Revenue (FSz Rev), a proxy for firm size ranges between approximately, ₦41.6 million (minimum) and ₦291 billion (maximum). On average, revenue of the firms amounts to approximately, ₦28.2 billion. The computed mean and maximum revenue values are attributable to the presence

of conglomerate, oil and gas firms in the sample and for which such amounts are expected. Correspondingly, the logged values (Fsize) in minimum, maximum and mean terms are 4.62, 8.46 and 6.77 respectively. Economic recession (Ecrecess), a dummy variable, has minimum and maximum values of 0 and 1. Shapiro-Wilk test results (S-W (z) and pr>z) indicate non-normality of data distribution for the dependent variable, finance leases (S-W (z), 7.9666; pr>z, 0.000). Regression as a technique of analysis, is robust to violations of the normality assumption for a large number of observations (Schmidt & Finan, 2018).

4.2 Correlation Matrix

Table 4.2 presents the correlation matrix of the study variables.

Table 4.2 Correlation Matrix

	Finl	Ecrecess	Fsize
Finl	1.0000		
Ecrecess	0.1379	1.0000	
Fsize	-0.2403	-0.0831	1.0000

*- significant at 5%

Source: STATA Output, 2019

From Table 4.2, it can be seen that none of the correlation coefficients of the independent variables exceed 0.80 as required by Gujarati

(2003). This indicates possible absence of multicollinearity- confirmed by the Variance Inflation Factor (VIF) and Tolerance Values (TV) presented in Table 4.3.

Table 4.3 Variance Inflation Factor and Tolerance Values

Variable	VIF	TV
Ecrecess	1.01	0.993100
Fsize	1.01	0.993100
Mean VIF	1.01	

Source: STATA Output, 2019

For all independent variables, Variance Inflation Factors (VIF) are less than 10 while Tolerance Values are greater than 0.1 suggesting absence of problematic multicollinearity.

4.3 Regression Results and Test of Hypotheses

Table 4.4 presents the Generalised Least Square (GLS) regression results of model. The initial Ordinary Least Square (OLS) regression tested significant for heteroscedasticity (Breusch-

Pagan/Cook-Weisberg chi2 (1), 25.28; p-value, 0.0000). A run of fixed and random effects regression was done with the conduct of Hausman Specification test in order to arrive at the optimum regression result used in the analysis. The random effects (GLS) regression result is thus, interpreted based on the outcome of the specification test being insignificant at 5% level of significance. The decision is further corroborated by significance of the Lagrangian Multiplier test result (chibar2 (01), 173.44; p-value, 0.0000).

Table 4.4 Regression Results

Variable	Co-efficient	Std. Errors	Z	P>(z)
-Cons	0.3240169	0.1000015	3.24	0.001
Ecrecess	0.0132917	0.0060095	2.21	0.027
Fsize	-0.0438094	0.0146311	-2.99	0.003

R² (Within) - 0.1823

Wald Chi2 (2) - 17.51

Prob>Chi2- 0.0002

Source: STATA Output, 2019

The multiple coefficient of determination (R²) indicates the percentage of variation in the dependent variable that is explained by the collective of independent variables. Table 4.4 informs that 18.23% of variation in finance lease use by listed non-financial firms in Nigeria is accounted for by the economic recession and firm size whereas 81.77% is attributable to other factors not captured in the model. The Wald chi2 statistic of 17.51 with a p-value of 0.0002 (significant at 1%) confirms the fitness of the model used in estimation. Analysis of the variable coefficients and p-values shows that economic recession has a positive and statistically significant effect on finance lease use (coefficient, 0.0132917; p-value 0.027, significant at 5%). This provides evidence in support of the hypothesis formulated and affirms the proposition of the pecking order theory that firms compelled by problems of information asymmetry, prioritize and employ sources of finance at least obtainable costs such as leases. The control variable, firm size has a negative and statistically significant effect on finance lease

use (coefficient, -0.0438094; p-value, 0.003 significant at 1%) implying that though economic recession is a propelling factor, larger firms are less likely to engage in leasing.

5. Conclusion and Recommendations

The economic recession can be concluded to positively affect the use of finance leases by listed non-financial firms in Nigeria. This is probably due to a constraint on internal financing capacities and external contracting feasibilities of these firms caused by the recession. The paper recommends that in order to meet increasing demand for lease finance particularly in the aftermath of a recession, the capacity of leasing businesses should be enhanced by facilitating access to an array of finance sources such as insurance and pension funds. The resulting investments in general and specialized assets would ensure varying capital asset needs of diverse corporate firms can be met. By facilitating and sustaining productive activities in the economy, lease finance could in the long-term, contribute to economic growth

thereby, reversing and averting the occurrence of a recession.

References

- Adaranijo, L. O., Bakare, L. A. & Ajiteru, W. O. (2018). Exploration of firms' survival strategies amidst economic recession in Nigeria. *International Journal of Business & Law Research*, 6(2), 20-30.
- Business Day (2017, January 19). Nigeria in 2017: Seeing beyond the recession, *Business Day Online*. Retrieved from <https://www.businessdayonline.com/wp-content/uploads/2016/10/FRITOVAECONOMICS.pdf>
- Chatterjee, S. & Price, B. (1991). *Regression analysis by example*. 2nd Edn. Wiley. New York.
- Davis, M. (2019). The impact of recession on businesses. Accessible at <https://www.investopedia.com/articles/economics/08/recession-affecting-business.asp>
- Donaldson, G. (1961). *Corporate debt capacity: A study of corporate debt policy and the determination of corporate debt capacity*. Graduate School of Business Administration, Harvard University.
- Equipment Leasing Association of Nigeria (2018). Lease volume news. <https://elannigeria.org/wp-content/uploads/2019/04/LEASE-VOLUME-NEWS-2018-newwww.pdf>
- Gujarati, D. N. (2003). *Basic econometrics* (4th ed.). Singapore: McGraw Hill.
- International Accounting Standards Board (2010). *International accounting standards 17- leases*. IFRS Foundation. http://www.ec.europa.eu/internat.../ias17_en.pdf
- International Accounting Standards Board (2016). *IFRS 16- leases*. Accessible at <https://www.iasplus.com/en/standards/ifrs/ifrs-16>
- Kang, S. & Long, M. S. (2001). The fixed payment financing decision: To borrow or lease. *Review of Financial Economics*, 10 (1), 41.
- Landry, S., Fortin, A. & Callimaci, A. (2013). Family firms and the decision to lease. *Journal of family Business Strategy*.
- Lasfer, M. A. & Levis, M. (1998). Determinants of leasing decisions of small and large companies. *European Financial Management*, 4 (2), 159-184.
- Lasisi, J. O. & Shodiya, O. A. (2017). Business development and economic recession in Nigeria: Lessons and the way forward. *The Business and Management Review*, 8 (4).
- Ministry of Budget and National Planning (2017). *Nigeria economic recovery and growth plan (2017-2020)*. Abuja: SOU.
- Modigliani, F. & Miller, H. M. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53 (3), 433-443.
- Myers, S. C. & Majluf, N. S. (1984). Corporate financing decision where firms have information investors do not. *Journal of Financial Economics*, 13, 187-220.
- National Assembly of Nigeria (2015). *Equipment leasing act*. Printed by Equipment Leasing Association of Nigeria.
- National Bureau of Economic Research (2003). Recession dating procedure. Accessible at <http://www.nber.org/cycles/recessions.pdf>
- Oxford Business Group (2017). Nigeria's economy displays strong economic growth in 2017. Accessible at <https://oxfordbusinessgroup.com/overview/onwards-and-upwards-growth-has-begun-pick-following-recession-2016>
- Revised Guidelines for Finance Companies in Nigeria (2014). <http://www.cenbank.org/.../OFIDcircul ars.pdf>
- Schmidt, A. F. & Finan, C. (2018). Linear regression and the normality assumption. *Journal of Clinical Epidemiology*, 98, 146-151.
- Sharpe, S. A. & Nguyen, H. H. (1995). Capital market imperfections and incentive to lease. *Journal of Financial Economics*, 39, 271-294.
- Smith, C. W. & Wakeman, L. M. (1985). Determinants of corporate leasing policy. *The Journal of Finance*, 40 (3), 895-908.
- Yau, J. & Tan, H. (2017). *CEO personal attributes and corporate leasing decisions*. Durham e-theses. Durham University.