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# **Mediating the Effect of Corporate Social Responsibility on the Relationship between Board Gender Diversity and Financial Performance of Listed Companies in Nigeria**

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## **Abstract**

This study examines the mediating effect of corporate social responsibility on the relationship between board gender diversity and financial performance of listed companies in Nigeria. The study employs an ex-post facto research design. The population of the study comprises the entire companies quoted on Nigerian Exchange Group from 2012-2021. The study samples hundred and twelve (112) companies out of the larger population which were drawn using judgmental sampling technique. The study sourced data from secondary source. The technique of data analysis employed is mediation analysis (using sobel test). The study finds that corporate social responsibility fully mediates the relationship between board gender diversity and financial performance of listed companies in Nigeria. Therefore, the study recommends that companies should diversify their board to improve companies' financial performance through corporate social responsibility activities.

**Keyword:** board gender diversity, financial performance, corporate social responsibility

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## **1. Introduction**

Company boards today are more gender diverse than ever before with having both women and men around the table when making critical decisions that determine the success of a company. The performance of business within an organization is impacted by the significant variations in gender diversity in the workplace. Gender diverse boards are expected to promote a better understanding of the marketplace, increase creativity and decision-making ability, promote more effective problem solving, broaden perspectives and increase board monitoring. Board gender diversity indicates the fair representation of members of various genders within the corporate board (Chandula , Dissanayake & Anuradha ,2023). Therefore, gender diversity in workplace means that women and men are hired at a similar and consistent pay and are given the same opportunities, be that access to resource, promotion or pay. Diverse board encourages the companies to commit to more corporate social responsibility practices.

To be corporate social responsibility responsive, companies aim for a beyond-the-profit approach, and they are required to consider all stakeholders where the business is concerned not just with the interests of the management and capital owners but also those of the employees, customers, and society. Corporate social responsibility entails engaging in specific activities by firms that align their economic, environmental, and social objectives within their strategic frameworks and operational choices (Chuang &Huang,

2018; Wang, Gibson, & Zander, 2020; Endrikat, De Villiers, Guenther & Guenther, 2020). The corporate social responsibility tactics has eventually focused more on support to their employees, customers, and communities through provision of scholarship for poor children, the provision of funds for the maintenance of public facilities, donations for village/community facilities that are social and useful for many people, especially communities, donating equipment to resist the disease, moving to the different manufacturing processes to produce tools that doctors and nurses need such as gowns, masks, and hand sanitizer. This heightened focus is attributed to the growing recognition among businesses that their role extends beyond profit maximization to encompass broader social responsibilities (Su & Lee, 2020).

One way to assess the performance of a company is by looking at the company's financial performance. Financial performance is a company goal, which describes the company's ability to increase company profits by generating profits. Profitability is a natural thing to see the sustainability of the company. The ability of a business to turn a profit using sales, total assets, and capital is known as profitability (Hamad & Cek, 2023). Profitability ratios are crucial for a firm's longevity since they enable an analysis of the contribution of short- and long-term corporate earnings (Santosa, Aprilia & Tambunan, 2020). Therefore, the company's profitability is crucial to ensuring its continued existence.

Studies that have focused on the relationship between board gender diversity and firm's financial performance have arrived at mixed results. Some studies support the existence of a positive relationship (Jeong, Jeong, Lee & Bae, 2018; Chuang & Huang, 2018; Ghaderi Mirzapour, Henderson, & Richardson, 2019; González-Rodríguez, Martín-Samper, Köseoglu & Okumus 2019; Chung Jung & Young, 2018; Kim, Kim & Qian 2018; Sroufe & Gopalakrishna-Remani, 2019), others advocate a negative or non-significant link (Chen, Hung & Wang, 2018; Duque-Grisales & Aguilera-Caracuel, 2019). These heterogeneous results can mainly be explained by the use of different measures of board gender diversity and firm performance (Galant & Cadez, 2017), the different studied periods and contexts, the choice of model specification and control variables (Benlemlih, 2017). These mixed results seem to be mainly attributed to testing the direct effect; however, there might be a potential indirect relationship between corporate board gender diversity and firms' financial performance. This indirect effect is motivated based, on one hand, on studies that highlight that board gender diversity is linked to better corporate social responsibility (Seto-Pamies, 2015; Jain & Jamali, 2016; Kaspereit, Lopatta, & Matolcsy, 2016; Velte, 2021; Uyar, Kuzey, Kilic, & Karaman, 2021; Galletta, Mazzu, Naciti, & Vermiglio, 2022) and on the other hand, on the studies that support a positive relationship between corporate social responsibility and financial performance (Goel & Misra, 2017; Velte, 2017).

Studies on the relationship between board diversity and corporate performance by focusing on the mediating role of corporate social responsibility reporting is scanty. For instance, evidence of an indirect effect between board gender diversity and financial performance through the mediating role of corporate social responsibility (Galbreath, 2018). Furthermore, investigation on the relationship between board diversity and corporate performance by focusing on the mediating role of corporate social responsibility reporting (E-Vahdati Zulkifli, & Zakaria, 2018). Specifically, In Nigeria, examination on mediating the effect of corporate social responsibility on the nexus between corporate value and board diversity (Chondough, 2021). This study is related to indirect effect, aiming to examine the mediating effect of corporate social responsibility in driving the relationship between board gender diversity and financial performance. However, contrary to previous studies, such as Chondough (2021) where the study examines mediating effect

of corporate social responsibility (CSR) on the nexus between corporate value and board diversity of Nigerian listed oil and gas firms in the upstream sector spanning 2012 to 2019.

This study examines whether corporate social responsibility mediates the relationship between board gender diversity and financial performance of listed companies in Nigeria from 2019-2021. To achieve this objective, hypotheses that there is no significant mediating effect of corporate social responsibility on the relationship between board gender diversity and financial performance of listed companies in Nigeria.

The rest of the paper contains four sections. Section two examines literature review. Section three explains the methodology of the paper. Section four presents result and discussion. The last section contains the conclusion and recommendation.

## **2. Literature Review**

A company's financial performance forms the backbone on which a profit seeking entity would continue to exist. Alexopoulos, Kounetas & Tzelepis 2(018) conceptualized financial performance as how well a firm uses its resources to generate revenues and profits. On the hand, Centobelli, Cerchione & Singh (2019) defined financial performance as the achievement of a company in terms of profitability, efficiency, liquidity, and solvency. Mwangi & Murigu (2015) viewed financial performance as a measure of an organization's earnings, profits and appreciation in its value which is reflected by the rise in price of the entity's shares and can be compared with other firms across the industry or to compare the performance of industries as a whole. Fauzi, Svensson & Rahman (2010) considered financial performance as the outcomes of management processes in relation to the goals that were set. Furthermore, Trivedi (2010) sees financial performance as the act of performing a financial activity measured against preset standards of accuracy, completeness, cost, and speed. In addition, Liu (2020) refers to financial performance as to the ability of a business to effectively manage its financial resources to achieve its objectives and create value for its stakeholders .From the foregoing, financial performance is a measure of an organization's earnings, profits and appreciation in its value which are reflected by the rise in price of the entity's shares and the degree to which financial objectives are being met or has been accomplished

### **2.1 Concept of Corporate Social Responsibility**

Different definition of corporate social responsibility was authored by various authors. According to Adeneye and Ahmed (2015) corporate social responsibility is a commitment to enhance community well- being by discretionary business practices and contributions of company resources. In this scenario, a firm goes out of its way to provide in-kind assistance or make direct monetary contributions to enhance society. Rehan, Khan & Khan (2018) described corporate social responsibility as a company's commitment to preserve and enhance the wellbeing of stakeholders in the present and future. In the view of Westoby (2016) corporate social responsibility is a strategy that companies employ to deliberately integrate social and environmental concerns into their business operations and improve stakeholders' engagement. This definition focuses on the business ethics of integrating economic, social, and environmental effect into all corporate operations, maintaining sustainable economic growth, and manager accountability to all stakeholders. Umarana, Bashir & Ali (2018) opined corporate social responsibility as an approach to business operations that contributes to sustainable development by providing economic, social, and environmental benefits to all stakeholders. Furthermore, Mumtaz & Ihendinihu (2014) conceptualized corporate social responsibility as the pursuit of commercial success in a manner that respects ethical values, individuals, the community, and the natural environment. Chandula, Dissanayake & Anuradha (2023) documented corporate social responsibility as a management concept whereby companies integrate social and

environmental concerns in their business operations and interactions with their stakeholders. Thus, corporate social responsibility is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives ("Triple-Bottom-Line-Approach"), while at the same time addressing the expectations of shareholders and stakeholders

A number of studies have been examined on board diversity, financial performance and disclosure of corporate social responsibility. Hassan, Saleh & Ibrahim (2020) investigated the relationship between board diversity, financial performance and disclosure of corporate social responsibility (CSR) information of the Malaysian listed companies. Different from prior literature, board diversity is viewed from the perspective of gender, age, tenure, educational level, professional membership and functional background. We used 1.5 one explanation i.e. diversity as variety, out of three explanations from a typology in social psychological and organizational management fields. The sample consists of 205 companies listed on Bursa Malaysia. Using regression analysis, a significant positive relationship was noted between the functional backgrounds of directors and the companies' financial performance. The result shows that boards should have diversity in their functional background. The other forms of board diversity such as gender, age, tenure, educational level and professional membership have been found not to influence companies' financial performance. Board professional membership diversity was found to significantly increase the CSR information disclosure. However, other forms of board diversity were found not to influence the CSR information disclosure.

Boukattaya, Ftiti, Ben Arfa, & Omri, (2022) examined whether the corporate social practices (CSP) affect the board gender diversity–financial performance relationship. Taking a sample of French firms listed in the SBF 120 index during 2005–2019 period, we used the mediation effect steps analysis to test the mediation effect of CSR versus CSI on the relationship between board gender diversity and the firm's performance. First, our findings show that board gender diversity has a stronger impact on CSI than CSR. Second, we confirm that CSP exert an asymmetric effect on financial performance in favour of CSI. Finally, we show that CSI plays a mediating role between board gender diversity and financial performance.

Rahmadhani, Nurlita & savitri (2020) determine the effect of gender diversity and corporate social responsibility and to find out the influence of corporate social responsibility in mediating the relationship between gender diversity and company performance. This study uses secondary data from companies listed on the Indonesian Stock Exchange. Research sample selection employed was purposive sampling. The research data analysis was double regression analysis. It was found that gender diversity and corporate social responsibility had a positive effect on company performance. Corporate social responsibility was proven to mediate relationship of gender diversity to company performance. Improved financial performance influenced by gender diversity will develop better through social and environmental concerns expressed in corporate social responsibility disclosure.

Uyar, Kilic, Ali, Kuzey & Karaman (2020) explored whether board characteristics (that is a sustainability committee, board independence, board diversity, and board diligence) lead to greater corporate social responsibility performance, and to test whether corporate social responsibility performance enhances firms' financial performance in the hospitality and tourism (H&T) industry. Data were collected from the Thomson Reuters Eikon database for the H&T firms listed there between 2011 and 2018. We employed panel data analysis, after which we ran robustness tests. The results indicated that having a corporate social responsibility committee and female directors on the board are robust factors driving firms to show superior corporate social responsibility performance in all dimensions,

including environmental, social, and governance (ESG). Independent directors and directors' diligence selectively enhance the overall corporate social responsibility score and individual pillars of corporate social responsibility. Investigating the relationship between corporate social responsibility performance and firms' financial performance did not produce a significant outcome. The findings propose a straightforward roadmap for H&T firms and policymakers to identify characteristics of corporate social responsibility - friendly boards.

Oware & Mallikarjunappa (2021) examined the moderating and mediating effect of corporate social responsibility (CSR) disclosure and CSR expenditure on the association between listed firms' financial performance and gender diversity. There are 80 listed firms with 800 firm-year observations from 2010 to 2019 that qualified for the study using the Indian stock market. The first finding shows a negative association between financial leverage and gender diversity. The second finding shows that the implementation of CSR disclosure hurts the improvement of gender diversity. The third finding shows that CSR expenditure improves gender diversity of listed firms in an emerging market. The fourth finding shows that CSR expenditure positively mediates the negative association between financial leverage and gender diversity. The fifth finding shows that CSR disclosure does not mediate the association between financial performance (return on assets, price to book ratio and financial leverage). The sixth finding shows that CSR expenditure negatively moderates the negative association between return on assets and gender diversity.

Jiang et al (2020) examine the moderating role of corporate social responsibility (CSR) in board gender diversity and firm financial performance. We used the panel data regression (fixed effect) in our analysis to check the moderating role of CSR in the board gender diversity and the firm financial performance. We collected the data of Chinese listed companies from the Shenzhen and Shanghai stock exchanges from the China stock market and accounting research (CSMAR) database. We used a two-stage least square (TSLS) regression model to control the possible problem of endogeneity. Our results show that higher representation of female directors in the board is positively related to firm financial performance and that CSR has a significantly positive effect when moderating the relation between board gender diversity and firm financial performance. Besides, three control variables (board size, board member average age, and Big4) have a positive impact on the firm performance, having the leverage variable a negative impact on the firm performance. Our findings hold for a set of robustness tests.

E-Vahdati Zulkifli & Zakaria (2018) analyzed the association between board diversity (gender and foreigner) and corporate performance by focusing on the mediating role of corporate social responsibility reporting (CSR) and the moderated mediation role of South East Asian (ASEAN) countries through new institutional theory, which consists of legitimacy and institutional theories. According to a sample of 264 corporates from all industries by using GRI G3 guideline from 2011 to 2013, we found that foreign and gender diversity have partial and full mediation effects in ASEAN countries. The main conclusion of the study indicates that board diversity affects directly with corporate performance and indirectly with CSRR through moderated path analysis.

Galbreath (2018) examined the indirect link between board gender diversity and financial performance as well as the mediating mechanism of Corporate Social Responsibility relying on a sample of Australia's largest publicly traded firms, the results demonstrate that women on boards are linked to CSR and that CSR is linked to financial performance. However, in the mediation test, CSR appears to fully mediate the link between women on boards and financial performance. The results are discussed along with limitations and future research directions.

Awwad, Binsaddig, Kanan & AlShirawi (2022) investigated whether there is a relationship between women's presence on boards of directors and companies' financial performance and corporate social responsibility (CSR) disclosure and, if so, whether this relationship is positive, negative or neutral. The research sample included 47 companies listed on the Palestine Stock Exchange from 2010 to 2020. Panel regression analysis was used to examine the study's hypothesis and achieve the study's objectives. The presence of women on the board of directors positively affects a company's financial performance and disclosure of CSR. However, measuring the CSR disclosure sub-components separately shows a decrease in the disclosure index towards both the environment and employees. Moreover, the level of female representation on the boards of directors of the Palestinian companies studied is generally low.

Dakhli, (2021) investigates the direct and indirect relationship between board gender diversity and corporate tax avoidance using corporate social responsibility (CSR) as a mediating variable. This study uses a panel dataset of 200 French firms listed during 2007–2018 period. The direct and indirect effects between board gender diversity (BGD) and tax avoidance were tested by using structural equation model analysis. The results indicate that the presence of women on corporate boardrooms negatively affects tax avoidance. The greater the proportion of women in boards, the lower the likelihood of tax avoidance practice. In the mediation test, CSR appears to partially mediate the link between women on boards and corporate tax avoidance. Additional analysis shows that the social dimension of CSR produces this mediating effect.

Sial et al (2018) examined the relationship between board gender diversity and a firm's financial performance has been investigated before, the current study provides a valuable contribution by exploring the complex phenomenon of the mediating impact of corporate social responsibility (CSR) performance on a firm's financial performance. The current study aims to explore whether corporate social responsibility (represented by the proxy variable of CSR reporting) mediates the relationship between boardroom gender diversity and firm performance. We use the pooled ordinary least square (OLS) regression to examine the above relationship by using data from 2008 to 2015. To control the likelihood of endogeneity we also use one-year lagged and two-stage least square (2SLS) regression models. Our results show that boardroom gender diversity is significant, positively correlated with firm performance, and CSR fully mediates the relationship between boardroom gender diversity and firm performance. In addition, four control variables (independent director, Chief executive officer (CEO power), board member meeting frequency, Big4, and leverage) have some influence on firm performance.

Chondough (2021) examine mediating effect of corporate social responsibility (CSR) on the nexus between corporate value and board diversity is investigated. However, hypotheses developed for this study were tested with annualized panel dataset of eight (8) Nigerian listed oil and gas firms in the upstream sector spanning 2012 to 2019. Stakeholder theory was used to underpin the study. The study employed three indicators for board diversity (board professionalism, board nationality and board gender), Tobin's Q and amount spent on CSR. The panel regression results show that looking at the indirect effect in Model One; board diversity has no significant effect on firm value. However, empirical findings indicated that CSR exerts a significant and positive relationship with corporate value. Considering Model Two, the results show that CSR plays a pertinent role in establishing the nexus between corporate value and board diversity, this finding is congruent with stakeholder theory.

From the foregoing, it can be deduced that the studies show conflicting and mixed results on mediating the effect of corporate social responsibility on board gender diversity and financial performance. In addition, empirical studies on mediating the effect of

corporate social responsibility on board gender diversity and financial performance are scanty, especially in the Nigerian context and therefore, this is the research gap that this study attempt to fills.

### **3. Theoretical Framework**

The theoretical foundation of this work rests on the resource dependency theory and stakeholder theory. One such theories is the Resource Dependency Theory

A theory possibly explaining the relationship between board gender diversity and corporate social responsibility is the resource dependency theory. It is introduced by Pfeffer and Salancik (1978), who argued that companies supervise their environment by bringing on board resources needed to survive. The central proposition is that the social context in which firm exists matters in understanding its activities as it is the source of resources required by firms. Thus, firm's managerial activities or strategies are designed and driven by the urge to control these resources required.

Yarram & Adapa (2021) noted that resource dependence theory highlights the role that the board of directors plays in gaining access to critical resources. Chatjuthamard, Jiraporn, Lee, Uyar & Kilic (2021) opined that resource dependency theory provided a theoretical basis that the board gender diversity is a resource to the company It views board gender diversity as a good mechanism by which firms can manage the needs of their various influential stakeholders by providing various ideas, skills and perspectives to corporate board decision-making to access critical resources. From this theoretical perspective, Nadeem, Zaman & Saleem (2017) & Handayani and Panjaitan (2019) documented that competent diverse directors bring in social capital resources and advice to management on strategic actions that might increase the pressure on managers to improve firm financial performance to satisfy powerful stakeholders and thus secure access to critical resources. In this way, the incorporation of diverse directors on corporate boards may favor the engagements of companies on social responsibility activities, as they are more sensitive about society, environment and ethics. Rahmadhani, Nurlita, Dsavitri (2020) documented that gender diversity in top management and middle management positions can leverage various company resources for the better. Resource dependence theory suggests that gender diversity in top management and middle management positions has the potential to increase the information provided by the board of directors to managers. The composition of top management with gender diversity would produce unique information used for better decision making. Gender diversity in top management can provide access to important constituencies in the external environment. Diversity promotes greater creativity, innovation and quality decision making. Gender diversity in top management and middle management is expected to provide added value through the corporate social responsibilities' activities effecting in a better financial performance of company.

Another important theory relevant to this study is Stakeholders' theory. This theory considers success depends on the successful coordination of all the associations that a company has with its stakeholders. The stakeholders' support is very paramount to the success of firms. Kujala, Lehtimäki & Freeman (2019) affirmed that Stakeholder theory has been expanded to include owners, employees, suppliers, customers, lenders, investors, and the local community or society in which the corporation operates to increase owners' capital and increase value creation for owners. Thus, according to stakeholder theory, not just shareholders but other stakeholders are also impacted by a company's actions. Brown & Forster (2013) documented that long term firm performance is affected by relationships with stakeholders and stakeholder management has a critical role to play in the success or failure of a company or organization. Hamad & Cek (2023) evidenced that companies that concern themselves with the interests of more stakeholders have better corporate social

responsibility which result to enhanced financial performance. Therefore, corporate social responsibility is related to continuous improvement of company performance. Company activities that consider social and environmental impacts in short and long term can have an impact on improving company performance.

#### 4. Methodology

This section explains the methodology employed in the study. The section covers the research design, population of the study, sample size, and sampling technique. Method of data collection and techniques for data analysis used was also explained in this section.

This study employed an ex-post facto research design. The population of the study comprises the entire companies quoted on Nigerian Exchange Group covering totaling of 156 from 2012-2021. The use of quoted companies on Nigerian exchange group is justified by the accessibility and consistency of their financial data. Judgmental sampling technique was used to identify companies having a complete ten (10) year financial statement and not being delisted during the period under study and companies not having technical difficulties with the Exchange explained as below listing standard, missed regulatory filing, delisting in progress, delisting watch list. Based on these criteria, therefore, one hundred and twelve (112) companies were obtained as a research sample for a period of ten (10) years (2012 – 2021) which produces 1,120 observations. The study sourced data from secondary source such as journal, the Nigerian Exchange Group Fact book and annual reports and accounts of the companies in Nigeria. The study employs Mediation analysis using sobel test. The data was analyzed using statistical package for social science (SPSS). The variables employed in this study are explained below.

**Table 1: Variable and their Measurement**

Variable	Sub-dimension	Measure	Source	Abbreviation
Independent variable	Gender diversity	Blau index measured as $1 - \sum_{i=1}^n p_i^2$ where $p_i$ is the percent of male and female in the board and n is 2 representing number of categories (male and female)	Chandula, Dissanayake & Anuradha (2023)	BGD
Dependent variable	Financial performance	Return on asset Net income / total assets	Uyar, Kilic, Ali, Kuzey & Karaman (2020)	ROA
Mediating variable	Corporate social responsibility	1. Disclosure towards Society, 2. Disclosure towards customers and clients 3. Disclosure towards environment 4. Disclosure towards employees the total score of CSR reporting index has been computed based on the following formula $\sum_{n=1}^1 \frac{x}{n} \times 100$ , where x equals 1 if the item is reported, otherwise 0, and n represent the number of all items	Alareeni and Hamdan, 2020; Sisaye, 2021	CSR



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**Source:** Constructed by authors (2023)

**Model Estimation**

The study adapted the model of Sial et al (2018). The study tested the mediation hypothesis of corporate social responsibility on the relationship between boardroom gender diversity and financial performance. Their model shown below as thus:

$$TQ = \beta_0 + \beta_1 BGD_{it} + \sum_{i=1}^n \beta_n \dots \dots \dots (1)$$

$$CSR = \beta_0 + \beta_1 BGD_{it} + \sum_{i=1}^n \beta_n \dots \dots \dots (2)$$

$$TQ = \beta_0 + \beta_1 BGD_{it} + \beta_2 CSR_{it} + \sum_{i=1}^n \beta_n \dots \dots \dots (3)$$

The adapted form of is expressed as thus

$$ROA = \beta_0 + \beta_1 BGD_{it} + \epsilon_{it} \dots \dots \dots (1)$$

$$CSR = \beta_0 + \beta_1 BGD_{it} + \epsilon_{it} \dots \dots \dots (2)$$

$$ROA = +\beta_0 + \beta_1 BGD_{it} + \beta_2 CSR_{it} + \epsilon_{it} \dots \dots \dots (3)$$

According to Baron and Kenny [95], the following conditions must hold to establish mediation:

In the first model, the independent variable (BGD) predicts the dependent variable (ROA); that is, “c” is statistically significant

In the second model, the independent variable (BGD) predicts the mediator (CSR); that is, “a” is statistically significant.

In the third model, the mediator (CSR predicts the dependent variable (ROA) while controlling for the effect of the independent variable (BGD); that is, “b” is statistically significant. Full mediation holds if board gender diversity does not affect ROA in the third model .

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.156	.259		8.324	.000
	BGD	.399	.054	.627	7.389	.014

To examine these three conditions, the study run three regression analyses as follows: (1) regress ROA on BGD, (2) regress CSR on BGD, and (3) regress ROA on BGD and CSR in section four

**4. Results and discussion**

This segment presents analysis involved, hypothesis testing and discuss issues arises in relation to previous positions in the literature using the model adapted Tables 1-3 display the summary of the SPSS regression output.

**Dependent: ROA**

Table 1 shows that the independent variable (BGD) is a positive significant predictor of the dependent variable (ROA) (t = 7.389 p < .05). In other words, “c” (unstandardized coefficient = .399) is a statistically significant. This implies that more diverse the board of directors, the better the financial performance proxied by return on asset .This result is consistent with previous studies of Jeong ,Jeong, Lee & Bae, 2018; Chuang & Huang, 2018; Ghaderi Mirzapour, Henderson, & Richardson, 2019; González-Rodríguez ,Martín-Samper, Köseoglu & Okumus 2019; Chung Jung & Young, 2018; Kim, Kim & Qian 2018; Sroufe & Gopalakrishna- Remani, 2019 and supports resource dependency theory that

board gender diversity is a resource to the company and that diverse board of directors bring in social capital resources and advice to management on strategic actions that might increase the pressure on managers to improve firm financial performance to satisfy powerful stakeholders and thus secure access to critical resources.

<b>Table 2: Coefficients (CSR on BGD)</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.615	.289		9.049	.000
	BGD	.369	.074	.527	4.986	.000

**Dependent: CSR**

Table 2 shows that the independent variable (BGD) is also a positive significant predictor of the mediating variable (CSR) ( $t = .4.986, p < .05$ ). That is, “a” (unstandardized coefficient = .369) is a statistically significant. This implies that the more diverse the board, the more engagements of companies on social responsibility activities. This finding is in line with previous studies of Seto-Pamies, 2015; Jain & Jamali, 2016; Kaspereit, Lopatta, & Matolcsy, 2016; Velte, 2021; Uyar, Kuzey, Kilic, & Karaman, 2021; Galletta, Mazzu, Naciti, & Vermiglio, 2022. This supports resource dependency theory that board gender diversity is a good mechanism by which firms can manage the needs of their various influential stakeholders by providing various ideas, skills and perspectives to corporate board decision-making to access critical resources. Companies with more diverse board directors enjoy more favorable social reputations and are more able to satisfy the needs of their stakeholders.

**Dependent: ROA**

Table 3 shows that When CSR is included in the full model, then the coefficient of board gender diversity proxy (BGD) was found to be insignificant and the coefficient of CSR was found to be a positive significant predictor of the dependent variable (ROA) ( $t = 16.041, p < .05$ ). That is, “b” (unstandardized coefficient = .786) is a statistically significant. This is in line with the researches of Goel & Misra, 2017 & Velte, 2017. This supports the stakeholder theory which states that a good relationship with stakeholders can improve company’s financial performance through corporate social responsibility disclosure, a company should not only operates for not just shareholders but other stakeholders. Companies that concern themselves with the interests of more stakeholders have better corporate social responsibility which result to enhanced financial performance. Therefore, corporate social responsibility is related to continuous improvement of company’s financial performance. Company activities that consider social and environmental impacts in short and long term can have an impact on improving company’s financial performance.

After confirming the three conditions for mediation are established, examine if the mediating variable (corporate social responsibility) is a statistically significant using the sobel test (using the Z formula).

To utilize the sobel test, follow these steps: Determine both “a” and “b” unstandardized regression coefficients and their standard errors (Sa and Sb, respectively). These values are found in both tables 2 and 3, respectively, and are summarized in table 4

**Table 3: Coefficients ( ROA , BGD and CSR)**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.347	.061		5.689	.000
	BGD	.186	.028	.263	6.643	.107
	CSR	.786	.049	.792	16.041	.000

**Table 4: unstandardized coefficients and Std. Error**

MODEL		Unstandardized Coefficients	
		B	Std. Error
	BGD→CSR	.369	.074
	CSR→ROA	.786	.049

Source: Generated from table 2& 3

$$Z = \frac{ab}{\sqrt{b^2SEa^2 + a^2SEb^2}}$$

**a = .369**  
**b = .786**  
**SEa = .074**  
**SEb = .049**

$$\frac{.369 \times .786}{\sqrt{.786^2 \times .074^2 + .369^2 \times .049^2}}$$

$$\frac{.290034}{.060901} = 4.762385$$

Because the computed z score 4.76238 is greater than 1.96, it indicates a statistically significant result at alpha .05

Sobel test was utilized to examine if corporate social responsibility mediated the relationship between board gender diversity and financial performance. First, results of simple linear regression show that board gender diversity was a statistically significant predictor of return on asset (b = .399, beta = .627, t = 7.389, p < .05). Next, when the mediator, corporate social responsibility was entered in the regression analysis, board gender diversity was no longer a significant predictor of return on asset (b = .186, beta = .263, t = 6.643, p > .05). On the other hand, the mediator, corporate social responsibility, emerged as a significant predictor of return on asset (b = .786, beta = .792, t = 16.041, p < .05).

To further investigate the mediator, the sobel test was utilized to examine if corporate social responsibility significantly mediated the relationship between board gender diversity and financial performance. The results confirmed that corporate social responsibility significantly mediates the relationship between board gender diversity and financial performance (4.76238 > 1.96, p < .05). Full mediation holds since board gender diversity does not affect Return on asset in the third table.

Thus, on the basis of overall results the study rejects the null hypothesis since the (Z > 1.96, p < .05). Hence, there is significant mediating effect of corporate social responsibility on the relationship between board gender diversity and financial performance of listed

companies in Nigeria. This is consistent with the studies of Sial et al (2018) Galbreath, J.,(2018) E-Vahdati Zulkifli & Zakaria (2018) Rahmadhani, Nurlita & savitri (2020) Rahmadhani, Nurlita & savitri (2020). This supports stakeholder theory that it is considered that companies committed to corporate social responsibility actions identify and assess the demands of different stakeholders. The more diverse the board who were involved in social activities, the more the assessment available for the company, because the company not only prioritizes things that are profitable but also social.

### **5. Conclusion and Recommendation**

The study examines the mediating effect of corporate social responsibility on the relationship between board gender diversity and financial performance of listed companies in Nigeria from 2012 to 2021. The study's results can be summarized as follows. First, board gender diversity has a positive significant effect on return on asset. Second, board gender diversity has a positive significant effect on corporate social responsibility. Third, the empirical results confirm an indirect relationship between board gender diversity and financial performance, based on the mediating effect of corporate social responsibility. Therefore, the study concludes that corporate social responsibility fully mediates the relationship between board gender diversity and firm performance of listed companies in Nigeria. Therefore, the study recommends that companies should diverse their board to improve companies' financial performance through corporate social responsibility activities. Future research is expected to add the duration of the research.

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