MEDIATING EFFECT OF FINANCIAL LEVERAGE ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE MECHANISMS AND LEASING IN LISTED NON-FINANCIAL FIRMS IN NIGERIA

By

Aliya MUSA-MUBI

B.Sc. Accounting, (BUK, 2011); M.Sc. Accounting and Finance (ABU, 2017)

P17ADAC9008

A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD) IN ACCOUNTING AND FINANCE

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DECLARATION

I declare that the work in this thesis entitled: 'MEDIATING EFFECT OF FINANCIAL LEVERAGE ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE MECHANISMS AND LEASING IN LISTED NON-FINANCIAL FIRMS IN NIGERIA' was carried out by me in the Department of Accounting, Faculty of Management Sciences, Ahmadu Bello University Zaria. The information derived from the literature was duly acknowledged in the text and a list of references provided. No part of the thesis was previously presented for the award of any degree at this or any other institution.

Aliya, MUSA-MUBI

.....	.....	.....
P17ADAC9008	**SIGNATURE**	**DATE**

CERTIFICATION

This thesis entitled: MEDIATING EFFECT OF FINANCIAL LEVERAGE ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE MECHANISMS AND LEASING IN LISTED NON-FINANCIAL FIRMS IN NIGERIA' by Aliya, MUSAMUBI (P17ADAC9008) meets the regulations governing the award of the degree, Doctor of Philosophy (PhD) Accounting and Finance in Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

Prof. A. B. Dogarawa

.....	.....	.....
Chairman, Supervisory Committee	**SIGNATURE**	**DATE**

Prof. M. S. Tijjani

.....	.....	.....
Member, Supervisory Committee	**SIGNATURE**	**DATE**

Dr. H. S. Sambo

.....	.....	.....
Member, Supervisory Committee	**SIGNATURE**	**DATE**

Dr. M. M. Bagudo

.....	.....	.....
Head of Department	**SIGNATURE**	**DATE**

Prof. M. N. Shu'aibu

.....	..... .	.....
Dean, School of Postgraduate Studies	**SIGNATURE**	**DATE**

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ABSTRACT

While acknowledging the agency problems associated with capital structure of corporate firms and the search for optimal alternative finance sources, this thesis examines the finance choice of leasing in listed non-financial firms in Nigeria. It investigates the effect that corporate governance mechanisms have on its utilisation with emphasis on the mediating role that financial leverage (other debt components in firms' capital structure) plays in the relationship. For a sample of 53 listed non-financial firms, data were obtained for leasing, financial leverage, Board structure, share ownership and firm-level variables (profitability, firm size and growth) covering the period, 2012-2021. Based on a correlation research design, regression was first run to ascertain the effects of Board size, Board independence, Board gender diversity, Specialised Board committee, managerial ownership, foreign ownership, institutional ownership and ownership concentration on leasing in these firms. For the mediation analysis, regression was run within the framework of structural equation modelling (SEM) with the Monte-Carlo approach to test for mediation applied in order to conclusively determine the presence of any indirect effects. Findings reveal that Board size, Board independence, Board gender diversity, presence of a specialized Board committee and managerial ownership, significantly affect leasing in listed non-financial firms in Nigeria. Financial leverage was also found to mediate the relationship between Board gender diversity (partial mediation), foreign ownership (partial mediation), institutional ownership (full mediation) and leasing. The study therefore, concludes that corporate governance mechanisms affect leasing in listed non-financial firms in Nigeria and that financial leverage plays a mediating role in the ascertained relationship. Recommendations are made for policies by regulatory bodies which advocate for substantial number of Board members, independent, non-executive Board Directors and females on the Board as this would positively affect the choice to finance by leasing. Given respective idiosyncrasies, firms can determine the optimal levels in relation to size and gender. However, independent, non-executive directors should comprise the majority of Board directors. Listed non-financial firms in Nigeria are also advised to devise or strengthen strategies that would enhance efficiencies of specialised Board committees such as providing clear mandates, training, and conduct of performance reviews to ensure effectiveness. Levels of managerial shareholding should be limited in order to avoid adverse effects on employment of leases. In addition, incentives (bonuses, allowances, insurance schemes and other perks) can be provided to managers to employ debt financing where appropriate especially as it relates to leases.

Keywords: Leasing, Corporate Governance Mechanisms, Financial Leverage, Corporate Finance, Agency Theory, Agency Cost Theory, Pecking Order Theory, Ownership, Location and Internalisation Theory, Specialisation Theory, Mediation, Monte-Carlo Approach.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Corporate finance decisions are arguably, the most critical strategic function of management requiring optimality in the course of maximising not just shareholder but stakeholder value in an organisation. The marked increase in complexity of businesses traceable to the industrial revolution of the 18th century, has correspondingly translated to dynamism and innovation in modes of financing. Finance underscores the sustainability and goal attainment of varying economic constitutions ranging from basic sole proprietorships to partnerships and incorporated entities. As such, taking into cognizance their idiosyncrasies which influence access to and choice of finance, the key questions faced by financial managers include- what source of finance to procure, at what cost to the organisation, and what probable effects these choices could have on the overall strategic objectives of value preservation and creation.

Considering these questions, extant theories in corporate finance provide some insight into the choices eventually made by management of firms. The agency cost theory by Jensen and Meckling (1976) assesses the finance decision in the context of corporate entities where the principle of agency applies due to a distinct separation of control from ownership. The management as an agent, is tasked with the responsibility of running the firm in the best interest of its owners, the principal, as well as other stakeholders of the firm. This charge entrusted to management, covers all strategic decisions, finance inclusive, which as propositioned by the theory, could influence the occurrence of certain agency problems and associated costs.

In domiciliation of analysis to corporate entities, the finance choice is seen to encompass owners' investments (equity) and debt. The combination by consequence, creates distinct classes of stakeholders in an organisation- shareholders and debt-holders who have

conflicting interests that could be aligned via deployment of appropriate and effective governance mechanisms within the corporations. For instance, equity has been established to result in the free cash-flow problem whereby managers appropriate funds in excess of investment opportunities for perquisite indulgence (Harris & Raviv, 1991). In response, the contracting of debt has prominently been posited as a disciplinary measure in order to facilitate management of firms in the best interest of shareholders.

However, pursuant to mitigation of the equity-induced agency problem (free cash-flow), there also arises an agency cost attributable to the use of debt- asset substitution and underinvestment. To maximise returns to shareholders, the management is prone to high-risk investments that in event of positive pay-offs, limit the portion accruable therefrom to debt-holders. Compensating for this, debt financiers are wont to incorporate risk exposure in the interest rates charged thus, raising the firms' cost of capital. Correspondingly, an impairment to firms' capacity for investment in profitable endeavours occurs due to increased cost of capital that erodes gains and otherwise, causes worthwhile undertakings to culminate in negative returns to shareholders. This reiterates the need for financial managers to consider cost implications of the shareholder-debt-holder interest misalignment and decide on financing means that lead to a minimisation. Consequent to the above, there entails a consideration by managers, of finance options available that would ideally, would minimise the cost of finance and prevalence of agency problems, as well as ensure investment in endeavours that would maximise firm value to the benefit of stakeholders.

The ultimate decision can equally be explained in the context of the pecking order theory by Myers and Majluf (1984) which notes a hierarchy of preference that management complies with in the choice of finance. Internal funds via retained earnings are presumed to be most preferred as they are arguably cost-free. Where external means are considered, debt is

typically employed over equity as it is considered a cheaper source of finance due to tax shields inherent in interest deductibility. The choice of debt over equity is further premised on the fact that in the real-world of imperfect markets, information asymmetry abounds and this informs investors' discount of equity prices due to perceptions of overvaluation. Also, in comparison to other forms of finance, equity is adjudged the costliest to issue. Inference can therefore be made, that rational firms would contract debt in order to minimise cost of capital and maximise firm value (Modigliani & Miller, 1963).

In the same vein, firms are motivated to procure debt not just for the tax shields obtainable and its affordability, but the reduction of agency costs arising from free cash-flow. However, the use of debt which constitutes financial leverage, is also associated with increase in risks of bankruptcy in firms as well as persistence in manifestation of the agency problem albeit, in new forms such as asset substitution and underinvestment. Consequently, firms are faced with not just the decision of employing debt in capital structure, but the type of debt to contract in view of optimally exploiting its benefits while mitigating bankruptcy risks, agency problems, and associated costs (Kraus & Litzenberger, 1973 as cited in Nyamita, Garbharran & Dorasamy, 2014).

A type of debt that potentially avails firms with these ideals, is lease finance; a unique class of debt that differs from conventional forms in that it is asset-based. Lease companies referred to as lessors, finance firms through provision of physical assets needed with the lessor usually having specialised knowledge in the assets leased. Whereas financial institutions such as banks provide funds to firms which are secured on existing assets, this requirement of collateral however, is known to pose severe funding constraints to firms that have low asset tangibility. Lease finance provides a feasible, flexible alternative to conventional credit for firms as it de-emphasises the need for collateral given that the asset

leased serves such purpose (International Finance Corporation, 2017). Leases also constitute low-risk debt structures that minimise bankruptcy risks for lessees (Fama & French, 2002). Other benefits include- repossession advantage of lessors (compared to secured lenders) which leads to low bankruptcy costs, capital allowances on leased assets and tax deductibility of rentals or interest component in lease payments. This results in leases being attractive sources of finance compared to other conventional forms of debt.

In corporate entities, lease finance is proposed to address the agency problems that arise with the use of equity and conventional debt. The free cash-flow problem is mitigated by the restriction placed on managers through fixed payment obligations- regular rental payments or payments that amortise interest and cost of assets leased (Lasfer & Levis, 1998). As for asset substitution with conventional debt finance, leases contract firms to the use of an asset over an agreed term limiting diversion of funds to perceived risky investments (Zhou, 2014). Underinvestment due to high cost of capital is avoided as leases enhance investor perception of low-risk debt structures (Fama & French, 2002). In addition, leases tend to be procurable at lower costs due to the repossession advantage lessors have compared to other creditors in secured lending (Neuberger & Rathke-Doppner, 2012; Rampini & Viswanathan, 2013).

These feasibilities and benefits inherent in lease finance raise an expectation of prevalence in the financing structure of firms. This is supported by regional statistics on equipment leasing in Africa, published by the International Finance Corporation (IFC) in 2017, which estimated potential value of the African market to be about 80 billion dollars. The statistics as presented by IFC (2017) further identified Agriculture, Construction, Manufacturing, Mining, Oil and Gas, Renewable Energy, and Transportation sectors as likely sources for increased lease demand in Nigeria. However, Otabor-Olubor (2017) noted that despite emerging economies such as Nigeria having a substantial need and demand for leases, it remains under-utilised

compared to other conventional forms of finance. Therefore, questions arise as to the enabling idiosyncratic factors that motivate its use particularly in corporate entities.

Corporate governance mechanisms encompassing Board structure (Board size, Board independence, Board gender diversity, specialised Board committees) and share ownership patterns (managerial ownership, foreign ownership, institutional ownership, ownership concentration) have been documented in empirical studies to influence firms' financing decisions (De La Bruslerie & Latrous, 2012; Lee & Kuo, 2013; Chung & Wang, 2014; Liao, Mukherjee & Wang, 2015; Purag, Abdullah & Bujang, 2016; Martin & Hoffman, 2017; Khawaja, Bhatti & Ashraf, 2018; Kajola, Olabisi & Fapetu, 2019; Gupta, Yadav & Jain, 2020). The central focus of this research is examination of the effect that corporate governance mechanisms may have on proposed value-enhancing finance decisions such as leases and the possible mediating role of pre-existing financial leverage which in the context of this study, is defined as all other components of non-current debt in a firm's capital structure.

Considering the limited number of studies which examined the effect of corporate governance mechanisms on leasing by firms (see Mehran, Taggart & Yermack, 1999; Robicheaux, Fu & Ligon, 2008; Callimaci, Fortin & Landry, 2011; Malik, Saeed, Ahmed & Javed, 2012; Mungami, 2013; Munir, Kok, Teplova & Li, 2017), it is proposed that any identified relationship is on account of firms' state of financial leverage. The underlying thesis of this study is that corporate governance mechanisms indirectly affect the decision to contract lease finance through a direct effect on financial leverage.

This could materialise in terms of quality corporate governance mechanisms and the consequent efficient monitoring which are theorised to improve the financial performance of firms. According to the signalling theory, this effect on earnings communicates firm credit-

worthiness to investors thereby, lowering the cost of capital as well as facilitating access to debt finance. Whilst equity issues may be subscribed at undiscounted prices, the pecking order theory affirms preference for debt given tax shields obtainable that make it comparatively cheaper. To maximise return of shareholders, firms therefore, contract debt to invest in positive Net Present Value (NPV) projects and exploit tax shields which ultimately contribute to increased firm earnings.

Considering the implied positive relationship between corporate governance mechanisms and financial leverage, inference can be made for entrenched shareholder-management alignment albeit, with morphed agency problems in form of asset substitution and underinvestment. In the course of shareholder wealth maximisation, firms tend to channel these debt funds to investments that expose debt-holders to increased risks and only a fixed percentage should the investments payoff (asset substitution). To mitigate, increased rate of interest is charged which is a disincentive to firms' engagement in positive NPV projects due to potential appropriation of the payoffs by debt-holders (underinvestment).

Lease finance can be deemed a suitable last resort which circumvents the agency problems of both equity and conventional debt. Payment obligations on leases safeguard against appropriation of free cash flow and the commitment to asset use over a term, prevents firms from asset substitution and future constraints to investment. Therefore, financial leverage in firms is expected to compel the contracting of leases in order to be availed of these means by which quintessential agency issues could be avoided. Corroborating this relationship are findings of empirical studies such as; Malik, Saeed, Ahmed and Javed (2012), Landry, Fortin and Callimaci (2013), Cotei and Farhat (2015), Ambrose, Emmerling, Huang and Yildirim (2018) and Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018). These

studies are classified under the lease-debt complementarity strand of literature addressing the nature of relationship between leases and other conventional debt.

From a differing perspective, in the context of agency cost theory, the presence of quality corporate governance mechanisms through Board structure and share ownership, aligns the interests of shareholders and managers thereby, mitigating the agency problem associated with the use of equity. As debt is considered an agency cost employed to address the free cash flow problem, effective corporate governance mechanisms will in this instance, suffice as a monitoring/disciplinary substitute thereby, foregoing the need to finance with debt. A potential implication on the use of lease finance can be inferred from a strand of literature on the leasing puzzle which suggests the substitutability of conventional debt and leases (Cosci, Guida & Meliciani, 2013; Mendes, 2015; Bialek-Jaworska & Nehrebecka, 2016, Musa-Mubi, 2017). Lease finance being considered as pseudo-debt, would adversely be affected by an eliminated need for financial leverage in firms. Furthermore, it could be posited that the absence of agency problems associated with debt would not necessitate leasing by these firms. Therefore, the decision to finance with leases is in part, accounted for by the consequences of financing with other types of conventional debt.

Despite practical motivations for leases, there obtains a low level of adoption in Nigeria and Africa at large compared to developed economies. The Global Leasing Report published by White Clarke Group (2020) indicates that Africa accounted for 0.5% of world lease volume in 2018, equivalent to 6.2 billion dollars (most recent statistical information indicates reduction in percentage of lease volume to 0.3% in 2021 as cited in the Global Leasing Report of 2023). In 2020, the continent, along with South America and Australia collectively accounted for 3.4% of global lease volume (World Leasing Review, 2022). Only five African countries (South Africa, Nigeria, Morocco, Kenya and Egypt) made the list of top 50

countries based on volume of lease transactions in 2019. Nigeria, placed 42nd, registered 1.01 billion dollars in leases- a 16.80% growth from 2018 (White Clarke Group, 2020). As at 2021, only three African countries including Nigeria were placed in the top 50 (Solifi, 2023).

In 2023, a lease volume of 4.19 trillion naira was registered representing growth of 28.7% compared to 2022 values (Equipment Leasing Association of Nigeria, 2024a). Leasing was notable across capital-intensive sectors such that Oil and Gas accounted for 25%; Transportation and Logistics, 23%; Healthcare, Education and others, 14%; Manufacturing, 14%; Telecommunications, 8%; Agriculture, 9% and Government, 7% (Equipment Leasing Association of Nigeria, 2024a). Financial institutions are noted to provide lease finance with 80% of investment value attributable to Banks. However, non-Bank institutions cover 80% of transaction spread with a clientele pre-dominantly Micro, Small and Medium Scale Enterprises (MSMEs) (Equipment Leasing Association of Nigeria, 2020). The Leasing Outlook for 2024 as published by ELAN further suggests continued significant representation of MSMEs in the lease clientele of financial institutions. This provides inference for low subscription to leases by corporate entities especially those publicly listed in Nigeria.

The narrative could however, be changed given the results of the Coronavirus pandemic in 2020 such as dwindling revenues, retrenchment, contraction in productivity and recessions across multiple continents (Equipment Leasing Association of Nigeria, 2020). The increased sourcing of finance by entities from varying channels besides interventions from the Federal Government, has the potential of stimulating demand for lease finance (further buttressed by persistent financing gaps across various sectors of the economy as noted by Equipment Leasing Association of Nigeria, 2024b). This is in consideration of the critical role of leases in capital investment and restoration of economic activities post-pandemic. Also, being that listed firms in Nigeria have access to finance in the capital market through equity issues, the

consequent ownership structure has implications on decisions to employ conventional debt and lease finance. These firms are further regulated by the Codes of Corporate Governance (2011, Revised 2018) mandating the institution of corporate governance mechanisms particularly the Board, whose oversight function similarly portends implications for the finance decision. The study therefore, examines the effect of Board and ownership structure dynamics on leasing as well as the mediating role of financial leverage in the context of listed non-financial firms in Nigeria.

As at March 2022 (and applicable as at 2024), listed non-financial firms in Nigeria are classified under the following industries on the Nigerian Stock Exchange (NSE); agriculture, conglomerates, construction and real estate, consumer goods, information and communication technology, healthcare. Industrial goods, natural resources, oil and gas and services. Non-financial firms are unique given that they engage in leasing as users (lessees). Thus, they are best suited for examination in addressing the subject matter of the research which is the identification of corporate governance mechanisms explaining leasing by listed corporate entities in Nigeria.

1.2 Statement of the Problem

Developing economies such as Nigeria are known to have dire financing needs for capital investment. This is explained by limited options and access to financing as a result of the prevalence of under-developed financial centres (Agence Francaise De Developpement [AFD], 2021). The capital markets are further noted to be volatile such that in 2020, Nigeria registered net outflows of portfolio investments valued at 3.6 billion dollars with 90% of this amount being debt capital (AFD, 2021). The financing constraints consequently imposed, is also worsened by weak creditor rights and imperfect legal systems which increase risks associated with secured lending as evident in conventional debt financing (IFC, 2017). Thus,

besides insufficiency in the supply of finance, there is an adverse effect on demand due to high interest rates charged in mitigation of perceived risks. In corroboration, a Business Expectations Survey Report by the Central Bank of Nigeria (CBN, 2020a), identified constraints to credit access and high interest rates amongst significant factors affecting business operations in Nigeria.

Furthermore, as the Central Bank of Nigeria (CBN) projected economic growth for 2020 in the Economic Report for the 4th Quarter of 2019, part of its mandate included improvement in credits to specific sectors of the economy such as agriculture and manufacturing albeit, with a bias towards Micro, Small and Medium Scale Enterprises (MSMEs). The projection was made on rising oil output and prices, diversification of the economy from oil predominance as well as expansion in the financial sector (CBN, 2020b). However, the Coronavirus pandemic of 2020 led to a drastic dive in oil prices and a fall in remittances with similar trend observed in foreign exchange held in the Reserves (AFD, 2021). The resultant currency devaluation has discouraged importation of production inputs thus, compelling businesses to source from domestic suppliers (Bloomberg, 2020). In this regard, the importance of lease finance in facilitating capital asset investments and sustainability of economic activities cannot be over-emphasised.

Despite intervening efforts of the CBN, its policies have further been adjudged to be self-sabotaging (Bloomberg, 2020). For instance, the increase in loan to deposit ratio (60-65%) expected to raise level of credit accessible is offset by the requirement of 27.5% of deposits to be maintained as reserves. In a report by The Nation Newspaper (December, 2020), the CBN debited banks ₦349.72 billion due to a breach of the cash reserve requirements. Consequently, the intended effect of the loan to deposit ratio will be countered by financial institutions' constraint in extending credit. As at April, 2020, a drop in loans to the private

sector by two-thirds of 4th Quarter, 2019 totals had already been registered with low expectations of an improvement given the current economic downturn (The Nation Newspaper, December, 2020) and in spite of ₦1.7 trillion borrowed by banks through the Standing Lending Facility (CBN, 2020c).

In addition, increased domestic borrowing by the Government could crowd out businesses in credit access (Bloomberg, 2020). On the capital market front, the Economic Report for the 3rd Quarter of 2020 (CBN, 2020c) revealed a dip in performance as the volume and value of traded securities reduced by 11.4% and 18.3% respectively when compared to the 2nd Quarter. For the year 2023, global slow-paced recovery from Covid-19, rising inflation, constrictive monetary policies and tighter credit conditions were registered to persist with adverse effects on financial intermediation in emerging and developing economies including Nigeria (Equipment Leasing Association of Nigeria, 2024b).

Combination of these aforementioned factors thereby, highlights need for alternative finance sources by firms. Lease finance has reasonable potential in servicing the funding needs of businesses particularly corporate entities. Variability in credit supply could also ease pressure on financial institutions such as banks that are conspicuously saddled with demand for long-term credit in form of conventional loans (Veron & Wolff, 2016 as cited in Omoshagba & Zubairu, 2018). However, while the motivation for leasing is evident, there is an inferred low level of prevalence among listed firms in Nigeria (Equipment Leasing Association of Nigeria, 2020 & 2024).

Considering the aforementioned, questions arise as to how corporate governance mechanisms affect the financing structure of listed firms in Nigeria and what permutations ensure positive outcomes in terms of optimal finance choices that contribute to the enhancement of firm value. While there is a robust body of literature on debt contracting by firms, Rauh and Sufi

(2010) noted the significant disregard for heterogeneity of its composition in empirical research. The minimal attention that has been accorded to specific types of debt and their determinants, obscures valuable insight into the financing decisions of firms. There is a limited quantum of research on lease finance which is more pronounced in the area that covers the effects of corporate governance mechanisms on its use by firms.

Few studies such as Mehran, Taggart and Yermack (1999), Robicheaux, Fu and Ligon (2008), Callimaci, Fortin and Landry (2011), Malik, Saeed, Ahmed and Javed (2012), Mungami (2013) and Munir, Kok, Teplova and Li (2017) have been conducted on the subject matter, albeit, in foreign economies inclusive of Canada, Pakistan, Kenya and China. The limited findings as a result, do not provide sufficient grounds for either conclusion or generalisation thus, warranting the conduct of empirical studies in other climes such as Nigeria. Pertinent to note also, is the fact that research on leases in Nigeria has only covered the subject matters of; compliance with lease accounting standards by lessee firms (Mamman, 2006), development of the lease industry (Oko & Isu, 2013; Oko & Essien, 2014; Oko & Egwu, 2014; Abdulkarim, Mohammed & Musa-Mubi, 2020), leasing effects on firm liquidity (Kurfi, 2005), leasing effects on firm financial performance (Hassan, 2008; Akinbola & Otokiti, 2012), effects of firm-specific attributes on leasing (Musa-Mubi, 2017) and the relationship between leases and debt (Musa-Mubi & Badara, 2019).

Furthermore, a review of empirical studies on the effects of corporate governance mechanisms on leasing indicates that predictor variables examined have largely been restricted to Board size (Robicheaux, Fu & Ligon, 2008), Board independence (Robicheaux, Fu & Ligon, 2008), managerial (CEO) ownership (Mehran, Taggart & Yermack, 1999; Robicheaux, Fu & Ligon, 2008; Mungami, 2013; Munir, Kok, Teplova & Li, 2017), institutional ownership (Mungami, 2013) and ownership concentration (Callimaci, Fortin &

Landry, 2011; Malik, Saeed, Ahmed & Javed, 2012). For the most part, studies in the area have not tested the effect of other relevant variables within both Board and ownership structure. In addition, the methodology adopted by these studies has neither considered nor tested the possibility of mediation by a relevant variable.

Therefore, informed by propositions of hypotheses and theories, this research considers the effects of Board gender diversity (risk aversion and overconfidence hypothesis), presence of specialised Board committees such as the risk management (specialisation theory) and foreign ownership (ownership, location and internalisation theory). In addition, based on the thesis of this research, the effect of financial leverage as a mediating variable is examined. Empirically, the premise of the research is further strengthened by evidence as to the relationship between corporate governance mechanisms and financial leverage (Liao, Mukherjee & Wang, 2015; Purag, Abdullah & Bujang, 2016; Martin & Hoffman, 2017; Khawaja, Bhatti & Ashraf, 2018; Kajola, Olabisi & Fapetu, 2019; Gupta, Yadav & Jain, 2020) as well as the relationship between financial leverage and leasing (Malik, Saeed, Ahmed & Javed, 2012; Cosci, Guida & Meliciani, 2013; Mendes, 2015; Musa-Mubi, 2017; Ambrose, Emmerling, Huang and Yildirim, 2018; Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak & Trzpiola, 2018). Collectively, significant contribution to the literature obtains through evidence from Nigeria, as to the effect of corporate governance mechanisms (Board structure and share ownership patterns) on leasing in the context of listed non-financial firms.

1.3 Research Questions

The following research questions were raised to guide the study:

i. How does Board size affect leasing in listed non-financial firms in Nigeria?
ii. To what extent does Board independence affect leasing in listed non-financial firms in Nigeria?

iii. What is the influence of Board gender diversity on leasing in listed non-financial firms in Nigeria?

iv. How does the presence of specialised Board committee affect leasing in listed non-financial firms in Nigeria?

v. What is the effect of managerial ownership on leasing in listed non-financial firms in Nigeria?

vi. To what extent does foreign ownership affect leasing in listed non-financial firms in Nigeria?

vii. How does institutional ownership influence leasing in listed non-financial firms in Nigeria?

viii. What effect does ownership concentration have on leasing in listed non-financial firms in Nigeria?

ix. How does financial leverage affect leasing in listed non-financial firms in Nigeria?

x. To what extent does financial leverage mediate the relationship between the aforementioned corporate governance mechanisms and leasing in listed non-financial firms in Nigeria?

1.4 Objectives of the Study

The research aimed at determining the mediating effect of financial leverage on the relationship between corporate governance mechanisms and leasing in listed non-financial firms in Nigeria. Specifically, the objectives of the study are to:

i. Determine the effect of Board size on leasing in listed non-financial firms in Nigeria.

ii. Examine the effect that Board independence has on leasing in listed non-financial firms in Nigeria.

iii. Assess the influence of Board gender diversity on leasing in listed non-financial firms in Nigeria.

iv. Analyse the effect of specialised Board committee on leasing in listed non-financial firms in Nigeria.

v. Examine the effect of managerial ownership on leasing in listed non-financial firms in Nigeria.

vi. Determine the effect of foreign ownership on leasing in listed non-financial firms in Nigeria.

vii. Assess the influence of institutional ownership on leasing in listed non-financial firms in Nigeria.

viii. Analyse the effect ownership concentration has on leasing in listed non-financial firms in Nigeria.

ix. Examine the effect of financial leverage on leasing in listed non-financial firms in Nigeria.

x. Assess the extent to which financial leverage mediates the relationship between Board size and leasing in listed non-financial firms in Nigeria.

xi. Examine the mediating role financial leverage plays in the relationship between Board independence and leasing in listed non-financial firms in Nigeria.

xii. Determine how financial leverage mediates the relationship between Board gender diversity and leasing in listed non-financial firms in Nigeria.

xiii. Examine the mediating role of financial leverage in the relationship between presence of specialised Board committee and leasing in listed non-financial firms in Nigeria.

xiv. Assess the extent to which financial leverage mediates the relationship between managerial ownership and leasing in listed non-financial firms in Nigeria.

xv. Investigate the mediating effect of financial leverage on the relationship between foreign ownership and leasing in listed non-financial firms in Nigeria.

xvi. Analyse the mediating effect of financial leverage on the relationship between institutional ownership and leasing in listed non-financial firms in Nigeria.

xvii. Determine the extent to which financial leverage mediates the relationship between ownership concentration and leasing in listed non-financial firms in Nigeria.

1.5 Hypotheses of the Study

The following hypotheses were formulated for testing in line with the objectives of the study:

$H0_1$ Board size has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_2$ Board independence has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_3$ Board gender diversity has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_4$ Presence of specialised Board committee has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_5$ Managerial ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_6$ Foreign ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_7$ Institutional ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_8$ Ownership concentration has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_9$ Financial leverage has no significant effect on leasing in listed non-financial firms in Nigeria.

$H0_{10}$ Financial leverage does not mediate the relationship between Board size and leasing in listed non-financial firms in Nigeria.

$H0_{11}$ Financial leverage does not mediate the relationship between Board independence and leasing in listed non-financial firms in Nigeria.

$H0_{12}$ Financial leverage does not mediate the relationship between Board gender diversity and leasing in listed non-financial firms in Nigeria.

$H0_{13}$ Financial leverage does not mediate the relationship between presence of specialised Board committee and leasing in listed non-financial firms in Nigeria.

$H0_{14}$ Financial leverage does not mediate the relationship between managerial ownership and leasing in listed non-financial firms in Nigeria.

$H0_{15}$ Financial leverage does not mediate the relationship between foreign ownership and leasing in listed non-financial firms in Nigeria.

$H0_{16}$ Financial leverage does not mediate the relationship between institutional ownership and leasing in listed non-financial firms in Nigeria.

$H0_{17}$ Financial leverage does not mediate the relationship between ownership concentration and leasing in listed non-financial firms in Nigeria.

1.6 Scope of the Study

The domain for the research is non-financial firms listed on the Nigeria Stock Exchange (NSE) as at 31st July, 2022, having report of right-of-use assets and/or prepayments on leases in their Statement of Financial Position. The criterion specified, qualifies these firms as lessees. As a domain of study, lessees are deemed most appropriate given that research on leasing by firms implies investigation within the context of demand for such finance. Therefore, firms listed on the NSE as financial services providers are excluded being representative of the supply side to finance (lessors).

The time-frame of the research is 2012-2021. This is in consideration of the Codes of Corporate Governance that have been issued specifically, in 2011 and 2018 as revisions to

the Code of Best Practices for Corporate Governance (public companies) released in 2003. The period selected, enables assessment of the effects that compliance with these Codes (such as on Board structure) may have had on the financing decision to lease. Noteworthy is the exclusion of the period covering 2003-2011 which is due to significant non-availability of the needed financial statements.

Correspondingly, given the dynamic and continuously evolving nature of businesses, financing arrangements and resulting stakeholders, the effect of ownership structure on the decision to lease can reliably be determined within the context of the specified time-frame. Reiterated is the thesis tested that any effects so determined are explained by a mediating factor which is hypothesised in this research as financial leverage.

1.7 Significance of the Study

The discourse contained in this study provides insight and impetus for consolidating the role of lease finance. This is considering the benefits that accrue not just to lessees (such as listed corporate firms in Nigeria) but lessors. More specifically, listed non-financial firms as a whole, will be influenced to assess the state of corporate governance mechanisms in place as well as adopt measures for their enhancement. This is in order to secure attendant benefits including optimality in strategic decision making, particularly as it relates to finance.

Stakeholders of these firms (investors) are similarly expected through influence on the Board, to positively affect the contracting of lease finance. Being appointed by shareholders in the capacity of an agent, the Board constitutes the management, monitors its actions and takes the necessary decisions towards ensuring success of managerial outcomes the most basic of which, is the preservation of firm value. The Financial Reporting Council (FRC) as a regulatory body would also be guided in the formulation of governance policies that will

enhance corporate governance mechanisms in firms which would translate to value-adding management.

The study would motivate financial institutions and markets to consolidate on diversification of finance sources for firms. This will minimise the demand pressure on commonly subscribed forms such as conventional loans. Where impediments on the supply side are addressed through collaborative efforts of institutions such as the IFC, International Monetary Fund, World Bank, finance associations, lease associations amongst others, demand for leases by listed non-financial firms would be stimulated, if not enhanced.

The study makes theoretical contributions to the corporate finance literature by hypothesising and proving, the mediating effect of financial leverage on the relationship between corporate governance mechanisms and leasing in listed non-financial firms in Nigeria. Given that the study examines heterogeneity of the debt component of capital structure (with a focus on leases), it provides new perspectives within the context of extant theories and hypotheses on corporate governance. This is via explanations for the specific choice of lease finance in relation to other forms of conventional debt.

The study also makes methodological contributions given that it employs a statistical mediation technique in assessing the indirect effect of corporate governance mechanisms on leasing in listed non-financial firms. The limited empirical studies in this area so far, have assessed only direct effects. Furthermore, this study applies a new form of mediation analysis developed by Mehmetoglu (2018) which is conducted through the use of structural equation modelling (SEM). This method of analysis is suitable for mediation studies with only observed variables instead of latent. The expectation holds that the methodology and findings of this study will motivate and guide the conduct of research on heterogeneity in capital structure- placing emphasis on other forms of debt finance employable by firms.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature in terms of conceptual definitions of the variables, empirical studies conducted in relation to the subject matter and the theories deemed relevant to the explanation of the relationships among the variables. The concepts of lease finance, financial leverage and corporate governance mechanisms are reviewed inclusive of their varying dimensions. The empirical literature is distinctly categorised and reviewed in terms of the effects of corporate governance mechanisms on lease finance, corporate governance mechanisms on financial leverage and financial leverage on lease finance. The chapter concludes with a review of the agency, agency cost, pecking order and ownership, location and internalisation (OLI) and specialisation theories.

2.2 Concept of Lease Finance

A lease is defined as a contractual agreement whereby one party (lessor) grants another (lessee) the right to use an asset over a specified period in exchange for payment of a consideration (IFC, 2005; Bolea & Cosma, 2015). Leasing refers to the act of utilising lease finance. Wolck, Dodd and Rozycki (2017) describe a lease as a legal document that conveys the use of an asset for a period, provided that compensation such as rent payment is made. A lease under this definition is said to be a conveyance given that it results in a lessee acquiring interest in the asset during the term of the lease. In fulfilment of contractual terms, the lessor is obligated to permit the lessee, unhindered use of the asset as long as lease payments are made periodically. Subsequent to the expiration of a lease term, any of the following instances may occur; secondary lease of the asset, acquisition of ownership by lessee or repossession and lease or sale to third parties (IFC, 2017).

In Nigeria, a lease is defined by the Banks and Other Financial Institutions Act of Nigeria (BOFIA, 2004) and stated in the Revised Guidelines for Finance Companies in Nigeria (2014), as the business of letting or subletting mobile properties for use by a party referred to as hirer or any similar term. This is with retention of title to the asset by the lessor, irrespective of the type of lease agreement. Leases are seen as medium-term finance instruments for acquisition of assets that is premised on separation of legal ownership from economic use (IFC, 2005).

Pancheva (2015) notes the essence of leases as availing firms with access to assets in respective of cash flow status. Bolea and Cosma (2015) identify benefits of leases to include; short-term to long-term financing of assets, non-restriction to its use in spite of covenants that may exist in subsisting loan arrangements, convenience, as well as flexibility in payments. Leases are contracted on the presumption that lessees would generate cash flow from asset use in order to service the lease facility. As such, credit history and collateral of firms have less influence on lessors' decision to offer leases of assets (IFC, 2017).

Leases accord significant benefits to not just lessees but suppliers of assets. As financial intermediaries inclusive of banks, insurance firms, manufacturers and equipment vendors, lessors assume the credit functions of suppliers and address the capital investment needs of lessees. This is aided by possession of specialised knowledge of the assets and industry in which the lessee operates. The lessor purchases an asset based on lessee specifications after which it is made available to the lessee for a term and in exchange for periodic payments. This specialisation of lessors also accounts for efficient disposal of repossessed assets (IFC, 2017).

There are two types of lease arrangements- finance and operating which are distinguishable by the transfer or otherwise of risks and rewards of ownership. By risks of ownership, losses,

damages, obsolescence are implied whereas rewards refer to the gains that result from economic use of the asset. In the financial statements of firms utilising lease finance, this distinction is however, eliminated in accordance with the requirements of International Financial Reporting Standard (IFRS) 16 (IFC, 2019). Firms are by this standard, mandated to capitalise all leases on the statement of financial position excluding those that are of low-value assets and a lease term less than 12 months.

According to IFRS 16 as issued by the IASB (2016), leases are identified and capitalised on the Statement of Financial Position as assets (right-of-use assets) with a corresponding liability (non-current), based on transfer of a 'right-to-use'. This implies that a lessee has control over the asset in terms of discretion over its use as well as substantial receipt of economic benefits derivable from its use. Where the decision as to how or for what purpose the asset is to be used, lies with the supplier, the arrangement is instead, considered a service even though there are substantial economic benefits derivable by the user (KPMG, 2017). This study aligns with the definition of leases as given by the IASB (2016) which serves as the yardstick for identification of sample firms and investigation in line with the objective of the research. This notwithstanding, the concepts of finance lease and operating lease are explained in the following sub-sections.

2.2.1 Finance Lease

Bolea and Cosma (2015) define a finance lease as a non-cancellable agreement- a lease that transfers the risks and rewards of ownership of an asset to a lessee in return for periodic payments. According to IFC (2005), a finance lease is referred to as a full pay-out lease due to the lease payments amortising the lessor's purchase cost in relation to the asset (as well as providing a profit margin). A finance lease is characterised by the following terms; lease of specialised assets not subjectable to significant modifications by the lessee, lease period

covering significant portion of asset economic life, present value of minimum lease payments equalling fair value of the leased asset and a purchase option at end of the lease term with transfer of ownership (Pancheva, 2015).

In a finance lease, the lessee provides requirements in relation to a specific asset which is then purchased by the lessor and leased to the lessee. The rental payments are designed to cover the cost of the asset and profit margin to accrue to the lessor (Bolea & Cosma, 2015). Some agreements include clauses that make the lessee liable for all rentals- past and future in the event of a default. This is referred to as the hell or high water clause (Bolea & Cosma, 2015). At the expiration of the lease term, the lessee is usually availed with the option of purchasing the asset at a percentage of its fair value when the option is exercised (Revised Guidelines for Finance Companies in Nigeria, 2014).

There are other forms of lease arrangements that are classified as finance lease such as the leveraged lease, sale-leaseback and sale-type. According to the Federal Inland Revenue Service (FIRS, 2010), a leveraged lease involves a third party- a financial institution that assumes a significant portion of the purchase price of the asset. Where a finance lease is a sale-type, gains or losses to the lessor may arise where the fair value of the leased asset is higher or lower than the carrying amount in the lessor's financial statements at the commencement of the lease (FIRS, 2010). In the case of a sale-leaseback, an asset is sold and leased by the disposing firm. This arrangement is usually secured in order to improve firm liquidity while still being availed with use of the asset (Stojanovic & Guzovski, 2013).

2.2.2 Operating Lease

IFC (2005) defines an operating lease as a rental contract with the risks and rewards of ownership of a leased asset, being the preserve of the lessor. Being that operating leases are for a short-term, the cost of the leased asset and profit margin are gained through multiple

leases of the asset and its eventual sale (IFC, 2005). Mateeha (2006) identifies features of an operating lease to include; retention of title to asset by lessor, lease term of less than 75% of the economic life of the asset, present value of lease payments equalling less than 90% of asset fair value and absence of an option to purchase in the lease contract. In an operating lease, the lessor incurs maintenance, insurance and associated costs which are embedded into the receivable lease payments (Stojanovic & Guzovski, 2013).

Operating leases are cancellable agreements especially considering the fact that some leased assets are prone to risk of obsolescence by way of technological advancements. Besides minimisation of this risk, tax savings can be realised through negotiations for low rental payments in exchange for capital allowances claimable by lessor, particularly where subject to a higher tax rate than the lessee (Thomson, 2003).

Prior to 2019, operating leases had the advantage of off-balance sheet reporting in the financial statements which obscured actual gearing levels and true financial performance of firms. This informed its popularity as a type of lease finance. However, with the issuance of IFRS 16 and its mandatory compliance from 2019, lessee firms are required to re-assess and re-classify transactions with the objective of reporting reliable values of confirmed leases on the statement of financial position.

2.3 Concept of Corporate Governance Mechanisms

The precipitant of corporate governance emanated from the development of corporations which are distinctly characterized by a separation of ownership from management (Berle & Means, 1932) and operation based on the principle of agency (Jensen & Meckling, 1976). Unintended agency problems from these peculiarities, manifest where managements indulge in self-utility maximizing practices such as excessive perquisites consumption and sub-optimal investments to the detriment of wealth maximization; particularly in the case of

shareholders being residual risk investors. In addressing the debacle, firms tend to accord significance to the efficacy of Boards of Directors as well as equity ownership composition.

Similarly, firms tend to utilize enforceable contracts as in the case of debt. However, while mitigating the conflict of interests between management and shareholders, a new set tends to arise within the set of stakeholders most evidently, between shareholders and debt financiers. This conflict arises due to the limited liability that shareholders possess in the event of firm insolvency thereby, motivating risk-appetite on their part in anticipation of high returns. In contrast, debt financiers only benefit a fixed percentage of any positive pay-off while being exposed to a significant amount of risk and potential losses (Mcdonnell, 2015). Stakeholders therefore, require measures conceptualised as corporate governance mechanisms, by which conflicting interests are protected and equitably managed.

The earliest definition of corporate governance can be traced to that given in the Cadbury Report (1992) which describes it as the systems by which corporate entities are directed and controlled with the responsibility for such governance assigned to a Board of Directors. The OECD principles (1999) defined corporate governance as the structure of relationships amongst shareholders, the Board and management of an organisation, aimed at ensuring attainment of its objectives. According to Davis (2005), corporate governance refers to the structures, processes and institutions used to allocate resources within an organisation. Wojcik (2009) defined corporate governance as a set of mechanisms by which relationships between managers and investors can be optimized- inclusive of legal requirements, acceptable business practices and societal norms. The essence of corporate governance was theorized as securing investor confidence and assurance of access to finance by firms. Obigbemi, Omolehinwa, Mukoro, Ben-Caleb and Olusanmi (2016) reasoned that confidence

in firms translate to low cost of capital and corporate governance further ensures the optimum deployment of resources leading to growth not just at firm-level but the economy as a whole.

The definition by Wojcik (2009) considers investors (equity holders and debt financiers) as the primary stakeholders in whose interests, governance is required towards attaining positive returns on investment. In a similar vein, Boatright (2012) narrowed conceptualisation of corporate governance based strictly on the shareholder model. While defining corporate governance as the legal rules informing the roles of groups adjudged to control an entity (shareholders, directors and management), emphasis is placed on shareholders as the group with control rights whose interests must be furthered in an organisation.

This recognition of 'shareholder primacy' is attributed to the consequence of public policy and market transactions. As protecting shareholders is deemed to serve the best interests of societies, public policy thus, influences the institution of corporate governance in firms through legislation and regulation. From the perspective of market transactions, it is reasoned that sourcing of capital by firms leads to the formation of contracts which should ensure means by which shareholders' interests are guarded, being the residual risk bearers of a firm. Subscription to the shareholder primacy view however, de-emphasises the importance of other stakeholders in a firm. This inadequacy therefore, underscores the necessity of a remodelling and redefinition of corporate governance whose beneficiaries should connote inclusiveness.

Assessing the evolution of the concept of corporate governance, indications are that contentions persist stemming from differing perceptions of whose interest a firm should be run. Paine and Srinivasan (2019) noted in particular, the influence that increasing capital market sophistication has on the revision of statements and Codes of corporate governance. Citing the case of the United Kingdom (UK) Governance Code (2018), corporate entities

have been enjoined to specify how long-term value will be created for all stakeholders as against shareholders. Similarly, in the United States (US), the statement issued by the Business Roundtable in 2019 includes a commitment by CEOs to the interest of all stakeholders in a firm. Compared to the UK and US, France subscribes to the advancement of the corporate interest rather than any group of stakeholders. The inference therefore, is that the focal essence of corporate governance has transcended the doctrine of shareholder primacy.

Across several other jurisdictions, Nigeria inclusive, corporate entities have in place Codes of corporate governance whose prescriptions are largely derived from the Principles of Corporate Governance issued in 1999 by the Organization for Economic Cooperation and Development (OECD) as well as the Sarbanes-Oxley Act (2002). The OECD principles prescribe standards for six areas spanning; shareholder rights, equitable treatment of shareholders, role of stakeholders, disclosure, transparency and the Board (McDonnell, 2015) whereas the Sarbanes-Oxley Act (in conjunction with the New York Stock Exchange listing requirements) further stipulates composition of specialised Board committees that would yield desired results of corporate governance (Useem & Davis, 2015).

In Nigeria, the first Code of Best Practices for Corporate Governance (public companies) was issued in 2003 by the Securities and Exchange Commission (SEC) in collaboration with the Corporate Affairs Commission (CAC). Subsequent revisions to the Code were made in 2011 and 2018. However, while the Nigerian Code of Corporate Governance (2018) has been released by the Financial Reporting Council of Nigeria (FRC) since 2019, no effective date for compliance has been stated. Phillips, Amadi, Somuyiwa and Onakoya (2019) noted that the new Code of 2018 does not explicitly override the revised version of 2011 thus, paving way for inference that publicly listed firms in Nigeria are expected to comply with the

requirements of both. The Codes address matters in relation to Board structure which is investigated as a component of corporate governance mechanisms. These Codes are referred to for the purpose of conceptualisation. The other component of corporate governance mechanisms- ownership structure, is conceptualised based on the extant theoretical literature.

2.3.1 Board Structure

The Board of Directors is constituted by elected representatives of shareholders who oversee the affairs of firms on their behalf. Kumar (2017) views the Board as the central component of corporate governance mechanisms in a firm. The major functions of the Board besides oversight of management, include determination of firms' means of financing and approval of strategic decisions, policies and procedures of a firm (Boatright, 2012). In Nigeria, Boards are one-tiered which implies a single-body operating structure except in cases where certain assignment of responsibilities are made to sub-committees (Phillips, Amadi, Somuyiwa & Onakoya, 2019).

Sections 2.2 of the Code of Corporate Governance (CCG, 2011) defines the objective of the Board as ensuring proper oversight of a firm which results in enhanced shareholder value as well as fulfilment of firm obligations to other stakeholders. Section 1.2 of the Nigerian Code of Corporate Governance (NCCG, 2018) similarly albeit holistically, considers the firm as the focal point in whose interests, corporate governance by the Board should be entrenched. Section 1.6 of the NCCG (2018) in corroboration, requires the Board to identify and manage the relationships between shareholders and other stakeholders.

Section 2.3 of the CCG (2011), explicitly places the responsibility for effective corporate governance with the Board. This could similarly be inferred from Sections 1.4 and 1.9 of the NCCG (2018) which note Board functions of approving as well as monitoring, short and long term strategies of the firm with due consideration of insights from risk management. In

ensuring reasonable execution of such responsibility, both Codes provide stipulations as to how a Board should be constituted. This informs the concept of Board structure- an array of attributes by which a Board can be described and assessed in terms of its impact on an outcome. The following sub-sections conceptualise the components of Board structure in terms of size, independence, gender diversity and specialised committees.

2.3.1.1 Board Size

Size connotes quantum or magnitude of a phenomenon. In this context, Board size refers to the number of persons that comprise the Board of Directors in an organisation. The CCG (2011) requires the Board to have an adequate number of members considering the scale and complexity of the entity. It stipulates however, that there be a minimum of 5 individuals who possess in summary, character, competence and commitment in providing the necessary oversight. Section 2 of the NCCG (2018) gives the entity the prerogative in determining the size of its Board ensuring sufficiency of members to serve in sub-committees, compliance with quorum requirements at meetings as well as reflection of diversity in knowledge, skills and experience.

According to Jensen (1986), the larger a Board, the greater the likelihood of a firm to contract debt. This is attributable to the exploitation of broad-based networks that higher number of Directors avail entities thus, facilitating access to external finance. El-Habashy (2018) proposes that large-sized Boards further provide as well as signal, varied expertise which enhances favourably, investor perception of firm risk. Firms are therefore, motivated to employ debt with corresponding positive outcomes of lower weighted average cost of capital (WACC) and increase in firm value. In a differing perspective, Huang and Wang (2014) explains how the negative consequences of a large Board could account for debt use by firms. Large Boards tend to be riddled with conflicts which cause difficulty in arriving at a

consensus in strategic decisions. This essentially weakens the governance role of Boards and compels the use of debt for its disciplinary effect on management.

Empirical studies confirming the significant positive association between Board size and debt include; Rehman, Rehman and Raoof (2010), Ahmadpour, Samimi and Golmohammadi (2012), El-Habashy (2018) and Khawaja, Bhatti and Ashraf (2018). Noteworthy is the fact that El-Habashy (2018) found this relation in the context of long-term debt whereas, Khawaja et al. (2018) linked Board size to sourcing external forms of finance, albeit, with no particular preference indicated by firms. Negative effects of Board size on debt is explained by a tendency of firms with large Boards to place emphasis on internal finance utilisation as against debt (Kyriazopoulos, 2017). This finance decision in the presence of large Boards could also be informed by the presumed correlation between low leverage and high financial performance (Berger, Ofek & Yermack, 1997). Similar findings as regards a negative relationship were established in the works of Nejad and Wasiuzzaman (2015) and El-Habashy (2018).

Evidently, there is a significant dearth of empirical studies that examine in general, the effect of corporate governance mechanisms on lease finance use. Robicheaux, Fu and Ligon (2008) hypothesised and confirmed a relationship between strong corporate governance structures (characterised by smaller Boards) and lease finance based on the assumption that smaller-sized Boards are more effective in the monitoring role and assurance of value-adding managerial decisions. Based on the thesis, this study proposes an underlying mediating effect of financial leverage on the relationship between Board size (being a component of corporate governance mechanisms) and lease finance use.

2.3.1.2 Board Independence

Independence connotes freedom from undue influence that may impair objectivity and soundness of decisions. In the context of the Board which is entrusted with oversight over the management of an organisation, the clamour for independence cannot be overemphasised. Independence of the Board is defined as the constitution of the Board with members that have no direct or indirect stake in an entity which could result in conflicting interests and undermine effectiveness in its role of monitoring. Blevins, Ragozzino and Ekcardt (2020) opined that Board independence assures critique of management given the absence of members' financial or personal connection to the organisation. In Nigeria, the CCG (2011) requires the Board to comprise Executive and Non-Executive Directors with the latter being in the majority as well as having at least one who is independent. The NCCG (2018) further recommends instead, that the Board should be constituted with majority of Non-Executive Directors being independent.

Non-Executive Directors are expected to leverage on expertise, experience and judgement in the course of influencing firm strategies as proposed by management. The CCG (2011) defines an Independent Director as a Non-Executive whose shareholding does not directly or indirectly exceed 0.1% of the company's paid up capital. In comparison to the CCG (2011), the NCCG (2018) suggests that the shareholding should instead, be restricted to 0.01% as against 0.1%. Independent Directors are also required to have no personal, business or professional relationship with the firm and its management in the preceding three years. This is in order to safeguard their independence and objectivity. The NCCG (2018) is stricter in recommending a time-span of about five years. Section 7 of the NCCG (2018) recommends that Boards conduct an annual assessment of the independence of its Independent Directors and that an existing Non-Executive Director should not be reclassified as an Independent Director on the same Board.

According to El-Habashy (2018), an independent Board serves as an effective corporate governance mechanism that substitutes for debt thus, leading to low leverage levels and in addition, a high market value of equity that could be exploited in raising funds. Empirical studies corroborating a significant negative relationship between Board independence and leverage include Ahmadpour, Samimi and Golmohammadi (2012) as well as Purag, Abdullah and Bujang (2016). In contrast, Kyriazopoulos (2017) notes that presence of Independent Non-Executive Directors on a Board, avails firms with the advantages of their networks through which information asymmetry is reduced, firm status enhanced and access to debt finance made easier. Rehman, Rehman and Raoof (2010), Liao, Mukherjee and Wang (2015), Siromi and Chandrapala (2017) and Kyriazopoulos (2017) are some of the studies that established a significant positive effect of Board independence on leverage. El-Habashy (2018) and Khawaja et al. (2018) as exceptions, registered insignificant results.

Kieschnick and Moussawi (2018) in a differing approach, found non-linear evidence as to insider-dominated Boards (no independence) having a significant positive effect on debt in the case of young firms, which subsequently changes to a significant negative effect as they age. For mature firms, the greater the independence, the likelihood of employing debt increases but where insiders dominate a Board, it leads to managerial entrenchment and superimposition of managerial risk preferences that adversely affects debt contracting. As to the relationship between Board independence and lease finance, only a single study, Robicheaux, Fu and Ligon (2008) provided evidence- specifically, a significant positive effect connoting that independent Boards translate to strong corporate governance structures and as such, influence the decision to engage in leases. Based on the thesis, this study proposes an underlying mediating effect of financial leverage on the relationship between Board independence (being a component of corporate governance mechanisms) and lease finance use.

2.3.1.3 Board Gender Diversity

Gender diversity refers to the presence of males and females in any setting or constitution. Board gender diversity by extension, refers to heterogeneity in the composition of the Board by virtue of male and female representation. As a corporate governance mechanism, the role of females on the Board and general contributions to firm value are being recognised. Poletti-Hughes and Briano-Turrent (2019) noted the increasing demand for female representation on the Board in developed economies. Legislations particularly in European countries have provided quotas for female representation on the Board of Directors as evident in Norway (40%), Sweden (25%), Spain (25%), Germany (30%) and France (50%) (Srinidhi, Sun, Zhang & Chen (2020). In Nigeria, the CCG (2011) requires consideration of gender composition in appointments to the Board whereas, the NCCG (2018) recommends balance in gender while assuring competence, independence and integrity of members.

Women are contended to have an ability to influence thoroughness in assessment and critique of matters addressed by the Board (Srinidhi, Sun, Zhang & Chen, 2020). Ellickson's Framework (2001) suggests that women have leadership skills, technical and social intelligence similar to men. Given the (still) persistent widespread under representation of women on Boards, those present would have had to exceed the normal thresholds set for these abilities. Therefore, female Directors can be said to be more skilled than men and their presence on Boards would consequently result in improved governance and firm outcomes.

Gender diversity is proposed to ensure efficiency in monitoring as well as quality of Board decisions. Fauzi, Basyith and Ho (2017) posit that gender diversity in Boards ensures corresponding diversity in thoughts and skills which enhance optimality of decisions. Bernile, Bhagwat and Yonker (2018) similarly contended that less gender diverse Boards present with homogeneity in views and preferences with the effect of hampering internal governance as

well as leading to volatile firm outcomes. In contrast, Sila, Gonzalez and Hagendorff (2015) suggested that gender diversity could be counterproductive in the sense that there may be conflicts and increased difficulty in arriving at a consensus which could in turn, raise firm risks.

Females are asserted to exhibit a different orientation in terms of risk aversion and overconfidence with substantial implications on finance decisions. Females tend to be more risk averse than men and thus, display conservatism when it comes to decisions on sources of finance that portend with varying levels of risks. Their presence, therefore, results in less overconfident and risk averse Boards (Levi, Li & Zhang, 2014 as cited in Adusei & Obeng, 2018). A varying effect of Board gender diversity on finance decisions is such that women tend to ensure greater levels of disclosure which in turn, reduce information asymmetry and foster the use of equity as against debt (Alves, Couto & Fransisco, 2015; Faccio, Marchica & Mura, 2016; Adusei & Obeng, 2018). Bernile, Bhagwat and Yonker (2018) empirically confirmed that diverse Boards adopt finance policies that imbibe less risks and therefore, employ less of debt.

There are contentions however, that females are not less risk averse than their male counterparts and that this is mostly evident with women in finance (Adams & Ragunathan, 2014 as cited in Adusei & Obeng, 2018). Tanaka (2014) suggested that female representation on Boards assures debt financiers of interest protection thereby facilitating debt contracting at low cost of capital. This could explain the findings of Adusei and Obeng (2018) where gender diversity was found to have a significant, positive effect on the use of debt specifically in the context of borrowings (loans). Khawaja, Bhatti and Ashraf (2018) registered similar positive effect on the choice to employ external sources of finance although firms sampled were seen to indicate no preference. In relation to lease finance, the extant literature is devoid

of evidence as to the effect that gender diversity has on its utilisation by firms. Based on the thesis, this study proposes a mediating effect of financial leverage on the relationship between gender diversity and lease finance use in firms.

2.3.1.4 Specialised Board Committees

These are subsets of the main Board of Directors assigned a specific task or area of oversight as regards the organisation. According to Srinidhi et al. (2020), the functions of Board committees span the collation and assessment of information as well as submission of proposals to the main Board for consideration. The benefits associated with the presence of Board committees are further identified to include increase in Directors' accountability, independence and knowledge specialisation. The use of committees ensures that Directors on the Board are actively engaged thus, eliminating the costs of free-riding. The consequent division and assignment of tasks/responsibilities fosters knowledge specialisation given that committee members would be driven to enhance expertise and competence in the matters assigned to them. The presence of committees also aids in safeguarding Board independence through separation of the Executive and Non-Executive Directors within these subsets. The essence of Board committees is the assurance of informed strategic decisions taken by management.

Despite these benefits of specialised Board committees, Chen and Wu (2016) noted associated costs in form of information segregation especially where there is exclusivity in committee membership. This could however, be mitigated by ensuring multi-committee Directorships- a situation where Directors serve on two or more related committees which reduces costs of information acquisition as well as ensures efficiency in the deployment of Director expertise to related matters of oversight. While the Sarbanes-Oxley Act of 2002 as well as various country Codes of corporate governance require the use of specialised Board

committees such as the audit, compensation and governance committees, Chen and Wu (2016), noted the implementation by Boards albeit rare, of certain non-required committees such as finance, strategy, ethics and technology. Given that Board committees are empowered to influence firm policy, the finance committee (availing the firm of its knowledge specialisation benefit) should recommend optimal financing options to the Board and inform management actions accordingly.

In the context of this research, focus is primarily on the Board risk management committee which is expected to guide management decisions with the objective of minimising and mitigating anticipated risks. According to the CCG (2011), the establishment of specialised committees is at the discretion of the Board of Directors where deemed necessary. The CEO, senior management official (Chief Risk Officer) and Executive Directors are expected to be in attendance at the meetings of the risk management committee. The risk areas for oversight are identified to include; operational, reputational, financial, market, technological and compliance risks (CCG, 2011). Financial risks include those of default in payment of financial obligations which arise where a firm is financed by debt. Reputational risks can be inferred to imply potential negative external perception of a firm which could adversely affect its transactional successes. This could be in form of increased costs of financing in the event a firm is perceived as less credit worthy and formally assigned low credit ratings.

The NCCG (2018) recommends the constitution of Board committees inclusive of the risk management committee with Independent Non-executive Directors in the majority. These Directors are also expected to possess the requisite knowledge and skills in the areas of governance, risk management and finance (KPMG, 2019). The NCCG (2018) in addition, sets the expectation that directors assume multiple membership of committees for enhanced insight on risk issues especially where the risk and audit committees are separate. The risk

management committee is required to construct and regularly assess a framework that clearly defines the risk appetite, risk policy and risk limits of a firm (KPMG, 2019). Notable amongst the recommended functions of the risk management committee is the periodic review of economic and business developments which would impact the firm in terms of performance, liquidity and solvency, and the formulation of mitigating strategies. The committee is further expected to exercise oversight as regards the risk management systems and mechanisms instituted within a firm. The outcomes of committee deliberations are to be submitted to the Board at quarterly meetings for consideration and vote.

Reviewing the empirical literature, Zhang (2009) established the pronounced likelihood of a presence of risk committees where a large Board obtains. Hines and Peters (2015) further linked the presence of risk committees with higher levels of leverage in firms while Lunqvidst (2015) confirmed a relation between risk governance and increased debt contracting. Chen and Wu (2016) highlighted the dearth of studies on specialised committees and the tendency of the few conducted to accord attention to one in particular- the audit committee. To buttress, the known study in relation to leverage, Siromi and Chandrapala (2017), explored the effect of number of Board committees with attention accorded the presence of audit, nomination and remuneration committees. Other specialised committees could impact the financing decisions of firms and this warrants an investigation. In consideration of the objectives and benefits of specialised committees as well as the proposition that lease finance is safer and less risky than conventional debt, this study examines the effect of the presence of risk management committee on the use of lease finance in firms as well as how the relationship could be mediated by financial leverage.

2.3.2 Ownership Structure

This refers to the nature of shareholding in a corporate entity. There are various types of shareholders whose investments collectively define the equity component of capital structure of firms. Notably, the shareholder theory highlights the objective of firms to be shareholder wealth maximisation being that shareholders are residual risk bearers. Correspondingly, the agency theory recognises the shareholders as principals in whose interests the firm should be run and for which corporate governance mechanisms are purposefully instituted. The financing decision, particularly leverage which affects the risk portfolio and returns of these shareholders would be influenced in diverse ways by the presence of certain groups. This section presents a conceptual review of specific forms of ownership structure such as managerial ownership, foreign ownership, institutional ownership and ownership concentration which are theorised to affect leverage and by extension, could similarly affect the decision of firms to subscribe to leases.

2.3.2.1 Managerial Ownership

Managerial ownership is the shareholding in firms by persons involved in management such as the Chief Executive Officer and other Executives who may also be on the Board as Directors. Holderness (2003) defines managerial ownership as the equity stake of insiders of a firm with insiders referring to officers and Directors on the Board. Davies et al. (2005) further considers managerial ownership to be the shareholding of all members of the Board of directors given the fact that in the very least, Directors irrespective of classification, assent to financial decisions of a firm. Therefore, their shareholding would matter in terms of effect on the financing decisions of firms. Ruan, Tian and Ma (2011) similarly aligns with the definition of Davies et al. (2005). Directors on the Board work in Board committees with oversight on nomination, governance and remuneration. This equally implies by extension, a direct influence in the management of firms.

Managerial ownership is seen as a corporate governance mechanism that commits management to optimal performance with corresponding positive effects on investor confidence usually in terms of share value and credit ratings. According to McDonnell (2015), effectiveness of this mechanism is buttressed by the Wall Street Rule which describes the tendency of share disposal in an active market where firms are under-performing. The consequent fall in share price negatively affects returns to management, places constraints on ability to raise capital and exposes a firm to hostile take-overs. In a similar perspective, increased shareholding by management makes them more open to advice by the Board and motivates risk-reducing actions being that their portfolio becomes less diversified (Walters, Kroll & Wright, 2008).

Managerial ownership has been theorised and empirically confirmed to affect leverage. This effect can be understood within the context of the managerial entrenchment theory (Fama & Jensen, 1983 as cited in Sun, Ding, Guo & Li, 2015). Managerial entrenchment through substantial shareholding, is proposed to motivate the use of debt in order to prevent shareholding dilution as well as a loss of control through raids or take-overs. This is due to the burden of financial obligations associated with the firm that will be a disincentive to interested parties (Nguyen, Bai, Hou & Vu, 2020). Berger et al. (1997) as cited in Sun, Ding, Guo and Li (2015) in similar trajectory, assert that threats to entrenchment such as a CEO replacement, would motivate managers to employ debt. Empirical evidence that support a positive effect of managerial ownership on leverage can be found in studies such as El-Habashy (2018) and Saona, Vallelado and Martin (2019).

In a differing perspective, managers have non-diversifiable employment risk which could be worsened by financial distress or bankruptcy as a result of leverage thus, serving as a major disincentive to the use of debt (Brailsford, Oliver & Pua, 2002 as cited in Sun, Ding, Guo &

Li, 2015). Managerial ownership could therefore, negatively affect leverage in the context of a risk averse management that seeks to avoid cash outflow commitments, debt covenants and bankruptcy possibilities with the attendant loss of firm control. Lee and Kuo (2013) established a significant negative effect in corroboration. There are studies however, that concluded on an insignificance of effect such as Rehman, Rehman and Raoof, (2010), Kumar (2015) and Siromi and Chandrapala (2017).

The relationship between managerial share ownership and leverage could be curvilinear as found by some empirical studies such as Sun, Ding, Guo and Li (2015) and Gan and Xia (2019). According to the interest alignment theory (Jensen & Meckling, 1976 as cited in Sun, Ding, Guo & Li, 2015) at low managerial shareholding, debt would be positively affected due to the objective of aligning manager and shareholder interests by mitigating the abuse of free cash flow. At substantial levels of managerial shareholding, debt would be reduced as a result of the increased risk of bankruptcy that could adversely affect the entrenchment of managers. This, being in the context of the managerial entrenchment theory.

Reviewing the empirical literature on managerial ownership and lease finance, these studies were found to provide evidence in respect of a significant positive effect; Mehran, Taggart and Yermack, (1999), Robicheaux, Fu and Ligon (2008) and Mungami (2013)- suggesting that corporate governance mechanisms and leases are complementarily adopted in mitigating agency costs of equity and conventional debt finance. Mehran, Taggart and Yermack (1999) in addition, provide a varying perspective as to the use of leases in reducing asset-specific risks of obsolescence that managers may be exposed to consequent to the firm being levered. Therefore, in line with the thesis of the study, financial leverage is hypothesised to mediate the relationship between managerial ownership (a component of corporate governance mechanisms) and lease finance.

2.3.2.2 Foreign Ownership

Lagendijk and Hendrikx (2009) defined foreign direct investment (FDI) as a cross-border mechanism in which a firm undertakes investments in a foreign country through any of acquisitions, mergers and new business set-ups. Acquisitions here, imply controlling foreign shareholding in a firm. Bamiatzi, Efthyvoulou and Jabbour (2017) posit and empirically confirm, a negative relationship between foreign ownership and leverage within the context of the agency theory. Foreign shareholding enables a level of influence over management through monitoring which translates to optimality in strategic decisions. Foreign shareholders are also wont to protect investee firms from further external influences and as such, do not encourage the use of debt, that is attendant with potential bankruptcy risks and loss of control. Ensuring this, is the fact that with foreign ownership, there tends to be an inflow of capital, expertise and technology which enhance firm earnings and reduce dependence on external sources of finance such as debt. Kumar (2015), Do, Lai and Tran (2019) as well as Gupta, Yadav and Jain (2020), similarly provide evidence of a negative relationship, concluding on the substitutability between foreign ownership and debt, in attaining enhanced governance in firms.

Park, Suh and Yeung (2013) in contrast, suggest that multinational corporations (MNCs) with controlling foreign ownership (subsidiaries) should present with leverage in their capital structure. This is based on a theorised prevalence of agency problems due to size and dispersion that can be mitigated by the use of debt. There is also the contention that these MNCs have no financing constraints that warrant a consideration of funding for future investment opportunities which would compel an avoidance of debt and the underinvestment risk associated. Therefore, MNCs should be seen to employ debt. The aforementioned study, in examining foreign ownership via the number of foreign subsidiaries, however, concluded on a positive, albeit insignificant effect on leverage. Noteworthy however, is the emphasis on

the non-generalizability of limited evidence available as to the effect of foreign ownership on governance which displaces leverage (Do, Lai & Tran, 2019). This has been attributed to low foreign ownership in emerging economies which has not fostered a clear establishment of its effect on debt. In relation to leases, a review of extant literature reveals an absence of evidence as to the effect of foreign ownership. This study proposes a relationship between these, mediated by the presence of financial leverage in firms.

2.3.2.3 Institutional Ownership

This refers to the stake in equity held by institutions such as pension funds, mutual funds and insurance companies. Institutional investors are large firms that hold a diversified portfolio of investments. They contribute to corporate governance through their role as monitors and could also avail firms with sources of finance through their established networks (Wojcik, 2009, El-Habashy, 2018). Sun, Ding, Guo and Li (2015) note that active monitoring results in higher bond ratings and lower yields on debt (finance cost) thereby, motivating firms to be levered. This in turn, ensures the optimal functioning of management due to the disciplinary effect of debt. La Porta, Lopez-De-Silanes, Shleifer and Vishny (2000) as cited in Chung and Wang (2014) consider a positive effect of institutional ownership on debt as being attributable to the pressure that institutional investors place on firms to pay out dividends thus, necessitating the need for external financing by debt. Empirical studies corroborating a significant positive effect of institutional ownership on leverage include; Al-Najjar (2011) using pooled regression, Liao, Mukherjee and Wang (2015) and Sun, Ding, Guo and Li (2015).

Chung and Wang (2014) theorise institutional ownership as a substitute for debt which leads to the avoidance of potential agency costs, notably, asset substitution. Khawaja, Bhatti and Ashraf (2018) suggest that as concerns of institutional investors tend to be that of firm survival, such firms will avoid debt financing and potential bankruptcy risks. Empirical

studies confirming a significant negative effect of institutional ownership on leverage include; Al-Najjar (2011) using panel data regression, Ahmadpour, Samimi and Golmohammadi (2012), Chung and Wang (2014), Kumar (2015) and El-Habashy (2018). In relation to lease finance, Mungami (2013) established evidence of an insignificant effect of institutional ownership. This study therefore, proposes that a relationship exists mediated by financial leverage.

2.3.2.4 Ownership Concentration

Ownership concentration can be conceptualised as the quantum of shareholding by an investor or block of investors which is considered to be the largest in a firm. According to Wojcik (2009), ownership concentration is relative and could be shareholding exceeding 50% or a single shareholding of 10% in firms with diluted ownership. While ownership concentration motivates active monitoring in firms through conferment of control, it results in a trade-off between control and liquidity as potential market for disposal is limited. This adversely affects liquidity of the capital market and its function as an avenue for long-term financing (Wojcik, 2009).

El-Habashy (2018) and Khawaja, Bhatti and Ashraf (2018) contend that a positive association between ownership concentration and leverage would obtain at low levels of shareholding. This, being that debt forestalls the dilution of ownership. Detthamrong, Chancharat & Vithessonthi (2017) further posit that the use of debt will mitigate the occurrence of managerial opportunism in firms. At high levels of ownership, a negative relationship between ownership concentration and leverage will obtain as concentrated owners will want to avoid exposure to bankruptcy risks (De La Bruslerie & Latrous, 2012; Lo, Ting, Kweh & Yang, 2016). This conclusion however, differs from that of Cespedes, Gonzalez and Molina (2010) which implies that firms at high levels of concentrated

ownership will instead, contract debt in order to avoid shareholding dilution. The aforementioned study concludes on a non-linear relationship between ownership concentration and leverage. At low levels of concentration, the relationship is negative attributable perhaps to an objective of consolidating control and monitoring rights, as well as minimising exposure to default/bankruptcy risks with the use of debt.

Haque, Arun and Kirkpatrick (2011) theorise that active monitoring arises with ownership concentration and this increases investor confidence as well as access to equity finance thereby, minimising dependence on debt. An incentive equally obtains for avoidance of debt in these firms being that, shareholders with concentrated ownership are undiversified and would tend to be risk averse. However, these firms could be influenced to contract debt where the concentrated shareholders are banks (Cespedes, Gonzalez & Molina, 2010). Empirical studies that evidence a significant positive effect of ownership concentration on leverage include; Haque, Arun and Kirkpatrick (2011), Ahmadpour, Samimi and Golmohammadi (2012), Martin and Hoffman (2017) and Khawaja, Bhatti and Ashraf (2018). Negative effects have been registered in the context of non-linear relationships as in Cespedes, Gonzalez and Molina (2010), De La Bruslerie and Latrous (2012) and Lo, Ting, Kweh and Yang (2016) whereas Detthamrong, Chancharat and Vithessonthi (2017) and El-Habashy (2018) concluded on insignificance of effect.

Ownership concentration is theorised to have an effect on lease finance such that concentrated firms tend to be less risk-averse that non-concentrated firms. The consequence being that, concentrated firms would not engage in risk-minimising behaviours such as the contracting of lease finance (Short, 1994 as cited in Callimaci, Fortin & Landry, 2011). There is empirical evidence as to this implied negative effect of ownership concentration on lease finance as confirmed by Callimaci, Fortin and Landry (2011) in the context of total leases.

However, some studies provide evidence for a positive association (Callimaci, Fortin & Landry, 2011- for capital leases; Malik, Saeed, Ahmed & Javed, 2012). Irrespective of the direction of relationship found by these studies, this research proposes that an explanation further lies in the mediating effect of financial leverage in these firms.

2.4 Concept of Financial Leverage

Leverage is a term used to describe the collective of debt employed by firms in their capital structure which correspondingly, translates to level of indebtedness (Landry, Fortin & Callimaci, 2013). Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018) define leverage generally as a reflection of firm utilisation of debt capacity at any given point in time. This could manifest in various forms such as accruals arising from operations (non-financial liabilities), cash-based or asset based debts. Malik, Saeed, Ahmed and Javed (2012) emphasise the importance of debt management in order to sustain firm operations and secure favourable credit ratings.

According to Rajan and Zingales (1995), there are five probable definitions and measures of leverage- the appropriateness of which depends on the objective of a research. The first noted definition of leverage, describes it as the relation of total liabilities to total assets which by extension, is indicative of the residual component of assets attributable to shareholders in the event of a bankruptcy (Rajan & Zingales, 1995). The authors note the inadequacies of this definition (and measure), to lie in its inability to adequately reflect historical finance choices of firms and default risk. In addition, the inclusion of trade credits (accounts payables) which arises from operations and not financing activities has the tendency of distorting the true level of leverage (financial liabilities) in firms.

Subsequent to this, the second and third definitions of leverage given as the relation of total debt (short-term and long-term) to total assets and relation of total debt to net assets

respectively, are adjudged progressive. However, the influence of non-financial liabilities (trade credits, pension liabilities) in these definitions are noted to persist (Rajan & Zingales, 1995). This led to the proposition of fourth and fifth definitions which are; the relation of total debt to capital employed (summation of total debt and equity) and the relation of earnings before interest, taxes, depreciation and amortisation to interest expense (interest coverage) respectively. The fourth definition of leverage is considered best in the representation of historical financing choices of firms whereas the fifth definition is adjudged sufficient in reflection of firms' default risk. Reviewing the substantial body of empirical research in the area of capital structure, the work of Rajan and Zingales (1995) can be inferred as a reference point for studies in the definition and measure of leverage.

This research builds a thesis on financial leverage (debt arising from firms' financing activities) serving as a mediator in the relationship between corporate governance mechanisms and lease finance use. Debt is regarded as an agency cost in mitigating the free cash flow problem associated with equity financing. In the presence of effective corporate governance mechanisms which ensure managerial discipline, the need to contract debt is reduced. Thus, lease finance being considered pseudo-debt, would similarly be negatively affected. Quality corporate governance mechanisms could however encourage the use of debt due to its accessibility at low costs of finance given the credibility that better governed firms attain. The presence of debt (financial leverage) is not without the associated agency problems of asset substitution and underinvestment. Lease finance is contended as an optimal finance mechanism that addresses these agency problems of equity and debt finance. As such, its use would be positively affected by financial leverage. Concisely, we propose that corporate governance mechanisms indirectly affect lease finance use through a direct effect on financial leverage.

The association between corporate governance mechanisms and financial leverage is rooted in the agency problems that subsist in corporate firms. Corporate governance mechanisms could serve as substitutes or complements to financial leverage in ensuring managerial discipline and optimality of firm decisions or outcomes. As a substitute, effective governance is said to suffice in realising the aforementioned objectives (managerial discipline and decision optimality) thereby, reducing the tendency of firms to contract debt (Arping & Sautner, 2010; Haque, Arun & Kirkpatrick, 2011; Jiraporn, Kim, Kim & Kitsabunnarat, 2012; Sivathaasan, Ali, Liu & Haung, 2016; Ji, Mauer & Zhang, 2019). However, where firms are levered in place of effective corporate governance mechanisms, the consequent shareholder-managerial alignment similarly avails firms with the desired outcomes. As a complement, quality governance is expected to enable the use of debt by firms, at low cost of finance due to the confidence it generates in the capital market (Liao, Mukherjee & Wang, 2015; Martin & Hoffman, 2017; Kieschnick & Moussawi, 2018).

As regards theoretical and empirical linkages between financial leverage and lease finance, expositions and evidence in the literature remain divergent with two distinct strands suggesting substitutability and complementarity. The proposition that conventional debt and leases are substitutes lies in the fact that some leases are long-term financial obligations that require periodic payments in order to amortise the liability. By being capitalised in the financial statements (e.g. finance leases), they have equal tendency in limiting the debt capacity of firms as with other conventional debt instruments. Empirical studies such as Franks and Hodges (1978), Adedeji and Stapleton (1996); Deloof and Verschueren (1999), Kang and Long (2001), Lasfer (2005), Mnzava (2008), Slotty (2009), Cosci, Guida and Meliciani (2013), Mendes (2015), Bialek-Jaworska and Nehrebecka (2016), Musa-Mubi (2017) provide evidence in line with the assertions.

Arguments for complementarities arise in the case of firms lacking access to conventional debt instruments or contending with limited debt capacity. Malik, Saeed, Ahmed and Javed (2012) note that for these firms, leases are employed as a substitute and complement. Krishnan and Moyer (1994) opine that high-geared firms resort to leases as the likely course of financing obtainable at low costs. Smith and Wakeman (1995) suggested that operating leases are likely to be subscribed to as complementary means of financing irrespective of firm debt capacity. Ang and Peterson (1984) had earlier found that firms significantly engaged in leases were highly geared. This has been corroborated by the works of Lewis and Schallheim (1992), Lasfer and Levis (1998), Filareto-Deghaye and Severin (2007), Eisfeldt and Rampini (2009) and Malik, Saeed, Ahmed and Javed (2012).

However, noteworthy is the proposition by Anastassiou and Tsaklanganos (2013) that complementarities between conventional debt and leases may be misleading given that financial institutions were not found to disregard the off-balance sheet disclosures reported in relation to operating leases (under the previous IAS 17), in the assessment of firm borrowing capacity and default risks. With the introduction of IFRS 16 requiring, reclassifications and adjustments to lease reporting in the financial statement as well as the potential effects these may have on the decision to employ lease finance, subsequent research is expected to enhance the body of evidence on the true nature of relationship between conventional debt and leases. Evidences on complementarity can further be found in works such as; Landry, Fortin and Callimaci (2013), Cotei and Farhat (2015), Ambrose, Emmerling, Huang and Yildirim (2018), Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018), Musa-Mubi and Badara (2019).

2.5 Review of Empirical Studies

The section entails a review of empirical studies on the subject matter conducted in order to ascertain the depth of extant research, identify gaps and inform the methodological approach in addressing the objective of the proposed thesis. The empirical review is structured in three sub-sections with a presentation and critique of studies linking corporate governance mechanisms to lease finance, corporate governance mechanisms to financial leverage and conclusively, financial leverage to lease finance. The review is conducted in ascending order from the earliest available research work to the most recent.

2.5.1 Corporate Governance Mechanisms and Lease Finance

Adams and Hardwick (1998) investigated the determinants of leasing decisions in UK firms utilising a sample of 100 firms listed on the London Stock Exchange as at 1994. Based on a cross-sectional research design and employing the technique of regression, ownership concentration was found to have a significant positive effect on the leasing decision in these firms. Inference made was that concentrated firms are more likely to lease in order to reduce asset-specific risks such as obsolescence.

Mehran, Taggart and Yermack (1999) examined for a sample of 176 manufacturing firms listed on Compustat Industrial Annual File, the effect of CEO ownership on lease finance use over the period 1986-1991. With the aid of Ordinary Least Square (OLS) and Tobit regressions, it was found that CEO ownership has a positive significant effect on the use of both conventional debt and leases. The use of debt is attributable to the alignment of shareholder-manager interests while the employment of lease finance is consequential to the presence of debt being that managers contract leases in order to minimise personal exposure to asset-specific risks such as obsolescence. However, the complementary relationship between conventional debt and leases may be contentious as a result of omitted variable bias.

The study particularly placed emphasis on effect of CEO ownership excluding the role of the Board, its specialised committees and other ownership structure variables in analysis.

Altamuro (2005) in a study on the economic, financial accounting and governance determinants of synthetic lease financing, examined datasets of 101 synthetic lease firms and 64 non-synthetic lease firms covering the period 1998-2003. On the governance determinants, a composite measure for the quality or strength of the Board based on percentage of outsiders (independence), percentage of shareholding by these outsiders and Board expertise was utilised. Regression results indicated that strong Boards are significantly more likely to facilitate synthetic lease financing but less likely to do so where there is wealth appropriation from one group of stakeholders to another.

Robicheaux, Fu and Ligon (2008) explored the relationship between corporate governance mechanisms, and lease finance use in a sample of 229 firms over the period 1992-2004. These firms were filtered from a population of 800 listed as part of Forbes Magazine's survey of executive compensation in 1993. Adopting a quantitative research design, Ordinary Least Square (OLS) and 2-Stage Least Square (2SLS) data analysis techniques, the study assessed the effect of CEO compensation, CEO ownership, Board size and Board independence on leases by firms. Controlling for firm-specific variables, CEO compensation was found to have a positive significant effect on the use of finance leases (2SLS result). For operating leases, CEO ownership and stock-based compensation were seen to have a positive significant effect and Board size, a negative significant effect on their employment as finance. In the results for total leases, a similarity in findings was reported to that of operating leases (having accounted for a greater portion of lease observations) except for Board size which registered an insignificant effect. Instead, Board independence was positive and significant in explaining lease finance use.

The findings above suggest a complementary relationship between corporate governance mechanisms and lease finance in mitigating agency costs of equity and agency costs of conventional debt respectively. The greater the CEO compensation and ownership in addressing agency costs of equity, the more likely a firm is to utilise leases as a complement in further curtailing agency costs of other forms of conventional debt finance. Similarly facilitating lease contracting is a smaller Board dominated by Independent Directors leading to inference that specialised committees created out of the main Board with a significant composition of Independent Directors increases propensity of firms to engage in leases. This informs proposed hypothesis of a link between Board Risk Management Committee and lease finance for which extant studies are yet to document any evidence.

Brage and Eckerstom (2009) investigated the similarities and differences between high leasing Japanese and low leasing Swedish firms as a basis for understanding lease finance use. Adopting a mixed methods research design for a sample of 11 Japanese and Swedish firms respectively, results of descriptive content and comparative analysis for the period 2003 to 2008, revealed a positive correlation between agency costs associated with leverage and lease finance contracting by Japanese firms. This provides evidence supporting the assertion under agency cost theory, of lease finance as a means to mitigate asset substitution and underinvestment tendencies that abound with the presence of leverage (conventional debt) in firms. Whilst giving insight into the relationship between agency costs and finance decisions, the study did not provide information as to the influence therein by Boards (specialised committees) and ownership structure.

In a study by Callimaci, Fortin and Landry (2011), ownership structure (concentration) was assessed as one of a set of firm attributes for its effect on the propensity of firms to lease in Canada. Results from Censored Tobit regression run on data generated for 228 listed firms

between 2006 and 2007, indicated that total leases (operating and finance) decrease with a rise in ownership concentration while capital leases independently increase in tandem with growing concentration in ownership. These findings on the relationship between ownership structure (concentration) and capital leases, are similar to that of Malik, Saeed, Ahmed and Javed (2012) in the context of closely-held companies. This further corroborates the theory on enhanced monitoring (attributable to a concentration in ownership) compelling positive, value maximising corporate behaviours amongst which is the employment of agency cost reducing finance options such as leases.

Subsequent research by Landry, Fortin and Callimaci (2013) probed the moderating effect of family ownership on the relationship between select firm attributes (inclusive of leverage) and the decision to lease by 227 listed firms in Canada for the same period, 2006 to 2007. Regression results suggest that while family ownership does not significantly account for leasing propensity, family-owned firms explain a positive, significant relationship between conventional debt and leases. The studies of Callimaci, Fortin and Landry (2011) and Landry, Fortin and Callimaci (2013), whilst contributing to literature on an aspect of corporate governance, did not include in analysis, effect of other mechanisms such as the Board and in particular, specialised committees.

Mungami (2013) inquired into the effect of corporate governance mechanisms on lease use with emphasis on management compensation and CEO share ownership for a sample of 40 non-financial firms listed on the Nairobi Stock Exchange (Kenya) between 2004 and 2009. Panel Logit regression was applied on data generated through extraction from financial statements and administering of questionnaires. Management compensation and CEO share ownership were found to have a significant positive effect on lease finance decisions. Increase in CEO share ownership results in the likelihood of firms utilising finance leases. As

for operating leases, the study found a positive, significant effect of CEO share ownership and an insignificant effect of ownership concentration and institutional ownership. The literature gap identified in the works of Callimaci, Fortin and Landry (2011) and Landry, Fortin and Callimaci (2013) as regards the Board and effect of specialised committees apply.

Yau and Tan (2017) analysed the effect of CEO personal attributes on corporate leasing decisions controlling for firm and macroeconomic factors. In terms of personal attributes, the study assessed CEO personal traits, skills and networking on the operating and finance lease decision while controlling for tax incentives, financial constraints, contracting costs, firm uniqueness, corporate governance, industry effects, Gross Domestic Product (GDP), stock market return and Consumer Confidence Indicator (CCI). Data generated between 2000 and 2013 for a sample of 248 Executives from UK FTSE 100 firms, was run using Ordinary Least Square (OLS) regression.

Results of the aforementioned study suggest that CEOs with more networking ties are less likely to use finance leases while CEOs with higher optimism, skills and experience, tend to use less of finance leases and more of operating leases. The proposed thesis contends that irrespective of management personalities, decisions as regards the firm are subject to influences of the Board as a corporate governance mechanism securing the interest of stakeholders. The thesis therefore, aims to contribute to the literature by examining the role of the Board (and its specialised committees) on lease use.

Munir, Kok, Teplova and Li (2017) similarly investigated the effect of CEO-power on firm financing policies (use of conventional debt and operating leases). CEO-power was examined by a number of variables such as CEO-Founder, CEO-Chair, CEO-ownership and CEO-pay slice with data generated from 297 listed Chinese Small and Medium-scale Enterprises (SMEs) for the period 2009-2012. Controlling for a number of firm attributes and employing

Instrumental Variable Threshold regression, it was found that below a certain threshold for the CEO-power index, firms use more of conventional debt and operating leases. Above such threshold, less is utilised with this being attributed to CEO tendencies to manipulate capital structure in pursuit of self-interest. Furthermore, the relationship between conventional debt and operating leases was concluded to be positive below CEO-power threshold and negative when it exceeds. In terms of scope and extent of contribution of the reviewed study, the critique raised in respect of Yau and Tan (2017) applies. Also, due to the use of Principal Component Analysis (PCA) in arriving at a measure for Power-Index, the effects of CEO-Chair and CEO ownership cannot be distinctly established.

Zhang and Liu (2020) conducted a study on the determinants of structured leasing arrangements using a dataset for the period 2001-2016 generated from a sample of 368 State-owned and 389 non-State-owned enterprises in China. The objective of the study was to confirm the hypothesis that State-owned enterprises have more incentives to structure leasing arrangements as finance leases instead of operating leases. This is in spite of the financing incentives that obtain with reporting operating leases off-balance sheet prior to IFRS 16 adoption. Using regression as a technique of analysis, the study found that State-owned enterprises are more likely to structure lease arrangements (positive significant effect).

In addition, the aforementioned study assessed the effect of executive characteristics (CEO/ managerial share ownership) on structured leases in State-owned enterprises. A negative significant effect was determined implying that increases in managerial ownership decreases the tendency for State-owned enterprises to use finance leases. Managers are posited to be less likely to engage in empire building or wealth-reducing activities that may affect firm value. Therefore, finance leases are avoided due to their on-balance sheet reporting which increases the gearing ratio and financing costs for these firms.

2.5.2 Corporate Governance Mechanisms and Financial Leverage

Subsequent to corporate governance reforms in the Netherlands, Arping and Sautner (2010) examined its effect on leverage over the period 2000-2007, for a sample of 246 firms (split into a treatment group of 40 firms in Netherlands and a control group of 206 firms drawn from Europe). Size, growth, tangibility, profitability and liquidity controlled for, regression was run with findings being that, the treatment group on account of corporate governance reforms presented with decreasing levels of debt use in their capital structure (significant negative effect as per the Difference-in-Difference (DID) regression estimates). The implication is that where corporate governance mechanisms are strengthened or effective, they suffice in place of debt as a managerial disciplining strategy. The acknowledged concerns of the study lie in possibility of the control group firms having been equally subjected to corporate governance reforms thus, leading to elements of bias in findings. The study also did not provide evidence as to how specific aspects of the reforms affecting Board structure influenced leverage in these firms.

Haque, Arun and Kirkpatrick (2011) assessed the effect of corporate governance quality on capital structure (leverage) of listed non-financial firms in Bangladesh. The study adopted a mixed methodology by first, administering questionnaires for the 2004-2005 period through which qualitative data was generated and subsequently converted to quantitative data –the Corporate Governance Quality Index (CGI). The CGI comprised data relating to; ownership pattern, shareholders' rights, Board independence and responsibilities, management, financial reporting and responsibility towards stakeholders. Employing OLS regression, CGI was found to have a significant negative effect on leverage lending evidence to the proposition of substitutability between corporate governance mechanisms and debt in ensuring shareholder-management alignment. Validity of results may be impaired due to the unaddressed issues of endogeneity and reverse causality on account of the cross-sectional nature of the study.

Jiraporn, Kim, Kim and Kitsabunnarat (2012) utilised the Institutional Shareholder Services (ISS) governance quality measure in investigating the effect of corporate governance on leverage in firms registered in its database. The ISS measure is adjudged superior to that of the CGI and covers the aspects of governance bordering on; audit, Board of Directors, charter/bylaws, Director Education, executive and Director compensation, ownership, progressive practices, and state of incorporation. The study period covered 2001-2004 and a sample of 7,557 firm-year observations was generated from the ISS database. Two-stage least square (2SLS) regression was run revealing a significant negative effect of the Board and ownership structure on leverage. This implies the substitutability of corporate governance mechanisms and debt in ameliorating agency problems in firms. Findings of the study are deemed valid due to the technique of analysis (2SLS) being efficient in the presence of endogeneity.

Fauver and McDonald (2015) in a study on culture, agency costs, governance and capital structure, analysed the moderating effect of firm-level governance on the relationship between cultural disposition of managers (individualism) and capital structure of firms in the G20 nations between the years 1995 and 2009. Firm-level governance was measured using the Thomson Reuters Asset4 governance performance measure- a composite assessment of Board structure, compensation policies, Board function, shareholder rights, firm vision and strategy. Firm attributes controlled for, Probit regression estimations revealed a significant negative effect of the interaction between governance and culture on the use of debt. Inference is that presence of strong governance mechanisms moderates the cultural disposition of overconfident mangers/CEOs (manifested in form of high individualism) to contract debt by reducing the likelihood. This conclusion was however, adjudged valid for developed economies as emerging economies (such as Nigeria) are contended to have illiquid and highly controlled debt markets.

2.5.2.1 Board Attributes and Financial Leverage

Rehman, Rehman and Raoof (2010) investigated the effect of corporate governance mechanisms on leverage in listed banks in Pakistan. Data was generated for a sample of 19 banks covering the period 2005 and 2006 with deployment of OLS regression as a technique of analysis. Results indicated the following Board attributes; size, independence and number of meetings held in a year, had positive effect on leverage in these listed banks (in addition to Board structure, effects of ownership concentration and managerial ownership were also considered). However, the study concluded on an overall weak association between corporate governance mechanisms and leverage based on the R-square, F-stat and significance level set at 5%. This was attributed to the study period of 2 years having a significant influence on the direction of results.

Ahmadpour, Samimi and Golmohammadi (2012) explored the effect of corporate governance mechanisms on leverage in 311 listed firms on the Tehran Stock Exchange (TSE). The study placed emphasis on the effects of Board size, Board independence, CEO duality, ownership concentration and institutional shareholding deploying linear multiple regression as a technique of analysis on data generated for the period 2005-2010. The results suggested that Board independence and CEO duality have significant negative effect on leverage whereas Board size has a significant positive effect. Inference can be made that where greater independence is associated with the Board and a CEO, debt use is reduced probably due to quality of monitoring and level of engagement. A larger Board may be ineffective thus, shifting agency conflict resolution to the use of debt. Acknowledged limitation of the study is in the external validity of findings thus, suggesting the need for replication in other domains as well as the investigation of other corporate governance mechanisms' effects. Similar findings in relation to Board size was registered in a study by Huang and Wang (2014).

Uwuigbe (2013) studied the effects of Board size and CEO duality on use of leverage by 40 listed firms in Nigeria using a dataset for the period 2006-2011. Regression was run with results indicating that a Board size has a significant negative effect on leverage in these firms. This was explained as smaller Boards translating to weak corporate governance thus, necessitating the use of debt as a disciplinary mechanism. The larger the Boards, the more effective corporate governance is presumed to be thus lowering the level of leverage in firms. In a corresponding study conducted by Uwuigbe (2014), Board composition and managerial ownership were examined in addition to Board size and CEO duality using the same sample dataset and technique of analysis. Only Board composition was found to have a significant effect (negative) on financial leverage suggesting that greater independence of Boards substitute debt as an effective corporate governance mechanism.

Liao, Mukherjee and Wang (2015) assessed for a sample of 1,589 U.S. firms pooled from the Compustat database, the effect of Board independence, institutional ownership and aggregate corporate governance quality on leverage during the years 1996-2008. Estimations using the Generalised Method of Moments (GMM) revealed a significant positive association between Board independence, institutional ownership, corporate governance quality and leverage. The implication is that effective corporate governance in firms results in an increased use of debt. From the study, corporate governance mechanisms and leverage can be adjudged to serve as complements in ensuring effective and value-oriented management of firms. GMM was similarly used by Nejad and Wasiuzzaman (2015) which analysed determinants of firms' debt policies for a sample of 171 firms listed on the Bursa Malaysia between the years 2005-2010. Estimations however, suggested that Board size as well as ownership structure (in general) has a significant negative effect on leverage.

Adebgile (2015) examined the effect of corporate governance attributes on the capital structure of listed food and beverages firms in Nigeria. Covering a timeframe between 2003 and 2012 and utilising a sample of 6 firms, leverage was regressed on Board size, Board composition and managerial shareholding. In addition, firm attributes such as asset tangibility and growth were considered. Applying regression as a technique of analysis, the study found Board composition to have a positive effect on leverage whereas Board size and managerial shareholding were found to have negative effects. However, the effects were all further established to be insignificant.

Audu (2015) investigated the effect of corporate governance mechanisms on the capital structure (leverage) decision of listed food and beverages firms in Nigeria. Covering the period, 2004-2013, GLS regression was run with results indicating that Board composition (and ownership concentration) have statistical significance (negative and positive respectively) in explaining the use of leverage in these firms. Institutional ownership however, was found to have no significant effect on leverage. The result in terms of Board composition contrasts that of Adegbile (2015) by establishing that more independent Directors on the Board suffice as a monitoring mechanism and would lead to less use of debt in firm capital structure.

Purag, Abdullah and Bujang (2016) investigated the effect of corporate governance mechanisms on leverage in a sample of 195 family-owned firms listed on the Bursa Malaysia between 2009 and 2011. Debt ratios were regressed on Board size, Board composition (independence), Board financial expertise, CEO duality and CEO tenure with OLS results suggesting that Board composition and CEO tenure have significant negative effects on debt use in family-owned firms. Study findings however also revealed a low R-squared value in relation to collective effect of the corporate governance variables examined on leverage. This

was attributed to possibility of variable measurement errors or wide data dispersion which may impair validity of findings.

Sivathaasan, Ali, Liu and Haung (2016) in a study on the effect of stock liquidity and corporate governance mechanisms on leverage, utilised a sample of 1,207 listed non-financial firms in Australia between the years 2001-2013. A composite governance quality index (CGQ) based on the Howarth Report was construed with consideration given to firms' structures and processes in relation to the Board. Fixed effects regression was run with findings of a significant negative association between CGQ and leverage. This further lends support to the substitutability of quality corporate governance mechanisms with leverage in shareholder-management alignment.

Siromi and Chandrapala (2017) analysed the influence of the following corporate governance mechanisms; Board size, Board composition, Board Committees, and managerial ownership, on leverage in a sample of 138 listed non-financial firms in Sri Lanka. Data was generated for the period, 2009-2013 with regression estimations confirming a significant positive effect in relation to Board composition whereas a significant negative effect was registered for Board Committees. In comparison to prior empirical works, this study considered the effect of Board Committees measured based on the number obtainable in a firm. The greater the number, the lower the need and likelihood of firms to contract debt as effective monitoring of management tends to prevail with many Board Committees.

Detthamrong, Chancharat and Vithessonthi (2017) provided evidence on the relationship between corporate governance and capital structure albeit, as part of a broader objective of assessing the mediating effect of leverage on the relationship between corporate governance mechanisms and financial performance (controlling for a set of firm attributes). For a sample data of 493 listed non-financial firms in Thailand between 2001 and 2014, OLS regression

was run with estimations indicating no relationship between corporate governance mechanisms and leverage. The following variables serving as proxies for corporate governance; Board size, Board independence, Audit committee size, female directorship, CEO duality, ownership concentration and audit reputation were found to be statistically insignificant in relation to effects on leverage.

Kyriazopoulos (2017) conducted a study on the effect of corporate governance mechanisms (Board structure) on leverage in firms listed on the Athens Stock Exchange during the years 2005-2014 which encompassed the sovereign debt crisis period. This event was found to have a moderating effect on two corporate governance mechanisms' relationship with debt use in sample firms. OLS regression results (controlling for a number of firm attributes) indicated that Board size has a significant negative effect on leverage whereas Board independence has a significant positive effect. The sovereign debt crisis however, was found to have weakened and strengthened respectively, the effects of Board size and Board independence on debt contracting. CEO duality was associated with less use of debt and its effect unchanged on account of the sovereign debt crisis. These findings seem to counter that of Ahmadpour, Samimi and Golmohammadi (2012) and could be attributable to the peculiarities of Greece and in particular, occurrence of the sovereign debt crisis.

Lardon, Deloof & Jorissen (2017) in exploring the effect that an outside CEO has on the financing choices of privately held firms in Belgium, included in analysis, the possible moderating influence that family control through the Board exerts. Employing Tobit regression whilst controlling for a number of firm attributes, results indicated a significant positive relationship between interaction of an outside CEO with Board control and leverage. The implication is that the Board ensures managerial discipline and shareholder alignment through its effect on outside CEOs' debt contracting.

El-Habashy (2018) studied the effect of corporate governance on capital structure decisions of listed non-financial firms in Egypt considering the variables; Board size, Board composition, CEO-Chair distinction, managerial ownership, institutional shareholding, large block shareholding and audit type. OLS regression was run on a dataset of 240 observations generated for the period 2009-2014. In relation to Board structure, size was found to have a significant positive effect on the use of long-term debt but negative effect on short-term debt. CEO-Chair distinction was similarly found to have a significant positive effect on leverage whereas Board independence was established to have no significant effect on debt presence in capital structure.

Kieschnick and Moussawi (2018) conducted a study on the influence of corporate governance on capital structure choices using a sample of US firms between the years 1996-2016. A two-part quasi likelihood model was deployed for analysis with results suggesting that Board composition (insider-dominated Board) exhibits a significant positive effect on debt use by young firms. However, as they age, these Boards have a significant negative effect on leverage. Inference can be made that less independent Boards initially utilise debt as a more effective corporate governance mechanism and with time, probably due to experience, increase in efficiency and disciplinary function of contracted debt, become more effective as a corporate governance tool thus, resulting in reduced financing by debt in these firms.

In a study by Adusei and Obeng (2018), the effect of Board gender diversity on leverage was assessed for a sample of 441 microfinance institutions (MFIs) pooled from 69 countries between 2010 and 2014. Three panel regression estimation techniques were employed controlling for a number of variables such as; financial intermediation, credit risk, age of MFI, profitability, regulation and country status in relation to economic and financial development. Random effects and Pooled OLS results suggested a significant negative effect

of gender diversity on leverage. The presence of female Directors on the Board reduces the perceived risks and costs associated with equity thus, translating to its preference over debt. This confirms propositions of the risk aversion and disclosure effect theories. The Fixed effects regression however, revealed a significant positive effect of gender diversity on leverage where borrowings was examined as the dependent variable.

Khawaja, Bhatti and Ashraf (2018) studied the effects of Board size, independence, gender, CEO duality and ownership on the use of debt in a sample of 1, 565 listed non-financial firms drawn from Malaysia, Indonesia, Singapore and Pakistan. Data was generated for the period 2000-2015 resulting in 67, 734 firm- year quarter observations. With the use of Heckman Ordered Probit (HOP) model as well as controlling for a number of firm-specific and macroeconomic factors, CEO duality was found to have a significant negative effect on the choice to utilise external financing but would result in preference for debt should it be considered. Board independence displayed similar results but lacked significant effect on the specific choice of external financing. Board size and gender (female presence) were found to have a significant positive effect on the choice to contract external finance but equally indicated no particular preference for options obtainable. Acknowledged limitation of the study was traced to its emphasis for analysis, on only four financial instruments; equity, bonds, bank loans and sukuk.

Kajola, Olabisi and Fapetu (2019) examined the effect of corporate governance mechanisms (Board attributes of size, gender and independence) on the capital structure of 42 listed firms in Nigeria for the period, 2005-2016. Fixed effects regression was run with results indicating the Board gender diversity has a statistically significant positive effect on leverage in these firms. This implies that women on the Board are more attuned to the use of debt than

otherwise. Board size and independence however, were established to have statistically insignificant effect on leverage.

2.5.2.2 Ownership Structure and Financial Leverage

Cespedes, Gonzalez and Molina (2010) assessed the determinants of capital structure in Latin American firms spanning seven countries and for the period, 1996-2005. Data generated for the sample totalled 6,766 observations which were subjected to fixed effects regression. The results suggested a negative but statistically insignificant relationship between ownership concentration and leverage as did the earlier reviewed work by Rehman, Rehman and Raoof (2010). In further analysis, the possibility of a non-linear relationship was examined via the use of Herfindahl index measures. Findings revealed a U-shaped (non-linear) relation whereby, the effect of ownership concentration on leverage is significantly negative for firms that have low concentration and significantly positive for firms with high concentration. The implication here is that as firms become more concentrated in ownership, there arises a need to protect shareholding control which leads to the issue of debt as against equity by firms.

Al-Najjar (2011) similarly investigated the determinants of capital structure with focus on non-financial firms in Jordan. Data was sourced for a sample of 86 firms covering the period 1999-2003. Two techniques of data analysis, pooled and panel regression were employed with each giving different perspectives on the relationship between institutional ownership and debt. Panel data regression results indicated a significant negative relationship between institutional shareholding and debt whereas that of the pooled regression suggested a positive relationship. Institutional shareholding can be deemed to suffice as a corporate governance mechanism in the reduction of agency costs thus, curtailing any need to utilise debt. As for the pooled regression result, the study contends that entrenchment of institutional shareholders could influence the constitution of the Board with those involved in

management. This would render ineffective, institutional shareholding as a monitoring mechanism thus, necessitating debt contracting.

De La Bruslerie and Latrous (2012) sought to determine evidence of a non-linear relationship between ownership concentration and leverage in a sample of 112 firms listed on the French Stock Exchange between the years, 1998 and 2009. Controlling for a number of firm attributes, the study employed panel data regression for which results confirmed the expectation hypothesised. The lower the concentration of ownership, the more likely firms would issue debt in order for the shareholders to protect their level of control. At higher levels of concentration, there obtains reduced debt contracting attributable to the need to avoid risks of financial distress and bankruptcy in these firms. These findings and interpretations however, are a reverse of that documented in the study by Cespedes, Gonzalez and Molina (2010).

Lee and Kuo (2013) examined as part of a broader objective, the relationship between managerial ownership and debt for a sample of firms listed on the Taiwan Stock Exchange and Over-the-Counter (OTC) market during the years 1996-2006. Firm attributes controlled for, Two-Stage Least Square (2SLS) regression was employed on a data-set of 5, 027 firm-year observations with estimation results indicating a significant negative relationship between managerial ownership and debt. This lends credence to propositions of an entrenchment effect with increased managerial shareholding which reduces the utilisation of debt by firms. Reasons for the finding can be deduced in terms of a need for preservation of managerial control, protection from external monitoring, as well conformity to the financing orientation of risk-averse managers. In contrast, an earlier reviewed work by El-Habashy (2018) concluded on a significant positive effect of managerial ownership on debt.

Chung and Wang (2014) analysed the effect of institutional ownership on leverage using a sample of firms registered in the Compustat database for the period 1985-2008. Three-Stage Least Square (3SLS) regression was used as a technique of analysis with the estimations providing evidence of a significant negative relationship between institutional ownership and leverage. This corroborates the findings of Al-Najjar (2011) and an earlier reviewed work by Ahmadpour, Samimi and Golmohammadi (2012) and El-Habashy (2018) that institutional shareholders serve as capable substitutes to debt for monitoring of firms. The study further notes the strength of this effect being more evident where there is information asymmetry and absence of business relationships between the institutional investors and firms.

Uwuigbe (2014) in a study on corporate governance and capital structure, examined in addition to earlier reviewed Board attributes, the effect of managerial ownership on the use of debt in 40 listed firms in Nigeria, over the period, 2006-2011. Regression was run with results being that managerial ownership displays a significant negative effect on leverage. This implies that increased level of managerial shareholding will result in entrenchment of managers who as a consequence, tend to be risk averse leading to less use of debt in firms' capital structure.

Kumar (2015) investigated the effect of ownership structure on leverage for a sample of 2, 478 firms listed in India during the years 1994-2000. The study specifically examined the influence of institutional, managerial, foreign and corporate ownership on debt. Results of fixed effects regression indicated that, institutional ownership and foreign ownership (squared) have a significant negative effect on debt. Institutional and foreign ownership can thus, be inferred to serve as effective monitoring mechanisms substituting the role of debt. Findings on institutional ownership can be seen to affirm that of earlier studies such as Al-Najjar (2011) and Chung and Wang (2014). Corporate and managerial ownership were found

to have no significant effect on leverage with findings on managerial ownership similar to that of prior reviewed works by Rehman, Rehman and Raoof, (2010) and Siromi and Chandrapala (2017).

Sun, Ding, Guo and Li (2015) analysed the effect of ownership structure on leverage in firms listed in the United Kingdom between 1998 and 2012. OLS regression was applied to the data set with findings of a significant non-monotonic association between managerial ownership and debt. At lower levels of managerial shareholding (which translates to less entrenchment and better governance), there obtains higher levels of debt in firms based on perceived manager-creditor alignment. However, as managerial shareholding increases, leverage in firms decreases to protect private managerial benefits of control and guard against bankruptcy risks. Institutional ownership was found to have a significant positive effect on leverage and can be deduced to be an effect of the associated enhanced monitoring, resulting in lower costs of debt thereby, encouraging its use by firms. In relation to earlier reviewed works, this corroborates the finding of Liao, Mukherjee and Wang (2015) but contradicts that of Nejad and Wasiuzzaman (2015) which concluded on a general significant negative effect of ownership structure on leverage.

Lo, Ting, Kweh and Yang (2016) analysed the effect of controlling rights (ownership concentration) on leverage in listed firms in Taiwan during the period, 1999-2014. 15, 721 firm-year observations were generated and subjected to OLS regression with estimations that suggest a U-shaped non-linear relationship between ownership concentration and leverage. At first, ownership concentration leads to an increase in debt use over equity, to protect control rights as ownership in the firm expands. However, after a certain point, the relationship becomes negative and can be attributed to the tendency of controlling

shareholders to subsequently utilise less debt in order to avoid bankruptcy risks. The study findings corroborate that of De La Bruslerie and Latrous (2012).

Bamiatzi, Efthyvoulou and Jabbour (2017) in contribution to literature on the subject matter, explored the effects of domestic and foreign acquisition (ownership) on leverage. The study sample comprised acquired firms (manufacturing and service industries) based in Italy and Spain between the years, 2002 and 2010. Propensity score matching was employed in assessing the acquisition effect with results indicating that foreign acquisition reduces leverage in acquired firms whereas the effect of domestic acquisition is less significant statistically. Foreign ownership besides funding, tends to avail firms with the benefits of technology, experience and expertise which positively affect firm performance in terms of earnings thus, lowering the need for external financing such as debt. The study is however, not without its limitations which include external validity and the lack of clarity as to the nature of foreign acquiring firms that leads to a reduction in debt levels for acquired entities.

Martin and Hoffman (2017) explored the effect of ownership concentration on leverage using a sample of 157 listed non-financial firms in Chile during the period 2002-2010. Ownership concentration was assessed from two perspectives- one being the majority shareholding and the other, affiliation of the sample firms to a business group. Generalised Method of Moments (GMM) was deployed as a technique of analysis with results being that ownership concentration translates to an increase in the utilisation of debt by firms. The inference is that ownership concentration improves the governance quality of firms generating confidence in the finance market as well as facilitating the ability of firms to contract debt under favourable terms (lower costs).

Correspondingly, where there is an affiliation to a business group, these firms also register higher levels of debt as there tends to be feasibility of debt access through intra-group capital

markets. The study finding corroborates the earlier reviewed works by Haque, Arun and Kirkpatrick (2011), Ahmadpour, Samimi and Golmohammadi (2012), Khawaja, Bhatti and Ashraf (2018) and provides a new insight to that of Cespedes, Gonzalez and Molina (2010) on the positive effect that ownership concentration has on leverage. Studies on ownership concentration generally provide evidence of a significant effect on leverage except for the earlier reviewed works by Detthamrong, Chancharat and Vithessonthi (2017) and El-Habashy (2018).

Differing from prior reviewed studies, ElBannan (2017) assessed the effect of family ownership on leverage for a sample of 154 firms listed on the Egyptian Stock Exchange for the period, 2006-2014. Instrumental variable approach in estimation of Two-Stage Least Square (2SLS) regression led to the finding that family ownership has a significant positive effect on leverage in these firms. This could imply that family-owned firms may not have in place, quality governance that could substitute for debt. Therefore, in order to make up for the shortfall, these firms contract debt for its disciplinary effect on management.

Similarly, Ramalho, Rita and Da Silva (2018) explored the effect of family ownership on leverage using a sample of 9, 220 non-financial firms in Portugal for the period 2006 to 2012. Equally factored into the analysis were the effects of size, geographical location and the 2008 global financial crisis. Estimations of random-effects regression revealed a significant positive effect of family ownership on leverage due to continuity and stability associated with family firms that in turn, enable the contracting of debt. The study further found the effect to be more pronounced in firms that are large and situated in metropolitan areas. Large family firms were also found to employ more of debt in their capital structure post-2008 global financial crisis compared to small firms. The study findings however, may be interpreted with caution due to the unaddressed issue of endogeneity as well as assumption of homogeneity in

family firms. Non-incorporation of the heterogeneous nature of family firms masks insight into the attributes that explain significant influence on leverage.

An innovative approach to research on the subject matter can be found in the work of Fernandez-Mendez and Gonzalez (2018) which analysed the effect of bank ownership on capital structure of 3,044 firms in Spain during the period 2005-2012. For a sample of 3,044 firms, bank ownership was found to have no effect on financial debt with findings further suggesting that a reduction in leverage actually occurs. However, in the course of its multivariate analysis, the study found a significant positive effect on debt maturity based on the assertion that banks by virtue of increased shareholding, monitor and acquire quality access to information about firms. This in turn increases confidence of the credit market and enables firms to contract debt on a long-term basis as well as at reduced cost.

Ji, Mauer and Zhang (2019) assessed the relationship between a number of governance variables (EW governance index, PW governance index, E-index, institutional ownership, CEO stock ownership) and leverage for a sample of 1, 191 firms between the years 1998 and 2014. Findings suggest that in diversified firms, there is a significant negative effect of governance quality on debt use. The lower the effectiveness of governance, the more inclined these firms are to employ debt as a disciplinary mechanism. For focused firms, a positive relationship was established between governance quality and debt attributable to the proposition that in better governed firms, managers' interests are further aligned with creditors thereby, lowering the agency costs associated with debt and motivating its use by firms. These results can equally be interpreted from a perspective based on the relationship between governance quality and managerial entrenchment. In diversified firms, poor governance quality is implied to be a consequence of managerial entrenchment thus, necessitating the use of debt. In focused firms however, managerial entrenchment reduces

leverage as entrenched managers would in this context, act to avoid bankruptcy and control loss risks.

Gan and Xia (2019) employed a dynamic programming method to analyse the effect of managerial ownership on leverage in publicly traded firms helmed by risk-averse managers. The study found the existence of an inverted U-shaped relationship such that where managerial ownership is low, the corresponding low compensation from holding stock options motivates managers to issue more debt in order to exploit tax shields and benefits from diversification. At higher levels of ownership which translate to higher compensation from shareholding, managers lose the incentive to issue more debt due to the increased risks of bankruptcy that arise. This, in addition to the inability to engage in profitable ventures due to debt overhang.

Saona, Vallelado and Martin (2019) examined the effect of insider ownership on firm-debt policy using a sample of 14, 950 firms drawn from across 47 countries characterised as developed, developing and under-developed. Two techniques of analysis were deployed-panel logistic fixed effects and Tobit regression in assessing the effect on leverage, of ownership by parties directly related to the firms (holding companies) or those involved in the operation and management (employees, management, directors). Data analysed covered the period 1996-2014 with regression estimations suggesting that diluted (low) insider ownership tends to foster a zero-debt policy particularly in the case of small firms. Thus, it can be inferred that where concentration of insider ownership obtains, there arises a managerial compulsion to guard against shareholding dilution and takeovers. Therefore, in place of issuing equity to raise capital, these firms utilise debt.

Do, Lai and Tran (2019) explored the effect of foreign ownership on leverage for a sample of listed firms in Taiwan over the period, 1997-2016. System GMM estimations revealed that

foreign ownership has a significant negative effect on debt use by firms thus, further corroborating propositions on the substitutability of ownership and debt in firm monitoring. The study equally examined the nature of this relationship in the context of varying quality levels of governance obtainable in these firms. The interaction of the governance variables (Board independence and information ratings) with foreign ownership was found to strengthen the significant negative effect arrived at with the interpretation being that where governance quality is poor, foreign ownership decreases debt use and effectively substitutes as a monitoring mechanism. Explanation by the study on the relationship between foreign ownership and leverage provides a differing perspective to that of Bamiatzi, Efthyvoulou and Jabbour (2017).

In similar trajectory, Gupta, Yadav and Jain (2020) assessed the effect of foreign ownership on leverage for a sample of 200 non-financial firms listed on the National Stock Exchange (NSE) in India (Nifty-200 index). Data was sourced for the period 2007-2018 and analysed using the Generalised Method of Moments (GMM). Controlling for a number of firm attributes, a significant negative relationship was found between foreign ownership and leverage attributable to improved performance associated with not just funding but technology, experience and expertise that foreign ownership accrues to a firm. This invariably results in the reduction of debt levels or a decreased tendency of firms to contract debt.

2.5.3 Financial Leverage and Lease Finance

Adams and Hardwick (1998) in examining the determinants of leasing decisions in UK firms assessed (as one of the variables of interest), the effect that leverage may have on leasing decisions. Data was generated for a sample of 100 firms listed on the London Stock Exchange as at 1994. Regression results revealed leverage to have a significant, positive

effect on lease utilisation in these firms. The inference was that highly levered firms would have used up their debt capacity thus, necessitating the employment of leases in financing operations.

Kang and Long (2001) conducted a research on the determinants of fixed payment financing (conventional debt and leases) for a sample of 4,781 observations over the period, 1984-1993. Results from Logit and Ordinary Least Squares (OLS) regressions suggested a negative relationship between other fixed payment financing mechanisms (defined as leverage/conventional debt) and leases. This is in support of the lease-debt substitutability hypothesis which posits that the more of conventional debt a firm utilises, the lower its tendency to contract leases due to perceived similarities in long-term fixed payment streams and impact on firm gearing levels. Pertinent to note is the acknowledged survivorship bias present in the source database from which the sample was drawn and which may have had an impact on conclusions drawn.

Lasfer (2005) investigated the motivations for leasing amongst 2,343 firms in the United Kingdom over the years, 1989-2002. Regression results revealed that firms lease in order to reduce debt levels with the industries recording highest leasing propensity being IT hardware, software and computer services. Mnzava (2008) in same trajectory, tested the lease-debt substitution hypothesis for a sample of 178 firms in the United Kingdom covering a 10 year period between 1981 and 1990. Differing from techniques used in prior studies, Tobit regression was run with leverage found to have a negative significant effect on the use of finance leases. There abounds the possibility though, that results were influenced by tax changes observed within the study period.

Slotty (2009) provided corroboration for the substitution hypothesis through analysis of data (covering the period 2002 to 2006), for a sample of 20,442 small, private firms in Germany

using Generalised Method of Moments (GMM). This technique is noted by the study to address both endogeneity and heteroscedasticity concerns thus, enhancing validity of findings compared to prior studies. The work of Lin, Wang, Chou and Chuey (2013) is similar in its handling of endogeneity which it attributes as the cause of mixed inferences on the lease-debt relationship in extant literature. The study adopted Tobit Instrumental Variable regression for a data set comprising observations of 4,158 firms pooled from Compustat North America database for the years 1991-2005. Controlling for asset uniqueness, tax incentives and financial situation, results likewise concluded on a significant negative effect of debt on lease use by firms. This, underscored by the extent of financial constraints as determined by size and internal funds. The study found that small firms with low levels of internal funds or high internal fund variability are prone to contract leases instead of conventional debt.

Singh (2013) analysed sample data of 233 retail firms accessed from Compustat database for the years 2006-2008. Results from the Ordinary Least Square (OLS) regression for firms with both capital and operating lease observations, provided evidence in support of the substitution hypothesis as debt was found to have a significant, negative effect on the contract of leases. Limited observations of capital leases in the sample leads to inference that the substitution effect applies in the context of operating leases. There are concerns however, with assumptions involved in the capitalisation of operating leases which possibly resulted in biased estimations.

Li (2014) in a study of 1,400 publicly listed firms in China between 2003 and 2012, examined the effect of conventional debt on lease use. Two sets of regression were run employing Logistic and Generalised Least Squares (GLS) techniques. Results from the Logistic regression were deemed incapable of providing clarity (due to endogeneity concerns) on the nature of relationship between debt and leases. The GLS regression adopted

in overcoming the identified shortcoming, provided evidence in support of the substitution hypothesis. While GLS regression is considered a more appropriate technique than its Logistic counterpart, the study acknowledged the presence still, of limitations to its explanatory power. The possibility of a non-linear relationship between debt and leases, led to suggestion of threshold regression in detecting at what levels debt exhibits complementary and substitution effects on leases.

Mendes (2015) explored for the period 2000-2013, the effect of leverage on leases for a sample of 341 firms listed on the Bloomberg European 500 Index while controlling for time, industry and country differences. OLS and Tobit regressions were run with leverage found to have a significant negative association with leases further confirming the lease-debt substitution hypothesis. Comparably, Rahman and Sankaran (2016) assessed 111,876 firm-year observations derived from Compustat database for the period 1980-2013 in order to establish the effect of leverage deficits on leases in multivariate settings. Dividend payment, level of earnings, S & P ratings, loss and firm size controlled for, fixed effects regression results revealed a significant positive relationship between leverage deficit and leases. This implies that lower-levered firms are more inclined to contract leases thereby, providing evidence in support of the substitution hypothesis on the relationship between conventional debt and leases. The findings were noted to be more prevalent in the case of financially constrained firms. The works of Mendes (2015) and Rahman and Sankaran (2016) did not highlight if and how endogeneity was factored into analysis given the emphasis placed by studies from 2009.

Bialek-Jaworska and Nehrebecka (2016) in a study of the dependence between finance leases and long-term bank loans as well as operating leases and short-term bank loans in Polish enterprises focused on a sample of 50,000 companies for the years 1995-2011 and 2007-2011

respectively. Analysis with the aid of System Generalised Method of Moments (System GMM) suggested the substitutability of finance leases with long- term bank loans with similar conclusions arrived at in the case of short-term bank loans and operating leases. A unique feature of the research was its analysis of lagged lease ratios whose negative coefficient led to inference that firms contract leases up to a threshold beyond which adjustments are made, thus, affecting its quantum in firms' capital structure.

In a study on the effect of firm-attributes on finance lease use by listed non-financial firms in Nigeria, Musa-Mubi (2017) examined (as one of a number of variables), the role of leverage. Utilising a sample of 14 firms listed on the Nigerian Stock Exchange (NSE) over the period, 2007-2015, the study employed a bootstrap-based fixed effects regression- the results of which indicated leverage to have a significant and negative effect on the use of finance leases. Findings of this study therefore, confirmed the lease-debt substitutability hypothesis, providing evidence within the context of Nigeria.

While the aforementioned studies reviewed centre on the substitution literature, there exists a strand that provides evidence in support of the complementary nature of relationship between debt and leases. The earliest insight can be found in the work of Ang and Peterson (1984) where for a sample of 600 US firms, Tobit regression was run on data for the period, 1976-1981. Leverage was established to have a significant positive effect on lease use due to obtainable inefficiencies in debt and pseudo-debt markets allowing for significantly levered firms to contract leases as a complement to debt. Lasfer and Levis (1998) correspondingly analysed lease use in 3,008 public and private companies in the United Kingdom over the period 1982-1996. Employing Univariate and Logit regressions, results equally indicated that high levels of leverage translate to increased use of leases particularly in the case of large firms.

Filareto-Deghaye and Severin (2007) in determining characteristics of firms engaged in leases, analysed the attribute of leverage using a sample of 11,233 Small and Medium Scale Enterprises (SMEs) in France for the year 1999. Kohonen maps were employed as a technique of analysis with leverage found to have a significant positive effect on lease finance suggesting that levered firms tend to be financially constrained and thus, present with an increased susceptibility to contract leases. Pertinent to note however, is the criticism associated with the use of Kohonen maps as a technique which is the structure of neural networks' non-conformation to existing theories as well as limitations in explanatory power.

Malik, Saeed, Ahmed and Javed (2012) assessed for a single period (2009), the effect of leverage on lease finance use by a sample of 163 listed firms in Pakistan. A complementary relationship was observed from regression of study variables implying that firms lease in addition to contracting conventional debt. This may be due to consequences of a debt overhang and constraints in accessing conventional debt for projects as they arise. Leases therefore, assume the function of a last resort finance alternative. Despite sufficient number of observations for analysis, the study provided no justification for the choice of time and use of a cross-sectional dataset which may have had some measure of influence on the conclusions derived.

Schallheim, Wells and Whitby (2013) explored as one of its objectives, the relationship between leverage and leases. Data was sourced from digital databases for the period 1980-2011 with emphasis on 392 sales-lease-back transactions. Analysis was conducted controlling for a number of variables inclusive of; size, change in cash, capital expenditure, marginal tax rates, interest coverage, investment grade, Z-score and real estate. Regression results revealed that 40% of sample firms increased total debt levels after a sales-lease-back transaction corroborating the proposition that leases and debt are complements. The sample firms that

presented with substitution relationships were noted to lease in the circumstance of being small-sized with higher marginal tax rates and changes in cash.

Singh (2013) in contribution to the literature on relationship between debt and leases, focused on a sample of 64 restaurant and 169 retail firms drawn from Compustat database between the years 2006-2008. The study split the sample into sets of firms with one comprising those with record of utilising only capital leases and the other, firms employing both capital and operating leases. For the sample of firms with capital leases as regressand, Tobit regression results indicated a significant, positive effect of debt on leases confirming the complementary hypothesis.

Compared to extant studies in the complementary literature, an innovative approach was adopted by Landry, Fortin and Callimaci (2013) in investigating the moderating effect of family ownership on the relationship between leverage and the decision to lease for a sample of 227 firms covering the period 2006-2007. Concentrated ownership, size, tax position and industry controlled for, findings from regression analysis revealed that in family-owned firms, leverage had a significant, positive effect on the decision to lease- this, in order to exploit growth opportunities especially in the case of lone-founder firms. Validity of findings may be impaired due to the acknowledged possibility of omitted variable bias. Likewise, findings may not be generalizable to other climes due to differences in cultural factors.

Ambrose, Emmerling, Huang and Yildirim (2018) in a study of 166 single-tenant commercial real estate properties between the years 1996 and 2006, explored the relationship between debt and leases in the presence of counter-party risk. Adopting the methodology of Ang and Peterson (1984), the study categorised its sample into differing default risk, debt and lease maturities. For low-default risk tenants, complementarities were obtained between debt and

leases. However, the study noted a change in relationship to that of substitutes where the default risk rises.

Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018) assessed the relationship between bank loans and finance leases in the context of small firms in Poland. Utilising a sample of 400 companies studied between the years 2012 and 2016 as well as employing Tobit and Logit regressions as techniques of analysis, the study found a complementary relationship between conventional debt and finance leases. This was further discovered to be due to presence of a debt overhang from the use of bank loans by these firms. There are indications that when a firm is constrained in terms of leverage levels, it may be unable to contract additional sources of finance as a result of high cost of capital which results in underinvestment by these firms. Leases tend to be employed as a lower cost of capital obtains compared to conventional debt.

Musa-Mubi (2017) in a study on the effect of firm-specific attributes on finance lease use by listed non-financial firms in Nigeria, investigated leverage as one of the predictor variables. Data was extracted for a sample of 14 listed non-financial firms covering the period 2007-2015. A fixed effects regression with bootstrap based standard errors was run, establishing that leverage has a significant negative effect on leases. This implies that increased use of other forms of debt reduces the tendency of firms to procure leases perhaps owing to the perception of leases having same risk implications as conventional debt as well the (still) developing state of the lease industry compared to other debt markets which makes it a less popular financing choice for firms. This finding is noted to corroborate the literature on lease-debt substitutability.

Musa-Mubi and Badara (2019) re-assessed the relationship between leverage and leases examined previously by Musa-Mubi (2017) on account of the 2016 economic recession

which was moderated for. Examining data for a sample of 20 listed non-financial firms in Nigeria, over the period 2010-2017, generalised least square regression indicated leverage and economic recession to have a significant positive effect on the use of finance leases. The result in relation to leverage was confirmed through fixed effects regression, to have had a moderating influence of the economic recession. Inference made was that the internal financing capacities as well as external contracting feasibilities of these firms had been adversely affected by the economic recession. Thus, compelling the use of leases as a complement to debt.

2.6 Theoretical Framework

This section presents an explanation of selected theories which serve as the basis upon which the study was conducted. These theories are the; agency theory, agency cost theory, pecking order theory, ownership, location and internalisation theory and specialisation theory.

2.6.1 Agency Theory

The basis of agency theory can be traced to the separation of control from ownership which arose from the metamorphosis of enterprising ventures into complex organisations with diverse interests by virtue of diffused shareholding (Berle & Means, 1932). The underlying principle of agency whereby one party (agent) acts on behalf of another (principal), however, contends with the moral hazard problem in form of sub-optimal decision making due to misalignment of principal-agent interests (Jensen & Meckling, 1976). In mitigation, proponents of the theory have underscored the importance of instituting corporate governance mechanisms that monitor the actions of agents and assure goal congruence with the principals whose definition is further dependent on the model of corporate governance an organisation ascribes to.

Nwanji and Howell (2007) noted that the matter of corporate governance is based on either the shareholder or stakeholder model. The shareholder model asserts the priority of shareholders as the essence of corporate governance, being residual risk-bearers whose interests must be maximised. The stakeholder model is accommodating of other parties with a stake in a firm and asserts that these interests are just as much of an importance as shareholders'. Consequently, the stakeholder theory contends that management of firms have obligations to a broader set of stakeholders who just as shareholders, bear some form of risk by virtue of investments made in a firm (Freeman, 1984; Clarkson, 1995).

The agency theory therefore, can be said to explain the relationship between corporate governance mechanisms and leverage. There are propositions in the literature that corporate governance mechanisms can serve as either complements or substitutes to leverage. Given that the role of corporate governance is to monitor agents and prevent the self-utility maximisation tendency at the expense of the firm, effective corporate governance mechanisms are proposed to compel management to contract debt (outcome hypothesis). The effects of this can be seen in the fact that debt serving as a disciplinary mechanism ensures firm value-maximising decisions by management as well as the mitigation of the free cash flow problem due to attendant financial obligations.

Similarly, the use of debt, increases the percentage of managerial shareholding in the firm which consolidates the alignment of shareholder-management interests (Jiraporn, Kim, Kim & Kitsabunnarat, 2012). As a substitute, the proposition is that either of quality corporate governance mechanisms or leverage can mitigate agency problems (substitution hypothesis). The use of debt in firms indicates less potential for shareholder expropriation in a firm. This leads to the establishment of a favourable reputation that facilitates the raising of funds in the capital market at low costs of finance (Jiraporn, Kim, Kim & Kitsabunnarat, 2012).

Noteworthy from the prior paragraph is the observation that debt increases the percentage of managerial shareholding in a firm. This underscores the managerial entrenchment theory as proposed by Fama and Jensen (1983) which suggests debt contracting by management in order to safeguard against dilution of their shareholding, threats of retrenchment, as well as loss of control through corporate raids and take-overs. However, due to the employment risk that is non-diversifiable, managers may exercise caution by avoiding the use of debt. This, in order to forestall bankruptcy risks that could similarly result in a loss of firm control.

Complementing the agency theory are a number of hypotheses that propose explanations into the relationship between corporate governance mechanisms and leverage such as the risk aversion and overconfidence hypothesis and the active monitoring hypothesis. Risk aversion and overconfidence hypothesis underpins specifically, the effects that Board gender diversity could have on the decision to employ debt by firms. Females are proposed to be risk averse and thus, conservative (less confident) in contracting risk-laden sources of finance (Levi, Li & Zhang, 2014 as cited in Adusei & Obeng, 2018). However, females within certain sectors such as Finance, are noted to be less conservative and likely to encourage the use of debt in firms (Adams & Ragunathan, 2014 as cited in Adusei & Obeng, 2018). Detthamrong, Chancharat & Vithessonti (2017) contend that in the presence of CEO duality, the risk profile of the CEO influences the decision to employ debt in firms. A risk averse CEO serving as the Chairman would result in firms with low leverage and the reverse, should the CEO have an appetite for risk.

The active monitoring hypothesis suggests that corporate governance mechanisms through institution of active monitoring affects leverage in firms. This could be seen in the role that institutional investors play which results in enhanced bond ratings and lower costs of finance thereby, encouraging firms to contract debt (Sun, Ding, Guo & Li, 2015). Gupta, Yadav and

Jain (2020) in corroboration, provided empirical evidence with respect to foreign ownership. Institutional shareholding also compels firms to utilise debt as a disciplinary mechanism. In contrast, Jensen and Meckling (1976) theorise that active monitoring due to institutional shareholding, will reduce the tendency of firms to be levered in order to mitigate against agency costs of debt. El-Habashy (2018) contends the same effect where Independent Boards obtain. In the context of large Boards, Nejad and Wasiuzzaman (2015) and El-Habashy (2018) provide similar results of a negative association attributable to the effects of active monitoring. Similarly, assuring firm survival through minimisation of bankruptcy risks will account for low levels of leverage in these firms (Khawaja, Bhatti & Ashraf, 2018). Haque, Arun and Kirkpatrick (2011) provide corroborating empirical evidence in the context of a concentration in ownership.

2.6.2 Agency Cost Theory

Jensen and Meckling (1976) described a firm as a nexus of contracts between parties, stemming from the separation between ownership and control. Shareholders as owners, delegate control of firms to the Management who as agents, are expected to act in the best interests of their principal. However, given that agents equally have a utility to be maximised, most often than not, a divergence of interests occurs and actions taken by these agents may ultimately be detrimental to the value of a firm. The conflict of interests and 'morally hazardous' actions of managers define the agency problem and the costs incurred in mitigation, embody the concept of agency costs.

According to Jensen and Meckling (1976), agency costs are of three types; monitoring costs, bonding costs and residual loss. Monitoring costs are incurred to ensure alignment of principal-agent interests through mechanisms that avail the principal with insight into the actions of agents. Bonding costs are associated with strategies that commit agents to ensuring

optimality in their performance whereas residual loss refers to that resulting from inefficiency in the agents' functions. Monitoring costs in form of an instituted Board of Directors and bonding costs such as financing by leverage are assumed in order to minimise residual loss (Panda & Leepsa, 2017).

Fama and Jensen (1983) noted that in firms, agency problems arise in the course of decision making by management who are in essence, not the residual claimants of any positive value generated by those decisions. The finance decision determines the capital structure of firms and in turn, creates a set of relationships as well as conflicting interests among parties such as shareholders, managers and debt/bond holders (Jensen & Meckling, 1976). This is evident in the free cash-flow problem consequent to equity financing that motivates managers to engage in appropriation and sub-optimal investments thereby, undermining firm value. In mitigation, the use of debt which binds mangers to vale-enhancing decisions however, results in agency problems of asset substitution and under-investment.

Myers (1977) notes that levered firms tend to present with the underinvestment problem attributable to the fact that positive NPV investments are passed on due to investors' perception of risk which translates to high costs of finance. Procuring debt on this basis will lead to appropriation of a significant portion of the gains by the new debt holders- ultimately, minimising or obliterating the investment gains to shareholders. Iyer, Sankaran and Walsh (2020) posit that firms as a precaution, would therefore, maintain low levels of leverage (conventional debt) to avoid bankruptcy risks and the underinvestment problem.

Lasfer and Levis (1998) posit that leases can address both agency problems generated by equity and conventional debt finance. Leases commit a firm to planned, regular payments in respect of the financial obligation thereby, minimising the prevalence of free cash-flow. In contrast to conventional debt whose use may not prevent a shift or generation of agency

problems for debt financiers, leases mitigate against asset substitution. This, given that as an asset-based form of debt whose ownership is the preserve of the lessor, the lessee is committed to its use over the period of the lease (Lobez, De Bodt & Filareto, 2001).

As for the underinvestment problem, leases mitigate against high cost of capital due to their perception as low-risk debt structures as well as the repossession advantage that lessors are availed with (Fama & French, 2002; Neuberger & Rathke-Doppner, 2012; Rampini & Viswanathan, 2013). Empirical studies such as Mehran, Taggart and Yermack (1999), Robicheaux, Fu and Ligon (2008) and Brage and Eckerstom (2009) have provided evidence for complementarities between some corporate governance mechanisms (such as managerial ownership, Board size and Board independence) and lease finance use. Managerial ownership which is a form of compensation, addresses the agency cost of equity, thereby, increasing the likelihood of a firm to engage in leasing. This is in order to guard against the agency costs of utilising other conventional forms of debt finance. Smaller-sized Boards also increase the disposition of firms to lease. More so, where these Boards are dominated by Independent Directors.

2.6.3 Pecking Order Theory

Proponents of the pecking order theory, Myers and Majluf (1984), state that firms abide by a scale of preference as regards the finance decision. This is manifest in the decision by firms to first, be funded through retained earnings, in the absence of which, debt is preferred and then, equity as a last option. The hierarchical preference is informed by the consequence of information asymmetry such that the issuance of shares by firms is perceived as a signal of over-valuation which results in their being under-priced by investors trying to avoid adverse selection. This makes equity finance to be costlier and rank lower in preference compared to debt which is noted for being less sensitive to information asymmetry (Mina & Lahr, 2018).

Similarly, internal financing would be cheaper and preferred to both debt and equity, given the absence of transaction and issue costs (Chen, Jung & Chen, 2011).

Donaldson (1961) provided earliest empirical evidence of a pecking order in firm financing. Myers (1984) further noted that the decision rule adhered to by firms, seems to be the issuance of debt when investors undervalue a firm and the issuance of equity when overvalued. Likewise, safe securities tend to be issued before risky ones. These decisions are made possible by the heterogeneous forms of debt and equity obtainable due to variety in financial markets (Mina & Lahr, 2018). Leases are noted to be a cheaper, less risky form of debt that mitigate the adverse selection and moral hazard problems associated with information asymmetry (Myers & Majluf, 1984; Ezzell & Vora, 2001).

Specifically, underinvestment attributable to high cost of capital can be avoided where firms maintain low-risk debt structures such as leases (Fama and French, 2002). Asset substitution is equally addressed by the use of leases with purchase options (Chau, Firth & Srinidhi, 2006). Guizani (2020) in corroboration, notes leases (Ijara) to be low risk with minimal contracting costs and absence of floatation costs when compared to equity. Also, in relation to conventional forms of debt, the attribute of low risk applies and is explained by the use of a fixed, pre-determined rate of return which addresses the problems of adverse selection and moral hazard. Therefore, in accordance with the pecking order theory, firms are expected to finance by retained earnings, progressing to less risky finance sources such as leases before other forms of conventional debt and lastly, equity.

2.6.4 Ownership, Location and Internalisation (OLI) Theory

The OLI theory otherwise referred to as the eclectic paradigm developed by Dunning (1979) explains the decision making process firms undertake in relation to foreign investments. According to the theory, firms assess the cost-benefits of foreign investments in comparison

to internal transactions. The theory is adopted in the context of this research as it highlights the effect that firms through foreign investments (foreign shareholding) have on the financing decision of investee firms. First, amongst the benefits associated with firms' foreign direct investment is the enhanced monitoring role and influence over the strategic decisions of the investee firms which includes finance. Therefore, there results a reduced tendency for investee firms' to contract debt in order to avoid potential bankruptcy risks and loss of control. Similarly, foreign shareholding avails investee firms with expertise, technology and capital that substitutes as a sufficient source of finance against debt (Bamiatzi, Efthyvoulou & Jabbour, 2017).

Park, Suh and Yeung (2013) provide a different context to the effect of foreign direct investments on financing decisions of firms through assessment of the multinational corporations (MNCs). Multinational corporations (MNCs) were noted to be characterised by large investments in research and development (R&D) and a substantial amount of intangible assets which motivates firm expansion through foreign direct investments as against licencing or exports. The aforementioned study explain that MNCs should present with leverage in their capital structure in order to address agency problems that arise with size and dispersion. In addition, these firms are not expected to face financing constraints given the substantial levels of intangible assets that translate to profitability and internal funding. Therefore, avoidance of debt for the purpose of future investments and possible underinvestment risk becomes unwarranted.

2.6.5 Specialisation Theory

Barnard (1948) proposed the theory of specialisation in which the term is construed to imply the way individuals develop proficiency in work that has been assigned to them in an organisation. Specialisation extends beyond division of labour across responsibilities

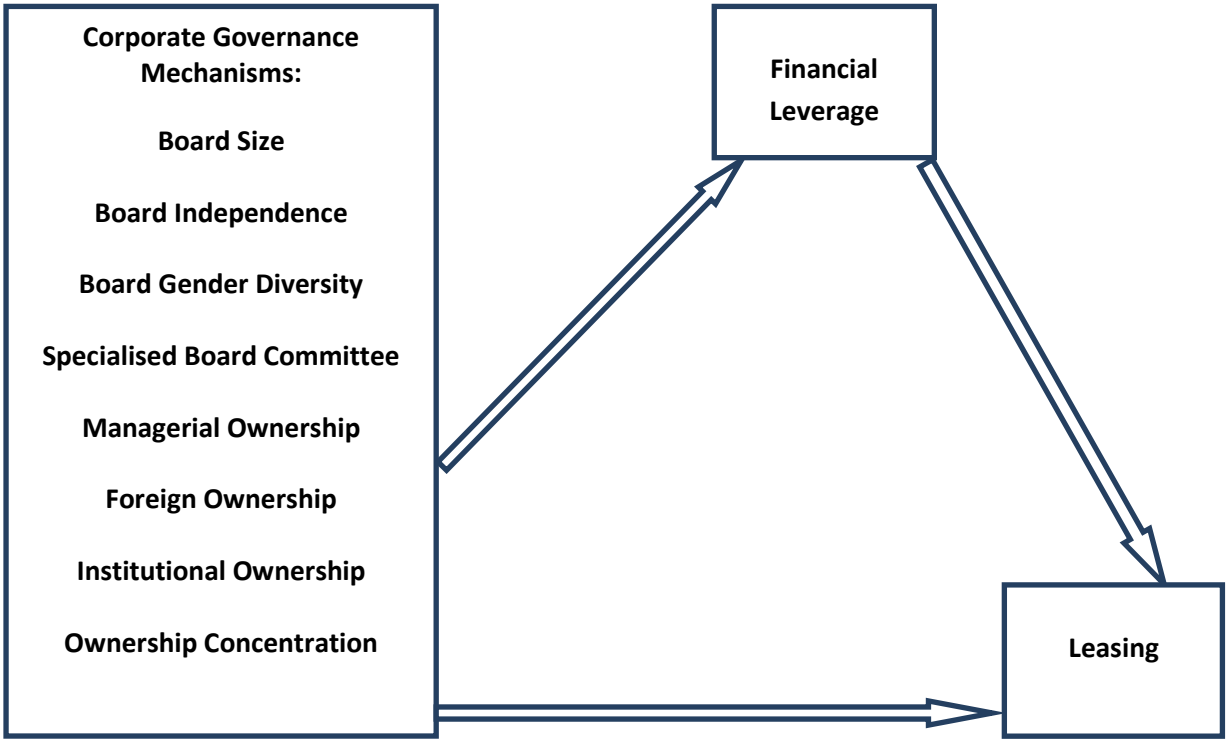
(functionalization) and is usually an outcome of units created within a complex formal organisation. Barnard (1948) identifies five bases of specialisation- place, time, association, material and process. These encompass where, when, with whom, with what and how, a task is executed. Isomura (2021) notes that proper combinations of these bases would result in innovation and organisational effectiveness.

According to the specialisation theory, a firm has an overall purpose of maximising its value to the benefit of stakeholders. To achieve this, the main purpose is broken into intermediate and detailed purposes. Where there is proper combination of the aforementioned specialisation bases particularly with regards to association, material and process, individuals are able to comprehend their specific objectives (intermediate and detailed purposes) and therefore, act in accordance with attaining the main objective of the firm.

In the context of Boards of corporate firms, specialised committees can be perceived as unit organisations created from a formal organisation (the Board). The members of these committees are usually individuals who by formal and informal association, expertise, resources and experience are specialised in their assigned responsibilities. The committees therefore, would be effective in realising their intermediate or detailed purposes. By extension, these committees would contribute to the effectiveness of the main Board in its role of oversight as regards the affairs of firms. The presence of a Board risk committee should translate to the optimal finance outcome of financing by leases in firms.

Figure 2.1 Conceptual Framework

In light of the theories discussed, the framework of the study is presented in Figure 2.1.



Source: Researcher's Construction, 2023

Figure 2.1 presents the nature of the theoretical relationship between corporate governance mechanisms and leasing. The figure also shows the mediating role of financial leverage in the relationship.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This Chapter presents the methodology adopted by the study. It covers the research methods and processes employed in the course of attaining the defined objectives. The research design, population and sample, sources and methods of data collection, variable measurement and model specification, technique of data analysis as well as the robustness tests are discussed under sub-sections.

3.2 Research Design

Correlation research design was used in achieving the research objectives. Anderson and Arsenault (1998) note the application of correlation research design in assessment of the magnitude and significance of association between a number of variables- predictor and outcome. The optimality of correlation research design is justified based on the fact that it allows for determination of a statistical association between variables which could correspondingly, be causal (Jhangiani, Cuttler & Leighton, 2019). The design is characterised by sufficiency, external validity (generalizability of findings) and significance in contribution of evidence to theories (Jhangiani, Cuttler & Leighton, 2019).

3.2.1 Research Paradigm

The research paradigm for the study is positivism. A paradigm is defined by its philosophies in relation to ontology (nature of reality), epistemology (nature of knowledge) and methodology (means of knowledge generation). In the context of positivism, the nature of reality is regarded as tangible, examinable, external to, and independent of beliefs or biases of the researcher. Dammak (2015) succinctly describes this positivist ontology as 'realist-foundationalist'. In terms of epistemology, knowledge is said to be objective given the dualism assumption that the research remains independent of the researcher (Park, Konge &

Artino, 2020). Knowledge is also realisable through scientific means. Park, Konge and Artino (2020) view positivism as a hypothetico-deductive model of science that encompasses; identification of theories, expression of hypotheses, variable measurement and statistical experimentation, whose results serve as a basis for confirmation or refinement of theories. Positivist paradigm is notably associated with quantitative researches (Ryan, 2018; Park, Konge & Artino, 2020). As such, its appropriateness for this study is justified given the quantitative nature and compliance with the hypothetico-deductive model for research.

3.2.2 Methodological Approach

The methodological approach for the study is defined as quantitative. According to Antwi and Hamza (2015), research methodology under the positivist paradigm, involves measurement of variables and test of hypotheses (derived from deductive reasoning), which suggest a cause-effect relation between a set of variables. Multivariate analysis and statistical techniques are employed in quantitative researches to test hypotheses, as well as confirm theories from which predictions and generalisations can be made (Antwi & Hamza, 2015). In the context of this study, variables were measured in quantitative terms and their relation modelled in conformity with the thesis of the study which proposes a possible presence of mediation in the relationship between corporate governance mechanisms and leasing in listed non-financial firms in Nigeria. Mediation models can be considered multivariate given the use of two (2) distinct dependent variables (outcome and mediator) in addressing the subject matter of the research. Statistical techniques of linear regression and structural equation modelling were employed in the study, with results of analysis used in testing the hypotheses formulated.

3.3 Population and Sample

The population of the study comprises all listed non-financial firms on the Nigerian Stock Exchange (NSE) which amount to 106 as at 31st July, 2022. The study employed a filter

whereby firms reporting ‘right of use assets’ (leases) were selected to form a modified population for the study. The filter is justified based on the fact that the study in examining the mediating role of financial leverage on the relationship between corporate governance mechanisms and leasing, first, considered all forms of leases (operating and finance) which by IFRS 16 are to be reported on the Statement of Financial Position of firms as right-of-use assets (effective, 2019). Secondly, some of these firms were noted to have made advance payments on their lease obligations which as per financial reporting requirements are to be presented as prepayments. Therefore, these firms may not have lease finance obligations reported as liabilities on the Statement of Financial Position and may therefore, be omitted for the purpose of analysis, where firms are filtered solely based on the report of lease finance obligations. The filtration table depicting the process of filter application and arrival at a modified population is provided in Table 3.1.

Table 3.1 Application of Filter on Population of Listed Non-Financial Firms in Nigeria

S/N	Industry	No. of Firms in Industry	No. of Firms Reporting 'Right-of-Use' Assets	Firms in Adjusted Population/Sample
1.	Agriculture	5	3	Live Stock Feeds Okomu Palm Oil Presco
2.	Conglomerates	5	3	Chellarams John Holt Transcorp Nig.
3.	Construction/Real Estate	8	2	Arbico Julius Berger
4.	Consumer Goods	21	9	BUA Foods Cadbury Nig. Dangote Sugar Flour Mills Nig. NASCON PZ Cussons Unilever Vitafoam Nestle Nig.
5.	Health Care	7	5	Eko Corp Fidson Glaxosmithkline May & Baker Neimeth International
6.	ICT	9	4	Chams CWG Courteville MTN
7.	Industrial Goods	13	8	BUA Cement CAP Chemical & Allied Cutix Dangote Cement Lafarge WAPCO Meyer Notore Chemicals Premier Paints
8.	Natural Resources	4	2	Industrial & Medical Gases Thomas Wyatt
9.	Oil and Gas	10	8	Forte Oil Eterna Oil Japaul Oil MRS Oil Oando Rak Unity Seplat Petroleum Total Nig.
10.	Services	24	9	Academy Press Learn Africa NAHCO Redstar Express Caverton Offshore RT Briscoe Skyway Aviation Tourist Company Transcorp Hotels

Source: Researcher's Construction, 2023

Based on Table 3.1, the total population (number of firms in industry) is 106 while the modified population (number of firms reporting right-of-use assets) is 53 listed non-financial firms. A census of this modified population was taken as the sample of the study.

3.4 Source and Method of Data Collection

The study referred to secondary sources of data from which the required information was extracted. The study utilised the audited annual reports and accounts of the firms for the period 2012-2021. Data on corporate governance mechanisms- Board attributes and ownership structure were extracted from the annual reports of the firms whereas, data in relation to leasing were extracted from the annual accounts; specifically, the Statements of Financial Position. The use of audited annual reports and accounts is justified on the basis that these sources (in compliance with financial reporting requirements), are expected to provide comprehensive information in relation to the research variables. Furthermore, by being audited, the information therein, is assured to be accurate and reliable. Therefore, inferences from analysis of data generated can be deemed valid.

3.5 Techniques of Data Analysis

Regression was used in estimating the direct effect of corporate governance mechanisms on leasing. This technique also served as the basis for determining the mediating effect of financial leverage on the relationship between corporate governance mechanisms and leasing. In line with the aforementioned, the application of regression was at three levels (estimation of Models 1-3) underscored by the principles of mediation for explanation. According to Hair, Black, Babin & Anderson (2010), the relation between variables at the three levels of regression must be significant at p-value of 0.05.

There are many approaches to the estimation of mediating effects. The commonly utilised causal steps method (Hayes, 2009) requires significance of a direct effect of the predictor

variable on the outcome variable in Models 1 and 2 (the outcome variable being the dependent and mediating variable respectively). As for Model 3, the mediator variable must satisfy the condition of significance in relation to its effect on the dependent variable. In addition, the coefficient estimates of the predictor variables in Model 3, should significantly reduce or be equal to zero when compared with the coefficients estimated for Model 1 (Judd & Kenny, 1981 as cited in Baron & Kenny, 1986). This is in order to establish a partial or full mediating effect.

Kenny (2021) highlights several shortcomings with the causal steps approach. First, meeting all the requirements does not conclusively affirm the presence of mediation. Second, there is a general consensus among researchers in de-emphasising the importance of Model 1 estimation and instead placing emphasis on Models 2 and 3 in mediation studies. Third, variance reduction as regards the estimated coefficients, is not sufficient in confirming mediation. Instead, the significance of such reduction in variance (indirect effect) is of importance and this cannot be determined using the causal steps approach.

A number of methods in estimating such significance obtain such as the joint significance test, Sobel test, bootstrapping and Monte-Carlo (Kenny, 2021). The Monte-Carlo method recommended as the most optimal by Kenny (2021) is applied in this study in order to estimate mediating effects of financial leverage. Regressions for Models 2 and 3 were run using structural equation modelling (SEM) with the option for asymptotic distribution free (adf) estimation. This assures efficient coefficient and standard error estimates under conditions of non-normal distributions (STATA Manual, 2021). The observed information matrix (OIM) standard errors combined with adf estimation effectively address the issue of heteroscedasticity (STATA Manual, 2021).

Pertinent to note is the fact that SEM is an approach for simultaneously estimating multiple modelled relationships (Hair, Hult, Ringle & Sarstedt, 2022). According to Venturini and Mehmetoglu (2019), SEM allows for estimation of multiple models including those with only single-item variables (observed) on both sides of a model equation. Mehemtoglu (2018) notes that SEM is the recommended framework for mediation analysis given the shortcomings of independent regression estimations and comparisons. Furthermore, the SEM estimations used in the study, (adf with oim standard errors) are classified under covariance based SEM (CB-SEM). This is recommended where the objective of a study is primarily confirmatory- that is, testing hypotheses formulated based on existing theories (Hair, Hult, Ringle & Sarstedt, 2022).

The statistical package, STATA was used in analysis. SEM regressions were run based on the 'sem' command while mediation tests were run using the 'medsem' command developed by Mehmetoglu (2018). The 'medsem' command is configured to apply the Monte-Carlo approach in testing indirect effects. It is also suitable for models that have continuous variables as the outcome and mediator which is the case with this study.

For robustness of analysis, demonstration and confirmation of the positions highlighted in prior paragraphs, the causal steps and Monte-Carlo approach to mediation are presented in Chapter 4. However, tests of hypotheses with respect to mediation are made based on the Monte-Carlo results.

In addition to regression, other techniques of data analysis employed include descriptive statistics and correlation analysis. Descriptive statistics provide information as to the characteristics of the data using measures of central tendency (mean), measures of dispersion (standard deviation) and range (minimum and maximum values). These statistics are useful in understanding the state and operational dynamics of the sample firms.

The correlation analysis via a matrix, informs on the nature of relationship between the predictor and outcome variables as well as that existing between the predictor variables. This is useful in first, assessing the possible existence of multicollinearity and second, deriving preliminary indications as to existence or otherwise of significant effects in the relationship between the predictor and outcome variables.

3.6 Variables Measurement and Model Specification

Variables of the study are categorised into four; the independent variables, the mediating variable, control variables and the dependent variable. The independent variables refer to the corporate governance mechanisms which are further classified into Board structure variables and ownership structure variables. Financial leverage is the mediating variable and leasing, the dependent variable of the study. Three control variables are equally utilised in the study based on their potential to affect firms' capital structure (Rajan & Zingales, 1995). These are profitability, firm size and growth.

Profitability determines the level of earnings that firms could retain as internal financing. The sufficiency or otherwise of this, would inform firms' decision to source for external finance. Firm size could influence firms' capital structure as it is an indicator of the level of information asymmetry a firm portends. This could affect cost of financing as well as contracting feasibilities for firms. As for growth, expansion or increase in scale of operations would necessitate the sourcing for finance by firms.

Based on the reasons above, controlling for these variables would facilitate clarity of insight into the actual effect of corporate governance mechanisms on leasing as well as the mediating role of financial leverage in the relationship. Also, controlling for these variables would further account for differences in the sample firms in terms of profitability, size and growth. Measurements are presented in Table 3.2.

Table 3.2: Summary of Variables and Measurement

Variable		Measurement	Sources
Dependent:			
i.	Leasing	Ratio of lease liabilities to total assets.	Modified construct of measures used in Lasfer and Levis (1998), Deloof and Verschueren (1999), Mehran, Taggart and Yermack (1999), Filareto-Deghaye and Severin (2007), Mnzava (2008), Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018)**.**
Independent:			
i.	Board Size	Number of members on the Board.	Robicheaux, Fu and Ligon (2008), Rehman, Rehman and Raoof (2010), Ahmadpour, Samimi and Golmohammadi (2012), Purag, Abdullah and Bujang (2016), Detthamrong, Chancharat and Vithessonthi (2017), El-Habashy (2018), Kieschnick and Moussawi (2018), Khawaja, Bhatti and Ashraf (2018).
ii.	Board Independence	Number of non-executive Directors including independent Directors on the Board scaled by total number of members on the Board.	Rehman, Rehman and Raoof (2010), Purag, Abdullah and Bujang (2016), Modified construct of Siromi and Chandrapala (2017), El-Habashy (2018).
iii.	Board Gender Diversity	Number of female Directors on the Board scaled by total number of members on the Board.	Detthamrong, Chancharat and Vithessonthi (2017), Modified construct of Adusei and Obeng (2018), Khawaja, Bhatti and Ashraf (2018).
iv.	Specialised Board Committees	Dummy variable- 1 for presence of risk committee, 0, otherwise.	Innovation of the Study.
v.	Managerial Ownership	Percentage of shares held by executive and non-executive Directors out of total outstanding ordinary shares of a firm.	Sun, Guo and Li (2015), Siromi and Chandrapala (2017).
vi.	Foreign Ownership	Percentage of total outstanding ordinary shares held by foreign investors.	Kumar (2015), Do, Lai and Tran (2019), Gupta, Yadav and Jain (2020).
vii.	Institutional Ownership	Dummy variable- 1 for presence of institutional investors, 0, otherwise.	Innovation of Study
viii.	Ownership Concentration	Percentage of total outstanding ordinary shares held by the majority shareholder in a firm.	Landry, Fortin and Callimaci (2013), Modified construct of measures used in San Martin and Hoffman (2017), El-Habashy (2018), Khawaja, Bhatti and Ashraf (2018).
Mediator:			
i.	Financial Leverage	Value of Non-current debt (excluding lease liabilities) scaled by total assets.	Adams and Hardwick (1998), Yan (2006), Deloof, Istvan and Verschueren (2007), Lin, Wang, Chou and Chueh (2013), Li (2014), Mendes (2015), Bialek-Jaworska.and Nehrebecka (2016), Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018)**.**
Controls:			
Profitability		Ratio of Earnings before interest, taxes depreciation and amortisation (EBITDA) to Turnover.	Ang and Peterson (1984), Deloof and Verschueren (1999), Robicheaux, Fu and Ligon (2008), Arping and Sautner (2010).
Firm Size		Logarithm of Total Assets.	Arping and Sautner (2010), Cespedes, Gonzalez and Molina (2010), Malik, Saeed, Ahmed and Javed (2012), Mendes (2015), Bialek-Jaworska and Nehrebecka (2016).
Growth		Percentage change in Turnover from period t-1 to t.	Ang and Peterson (1984), Erickson and Trevino (1994), Lasfer and Levis (1998), Brage and Eckerstom (2009), Bialek-Jaworska & Nehrebecka (2016).

Source: Researcher's Construction, 2023

Model Specification

Based on the sub-classification of corporate governance mechanisms into Board structure and ownership structure, a number of models were developed for assessment of their respective effects on leasing as well as the possible mediating effect of financial leverage. In accordance with the causal steps approach proposed by Baron and Kenny (1986), three (3) models denoted '1', '2' and '3' were constructed for analysis by regression. These models also serve as the basis for mediation analysis in line with the Monte-Carlo approach via structural equation modelling (SEM). A fourth model-'4' is included to assess the direct effect of financial leverage on leasing given the hypothesis formulated.

The models '1'-'4' are presented as follows;

1. $LEASES_{it} = \beta_{0it} + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 SPBC_{it} + \beta_5 MGROWN_{it} + \beta_6 FORGNOWN_{it} + \beta_7 INSTOWN_{it} + \beta_8 OWNCONC_{it} + \beta_9 PROF_{it} + \beta_{10} FIRM_SIZE_{it} + \beta_{11} GROWTH_OPP_{it} + \varepsilon_{it}$

2. $FINLEV_{it} = \beta_{0it} + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 SPBC_{it} + \beta_5 MGROWN_{it} + \beta_6 FORGNOWN_{it} + \beta_7 INSTOWN_{it} + \beta_8 OWNCONC_{it} + \beta_9 PROF_{it} + \beta_{10} FIRM_SIZE_{it} + \beta_{11} GROWTH_OPP_{it} + \varepsilon_{it}$

3. $LEASES_{it} = \beta_{0it} + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 SPBC_{it} + \beta_5 MGROWN_{it} + \beta_6 FORGNOWN_{it} + \beta_7 INSTOWN_{it} + \beta_8 OWNCONC_{it} + \beta_9 FINLEV_{it} + \beta_{10} PROF_{it} + \beta_{11} FIRM_SIZE_{it} + \beta_{12} GROWTH_OPP_{it} + \varepsilon_{it}$

4. $LEASES_{it} = \beta_{0it} + \beta_1 FINLEV_{it} + \beta_2 PROF_{it} + \beta_3 FIRM_SIZE_{it} + \beta_4 GROWTH_OPP_{it} + \varepsilon_{it}$

Where;

LEASES = Leasing

BSIZE = Board Size

BIND = Board Independence

BGD = Board Gender Diversity

SPBC = Presence of a Specialised Board Committee (Risk Management)

FINLEV = Financial Leverage

MGROWN = Managerial Ownership

FORGNOWN = Foreign Ownership

INSTOWN = Institutional Ownership

OWNCONC = Ownership Concentration

PROF = Profitability

FIRM_SIZE = Firm Size

GROWTH_OPP = Growth

it = Subscript 'i' denoting firm and 't' denoting time

β_0 **=** Constant term

$\beta_1 - \beta_{12}$**=** Coefficients for estimation

ε_{it}**=** Residual or Error term

Model 1 examines the direct effect of corporate governance mechanisms on leasing in listed non-financial firms in Nigeria.

Model 2 is used to estimate the effect of corporate governance mechanisms on the mediator (financial leverage) for the sample firms.

Model 3 estimates the effect of corporate governance mechanisms on leasing with the mediator variable (financial leverage) introduced in the equation.

Model 4 estimates the effect of the mediator variable (financial leverage) on the outcome variable (leasing).

Precisely, estimates of Model 1 were used in the test of hypotheses 1-8 formulated. Estimates of Model 4 were used in the test of hypothesis 9 whereas the estimates of Models 1-3 were collectively utilised in ascertaining indirect effects for the test of hypotheses 10-17.

3.7 Robustness Tests

The research incorporated a number of robustness tests in order to provide assurance as to the validity of results and inferences. These include tests for normality, multicollinearity, heteroscedasticity and Hausman specification. The Shapiro-Wilk test for normality was run in order to check that the dataset (especially as regards the dependent variable) is devoid of outliers which could lead to biased estimations of the model coefficients. Pertinent to note is the fact that irrespective of the outcome, regression as a technique is adjudged robust to violations of normality assumptions for a large number of observations (Schmidt & Finan, 2018).

In addition, the presence of multicollinearity was assessed through computation of the Variance Inflation Factor (VIF) and Tolerance Values. Multicollinearity occurs where the independent variables mutually predict each other thereby, obscuring the actual relationship that obtains between the predictor and outcome variables. As noted by Chatterjee and Price (1991), VIF values less than 10 and Tolerance values greater than 0.1 would suggest a tolerable level of multicollinearity as well as affirm validity of inferences from analysis of data.

Considering that a panel dataset of observations for heterogeneous firms was utilised, heteroscedasticity test was conducted to confirm absence of constant variation in the error term. This necessitated the run of fixed and random effects regression as well as selection based on the results of the Hausman specification test. Where the fixed effects regression was

supported, the modified Wald test for group-wise heteroscedasticity was further run- the outcome of which required report of panel corrected standard errors.

For the regressions run using SEM, the root mean squared error of approximation (RMSEA), standardised root mean squared residual (SRMR), comparative fit index (CFI) and Tucker-Lewis index (TLI) were estimated. These are goodness of fit statistics in relation to the models (Fan, Chen, Shirkey, John, Wu, Park & Shao, 2016). RMSEA is a badness-of-fit statistic that should be less than 0.06 with 0, indicating a perfect fit (Hu & Bentler, 1999). SRMR similarly a badness-of-fit indicator, requires its value to be less than 0.09. The CFI ranges between 0 and 1 with higher values from 0, indicating a good fit. According to Hu and Bentler (1999), the CFI should ideally be 0.95 or greater. For TLI, values greater than 0.90 are acceptable (Hu & Bentler, 1999). These statistics are reported because they are less sensitive to sample size and therefore, more reliable than other measures particularly, the likelihood ratio (LR) test.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The Chapter presents and discusses the results of data analysed in respect of the study objective. Descriptive statistics, correlation matrix and regression results are provided and analysed. In subsequent sections, the hypotheses formulated for the study (in terms of direct and mediating effects) are tested. The Chapter concludes with the implications for policy based on the findings of the study.

4.2 Descriptive Statistics

Table 4.1 presents the characteristics of the dataset used in the study in terms of; mean, standard deviation, minimum and maximum values. The mean defines the average of values in the distribution per variable while the standard deviation provides information as to the extent of dispersion of values from the mean. The minimum and maximum values represent the highest and lowest observations respectively for each variable. In addition to the descriptive statistics, results of the Shapiro-Wilk test are presented which give insight into the normality of the data distribution used for the study.

Table 4.1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
LEASES	285	0.0151	0.0554	0	0.4444
BSIZE	285	8.6000	2.3168	4	15
BIND	285	0.7526	0.1141	0.375	1
BGD	285	0.1753	0.1450	0	0.6667
SPBC	285	0.6737	0.4697	0	1
MGROWN	285	27.3510	31.1240	0	98.24
FORGNOWN	285	21.3863	29.7087	0	83.81
INSTOWN	285	0.4982	0.5009	0	1
OWNCONC	285	47.7929	22.4977	5.63	89.85
FINLEV	285	0.1794	0.2235	0	1.8942
PROF_CONTROL	285	0.1296	0.3510	-4.4331	1.0131
TOTALASSETS	285	1.51e+08	3.43e+08	219871	2.39e+09
FIRM_SIZE_CONTROL	285	7.4276	0.8650	5.3422	9.3788
GROWTH_OPP_CONTROL	285	9.7633	32.7467	-74.3907	182.2137

Source: STATA Output, 2023

From Table 4.1, the total number of observations for the study amount to 285 for each of the predictor and outcome variables. In relation to the outcome variable, 'LEASES', the minimum and maximum values are 0 and 0.4444 respectively. This implies that there are firms within the sample which recorded no lease finance for some periods whereas there are also firms for which financing by leases accounted for up to 44.44% of total assets. On average, firms' use of leases amounted to 0.0151 (1.5%) of total assets as revealed by the mean. This corroborates inference of low utilisation of leases by listed non-financial firms in Nigeria. The maximum value of 0.4444 may be explained by one or few firms that are significantly financed by leases. Considering the standard deviation value of 0.0554, this indicates low dispersion of data when compared to mean value.

The variable, Board size (BSIZE) has a minimum and maximum value of 4 and 15 which indicates that for the study period, the least number of members on the Board amounted to 4 while some firms had as many as 15 members on the Board. The minimum number shows that there are firms that contravened, for some periods, the requirements of CCG (2011) which states that Boards should have a minimum of 5 members (as seen with Eterna Oil Plc in 2015. and Thomas Wyatt Plc. in 2019). However, firms have been given the prerogative in determining the number of Board members according to the NCCG (2018) provided they are sufficient to serve in sub-committees. The mean value of 8.6 suggests that on average, Boards of listed non-financial firms in Nigeria have approximately 9 members. The standard deviation of 2.3168 which is lower than the mean of 8.6 could be interpreted as evidence of low dispersion of the data.

Board independence (BIND) which is measured as proportion of non-executive directors including independent Directors on the Board, has a minimum and maximum value of 0.375 and 1 respectively. This suggests that some firms have as low as 37.5% of Board members

that are non-executive Directors while there are firms with Boards where in some periods, all members were defined as non-executive Directors (as seen with Dangote Sugar Refinery Plc. in 2019). Mean value of 0.7526 suggests that on average, 75.26% of Board members are non-executive. This is in consonance with the requirements of the CCG (2011) which states that Boards should be constituted with non-executive Directors in the majority. The firms were also found to have non-executive Directors that are independent. In terms of standard deviation, the value of 0.1141 when compared to the mean implies low dispersion.

The variable, presence of specialised Board committee (SPBC) has a minimum and maximum value of 0 and 1. This implies that there are firms with no presence of a risk committee and others with one. Given that the variable has been measured in terms of a specific committee (risk) committee, it is possible that the firms recording no observation instead, have other specialised committees such as the Governance, Audit and Remuneration committees. It is also not uncommon to find one of these committees (such as the Audit) perform to some extent, functions expected of a risk committee. The standard deviation of 0.4697 against the mean of 0.6737, indicates low dispersion of the data distribution.

Considering Board gender diversity (BGD), the minimum and maximum values of 0 and 0.6667 reveal that there are firms with no females on the Board, and others with as much as 66.67% of Board members that are women. Inference can therefore be made of some firms contravening the stipulations of CCG (2011) as regards Board gender consideration. In contrast, there are firms surpassing the recommendation of the NCCG (2018) on gender balance of Board members (as seen with CAP Plc.). The mean value of 0.1753 implies that on average, firms in the sample have 17.53% of Board members that are female. This can be adjudged low when compared to legally mandated quotas of countries such as Norway (40%), Sweden (25%), Spain (25%), Germany (30%) and France (50%) (Srinidhi, Sun,

Zhang & Chen (2020). As with prior analysed variables, low data dispersion can be inferred given the standard deviation of 0.1450 when compared to the mean of 0.1753.

Examining the variable, managerial ownership (MGROWN), the minimum and maximum values are 0% and 98.24% respectively. The variable measured takes into account the direct and indirect shareholdings of Directors- thus, explaining the high maximum percentage recorded in the observations. On average, managerial ownership in the sample firms is 27.35%. The standard deviation of 31.1240 is greater than the mean (27.3510) which indicates a great dispersion of data from the average. As for the variable, foreign ownership (FORGNOWN), the minimum and maximum values are 0% and 83.81% respectively. High levels of foreign ownership were found to occur in firms classified under the industrial and consumer goods industries in Nigeria such as Cadbury Nigeria Plc. and Lafarge Africa Plc.). The average level of foreign ownership in the sample firms is indicated by the mean of 21.39%. The standard deviation of 29.7087, greater than the mean further reveals a high dispersion in the data.

The maximum value for majority shareholding represented as ownership concentration (OWNCONC) is 89.85% (as seen with BUA Foods Plc. in 2021) while the minimum value observed in the sample is 5.63%. The average (mean) is 47.79% whereas the standard deviation at 22.4977 is suggestive of low data dispersion. The variable, institutional ownership (INSTOWN) measured as a dummy, has minimum and maximum values of 0 and 1 respectively. Comparing the mean and standard deviations of 0.4982 and 0.5009, inference can be made of a significant dispersion of data.

Analysis of the variable, financial leverage (FINLEV) reveals a minimum and maximum value of 0 and 1.8942 respectively. Pertinent to note is the fact that the measure for financial leverage used in this study is based on non-current debt excluding lease liabilities in relation

to total assets. Therefore, there are firms in the sample which were found to have no presence of non-current debt in their financing structure for some periods (Live Stock Feeds Plc. in 2018). In contrast, some firms were found to have non-current debt in excess of total assets. This case was also noted to be evident in periods where such firms recorded negative book values of equity (Japaul Oil and Maritime Services Plc. in 2017 and Tourist Company of Nigeria for the year, 2016). On average, financial leverage has a mean of 0.1794 and a standard deviation of 0.2235. Inference can be made of a high dispersion of data given that the standard deviation is greater than the mean.

As for the control variables in the study- profitability, firm size and growth, profitability (PROF_CONTROL) has a minimum value of -4.4330 and a maximum value of 1.0131. This indicates that there are both loss incurring and highly profitable firms in the sample. On average, profitability is 0.1296 as indicated by the mean which when compared to the standard deviation of 0.3510, is indicative of a high dispersion of data.

In relation to firm size (FIRM_SIZE_CONTROL), measured by logarithm of total assets, the minimum and maximum values are approximately 5.34 and 9.38 accordingly. However, in terms of the actual values for total assets (TOTALASSETS), the minimum and maximum ranges between ₦219.871 million and ₦2.39 trillion suggestive of a sample comprising small and large-sized firms. On average, total assets amount to ₦151 billion given by the mean which when compared to the standard deviation of 343 billion indicates high dispersion in the data.

Growth (GROWTHOPP_CONTROL) measured as percentage change in revenue, had the highest observation (maximum) of 182.21% and lowest (minimum) of -74.39%. The mean of 9.7632 reveals that firms had an average growth rate of 9.76% for the study period. This is

significantly lower than the standard deviation of 32.7467 suggesting a great level of dispersion in the data extracted for the variable.

In addition to descriptive statistics, results for the Shapiro-Wilk test for data normality is presented in Table 4.2.

Table 4.2: Shapiro-Wilk Normality Test

Variable	Obs	W	V	Z	Prob>z
LEASES	285	0.4105	120.010	11.210	0.0000
BSIZE	285	0.9748	5.133	3.830	0.0001
BIND	285	0.9804	3.984	3.237	0.0006
BGD	285	0.9703	6.046	4.213	0.0000
SPBC	285	0.9960	0.812	-0.488	0.6872
MGROWN	285	0.8095	38.780	8.565	0.0000
FORGNOWN	285	0.8272	35.174	8.337	0.0000
INSTOWN	285	0.9997	0.065	-6.415	1.0000
OWNCONC	285	0.9405	12.109	5.840	0.0000
FINLEV	285	0.6908	62.949	9.699	0.0000
PROF_CONTROL	285	0.5520	91.206	10.568	0.0000
TOTALASSETS	285	0.4717	107.548	10.954	0.0000
FIRM_SIZE_CONTROL	285	0.9867	2.701	2.326	0.0100
GROWTH_OPP_CONTROL	285	0.9374	12.751	5.961	0.0000

Source: STATA Output, 2023

Table 4.2 reveals that for all variables excluding SPBC (presence of specialised Board committee) and INSTOWN (institutional ownership), the p- values (Prob > z) are significant at 1%. This indicates that the variables exhibit non-normal distributions. However, as noted by Schmidt and Finan (2018), linear regression is robust to violations of normality in the case of a large number of observations. Similarly, for asymptotic distribution free (adf) estimations as obtains with structural equation modelling (SEM), estimates generated are efficient for both coefficients and standard errors under conditions of non-normality (STATA Manual, 2021).

The normality of the variables, SPBC (presence of specialised Board committee) and INSTOWN (institutional ownership) can be attributed to the use of dummy variables (0 and 1) in their measure.

4.3 Correlation Matrix

The strength of the relationship between the independent variables are assessed in order to ascertain the likelihood of multicollinearity. Table 4.3 presents the correlation matrix with information as to the coefficients and their significance (established against a level of 5%).

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Table 4.3 reveals that none of the coefficients are greater than 0.80 as required by Gujarati (2003), which suggest an absence of multicollinearity. This is further confirmed by the results of the multicollinearuty test in terms of Variance Inflation Factor (VIF) and Tolerance Values (TV) presented in Table 4.4.

Table 4.4: Multicollinearity Test

Variable	VIF	TV
Firm_size_Control	2.01	0.4976
Bsize	1.86	0.5372
Forgnown	1.82	0.5491
Ownconc	1.53	0.6556
Prof_Control	1.33	0.7522
Finlev	1.28	0.7820
Mgrown	1.26	0.7916
Instown	1.21	0.8247
Bgd	1.16	0.8620
Growth_Opp_Control	1.14	0.8759
Bind	1.10	0.9117
Spbc	1.09	0.9176
Mean VIF	1.40	

Source: STATA Output, 2023

From Table 4.4, the VIFs and TVs are noted to be less than 10 and greater than 0.1 respectively. According to Chatterjee and Price (1991), this is indicative of the absence of multicollinearity which further assures, as to the reliability of results generated for analysis and inferences. In Table 4.5, an excerpt of the correlation matrix results generated through SEM are presented for the variable, Board size (BSIZE).

Table 4.5: SEM Correlation Table (Excerpt)

	Stand. Coeff	OIM Std. Err.	Z	P>z
Cov (bsize, bind)	0.1119	0.0584	1.91	0.056
Cov (bsize, bgd)	**-0.1954	0.0570	-3.43	0.001
Cov (bsize, spbc)	-0.0104	0.0592	-0.17	0.861
Cov (bsize, mgrown)	0.0159	0.0592	0.27	0.788
Cov (bsize, forgnown)	**0.2884	0.0543	5.31	0.000
Cov (bsize, instown)	0.0237	0.0592	0.40	0.689
Cov (bsize, ownconc)	0.0993	0.0587	1.69	0.091
Cov (bsize, finlev)	*0.1477	0.0579	2.55	0.011
Cov (bsize, prof)	**0.2990	0.0539	5.54	0.000
Cov (bsize, firm_size)	**0.5950	0.0383	15.55	0.000
Cov (bsize, growth)	*0.1282	0.0583	2.20	0.028

Source: STATA Output, 2023

Comparing the results in Table 4.5 with that in Table 4.3, the coefficients, significance and significance level for all predictor correlations with Board size (BSIZE) are found to be the same. This also applies to the results of correlation between other predictor variables (attached as appendix).

4.4 Regression Results

In this Section, regression results including that generated using the SEM technique are presented. These serve as the basis for analyses, comparisons and inferences particularly in cognisance of the diverse positions held in the literature as to assessment of mediating effects in hypothesised relationships.

4.4.1 Linear Regression Results

Four regressions were generated to estimate the relationship between corporate governance mechanisms and leasing (Model 1), corporate governance mechanisms and financial leverage (Model 2), corporate governance mechanisms and leasing, controlling for financial leverage (Model 3) as well as financial leverage and leasing (Model 4). The results are presented as follows;

4.4.1.1 Model 1 Regression Results (Corporate Governance Mechanisms and Leasing)

A series of steps to guarantee robustness of the regression results were followed. Linear regression was first run and checked for heteroscedasticity using the Breusch-Pagan/Cook-Weisberg test. This was confirmed given a chi2 (1) value of 272.26 with a prob>chi2 of 0.0000 significant at 1%. Taking into consideration the nature of the data being panel, fixed and random effects regression were run and compared through the Hausman specification test. With a chi2 (11) value of 71.47 and prob>chi2 of 0.0000 (significant at 1%), the fixed effects regression output was adjudged appropriate. This was further subjected to the modified Wald test for group-wise heteroscedasticity which returned significant at 1% with value of chi2 (53), 5.4e+35 and prob>chi2, 0.0000. Therefore, fixed effects regression results with panel corrected standard errors are reported (results attached as appendix).

Table 4.6 Model 1 Regression Results

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	0.0226	0.0441	0.51	0.608
BSIZE	0.0040	0.0014	2.86	0.004
BIND	0.0771	0.0296	2.60	0.009
BGD	0.0491	0.0209	2.35	0.019
SPBC	-0.0232	0.0090	-2.58	0.010
MGROWN	-0.0001	0.0001	-2.16	0.031
FORGNOWN	0.0001	0.0001	1.23	0.219
INSTOWN	-0.0093	0.0080	-1.16	0.246
OWNCONC	-0.0000	0.0001	-0.40	0.689
PROF_CONTROL	-0.0368	0.0115	-3.20	0.001
FIRM_SIZE_CONTROL	-0.0109	0.0056	-1.94	0.052
GROWTH_OPP_CONTROL	0.0000	0.0001	0.25	0.806

R-squared = 0.1740
Wald chi2 (11) = 31.58
Prob>2 = 0.0000

Source: STATA Output, 2023

From Table 4.6, Wald chi2 (11) at 31.58 and prob>chi2 of 0.0009 (significant at 1%) confirms fitness of the model for use in analysis. The R-squared value of 0.1740 implies that 17.4% of variation in the outcome variable (Leases) is explained by the collective of

predictor (independent) variables in the model. Further examination of Table 4.6 reveals the following variables to be significant- Board size (BSIZE), at 1%, Board independence (BIND) at 1%, Board gender diversity (BGD) at 5%, Presence of specialised Board committee (SPBC) at 5% and managerial ownership (MGROWN) at 5%. These meet the first requirement that the relation between predictor and outcome variables be significant at 5% according to Hair, Black, Babin and Anderson (2010). Note that the requirement does not imply significance of the predictor variables collectively but individually. The control variable, profitability (PROF_CONTROL) is also seen to be significant at 1%. These results, as presented in Table 4.6, are used in the test of hypotheses 1-8 which have been formulated to establish direct effects of corporate governance mechanisms on leasing. The implications of the direction as well as significance of each predictor variable effect, are discussed under section 4.4.1.5 (test of hypotheses).

4.4.1.2 Model 2 Regression Results (Corporate Governance Mechanisms and Financial Leverage)

As with Model 1, fixed and random effects regressions were run given the panel nature of the data and confirmation of heteroscedasticity by the Breusch-Pagan/Cook-Weisberg test (chi2 (1) value, 45.00; prob>chi2, 0.0000, significant at 1%). The Hausman specification test returned a chi2 (11) value of 433.11 and prob>chi2 of 0.0000 which being significant at 1%, suggests the optimality of the fixed effects regression result. Modified Wald test for group-wise heteroscedasticity significant at 1% with chi2 (53), 98002.68 and prob>chi2 of 0.0000 necessitated the generation of fixed effects result with panel corrected standard errors. This is reported in Table 4.7 (results attached as appendix).

Table 4.7 Model 2 Regression Result

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	-0.2576	0.1357	-1.90	0.058
BSIZE	0.0085	0.0071	1.21	0.226
BIND	0.1665	0.1188	1.40	0.161
BGD	-0.3957	0.0992	-3.99	0.000
SPBC	0.0219	0.0247	0.89	0.374
MGROWN	-0.0005	0.0004	-1.14	0.253
FORGNOWN	-0.0010	0.0005	-2.00	0.045
INSTOWN	-0.0689	0.0244	-2.82	0.005
OWNCONC	-0.0001	0.0005	-0.29	0.774
PROF_CONTROL	-0.1710	0.0494	-3.46	0.001
FIRM_SIZE_CONTROL	0.0524	0.0189	2.77	0.006
GROWTH_OPP_CONTROL	0.0002	0.0006	0.42	0.678

R-squared = 0.2180
Wald chi2 (11) = 55.28
Prob>2 = 0.0000

Source: STATA Output, 2023

Information from Table 4.7 confirms fitness of the model given Wald chi2 (11) at 55.28 and prob>chi2 of 0.0000 (significant at 1%) R-squared value of 0.2180 suggests that the predictor variables account for 21.80% of variation in the outcome variable (financial leverage). In contrast to leases, corporate governance mechanisms found to have a significant effect on financial leverage are Board gender diversity (BGD) at 1%, foreign ownership (FORGNOWN) at 5% and institutional ownership (INSTOWN) at 1%. These variables similarly meet the requirement of Hair, Black, Babin and Anderson (2010) for a significant relation between predictor and outcome variables at 5%.

Comparing the results to that presented in Table 4.6, Board gender diversity (BGD) can be seen to be consistently significant in terms of its effect on the dependent variable which in this context, is financial leverage. Despite the non-significance of the other corporate governance mechanisms, the Wald chi2 results however, suggest that as a whole, all the predictor variables jointly and significantly have an effect on the outcome variable. Table 4.7 also reveals the control variables, profitability (PROF_CONTROL) and firm size

(FIRM_SIZE_CONTROL) to have a significant effect on financial leverage at 1% respectively.

In further assessment of the predictor variables' effect on the mediator, Board gender diversity (BGD) with a coefficient of -0.3957 and p-value of 0.0000 has a significant negative effect on financial leverage. This implies that less female representation on the Board increases the likelihood of firms' financing with debt as well as the attendant agency costs of debt that would arise. Women on Boards of listed non-financial firms in Nigeria compared to their male counterparts, can thus be inferred to be risk averse such that their presence would result in lower financial leverage in firms. This finding corroborates that established by Adusei and Obeng (2018).

As for foreign ownership (FORGNOWN), coefficient of -0.0010 and p-value of 0.045 indicates a significant negative effect on financial leverage. Foreign investors in a firm through the act of effective monitoring, guard against bankruptcy risk and the potential loss of control associated with financing by debt. This implies that low foreign ownership in firms increases the likelihood of financial leverage and agency costs of debt. The finding is affirmed by that of the following studies; Kumar (2015), Bamiatzi, Efthyvoulou and Jabbour (2017), Do, Lai and Tran (2019) and Gupta, Yadav and Jain (2020).

Examining the variable, institutional ownership (INSTOWN), a significant negative effect on financial leverage is confirmed by the coefficient, -0.0689 and p-value, 0.005. As with foreign ownership, institutional investors serve as effective monitoring mechanisms that substitute for debt in firms. Therefore, the higher the percentage of institutional shareholding, the lower the likelihood of financial leverage in listed non-financial firms in Nigeria. This finding is corroborated by the studies- Al-Najjar (2011), Ahmadpour, Samimi and Golmohammadi (2012), Chung and Wang (2014), Kumar (2015) and El-Habashy (2018).

The control variable, profitability (PROF_CONTROL) has a significant negative effect on financial leverage (coefficient, -0.1710; p-value, 0.001). Profitable firms are opportune to finance with retained earnings which is notably preferable to debt as per propositions of the pecking order theory. For firm size (FIRM_SIZE_CONTROL), coefficient, 0.0524 and p-value, 0.006 provide inference that larger-sized firms are availed with contracting feasibilities due to lower information asymmetries that obtain. This would reduce perception of risk as well as cost of finance thus, encouraging use of debt by firms.

4.4.1.3 Model 3 Regression Results (Corporate Governance Mechanisms, Financial Leverage and Leasing)

In line with sections 4.4.1.1 and 4.4.1.2, the same procedures were followed in order to assure the robustness of results used in analysis. The Breusch-Pagan/Cook-Weisberg test (chi2 (1) value, 412.19; prob>chi2, 0.0000, significant at 1%) similarly indicates presence of heteroscedasticity with run of the model data. Based on the Hausman specification test results- chi2 (12) value of 41.66 and prob>chi2 of 0.0000 significant at 1%, the fixed effects regression result was selected and subjected to the Modified Wald test for group-wise heteroscedasticity. Chi2 (53), value of 3.4e+07 and prob>chi2 value of 0.0000 required run of fixed effects regression with panel corrected standard errors. This is reported in Table 4.8, with results attached as appendix.

Table 4.8 Model 3 Regression Results

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	0.0371	0.0446	0.83	0.405
BSIZE	0.0035	0.0015	2.37	0.018
BIND	0.0677	0.0294	2.30	0.021
BGD	0.0714	0.0246	2.90	0.004
SPBC	-0.0244	0.0087	-2.79	0.005
MGROWN	-0.0001	0.0001	-1.76	0.078
FORGNOWN	0.0002	0.0001	1.72	0.085
INSTOWN	-0.0054	0.0083	-0.65	0.514
OWNCONC	-0.0000	0.0001	-0.33	0.743
FINLEV	0.0563	0.0227	2.48	0.013
PROF_CONTROL	-0.0272	0.0101	-2.69	0.007
FIRM_SIZE_CONTROL	-0.0138	0.0058	-2.40	0.016
GROWTH_OPP_CONTROL	0.0000	0.0001	0.14	0.887

R-squared = 0.2144
Wald chi2 (12) = 42.37
Prob>2 = 0.0000

Source: STATA Output, 2023

From Table 4.8, Wald chi2 (12) at 42.37 and prob>chi2 of 0.0000 (significant at 1%) implies fitness of the model. The R-squared value of 0.2144 indicates that the collective of predictor variables account for 21.44% of variation in the outcome variable (Leases). This represents an increase from 17.40% in Model 1 results, on account of the inclusion of financial leverage to the model. Pertinent to note is the fact that financial leverage, for the purpose of mediation analysis is controlled for within the context of Model 3.

The following predictor variables were established to have a significant effect on leasing- Board size (BSIZE) at 5%, Board independence (BIND) at 5%, Board gender diversity (BGD) at 1%, presence of specialised Board committee (SPBC) at 1%, financial leverage (FINLEV) at 5%, and the control variables, profitability (PROF_CONTROL) at 1% and firm size (FIRM_SIZE_CONTROL) at 5%. These variables equally fulfil the requirement of Hair, Black, Babin and Anderson (2010) for significance at the 5% level.

Comparing the results presented in Table 4.8 to Tables 4.6 and 4.7, Board gender diversity (BGD) is consistently significant in Models 1-3. While foreign ownership (FORGNOWN) and institutional ownership (INSTOWN) are only significant in Model 2 (Table 4.7), Board size, Board independence, Board gender diversity and presence of specialised Board committee are found to be significant in both Model 1 (Table 4.6) and Model 3 (Table 4.7). This is to the exclusion of managerial ownership which is found to be only significant in Model 1 (Table 4.6).

4.4.1.4 Model 4 Regression Results (Financial Leverage and Leasing)

The result reported in Table 4.9 is the random effects-generalised least squares (GLS) regression output. Heteroscedasticity was found present in the initial OLS regression given a chi2 (1) value of 124.56 and a significant prob>chi2 of 0.0000 from conduct of the Breusch-Pagan/Cook-Weisberg test. Subsequent to the run of fixed and random effects regression, the Hausman specification test result, with chi2 (4) value of 1.48 and non-significant prob>chi2 value of 0.8310 confirmed the appropriateness of the random effects output. This was further subjected to the Lagrangian Multiplier (LM) test comparing the random effects with the initial OLS result. This returned significant at 1% with chibar2 (01) and prob>chibar2 values of 317.29 and 0.0000 respectively in favour of GLS (results attached as appendix).

Table 4.9 Model 4 Regression Results

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	-0.0479	0.0520	-0.92	0.357
FINLEV	0.0732	0.0125	5.85	0.000
PROF_CONTROL	-0.0271	0.0083	-3.26	0.001
FIRM_SIZE_CONTROL	0.0072	0.0069	1.06	0.291
GROWTH_OPP_CONTROL	-5.07e-06	0.0000	-0.11	0.915

R-squared (within) = 0.1450
Wald chi2 (4) = 52.69
Prob>chi2 = 0.0000

Source: STATA Output, 2023

The Wald chi2 (4) value of 52.69 and prob>chi2 of 0.0000 (significant at 1%) assure fitness of the model. The R-squared (within) of 0.1450 suggests that the variables collectively account for 14.50% of the variation in the dependent variable. The mediator variable, financial leverage (FINLEV) can be seen to have a significant positive effect on the dependent variable, Leases, with a coefficient of 0.0732 and p-value of 0.000 (significant at 1%). This fulfils the requirement of Hair, Black, Babin and Anderson (2010) for significance of the mediator effect on the outcome variable at 5% level. Also, the control variable, profitability (PROF_CONTROL) is seen to maintain its significant negative effect on leasing with a coefficient of -0.0271 and p-value of 0.001 (significant at 1%). These results in Table 4.9 are used in the test of hypothesis 9 which has been formulated to confirm the effect or otherwise of financial leverage on leasing. Discourse on the import of direction and significance of effect, is presented under section 4.4.1.5 (test of hypotheses).

4.4.1.5 Test of Hypotheses 1-9

In order to test the hypotheses formulated on direct effects of corporate governance mechanisms on leasing in the context of listed non-financial firms in Nigeria ($H0_1$-$H0_8$), Table 4.6 reported on page 113 is hereby re-presented.

Table 4.6 Model 1 Regression Results

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	0.0226	0.0441	0.51	0.608
BSIZE	0.0040	0.0014	2.86	0.004
BIND	0.0771	0.0296	2.60	0.009
BGD	0.0491	0.0209	2.35	0.019
SPBC	-0.0232	0.0090	-2.58	0.010
MGROWN	-0.0001	0.0001	-2.16	0.031
FORGNOWN	0.0001	0.0001	1.23	0.219
INSTOWN	-0.0093	0.0080	-1.16	0.246
OWNCONC	-0.0000	0.0001	-0.40	0.689
PROF_CONTROL	-0.0368	0.0115	-3.20	0.001
FIRM_SIZE_CONTROL	-0.0109	0.0056	-1.94	0.052
GROWTH_OPP_CONTROL	0.0000	0.0001	0.25	0.806

R-squared = 0.1740
Wald chi2 (11) = 31.58
Prob>2 = 0.0000

Source: STATA Output, 2023

$H0_1$ Board size has no significant effect on leasing in listed non-financial firms in Nigeria.

From Table 4.6, Board size can be seen to have a significant positive effect on leasing, given a coefficient of 0.0040 and p-value of 0.004, significant at 1%. This implies that an increase in the number of members on a Board would enhance the likelihood of optimal finance decision making. This is due to the proposition that firms are availed with diverse expertise and access to broad networks on account of the Board members (Jensen, 1986). A large Board that is effective, fosters productive discourse and exploration of creative financing options that would avoid the notable agency problems associated with conventional modes of financing. A large Board also provides ample grounds for active monitoring by members and the realisation of attendant benefits in line with stipulations of the active monitoring hypothesis. The results therefore, provide evidence for the rejection of Hypothesis 1 ($H0_1$) and conclusion that Board size has a significant effect on leasing in listed non-financial firms in Nigeria. This finding contradicts that of Robicheaux, Fu and Ligon (2008) which in reporting on a significant negative effect, posited that optimal financing decisions such as leasing, would instead occur in the presence of small-sized Boards.

$H0_2$ Board independence has no significant effect on leasing in listed non-financial firms in Nigeria.

The positive coefficient, 0.0771 and p-value, 0.009, significant at 1%, establishes that Board independence has an effect on leasing in listed non-financial firms in Nigeria. Having more non-executive Directors on a Board ensures effective monitoring of managerial actions and an objective influence over its outcome (Blevins, Ragozzino & Ekcardt, 2020). This implies that greater Board independence would increase the likelihood of firms to lease. The result provides evidence for rejection of Hypothesis 2 ($H0_2$) and confirmation of a significant effect

of Board independence on leasing in listed non-financial firms in Nigeria. The finding corroborates that of Robicheaux, Fu and Ligon (2008) which posits that Board independence correlates to strong governance structures capable of yielding desirable firm outcomes. This finding similarly, affirms propositions of the active monitoring hypothesis.

$H0_3$ Board gender diversity has no significant effect on leasing in listed non-financial firms in Nigeria.

Considering the results in Table 4.6, Board gender diversity has a coefficient of 0.0491 and p-value of 0.019, significant at 5%. This indicates that more women on the Board will result to firms contracting leases as a means of finance. Women, assumed to be more risk averse and less confident than their male counterparts, would influence decisions that portend low risk to firms. In corporate finance, leases are perceived to be low-risk debt structures compared to other conventional forms. Leases mitigate the risk of asset substitution, underinvestment and bankruptcy prevalent with debt financing. Therefore, in line with the risk aversion and overconfidence hypothesis, the greater the number of women on the Board, the more likely firms would engage in leasing. The finding of this study provides evidence for rejection of Hypothesis 3 ($H0_3$) and inference that Board gender diversity has a significant effect on leasing in listed non-financial firms in Nigeria. This also serves as a unique contribution to the extant literature on corporate governance mechanisms and leasing for which there is no documented evidence on the influence of Board gender diversity.

$H0_4$ Presence of specialised Board committee has no significant effect on leasing in listed non-financial firms in Nigeria.

In relation to presence of a specialised Board committee, the results provide evidence for rejection of Hypothesis 4 ($H0_4$) given the coefficient, -0.0231959 and p-value, 0.010 (significant at 5%). That is, presence of a specialised Board committee (risk management)

has a significant effect on leasing, albeit, negative in the context of listed non-financial firms in Nigeria. This implies that firms with a specialised Board committee are less likely to engage in leasing. Whilst it is expected that specialised committees would foster knowledge specialisation and its attendant benefits to firms' strategic decisions, it is possible that there are inefficiencies that hinder its materialisation. These could be in form of Director free riding on Committees as well as high costs of information acquisition and segregation. In relation to the latter, there is a likelihood that multi-committee directorships have no positive bearing in the case of listed non-financial firms in Nigeria. The finding of this study contradicts the postulations of specialisation theory which imply that optimal firm outcomes (such as leasing) would be positively affected in the presence of a specialised Board committee. The finding of this study also serves as a unique contribution to the extant literature on corporate governance mechanisms and leasing for which there is no documented evidence on the effect of specialised Board committees.

$H0_5$ Managerial ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

With respect to managerial ownership, the coefficient, -0.0001 and p-value, 0.031 imply a significant negative effect on leasing (at 5% level). That is, increasing equity ownership of Directors would reduce the tendency of firms to engage in leasing. This could be explained as being a consequence of managerial entrenchment that is typically achieved via a significant use of debt. The managerial entrenchment theory posits that managers would employ debt in order to guard against dilution in their shareholding as well as ward off corporate raids or take-overs which could result in their replacement (Fama & Jensen, 1983). Once managerial entrenchment is attained, the risks associated with being highly levered especially bankruptcy that results in loss of control, motivates managers to avoid contracting all forms of debt which portend with fixed payment obligations. Given the results, this includes leasing which

is considered pseudo-debt in the lease-debt substitutability literature. In line with the above, evidence is provided for rejection of Hypothesis 5 ($H0_5$) and the conclusion that managerial ownership has a significant effect on leasing in listed non-financial firms in Nigeria. The finding contradicts that of a significant positive effect, established by Mehran, Taggart and Yermack, (1999), Robicheaux, Fu and Ligon (2008) and Mungami (2013).

$H0_6$ Foreign ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

The coefficient, 0.0001 and non-significant p-value, 0.219 provide evidence for the non-rejection of Hypothesis 6 ($H0_6$). Examining the results, foreign ownership can be seen to have a positive relationship with leasing implying that the greater shareholding of foreign investors in a firm could influence optimal financing decisions such as leasing. This is by way of active monitoring which arises subject to significance of equity interests in a firm. The insignificance of foreign ownership's effect on leasing could be inferred as foreign shareholding across listed non-financial firms in Nigeria, not being prevalent or substantial enough to influence managerial outcomes. The empirical literature on corporate governance mechanisms and leasing has no evidence as it relates to foreign ownership. The finding of this study serves a contribution. The direction of its effect on leasing (positive) can equally be inferred to affirm the postulations of the active monitoring hypothesis.

$H0_7$ Institutional ownership has no significant effect on leasing in listed non-financial firms in Nigeria.

In relation to the above hypothesis ($H0_7$), the coefficient, -0.0093 and p-value, 0.246 confirm that institutional ownership has no significant effect on leasing in listed non-financial firms in Nigeria thus, leading to its non-rejection. The negative relationship suggests that the greater the shareholding of institutional investors, the lower the tendency of firms to engage in

leasing. Inference could be made that institutional investors ensuring firm survival through active monitoring would adversely affect the contracting of debt given its associated risks. Institutional investors may consider leases as pseudo debt and as such, would not encourage its use especially where they have a strong presence in firms through substantial shareholding. The finding of a non-significant effect corroborates that of Mungami (2013) although, the relationship found was positive. The direction of correlation between institutional ownership and leasing can be inferred to affirm the propositions of the active monitoring hypothesis.

$H0_8$ Ownership concentration has no significant effect on leasing in listed non-financial firms in Nigeria.

From the results in Table 4.6, the coefficient, -0.0000 and non-significant p-value, 0.689 reveals that ownership concentration has no significant effect on leasing in listed non-financial firms in Nigeria. Irrespective of the fact that the coefficient value is approximately zero, what is of interest to the study, is the direction of the relationship (negative) given by the sign of the coefficient. This suggests that increase in ownership concentration adversely affects the likelihood of firms to engage in leasing. Short (1994) as cited by Callimaci, Fortin and Landry (2011), explains this to be possibly, as a result of concentrated owners' tendency to be less risk averse such that influencing risk minimising finance decisions (leasing) would not be prevalent. In such firms, assets would be purchased rather than leased. Similarly, it could be inferred that active monitoring due to ownership concentration would discourage the use of all forms of debt including pseudo-debt financing such as leases. The finding of this study provides evidence for non-rejection of Hypothesis 8 ($H0_8$) and is in line with propositions of the active monitoring hypothesis as well as empirical evidence established by Callimaci, Fortin and Landry (2011).

Table 4.9 reported on page 119, is hereby re-presented in order to test the hypothesis formulated as to a direct effect of financial leverage on leasing in listed non-financial firms in Nigeria ($H0_9$).

Table 4.9 Model 4 Regression Results

Variable	Coeff.	Het-corr. Std. Err.	Z	P>z
_CONS	-0.0479	0.0520	-0.92	0.357
FINLEV	0.0732	0.0125	5.85	0.000
PROF_CONTROL	-0.0271	0.0083	-3.26	0.001
FIRM_SIZE_CONTROL	0.0072	0.0069	1.06	0.291
GROWTH_OPP_CONTROL	-5.07e-06	0.0000	-0.11	0.915

R-squared (within) = 0.1450
Wald chi2 (4) = 52.69
Prob>chi2 = 0.0000

Source: STATA Output, 2023

$H0_9$ Financial leverage has no significant effect on leasing in listed non-financial firms in Nigeria.

The mediator variable, financial leverage (FINLEV) can be seen to have a significant positive effect on the dependent variable, Leasing, with a coefficient of 0.0732 and p-value of 0.000, significant at 1%. This confirms that agency costs of debt- asset substitution and underinvestment, would ultimately motivate firms to finance by leasing. The finding of this study affirms the lease-debt complementarity hypothesis and corroborates the studies of Landry, Fortin and Callimaci (2013), Cotei and Farhat (2015), Jaszczuk, Bialek-Jaworska, Opolski, Sylwestrzak and Trzpiola (2018), Musa-Mubi and Badara (2019). Given the above, evidence is provided for rejection of the hypothesis and conclusion that financial leverage does have a significant effect on leasing in listed non-financial firms in Nigeria.

4.4.1.6 Mediation Analysis Based on the Causal Steps Approach

Testing for mediation using the causal steps approach, requires comparison of the regression results of Models 1, 2 and 3. According to Judd and Kenny (1981) as cited in Baron and

Kenny (1986), the direct effect of the predictor variable on the outcome variable (Model 1) should first be significant. In Model 2, the predictor variable effect on the mediator should equally be significant. However, in Model 3 (where the mediator is controlled), the coefficient of the predictor variable should significantly reduce from that in Model 1 or be zero, for either partial or full mediation to be established. It is also imperative that the mediating variable in Model 3, should be seen to significantly affect the dependent variable. Detthamrong, Chancharat and Vithessonthi, (2017) further note that a loss of significance in terms of the predictor variable's p-value in Model 3 would be suggestive of a full mediating effect present.

In line with the above, the coefficients and p-values of Models 1, 2 and 3 are reported in Table 4.10 for comparison and ascertainment of mediating effects.

Table 4.10 Combined Linear Regression Results of Models 1, 2 and 3

Variable	Model 1 Coeff.	P>z	Model 2 Coeff.	P>z	Model 3 Coeff.	P>z
_CONS	0.0226	0.608	-0.2576	0.058	0.0371	0.405
BSIZE	0.0040	0.004	0.0085	0.226	0.0035	0.018
BIND	0.0771	0.009	0.1665	0.161	0.0677	0.021
BGD* **	0.0491	0.019	-0.3957	0.000	0.0714	0.004
SPBC	-0.0232	0.010	0.0219	0.374	-0.0244	0.005
MGROWN	-0.0001	0.031	-0.0005	0.253	-0.0001	0.078
FORGNOWN	0.0001	0.219	-0.0010	0.045	0.0002	0.085
INSTOWN	-0.0093	0.246	-0.0689	0.005	-0.0054	0.514
OWNCONC	-0.0000	0.689	-0.0001	0.774	-0.0000	0.743
FINLEV	-	-	-	-	0.0563	0.013
PROF	-0.0368	0.001	-0.1710	0.001	-0.0272	0.007
FIRM_SIZE	-0.0109	0.052	0.0524	0.006	-0.0138	0.016
GROWTH	0.0000	0.806	0.0002	0.678	0.0000	0.887

- *Variable with some presence of mediating effect

Source: Researcher's Construction, 2023

As can be seen in Table 4.10, Board gender diversity (BGD) is the only variable that meets the condition of a significant effect in Models 1, 2 and 3 with p-values, 0.019, 0.000 and 0.004 significant at 5%, 1% and 1% respectively. The mediating variable, financial leverage

(FINLEV) is also seen to have a significant effect on the outcome variable (leasing) in Model 3 with a p-value of 0.013 (significant at 5%). However, comparing the absolute values of the coefficient in Models 1 and 3 (0.0491 and 0.0713), there is no reduction with respect to the variable, Board gender diversity (BGD). By the causal steps approach of Baron and Kenny (1986), all but one of the conditions for mediation have been fulfilled.

Pertinent to note is the fact that the causal steps approach to mediation has been criticised for its basic approach to mediation analysis. According to Kenny (2021), fulfilling all the requirements is not a conclusive evidence of mediation. Also, majority of contemporary researchers opine that estimating Model 1 is not required to determine mediation and that emphasis instead, should be placed on estimation of Models 2 and 3 (Kenny, 2021). Considering the latter position, Model 2 results indicate that besides Board gender diversity (BGD), foreign ownership (FORGNOWN) with coefficient, -0.0010 and p-value, 0.045 (significant at 5%) has an effect on the mediating variable, financial leverage (FINLEV). Same can be deduced for institutional ownership (INSTOWN) with coefficient, -0.0688 and p-value, 0.005 (significant at 1%). These variables are suggestive of the likely presence of mediation.

Further criticism of the causal step approach is made as regards the insufficiency of variance reduction (with respect to the coefficients) in establishing mediation. What matters is the significance of the reduction in variance which cannot be reliably deduced from the causal steps approach. Instead, an array of methods for its computation are obtainable in the literature. These are; the joint significance test, Sobel test, bootstrapping and Monte-Carlo (Kenny, 2021). Having considered the strengths and shortcoming of these methods, Kenny (2021) impliedly recommends use of the Monte-Carlo method in assessing mediation.

The causal steps approach cannot be used for such analysis therefore, necessitating application of the SEM technique which simultaneously estimates multiple modelled relationships while effectively addressing measurement error- a concern associated with the basic regression technique under the causal steps approach (Hair, Hult, Ringle & Sarstedt, 2022). Through SEM, the significance of reduction in coefficient variance (indirect effect) was computed via the Monte-Carlo method and this served as basis for testing hypotheses formulated in respect of the mediating effects of financial leverage.

4.4.2 SEM Regression Results

The SEM regression output was generated using asymptotic distribution free (adf) estimation method. This is adjudged preferable in providing efficient coefficient and standard error estimates under conditions of non-normal distributions (STATA Manual, 2021). The results presented in Table 4.11 is in respect of the effect of the predictor variables on the mediator variable as well as the effect of the predictor and mediating variables on the outcome variable.

Table 4.11 SEM Regression Results

Mediating/Outcome Variable- Financial Leverage (FINLEV)

Variable	Coeff.	Std. Err.	z	P>z
_CONS	-0.2576	0.0739	-3.49	0.000
BSIZE	0.0085	0.0061	1.39	0.164
BIND	0.1665	0.0820	2.03	0.042
BGD	-0.3957	0.0683	-5.79	0.000
SPBC	0.0219	0.0168	1.31	0.191
MGROWN	-0.0005	0.0002	-2.36	0.018
FORGNOWN	-0.0010	0.0002	-4.22	0.000
INSTOWN	-0.0689	0.0171	-4.04	0.000
OWNCONC	-0.0001	0.0003	-0.47	0.637
PROF_CONTROL	-0.1710	0.0170	-10.08	0.000
FIRM_SIZE_CONTROL	0.0524	0.0128	4.09	0.000
GROWTH_OPP_CONTROL	0.0002	0.0004	0.59	0.558

Outcome Variable- Leasing (LEASES)

Variable	Coeff.	Std. Err.	z	P>z
_CONS	0.0371	0.0316	1.18	0.240
FINLEV	0.0563	0.0243	2.32	0.020
BSIZE	0.0035	0.0009	3.74	0.000
BIND	0.0677	0.0155	4.36	0.000
BGD	0.0714	0.0212	3.37	0.001
SPBC	-0.0244	0.0043	-5.72	0.000
MGROWN	-0.0001	0.0000	-3.53	0.000
FORGNOWN	0.0002	0.0001	3.85	0.000
INSTOWN	-0.0054	0.0065	-0.83	0.404
OWNCONC	-0.0000	0.0000	-0.72	0.474
PROF_CONTROL	-0.0272	0.0047	-5.83	0.000
FIRM_SIZE_CONTROL	-0.0138	0.0042	-3.24	0.001
GROWTH_OPP_CONTROL	0.0000	0.0001	0.22	0.823

RMSEA = 0.0000
SRMR = 0.0000
CFI = 1.0000
TLI = 1.0000

Source: STATA Output, 2023

From Table 4.11, the root mean squared error of approximation (RMSEA) has a value of 0.0000 which is less than 0.06 and indicative of a perfect fit (Fan, Chen, Shirkey, John, Wu, Park & Shao, 2016). In corroboration, the standardised root mean squared residual (SRMSR) also has a value of 0.0000 which is less than 0.09 – the standard as noted by Hu and Bentler (1999). Examining the comparative fit index (CFI) and Tucker-Lewis index (TLI) values of 1.0000, model fitness can further be assured given that both values are greater than 0.95 and 0.90 respectively. This is in fulfilment of the requirements as stated in Hu and Bentler (1999). While goodness-of-fit statistics are required for theory testing and confirmatory studies (Hair, Hult, Ringle & Sarstedt, 2022), they are of less importance where the model is entirely comprised of observed variables compared to when latent variables are included (STATA Manual, 2021).

Table 4.12 presents the combined coefficients and p-values of the linear regression results (Models 2 and 3) as well as that of SEM.

Table 4.12 Combined Linear Regression and SEM Regression Output

Model 2- Corporate Governance Mechanisms and Financial Leverage

Variable	Linear Reg. Coeff	P>z	SEM Coeff.	P>z
_CONS	-0.2576	0.058	-0.2576	0.000
BSIZE	0.0085	0.226	0.0085	0.164
BIND	0.1665	0.161	0.1665	0.042
BGD	-0.3957	0.000	-0.3957	0.000
SPBC	0.0219	0.374	0.0219	0.191
MGROWN	-0.0005	0.253	-0.0005	0.018
FORGNOWN	-0.0010	0.045	-0.0010	0.000
INSTOWN	-0.0689	0.005	-0.0689	0.000
OWNCONC	-0.0001	0.774	-0.0001	0.637
PROF_CONTROL	-0.1710	0.001	-0.1710	0.000
FIRM_SIZE_CONTROL	0.0524	0.006	0.0524	0.000
GROWTH_OPP_CONTROL	0.0002	0.678	0.0002	0.558

Model 3- Corporate Governance Mechanisms, Financial Leverage and Leasing

Variable	Linear Reg. Coeff	P>z	SEM Coeff.	P>z
_CONS	0.0371	0.405	0.0371	0.240
FINLEV	0.0035	0.013	0.0563	0.020
BSIZE	0.0677	0.018	0.0035	0.000
BIND	0.0714	0.021	0.0677	0.000
BGD	-0.0244	0.004	0.0714	0.001
SPBC	-0.0001	0.005	-0.0244	0.000
MGROWN	0.0002	0.078	-0.0001	0.000
FORGNOWN	-0.0054	0.085	0.0002	0.000
INSTOWN	-0.0000	0.514	-0.0054	0.404
OWNCONC	0.0563	0.743	-0.0000	0.474
PROF_CONTROL	-0.0272	0.007	-0.0272	0.000
FIRM_SIZE_CONTROL	-0.0138	0.016	-0.0138	0.001
GROWTH_OPP_CONTROL	0.0000	0.887	0.0000	0.823

Source: STATA Output, 2023

Evident from Table 4.12 is the fact that the coefficients of both regression outputs are the same. For Model 2, regressing financial leverage on the corporate governance variables (and controls), the corporate governance variables significant under the linear regression output are similarly found to be so in the SEM output. However, two additional variables (Board independence and managerial ownership) are significant in the SEM regression result due to differences in standard error computation.

As regards Model 3, regressing leasing on the corporate governance, mediating and control variables, corporate governance variables that are significant also remain the same with the exclusion of managerial ownership and foreign ownership. These variables that are insignificant at the 5% level under the linear regression output become significant in that of SEM. This is equally as a result of differences in standard error computation.

Noteworthy is the fact that het-corrected standard errors (linear regression results) and the adf-observed information matrix (OIM) standard errors (SEM regression results) both effectively address the issue of heteroscedasticity.

With respect to the SEM regression output, the command, 'estat teffects' was run in order to estimate the indirect effects. In elaboration, this implies determination of the corporate governance variables whose effect on leasing is likely mediated by financial leverage. The indirect effects output is a tentative indicator of mediating effects which are only confirmed by tests of mediation such as that based on the Monte-Carlo method. The indirect effects result is presented in Table 4.13.

Table 4.13 SEM Indirect Effects Regression Output

Indirect Effects

Variable	Coeff.	Std. Err.	z	P>z
BSIZE	0.0005	0.0004	1.11	0.266
BIND	0.0094	0.0052	1.82	0.069
BGD	-0.0223	0.0077	-2.88	0.004
SPBC	0.0012	0.0008	1.59	0.111
MGROWN	-0.0000	0.0000	-1.68	0.093
FORGNOWN	-0.0001	0.0000	-2.12	0.034
INSTOWN	-0.0039	0.0013	-2.99	0.003
OWNCONC	-8.04e-06	0.0000	-0.44	0.659
PROF_CONTROL	-0.0096	0.0045	-2.16	0.031
FIRM_SIZE_CONTROL	0.0029	0.0013	2.27	0.023
GROWTH_OPP_CONTROL	0.0000	0.0000	0.60	0.546

Source: STATA Output, 2023

Details of Table 4.13 suggest that the variables- Board gender diversity, BGD (p-value, 0.004 significant at 1%), foreign ownership, FORGNOWN (p-value, 0.034, significant at 5%) and institutional ownership, INSTOWN (p-value, 0.003, significant at 1%) have an effect on leasing that is in essence, being mediated by financial leverage. This inference is confirmed by the Monte-Carlo test of mediation discussed in subsequent Sections.

4.4.2.1 Mediation Analysis Based on Monte-Carlo Approach

The Monte-Carlo approach to mediation facilitates a test of the significance of indirect effects in mediation analysis. This method is similar to but more practical than the bootstrapping method as proposed by Zhao, Lynch and Chen (2010). The 'medsem' command in STATA was used to generate results for assessing mediating effects based on the Monte-Carlo method. In addition, the 'medesm' command was run with the syntax 'zlc' which provides information as to the nature of a mediating effect (if any) in terms of being competitive, complementary or indirect-only. Absence of mediating effects are established in terms of no-effect or direct-only non-mediation results. The 'zlc' stands for Zhao, Lynch and Chen (2010) which set the conditions for the aforementioned categorisations.

4.4.2.2 Test of Hypotheses 10-17

The hypotheses under this Section are tested based on the results generated via the Monte-Carlo method for mediation analysis (results attached as appendix).

$H0_{10}$ Financial leverage does not mediate the relationship between Board size and leasing in listed non-financial firms in Nigeria.

Table 4.14: Medsem Results for Board Size

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	0.020	0.020	0.020
Std. Err.	0.018	0.017	0.018
z-value	1.142	1.201	1.139
p-value	0.253	0.230	0.255

*** Leases: Bsize (X->Y) with β= 0.147 and p= 0.001

Source: STATA Output, 2023

Based on the results in Table 4.14, Monte-Carlo coefficient estimate of the indirect effect is 0.020 with a p-value of 0.255 (non-significant at 5%). Comparing this to results of the effect of Board size (X) on leasing (Y), coefficient of 0.147 and p-value, 0.001 significant at 1% indicates that Board size directly affects leasing and not indirectly. As per conditions set by Zhao, Lynch and Chen (2010), this is a case of direct-only non-mediation confirming that there is only a direct effect of Board size on leasing and no mediating effect of financial leverage on the relationship. In line with the above, evidence is provided for the non-rejection of Hypothesis 10 ($H0_{10}$). Conclusion therefore, is made that financial leverage does not mediate the relationship between Board size and leasing in the context of listed non-financial firms in Nigeria.

$H0_{11}$ Financial leverage does not mediate the relationship between Board independence and leasing in listed non-financial firms in Nigeria.

Table 4.15: Medsem Results for Board Independence

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	0.019	0.019	0.019
Std. Err.	0.009	0.010	0.011
z-value	2.034	1.840	1.776
p-value	0.042	0.066	0.076

*** Leases: Bind (X->Y) with β= 0.139 and p= 0.000

Source: STATA Output, 2023

Analysing indirect effects in the relationship between Board independence and leasing, the Monte-Carlo coefficient estimate of 0.019 and p-value, 0.076 (non-significant at 5%) reveals an absence of mediation (as seen in Table 4.15). Further considering the effect of Board independence on leasing, significant at 1% (coefficient, 0.139; p-value, 0.000) and the criteria of Zhao, Lynch and Chen (2010), there is only a direct effect in this relationship. Specifically, this is a case of direct-only non-mediation as with Board size. The result provides evidence

for non-rejection of Hypothesis 11 ($H0_{11}$) and inference that financial leverage does not mediate the relationship between Board independence and leasing in listed non-financial firms in Nigeria.

$H0_{12}$ Financial leverage does not mediate the relationship between Board gender diversity and leasing in listed non-financial firms in Nigeria.

Table 4.16: Medsem Results for Board Gender Diversity

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.058	-0.058	-0.058
Std. Err.	0.017	0.021	0.021
z-value	-3.523	-2.801	-2.745
p-value	0.000	0.005	0.006

*** Leases: Bgd (X->Y) with β= 0.187 and p= 0.000

Source: STATA Output, 2023

The result presented in Table 4.16 with respect to Board gender diversity indicates presence of an indirect effect of financial leverage in its relationship with leasing. The Monte-Carlo coefficient of the indirect effect (-0.058) and p-value of 0.006, significant at 1% confirms this inference. Assessing output in relation to the direct effect, the coefficient of 0.187 and p-value, 0.000 (significant at 1%) suggests that there is a direct effect of Board gender diversity on leasing although this is accounted for in part by financial leverage. Due to a difference in the signs of the direct and indirect effects' coefficients (positive versus negative), the mediation is further defined as competitive in accordance with Zhao, Lynch and Chen (2010). With emphasis placed on the significance of the indirect effect, evidence therefore abounds for rejection of Hypothesis 12 ($H0_{12}$) and the conclusion that financial leverage mediates the relationship between Board gender diversity and leasing in listed non-financial firms in Nigeria.

$H0_{13}$ Financial leverage does not mediate the relationship between presence of specialised Board committee and leasing in listed non-financial firms in Nigeria.

Table 4.17: Medsem Results for Presence of Specialised Board Committee

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	0.010	0.010	0.010
Std. Err.	0.007	0.008	0.009
z-value	1.588	1.247	1.184
p-value	0.112	0.212	0.236

*** Leases: Spbc (X->Y) with β= -0.207 and p= 0.000

Source: STATA Output, 2023

In relation to the presence of a specialised Board committee (Table 4.17), Monte-Carlo coefficient estimate of the indirect effect is 0.010 with a p-value of 0.236 (non-significant at 5%). This suggests absence of an indirect effect in its relationship with leasing. Results of the direct effect of specialised Board committee on leasing however, reveal a coefficient of -0.207 and p-value, 0.000 (significant at 1%). Holistically, the mediation analysis output is indicative of only a direct effect in the relationship. To categorise based on Zhao, Lynch and Chen (2010), this is a case of direct-only non-mediation and the evidence does not provide grounds for rejection of Hypothesis 13 ($H0_{13}$). The inference therefore, is that financial leverage does not mediate the relationship between presence of specialised Board committee and leasing in listed non-financial firms in Nigeria.

$H0_{14}$ Financial leverage does not mediate the relationship between managerial ownership and leasing in listed non-financial firms in Nigeria.

Table 4.18: Medsem Results for Managerial Ownership

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.016	-0.016	-0.016
Std. Err.	0.009	0.008	0.009
z-value	-1.861	-1.935	-1.838
p-value	0.063	0.053	0.066

*** Leases: Mgrown (X->Y) with β= -0.068 and p= 0.000

Source: STATA Output, 2023

Examining the results as presented in Table 4.18, the Monte-Carlo coefficient estimate of the indirect effect at -0.016 with p-value of 0.066 (insignificant at 5%), indicates an absence of mediation. As for the effect of managerial ownership on leasing, coefficient- -0.068 and p-value, 0.000 (significant at 1%) indicates that a direct relationship only exists between the aforementioned predictor and outcome variables. Therefore, by the categorisation of Zhao, Lynch and Chen (2010), the results suggest a direct-only type of non-mediation. Evidence is therefore provided for non-rejection of the formulated hypothesis and conclusion that financial leverage does not mediate the relationship between managerial ownership and leasing in listed non-financial firms in Nigeria.

$H0_{15}$ Financial leverage does not mediate the relationship between foreign ownership and leasing in listed non-financial firms in Nigeria.

Table 4.19: Medsem Results for Foreign Ownership

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.031	-0.031	-0.031
Std. Err.	0.013	0.012	0.013
z-value	-2.409	-2.500	-2.415
p-value	0.016	0.012	0.016

*** Leases: Forgnown (X->Y) with β= 0.107 and p= 0.000

Source: STATA Output, 2023

Considering the variable, foreign ownership, Monte-Carlo estimate of the indirect effect (coefficient, -0.031, p-value, 0.016, significant at 5%) suggests the presence of mediation. Given the significance of the direct effect of foreign ownership on leasing (coefficient, 0.107, p-value, 0.000 significant at 1%) and the difference in directional sign when compared to that of the indirect effect (positive as against negative), the mediation type is classified as competitive in line with Zhao, Lynch and Chen (2010). The statistical evidence therefore, supports rejection of the hypothesis ($H0_{15}$) and, conclusion that financial leverage mediates

the relationship between foreign ownership and leasing in the context of listed non-financial firms in Nigeria.

$H0_{16}$ Financial leverage does not mediate the relationship between institutional ownership and leasing in listed non-financial firms in Nigeria.

Table 4.20: Medsem Results for Institutional Ownership

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.035	-0.035	-0.035
Std. Err.	0.010	0.014	0.014
z-value	-3.677	-2.583	-2.504
p-value	0.000	0.010	0.012

*** Leases: Instown (X->Y) with β= -0.049 and p= 0.426

Source: STATA Output, 2023

Table 4.20 in respect of the predictor, institutional ownership, reveals the Monte-Carlo estimate of the indirect effect to be -0.035 with a p-value of 0.012 (significant at 5%). This alludes to the presence of mediation. However, the estimation of direct effect of institutional ownership on leasing indicates a lack of significant effect based on coefficient, 0.049 and p-value, 0.426 (insignificant at 5%). This suggests that while institutional ownership has no direct effect on leasing in listed non-financial firms, any relationship established is on account of the presence of financial leverage in firms. Financial leverage has a mediating effect in the relationship between institutional ownership and leasing in listed non-financial firms in Nigeria. This type of mediating effect is classified as an indirect-only (complete) mediation in line with Zhao, Lynch and Chen (2010). Therefore, evidence is provided for the rejection of the formulated hypothesis ($H0_{16}$).

$H0_{17}$ Financial leverage does not mediate the relationship between ownership concentration and leasing in listed non-financial firms in Nigeria.

Table 4.21: Medsem Results for Ownership Concentration

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.003	-0.003	-0.003
Std. Err.	0.007	0.007	0.008
z-value	-0.446	-0.462	-0.434
p-value	0.655	0.644	0.664

*** Leases: Ownconc (X->Y) with β= -0.015 and p= 0.479

Source: STATA Output, 2023

In the context of ownership concentration, results in Table 4.21 reveal the Monte-Carlo estimate of the indirect effect to be -0.003 with a p-value of 0.664 (insignificant at 5%) which is suggestive of an absence of mediation. As for the direct effect of the predictor variable on leasing, the coefficient estimate of -0.015 and p-value, 0.479 (insignificant at 5%) indicates no-effect of ownership concentration on leasing. Collectively, the results on indirect and direct effects suggests that financial leverage has no mediating effect in the relationship between ownership concentration and leasing in listed non-financial firms in Nigeria. Based on the categorization by Zhao, Lynch and Chen (2010), the non-mediation type is defined as a no-effect non-mediation. The results provide evidence for non-rejection of the formulated hypothesis ($H0_{17}$).

4.5 Policy Implications of Findings

The results of Model 1 which assesses the direct effect of corporate governance mechanisms on leasing, provide insight deemed valuable to the formulation of effective governance policies as well as materialisation of desired corporate outcomes with respect to listed non-financial firms in Nigeria. Considering Board structure variables, Board size with a positive significant effect on the financing decision to lease, affirms that regulatory bodies (such as the SEC and FRC) should at least encourage if not mandate a substantial number of Board

members. The varied expertise, experience, perspectives and networks of a diverse Board would translate to optimal financing outcomes in listed non-financial firms in Nigeria.

Board independence with similar findings, highlights the importance of policies that emphasise the presence of non-executive Directors who embody a measure of independence critical to oversight and positive firm outcomes. The finding in relation to Board gender diversity suggests that mandating an increase in the number of females on corporate Boards would similarly result in optimal financing decisions for firms. More females on the Board would also align Nigeria with global best practices as regards gender equity in corporate Boardrooms.

Presence of a Specialised Board committee with a negative significant effect on leasing, indicates the need for firms to internally regulate the operation of specialised committees in order to be availed with its benefits. These regulations would cover sub-optimality in terms of Director free-riding and high costs of information acquisition or segregation despite multi-committee Directorships being the norm in listed non-financial firms in Nigeria.

In the context of share ownership patterns, managerial ownership with a negative significant effect on leasing, suggests institution of policies that would limit shareholdings of those in management. This would curtail the effect of managers' eventual aversion to all forms of debt (even where optimal) as a result of concerns over bankruptcy risks and loss of firm control. Foreign ownership, institutional ownership and ownership concentration have no direct effect on leasing.

However, with respect to foreign ownership, a relationship with leasing abounds on account of financial leverage. Results of Models 2 and 4 which chart the X→M→Y path suggest that low levels of foreign ownership would compel firms to be financially levered and the resulting agency problems of asset substitution and underinvestment would further

necessitate leasing. Firms with low foreign ownership would therefore, consider financing policies that advocate the use of leasing.

Similarly, institutional ownership is found to have an effect on leasing only as a result of the mediating effect of financial leverage. Examining Models 2 and 4 results (X→M→Y path), inference is that low levels of institutional ownership would result in greater levels of financial leverage and ultimately, leasing. Therefore, firms with low levels of institutional ownership would likely formulate financing policies that encourage leasing instead of alternative conventional forms of debt financing.

As for ownership concentration, the absence of both a direct and indirect effect on leasing may still have some implications for firm policy. In particular, given the negative (though insignificant) direct effect established from results of Model 1, firms would likely consider ownership patterns that encourage diffused shareholding. This is due to the potential of concentrated ownership in adversely affecting risk-minimising finance decisions such as leasing in listed non-financial firms in Nigeria.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study examined the mediating effect of financial leverage on the relationship between corporate governance mechanisms and leasing in listed non-financial firms in Nigeria. The motivation arose from a myriad of bottlenecks associated with access to and utilisation of conventional finance towards capital assets investment by listed non-financial firms in Nigeria. Under-developed financial centres, volatile capital markets, weak creditor rights, imperfect legal systems, increased domestic borrowing by the Government, significant risks and high financing costs have adversely affected both supply and demand for finance in relation to listed non-financial firms. In addition, the coronavirus pandemic of 2020, by affecting oil prices, remittances and foreign reserve balances, resulted in currency devaluation thereby, discouraging import of production inputs by firms and instead, necessitating their sourcing from domestic suppliers.

Leasing, a finance alternative is noted in the literature to present with contractual feasibilities (compared to other forms of financing), as well as the potential to circumvent agency problems associated with equity and other forms of conventional debt finance. However, leasing is not predominantly utilised in listed non-financial firms in Nigeria despite the aforementioned precipitating factors. This study was premised on the fact that listed non-financial firms with mandated corporate governance mechanisms in place, should be seen to engage in optimal financing choices that would minimise risks and enhance firm value. Therefore, the study sought to investigate what corporate governance mechanisms affect the decision to lease as well as whether the relationship ascertained is explained by some other intervening (mediating) factor. These mechanisms include Board structure (size, independence, gender diversity, presence of a specialised committee) and share ownership

patterns (managerial ownership, foreign ownership, institutional ownership and ownership concentration) with the intervening variable being financial leverage.

The thesis of the study is that effective corporate governance mechanisms and the attendant benefits in terms of enhanced financial performance and credit worthiness perception would facilitate firms' ability to contract debt finance at lower costs. The preference for debt is also underscored by the inherent tax shields which would ultimately, lower firms' cost of capital as well as maximize their value. However, the use of debt finance results in some agency problems- specifically, asset substitution and underinvestment which would lead to an increase in not just contracting costs but contracting infeasibilities (debt finance in the context of this study refers to all forms of debt which constitute financial leverage excluding leases). Firms therefore, would be compelled to employ leasing in their capital structure as an alternative for capital assets investment. Leasing is proposed in the corporate finance literature to circumvent agency problems arising from equity and debt financing.

Subsequent to an extensive review of extant literature, a number of critical gaps were found. First, the literature on corporate finance as it relates to debt, disregards heterogeneity in its composition. Varying forms of debt financing are equally influenced by a varied number of factors which warrant empirical research into the dynamic nature of corporate financing. In particular, leasing, an asset-based form of debt, has a limited body of research output- evidently pronounced in the area of its relation to corporate governance mechanisms. Second, the limited studies available on the subject matter of interest have been conducted in foreign domains such as Canada, Pakistan, Kenya and China. These studies provide insufficient basis for conclusion or generalisation thus, necessitating empirical studies in other domains such as Nigeria.

Third, research on leasing in Nigeria has so far only covered the themes- compliance with lease accounting standards by lessee firms, development of the lease industry, leasing effects on firm liquidity, leasing effects on firm financial performance, effects of firm-specific attributes on leasing and the relationship between leases and debt. Fourth, empirical studies on the effects of corporate governance mechanisms on leasing have centred on Board size, Board independence, managerial ownership, institutional ownership and ownership concentration. The effects of relevant variables within both Board and ownership structure such as Board gender diversity, presence of a specialised Board committee and foreign ownership have not been examined. Similarly, neither has the effect of a mediating variable which is introduced in this study as financial leverage.

The study therefore, formulated hypotheses on the relationship between corporate governance mechanisms and leasing. The selection of the predictor variables was informed by propositions of theories such as specialisation theory (presence of specialised Board committee), managerial entrenchment theory (managerial ownership), ownership, location and internalisation theory (foreign ownership), as well as the hypotheses- active monitoring (Board size, Board independence, institutional ownership, ownership concentration) and risk aversion and overconfidence (Board gender diversity). While the relationship between corporate governance mechanisms and leasing was hypothesised based on the agency theory, the mediating effect of financial leverage was hypothesised on propositions of the agency cost theory.

The concept of each corporate governance mechanism (as independent variables), the mediating variable, financial leverage and outcome variable, leasing were reviewed in the work. In addition to the aforementioned theories, others relevant to the study were extensively discussed and inclusive of- agency theory and pecking order theory. The

empirical literature on the relationship between corporate governance mechanisms and leasing, corporate governance mechanisms and financial leverage as well as financial leverage and leasing was reviewed and is equally presented in the body of the work.

In achieving the objectives of the study, a correlation research design was adopted. The study is situated within the positivist paradigm and was conducted based on a quantitative approach. Data was extracted from the annual reports and accounts of an adjusted population of 53 listed non-financial firms in Nigeria. The data collected was in relation to the variables of the study- corporate governance mechanisms (Board structure and share ownership patterns), financial leverage and leasing. In addition, data was extracted on the variables utilized as controls in the study (profitability, firm size and growth). Covering a ten-year period, 2012-2021, the data was analysed using the statistical technique of regression. This was in order to estimate the direct effect of corporate governance mechanisms on leasing as well as the mediating effect of financial leverage on the relationship between corporate governance mechanisms and leasing. As for the mediating effect, regression was first run within the framework of structural equation modelling (SEM). Subsequently, the Monte-Carlo approach to tests for mediation was applied to conclusively establish the presence of any indirect effects. Statistical analyses were conducted using the software, STATA.

The findings of the study in relation to direct effects, reveal that Board size, Board independence, Board gender diversity, presence of a specialized Board committee and managerial ownership, significantly affect leasing in listed non-financial firms in Nigeria. Increases in Board size, Board independence and Board gender diversity would enhance the likelihood of firms' leasing based on the positive direction of these variables' effect. As for presence of a specialized Board committee and managerial ownership, these corporate governance mechanisms would reduce the likelihood of firms to engage in leasing. This is

based on the negative direction of these variables' effect established by the conduct of this study. In relation to the mediating effect of financial leverage, this was determined present in the context of the variables- Board gender diversity (partial mediation), foreign ownership (partial mediation) and institutional ownership (full mediation).

5.2 Conclusion

Based on the research findings, the study first concludes that corporate governance mechanisms affect leasing in listed non-financial firms in Nigeria. Specifically, Board size, Board independence, Board gender diversity, presence of a specialised Board committee and managerial ownership directly influence the tendency of these firms to employ leasing in their capital structure. Large Boards facilitate productive discourse and active monitoring resulting in the use of financing options that avoid agency problems associated with other conventional forms. Similarly, Boards with non-executive Directors in the majority would assure effective monitoring of managerial actions and their outcomes.

In addition, the risk averse nature of women would increase the probability of firms financing with low-risk debt structures such as leases. In mitigating the inefficiencies of Specialised Board committees such as free riding and costs of information acquisition or segregation, the negative effect on decisions to lease would be addressed. Equally, avoiding managerial entrenchment through limits to managerial shareholding would similarly, reverse the negative effect on the decision to lease in listed non-financial firms in Nigeria.

The study also concludes that the relationship between some corporate governance mechanisms and leasing is in essence, contingent on financial leverage. The mediating effects of financial leverage were empirically confirmed in relation to Board gender diversity, foreign ownership and institutional ownership. Few women on the Board implies minimal risk aversion due to the presence of men in the majority. Therefore, firms with such Boards

are likely to finance with conventional forms of debt that result in agency problems of asset substitution and underinvestment. Ultimately, leasing would be considered as an optimal financing alternative. The presence of low levels of foreign and institutional ownership would cause firms to be financially levered through other conventional forms. This would equally result in the aforementioned agency problems. As such, these firms would tend to employ leasing in their capital structure.

5.3 Recommendations

The findings of the study inform the following recommendations:

i. The Securities and Exchange Commission (SEC) and Financial Reporting Council of Nigeria (FRC) should recommend a substantial number of members on the Board of Directors of listed non-financial firms in Nigeria. This would avail firms with an array of expertise, experience and networks that would translate into optimal financing choices. This recommendation on substantiality, should be implemented by firms considering their idiosyncrasies and what would provide optimal benefits in relation to attendant costs.

ii. The aforementioned regulatory bodies should also conduct regular audits to assure consistent compliance with its requirement for a significant presence of non-executive, independent Directors on the Boards of listed non-financial firms in Nigeria. The objectivity associated with independence would ensure effective oversight and advantageous financing decisions for the firms.

iii. The SEC and FRC should align Nigeria's Codes of corporate governance with global practices especially in relation to Board gender diversity. Developed economies in Europe such as France, have legislations requiring female representation on Boards to account for as high as 50%. Other countries include; Norway (40%), Germany (30%), Sweden (25%) and Spain (25%). Besides

ensuring gender equity in corporate Boardrooms, mandating an increase in the number of females on corporate Boards would influence beneficial financing decisions for listed non-financial firms. As earlier posited, recommendation on substantiality, should be implemented by firms given their idiosyncrasies and what would provide optimal benefits in relation to any attendant costs.

iv. Listed non-financial firms in Nigeria should institute mechanisms that would ensure effective operations of specialised Board committees. Inefficiencies that would need to be addressed include Director free-riding and significant costs of information acquisition or segregation. Corporate Boards should ensure that specialised committees have well-defined objectives and allocation of responsibilities in a manner that ensures the active engagement of members. There should also be a robust and reliable information system accessible by members in the course of fulfilling their duties. Multi-committee Directorships with actively engaged members could also reduce the costs associated with either information acquisition or segregation.

v. Listed non-financial firms in Nigeria should institute policies that limit managerial ownership in order to mitigate managerial aversion to all types of debt financing which is usually as a result of concerns over bankruptcy risks and potential loss of firms' control. Effective quotas (as determined by firms) can be set on managerial shareholding in relation to total outstanding shares. Besides this, other compensation schemes such as bonuses, allowances, insurance, pension schemes and severance packages could be considered.

vi. Listed non-financial firms in Nigeria with low levels of foreign ownership (significantly below 20%) should institute financing policies that include leasing. This is as a result of these firms typically being financially levered with the

attendant agency problems of asset substitution and underinvestment. There should be guidelines for evaluating leasing options and regular review to ensure alignment with market conditions.

vii. Given that listed non-financial firms in Nigeria with low levels of institutional ownership are found to be significantly financed by other forms of conventional debt financing besides leases, the noted agency problems arising should necessitate consideration of leasing by these firms and action in accordance. Firms should institute lease evaluation and approval processes.

viii. Listed non-financial firms in Nigeria should institute policies that encourage diffused shareholding instead of concentrated ownership. These can include reductions/limitations in percentage of shareholding that could be held by a block shareholder. This could mitigate against the possibility that concentrated ownership would adversely affect subscription to risk-minimising finance options such as leasing. Firms could also consider employee share-schemes and public offerings.

5.4 Limitations of the Study

This research does not examine or provide evidence on direct and mediating effects in the relationship between corporate governance mechanisms and leasing in the context of other African economies. This could have provided valuable supplementary insight into similarities and differences in the financing choices of listed non-financial firms in Africa.

5.5 Area for Further Research

Researchers could consider conducting cross-country studies in this area especially within the African context. This would provide valuable insights from African emerging

economies as to the effects of corporate governance mechanisms on leasing. These studies could as well as test for the mediating effects of financial leverage.

References

Abdulkarim, U. F., Mohammed, L. & Musa-Mubi, A. (2020). Lease finance in Nigeria: Current status, challenges and future prospects. *Journal of Accounting Research, Organisation and Economics*, 3(2), 172-181.

Adams, M. & Hardwick, P. (1998). Determinants of the leasing decision in United Kingdom listed companies. *Applied Financial Economics*, 8 (5), 487-494.

Adams, R. B & Ragunathan, V. (2014). Lehman sisters. Accessible at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2380036

Adedeji, A. & Stapleton, R. C. (1996). Leases, debt and taxable capacity. *Applied Financial Economics*, 6, 71-83.

Adegbile, S. A. (2015). Corporate governance attributes and capital structure of listed firms in the Nigerian food and beverages industry. *International Journal of Public Administration and Management Research*, 3(1), 48-56.

Adusei, M. & Obeng, E. Y. T. (2018). Board gender diversity and the capital structure of microfinance institutions: A global analysis. *Quarterly Review of Economics and Finance*.

Agence Francaise De Developpement (2021). *Hard times for developing countries: Africa's financing needs in question*. France: Agence Francaise De Developpement. Accessible at: https://www.afd.fr/fr/collection/macrodev

Ahmadpour, A., Samimi, A. J., & Golmohammadi, H. (2012). Corporate governance and capital structure: Evidence from Tehran stock exchange. *Middle East Journal of Scientific Research*, 11 (4), 531-535.

Akinbola. A. O. & Otokiti, B. O. (2012). Effects of lease options as a source of finance on the profitability performance of small and medium enterprises (SMEs) in Lagos state, Nigeria. *International Journal of Economic Development Research and Investment*, 3 (3).

Al-Najjar, B. (2011). Empirical Modelling of Capital Structure: Jordanian Evidence. *Journal of Emerging Market Finance*, 10 (1), 1–19. doi: 10.1177/097265271101000101

Altamuro, J. L. M. (2005). *The economic, financial accounting and governance determinants of synthetic lease financing*. PhD Thesis, Pennsylvania State University, USA.

Alves, P., Couto, E. B., & Francisco, P. M., (2015). Board of directors' composition and capital structure. *Research in International Business and Finance*. doi. org/10.1016/j.ribaf.2015.03.005

Ambrose, B. W., Emmerling, T., Huang, H. H. & Yildirim, Y. (2018). Capital structure and the substitutability versus complementarity nature of leases and debt. *Review of Finance*, 1-37. doi:10.1093/rof/rfy004

Anastassiou, T. & Tsaklanganos, A. (2013). An enquiry into the lease vs borrow decision of firms. *European Scientific Journal,* 1, 1857-7431.

Anderson, D. & Arsenault, N. (1998). *Fundamentals of educational research*. Routledge. ISBN- 978-0-203-978-0-203-97822-1.

Ang, J. & Peterson, P. P. (1984). The leasing puzzle. *Journal of Finance*, 39 (4), 1055-1065.

Antwi, S. K. & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management,* 7 (3), 217-225

Arping, S. & Sautner, Z. (2010). Corporate governance and leverage: Evidence from a natural experiment. *Finance Research Letters*, 7, 127-134.

Audu, U. D. (2015). *Corporate governance mechanisms and capital structure of listed food and beverages firms in Nigeria*. M.Sc. Dissertation, Ahmadu Bello University, Zaria, Nigeria.

Bala-Gbogbo, E. & Onu, E. (2020, May 12). Nigeria's dollar shortage pushes manufacturers to the brink, *Bloomberg Online*. Retrieved from https://www.bloomberg.com/news/articles/2020-05-12/nigera-s-dollar-shortage-pushes-manufacturers-to-the-brink

Bamiatzi, V., Efthyvoulou, G. & Jabbour, L. (2017). Foreign vs domestic ownership on debt reduction: An investigation of acquisition targets in Italy and Spain. *International Business Review*.

Barnard, C. I. (1948). *Organization and management: Selected papers*. Cambridge: Harvard University Press.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182. doi:10.1037/0022-3514.51.6.1173

Berger, G., Ofek, E., & Yermack, L. (1997). Managerial entrenchment and capital structure decisions. *Journal of Finance, 52* (4), 1411-1438.

Berle, A. A., Jr. & Means, G. C. (1932). The modern corporation and private property. New York: Commerce Clearing House.

Bernile, G., Bhagwat, V. & Yonker, S. (2018). Board diversity, firm risk, and corporate policies. *Journal of Financial Economics*, 127, 588-612.

Bialek-Jaworska, A. & Nehrebecka, N. (2016). Determinants of Polish enterprises' propensity to lease. Working Paper No. 7. University of Warsaw, Poland.

Blevins, D. P., Ragozzino, R. & Ekcardt, R. (2020). "Corporate governance" and performance in non-profit organizations. *Strategic Organization*, 1–25. doi: 10.1177/1476127020921253

Boatright, J. R. (2012). *Corporate governance*. Elsevier Inc.

Bolea, A. & Cosma, R. (2015). Leasing as a modern form of business financing. *Progress in Economic Sciences*, 2, 295-306. doi: 10.14595/PES/02/021

Brage, V. & Eckerstom, G. (2009). *Leasing: A comparative study of Japanese and Swedish retail firms*. Bachelor Thesis, Goteborgs Universitet, Sweden.

Brailsford, T. J., Oliver, B. R., & Pua, S. L. H. (2002). On the relation between ownership structure and capital structure. *Journal of Accounting and Finance*, 42(1).

Business Round Table (2019). Statement on the purpose of a corporation. Accessible at https://businessroundtable.org

Cadbury, A. (1992). *Report of the committee on the financial aspects of corporate governance*. London: Gee.

Callimaci, A., Fortin, A. & Landry, S. (2011). Determinants of leasing propensity in Canadian listed companies. *International Journal of Managerial Finance*, 7 (3), 259-283.

Central Bank of Nigeria (2020a). Business expectations survey report. Accessible at www.cbn.gov.ng

Central Bank of Nigeria (2020b). Economic report: 4th quarter, 2019. Accessible at www.cbn.gov.ng

Central Bank of Nigeria (2020c). Economic report: 3rd quarter, 2020. Accessible at www.cbn.gov.ng

Cespedes, J., Gonzalez, M., & Molina, C. A. (2010). Ownership and capital structure in Latin America. *Journal of Business Research*, 63, 248–254.

Chatterjee, S. & Price, B. (1991). *Regression analysis by example*. 2nd Edn. Wiley. New York.

Chau, D. K. Y., Firth, M. & Srinidhi, B. I. N. (2006). Leases with purchase options and double moral Hazard. *Journal of Business, Finance and Accounting*, 33, 1390-1401.

Chen, K. D. & Wu, A. (2016). The structure of board committees. Working Paper 17-032, Harvard Business School.

Chen, L-J., Jung, C. & Chen, S-Y. (2011). How the pecking order theory explain capital structure. *Journal of International Management Studies*, 6 (3), 92-100.

Chung, C. Y., & Wang, K. (2014). Do institutional investors monitor management? Evidence from the relationship between institutional ownership and capital structure. *North American Journal of Economics and Finance*. http://dx.doi.org/10.1016/j.najef.2014.10.001

Clarkson, M. B. E. (1995). A stakeholder framework for analysing and evaluating corporate social performance. *Academy of Management Review*, 20, 92-117.

Cosci, S., Guida, R. & Meliciani, V. (2013).Leasing decisions and credit constraints: Empirical analysis on a sample of Italian firms. *European Financial Management*, 9999 (9999), 1–22. doi:10.1111/j.1468-036X.2013.12019.x

Cotei, C. & Farhat, J. (2015). *Financing through leasing: Evidence from the Kauffman firm survey*. FMA Annual Meeting, Orlando, Florida.

Dammak, A. (2015). Research paradigms: Methodologies and compatible methods. *Veritas*, 6 (2), 1-5.

Davis, G. F. (2005). New directions in corporate governance. *Annual Review of Sociology*, 31, 143–162.

Davies, J. R., Hillier, D., McColgan, P. (2005). Ownership structure, managerial behaviour and corporate value. *Journal of Political Economy*, 93, 1155-1177.

De La Bruslerie, H. & Latrous, I. (2012). Ownership structure and debt leverage: Empirical test of a trade-off hypothesis on French firms. *Journal of Multinational Financial Management*, 22, 111-130.

Deloof, M., Istvan, L. & Verschueren, I. (2007). Leases and debt: Complements or substitutes? Evidence from Belgian SMEs. *Journal of Small Business Management*, 45(4): 491–500.

Deloof, M. & Verschueren, I. (1999). Are leases and debt substitutes? : Evidence from Belgian firms. *Financial Management*, 28, 91-95.

Demper, S. (2012). Accounting quality of leases: A comparison in value relevance of the lease accounting models. Rotterdam.

Detthamrong, U., Chancharat, N., & Vithessonthi, C. (2017). Corporate governance, capital structure and firm performance: Evidence from Thailand. *Research in International Business and Finance*, 42, 689-709.

Do, T. K., Lai, T. N., & Tran, T. T. C. (2019). Foreign Ownership and Capital Structure Dynamics. *Finance Research Letters.* https://doi.org/10.1016/j.frl.2019.101337

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.

Dunning, J. H. (1979). Explaining changing patterns of international production: In defence of the eclectic theory. *Oxford Bulletin of Economics and Statistics*, 41 (4), 269-295.

Eisfeldt, A. L. & Rampini, A. A. (2009). Leasing, ability to repossess and debt capacity. *Review of Financial Studies*, 22, 1621-1657.

ElBannan, M. A. (2017). Stock market liquidity, family ownership, and capital structure choices in an emerging country. *Emerging Markets Review*, 33, 201-231.

El-Habashy, H. A. (2018). Determinants of capital structure within the context of corporate governance in Egypt. *International Journal of Business and Management*, 13 (8), 26-39.

Ellickson, R. C. (2001). The market for social norms. *American Law and Economics Review*, 3 (1), 1-49.

Equipment Leasing Association of Nigeria (2020). Equipment leasing: A creative financing option in covid-19 economy. *Leasing Focus*, September, 2020.

Equipment Leasing Association of Nigeria (2021). Economic thrust of government: Opportunities for leasing. *Leasing Focus*, April, 2021.

Equipment Leasing Association of Nigeria (2024a). Promoting entrepreneurship in Nigeria: The leasing initiative. *Leasing Focus*, October, 2024.

Equipment Leasing Association of Nigeria (2024b). 2024 Outlook: Navigating uncertain waters with resilience. January, 2024.

Ezzell, J. R. & Vora, P. P. (2001). Leasing versus purchasing: Direct evidence on a corporation's motivations for leasing and consequences of leasing. *The Quarterly Review of Economics and Finance*, 41, 33-47.

Faccio, M., Marchica, M. T., & Mura, R. (2016). CEO gender and corporate risk-taking, and the efficiency of capital allocation. *Journal of Corporate Finance*, 39, 193–209. doi.org/10.1016/j.jcorpfin.2016.02.008

Fama, E. F. & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of Financial Studies*, 15 (1), 1-33.

Fama, E. F. & Jensen, M. C. (1983). Agency problems and residual claims. *Journal of Law and Economics*, 26, 327–349.

Fan, Y., Chen, J., Shirkey, G., John, R., Wu, S. R., Park, H. & Shao, C. (2016). Applications of structural equation modeling (SEM) in ecological studies: An updated review. *Ecological Processes*, 5 (19).

Fauver, L. & McDonald, M. B. (2015). Culture, agency costs and governance: International evidence on capital structure, *Pacific-Basin Finance Journal*. doi: 10.1016/j.pacfin.2015.05.001

Fauzi, F., Basyith, A. & Ho, P. L. (2017). Women on boardroom: Does it create risk? *Cogent Economics and Finance*, 5. doi.org/10.1080/23322039.2017.1325117

Federal Inland Revenue Service, Nigeria (2010). *Guidelines on tax implications of leasing*. Information Circular, No. 2010/01.

Fernandez-Mendez, C. & Gonzalez, V. M. (2018). Bank ownership, lending relationships and capital structure: Evidence from Spain. *BRQ Business Research Quarterly*. doi: https://doi.org/10.1016/j.brq.2018.05.002

Filareto-Deghaye, M. C. & Severin, E. (2007). Determinants of the choice leasing vs bank loan: Evidence from the French SME by KACM. *Revista Investigación Operational*, 28 (2), 120-130.

Financial Accounting Standards Board (1976). Statement of financial accounting standards no. 13: Accounting for leases. Norwalk.

Financial Reporting Council (2018). The UK corporate governance code. Accessible at: https://www.frc.org.uk

Finucane, T. J. (1988). Some empirical evidence on the use of financial leases. *Journal of Financial Research,* 11(4), 321–333.

Francis, B., Hasan, I., Wu, Q. (2015). Professors in the boardroom and their impact on corporate governance and firm performance. *Financial Management* 44 (3), 547–581.

Franks, J. R. & Hodges, S. D. (1978). Valuation of financial lease contracts: A note. *Journal of Finance*, 33, 657-669.

Freeman, R. E. (1984). Strategic Management: A stakeholder theory. *Journal of Management Studies,* 39 (1), 1-21.

Gan, L. & Xia, X. (2019). Idiosyncratic risk, managerial discretion and capital structure. *International Review of Economics and Finance*, 64, 586-599.

Grossman, S. & Hart, O. (1982). Corporate financial structure and managerial incentives In; McCall, J. (Ed.), *The Economics of Information and Uncertainty*. University of Chicago Press.

Guizani, M. (2020). Testing the pecking order theory of capital structure: The case of Islamic financing modes. *Future Business Journal*, 6 (1). https://doi.org/10.1186/s43093-020-00042-9

Gujarati, D. N. (2003). *Basic econometrics* (4th ed.). Singapore: McGraw Hill.

Gupta, S., Yadav, S. S. & Jain, P. K. (2020). Impact of foreign ownership on leverage: A study of Indian firms. *Global Business Review*, 1–17. doi: 10.1177/0972150920927360

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Haque, F., Arun, T. G., Kirkpatrick, C. (2011). Corporate governance and capital structure in developing countries: A case study of Bangladesh. *Applied Economics*, 43 (6), 673-681.

Harris, M. & Raviv, A. (1991). The theory of capital structure. *Journal of Finance*, 46 (1), 297-355.

Hassan, S. U. (2008). *The impact of finance lease on the performance of Nigerian banks*. M.Sc. Dissertation, Ahmadu Bello University, Zaria.

Hayes. A. F. (2009). Beyond baron and kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76 (4), 408-420

Hines, C. S., & Peters, G. F. (2015). Voluntary risk management committee formation: Determinants and short-term outcomes. *Journal of Accounting and Public Policy*, 34, 267-290.

Holderness, C. G. (2003). A survey of blockholders and corporate control. *Economic Policy Review*, Federal Reserve Bank of New York, 9, 51-63.

Hu, L. T & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling*, 6 (1), 1–55.

Huber, C. (2014) *Introduction to Structural Equation Modelling Using STATA*. California Association for Institutional Research. Accessible at https://www.cair.org/wp-content/uploads/sites/474/2015/07/HuberC-SEMWorkshop.pdf

Huang, H. M. & Yildrim, Y. (2006). Lease financing, credit risk and optimal capital structure. http://www.fdic.gov/bank/analytical/cfr/2006/may/cfrss_Yildrim_06.pdf

Huang, Y.S. & Wang, C. J. (2014). Corporate governance and risk taking of Chinese firms: The role of board size. *International Review of Economics and Finance*. doi: 10.1016/j.iref.2014.11.016

IFRS Foundation (2016). International Financial Reporting Standards 16: Leases. http://www.ifrs.org/.../IASB.../IFRS_16_project-summary.pdf

International Accounting Standards Board (2010). International accounting standard 17-leases. IFRS Foundation. http://www.ec.europa.eu/internat.../ias17_en.pdf

International Accounting Standards Board (2016). International financial reporting standard 16 - leases. IFRS Foundation. https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards/english/2022/issued/part-a/ifrs-16-leases.pdf

International Finance Corporation (2005). *Leasing in development: Guidelines for emerging economies.* Accessible at: https://www.ifc.org

International Finance Corporation (2017). *Equipment leasing in Africa: Handbook of regional statistics, including an overview of 10 years of IFC leasing intervention in the region*. Accessible at: https://www.ifc.org/africaleasing

International Finance Corporation (2019). *Evaluation of leasing in India.* Accessible at: https://www.ifc.org

Isomura, K. (2021). *Management theory by Chester Barnard: An introduction.* Singapore: Springer Nature Singapore Pte Ltd.

Iyer, S. R., Sankaran, H. & Walsh, S. T. (2020). Influence of director expertise on capital structure and cash holdings in high-tech firms. *Technological Forecasting and Social Change.*

Jackson, T. H. & Kronman, A. T. (1979). Secured financing and priorities among creditors. *The Yale Law Journal*, 88 (6).

Jaszczuk, J., Bialek-Jaworska, A., Opolski, K., Sylwestrzak, M. & Trzpiola, K. (2018). Leasing puzzle in Polish small firms listed on the alternative market. *Central European Economic Journal*. doi: 10.2478/ceej-2018-0006

Jensen, M. C. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency cost and ownership structure. *Journal of Financial Economics*, 3, 305-360.

Jensen, M. C. (1986). Agency cost of free cash flow, corporate finance and takeovers. *American Economic Review*, 76, 323-329.

Jhangiani, R. S., Cuttler, C. & Dana C. Leighton, D. C. (2019). *Research methods in psychology* (4th ed.). Accessible at: http://www.saylor.org/site/textbooks/

Ji, S., Mauer, D. C. & Zhang, Y. (2019). Managerial entrenchment and capital structure: The effect of diversification. *Journal of Corporate Finance*. doi.org/10.1016/j.jcorpfin.2019.101505

Jiraporn, P., Kim, J. C., Kim, Y. S. & Kitsabunnarat, P. (2012). Capital structure and corporate governance quality: Evidence from the Institutional Shareholder Services (ISS). *International Review of Economics and Finance*, 22, 208-221.

Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in evaluation research. *Evaluation Research, 5*, 602-619.

Kajola, S. O., Olabisi, J. & Fapetu, O. (2019). Corporate governance mechanism and capital structure decision in Nigeria. *Izvestiya Journal of Varna University of Economics*, 63 (1), 50-68.

Kang, S. & Long, M. S. (2001). The fixed payment financing decision: To borrow or lease. *Review of Financial Economics*, 10 (1), 41.

Kenny, D. A. (2021). *Mediation*. Accessible at https://davidakenny.net/cm/mediate.htm

Khawaja, M., Bhatti, M. I. & Ashraf, D. (2018). Ownership and control in a double decision framework for raising capital. *Emerging Markets Review.* https://doi.org/10.1016/j.ememar.2019.100657

Kieschnick, R. & Moussawi, R. (2018). Firm age, corporate governance, and capital structure choice. *Journal of Corporate Finance*, 48, 597- 614.

KPMG (2017). Leases definition. Accessible at https://home.kpmg/xx/en/home/insights/2017/04/lease-definition-balance-sheet-test-ifrs16-270417.html

KPMG (2019). The Nigerian code of corporate governance 2018: Highlights and implications. Accessible at: https://home.kpmg/ng/en/home/insights/2019/01/2018-Nigerian-Code-of_Corporate-Governance.html

Kraus, A. & Litzenberger, R. H. (1973). A state-preference model of optimal financial Leverage. *Journal of Finance*, 28 (4), 911-922.

Krishnan, V. S. & Moyer, R. C. (1994). Bankruptcy costs and the financial leasing decision. *Financial Management*, 23 (2), 31-42.

Kumar (2017). *Perspectives on strategic finance.* Strategic Financial Management Casebook. Elsevier Inc.

Kumar, J. (2015). Capital structure and corporate governance. *Journal of Entrepreneurship and Organization Management*, 4 (3). doi:10.4172/2169-026X.1000143

Kurfi, A. K. (2005). Lease financing and liquidity and position of Nigerian manufacturing firms. *Bayero International Journal of Accounting Research*, 2 (1), 51-56.

Kyriazopoulos, G. (2017). Corporate governance and capital structure in the periods of financial distress. Evidence from Greece. *Investment Management and Financial Innovations*, 14(1-1), 254-262. doi:10.21511/imfi.14(1-1).2017.12

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. (2000). Agency problems and dividend policies around the world. *Journal of Finance*, 55, 1–33.

Lagendijk, A. & Hendrikx, B. (2009). *Foreign direct investment*. Elsevier Ltd.

Landry, S., Fortin, A. & Callimaci, A. (2013). Family firms and the decision to lease. *Journal of family Business Strategy*. doi:10.1016/j.jfbs.2013.03.003

Lardon, A., Deloof, M., Jorissen, A. (2017). Outside CEOs, board control and the financing policy of small privately held family firms. *Journal of Family Business Strategy*, 8, 29-41.

Lasfer, M. (2005). *Why do companies lease their real estate assets?* United Kingdom: Cass Business School, City University.

Lasfer, M. A. & Levis, M. (1998). Determinants of leasing decisions of small and large companies. *European Financial Management*, 4 (2), 159-184.

Lee, C. F. & Kuo, N. T. (2013). Effects of ultimate ownership structure and corporate tax on capital structures: Evidence from Taiwan. *International Review of Economics and Finance*, 29, 409-425.

Levi, M., Li, K., & Zhang, F. (2014). Director gender and mergers and acquisitions. *Journal of Corporate Finance*, 28, 85–200.

Lewis, C. M. & Schallheim, J. S. (1992). Are debt and leases substitutes? *Journal of Financial and Quantitative Analysis*, 27 (4), 497-511.

Li, F. Z. (2014). *An empirical analysis on the determinants of financial leasing: Evidence from public listed companies in mainland China.* Master thesis. National Sun Yat-sen University, China.

Liao, L. K., Mukherjee, T. & Wang, W. (2015). Corporate governance and capital structure dynamics: An empirical study. *The Journal of Financial Research*, 38 (2), 169–191.

Lin, J-R, Wang, C-J, Chou, D-W & Chueh, F-C (2013). Financial constraint and the choice between leasing and debt. *International Review of Economics and Finance*, 27, 171-182.

Lo, H.C., Ting, I. W. K., Kweh, Q. L. & Yang, M. J. (2016). Nonlinear association between ownership concentration and leverage: The role of family control. *International Review of Financial Analysis.* doi: 10.1016/j.irfa.2016.04.013

Lobez, F., De Bodt, E. & Filareto, M. C. (2001). Leasing decision, banking debt and moral hazard. *SSRN Electronic Journal*. DOI 10.2139/ssrn.264593

Lundqvist, S. A. (2015). Why firms implement risk governance: Stepping beyond traditional risk management to enterprise risk management. *Journal of Accounting and Public Policy*, 34, 441-466.

MacKinnon, D. P. (2011). Integrating mediators and moderators in research design. *Research on Social Work Practice*, 21(6), 675-681. doi: 10.1177/1049731511414148

Malik, Q. U. Z., Saeed, R., Ahmed, R. & Javed, M. (2012). Firm characteristics and leasing tendency of Pakistan listed companies. *Middle-East Journal of Scientific Research*, 12 (8), 1149-1156.

Mamman, S. (2006). *Accounting for leasing in Nigeria*. Phd Thesis, Ahmadu Bello University, Zaria. Nigeria.

Martın, P. S. & Hoffmann, P. S. (2017). Capital structure in the Chilean corporate sector: Revisiting the stylized facts. *Research in International Business and Finance*. http://dx.doi.org/10.1016/j.ribaf.2017.01.004

Mateeha, F. (2006). Differences and similarities between ijara and conventional operating lease contracts. *Market Forces*, 1 (4).

McDonnell, B. H. (2015). Corporate governance. *International Encyclopedia of the Social & Behavioral Sciences (2nd Ed.)*, 4. doi.org/10.1016/B978-0-08-097086-8.73019-4

Mehmetoglu, M. (2018). Medsem: A stata package for statistical mediation analysis. *International J. Computational Economics and Econometrics*, 8 (1), 63-78.

Mehran, H., Taggart, R. A. & Yermack, D. (1999). CEO ownership, leasing and debt financing. *Financial Management*, 31 (3), 5-14.

Mendes, R. P. (2015). *The role of lease financing*. Msc dissertation, Universidade Catolica, Portuguesa.

Mina, A & Lahr, H. (2018): *The pecking order of innovation finance.* LEM Working Paper Series: Paper No. 2018/31. Scuola Superiore Sant'Anna, Laboratory of Economics and Management (LEM), Pisa.

Mnzava, I. D. (2008). The significance of tax as a determinant of leasing: Evidence from UK tax changes. *Asia Pacific Business Review*, 4 (1), 0973-2470.

Modigliani, F. & Miller, H. M. (1963). Corporate income taxes and the cost of capital: A correction. *American Economic Review*, 53 (3), 433-443.

Mungami, S. E. (2013). *Determinants of lease financing decisions by non-financial firms quoted on Nairobi securities exchange, Kenya*. Ph.d. Thesis, Kenyatta University, Kenya.

Munir, Q., Kok, S. C., Teplova, T. & Li, T. (2017). Powerful CEOs, debt financing, and leasing in Chinese SMEs: Evidence from threshold model. *North American Journal of Economics and Finance*, 42, 487-503.

Musa-Mubi, A. & Badara, M. S. (2019). Lease-debt substitutability or complementarity. Evidence from listed non-financial firms in Nigeria. In M. S. H. Nazmudeen, F. Mohiddin, K. M. Kura, F. Kawi, K. Ismail, S. Wasiuzzaman, I. A. Salihu, L. Su & F. Ibrahim (Eds.), *Proceedings of 1st International Conference on Business, Management and Information Systems 2019* (pp. 407-422). Brunei: UTB School of Business.

Musa-Mubi, A. (2017). *Effect of firm-specific attributes on finance lease use in listed non-financial firms in Nigeria*. M.Sc. Dissertation, Ahmadu Bello University, Zaria, Nigeria.

Myers, S. C. & Majluf, N. S. (1984). Corporate financing decision where firms have information investors do not. *Journal of Financial Economics*, 13, 187-220.

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5 (2), 147-175.

Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39 (3), 575-592.

National Assembly of Nigeria (2004). Banks and Other Financial Institutions Act of Nigeria. Accessible at: https://www.cbn.gov.ng/OUT/PUBLICATIONS/BSD/1991/BOFIA

Nejad, N. R. & Wasiuzzaman, S. (2015). Multilevel determinants of capital structure: Evidence from Malaysia. *Global Business Review*, 16(2) 199–212.

Neuberger, D. & Rathke-Doppner, S. (2012). *Leasing by small enterprises*. Thunen Series of Applied Economic Theory: Working Paper No. 122. Universitat Rostcok.

Nguyen, T., Bai, M., Hou, Y. & Vu, M. C. (2020). Corporate governance and dynamic capital structure: Evidence from Vietnam. *Global Finance Journal.* https://doi.org/10.1016/j.gfj.2020.100554

Nwanji, T. I. & Howell, K. E. (2007). A review of the two main competing models of corporate governance: The shareholdership model versus the stakeholdership model. *Corporate Ownership & Control*, 5 (1), 9-23.

Nweze, C. (2020, December 25). CBN debits 23 banks N349.72b for CRR breach, *The Nation Newspaper Online*. Retrieved from https://thenationonlineng.net/cbn-debits-23-banks-n349-72b-for-crr-breach/

Nyamita, M. O., Garbharran, H. L. & Dorasamy, N. (2014). Factors influencing debt financing decisions of corporations- theoretical and empirical literature review. *Problems and Perspectives in Management*, 12 (4), 189-202.

Obigbemi, I. F., Omolehinwa, E. O., Mukoro, D. O, Ben-Caleb, E. & Olusanmi, O. A. (2016). Earnings management and board structure: Evidence from Nigeria. *Sage Open*, 1-15. doi: 10.1177/2158244016667992

Oko, A. E. N. & Essien, E. E. (2014). The prospects and challenges of market segmentation practice in the equipment leasing industry of Nigeria, 2000-2013. *Journal of Business Theory and Practice*, 2 (1).

Oko, A. E. N. & Egwu, U. E. (2014). Impact of psychology of ownership of assets on lease consumption in Nigeria. *International Journal of Innovative and Applied Research*, 2(3), 47- 59.

Oko, A. E. N. & Isu, H. O. (2013). Strategies for lease volume enhancement: Study of the Nigerian lease market, 2001-2011. *International Business Research*, 6 (8).

Omoshagba, T. P. & Zubairu, U. M. (2018). A systematic review of the field of debt financing. *Covenant Journal of Entrepreneurship (CJoE)*, 2 (1), 34-49.

Organisation for Economic Cooperation and Development (1999). *Principles of corporate governance*. Paris: OECD.

Otabor-Olubor, I. (2017, July 4-6). *The next frontier for finance leasing in sub-saharan Africa: Revisiting secured transactions law in Nigeria* [Paper Presentation].

Modernizing International Trade Law to Support Innovation and Sustainable Development, Vienna, Austria.

Paine, L. S. & Srinivasan, S. (2019). A guide to the big ideas and debates in corporate governance. Harvard Business Review. Accessible at: https://www.hbr.org

Pancheva, S. (2015). Accounting concept of lease contracts. *Balkan and Near Eastern Journal of Social Sciences*, 1 (1).

Panda, B. & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Governance*. doi: 10.1177/0974686217701467

Park, S. H., Suh, J. & Yeung, B. (2013). Do multinationals and domestic corporations differ in their leverage policies? *Journal of Corporate Finance*, 20, 115-139.

Park, Y. S., Konge, L. & Artino, A. R. (2020). The positivism paradigm of research. *Academic Medicine*, 95 (5), 690-694.

Phillips, O., Amadi, M., Somuyiwa, S. & Onakoya, O. (2019). Nigeria. In Calkoen, W. J. L. (Ed.), *The Corporate Governance Review* (9th ed., pp. 273-283). London: Law Business Research Ltd.

Poletti-Hughes, J. & Briano-Turrent, G. C. (2019). Gender diversity on the board of directors and corporate risk: A behavioural agency theory perspective. *International Review of Financial Analysis*, 62, 80–90.

Purag, M. B., Abdullah, A. B. & Bujang, I. (2016). Corporate governance and capital structure of Malaysian family-owned companies. *Journal of Business and Retail Management Research (JBRMR)*, 11 (1), 18-30.

Rahman, S. & Sankaran, H. (2016). Are leases and debt substitutes? Evidence from capital structure adjustment. doi:10.2139/ssrn.2825322

Rajan, R. G. & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *Journal of Finance*, 50 (5), 1421-1460.

Ramalho, J. J. S., Rita, R. M. S. & Da Silva, J. V. (2018). The impact of family ownership on capital structure of firms: Exploring the role of zero-leverage, size, location and the global financial crisis. *International Small Business Journal: Researching Entrepreneurship*, 1-31.

Rampini, A. A. & Viswanathan, S. (2013). Collateral and capital structure. *Journal of Financial Economics*, 109 (2), 466–492.

Rauh, J. D. & Sufi, A. (2010). Capital structure and debt structure. *Review of financial Studies, Society for Financial Studies*, 23 (12), 4242-4280.

Rehman, M, A., Rehman, R. U., & Raoof, A. (2010). Does corporate governance lead to a change in the capital structure? *American Journal of Social and Management Sciences*. doi:10.5251/ajsms.2010.1.2.191.195.

Revised Guidelines for Finance Companies in Nigeria (2014). http://www.cenbank.org/.../OFIDcirculars.pdf

Robicheaux, S. H., Fu, X. & Ligon, J. A. (2008). Lease financing and corporate governance. T*he Financial Review*, 43, 403-407.

Ruan, W., Tian, G. & Ma, S. (2011). Managerial ownership, capital structure and firm value: Evidence from China's civilian-run firms. AAFB, 5 (3), 73-92.

Ryan, G. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse Researcher*, 25(4), 41-49.

Saona, P., Vallelado, E. & Martin, P. S. (2019). Debt, or not debt, that is the question: A shakespearean question to a corporate decision. *Journal of Business Research*. doi.org/10.1016/j.jbusres.2019.09.061

Schallheim, J., Wells, K. & Whitby, R. J. (2013). Do leases expand debt capacity? *Journal of Corporate Finance*, 23, 368-381. doi: 10.1016/j.jcorpfin.2013.09.004

Schmidt, A. F. & Finan, C. (2018). Linear regression and the normality assumption. *Journal of Clinical Epidemiology*, 98, 146-151.

Securities and Exchange Commission (2011). Code of corporate governance for public companies in Nigeria. Accessible at: https://sec.gov.ng

Securities and Exchange Commission (2018). Nigerian code of corporate governance. Accessible at: https://nambnigeria.org

Securities and Exchange Commission. (2003). *Code of corporate governance in Nigeria*. Lagos, Nigeria: Corporate Affairs Commission.

Short, M. (1994). Ownership control, financial structure and performance of firms. *Journal of Economic Surveys*, 8 (3), 203-49.

Sila, V., Gonzalez, A., Hagendorff, J. (2015). Women on board: Does boardroom gender diversity affect firm risk? *Journal of Corporate Finance.* doi: 10.1016/j.jcorpfin.2015.10.003

Singh, A. (2013). Is leasing a substitute or complement to debt? Evidence from the restaurant and retail industry. *Journal of Hospitality & Tourism Research*, 37 (2), 155-183. doi: 10.1177/1096348011425501

Siromi, B. & Chandrapala, P. (2017). The effect of corporate governance on firms' capital structure of listed companies in Sri Lanka. *Journal of Competitiveness*, 9 (2), 19-33.

Sivathaasan, N., Ali, S., Liu, B. & Haung, A. (2016). Stock liquidity, corporate governance and leverage: New panel evidence. *Pacific-Basin Finance Journal*, doi:10.1016/j.pacfin.2016.11.004

Slotty, F. C. (2009). *Financial constraints and the decision to lease: Evidence from German SMEs*. Goethe University Frankfurt, House of Finance, Germany

Smith, C. W. & Wakeman, L. M. (1985). Determinants of corporate leasing policy. *The Journal of Finance*, 40 (3), 895-908.

Smith, C. W. & Warner, J. B. (1979). On financial contracting: An analysis of bond covenants. *Journal of Financial Economics*, 7 (2), 117-161.

Solifi (2023). *2023 Global leasing report: Innovation and resilience drive growth in the global leasing markets*. Accessible at: www.solifi.com

Song, J. H. & Lim, D. H. (2015). Mediating analysis approaches: Trends and implications for advanced applications in HRD research. *Advances in Developing Human Resources*, 17 (1), 57-71. doi: 10.1177/1523422314559807

Srinidhi, B., Sun, Y., Zhang, H. & Chen, S. (2020). How do female directors improve board governance? A mechanism based on norm changes. *Journal of Contemporary Accounting and Economics*. doi.org/10.1016/j.jcae.2019.100181

StataCorp. (2021). *Stata: Release 17. Statistical Software*. College Station, TX: StataCorp LLC.

Stojanovic, S. & Guzovski, M. (2013). The significance and role of leasing in corporate financing in republic of Croatia. *Interdisciplinary Management Research*, 9, 539-549.

Sun, J., Ding, L., Guo, J. M. & Li, Y. (2015). Ownership, capital structure and financing decision: Evidence from the UK. *The British Accounting Review*. http://dx.doi.org/10.1016/j.bar.2015.04.001

Tanaka, T. (2014). Gender diversity in the boards and the pricing of publicly traded corporate debt: Evidence from Japan. *Applied Financial Economics*, *24*(4), 247–258.

Thomson, S. (2005). The role of leasing in UK corporate financing decisions. Discussion Paper. Heriot-Watt University, Edinburgh.

United States (2002). Sarbanes-Oxley Act of 2002: Conference report (to accompany H. R. 3763). Washington, D. C.: U.S. G.P.O.

Useem, M. & Davis, G. F. (2015). Stockholders' ownership and control. *International Encyclopedia of the Social & Behavioral Sciences (2nd Ed.)*, 23. doi.org/10.1016/B978-0-08-097086-8.73084-4

Uwuigbe, O. R. (2013). The effects of board size and CEO duality on firms' capital structure: A study of selected listed firms in Nigeria. *Asian Economic and Financial Review*, 3 (8), 1033-1043.

Uwuigbe, U. (2014). Corporate governance and capital structure: Evidence from listed firms in Nigeria stock exchange. *Journal of Accounting and Management*, 4(1), 5-14.

Venturini, S. & Mehmetoglu, M. (2019). Plssem: A Stata package for structural equation modeling with partial least squares. *Journal of Statistical Software*, 88 (8).

Veron, N. & Wolff, G. B. (2016). Capital markets union: A vision for the long term. *Journal of Financial Regulation*, 2 (1), 130-153.

Walters, B. A., Kroll, M. & Wright, P. (2008). CEO ownership and effective boards: Impacts on firm outcomes. *Strategic Organisation*, 6 (3), 259-283. doi: 10.1177/1476127008093519

White Clarke Group (2020). *Global leasing report 2020: From strength to strength, nine years of continuous growth in leasing*. Accessible at: www.world-leasing-yearbook.com

Wojcik, D. (2009). *Governance, corporate*. Elsevier Ltd.

Wolck, H. I., Dodd, J. L. & Rozycki, J. J. (2017). *Accounting theory: Conceptual issues in a political and economic environment* (9th ed.). Sage Publishers Inc.

World Leasing Review (2022, Winter). Accessible at: https://www.world-leasing-yearbook.com/world-leasing-review/

Yan, A. (2006). Leasing and debt financing: Substitutes or complements? *Journal of Financial and Quantitative Analysis*, 41 (3), 709-731.

Yau, J. & Tan, H. (2017). *CEO personal attributes and corporate leasing decisions*. Durham e-theses. Durham University.

Zhang, Y., 2009. Are debt and incentive compensation substitutes in controlling the free cash flow agency problem? *Financial Management*, 38 (3), 507–541.

Zhang, S. & Liu, C. (2020). State ownership and the structuring of lease arrangements. *Journal of Corporate Finance*. https://doi.org/10.1016/j.jcorpfin.2020.101597

Zhou, L. (2014). *Agency costs, CEO compensation and leasing activities*. Phd Thesis, University of Arlington, Texas.

Appendices

RESULTS

DESCRIPTIVE STATISTICS

```
. summarize leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control
```

Variable	Obs	Mean	Std. Dev.	Min	Max
leases	285	.0150672	.0553804	0	.4444362
bsize	285	8.6	2.316809	4	15
bind	285	.7525913	.1140603	.375	1
bgd	285	.1752928	.1449665	0	.6666667
spbc	285	.6736842	.4696891	0	1
mgrown	285	27.35104	31.12404	0	98.24
forgnown	285	21.38633	29.70867	0	83.81
instown	285	.4982456	.5008764	0	1
ownconc	285	47.79288	22.49772	5.63	89.85
finlev	285	.1793559	.2235272	0	1.894162
prof_control	285	.1295984	.3510106	-4.433086	1.013099
firm_size_~l	285	7.427559	.8650099	5.342168	9.378764
growth_opp~l	285	9.763179	32.74667	-74.39074	182.2137

```
.
```

```
. summarize leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control totalassets firm_size_control growth_opp_contro
> l
```

Variable	Obs	Mean	Std. Dev.	Min	Max
leases	285	.0150672	.0553804	0	.4444362
bsize	285	8.6	2.316809	4	15
bind	285	.7525913	.1140603	.375	1
bgd	285	.1752928	.1449665	0	.6666667
spbc	285	.6736842	.4696891	0	1
mgrown	285	27.35104	31.12404	0	98.24
forgnown	285	21.38633	29.70867	0	83.81
instown	285	.4982456	.5008764	0	1
ownconc	285	47.79288	22.49772	5.63	89.85
finlev	285	.1793559	.2235272	0	1.894162
prof_control	285	.1295984	.3510106	-4.433086	1.013099
totalassets	285	1.51e+08	3.43e+08	219871	2.39e+09
firm_size_~l	285	7.427559	.8650099	5.342168	9.378764
growth_opp~l	285	9.763179	32.74667	-74.39074	182.2137

```
.
```

SHAPIRO WILK NORMALITY TEST

```
. swilk leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control totalassets firm_size_control growth_opp_control
```

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
leases	285	0.41052	120.010	11.210	0.00000
bsize	285	0.97479	5.133	3.830	0.00006
bind	285	0.98043	3.984	3.237	0.00060
bgd	285	0.97030	6.046	4.213	0.00001
spbc	285	0.99601	0.812	-0.488	0.68718
mgrown	285	0.80952	38.780	8.565	0.00000
forgnown	285	0.82723	35.174	8.337	0.00000
instown	285	0.99968	0.065	-6.415	1.00000
ownconc	285	0.94052	12.109	5.840	0.00000
finlev	285	0.69080	62.949	9.699	0.00000
prof_control	285	0.55201	91.206	10.568	0.00000
totalassets	285	0.47174	107.548	10.954	0.00000
firm_size_~l	285	0.98673	2.701	2.326	0.01000
growth_opp~l	285	0.93737	12.751	5.961	0.00000

```
.
```

CORRELATION MATRIX

```
. pwcorr leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, star (0.05)
> sig
```

	leases	bsize	bind	bgd	spbc	mgrown	forgnown
leases	1.0000						
bsize	0.0105 0.8604	1.0000					
bind	0.1367* 0.0210	0.1119 0.0592	1.0000				
bgd	0.1240* 0.0364	-0.1954* 0.0009	0.0782 0.1878	1.0000			
spbc	-0.2279* 0.0001	-0.0104 0.8618	0.0900 0.1296	-0.0772 0.1938	1.0000		
mgrown	-0.1217* 0.0400	0.0159 0.7892	0.0936 0.1150	-0.0121 0.8394	0.1363* 0.0213	1.0000	
forgnown	-0.0010 0.9869	0.2884* 0.0000	0.0073 0.9017	-0.0683 0.2502	0.0489 0.4109	-0.3049* 0.0000	1.0000
instown	-0.0637 0.2841	0.0237 0.6907	0.1875* 0.0015	0.0763 0.1988	0.0200 0.7366	-0.0029 0.9616	0.2278* 0.0001
ownconc	-0.1028 0.0831	0.0993 0.0944	0.0360 0.5446	-0.0105 0.8594	0.1300* 0.0283	0.0817 0.1688	0.4264* 0.0000
finlev	0.2153* 0.0002	0.1477* 0.0126	0.0491 0.4088	-0.2816* 0.0000	-0.0001 0.9990	-0.0431 0.4683	-0.0707 0.2339
prof_control	-0.2494* 0.0000	0.2990* 0.0000	0.0076 0.8987	-0.0071 0.9055	0.1360* 0.0216	0.0587 0.3237	0.1623* 0.0060
firm_size_~l	-0.0887 0.1354	0.5950* 0.0000	0.0453 0.4463	-0.0551 0.3542	-0.0635 0.2857	-0.0708 0.2338	0.4048* 0.0000
growth_opp~l	-0.0423 0.4773	0.1282* 0.0305	-0.0001 0.9982	0.0029 0.9605	-0.0633 0.2865	-0.0683 0.2504	-0.0106 0.8588

	instown	ownconc	finlev	prof_c~l	firm_s~l	growth~l
instown	1.0000					
ownconc	-0.0340 0.5677	1.0000				
finlev	-0.1782* 0.0025	-0.0447 0.4524	1.0000			
prof_control	0.0766 0.1971	0.2304* 0.0001	-0.2175* 0.0002	1.0000		
firm_size_~l	0.1219* 0.0398	0.3304* 0.0000	0.1413* 0.0170	0.2395* 0.0000	1.0000	
growth_opp~l	0.0739 0.2136	0.0534 0.3687	0.0228 0.7013	0.2290* 0.0001	0.2300* 0.0001	1.0000

.

SEM CORRELATION MATRIX

```
. sem bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, standardized

Exogenous variables

Observed:  bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control

Fitting target model:

Iteration 0:   log likelihood = -6293.9695
Iteration 1:   log likelihood = -6293.9695

Structural equation model                       Number of obs      =       285
Estimation method  = ml
Log likelihood     = -6293.9695
```

Standardized	Coef.	OIM Std. Err.	z	P>|z|	[95% Conf.	Interval]
mean(bsize)	3.718531	.1666358	22.32	0.000	3.391931	4.045131
mean(bind)	6.609793	.2831197	23.35	0.000	6.054888	7.164697
mean(bgd)	1.211322	.0779935	15.53	0.000	1.058458	1.364187
mean(spbc)	1.436842	.0844437	17.02	0.000	1.271336	1.602349
mean(mgrown)	.8803211	.0697736	12.62	0.000	.7435673	1.017075
mean(forgnown)	.7211345	.0664915	10.85	0.000	.5908137	.8514554
mean(instown)	.9964974	.072463	13.75	0.000	.8544725	1.138522
mean(ownconc)	2.128079	.1070229	19.88	0.000	1.918318	2.33784
mean(finlev)	.8038011	.0681342	11.80	0.000	.6702604	.9373417
mean(prof_control)	.3698645	.0612272	6.04	0.000	.2498613	.4898676
mean(firm_size_control)	8.601779	.3651258	23.56	0.000	7.886146	9.317413
mean(growth_opp_control)	.2986671	.0605414	4.93	0.000	.1800081	.4173262
cov(bsize,bind)	.1119094	.058493	1.91	0.056	-.0027349	.2265537
cov(bsize,bgd)	-.195449	.0569721	-3.43	0.001	-.3071122	-.0837857
cov(bsize,spbc)	-.0103545	.0592285	-0.17	0.861	-.1264403	.1057313
cov(bsize,mgrown)	.015902	.0592199	0.27	0.788	-.1001669	.1319708
cov(bsize,forgnown)	.2884311	.054307	5.31	0.000	.1819913	.3948708
cov(bsize,instown)	.0236677	.0592017	0.40	0.689	-.0923656	.1397009
cov(bsize,ownconc)	.0992627	.0586512	1.69	0.091	-.0156916	.2142171
cov(bsize,finlev)	.1476558	.0579434	2.55	0.011	.0340887	.2612228
cov(bsize,prof_control)	.2990193	.0539385	5.54	0.000	.1933017	.4047369
cov(bsize,firm_size_control)	.5950265	.0382624	15.55	0.000	.5200336	.6700194
cov(bsize,growth_opp_control)	.1282026	.0582613	2.20	0.028	.0140125	.2423926
cov(bind,bgd)	.0782379	.0588723	1.33	0.184	-.0371497	.1936255
cov(bind,spbc)	.0899903	.0587552	1.53	0.126	-.0251677	.2051484
cov(bind,mgrown)	.0935594	.0587164	1.59	0.111	-.0215226	.2086414
cov(bind,forgnown)	.0073478	.0592317	0.12	0.901	-.1087441	.1234398
cov(bind,instown)	.1874521	.0571535	3.28	0.001	.0754334	.2994709
cov(bind,ownconc)	.0360344	.059158	0.61	0.542	-.0799131	.1519819
cov(bind,finlev)	.0491184	.059092	0.83	0.406	-.0666997	.1649366
cov(bind,prof_control)	.0075703	.0592315	0.13	0.898	-.1085213	.1236619
cov(bind,firm_size_control)	.045293	.0591134	0.77	0.444	-.0705671	.1611531
cov(bind,growth_opp_control)	-.0001368	.0592349	-0.00	0.998	-.116235	.1159615
cov(bgd,spbc)	-.0772037	.0588818	-1.31	0.190	-.1926099	.0382026
cov(bgd,mgrown)	-.0120549	.0592263	-0.20	0.839	-.1281363	.1040264
cov(bgd,forgnown)	-.0683262	.0589584	-1.16	0.247	-.1838825	.04723
cov(bgd,instown)	.0763341	.0588897	1.30	0.195	-.0390877	.1917558
cov(bgd,ownconc)	-.0105405	.0592283	-0.18	0.859	-.1266258	.1055449
cov(bgd,finlev)	-.281606	.0545374	-5.16	0.000	-.3884974	-.1747146
cov(bgd,prof_control)	-.0070615	.0592319	-0.12	0.905	-.123154	.1090309
cov(bgd,firm_size_control)	-.0550749	.0590552	-0.93	0.351	-.1708209	.0606712
cov(bgd,growth_opp_control)	.0029443	.0592344	0.05	0.960	-.1131529	.1190416
cov(spbc,mgrown)	.1363339	.0581339	2.35	0.019	.0223936	.2502742
cov(spbc,forgnown)	.0488971	.0590933	0.83	0.408	-.0669236	.1647178
cov(spbc,instown)	.0200088	.0592112	0.34	0.735	-.096043	.1360606
cov(spbc,ownconc)	.1299521	.0582346	2.23	0.026	.0158145	.2440897
cov(spbc,finlev)	-.0000779	.0592349	-0.00	0.999	-.1161762	.1160203
cov(spbc,prof_control)	.1360157	.058139	2.34	0.019	.0220653	.2499661
cov(spbc,firm_size_control)	-.0634552	.0589964	-1.08	0.282	-.179086	.0521755
cov(spbc,growth_opp_control)	-.0633461	.0589972	-1.07	0.283	-.1789785	.0522863

cov(mgrown,forgnown)	-.3049216	.0537274	-5.68	0.000	-.4102254	-.1996179
cov(mgrown,instown)	-.0028672	.0592344	-0.05	0.961	-.1189645	.1132301
cov(mgrown,ownconc)	.0817268	.0588392	1.39	0.165	-.033596	.1970496
cov(mgrown,finlev)	-.0431249	.0591247	-0.73	0.466	-.1590073	.0727574
cov(mgrown,prof_control)	.0586613	.0590311	0.99	0.320	-.0570375	.17436
cov(mgrown,firm_size_control)	-.0707509	.0589384	-1.20	0.230	-.186268	.0447662
cov(mgrown,growth_opp_control)	-.0682999	.0589586	-1.16	0.247	-.1838566	.0472567
cov(forgnown,instown)	.2278484	.0561597	4.06	0.000	.1177774	.3379194
cov(forgnown,ownconc)	.4263552	.0484672	8.80	0.000	.3313612	.5213493
cov(forgnown,finlev)	-.0707335	.0589385	-1.20	0.230	-.1862508	.0447839
cov(forgnown,prof_control)	.1623112	.0576743	2.81	0.005	.0492716	.2753509
cov(forgnown,firm_size_control)	.4047835	.0495293	8.17	0.000	.3077079	.5018591
cov(forgnown,growth_opp_control)	-.010583	.0592283	-0.18	0.858	-.1266683	.1055022
cov(instown,ownconc)	-.0339872	.0591665	-0.57	0.566	-.1499514	.0819769
cov(instown,finlev)	-.1781825	.0573542	-3.11	0.002	-.2905948	-.0657703
cov(instown,prof_control)	.0766295	.0588871	1.30	0.193	-.038787	.192046
cov(instown,firm_size_control)	.1218841	.0583549	2.09	0.037	.0075105	.2362576
cov(instown,growth_opp_control)	.0738905	.0589115	1.25	0.210	-.0415738	.1893549
cov(ownconc,finlev)	-.0446808	.0591166	-0.76	0.450	-.1605473	.0711856
cov(ownconc,prof_control)	.2304352	.0560895	4.11	0.000	.1205018	.3403686
cov(ownconc,firm_size_control)	.330427	.0527675	6.26	0.000	.2270046	.4338494
cov(ownconc,growth_opp_control)	.0534437	.0590657	0.90	0.366	-.0623229	.1692104
cov(finlev,prof_control)	-.2175431	.0564316	-3.85	0.000	-.328147	-.1069392
cov(finlev,firm_size_control)	.1412636	.0580528	2.43	0.015	.0274822	.2550451
cov(finlev,growth_opp_control)	.0228183	.059204	0.39	0.700	-.0932195	.1388561
cov(prof_control,firm_size_control)	.2395228	.0558365	4.29	0.000	.1300852	.3489603
cov(prof_control,growth_opp_control)	.2290186	.056128	4.08	0.000	.1190097	.3390276
cov(firm_size_control,growth_opp_control)	.2300303	.0561005	4.10	0.000	.1200752	.3399853

LR test of model vs. saturated: chi2(0) = 0.00, Prob > chi2 = .

.

LINEAR REGRESSION RESULTS (MODELS 1-4)

MODEL 1: CORPORATE GOVERNANCE MECHANISMS AND LEASING

```
3-user 8-core Stata network perpetual license:
       Serial number:  501306208483
         Licensed to:  Aliya Mubi
                       ABU Zaria

Notes:
      1.  (/v# option or -set maxvar-) 5000 maximum variables

. *(17 variables, 285 observations pasted into data editor)

. regress leases bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control
```

Source	SS	df	MS		
Model	.151568319	11	.013778938	Number of obs	= 285
Residual	.719457602	273	.002635376	F(11, 273)	= 5.23
				Prob > F	= 0.0000
Total	.871025921	284	.003066993	R-squared	= 0.1740
				Adj R-squared	= 0.1407
				Root MSE	= .05134

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0040005	.001789	2.24	0.026	.0004785	.0075226
bind	.0770616	.0278522	2.77	0.006	.0222293	.1318939
bgd	.0490969	.0217959	2.25	0.025	.0061875	.0920062
spbc	-.0231959	.0067621	-3.43	0.001	-.0365083	-.0098835
mgrown	-.0001486	.0001097	-1.35	0.177	-.0003647	.0000674
forgnown	.0001418	.0001375	1.03	0.303	-.0001289	.0004125
instown	-.009311	.0066126	-1.41	0.160	-.0223292	.0037072
ownconc	-.0000438	.0001672	-0.26	0.793	-.000373	.0002853
prof_control	-.0368326	.0096532	-3.82	0.000	-.0558369	-.0178284
firm_size_control	-.0108621	.0049266	-2.20	0.028	-.0205611	-.0011632
growth_opp_control	.0000308	.0000993	0.31	0.757	-.0001647	.0002264
_cons	.0226067	.0355188	0.64	0.525	-.0473189	.0925323

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of leases

         chi2(1)      =   272.26
         Prob > chi2  =   0.0000

. xtset firmid year
       panel variable:  firmid (unbalanced)
        time variable:  year, 2012 to 2021, but with gaps
                delta:  1 unit
```

```
. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1393                         Obs per group: min =         1
       between = 0.0035                                        avg =       5.4
       overall = 0.0012                                        max =        10

                                                F(11,221)          =      3.25
corr(u_i, Xb)  = -0.3987                        Prob > F           =    0.0004
```

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0004866	.0016789	0.29	0.772	-.0028222	.0037954
bind	-.019064	.0319085	-0.60	0.551	-.0819478	.0438198
bgd	.0098428	.0236296	0.42	0.677	-.0367255	.056411
spbc	.0029646	.006289	0.47	0.638	-.0094296	.0153587
mgrown	.000205	.000123	1.67	0.097	-.0000374	.0004474
forgnown	-.0002927	.000266	-1.10	0.272	-.0008169	.0002314
instown	.0338859	.0069955	4.84	0.000	.0200995	.0476723
ownconc	.0001893	.0003001	0.63	0.529	-.0004021	.0007808
prof_control	-.0172206	.0115994	-1.48	0.139	-.0400801	.0056389
firm_size_control	-.0061069	.0130271	-0.47	0.640	-.03178	.0195663
growth_opp_control	-.000021	.0000509	-0.41	0.681	-.0001213	.0000793
_cons	.0440238	.0942066	0.47	0.641	-.1416345	.2296821
sigma_u	.06573284					
sigma_e	.0237259					
rho	.88473582	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 221) =    20.33             Prob > F = 0.0000

. estimate store fe1

. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1131                         Obs per group: min =         1
       between = 0.1257                                        avg =       5.4
       overall = 0.0181                                        max =        10

                                                Wald chi2(11)      =     33.93
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0004
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.001014	.0015999	0.63	0.526	-.0021216	.0041497
bind	-.0035246	.0292602	-0.12	0.904	-.0608736	.0538243
bgd	.0163713	.021721	0.75	0.451	-.0262011	.0589438
spbc	-.0013925	.0059371	-0.23	0.815	-.013029	.010244
mgrown	.0000694	.0001126	0.62	0.538	-.0001514	.0002901
forgnown	-.0000571	.0001985	-0.29	0.774	-.0004461	.000332
instown	.0242175	.0065596	3.69	0.000	.0113609	.0370741
ownconc	.0000839	.0002395	0.35	0.726	-.0003854	.0005533
prof_control	-.0342036	.0085329	-4.01	0.000	-.0509278	-.0174794
firm_size_control	.0001577	.0077141	0.02	0.984	-.0149616	.015277
growth_opp_control	-1.36e-06	.0000505	-0.03	0.979	-.0001003	.0000976
_cons	-.0047721	.0564062	-0.08	0.933	-.1153261	.105782
sigma_u	.0507509					
sigma_e	.0237259					
rho	.82064506	(fraction of variance due to u_i)				

```
. estimate store re1
```

```
. hausman fe1 re1
```

	Coefficients (b) fe1	(B) re1	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bsize	.0004866	.001014	-.0005274	.0005092
bind	-.019064	-.0035246	-.0155394	.0127276
bgd	.0098428	.0163713	-.0065286	.0093036
spbc	.0029646	-.0013925	.0043571	.0020743
mgrown	.000205	.0000694	.0001356	.0000494
forgnown	-.0002927	-.0000571	-.0002357	.000177
instown	.0338859	.0242175	.0096684	.0024307
ownconc	.0001893	.0000839	.0001054	.0001809
prof_control	-.0172206	-.0342036	.016983	.0078571
firm_size_~l	-.0061069	.0001577	-.0062646	.0104975
growth_opp~l	-.000021	-1.36e-06	-.0000196	6.27e-06

```
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                 chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       71.47
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)

.

. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1393                         Obs per group: min =         1
       between = 0.0035                                        avg =       5.4
       overall = 0.0012                                        max =        10

                                                F(11,221)          =      3.25
corr(u_i, Xb)  = -0.3987                        Prob > F           =    0.0004
```

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0004866	.0016789	0.29	0.772	-.0028222	.0037954
bind	-.019064	.0319085	-0.60	0.551	-.0819478	.0438198
bgd	.0098428	.0236296	0.42	0.677	-.0367255	.056411
spbc	.0029646	.006289	0.47	0.638	-.0094296	.0153587
mgrown	.000205	.000123	1.67	0.097	-.0000374	.0004474
forgnown	-.0002927	.000266	-1.10	0.272	-.0008169	.0002314
instown	.0338859	.0069955	4.84	0.000	.0200995	.0476723
ownconc	.0001893	.0003001	0.63	0.529	-.0004021	.0007808
prof_control	-.0172206	.0115994	-1.48	0.139	-.0400801	.0056389
firm_size_control	-.0061069	.0130271	-0.47	0.640	-.03178	.0195663
growth_opp_control	-.000021	.0000509	-0.41	0.681	-.0001213	.0000793
_cons	.0440238	.0942066	0.47	0.641	-.1416345	.2296821
sigma_u	.06573284					
sigma_e	.0237259					
rho	.88473582	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 221) =    20.33             Prob > F = 0.0000

.


. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (53)  =    5.4e+35
Prob>chi2 =      0.0000
```

```
. xtistest

Inoue and Solo (2006) LM-test as postestimation
Panelvar: firmid
Timevar: year
p (lags): 2
```

Variable	IS-stat	p-value	N	maxT	balance?
Post Estimation	15.48	0.561	53	10	gaps

```
 Notes: Under H0, LM ~ chi2(p*T-p(p+1)/2)
    H0: No auto-correlation of any order.
    Ha: Auto-correlation up to order 2.


. xtpcse leases bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, hetonly

Number of gaps in sample:  7

Linear regression, heteroskedastic panels corrected standard errors

Group variable:   firmid                       Number of obs      =       285
Time variable:    year                         Number of groups   =        53
Panels:           heteroskedastic (unbalanced) Obs per group: min =         1
Autocorrelation:  no autocorrelation                            avg =  5.377358
                                                                max =        10
Estimated covariances      =        53         R-squared          =    0.1740
Estimated autocorrelations =         0         Wald chi2(11)      =     31.58
Estimated coefficients     =        12         Prob > chi2        =    0.0009
```

leases	Coef.	Het-corrected Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.0040005	.0013986	2.86	0.004	.0012593	.0067417
bind	.0770616	.0296085	2.60	0.009	.0190299	.1350933
bgd	.0490969	.0209284	2.35	0.019	.0080779	.0901158
spbc	-.0231959	.0089953	-2.58	0.010	-.0408264	-.0055654
mgrown	-.0001486	.0000688	-2.16	0.031	-.0002835	-.0000138
forgnown	.0001418	.0001153	1.23	0.219	-.0000842	.0003677
instown	-.009311	.0080313	-1.16	0.246	-.0250519	.00643
ownconc	-.0000438	.0001094	-0.40	0.689	-.0002582	.0001705
prof_control	-.0368326	.0115222	-3.20	0.001	-.0594158	-.0142495
firm_size_control	-.0108621	.0055969	-1.94	0.052	-.0218318	.0001075
growth_opp_control	.0000308	.0001258	0.25	0.806	-.0002157	.0002773
_cons	.0226067	.0441046	0.51	0.608	-.0638367	.1090502

MODEL 2: CORPORATE GOVERNANCE MECHANISMS AND FINANCIAL LEVERAGE

```
. regress finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control
```

Source	SS	df	MS		
Model	3.09403299	11	.281275727	Number of obs	= 285
Residual	11.0958646	273	.040644193	F(11, 273)	= 6.92
				Prob > F	= 0.0000
Total	14.1898976	284	.049964428	R-squared	= 0.2180
				Adj R-squared	= 0.1865
				Root MSE	= .2016

finlev	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0085445	.0070258	1.22	0.225	-.005287	.0223761
bind	.1664765	.1093797	1.52	0.129	-.0488584	.3818114
bgd	-.3957216	.0855958	-4.62	0.000	-.5642333	-.2272099
spbc	.0219283	.0265557	0.83	0.410	-.0303517	.0742083
mgrown	-.0005003	.0004309	-1.16	0.247	-.0013487	.0003481
forgnown	-.0010138	.00054	-1.88	0.062	-.0020768	.0000492
instown	-.0688668	.0259688	-2.65	0.008	-.1199912	-.0177423
ownconc	-.0001428	.0006567	-0.22	0.828	-.0014356	.00115
prof_control	-.1709503	.0379098	-4.51	0.000	-.2455829	-.0963176
firm_size_control	.0523792	.0193476	2.71	0.007	.0142898	.0904687
growth_opp_control	.0002457	.0003901	0.63	0.529	-.0005222	.0010136
_cons	-.2576132	.1394879	-1.85	0.066	-.5322218	.0169955

```
.


Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of finlev

         chi2(1)      =    45.00
         Prob > chi2  =   0.0000


. xtreg finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.0978                         Obs per group: min =         1
       between = 0.0109                                        avg =       5.4
       overall = 0.0199                                        max =        10

                                                F(11,221)          =      2.18
corr(u_i, Xb)  = -0.7632                        Prob > F           =    0.0166
```

finlev	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.001172	.0078459	0.15	0.881	-.0142904	.0166344
bind	-.1392756	.1491125	-0.93	0.351	-.4331401	.1545889
bgd	.0793466	.1104244	0.72	0.473	-.138273	.2969662
spbc	-.0226923	.0293894	-0.77	0.441	-.0806117	.0352271
mgrown	.0008992	.0005747	1.56	0.119	-.0002335	.0020319
forgnown	-.0008772	.0012428	-0.71	0.481	-.0033266	.0015721
instown	.0776072	.0326909	2.37	0.018	.0131815	.142033
ownconc	-.0026892	.0014025	-1.92	0.056	-.0054532	.0000748
prof_control	-.0076985	.0542054	-0.14	0.887	-.1145241	.0991272
firm_size_control	-.1819178	.0608772	-2.99	0.003	-.3018919	-.0619438
growth_opp_control	.000261	.0002378	1.10	0.274	-.0002077	.0007296
_cons	1.709152	.4402399	3.88	0.000	.8415463	2.576757
sigma_u	.33450061					
sigma_e	.11087427					
rho	.90100876	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 221) =    13.11             Prob > F = 0.0000

.
```

```
. xtreg finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.0978                         Obs per group: min =         1
       between = 0.0109                                        avg =       5.4
       overall = 0.0199                                        max =        10

                                                F(11,221)          =      2.18
corr(u_i, Xb)  = -0.7632                        Prob > F           =    0.0166

------------------------------------------------------------------------------
      finlev |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       bsize |    .001172   .0078459     0.15   0.881    -.0142904    .0166344
        bind |  -.1392756   .1491125    -0.93   0.351    -.4331401    .1545889
         bgd |   .0793466   .1104244     0.72   0.473     -.138273    .2969662
        spbc |  -.0226923   .0293894    -0.77   0.441    -.0806117    .0352271
      mgrown |   .0008992   .0005747     1.56   0.119    -.0002335    .0020319
    forgnown |  -.0008772   .0012428    -0.71   0.481    -.0033266    .0015721
     instown |   .0776072   .0326909     2.37   0.018     .0131815     .142033
    ownconc |  -.0026892   .0014025    -1.92   0.056    -.0054532    .0000748
  prof_control |  -.0076985   .0542054    -0.14   0.887    -.1145241    .0991272
 firm_size_control |  -.1819178   .0608772    -2.99   0.003    -.3018919   -.0619438
growth_opp_control |    .000261   .0002378     1.10   0.274    -.0002077    .0007296
       _cons |   1.709152   .4402399     3.88   0.000     .8415463    2.576757
-------------+----------------------------------------------------------------
     sigma_u |  .33450061
     sigma_e |  .11087427
         rho |  .90100876   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(52, 221) =    13.11             Prob > F = 0.0000

. estimate store fe4
```

```
. xtreg finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.0087                         Obs per group: min =         1
       between = 0.3761                                        avg =       5.4
       overall = 0.0603                                        max =        10

                                                Wald chi2(11)      =     22.46
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0211
```

finlev	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.0033481	.0072782	0.46	0.645	-.0109168	.0176131
bind	-.0465406	.129888	-0.36	0.720	-.3011164	.2080352
bgd	-.1058262	.0969205	-1.09	0.275	-.295787	.0841346
spbc	-.026545	.0270515	-0.98	0.326	-.0795649	.0264749
mgrown	.0005106	.0004995	1.02	0.307	-.0004683	.0014895
forgnown	-.0000853	.0008079	-0.11	0.916	-.0016687	.0014981
instown	.0205235	.0294644	0.70	0.486	-.0372257	.0782727
ownconc	-.0015776	.0009894	-1.59	0.111	-.0035167	.0003615
prof_control	-.1351485	.0355789	-3.80	0.000	-.204882	-.0654151
firm_size_control	.0133173	.0300283	0.44	0.657	-.045537	.0721716
growth_opp_control	.0003024	.0002412	1.25	0.210	-.0001704	.0007752
_cons	.1964383	.2195803	0.89	0.371	-.2339312	.6268078
sigma_u	.16365509					
sigma_e	.11087427					
rho	.68540599	(fraction of variance due to u_i)				

```
. estimate store re4

.

. hausman fe4 re4
```

	Coefficients (b) fe4	(B) re4	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bsize	.001172	.0033481	-.0021761	.0029303
bind	-.1392756	-.0465406	-.092735	.073237
bgd	.0793466	-.1058262	.1851728	.0529147
spbc	-.0226923	-.026545	.0038527	.0114873
mgrown	.0008992	.0005106	.0003886	.0002844
forgnown	-.0008772	-.0000853	-.0007919	.0009445
instown	.0776072	.0205235	.0570837	.0141612
ownconc	-.0026892	-.0015776	-.0011116	.0009941
prof_control	-.0076985	-.1351485	.1274501	.0408945
firm_size_~l	-.1819178	.0133173	-.1952351	.0529559
growth_opp~l	.000261	.0003024	-.0000414	.

```
                b = consistent under Ho and Ha; obtained from xtreg
     B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                chi2(11) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =      433.11
              Prob>chi2 =      0.0000
              (V_b-V_B is not positive definite)

.
```

```
. xtreg finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.0978                         Obs per group: min =         1
       between = 0.0109                                        avg =       5.4
       overall = 0.0199                                        max =        10

                                                F(11,221)          =      2.18
corr(u_i, Xb)  = -0.7632                        Prob > F           =    0.0166
```

finlev	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.001172	.0078459	0.15	0.881	-.0142904	.0166344
bind	-.1392756	.1491125	-0.93	0.351	-.4331401	.1545889
bgd	.0793466	.1104244	0.72	0.473	-.138273	.2969662
spbc	-.0226923	.0293894	-0.77	0.441	-.0806117	.0352271
mgrown	.0008992	.0005747	1.56	0.119	-.0002335	.0020319
forgnown	-.0008772	.0012428	-0.71	0.481	-.0033266	.0015721
instown	.0776072	.0326909	2.37	0.018	.0131815	.142033
ownconc	-.0026892	.0014025	-1.92	0.056	-.0054532	.0000748
prof_control	-.0076985	.0542054	-0.14	0.887	-.1145241	.0991272
firm_size_control	-.1819178	.0608772	-2.99	0.003	-.3018919	-.0619438
growth_opp_control	.000261	.0002378	1.10	0.274	-.0002077	.0007296
_cons	1.709152	.4402399	3.88	0.000	.8415463	2.576757
sigma_u	.33450061					
sigma_e	.11087427					
rho	.90100876	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 221) =    13.11             Prob > F = 0.0000

. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (53)  =   98002.68
Prob>chi2 =      0.0000


. xtistest

Inoue and Solo (2006) LM-test as postestimation
Panelvar: firmid
Timevar: year
p (lags): 2
```

Variable	IS-stat	p-value	N	maxT	balance?
Post Estimation	22.57	0.164	53	10	gaps

```
 Notes: Under H0, LM ~ chi2(p*T-p(p+1)/2)
    H0: No auto-correlation of any order.
    Ha: Auto-correlation up to order 2.
```

```
. xtpcse finlev bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control, hetonly

Number of gaps in sample:  7

Linear regression, heteroskedastic panels corrected standard errors

Group variable:   firmid                       Number of obs      =       285
Time variable:    year                         Number of groups   =        53
Panels:           heteroskedastic (unbalanced) Obs per group: min =         1
Autocorrelation:  no autocorrelation                            avg =  5.377358
                                                                max =        10
Estimated covariances      =        53         R-squared          =    0.2180
Estimated autocorrelations =         0         Wald chi2(11)      =     55.28
Estimated coefficients     =        12         Prob > chi2        =    0.0000
```

finlev	Het-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.0085445	.0070592	1.21	0.226	-.0052912	.0223803
bind	.1664765	.1187638	1.40	0.161	-.0662964	.3992493
bgd	-.3957216	.099171	-3.99	0.000	-.5900932	-.20135
spbc	.0219283	.0246571	0.89	0.374	-.0263987	.0702552
mgrown	-.0005003	.000438	-1.14	0.253	-.0013587	.0003581
forgnown	-.0010138	.0005066	-2.00	0.045	-.0020068	-.0000208
instown	-.0688668	.0244184	-2.82	0.005	-.1167259	-.0210076
ownconc	-.0001428	.0004979	-0.29	0.774	-.0011187	.0008331
prof_control	-.1709503	.0494374	-3.46	0.001	-.2678457	-.0740548
firm_size_control	.0523792	.0188846	2.77	0.006	.015366	.0893924
growth_opp_control	.0002457	.0005919	0.42	0.678	-.0009144	.0014057
_cons	-.2576132	.1356602	-1.90	0.058	-.5235022	.0082758

```
.
```

MODEL 3: CORPORATE GOVERNANCE MECHANISMS, FINANCIAL LEVERAGE AND LEASING

```
. regress leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control
```

Source	SS	df	MS		
Model	.186760218	12	.015563351	Number of obs =	285
Residual	.684265703	272	.002515683	F(12, 272) =	6.19
				Prob > F =	0.0000
Total	.871025921	284	.003066993	R-squared =	0.2144
				Adj R-squared =	0.1798
				Root MSE =	.05016

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0035193	.0017527	2.01	0.046	.0000688	.0069698
bind	.0676861	.0273275	2.48	0.014	.0138858	.1214865
bgd	.0713828	.0221131	3.23	0.001	.0278482	.1149173
spbc	-.0244308	.006615	-3.69	0.000	-.0374539	-.0114078
mgrown	-.0001205	.0001075	-1.12	0.263	-.0003321	.0000911
forgnown	.0001989	.0001352	1.47	0.142	-.0000673	.000465
instown	-.0054326	.0065434	-0.83	0.407	-.0183147	.0074495
ownconc	-.0000358	.0001634	-0.22	0.827	-.0003575	.0002859
finlev	.0563172	.0150573	3.74	0.000	.0266735	.0859608
prof_control	-.0272052	.0097764	-2.78	0.006	-.0464523	-.0079581
firm_size_control	-.013812	.0048776	-2.83	0.005	-.0234147	-.0042093
growth_opp_control	.000017	.0000971	0.17	0.861	-.0001742	.0002082
_cons	.0371148	.034919	1.06	0.289	-.031631	.1058606

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of leases

         chi2(1)      =   412.19
         Prob > chi2  =   0.0000

.

. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.2322                         Obs per group: min =         1
       between = 0.0588                                        avg =       5.4
       overall = 0.0044                                        max =        10

                                                F(12,220)          =      5.54
corr(u_i, Xb)  = -0.3529                        Prob > F           =    0.0000
```

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0004042	.0015895	0.25	0.799	-.0027283	.0035367
bind	-.009274	.0302658	-0.31	0.760	-.0689221	.0503741
bgd	.0042653	.0223952	0.19	0.849	-.0398712	.0484019
spbc	.0045596	.0059616	0.76	0.445	-.0071894	.0163087
mgrown	.0001418	.0001171	1.21	0.227	-.0000889	.0003725
forgnown	-.0002311	.0002521	-0.92	0.360	-.0007278	.0002657
instown	.0284308	.0067062	4.24	0.000	.0152141	.0416474
ownconc	.0003784	.0002865	1.32	0.188	-.0001862	.0009429
finlev	.0702921	.0136266	5.16	0.000	.0434368	.0971474
prof_control	-.0166795	.0109811	-1.52	0.130	-.0383211	.0049621
firm_size_control	.0066805	.0125788	0.53	0.596	-.0181098	.0314709
growth_opp_control	-.0000393	.0000483	-0.81	0.417	-.0001345	.0000559
_cons	-.0761161	.092172	-0.83	0.410	-.2577691	.105537
sigma_u	.06063499					
sigma_e	.02246021					
rho	.87934623	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 220) =    21.85             Prob > F = 0.0000

. estimate store fe3
```

```
. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.2181                         Obs per group: min =         1
       between = 0.1814                                        avg =       5.4
       overall = 0.0474                                        max =        10

                                                Wald chi2(12)      =     70.47
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.0008347	.0015084	0.55	0.580	-.0021216	.0037911
bind	.0019013	.0277087	0.07	0.945	-.0524068	.0562094
bgd	.0185864	.0205434	0.90	0.366	-.021678	.0588508
spbc	.0013576	.0056129	0.24	0.809	-.0096436	.0123587
mgrown	.000033	.0001069	0.31	0.757	-.0001765	.0002426
forgnown	-.0000653	.0001905	-0.34	0.732	-.0004387	.0003081
instown	.02191	.0062195	3.52	0.000	.00972	.0341001
ownconc	.0002307	.0002305	1.00	0.317	-.000221	.0006824
finlev	.0712485	.0125338	5.68	0.000	.0466826	.0958143
prof_control	-.0264497	.0082644	-3.20	0.001	-.0426476	-.0102518
firm_size_control	.0014167	.0074775	0.19	0.850	-.013239	.0160724
growth_opp_control	-.0000228	.0000475	-0.48	0.631	-.0001158	.0000702
_cons	-.037889	.0550164	-0.69	0.491	-.1457191	.0699411
sigma_u	.05124398					
sigma_e	.02246021					
rho	.83885125	(fraction of variance due to u_i)				

```
. estimate store re3

.

. hausman fe3 re3
```

	Coefficients (b) fe3	(B) re3	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
bsize	.0004042	.0008347	-.0004305	.0005012
bind	-.009274	.0019013	-.0111753	.0121757
bgd	.0042653	.0185864	-.0143211	.0089169
spbc	.0045596	.0013576	.0032021	.0020087
mgrown	.0001418	.000033	.0001088	.0000477
forgnown	-.0002311	-.0000653	-.0001658	.000165
instown	.0284308	.02191	.0065207	.0025082
ownconc	.0003784	.0002307	.0001477	.0001701
finlev	.0702921	.0712485	-.0009564	.0053467
prof_control	-.0166795	-.0264497	.0097702	.0072308
firm_size_~l	.0066805	.0014167	.0052638	.010115
growth_opp~l	-.0000393	-.0000228	-.0000165	8.98e-06

```
                b = consistent under Ho and Ha; obtained from xtreg
     B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                chi2(12) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                         =       41.66
              Prob>chi2 =      0.0000
              (V_b-V_B is not positive definite)

.
```

```
. xtreg leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.2322                         Obs per group: min =         1
       between = 0.0588                                        avg =       5.4
       overall = 0.0044                                        max =        10

                                                F(12,220)          =      5.54
corr(u_i, Xb)  = -0.3529                        Prob > F           =    0.0000
```

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
bsize	.0004042	.0015895	0.25	0.799	-.0027283	.0035367
bind	-.009274	.0302658	-0.31	0.760	-.0689221	.0503741
bgd	.0042653	.0223952	0.19	0.849	-.0398712	.0484019
spbc	.0045596	.0059616	0.76	0.445	-.0071894	.0163087
mgrown	.0001418	.0001171	1.21	0.227	-.0000889	.0003725
forgnown	-.0002311	.0002521	-0.92	0.360	-.0007278	.0002657
instown	.0284308	.0067062	4.24	0.000	.0152141	.0416474
ownconc	.0003784	.0002865	1.32	0.188	-.0001862	.0009429
finlev	.0702921	.0136266	5.16	0.000	.0434368	.0971474
prof_control	-.0166795	.0109811	-1.52	0.130	-.0383211	.0049621
firm_size_control	.0066805	.0125788	0.53	0.596	-.0181098	.0314709
growth_opp_control	-.0000393	.0000483	-0.81	0.417	-.0001345	.0000559
_cons	-.0761161	.092172	-0.83	0.410	-.2577691	.105537
sigma_u	.06063499					
sigma_e	.02246021					
rho	.87934623	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 220) =    21.85             Prob > F = 0.0000


. xttest3

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (53)  =    3.4e+07
Prob>chi2 =      0.0000


. xtistest

Inoue and Solo (2006) LM-test as postestimation
Panelvar: firmid
Timevar: year
p (lags): 2
```

Variable	IS-stat	p-value	N	maxT	balance?
Post Estimation	19.89	0.280	53	10	gaps

```
 Notes: Under H0, LM ~ chi2(p*T-p(p+1)/2)
    H0: No auto-correlation of any order.
    Ha: Auto-correlation up to order 2.

.
```

```
. xtpcse leases bsize bind bgd spbc mgrown forgnown instown ownconc finlev prof_control firm_size_control growth_opp_control, hetonly

Number of gaps in sample:  7

Linear regression, heteroskedastic panels corrected standard errors

Group variable:   firmid                       Number of obs      =       285
Time variable:    year                         Number of groups   =        53
Panels:           heteroskedastic (unbalanced) Obs per group: min =         1
Autocorrelation:  no autocorrelation                            avg =  5.377358
                                                                max =        10
Estimated covariances      =        53         R-squared          =    0.2144
Estimated autocorrelations =         0         Wald chi2(12)      =     42.37
Estimated coefficients     =        13         Prob > chi2        =    0.0000
```

leases	Het-corrected Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
bsize	.0035193	.0014848	2.37	0.018	.0006091	.0064295
bind	.0676861	.0293798	2.30	0.021	.0101027	.1252696
bgd	.0713828	.0246329	2.90	0.004	.0231032	.1196624
spbc	-.0244308	.0087498	-2.79	0.005	-.0415801	-.0072816
mgrown	-.0001205	.0000684	-1.76	0.078	-.0002544	.0000135
forgnown	.0001989	.0001155	1.72	0.085	-.0000275	.0004252
instown	-.0054326	.0083277	-0.65	0.514	-.0217546	.0108895
ownconc	-.0000358	.0001094	-0.33	0.743	-.0002502	.0001786
finlev	.0563172	.0227183	2.48	0.013	.0117901	.1008442
prof_control	-.0272052	.0101165	-2.69	0.007	-.0470332	-.0073772
firm_size_control	-.013812	.0057544	-2.40	0.016	-.0250904	-.0025336
growth_opp_control	.000017	.0001195	0.14	0.887	-.0002172	.0002512
_cons	.0371148	.0446034	0.83	0.405	-.0503063	.1245358

```
.
```

MODEL 4: FINANCIAL LEVERAGE AND LEASING

```
. regress leases finlev prof_control firm_size_control growth_opp_control
```

Source	SS	df	MS		
Model	.081751926	4	.020437982	Number of obs	= 285
Residual	.789273994	280	.002818836	F(4, 280)	= 7.25
				Prob > F	= 0.0000
Total	.871025921	284	.003066993	R-squared	= 0.0939
				Adj R-squared	= 0.0809
				Root MSE	= .05309

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
finlev	.0451701	.0147625	3.06	0.002	.0161106	.0742296
prof_control	-.0309573	.0097518	-3.17	0.002	-.0501535	-.0117612
firm_size_control	-.0045342	.0038912	-1.17	0.245	-.012194	.0031256
growth_opp_control	.000025	.0001007	0.25	0.804	-.0001731	.0002232
_cons	.0444114	.0282665	1.57	0.117	-.0112304	.1000531

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of leases

         chi2(1)      =   124.56
         Prob > chi2  =   0.0000

.

. xtreg leases finlev prof_control firm_size_control growth_opp_control, fe

Fixed-effects (within) regression               Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1472                         Obs per group: min =         1
       between = 0.2135                                        avg =       5.4
       overall = 0.0342                                        max =        10

                                                F(4,228)           =      9.84
corr(u_i, Xb)  = -0.2915                        Prob > F           =    0.0000
```

leases	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
finlev	.0784494	.013617	5.76	0.000	.0516182	.1052806
prof_control	-.0248223	.0110336	-2.25	0.025	-.0465631	-.0030814
firm_size_control	.0161082	.01185	1.36	0.175	-.0072412	.0394577
growth_opp_control	-.0000119	.0000488	-0.24	0.808	-.0001081	.0000844
_cons	-.1153153	.0885432	-1.30	0.194	-.2897829	.0591523
sigma_u	.0547184					
sigma_e	.02325132					
rho	.84705356	(fraction of variance due to u_i)				

```
F test that all u_i=0:     F(52, 228) =    23.69              Prob > F = 0.0000

. estimate store fe2
```

```
. xtreg leases finlev prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1450                         Obs per group: min =         1
       between = 0.2416                                        avg =       5.4
       overall = 0.0614                                        max =        10

                                                Wald chi2(4)       =     52.69
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
finlev	.0732325	.0125087	5.85	0.000	.0487158	.0977492
prof_control	-.0270862	.0083022	-3.26	0.001	-.0433583	-.0108141
firm_size_control	.0072386	.0068551	1.06	0.291	-.0061972	.0206744
growth_opp_control	-5.07e-06	.0000475	-0.11	0.915	-.0000982	.0000881
_cons	-.0479185	.0519892	-0.92	0.357	-.1498154	.0539785
sigma_u	.05382259					
sigma_e	.02325132					
rho	.84272737	(fraction of variance due to u_i)				

```
. estimate store re2


. estimate store re2

. hausman fe2 re2
```

	Coefficients (b) fe2	(B) re2	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
finlev	.0784494	.0732325	.0052169	.0053808
prof_control	-.0248223	-.0270862	.0022639	.0072673
firm_size_~l	.0161082	.0072386	.0088696	.0096659
growth_opp~l	-.0000119	-5.07e-06	-6.79e-06	.0000112

```
                b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        1.48
                Prob>chi2 =      0.8310
```

```
. xtreg leases finlev prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1450                         Obs per group: min =         1
       between = 0.2416                                        avg =       5.4
       overall = 0.0614                                        max =        10

                                                Wald chi2(4)       =     52.69
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
finlev	.0732325	.0125087	5.85	0.000	.0487158	.0977492
prof_control	-.0270862	.0083022	-3.26	0.001	-.0433583	-.0108141
firm_size_control	.0072386	.0068551	1.06	0.291	-.0061972	.0206744
growth_opp_control	-5.07e-06	.0000475	-0.11	0.915	-.0000982	.0000881
_cons	-.0479185	.0519892	-0.92	0.357	-.1498154	.0539785
sigma_u	.05382259					
sigma_e	.02325132					
rho	.84272737	(fraction of variance due to u_i)				

```
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        leases[firmid,t] = Xb + u[firmid] + e[firmid,t]

        Estimated results:
                     |       Var     sd = sqrt(Var)
             ---------+-----------------------------
              leases |     .003067       .0553804
                   e |    .0005406       .0232513
                   u |    .0028969       .0538226

        Test:   Var(u) = 0
                            chibar2(01) =   317.39
                          Prob > chibar2 =   0.0000

.

. xtreg leases finlev prof_control firm_size_control growth_opp_control, re

Random-effects GLS regression                   Number of obs      =       285
Group variable: firmid                          Number of groups   =        53

R-sq:  within  = 0.1450                         Obs per group: min =         1
       between = 0.2416                                        avg =       5.4
       overall = 0.0614                                        max =        10

                                                Wald chi2(4)       =     52.69
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
finlev	.0732325	.0125087	5.85	0.000	.0487158	.0977492
prof_control	-.0270862	.0083022	-3.26	0.001	-.0433583	-.0108141
firm_size_control	.0072386	.0068551	1.06	0.291	-.0061972	.0206744
growth_opp_control	-5.07e-06	.0000475	-0.11	0.915	-.0000982	.0000881
_cons	-.0479185	.0519892	-0.92	0.357	-.1498154	.0539785
sigma_u	.05382259					
sigma_e	.02325132					
rho	.84272737	(fraction of variance due to u_i)				

```
. xtistest

Inoue and Solo (2006) LM-test as postestimation
Panelvar: firmid
Timevar: year
p (lags): 2
```

Variable	IS-stat	p-value	N	maxT	balance?
Post Estimation	18.20	0.376	53	10	gaps

```
 Notes: Under H0, LM ~ chi2(p*T-p(p+1)/2)
    H0: No auto-correlation of any order.
    Ha: Auto-correlation up to order 2.


. xtgls leases finlev prof_control firm_size_control growth_opp_control, panels (hetero)

Cross-sectional time-series FGLS regression

Coefficients:  generalized least squares
Panels:        heteroskedastic
Correlation:   no autocorrelation

Estimated covariances      =        53          Number of obs      =       285
Estimated autocorrelations =         0          Number of groups   =        53
Estimated coefficients     =         5          Obs per group: min =         1
                                                               avg =  5.377358
                                                               max =        10
                                                Wald chi2(4)       =     23.67
                                                Prob > chi2        =    0.0001
```

leases	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
finlev	.0180315	.0052982	3.40	0.001	.0076473	.0284157
prof_control	-.0133496	.0031188	-4.28	0.000	-.0194623	-.0072368
firm_size_control	-.0006842	.0008345	-0.82	0.412	-.0023198	.0009514
growth_opp_control	6.80e-06	.0000196	0.35	0.728	-.0000316	.0000452
_cons	.0087431	.0062453	1.40	0.162	-.0034975	.0209837

SEM REGRESSION RESULTS

```
. sem ( finlev <- bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control) ( leases <- finle
> v bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control) , method (adf) vce (oim)

Endogenous variables

Observed:  finlev leases

Exogenous variables

Observed:  bsize bind bgd spbc mgrown forgnown instown ownconc prof_control firm_size_control growth_opp_control

Fitting baseline model:

Iteration 0:   discrepancy =  7.3518945
Iteration 1:   discrepancy =  .42822922
Iteration 2:   discrepancy =  .42822922

Fitting target model:

Iteration 0:   discrepancy =  3.224e-29
Iteration 1:   discrepancy =  1.897e-29

Structural equation model                       Number of obs      =       285
Estimation method  = adf
Discrepancy        =  1.897e-29
```

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
finlev <-						
bsize	.0085445	.0061364	1.39	0.164	-.0034826	.0205716
bind	.1664765	.0819785	2.03	0.042	.0058016	.3271513
bgd	-.3957216	.0683132	-5.79	0.000	-.5296129	-.2618303
spbc	.0219283	.0167665	1.31	0.191	-.0109335	.0547901
mgrown	-.0005003	.0002123	-2.36	0.018	-.0009164	-.0000842
forgnown	-.0010138	.0002404	-4.22	0.000	-.0014849	-.0005426
instown	-.0688668	.0170555	-4.04	0.000	-.102295	-.0354386
ownconc	-.0001428	.0003029	-0.47	0.637	-.0007364	.0004509
prof_control	-.1709503	.0169564	-10.08	0.000	-.2041842	-.1377163
firm_size_control	.0523792	.0127928	4.09	0.000	.0273059	.0774525
growth_opp_control	.0002457	.0004191	0.59	0.558	-.0005758	.0010671
_cons	-.2576132	.0738981	-3.49	0.000	-.4024508	-.1127756
leases <-						
finlev	.0563172	.0242762	2.32	0.020	.0087366	.1038977
bsize	.0035193	.0009419	3.74	0.000	.0016733	.0053654
bind	.0676861	.0155364	4.36	0.000	.0372353	.098137
bgd	.0713828	.0211719	3.37	0.001	.0298866	.1128789
spbc	-.0244308	.0042689	-5.72	0.000	-.0327978	-.0160639
mgrown	-.0001205	.0000342	-3.53	0.000	-.0001874	-.0000535
forgnown	.0001989	.0000517	3.85	0.000	.0000976	.0003001
instown	-.0054326	.0065063	-0.83	0.404	-.0181847	.0073195
ownconc	-.0000358	.00005	-0.72	0.474	-.0001338	.0000622
prof_control	-.0272052	.0046696	-5.83	0.000	-.0363575	-.0180529
firm_size_control	-.013812	.0042641	-3.24	0.001	-.0221695	-.0054545
growth_opp_control	.000017	.0000762	0.22	0.823	-.0001323	.0001662
_cons	.0371148	.031557	1.18	0.240	-.0247359	.0989654
var(e.finlev)	.0389329	.0082833			.0256575	.0590769
var(e.leases)	.0024009	.0003628			.0017855	.0032284

```
Discr. test of model vs. saturated: chi2(0)   =     0.00, Prob > chi2 =      .

.
```

GOODNESS-OF-FIT STATISTICS

```
. estat gof, stats (all)
```

Fit statistic	Value	Description
Discrepancy		
chi2_ms(0)	0.000	model vs. saturated
p > chi2	.	
chi2_bs(23)	122.045	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.000	Root mean squared error of approximation
90% CI, lower bound	0.000	
upper bound	0.000	
pclose	1.000	Probability RMSEA <= 0.05
Baseline comparison		
CFI	1.000	Comparative fit index
TLI	1.000	Tucker-Lewis index
Size of residuals		
SRMR	0.000	Standardized root mean squared residual
CD	0.356	Coefficient of determination

.

INDIRECT EFFECTS

```
. estat teffects
```

Direct effects

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
finlev <-						
bsize	.0085445	.0061364	1.39	0.164	-.0034826	.0205716
bind	.1664765	.0819785	2.03	0.042	.0058016	.3271513
bgd	-.3957216	.0683132	-5.79	0.000	-.5296129	-.2618303
spbc	.0219283	.0167665	1.31	0.191	-.0109335	.0547901
mgrown	-.0005003	.0002123	-2.36	0.018	-.0009164	-.0000842
forgnown	-.0010138	.0002404	-4.22	0.000	-.0014849	-.0005426
instown	-.0688668	.0170555	-4.04	0.000	-.102295	-.0354386
ownconc	-.0001428	.0003029	-0.47	0.637	-.0007364	.0004509
prof_control	-.1709503	.0169564	-10.08	0.000	-.2041842	-.1377163
firm_size_control	.0523792	.0127928	4.09	0.000	.0273059	.0774525
growth_opp_control	.0002457	.0004191	0.59	0.558	-.0005758	.0010671
leases <-						
finlev	.0563172	.0242762	2.32	0.020	.0087366	.1038977
bsize	.0035193	.0009419	3.74	0.000	.0016733	.0053654
bind	.0676861	.0155364	4.36	0.000	.0372353	.098137
bgd	.0713828	.0211719	3.37	0.001	.0298866	.1128789
spbc	-.0244308	.0042689	-5.72	0.000	-.0327978	-.0160639
mgrown	-.0001205	.0000342	-3.53	0.000	-.0001874	-.0000535
forgnown	.0001989	.0000517	3.85	0.000	.0000976	.0003001
instown	-.0054326	.0065063	-0.83	0.404	-.0181847	.0073195
ownconc	-.0000358	.00005	-0.72	0.474	-.0001338	.0000622
prof_control	-.0272052	.0046696	-5.83	0.000	-.0363575	-.0180529
firm_size_control	-.013812	.0042641	-3.24	0.001	-.0221695	-.0054545
growth_opp_control	.000017	.0000762	0.22	0.823	-.0001323	.0001662

Indirect effects

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
finlev <-						
bsize	0	(no path)				
bind	0	(no path)				
bgd	0	(no path)				
spbc	0	(no path)				
mgrown	0	(no path)				
forgnown	0	(no path)				
instown	0	(no path)				
ownconc	0	(no path)				
prof_control	0	(no path)				
firm_size_control	0	(no path)				
growth_opp_control	0	(no path)				
leases <-						
finlev	0	(no path)				
bsize	.0004812	.0004322	1.11	0.266	-.0003659	.0013283
bind	.0093755	.0051546	1.82	0.069	-.0007273	.0194782
bgd	-.0222859	.0077309	-2.88	0.004	-.0374382	-.0071336
spbc	.0012349	.0007748	1.59	0.111	-.0002836	.0027535
mgrown	-.0000282	.0000168	-1.68	0.093	-.000061	4.67e-06
forgnown	-.0000571	.0000269	-2.12	0.034	-.0001098	-4.40e-06
instown	-.0038784	.0012968	-2.99	0.003	-.0064201	-.0013366
ownconc	-8.04e-06	.0000182	-0.44	0.659	-.0000438	.0000277
prof_control	-.0096274	.0044558	-2.16	0.031	-.0183607	-.0008942
firm_size_control	.0029498	.0013001	2.27	0.023	.0004017	.005498
growth_opp_control	.0000138	.0000229	0.60	0.546	-.000031	.0000587

Total effects

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
finlev <-						
bsize	.0085445	.0061364	1.39	0.164	-.0034826	.0205716
bind	.1664765	.0819785	2.03	0.042	.0058016	.3271513
bgd	-.3957216	.0683132	-5.79	0.000	-.5296129	-.2618303
spbc	.0219283	.0167665	1.31	0.191	-.0109335	.0547901
mgrown	-.0005003	.0002123	-2.36	0.018	-.0009164	-.0000842
forgnown	-.0010138	.0002404	-4.22	0.000	-.0014849	-.0005426
instown	-.0688668	.0170555	-4.04	0.000	-.102295	-.0354386
ownconc	-.0001428	.0003029	-0.47	0.637	-.0007364	.0004509
prof_control	-.1709503	.0169564	-10.08	0.000	-.2041842	-.1377163
firm_size_control	.0523792	.0127928	4.09	0.000	.0273059	.0774525
growth_opp_control	.0002457	.0004191	0.59	0.558	-.0005758	.0010671
leases <-						
finlev	.0563172	.0242762	2.32	0.020	.0087366	.1038977
bsize	.0040005	.0007486	5.34	0.000	.0025333	.0054678
bind	.0770616	.0141653	5.44	0.000	.0492982	.1048251
bgd	.0490969	.0150467	3.26	0.001	.019606	.0785878
spbc	-.0231959	.0041559	-5.58	0.000	-.0313413	-.0150505
mgrown	-.0001486	.0000385	-3.86	0.000	-.0002241	-.0000732
forgnown	.0001418	.0000487	2.91	0.004	.0000464	.0002372
instown	-.009311	.0055138	-1.69	0.091	-.0201179	.0014959
ownconc	-.0000438	.000047	-0.93	0.351	-.000136	.0000483
prof_control	-.0368326	.0048279	-7.63	0.000	-.0462952	-.0273701
firm_size_control	-.0108621	.0035039	-3.10	0.002	-.0177296	-.0039947
growth_opp_control	.0000308	.0000787	0.39	0.695	-.0001234	.000185

.

TEST OF HYPOTHESES

Board Size (BSIZE)

```
. medsem, indep (bsize) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)
```

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	0.020	0.020	0.020
Std. Err.	0.018	0.017	0.018
z-value	1.142	1.201	1.139
p-value	0.253	0.230	0.255
Conf. Interval	-0.014 , 0.055	-0.013 , 0.053	-0.011 , 0.060

```
  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:bsize (X -> M) with B=0.089 and p=0.190
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
           As either STEP 1 or STEP 2 (or both) are not significant,
           there is no mediation!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:bsize (X -> Y) with B=0.147 and p=0.001
           As the Monte Carlo test above is not significant and STEP 1 is
           significant you have direct-only nonmediation (no mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.020 / 0.167) = 0.120
           Meaning that about 12 % of the effect of bsize
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.020 / 0.147) = 0.137
           That is, the mediated effect is about 0.1 times as
           large as the direct effect of bsize on leases!

  Note: to read more about this package help medsem

.
```

Board Independence (BIND)

```
. medsem, indep (bind) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)
```

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	0.019	0.019	0.019
Std. Err.	0.009	0.010	0.011
z-value	2.034	1.840	1.776
p-value	0.042	0.066	0.076
Conf. Interval	0.001 , 0.038	-0.001 , 0.040	0.002 , 0.044

```
  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:bind (X -> M) with B=0.085 and p=0.020
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
  STEP 3 - leases:bind (X -> Y) with B=0.139 and p=0.000
           As STEP 1, STEP 2 and STEP 3 are all significant and the
           Sobel's test above is not significant the mediation is partial!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:bind (X -> Y) with B=0.139 and p=0.000
           As the Monte Carlo test above is not significant and STEP 1 is
           significant you have direct-only nonmediation (no mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.019 / 0.159) = 0.122
           Meaning that about 12 % of the effect of bind
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.019 / 0.139) = 0.139
           That is, the mediated effect is about 0.1 times as
           large as the direct effect of bind on leases!

  Note: to read more about this package help medsem

.
```

Board Gender Diversity (BGD)

```
. medsem, indep (bgd) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)

┌──────────────────────────────────────────────────────────────────────────┐
  Estimates          │     Delta        │     Sobel        │  Monte Carlo
├──────────────────────────────────────────────────────────────────────────┤
  Indirect effect    │    -0.058        │    -0.058        │    -0.058

  Std. Err.          │     0.017        │     0.021        │     0.021

  z-value            │    -3.523        │    -2.801        │    -2.745

  p-value            │     0.000        │     0.005        │     0.006

  Conf. Interval     │ -0.091 , -0.026  │ -0.099 , -0.018  │ -0.102 , -0.019
└──────────────────────────────────────────────────────────────────────────┘

  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:bgd (X -> M) with B=-0.257 and p=0.000
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
  STEP 3 - leases:bgd (X -> Y) with B=0.187 and p=0.000
           As STEP 1, STEP 2 and STEP 3 as well as the Sobel's test above
           are significant the mediation is partial!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:bgd (X -> Y) with B=0.187 and p=0.000
           As the Monte Carlo test above is significant, STEP 1 is
           significant and their coefficients point in opposite
           direction, you have competitive mediation (partial mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.058 / 0.129) = 0.454
           Meaning that about 45 % of the effect of bgd
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.058 / 0.187) = 0.312
           That is, the mediated effect is about 0.3 times as
           large as the direct effect of bgd on leases!

└──────────────────────────────────────────────────────────────────────────┘

  Note: to read more about this package help medsem

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Presence of Specialised Board Committee (SPBC)

```
. medsem, indep (spbc) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)

┌──────────────────────────────────────────────────────────────────────────┐
  Estimates          │     Delta        │     Sobel        │  Monte Carlo
├──────────────────────────────────────────────────────────────────────────┤
  Indirect effect    │     0.010        │     0.010        │     0.010
  Std. Err.          │     0.007        │     0.008        │     0.009
  z-value            │     1.588        │     1.247        │     1.184
  p-value            │     0.112        │     0.212        │     0.236
  Conf. Interval     │ -0.002 , 0.023   │ -0.006 , 0.027   │ -0.005 , 0.030
└──────────────────────────────────────────────────────────────────────────┘

  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:spbc (X -> M) with B=0.046 and p=0.170
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
           As either STEP 1 or STEP 2 (or both) are not significant,
           there is no mediation!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:spbc (X -> Y) with B=-0.207 and p=0.000
           As the Monte Carlo test above is not significant and STEP 1 is
           significant you have direct-only nonmediation (no mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.010 / 0.197) = 0.053
           Meaning that about  5 % of the effect of spbc
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.010 / 0.207) = 0.051
           That is, the mediated effect is about 0.1 times as
           large as the direct effect of spbc on leases!

└──────────────────────────────────────────────────────────────────────────┘

  Note: to read more about this package help medsem

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```

Managerial Ownership (MGROWN)

```
. medsem, indep (mgrown) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)

┌──────────────────────────────────────────────────────────────────────────┐
  Estimates          │     Delta        │     Sobel        │  Monte Carlo
├──────────────────────────────────────────────────────────────────────────┤
  Indirect effect    │    -0.016        │    -0.016        │    -0.016
  Std. Err.          │     0.009        │     0.008        │     0.009
  z-value            │    -1.861        │    -1.935        │    -1.838
  p-value            │     0.063        │     0.053        │     0.066
  Conf. Interval     │ -0.033 , 0.001   │ -0.032 , 0.000   │ -0.035 , -0.002
└──────────────────────────────────────────────────────────────────────────┘

  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:mgrown (X -> M) with B=-0.070 and p=0.011
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
  STEP 3 - leases:mgrown (X -> Y) with B=-0.068 and p=0.000
           As STEP 1, STEP 2 and STEP 3 are all significant and the
           Sobel's test above is not significant the mediation is partial!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:mgrown (X -> Y) with B=-0.068 and p=0.000
           As the Monte Carlo test above is not significant and STEP 1 is
           significant you have direct-only nonmediation (no mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.016 / 0.084) = 0.190
           Meaning that about 19 % of the effect of mgrown
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.016 / 0.068) = 0.234
           That is, the mediated effect is about 0.2 times as
           large as the direct effect of mgrown on leases!

└──────────────────────────────────────────────────────────────────────────┘
  Note: to read more about this package help medsem

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```

Foreign Ownership (FORGNOWN)

```
. medsem, indep (forgnown) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)
```

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.031	-0.031	-0.031
Std. Err.	0.013	0.012	0.013
z-value	-2.409	-2.500	-2.415
p-value	0.016	0.012	0.016
Conf. Interval	-0.056 , -0.006	-0.055 , -0.007	-0.058 , -0.009

```
  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:forgnown (X -> M) with B=-0.135 and p=0.000
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
  STEP 3 - leases:forgnown (X -> Y) with B=0.107 and p=0.000
           As STEP 1, STEP 2 and STEP 3 as well as the Sobel's test above
           are significant the mediation is partial!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:forgnown (X -> Y) with B=0.107 and p=0.000
           As the Monte Carlo test above is significant, STEP 1 is
           significant and their coefficients point in opposite
           direction, you have competitive mediation (partial mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.031 / 0.076) = 0.403
           Meaning that about 40 % of the effect of forgnown
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.031 / 0.107) = 0.287
           That is, the mediated effect is about 0.3 times as
           large as the direct effect of forgnown on leases!

  Note: to read more about this package help medsem

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Institutional Ownership (INSTOWN)

```
. medsem, indep (instown) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)

┌──────────────────────────────────────────────────────────────────────────┐
  Estimates          │     Delta        │     Sobel        │  Monte Carlo
├──────────────────────────────────────────────────────────────────────────┤
  Indirect effect    │    -0.035        │    -0.035        │    -0.035
  Std. Err.          │     0.010        │     0.014        │     0.014
  z-value            │    -3.677        │    -2.583        │    -2.504
  p-value            │     0.000        │     0.010        │     0.012
  Conf. Interval     │ -0.054 , -0.016  │ -0.062 , -0.008  │ -0.065 , -0.011
└──────────────────────────────────────────────────────────────────────────┘

  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:instown (X -> M) with B=-0.154 and p=0.000
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
  STEP 3 - leases:instown (X -> Y) with B=-0.049 and p=0.426
           As STEP 1, STEP 2 and the Sobel's test above are significant
           and STEP 3 is not significant the mediation is complete!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:instown (X -> Y) with B=-0.049 and p=0.426
           As the Monte Carlo test above is significant and STEP 1 is not
           significant you have indirect-only mediation (full mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.035 / 0.084) = 0.417
           Meaning that about 42 % of the effect of instown
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.035 / 0.049) = 0.714
           That is, the mediated effect is about 0.7 times as
           large as the direct effect of instown on leases!

└──────────────────────────────────────────────────────────────────────────┘
  Note: to read more about this package help medsem

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Ownership Concentration (OWNCONC)

```
. medsem, indep (ownconc) med (finlev) dep (leases) stand mcreps (5000) zlc rit rid

  Significance testing of indirect effect (standardised)
```

Estimates	Delta	Sobel	Monte Carlo
Indirect effect	-0.003	-0.003	-0.003
Std. Err.	0.007	0.007	0.008
z-value	-0.446	-0.462	-0.434
p-value	0.655	0.644	0.664
Conf. Interval	-0.018 , 0.011	-0.017 , 0.011	-0.019 , 0.012

```
  Baron and Kenny approach to testing mediation
  STEP 1 - finlev:ownconc (X -> M) with B=-0.014 and p=0.640
  STEP 2 - leases:finlev (M -> Y) with B=0.227 and p=0.003
           As either STEP 1 or STEP 2 (or both) are not significant,
           there is no mediation!


  Zhao, Lynch & Chen's approach to testing mediation
  STEP 1 - leases:ownconc (X -> Y) with B=-0.015 and p=0.479
           As the Monte Carlo test above is not significant and STEP 1 is
           not significant you have no effect nonmediation (no mediation)!


  RIT  =   (Indirect effect / Total effect)
           (0.003 / 0.018) = 0.183
           Meaning that about 18 % of the effect of ownconc
           on leases is mediated by finlev!


  RID  =   (Indirect effect / Direct effect)
           (0.003 / 0.015) = 0.225
           That is, the mediated effect is about 0.2 times as
           large as the direct effect of ownconc on leases!


  Note: to read more about this package help medsem

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NOTE- Results under Baron and Kenny's Approach:

Once either of STEP 1 (X->M) and STEP 2 (M->Y) are insignificant, STEP 3 (X->Y) will not be estimated as this is unnecessary. Conditions 1 and 2 have to be satisfied.

Once STEP 1 and STEP 2 are significant, STEP 3 will be estimated.