TSU-International Journal of Accounting and Finance (TSUIJAF)
e-ISSN: 28811-2709, p-ISSN: 28811-2695.Volume 4, Issue 2 (June, 2025).

MODERATING EFFECT OF CAPITAL ADEQUACY ON BOARD STRUCTURE AND FIRM VALUE OF LISTED CONGLOMERATE FIRMS IN NIGERIA

Napwamwa Aliyuda Tadeyi[1], Elmaude Jibreel Gambo PhD[2], & Usman Tanimu Gadi PhD[3]

[1]MSc Scholar, Department of Accounting, Taraba State University, Jalingo

[2]Department of Accounting, Modibbo University, Adamawa

[3]Department of Accounting, Taraba State University, Jalingo

Abstract

This study investigated the moderating effect of capital adequacy on the relationship between board structure and the firm value of listed conglomerate firms in Nigeria from 2014 to 2023. Specifically, it examined the impact of board size, board independence, board expertise, and managerial ownership on firm value, with capital adequacy as a moderating variable. The study adopts an ex-post facto research design, utilizing secondary data obtained from the annual reports of the selected firms over the specified period. Using panel regression analysis, the findings revealed that board independence and board expertise have a positive but varying influence on firm value, while managerial ownership exhibits a significant effect. Furthermore, the interaction between capital adequacy and board expertise, managerial ownership positively moderates firm value, indicating that firms with adequate capital and specialized board expertise experience enhanced firm value. Conversely, capital adequacy's moderation of board size and independence shows a negatively impact on firm value. The study concludes that while board expertise and capital adequacy play a critical role in improving firm value, other elements of board structure require further exploration. Based on the findings, the study recommended strengthening board expertise and maintaining sufficient capital adequacy to optimize firm value. Also, it is recommended that conglomerate firms in Nigeria reconsider the balance between board independence and capital adequacy. While board independence is crucial for transparency and accountability, too much independence may not serve the firm's interests when it dilutes strategic alignment with firm goals. Companies should strive to maintain a board structure that includes a well-balanced mix of independent directors and insiders who are more attuned to the firm's operational needs, particularly about capital adequacy decisions.

Keywords: Capital Adequacy, Board Structure, Firm Value

Introduction

Organizations seek to improve performance and create value in terms of additional wealth for their shareholders and increased satisfaction for their customers and other stakeholders. Therefore, identifying and selecting strategies that create value for shareholders is a major concern facing management in the modern era. The identification of factors which have the highest impact on value creation in a business can facilitate the establishment of criteria for appropriate strategy selection in that direction (Mohammed, 2017). Therefore, all investors, either institutional or individual, hold one common goal when they invest in shares and hope to maximise expected return at some preferred level of risk. Thus, an increase in firms' value is of vital importance for investors, stakeholders and the economy at large. For investors, the return on their investments is highly valuable, and a well-performing business can bring high and long-term returns for investors. According to the theory of the firm, the main purpose of a company is to maximise wealth or enterprise value (Mohammed, 2017). Higher value of the company will affect the perception of potential investors which can influence them to be more confidence and belief in to the prospect of a company.

However, firm value is affected by external and internal mechanisms. For instance, board related characteristics can play a significant role in enhancing firm's value. When there is a separation of ownership between the proprietors-the shareholders (principals) and the managers (agents), the shareholders are unable to engage in management and it is the duty of the managers to represent the shareholder's interests. The board of directors of companies owns the task to ensure that managers of corporations use the assets to maximize shareholders' value. Based on this, the board of directors is also anticipated to facilitate and monitor the effectiveness of management to ensure legal compliance and to prevent unlawful and immoral conduct. The prime aim of corporate governance is to derive competitive advantage in a free-market knowledge economy (Ebimobowei, 2022). This competitive edge is possible if corporate governance measures enhance value through exploiting all available resources. A good corporate governance practices ensure better decision making, operational efficiency, and reduction in wastes. It further balances the interests of all stakeholders, including executives and non-executive (Muhimatul, et al., 2019).

Management have been found to making funding decisions that are detrimental to firm value in achieving short term goals. In light of this, contracts between the management and owners of the firm should be those that encourage the management to be motivated to work and increase shareholders value (Anas, et al., 2022). Thus, improved corporate governance lowers cost of capital which improves firm value positively. Across board, corporate governance majorly aims at improving shareholder value over a long period of time and firm value, which in the long run contributes towards a firm's sustainability (Awad, et al., 2023). Agency theory suggests that the board of directors serves as a mechanism to align the interests of shareholders (principals) with those of managers (agents). A larger board may have the potential to provide better oversight, reducing agency problems by ensuring that management acts in the best interests of shareholders. Larger boards may have more directors available for monitoring and supervision of managerial actions. However, an excessively large board could lead to coordination challenges, slower decision-making processes, and reduced efficiency. A well-capitalized firm is generally more financially stable (Bhuiyan et al., 2020).

Independent directors are often seen as effective monitors of management actions. They can provide a system of checks and balances, helping to ensure that executives are acting in the best interests of shareholders. The presence of independent directors can enhance accountability and reduce the likelihood of managerial opportunism, potentially leading to higher firm value. Similarly, independence is often associated with aligning the interests of directors with those of shareholders. Independent directors are less likely to have personal or financial ties to the company's executives, reducing the potential for conflicts of interest. Improved alignment of interests can contribute to the creation of long-term shareholder value (Thenmozhi & Sasidharan, 2020). Capital adequacy provides a cushion for a company to pursue strategic initiatives without facing immediate financial distress. Independent directors in such companies may have more leeway to focus on long-term strategies and governance practices that contribute to firm value (Tahir et al, 2023).

The relationship between board financial expertise and firm value is a crucial aspect of corporate governance. Financially literate directors contribute to improved financial decision-making, risk management, and strategic planning. This expertise is particularly valuable in complex industries where financial considerations play a critical role in corporate success (Usman & Yahaya, 2023). The positive relationship between board financial expertise and firm value can be attributed to several factors. Firstly, directors with financial acumen are better equipped to understand and evaluate financial statements, facilitating more effective oversight of financial reporting and transparency (Ebimobowei, 2022).

Secondly, the presence of financial experts on the board is linked to better risk management practices, which can mitigate financial uncertainties and contribute to long-term shareholder value (Emeka-Nwokeji, 2017).

Companies with gender-diverse boards have been shown to exhibit enhanced financial performance and higher firm value (Isidro & Sobral, 2015). This positive relationship is attributed to the broader range of skills, experiences, and insights that diverse boards bring to strategic decision-making processes. The positive impact of board diversity on firm value can be explained through several mechanisms. Firstly, a diverse board is better positioned to understand and respond to the needs and preferences of diverse stakeholders, including customers and employees. Secondly, diverse boards are associated with a more robust risk management process, as they can bring a wider range of perspectives to identify and address potential risks (Tahir et al, 2023).

The higher managerial ownership fosters a sense of ownership mentality among managers, encouraging them to make decisions that enhance firm value (Jensen & Meckling, 1976). According to Jensen and Meckling (1976), the alignment of managerial and shareholder interests is expected to reduce agency costs, as managers are more likely to act in ways that maximize shareholder wealth. This alignment is rooted in the belief that managers with a significant ownership stake have a personal financial interest in the company's success, providing a strong incentive to pursue strategies that enhance firm value (Anas, et al., 2022). Based on the significance of the identified board structures in influencing firm value, this study seeks to examine whether or not, the capital adequacy moderates the effect of board structure on firm value of listed conglomerate companies in Nigeria.

Despite the previous effort of board structure on firm value such as Rajhans and Kaur (2016), Saona and Martin (2016), Mohammed (2017), Muhimatul, et al (2019), Surasmi, et al (2020), to the best of the researchers knowledge, none from the previous literature were able to studied board and ownership structure variables thus, this study shall be an improvement in the previous methodology. The study of Mohammed (2017) investigates the impact of firm characteristics on firm value of listed healthcare firms in Nigeria for the period 2008 to 2015. The determinants studied are only firm, liquidity and leverage. While Rajhans and Kaur (2016) investigated the determinants of firm value on Bombay Stock Exchange (BSE) from 2002 to 2011. Rajhans and Kaur (2016) used Net sales, Profit, Fixed Assets, dividend pay-out ratio and capital structure as the determinants and; Surasmi, et al (2020) examined the effect of asset growth, leverage, dividend policy, taxes and inflation on firm value from 2012 to 2017. Furthermore, Li-Ju and Shun (2011) assess the influence of profitability on firm value in Taiwanese listed companies for the period of 2005 to 2009 while Ulil, et al. (2013) examined the effect of size, firm age, profitability and firm growth on the governance quality and its impact on firm value.

From the existing gap in literatures, this study shall examine board size, board independence, board expertise, board diversity, managerial ownership and institutional ownership. Furthermore, most of the studies were unable to looks at the influence of a moderator on the relationship between board structures and firm value except Tahir, et al (2023) among few others. This signifies that this study is necessary since it considered the influence of a third variable (capital adequacy) which many felt to include in their studies. In conclusion, findings from other sectors cannot be applied to the conglomerate firms due to difference in economic activities therefore, because of lack of literatures in this sector area, this study will ascertain whether the aforementioned variables had affected firm value of this companies.

Literature Review

Board Structure

Board structure refers to the composition, organization, and formation of a company's board of directors. The board of directors is a group of individuals elected by shareholders to oversee the management of the company and ensure that the company's interests are aligned with those of its shareholders (Jentsch, 2019). Board structure encompasses several key elements, including:

Board Size

Board size refers to the total number of directors on the board of as at a particular accounting period. When the number of directors on the board is large, firms would get more access to various resources in comparison to the case when board size is small. The larger board of directors, the more experienced and knowledgeable people will be available which will lead to more careful learning, decision making process and ultimately better firm performance. Larger board of directors is harmful to firms' performance (Amedi, & Mustafa, 2020). According to the resource dependence theory, the more the members to the board, the better would be the quality of decisions taken by the firm. This would then enhance firm performance. On the contrary, a lesser number of members on the board would increase the chances of managers overdoing on personal pursuits and utilizing firms' resources for meeting personal needs (Anas, et. al., 2022). This study asserts that board size is the total number of members on the board.

Board Independence

Board of directors includes a number of executives who might be non-independent or independent directors. The board provides essential work as it monitors the management team of the firm. A large number of independent directors are preferable for investors. It is also called outside director (Muniandy & Hillier, 2015). Board independence is regarded an important tool for increasing the firm value. Independent directors have the incentive to elevate the interests of shareholders and be effective mentors, in parliamentary procedure to protect their reputational capital and being sued by shareholders (Jentsch, 2019). The need to have independent boards arises from the agency-theoretic premise that if boards exist to monitor shirking or self-dealing by inside management, then outside directors in general, and independent directors in particular, should be more effective monitors than are insiders whose interests may be at odds with outside shareholders. In alternative view, the effectiveness of independent directors in mitigating managerial opportunism and serving shareholder interests (Anas, et. al., 2022).

Board Expertise

Board expertise refers to the collective knowledge, skills, and competencies possessed by the members of a company's board of directors. The expertise of board members is a critical factor in the effective governance and strategic decision-making of a company. Boards with diverse and relevant expertise are better equipped to provide guidance, oversight, and contribute to the long-term success of the organization. Expertise is thus assessed on the basis of criteria conferring the capacity to carry out the task's incumbent on a board member. According to Blue Ribbon Committee (1999), financial expertise refers to past employment experience in finance or accounting, requisite professional certification in accounting, or any other comparable experience or background which results in the individual's financial sophistication, including being or having been a CEO or other senior officer with financial oversight responsibilities.

Managerial Ownership

Managerial ownership is the percentage of equity shareholding by directors' in an organization as at the accounting year end. Managerial ownership was originated mainly to solve the moral hazard problem raised by the separation of ownership and control which underpins the main assumption of agency theory (Jensen & Meckling, 1976). Almashaqbeh et al., (2023) have pointed out that there are two possible consequences of the managerial ownership, namely, incentive alignment and entrenchment. They argued that when the managers ownership share increases, their interests are aligned with those of shareholders and then their behaviour will serve both interests. However, as the ownership increases the managers bargaining power is increased as well and then managers can achieve self-interests without fearing the control power of other shareholders (Abbassi, et al., 2021). Managerial ownership is the proportion of the share acquired by the directors of the company.

Firm value

Firm value, also known as corporate value or business value, refers to the total economic worth of a business entity. It represents the sum of the company's tangible and intangible assets, its earning potential, and the market perception of its future prospects. Firm value is a comprehensive measure that reflects the financial health, performance, and overall standing of a business in the marketplace. Firm's value is the potential price that buyers are willing to pay if the firm is sold. The firm's value is also defined as the market value because firm's value can maximize shareholders wealth, if the stock price increases (Jacob & Taslim, 2017). According to Abbassi et al., (2021), companies with a long-term target of maximizing revenue and expanding properties of shareholders tend to optimize its own value (firm value). Winarto (2015) states that a company can take a lot of advantages thanks to the growth of firm value, such be accessible to the capital market's funding source or at competitive/high selling price in case of mergence. Firm value is the perception of the investor to the success of a company. It is reflected in the share price of the company. The increase of the share price shows the trust of the investors to the company. They are willing to pay more with aiming for a higher return. The firm value is the total assets owned. It consists of the market value of share and liabilities (Winarto, 2015). The high stock price can provide a good signal to attract investors to determine investment decisions.

Capital Adequacy

Capital can be defined as the sum of the bank's paid-up share capital and its accumulated capital reserves. This capital is important for the protection of bank depositors and for the maintenance of public confidence in the operations of the bank as well as the underpinning of banks stability and performance. However, from the stand point of the bank, higher capital means lower returns for equity holders but regulators view capital as a necessary buffer to absorb possible losses before such losses will be charged against deposits. Capital can be regulatory or economic capital. Regulatory capital is the amount of capital required by regulators (domestic and international) or considered adequate to ensure a safe and sound banking system. Economic capital is the capital that a bank believes it should hold to cover the risk it is undertaking while performing its intermediation and investment functions. The Basel capital accords envisages that the higher the risk of loss, the higher the qualifyi ng capital base of banks to maintain the stipulated capital adequacy ratio (Tahir, et al., 2023).

Resource Dependency Theory

This theory is associated with Pfeffer and Salancik (1978) who focused on the benefits a firm derives by virtue of its linkages with external parties. In connection, Dill (1981) explains that the proponents of this theory were mainly concerned with the extent to which firms rely on outsiders for provision of resources that contribute to the success of the firm. Additionally, Borlea and Achim (2013) argue that this theory offers an explanation to the complex character of network relationships that are typical of corporate governance relationships. Furthermore, Kyereboah-Coleman (2008) indicates that this theory introduces accessibility to resources by firms, as a critical dimension to the debate on corporate governance. Similarly, this view is supported by Masdoor (2011) and Wanyama and Olweny (2013) who point out that the resource dependency theory explains the role of board of directors in ensuring that management access the resources they require to run firms successfully.

Further, Nguyen, et al (2014) arguing from a resource dependency theory perspective emphasize that a firm's board of directors provides an avenue for it to access crucial resources. Yusoff and Alhaji (2012) point out that this theory explains the importance of board as a resource for the firm. Therefore, the role of a firm's board is wider and it goes beyond the traditional control responsibility stipulated by the agency theory (Yusoff & Alhaji, 2012).

Kyereboah-Coleman (2008) agrees that this theory helps to explain the importance of a firm's presence on the boards of other companies to establish networks that provide important access to beneficial information resources to the firm. Moreover, Nguyen, Locke and Reddy (2014), point out that this theory explains the positive relationship between board diversity and firm value.

Empirical Review

Board Size and Firm Value

Usman and Yahaya (2023) investigates the impact of board characteristics on firm value in Nigeria using 112 sampled NGX listed companies during the financial years 2009–2021. OLS pooled data regression model is applied for testing the hypotheses. In addition, an effort has been made to investigate the overall scope of share price in a broader context through a comprehensive analysis of share price across industry sectors, size and individual company-specific characteristics. The results indicate that board size, board independence and board share ownership have significant effects on firm value in Nigeria. Also, firm listing age and firm size have significant effects on firm value in Nigeria.

Muganda and Umulkher (2023) examined the relationship between board attributes (board independence, board meeting frequency, board gender diversity, and board size) and the firm value of listed companies in Kenya. The positivist paradigm informed the study's research design. Fixed effects panel data regression was applied to 618 firm-year observations from 58 firms listed on the Nairobi Securities Exchange (NSE) from 2010 to 2021.The results show that all board attributes had no significant effect on firm value.

Board Independence and Firm Value

Tahir et al (2023) explored the moderating effect of capital adequacy on the relationship between board characteristics and the firm value of listed banks in Pakistan. To obtain a more robust empirical model and results, this study incorporates moderator and control variables. This study is based on half-yearly secondary data of 560 sample observations from 2009 to 2021. Multiple regression and panel data estimation techniques were employed for the analysis. The study used firm value as a dependent variable, proxied by Tobin's Q, along with five independent variables, one moderating variable. The results of this study indicate that a higher capital adequacy ratio (CAR) increases firm value and has a moderating effect on board characteristics and firm value. Low proportions of women and independent directors on board affect firm value. The presence of risk management and audit committees in listed Pakistani banks, on the other hand, increases firm value. The banks in Pakistan have no problem with CEO duality. The study also found that bank size has a positive relationship with firm value, while bank age has a negative relationship with firm value.

Another study by Amedi and Mustafa (2020) involving Jordanian manufacturing firms studied the relation between the board characteristics and their performance. Using multiple regression and a dataset from 2016 to 2018, the hypotheses were formulated, tested, and resulted in a positive significant relation between the board independence, board diversity, and leverage with company performance, unlike the board size which showed an inverse relation with performance.

Board Expertise and Firm Value

Francis et al (2012) examined whether and to what extent corporate boards affect the performance of firms. Using cumulative stock returns over the crisis to measure of firm performance, we find that board independence, as traditionally defined, does not significantly affect firm performance. However, when the study re-define independent directors as outside directors who are less connected with current CEOs, a measure we call true independence, there is a positive and significant relationship between this measure and firm performance. Second, outside financial experts are important for firm performance. Third, board meeting frequencies, director attendance behaviors, and director age also affect firm performance during the crisis. Overall, our results suggest that firm performance during a crisis is a function of firm-level differences in corporate boards.

Furthermore, Abbassi et al. (2021) examined the impact of board characteristics on stock market of non-financial firms of South Asian countries such as Pakistan, Sri Lanka, Bangladesh, and India. The data in the study was collected from the DataStream for the 2011–2020 period. The study used a fixed effect model for the analysis of the data and hypotheses testing and generalized method of moments (GMM) was used to check the robustness of the results. The findings of the study indicated that, board size and board independence have significant and positive impact on stock market.

Board Diversity and Firm Value

Awad et al (2023) examined the impact of board size and gender diversity on the firm value of 354 non-financial firms listed on the Gulf Cooperation Council (GCC). The vital importance of this paper is to shed light on the presence of female directors on the boards of directors in the GCC. The study applied several estimation techniques such as ordinary least squares (OLS) and panel regression (fixed & random effect) on a dataset that is extracted from the Refinitiv Eikon platform for the period 2010–2022. This investigation controlled for firm age, firm size, profitability, and leverage in the model developed. The significant result of the Hausman test approved the results of the fixed effect model which reveals that gender diversity, firm size, profitability, leverage, and board size significantly positively impact the firm value, unlike the firm age which appeared to be statistically insignificant. The results imply that the larger the board size and the higher the presence of women on the boards of directors in the GCC region, the better the profitability. This indeed recommends the decision takers include more members especially women in the decision-making process.

Khanh et al. (2020) gathered and used data from Vietnam's listed stock market firms with 2,937 observations between 2008 and 2018. Several regression approaches were applied to study the board characteristics' influence along with the firm's capital structure on the corporate value. The research outcomes reveal that the board's independence level, the size of the board, the size of the company, and the percentage of women on board positively influence the firm value. However, the number of board meetings per year appeared to negatively influence the firm value.

Managerial Ownership and Firm Value

Zamzamir et al. (2021) examined 200 nonfinancial firms engaged in derivatives for the period 2012–2017 using the generalized method of moments (GMM) to establish the influence of managerial ownership on firm value. The study concludes that managerial ownership and firm value are related. In addition, Estiasih et al. (2019) find empirical evidence about the influence of managerial ownership on firm value using samples from manufacturing companies which are listed in Indonesia Stock Exchange in 2010-2012 periods. The results of this research show that managerial ownership has significant influence to the firm value.

Endri (2019) analyzed the effects of managerial ownership, audit committees, investment opportunities, profitability, and corporate social responsibility (CSR) on the value of manufacturing companies using panel data regression model in the Indonesia Sharia Stocks Index (ISSI) period of 2011-2017. Studies show that managerial ownership, profitability, and CSR have no significant effect on the value of manufacturing companies, while the variable committee's variables and investment opportunities have significant to the value of the company listed. The finding of the study is limited by country of the study thus, it cannot be applied to the Nigerian firms.

Institutional Ownership and Firm Value

Almashaqbeh et al (2023) investigated the impact of ownership structure on the firm's value of Jordanian companies listed in the Amman Stock Exchange (ASE) between 2020 and 2022. The study uses yearly financial reports to collect data on institutional ownership, family ownership, firm value, leverage, company size, liquidity, and profitability. The findings indicate that institutional ownership and family ownership strongly correlate with firm value. The results indicate that good institutional ownership and family ownership are significant determinants in the firm value of Jordanian companies. To make reasonable judgments, it is recommended an attempt to re-study this topic, with the need to expand the scope of the sample to include all sectors operating in Jordan. The study also recommends the necessity of taking disclosure variables (such as voluntary disclosure) together with the ownership structure and knowing their effect on the firm value.

Geovanni et al (2023) examined the effect of institutional ownership as part of corporate governance on firm value through capital structure as mediator. Panel data were obtained from 28 companies that were consistently listed in the LQ45 Index on the Indonesia Stock Exchange in 2017 to 2021. Data testing is done by regression analysis and Sobel test using the common effect modal approach. This study is expected to provide theoretical implications for the relationship between the determinants of the company's financial performance, as well as provide empirical implications for efforts to maximize firm value.

Methodology

The study adopted ex-post facto and correlation research design as past data in the form of secondary data was utilized. It is therefore, most appropriate for this study because it allowed for testing of expected relations between variables and the practical performance of predictions regarding these relationships.

The population of the study is five (5) listed conglomerates companies on the Nigeria Exchange Group (NGX) from 2014-2023. The study used only companies that are listed prior to 2014 and remain listed to 2023. This study adopted census sampling technique due to the fact that the population of five is small and all the needed information for the study is available, the study will adopt the population as the sample size.

In analyzing the data, panel data regression was considered appropriate in view of the fact that it helps in establishing relationship, cause and effect between the variables. In order to determine the best choice of analysis technique, the study run three types of regression; Ordinary Least Square (OLS), Fixed Effect and Random Effect regression. All these methods have various assumptions and conditions that must be fulfilled to achieve efficient estimates. However, the best technique was decided by the Hausman Specification test (either fixed effect or random effect regression) and Lagrangian Multpiplier Test (either random effect or OLS).

The model for the study is presented below:

$$FV_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BE_{it} + \beta_4 MGO_{it} + \varepsilon_{it} \quad \text{i}$$

$$FV_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BI_{it} + \beta_3 BE_{it} + \beta_4 MGO_{it} + \beta_5 CA_{it} + \beta_6 CA * BS_{it} + \beta_7 CA * BI_{it} + \beta_8 CA * BE_{it} + \beta_9 CA * MGO_{it} + \varepsilon_{it} \quad \text{ii}$$

Where:

FV	= *Firm Value*
BS	= *Board size*
BI	= *Board independence*
BE	= *Board expertise*
MGO	= *Managerial ownership*
CA	= *Capital Adequacy*
i	= *firm*
t	= *year*
$\mathcal{E}$	= *Error Margin*
β_0	= *Intercept*
β_1 *to* $\beta 9$	= *Regression Coefficients*

Variable Definition and Measurement

Variable	Type Variable	Variable Measurement	Source
Firm value	Dependent	Tobin's Q = Market value of equity plus book value of preferred stock plus book value of total debt divided by the sum of book value of total assets	Sweety and Mandeep (2014), Manoj and Manoranjan (2016)
Board Structure			
Board size	Independent	Number of directors at the board	Noor and Ayoib (2009), Kamangue and Ngugi (2013)
Board independence	Independent	Proportion of independent directors to board size	Villanueva-Villar, Rivo-López and Lago-Penas (2016)
Board expertise	Independent	The number of board that have financial background	DeFond, Hann and Hu (2005)
Managerial ownership	Independent	Proportion of managerial shareholding in the company	Subanidja, Rajasa, Suharto and Atmanto (2016), Manoj and Manoranjan (2016)
Moderating Variable			
Capital Adequacy	Moderator	bank's capital by its risk-weighted assets	Tahir et al (2023)

Source: Author's Compilation, 2024

Result and Discussion

Table 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
fv	50	.317988	.4995359	-.2976	2.6556
bs	50	7.68	1.463013	6	10
bi	50	.537866	.1957964	.2222	.8571
be	50	3.5	.952976	2	5
mgo	50	.06486	.1321761	.0001	.4759
ca	50	10.03164	.7067095	7.8195	10.9569
bsca	50	77.46473	17.27036	46.9173	106.9008
bica	50	5.429478	2.132487	2.3586	9.2718
beca	50	35.10842	10.12681	21.1742	53.4528
mgoca	50	.686558	1.418673	.0013	5.0875

Source: Stata, 2024

The result presents a summary of the data collected from the annual reports of conglomerate firms listed on the Nigerian Exchange Group (NGX). The data highlights the performance of these firms as measured by firm value, using Tobin's Q as an indicator. Tobin's Q, which is calculated by dividing the market value of a firm by the replacement cost of its assets, serves as a comprehensive measure of firm value in this context. The analysis reveals that the minimum firm value recorded was -0.2976, indicating that some conglomerate firms experienced a decline in value, with market performance falling below the replacement cost of their assets, resulting in a loss. On the other hand, the maximum firm value achieved was 2.6556, signifying that some firms were able to generate significant profits, with their market value far exceeding the replacement cost of their assets. On average, the firm value for the listed conglomerates was 0.317988, which suggests that, overall, these firms were able to generate positive value during the period under review.

The analysis of board size within the conglomerate firms listed on the Nigerian Exchange Group (NGX) reveals that the number of individuals serving on the boards of these firms ranges between a minimum of 6 and a maximum of 10 members. This range indicates that the smallest board among the conglomerate firms consisted of 6 members, while the largest board had up to 10 members. These variations in board size reflect the different governance structures and strategic approaches adopted by the firms, as some may prefer a more compact board for agile decision-making, while others opt for a larger board to accommodate diverse expertise and perspectives. On average, the number of people serving on the boards during the period of the study was 8. This suggests that most of the conglomerate firms maintained a moderately sized board, potentially balancing the need for efficiency in decision-making with the inclusion of diverse skills and insights from various board members.

The proportion of non-executive directors on the boards of conglomerate firms listed on the Nigerian Exchange Group (NGX) varies significantly, ranging from a minimum of 22.22% (0.2222) to a maximum of 86% (0.8571). This indicates that, in some conglomerate firms, non-executive directors make up only about one-fifth of the total board members, suggesting a relatively low level of external oversight. In contrast, other firms have a much higher proportion of non-executive directors, with more than 85% of the board members being non-executive, which reflects a stronger emphasis on independent governance and external monitoring. On average, non-executive directors comprise approximately 54% (0.537866) of the board members across the conglomerate firms. This indicates that, overall, these companies maintain a balanced board composition, with slightly more than half of the board members being non-executive directors.

The analysis of board expertise within conglomerate firms listed on the Nigerian Exchange Group (NGX) reveals that the number of board members with accounting and financial knowledge varies between a minimum of 2 and a maximum of 5. This indicates that, at the lower end, some boards have only two members possessing the necessary financial expertise, while at the higher end, certain boards have up to five members with specialized knowledge in accounting and finance. The variation suggests differing levels of emphasis placed on financial expertise by different firms, with some prioritizing a smaller group of experts and others opting for a higher representation of financially knowledgeable individuals. On average, the boards have 4 members with accounting and financial knowledge. This suggests that, across the period of the study, the conglomerate firms tend to prioritize financial expertise by ensuring that a substantial portion of their board members possess the skills and knowledge required to effectively oversee the financial reporting process, assess financial risks, and provide strategic financial guidance.

Managerial ownership refers to the percentage of company shares held by the directors and top executives of the firm, which can serve as a measure of the alignment between management's interests and those of shareholders. In the case of conglomerate firms listed on the Nigerian Exchange Group (NGX), the analysis reveals that the minimum shares held by directors is 0.0001, which translates to less than 1%. This suggests that in some firms, directors hold a very minimal stake in the company. On the other hand, the maximum percentage of shares owned by directors is 47.59%, indicating that in certain firms, directors hold almost half of the company’s shares, giving them significant control and influence over decision-making. On average, directors hold 6.5% (0.06486) of the total shares of the company. This average level of managerial ownership suggests that while directors typically hold a modest stake in the companies, this ownership level may still be sufficient to align their interests with those of other shareholders. The level of managerial ownership is an important factor in corporate governance, as higher ownership by directors can lead to better alignment between management's decisions and the long-term success of the company. However, excessively high ownership may also raise concerns about concentrated control and potential agency problems.

Capital adequacy, which measures the financial strength of conglomerate firms by assessing the amount of capital available to absorb potential losses, shows a variation between a minimum value of 7.8196 and a maximum value of 10.9569. This range indicates that, at the lower end, some firms have a capital adequacy ratio of 7.82, which, while sufficient, may signal a tighter cushion against financial risks. At the higher end, some firms have a capital adequacy ratio of 10.96, suggesting a stronger ability to absorb losses and maintain financial stability. The mean capital adequacy across the period of the study is 10.03164, indicating that, on average, the conglomerate firms maintain a solid capital buffer.

The moderated variables, which involve interactions between board structure and capital adequacy, exhibit considerable variation in their minimum and maximum values. The interaction between board size and capital adequacy shows a minimum value of 47 members, while the maximum is 107. This indicates that, in some conglomerate firms, the combined influence of capital adequacy and board size involves a relatively small board, while in others, it involves a much larger board. Similarly, the moderated variable for board independence shows a minimum of 2 and a maximum of 9, indicating that, when factoring in capital adequacy, the number of independent directors varies widely among firms. This suggests that some firms maintain a minimal level of independent oversight, while others emphasize a larger proportion of independent directors.

In terms of moderated board expertise, the minimum value is 21 and the maximum is 53 members, reflecting the variation in how financial expertise interacts with capital adequacy across firms. This wide range highlights differing levels of reliance on financial expertise within the boardroom, depending on the firm's capital adequacy situation. Finally, moderated managerial ownership ranges between 0.0013 and 5.1, indicating that when managerial ownership is adjusted for capital adequacy, the share of ownership held by directors varies significantly. Some directors hold a minimal stake in the company, while others have a more substantial ownership interest. These variations in the moderated variables suggest diverse board structures and governance practices across conglomerate firms in relation to their capital adequacy.

Table 4.2 Correlation Matrix

	fv	bs	bi	be	mgo	ca	bsca	bica	beca	mgoca
fv	1.0000									
bs	-0.5162	1.0000								
bi	-0.2168	-0.3235	1.0000							
be	-0.1240	0.6001	-0.6390	1.0000						
mgo	-0.2204	0.0444	0.4212	-0.3527	1.0000					
ca	-0.5375	0.4162	0.2492	-0.0035	0.3901	1.0000				
bsca	-0.5913	0.9676	-0.1951	0.5131	0.1546	0.6302	1.0000			
bica	-0.2981	-0.2221	0.9775	-0.6069	0.4742	0.4428	-0.0572	1.0000		
beca	-0.2436	0.6728	-0.5605	0.9752	-0.2589	0.2142	0.6358	-0.4890	1.0000	
mgoca	-0.2232	0.0486	0.4186	-0.3508	0.9999	0.3983	0.1603	0.4738	-0.2555	1.0000

Source: Stata, 2024

The correlation analysis reveals diverse relationships between board structure variables and firm value, with all board characteristics exhibiting negative correlations, but to varying extents. Board size shows a relatively strong negative relationship with firm value, correlating at 51%. This suggests that as board size increases, firm value tends to decrease, possibly due to challenges in coordination and decision-making within larger boards. On the other hand, board independence, which correlates at 22%, shows a weaker negative relationship. This implies that while independent directors are generally expected to enhance governance, their impact on firm value may be limited or insufficient in non-financial firms.

Board expertise, which reflects the presence of members with financial knowledge, has a weaker negative correlation with firm value at 12%. This may indicate that although expertise is crucial, other board dynamics or external factors might overshadow its potential benefits for firm value. Managerial ownership, the proportion of company shares held by directors, shows a negative relationship of 22%, which suggests that even as directors own more shares, it does not significantly improve firm value. This could be due to a misalignment between personal ownership and overall corporate goals or inefficiencies in governance.

Capital adequacy, an indicator of the company's financial strength, demonstrates the strongest negative correlation with firm value at 54%. This suggests that holding more capital may be perceived as an inefficient use of resources or could limit the firm's growth opportunities, leading to a decrease in market value. Interestingly, the interaction between board size and capital adequacy, as represented by moderated board size, has an even stronger negative relationship with firm value at 59%. This implies that the combined effect of larger boards and high capital reserves might further detract from firm value due to perceived inefficiencies in governance and capital utilization.

Moderated board independence, which factors in capital adequacy, correlates negatively with firm value at 30%, indicating that capital adequacy may diminish the expected benefits of having independent directors. Similarly, moderated board expertise and managerial ownership correlate negatively with firm value at 24% and 22%, respectively, suggesting that even when financial expertise and managerial ownership are considered alongside capital adequacy, they do not significantly contribute to improving firm value.

Overall, the correlations are moderate to weak, with all values falling below 70%, which indicates that there is no multicollinearity or severe correlation issues. The moderate negative relationships suggest that while board structure and capital adequacy do influence firm value, their combined effects are not overwhelmingly detrimental or indicative of severe governance failures. However, these relationships highlight the complexities of board dynamics and capital management in influencing firm performance.

Table 4.3Multicollinearity Test

no multicollinearity problem	Variance inflation factor	< 5.00
	bi : 4.11	
	be : 2.92	
	ca : 1.88	
	bs : 1.55	
	mgo : 1.23	

Source: Stata, 2024

A multicollinearity test was conducted to determine if the explanatory or independent variables were highly correlated. Variables are considered highly correlated if their Variance Inflation Factor (VIF) is greater than 10. However, the respective VIFs were all less than 10, indicating the absence of multicollinearity. Thus, the study concludes that multicollinearity is not a concern, and it should not affect the statistical inferences derived from the regression model, affirming the model's adequacy.

Table 4.4HeteroskedasticityTest

no heterokedasticity problem | Breusch-Pagan hettest > 0.05

| Chi2(1): 0.707

| p-value: 0.400

Source: Stata, 2024

Using the Breusch-Pagan-Godfrey estimation technique to test for heteroskedasticity, the result showed an Observed R-Squared of 0.707 with a probability value of 0.400. Since these values are greater than the 5% significance level, it indicates homoscedasticity of the residuals. This absence of heteroskedasticity suggests that the residuals are homoscedastic, as per the null hypothesis, which contrasts with the alternative hypothesis that posits heteroscedasticity.

Table 4.5Normality Test

residuals are normally distributed | Shapiro-Wilk W normality test > 0.01

| z: 1.367

| p-value: 0.086

Source: Stata, 2024

The Shapiro-Wilk W test was used to assess the normal distribution of the variables. The null hypothesis posits that the residuals are normally distributed, while the alternative hypothesis suggests they are not. If the test p-value is less than the 5% significance level, the null hypothesis is rejected, indicating non-normal distribution of the residuals. However, with a p-value of 0.086 (8.6%), which is greater than 5%, the result indicates that the residuals are normally distributed.

Table 4.6 Hausman Specification

chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)

= 0.93

Prob>chi2 = 0.9880

(V_b-V_B is not positive definite)

Source: Stata, 2024

The Hausman Test results, as shown in Table 4.6, indicate that the probability value of the chi-square is greater than 0.05. Consequently, the study concludes that the random model (RE) is the preferred model, by the null hypothesis. Since the Hausman Test specifies the random model, there is need to conduct the Lagrange test.

Table 4.7 Lagrangian Multiplier Test

	Var	sd = sqrt(Var)
fv	.2495361	.4995359
e	.0008185	.0286087
u	0	0

Test: Var(u) = 0

chibar2(01) = 801.88

Prob > chibar2 = 0.0000

Source: Stata, 2024

The results from the Lagrangian multiplier test indicate a p-value of 0.0000, which strongly supports the selection of the random effects model for the regression analysis. The p-value being less than the conventional threshold of 0.05 suggests that the random effects model is more appropriate compared to the fixed effects model for analyzing the dataset. This finding implies that unobserved heterogeneity across the firms in the study is significant and better captured by the random effects model. As a result, the subsequent testing of hypotheses, including the interpretation of the relationships between board structure, capital adequacy, and firm value, is carried out based on the random effects regression model, ensuring that the unique characteristics of the firms that do not vary over time are appropriately accounted for in the analysis. The details of the random effects regression model and its results are presented in the following sections.

Table 4.8 Test of Hypotheses

R-sq: = 0.6942

Prob > chi2 = 0.0000

fv	Coef.	Std. Err.	z	P>|z|
bs	.0932354	.1182365	0.79	0.430
bi	6.493808	1.790493	3.63	0.000
be	.0036104	.0266822	0.14	0.892
mgo	-144.285	50.95141	-2.83	0.005
ca	.0617501	.0831647	0.74	0.458
bsca	-.0100332	.0117255	-0.86	0.392
bica	-.5440331	.1587919	-3.43	0.001
beca	.0158806	.003286	4.83	0.000
mgoca	13.44032	4.746813	2.83	0.005

Source: Stata, 2024

The board structure variables explain 69% variation on firm value while the remaining variation is explained by other exogenous variables. P-value at 5% significance level signifies that the model is fit.

Test of Hypotheses

HO1: Board Size and Firm Value

The regression analysis shows that board size has a positive, though statistically insignificant, effect on firm value. This indicates that while there is a slight positive relationship between the number of directors on the board and the value of the firm, the effect is not strong enough to be deemed statistically significant. The insignificance of the result suggests that changes in board size, whether an increase or decrease, do not have a meaningful impact on the firm value of listed conglomerate firms in Nigeria. Consequently, this finding leads to the acceptance of the hypothesis that board size does not have a significant effect on firm value in this context. This could imply that simply increasing the number of directors on a board does not necessarily enhance firm performance or value, possibly due to challenges such as inefficiency in decision-making or coordination within larger boards. Therefore, it suggests that board size alone is not a key determinant of firm value in conglomerate firms listed on the Nigerian Exchange Group.

HO2: Board Independence and Firm Value

The regression analysis reveals that board independence has a positive and statistically significant effect on the firm value of listed conglomerate firms in Nigeria. This finding indicates that as the proportion of independent directors on the board increases, the firm value also rises. Board independence is often associated with improved governance practices, as independent directors are less likely to have conflicts of interest and are more likely to make decisions that benefit shareholders and enhance overall firm performance. Independent boards are believed to provide more objective oversight and contribute to better strategic decision-making, which can positively impact firm value. Therefore, increasing the proportion of independent directors on the board can lead to more effective governance, ultimately resulting in higher firm value for conglomerate firms in Nigeria. This highlights the importance of maintaining a significant level of board independence as a key factor in enhancing firm value. The study therefore reject the hypothesis that board independence has no significant effect on firm value of listed conglomerate firms in Nigeria.

HO3: Board Expertise and Firm Value

The study reveals that board expertise has a positive but insignificant effect on the firm value of listed conglomerate firms in Nigeria. This finding suggests that, while directors with specialized financial and industry knowledge contribute positively to firm performance, their impact on firm value is not strong enough to be deemed statistically significant in this context. Expertise in areas such as accounting, finance, and management enables board members to make informed decisions and enhance governance, but this effect is not substantial enough to definitively drive firm value. Despite the positive trend, the study accepts the hypothesis that board expertise has no significant effect on firm value. This could be due to specific factors within the conglomerate sector in Nigeria, where other variables, such as market conditions or internal management practices, may have more influence on firm value than board expertise alone. Therefore, while expertise is valuable, it may not be the sole determinant of firm value, indicating the importance of considering broader governance frameworks and other corporate dynamics to enhance firm value.

HO4: Managerial Ownership and Firm Value

The study reveals that managerial ownership has a negative and significant effect on the firm value of listed conglomerate firms in Nigeria. This finding suggests that, as managerial ownership increases, firm value tends to decrease. This result may appear counterintuitive, as traditional corporate governance theories such as the agency theory argue that higher managerial ownership aligns the interests of managers with those of shareholders, reducing agency conflicts and increasing firm value. However, in the context of Nigerian conglomerates, the negative relationship may indicate potential entrenchment or over-concentration of power among managers, leading to inefficiencies in decision-making. When managers hold substantial shares, they may pursue personal interests or make decisions that secure their positions rather than enhance firm value, which could result in suboptimal outcomes for the firm.

HO5: Capital Adequacy and Firm Value

The finding that capital adequacy has a positive but insignificant effect on the firm value of listed conglomerate firms in Nigeria suggests that while maintaining a strong capital base might contribute positively to firm performance, this effect is not substantial enough to be statistically significant in this context. Capital adequacy, which refers to the sufficiency of a firm's capital to cover its risks and absorb potential losses, is generally viewed as a critical factor in ensuring financial stability and operational resilience. A robust capital base can enhance a firm's ability to withstand economic downturns and invest in growth opportunities, potentially leading to improved firm value. However, in the case of the listed conglomerate firms in Nigeria, the positive impact of capital adequacy on firm value appears to be overshadowed by other factors or variables within the firm's environment. This might include market conditions, industry-specific challenges, or internal management practices that could be more influential in determining firm value. The insignificance of the effect suggests that while having adequate capital is beneficial, it alone does not provide a substantial competitive advantage or drive firm value in a meaningful way. Therefore, firms should consider a more comprehensive approach that includes enhancing other aspects of their financial and operational strategies to effectively improve their overall value.

HO6: Moderated Board Size and Firm Value

The study's findings reveal that the interaction between board size and capital adequacy exhibits a negative yet statistically insignificant effect on the firm value of listed conglomerate firms in Nigeria. This result indicates that while the combination of board size and capital adequacy might suggest a potentially adverse impact on firm value, this effect is not strong enough to be considered statistically significant. In other words, although larger boards combined with varying levels of capital adequacy might theoretically influence firm value negatively, the evidence does not support a conclusive impact in this case. The acceptance of the hypothesis that the interaction between board size and capital adequacy does not significantly affect firm value highlights the complexity of corporate governance dynamics. It suggests that the interplay between these two factors does not substantially alter the firm's value in the Nigerian context. This finding could imply that other factors, might overshadow the combined effect of board size and capital adequacy on firm value. Consequently, while capital adequacy and board size individually play roles in firm performance, their interaction does not appear to significantly influence firm value, emphasizing the need for a broader perspective when evaluating corporate governance and financial management strategies.

HO7: Moderated Board Independence and Firm Value

The study reveals that moderated board independence has a negative and significant effect on the firm value of listed conglomerate firms in Nigeria. This indicates that when board independence is combined with capital adequacy, the effect on firm value is adverse. In other words, an increase in the proportion of independent directors, alongside capital adequacy, leads to a reduction in firm value. This significant negative impact could suggest that independent directors may not always align with the strategic goals of the firm, particularly in the conglomerate sector, or that they may overly focus on compliance and governance controls at the expense of innovative decision-making and strategic risk-taking that are crucial for improving firm value. It may also imply that the influence of independent directors could be constrained by other factors, such as insufficient industry-specific expertise or lack of integration with executive management, leading to suboptimal outcomes for the firm.

HO8: Moderated Board Expertise and Firm Value

The study reveals that moderated board expertise has a positive and significant effect on the firm value of listed conglomerate firms in Nigeria. This finding indicates that when board expertise is combined with capital adequacy as a moderating factor, it positively influences firm value. The presence of directors with specialized knowledge in areas such as finance, accounting, and industry-specific insights enhances the board's ability to make informed strategic decisions, contributing to improved firm performance. This positive relationship suggests that boards with greater expertise can more effectively align their decisions with the firm's financial health, thereby increasing firm value.

HO9: Moderated Managerial Ownership and Firm Value

The result of the study indicates that moderated managerial ownership has a positive and significant effect on the firm value of listed conglomerate firms in Nigeria. This finding suggests that when managerial ownership is considered alongside other moderating factors, it enhances the overall value of the firm. Specifically, the positive relationship implies that as the proportion of shares held by managers increases, it aligns their interests more closely with those of the shareholders. This alignment can drive better decision-making and a stronger commitment to increasing the firm's value. The significant effect observed leads to the rejection of the hypothesis which proposed that moderated managerial ownership has no significant effect on firm value.

5.0 Conclusion and Recommendations

The study concludes that while board size exhibits a positive relationship with firm value in listed conglomerate firms in Nigeria. Also, board independence has a positive and significant effect on firm value among listed conglomerate firms in Nigeria. The study concludes that board expertise, while contributing positively to the firm value of listed conglomerate firms in Nigeria, does not have a statistically significant effect. The study reveals that managerial ownership has a negative significant effect on the firm value of listed conglomerate firms in Nigeria. The study reveals that capital adequacy has a positive but statistically insignificant effect on the firm value of listed conglomerate firms in Nigeria. The study's finding that the moderated board size has a negative but statistically insignificant effect on firm value among listed conglomerate firms in Nigeria suggests that this interaction does not have a substantial impact on firm value in this context. The study concludes that moderated board independence has a negative effect on the firm value of listed conglomerate firms in Nigeria. The study concludes that moderated board expertise has a positive and significant effect on the firm value of listed conglomerate firms in Nigeria. The study's finding concludes that moderated managerial ownership has a positive and significant effect on the firm value of listed conglomerate firms in Nigeria.

I. Based on the findings, it is recommended that conglomerate firms should not rely solely on increasing or decreasing board size as a strategy to improve firm value. Instead, firms should focus on optimizing the effectiveness of their boards by ensuring that board members possess the necessary skills, expertise, and experience. This can be achieved by implementing policies that promote diversity in board composition, enhancing board training and development, and ensuring effective board processes and decision-making.

II. Based on the findings, conglomerate firms in Nigeria shuld prioritize the appointment of independent directors to their boards. These firms should ensure that independent directors possess relevant industry knowledge and are empowered to perform their governance roles effectively. Additionally, regular board evaluations should be conducted to assess the effectiveness of board independence in enhancing firm value.

References

Abbassi, W., Hunjra, A. I., Alawi, S. M., & Mehmood, R. (2021). The role of ownership structure and board characteristics in stock market liquidity. *International Journal of Financial Studies, 9*(4), 74.

Abuzayed, B., & Molyneux, P. (2009). Market value, book value and earnings: Is bank efficiency a missing link? *Managerial Finance,* 35(2), 156–179

Adams, R. B., & Ferreira, D. (2022). Board diversity and firm performance: Evidence from recent studies. *Journal of Corporate Finance, 65*, 101837.

Adegboye, A. O., & Olaoye, O. (2021). The role of board expertise in enhancing firm value: Evidence from the Nigerian financial sector. *Journal of Business Finance & Accounting, 48(*1), 75-95.

Adekunle, S., & Sunday, O. (2020). Board characteristics and firm value of listed companies in Nigeria. *International Journal of Corporate Governance, 12*(1), 42-56.

Agyei, A., & Owusu, F. (2019). Board financial expertise and firm performance in African markets: The moderating role of governance. *African Journal of Economic and Management Studies, 10*(2), 241-256.

Agyemang-Mintah, P., & Schadewitz, H. (2021). Corporate governance mechanisms and firm performance: The case of board size and structure. *Journal of Financial Studies, 19*(1), 13-29.

Akinola, A. & Oluwatoyin, O. (2022). "Capital Adequacy and Firm Value: A Study of Nigerian Financial Institutions."*International Journal of Financial Studies, 10*(3), 45-67.

Ali, A., & Zahid, M. (2021). Board size, composition, and firm performance: Evidence from the banking sector. *Global Finance Journal, 55*, 100590.

Almashaqbeh, M. K., Mohamad, N. R., & Taha, R. (2023). The impact of ownership structure on the firm's value. *Journal of Governance and Regulation, 12* (4).

Al-Saidi, M., & Al-Shammari, B. (2022). Independent Directors and Corporate Governance: A Case Study of GCC Countries. *Journal of Governance and Regulation.*

Amedi, A. M. R., & Mustafa, A. S. (2020). Board characteristics and firm performance: Evidence from manufacture sector of Jordan. *Accounting Analysis Journal, 9*(3), 146–151. https://journal.unnes.ac.id/sju /index.php/aaj/article/view/39577

Anas, M., Jamal, M. T., Ahmad, M. M., Azmi, S. N., & Alam, M. F. (2022). The moderating role of board gender diversity in association of board characteristics and firm value. *Corporate Governance and Sustainability Review, 6*(2), 29–41. https://doi.org/10.22495/cgsrv6i2p3

Armstrong, C. S., Guay, W. R., & Weber, J. P. (2021). The role of independent directors in firm performance. *Accounting Review*.

Awad, A. B., Khalaf, B. A., & Afzal, A. (2023). The power of board size and gender diversity on the value of companies listed on emerging markets. *Corporate Law & Governance Review, 5* (2).

Awan, A. G., Lodhi, M. U., & Hussain, D. (2018). Determinants of firm value: a case study of Chamical industries of Pakistan. *Global Journal of Management, Social Sciences and Humanities,* 4 (1), 46-61.

Chen, L., Zhang, Z., & Li, J. (2021). Board size and firm performance: Evidence from China. *Journal of Corporate Finance, 68*, 101872.

Choi, J. J., Park, S. H., & Yoon, M. (2021). Managerial ownership and firm value: Evidence from South Korea. *Asia-Pacific Journal of Financial Studies, 50*(4), 520-546.

Danso, A., Ofori, G., & Owusu, M. (2022). The effect of board size on firm performance: Evidence from listed firms in sub-Saharan Africa. *African Journal of Economics and Finance, 23*(4), 153-170.

DeFond, M. J., Hann, R. N., & Hu, X. (2005). Does the market value financial expertise on audit committees of boards of directors? *Journal of Accounting Research*, 43(2), 153−194.

Donelson, D. C., Glenn, J. L., & Yust, C. G. (2018). The effect of ownership structure and board independence on firm value: Evidence from Controlled Companies. Red McCombs School of Business and the Mays Business School.

Ebimobowei, A. (2022). Corporate governance characteristics and firm value of deposit money banks in Nigeria. *Corporate Governance, 5*(2), 109-129.

El-Gazzar, S. & Aboelgheit, S. (2022). "Capital Structure and Firm Value: Revisiting the Role of Capital Adequacy."*Journal of Banking and Finance, 131*, 106-120.

Emeka-Nwokeji, N. (2017). Corporate governance and firm value: Evidence from quoted nonfinancial firms in Nigeria. *Accounting and Finance Research Association, 1*(1).

Endri, L. (2019). Determinant of Firm's Value: Evidence of Manufacturing Sectors Listed in Indonesia Shariah Stock Index. *International Journal of Recent Technology and Engineering (IJRTE),* 3, 3995–3999.

Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2020). Board independence and firm performance: The moderating role of industry. *Strategic Management Journal.*

Estiasih, S. P., Yuniarsih, N., & Wajdi, M. B. N. (2019). The influence of corporate social responsibility disclosure, managerial ownership and firm size on firm value in Indonesia stock exchange, 9(9), 159-171.

Fagbemi, T., & Olamide, O. (2020). Corporate governance and firm value: An examination of Nigerian conglomerates. *Journal of Accounting & Corporate Governance, 11*(3), 213-229.

Francis, B. B., Hasan, I., & Wu, Q. (2012). Do Corporate Boards Affect Firm Performance? New Evidence from the Financial Crisis. Bank of Finland Research Discussion Paper No. 11/2012, Available at SSRN: https://ssrn.com/abstract=2041194 or http://dx.doi.org/10.2139/ssrn.2041194

Furest, O., & Kang, S. (2004). Corporate governance, expected operating performance and pricing. *Corporate Ownership and Control,* 1(2), 13-30.

Geovanni, T. A., Vetric, V. H., Budi, S., Maulana, Y., Tri, R., & Gregorius, S. B. (2023). The relationship between institutional ownership, capital structure, and firm value: Research on LQ45 Index Companies.

Ghosh, S. (2006). Do board characteristics affect corporate performance? Firm-level evidence for India Do board characteristics affect corporate performance? Firm-level evidence for India. October 2014, 37–41.

Gilbrat, R. (1931). Les Inequalities Economiques. Paris, Librairie du Recueil Sirey

Gill, A., & Mathur, N. (2011). Factors that affect potential growth of Canadian firms. *Journal of Applied Finance & Banking,* 1 (4), pp. 107-123.

Gompers, P. A. (1995). Optimal investment, monitoring, and the staging of venture capital. *Journal of Finance, 50*(5), 1461-1489.

González, J. M., & García-Meca, E. (2020). Independent directors and firm performance: Evidence from emerging markets. Corporate Governance: *An International Review.*

Hassan, S., & Shamsher, M. (2022). The effect of board size on firm performance: A study of financial institutions. *International Journal of Finance & Economics, 27*(2), 273-290.

Jaffar, M., Asad, S., & Khalid, R. (2021). The impact of board size on firm performance: Evidence from Pakistan. *Asian Finance & Economics Review, 22*(3), 121-135.

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

Kanakriyah, R. (2021). The impact of board of directors' characteristics on firm performance: A case study in Jordan. *Journal of Asian Finance, Economics and Business, 8*(3), 341–350. https://doi.org/10.13106 /jafeb.2021.vol8.no3.0341

Khan, M. A., Ullah, N., & Shahid, A. (2023). Managerial ownership and firm performance: Evidence from Pakistani firms. *Journal of Economics and Business, 103*, 56-76.

Khanh, V. T. V., Hung, D. N., Van, V. T. T., & Huyen, H. T. (2020). A study on the effect of corporate governance and capital structure on firm value in Vietnam. *Accounting, 6,* 221–230. https://doi.org/10.5267/j.ac.2020.3.004

Liu, Y., Zhang, X., & Li, J. (2022). Managerial ownership and firm performance: Evidence from China. *China Economic Review, 71,* 101539.

M'ithiria, E. N., Musyoki, D., & Shawa, K. (2017). Corporate governance, board structure and firm value: A Review of Literature. *Journal of Business & Economic Policy,*4(4), 72–79.

Manoj, P., &Manoranjan, P. (2016). Insider ownership and firm value evidence from Indian corporate sector. *Economic and Political Weekly*, 42(16), 1459–1467.

Modest, P. A., Doaa, A., & Khaled, H. (2016). The impact of board characteristics on the financial performance of Tanzanian firms.

Modigliani, F., & Miller, M.H. (1958). The cost of capital, corporate on finance and the theory of investment. *The American economicreview*,48(3), pp.261-297.

Mohammed, G. T. (2017). Impact of firm characteristics on firm value of listed healthcare firms in Nigeria. A dissertation submitted to the school of postgraduate studies, Ahmadu bello university, Zaria in partial fulfilment of the requirements for the award of a master degree in accounting and finance.

Muhimatul, I. L., Faisal, F., Imam, G., & Udin, U. (2019). Company attributes and firm value: Evidence from companies listed on Jakarta Islamic index. Revista, Vol. 40 (37), Page 11.

Muneesh K., & Sanjay S. (2004), Company Characteristics and Common Stock Values: The Indian Experience. *Investment Management and Financial Innovations,* 4, 89.

Muniandy, B., & Hillier, J. (2015). Board independence, investment opportunity set and performance of South African firms. *Pacific-Basin Finance Journal*, vol. 35, issue PA, 108-124

Munisi, G., & Randøy, T. (2020). The impact of board expertise on firm value in emerging markets. *Journal of Business Research, 114,* 252-264.

Nassir, A., & Rahman, M. (2021). Impact of managerial ownership on firm value: Evidence from Malaysia. *International Journal of Managerial Finance, 17*(1), 120-140.

Nguyen, T. H., Bui, T. T., & Hoang, H. (2020). Managerial ownership and firm performance: Evidence from Vietnam. *Emerging Markets Finance and Trade, 56*(8), 1847-1863.

Nwankwo, E., Akintoye, O., & Olaniyan, A. (2023). "The Effect of Capital Adequacy on Firm Value: An Empirical Analysis of Nigerian Firms."*African Journal of Economic and Management Studies, 14*(2), 112-130.

Nyoman, N., Putu, G. M., Djumahir, M., & Djazuli, A. (2014). Factors Affecting Firms Value of Indonesia Public Manufacturing Firms. *International Journal of Business and Management Invention*, *3*(2), 35–44.

Ogunleye, A., Akinboade, O., & Akinbode, O. (2022). Corporate governance and firm value: An analysis of board size and performance in Nigeria. *Journal of Corporate Governance Research, 16*(2), 45-60.

Okoye, N., & Aliyu, A. (2022). The influence of board characteristics on firm performance in Nigeria. *Management and Organization Review, 18*(1), 157-179.

Okoye, R., Olagunju, O., & Abah, P. (2021). Board size, governance structure, and firm performance in non-financial firms in Nigeria. *Journal of Business and Finance, 18*(2), 77-89.

Oluwaseun, J., Adeyemi, A., & Ismail, A. (2021). Managerial ownership and firm value: Evidence from Nigeria. *African Journal of Economic and Management Studies, 12*(2), 115-134.

Pervan, M., Pervan, I., & Ćurak, M. (2019). Determinants of firm profitability in the Croatian manufacturing industry: evidence from dynamic panel analysis. *Economic Research-Ekonomska IstraÅ¾ivanja*, *32*(1), 968–981.

Riskin, H., Sugeng, W., Harjum, M., Intan, S., & Intan, P. (2019). The improve level of firm value with liquidity, debt policy and investment in indonesian emerging market. *Revista*, 40 (40), 22

Subanidja, S., Rajasa, A., Suharto, E., & Atmanto, J. D. (2016). The determinants of firm value: The role of earnings management and good corporate governance. *Corporate Ownership and Control*, *13*(4), 609–615.

Suparno, S., & Pitoyo, D. (2016). Determinant factor of firm's value on manufacturing company in Indonesian Stock Exchange. *Advances in Economics, Business and Management Research*, 15, 138–147.

Surasmi, I. A., Wiagustini, N. L. P., Purbawangsa, I. B. A., & Sedana, I. B. P. (2020). Determinant of firm value: Debt maturity as moderator (study in manufacturing industry in Indonesia). *International Journal of Advance Science and Technology*, 29(10), 6703–6716.

Sweety, N., & Mandeep, K. (2014). Impact of firm-specific attributes on shareholder value creation of Indian companies: An Empirical Analys. *Global Business Review*, *15*(4) 847–866

Tahir, S. J., Lim, C. C., & Zunarni, B. K. (2023). Board characteristics and firm value: The moderating role of capital adequacy. *Investment Management and Financial Innovations, 20*(2), 205-214. doi:10.21511/imfi.20(2).2023.18

Thenmozhi, M., & Sasidharan, A. (2020). Does board independence enhance firm value of state-owned enterprises? Evidence from India and China. *European Business Review, 32*(5), 785-800. https://doi.org/10.1108/EBR-09-2019-0224

Wang, L. & Zhao, X. (2022). "Capital Adequacy and Firm Value: A Comprehensive Analysis."*Finance Research Letters, 45*, 72-85.

Wang, T., & Xie, W. (2020). Managerial ownership and firm value in Taiwan: New evidence. *Journal of Asian Economics, 68,* 101244.

Yeboah, E., & Agyei, S. (2023). Board characteristics, governance, and firm value: The mediating role of decision-making processes. *Journal of International Corporate Governance, 9*(2), 81-94.

Zhang, Y., & Liu, X. (2021). Managerial ownership and firm performance in Indian conglomerates. *Journal of Indian Business Research, 13*(3), 298-316.

Zuhroh, I. (2019). The Effects of Liquidity, Firm Size, and Profitability on the Firm Value with Mediating Leverage, The 2nd International Conference on Islamic Economics, Business, and Philanthropy (ICIEBP) Theme: *Sustainability and Socio-Economic Growth, KnE. Social Sciences.*