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Women on boards, ownership structure, and CEO compensation: evidence from an emerging economy

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Abstract

Purpose – This study aims to investigate the association between the presence of women on boards and chief executive officer (CEO) compensation, and to examine how institutional and foreign ownership moderate this relationship within the context of an emerging economy.

Design/methodology/approach – The analysis focuses on the financial sector, encompassing both banks and non-bank financial institutions, over the period from 2013 to 2022. Ordinary least squares (OLS) regression models are employed to assess the associations.

Findings – The results indicate that firms with a higher proportion of women directors on their boards tend to have higher CEO compensation. However, this positive relationship is negatively moderated by institutional and foreign ownership. The findings remain robust after addressing potential endogeneity concerns, including observable heterogeneity bias and reverse causality, and alternative measures of female board presence and CEO remuneration. Furthermore, the positive association diminishes when the number of women directors reaches a critical mass, and the moderating effect of institutional ownership is stronger when three or more women are on the board.

Research limitations/implications – Since the study data are from Bangladesh's financial sector, the findings may not be generalisable to other industries or national contexts.

Practical implications – The study provides insights for regulators, policymakers, and stakeholders, highlighting the importance of promoting gender diversity in boardrooms and recognising the moderating impacts of institutional and foreign ownership in strengthening board governance.

Originality/value – This study adds to the growing literature on board gender diversity in developing economies and the joint effect of women directors and institutional/foreign ownership on board oversight effectiveness.

Keywords Board gender diversity, Critical mass effect, CEO compensation, Institutional ownership, Foreign ownership, Financial sector

Paper type Research paper

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1. Introduction

This study aims to investigate the effect of board gender diversity (BGD) on chief executive officers' (CEO) compensation and examine how ownership structure, specifically institutional ownership (IO) and foreign ownership (FO), moderates this relationship. Governance practices increasingly recognise executive compensation as a crucial mechanism for incentivising CEOs to excel while mitigating agency conflicts. A well-structured compensation package promotes performance and curtails opportunistic behaviour (Usman *et al.*, 2018; Bugeja *et al.*, 2016). However, CEOs often seek to maximise their financial rewards, primarily through compensation, by circumventing board oversight—a process influenced by the composition and structure of corporate boards (Boyd, 1994). Families with significant share ownership may expropriate wealth from minority shareholders by structuring excessive compensation packages. When a family member serves as the CEO, they may opportunistically set compensation at high levels to enrich themselves at the expense of other shareholders (Bertrand and Schoar, 2006).

Board effectiveness and composition—considering factors such as knowledge diversity, cultural aspects, age, and gender—significantly influence CEO compensation packages (Lucas-Pérez *et al.*, 2015). Regulators and policymakers emphasise gender diversity on corporate boards to ensure effective composition and executive oversight. Female directors, recognised for their decision-making abilities and contributions to board effectiveness (Eagly and Carli, 2003), can mitigate agency problems through effective management oversight (Salehi *et al.*, 2024) and play a critical role in limiting the CEO's influence on compensation decisions (Ullah *et al.*, 2020). Female board members enhance management oversight and control (Hillman and Dalziel, 2003). Moreover, the effectiveness of female directors is especially pronounced when a corporate board includes at least three women—a threshold necessary to eliminate tokenism, enhance organisational dynamism, ensure diverse perspectives, and strengthen monitoring, as proposed by critical mass theory (Yarram and Adapa, 2021).

In addition to board composition, both IO and FO play a significant role in corporate governance by protecting shareholders' interests through effective management oversight (Salehi *et al.*, 2022; Yoshikawa *et al.*, 2010). Institutional and foreign investors enhance firm monitoring and align CEO compensation with performance (Rashid, 2015; Hartzell and Starks, 2003) and limit the CEO's authority in setting compensation (Bebchuk and Fried, 2004; Khan *et al.*, 2005). However, Wen *et al.* (2021) argue that when institutional investors hold minority shares and lack sufficient oversight, they fail to mitigate agency problems or improve corporate governance.

A growing body of research highlights the influence of BGD on various aspects of board decision-making and behaviour. Empirical studies suggest that BGD positively affects financial performance (Brahma *et al.*, 2020; Ullah *et al.*, 2020), reduces agency costs (Ain *et al.*, 2021), enhances intellectual capital and investment efficiency (Mardini and Lahyani, 2024; Ali *et al.*, 2024), curbs unethical earnings management (Githaiga, 2023), and increases voluntary disclosure (Githaiga and Kosgei, 2022). However, several studies (e.g. Benkraiem *et al.*, 2017; Alfawareh *et al.*, 2023; Rahman, 2017; Nawaz, 2022) examine the impact of BGD on CEO compensation by assuming a direct influence of BGD on board decision-making and behaviour, overlooking intermediary elements such as ownership pattern, resulting in mixed findings.

This study departs from previous research by investigating the association between gender diversity on corporate boards and CEO compensation, while exploring the moderating roles of IO and FO in the context of Bangladesh. Specifically, it addresses the following research questions: Does BGD affect CEO remuneration in Bangladesh's financial sector? How does ownership structure–particularly institutional and foreign ownership–moderate this relationship? Is the relationship impacted when female representation on boards reaches a critical mass?

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Using a sample of 410 firm-year observations of Bangladeshi financial firms from 2013 to 2022, this study finds that female board representation is positively associated with CEO compensation, suggesting tokenism in their participation leading to inactive monitoring. However, the interaction terms between female directors and both foreign and institutional stock holdings are significantly negative in relation to CEO pay, suggesting that female directors, supported by institutional and foreign investors, play a monitoring role in CEO compensation. The results further indicate that at least three women must be on the board to have a significant voice in decision-making, supporting the critical mass theory. With only one or two women on the board, a positive and significant association with CEO pay is noted, whereas three or more women make the relationship insignificant. The moderating role of IO is also strengthened when the board has at least three female members.

This study advances our understanding of the benefits of ensuring women's representation on boards by analysing how female directors influence the board's oversight effectiveness, particularly in terms of CEO remuneration. This research makes several contributions. First, it adds to the literature on CEO pay by underscoring the effectiveness of female board participation in determining CEO pay when it surpasses mere token representation. Prior studies (e.g. Benkraiem *et al*., 2017; Alfawareh *et al*., 2023; Rahman, 2017) revealed a positive relationship between higher female representation on boards and high CEO pay, without considering the critical mass theory. However, our findings indicate that this association becomes insignificant once female representation reaches a critical mass. Second, this study uniquely examines the moderating roles of institutional investors in the relationship between BGD and CEO compensation in Bangladesh. Previous studies (e.g. Benkraiem *et al*., 2017; Lucas-Pérez *et al*., 2015; Alfawareh *et al*., 2023; Rahman, 2017; Nawaz, 2022) have focused on the direct impact of female board participation on CEO pay without considering potential interactions of other factors such as institutional ownership on effective board oversight. Finally, this study contributes to a growing body of literature examining the role of foreign investors in enhancing overall corporate governance. Prior research indicates that foreign ownership enhances corporate monitoring and transparency, thereby curbing managerial opportunistic behaviour by limiting earnings management (Al-Duais *et al*., 2022; Han *et al*., 2022), reducing excess perquisite consumption (Chen *et al*., 2022), and increasing financial reporting quality (Beuselinck *et al*., 2017), whereas we document a moderating effect of foreign ownership in monitoring executives' incentives. Our findings collaborate with the findings of Yoshikawa *et al.* (2010) in a developed country context, indicating an active oversight role of foreign investors in controlling CEO pay in an emerging country perspective.

The remainder of the paper is organised as follows: Section 2 outlines the institutional framework for corporate governance in Bangladesh. Section 3 presents the literature review and hypothesis development. Section 4 describes the sample, data, variables, and model specifications. Sections 5 and 6 report the results and analyse the main findings, including robustness checks and addressing endogeneity concerns. Section 7 discusses the findings and their policy implications. Finally, the paper concludes with a summary of the research, its limitations, and suggestions for future research.

2. Institutional framework for corporate governance in Bangladesh

The Bangladesh Securities and Exchange Commission (BSEC), the primary regulatory body for publicly listed firms, introduced corporate governance (CG) guidelines in 2006, and subsequently revised them in 2012 and 2018, to enhance accountability and transparency in corporate management (Rashid, 2022). The CG code, including its revised versions, does not contain any provisions for gender quotas in board composition, resulting in an imbalance in gender representation within corporate boardrooms. This lack of female representation can hinder board effectiveness in both strategic and operational control (Karim *et al*., 2022). Over the past 50 years, Bangladesh has made significant progress in growth and poverty reduction. However, progress in gender equality remains slow. According to the Women, Business and

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the Law 2021 index, Bangladesh ranks among the lowest-performing economies in South Asia with a score of 49.4, while Afghanistan has the lowest score at 38 [1]. Moreover, female enrolment in higher education is also declining, falling behind men's growth due to several issues like poverty, sexual harassment, and child marriage. This trend puts the country at risk of missing the Sustainable Development Goal of ensuring equal access to tertiary education by 2030 (Alamgir, 2024). Female participation in politics is also low, with only 4.86% female candidates in the 12th national parliament election, despite two women having served as prime ministers for 31 of the 33 years since 1991 (Rimon, 2024). Nonetheless, Bangladesh presents a unique context with distinct legal, financial, social, and institutional environments compared to developed countries. The particularly weak governance mechanisms, characterised by more concentrated ownership and lower transparency in CEO pay disclosure, along with underrepresented female participation in the banking sector (Das *et al.*, 2023; Rahman, 2017; Karim *et al.*, 2022), motivate this study.

The CG Code-2018 introduces several significant measures, including the appointment of a CEO with clearly defined duties and the establishment of a new board subcommittee, the Nomination and Remuneration Committee (NRC), alongside the existing audit committee. The NRC collaborates with the board to establish nomination criteria for evaluating top executives' credentials, traits, and experiences. It also formulates a formal compensation policy that balances fixed, and incentive pay, considering both short- and long-term performance goals. Bangladesh Bank (BB) plays a crucial role in promoting ethical practices within the financial sector. However, BB, issuing a circular, restricts banks from forming committees other than the executive committee, audit committee, and risk management committee. BB periodically releases "Prudential Regulations (PR)" for banks as part of this effort. The PR includes provisions for the creation of various committees, such as the risk management committee, audit committee, and executive committee, as well as the duties and powers of the board and its chairman, and the selection, responsibilities, and compensation of the CEO (Bangladesh Bank, 2014). According to the PR, the board must explicitly outline the CEO's basic wage, housing allowance, and other benefits (such as utilities, provident fund, and leave-fare assistance) in Bangladeshi Taka (BDT) in its proposal to BB. The CEO is restricted from receiving direct or indirect benefits beyond an incentive bonus, which is capped at BDT one million per year (e.g. dividends, club expenses, and commissions) and annual increments without enhancing the major economic indicator of the firm (Bangladesh Bank, 2014). However, executive compensation has risen dramatically despite unchanged shareholder dividends, creating an imbalance between top management and the workforce. Shareholders approve financial statements at annual general meetings, bypassing the CEO pay-setting process (Sumon, 2022). Additionally, compensation and incentive mechanisms in Bangladeshi financial institutions are poorly explained (Sadeque *et al.*, 2023). Therefore, this study sheds light on CEOs' pay in Bangladesh's financial sector, highlighting that top executives at listed banks receive significantly higher compensation than regular employees, thereby widening the pay gap.

3. Literature review and hypothesis development

The literature on agency theory emphasises that top management often can act opportunistically, maximising its interests at the expense of shareholders (Fama and Jensen, 1983). Corporate boards, as internal oversight mechanisms, monitor executives' opportunistic behaviours to safeguard investors' interests, as such opportunistic acts undermine investors' benefits. Boardroom diversity is associated with improved monitoring and greater transparency (Ahmed *et al.*, 2021). Gender diversity is particularly valuable for advisory and monitoring roles, as they bring diverse perspectives and experiences that strengthen the board's capacity to oversee management effectively (Benkraiem *et al.*, 2017; Lucas-Pérez *et al.*, 2015). Moreover, governance literature suggests that women are generally less prone to manipulative behaviour for personal financial gain at the expense of others (Krishnan and

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Parsons, 2008). Therefore, female directors play a crucial role in monitoring CEO compensation, helping to reduce potential biases in the design of compensation plans. However, the tokenism theory suggests that corporate boards often appoint a single female member mainly as a symbolic gesture to appear inclusive or meet societal expectations (Kanter, 1977). Kristie (2011) aptly states that "one is a token, two is a presence, and three is a voice", highlighting the importance of having multiple women on boards to move beyond mere tokenism. The critical mass hypothesis posits that having at least three women on the board is necessary to eliminate tokenism. When the number of female directors attains a critical mass, it can significantly contribute to corporate boards' balance and diversity of expertise, thereby playing a meaningful role in shaping corporate strategy. Research supports that having a minimum of three women on a board enhances organisational dynamism, ensures that women's voices are heard, and strengthens the board's monitoring role (Yarram and Adapa, 2021; Brahma *et al.*, 2020; Usman *et al.*, 2018). Boards with three or more female members are more likely to reduce agency costs (Ain *et al.*, 2021), improve firm performance (Brahma *et al.*, 2020; Jayaraman *et al.*, 2024), and promote positive corporate social responsibility (Yarram and Adapa, 2021). Usman *et al.* (2019) find that the impact of gender diversity on CEO remuneration and the relationship between CEO pay and company performance is more pronounced when there are at least two female directors on the board, as opposed to just one, particularly in the context of Pakistan, where 10% of firm-year observations have two or more women. In our sample, 53% of firm-years have one or two female directors, while only 19% have three or more, indicating a potential issue of tokenism in the representation of women on corporate boards in the financial sector. Torchia *et al.* (2011) also argue that having at least three women on a board enhances a firm's innovation capabilities, mainly through the strategic tasks of the board. Joecks *et al.* (2013) extend the critical mass theory by linking board gender diversity to business performance, finding that boards with 30% or more female members (equivalent to three women) are associated with improved firm performance, suggesting that three women might be a "magic number".

In Bangladesh, Rahman (2017) finds a positive association between executive pay and company size, performance, independent board members, a female member on the corporate board, institutional shareholdings, and director ownership. However, this study indicates that board size and leverage have an inverse association with CEO compensation, utilising 236 firm-years as a sample for the Dhaka Stock Exchange's (DSE) listed banks between 2006 and 2013. Similarly, Rashid (2022) utilises 238 annual reports for 2014–2018 of listed financial institutions of the DSE to investigate the influence of CG variables on CEO compensation. The findings reveal that board size and director ownership is negatively associated with CEO pay, while company size and leverage are positively linked. Sadeque *et al.* (2023) demonstrate that institutional ownership significantly influences CEO pay. They show that institutional owners and boards prioritise higher compensation to mitigate agency problems and safeguard shareholders' interests, using data from non-bank financial institutions (NBFIs) in Bangladesh from 2010 to 2019.

Previous research on gender diversity has primarily focused on its impact on business performance (Brahma *et al.*, 2020; Chatterjee and Nag, 2022; Simionescu *et al.*, 2021; Ullah *et al.*, 2020; Karim *et al.*, 2022), agency costs (Ain *et al.*, 2021), intellectual capital performance (Mardini and Lahyani, 2024), earnings management (Githaiga, 2023), and sustainability disclosure (Cicchiello *et al.*, 2021; Githaiga and Kosgei, 2022). Studies examining the relationship between female directors and CEO pay have typically focused on firms in developed countries such as the UK, US, Australia, Japan, China, and Hong Kong. For instance, Nawaz (2022) analyses the effects of board attributes and CEO traits on CEO pay in FTSE350 firms listed on the London Stock Exchange from 2011 to 2019, finding that larger and more diverse boards tend to favour higher compensation, even when controlling for firm attributes. Similarly, Benkraiem *et al.* (2017) find that female directors and independent directors directly influence CEO compensation, with female independent directors negatively affecting it, using data from French companies listed on the SBF120 index between 2008 and

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2012. Lucas-Pérez *et al.* (2015) report that female diversity positively influenced top managers' compensation packages based on 714 firm-years from 120 companies listed on the Spanish stock market between 2004 and 2009. In the Indian context, Patnaik and Sour (2020) reveal that increased board size, female independence, CEO duality, and IO significantly reduced CEO compensation, using data from 282 manufacturing firms in India. Given these findings, we hypothesise that female participation in the boardroom may fail to limit the CEO's influence over their remuneration and reduce CEO power due to tokenism.

H1. A positive association exists between female board participation and CEO compensation.

Institutional investors, alongside other governance mechanisms, play a crucial role in enhancing corporate governance by effectively overseeing business management (Bebchuk and Fried, 2004; Velte, 2023; Ali *et al.*, 2024), improving the value of firms through efficient investment (Salehi *et al.*, 2022), and mitigating adverse risk-taking behaviour through an inadequate move towards corporate social responsibility (Park *et al.*, 2019). Despite not having more power, institutional investors have significant holdings and a fiduciary duty to increase investor returns, making them effective in monitoring management compensation settings and limiting CEO power (Bebchuk and Fried, 2004; Khan *et al.*, 2005). Although few empirical studies have been conducted on the relationship between institutional stockholding and CEO compensation in developed and developing contexts, the direct association between IO and CEO compensation has produced mixed results. Khan *et al.* (2005) and Croci *et al.* (2012) document positive associations, while Fernandes *et al.* (2017), Bouteska and Mefteh-Wali (2021), and Ullah *et al.* (2020) show an inverse association. However, Ullah *et al.* (2020) contend that a significant percentage of gender diversity on boards can serve as an efficient governance mechanism to improve the quality of oversight, thus mitigating the favourable influence of inadequate CG factors (such as IO) on CEO salaries. In addition, Shiri *et al.* (2016) argue that information asymmetry is higher when the firm has higher IO and lower disclosure quality. However, Nasta *et al.* (2024) empirically demonstrate the moderating role of IO in the association between environmental scores and equity-based remuneration. Based on the literature, we propose our second hypothesis.

H2. Institutional ownership negatively moderates the association between female participation on boards and CEO compensation.

Foreign shareholding is generally considered beneficial because foreign shareholders are more effective in monitoring the firms in which they invest (Alhababsah, 2019). Ghaleb *et al.* (2021) argue that having a diverse board of directors helps safeguard the interests of different owners by reducing managers' opportunistic behaviour, such as earnings management. Similarly, Ashraf and Qian (2021) find that foreign directors enhance the board's oversight capabilities, thereby decreasing corporate executives' opportunity to engage in earnings management. Companies with high levels of foreign ownership are particularly effective at monitoring management and reducing rent-extracting behaviour (Al-Duais *et al.*, 2022; Guo *et al.*, 2015). Hence, from a corporate governance viewpoint, foreign shareholdings can be seen as a restraining factor on CEO compensation (Rashid, 2015). They primarily seek financial returns and often lower executive pay when company performance is poor (Yoshikawa *et al.*, 2005). However, in managerial compensation practice, significant foreign shareholding suggests that the firm aligns more closely with international pay standards, which calls for higher wage dispersion and, consequently, suggests higher, rather than lower, CEO compensation (Li *et al.*, 2007). Based on the literature, we propose our third hypothesis [2].

H3. Foreign ownership negatively moderates the association between female participation on boards and CEO compensation.

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4. Research methodology

4.1 Sample and data

Our study initially considers all financial firms listed on the DSE in Bangladesh, including both banks and non-bank financial institutions. Specifically, the financial sector includes 35 listed banks and 23 listed non-bank financial institutions (Dhaka Stock Exchange, 2023). The study covers the period from 2013 to 2022. The starting year 2013 was when the Bangladesh Labor Act was renewed to adopt the International Labor Organisation standard of eradicating discrimination of pay in terms of gender, among others. After excluding five banks and three non-bank financial institutions that were either listed after 2021 or did not disclose CEO compensation, our final sample comprises 50 listed financial firms. Due to the unavailability of annual reports and missing data, the final sample comprises 410 firm-year observations. Table 1 presents the sample selection process. The study relies on annual reports from the sampled companies to gather data on dependent, independent, and control variables.

4.2 Model specification

The following first model examines the relationship between board gender diversity (*FEBOD*) and CEO compensation (*CEOCOMP*). The second and third models assess the moderating roles of IO and FO in this relationship. A detailed explanation of the variables can be found in Appendix. To predict these relationships, we apply the following models specifically:

Table 1. Sample selection

	Banking	Financial institutions	Total
Panel A: Sample size			
Total listed firms	35	23	58
Less: Listed after 2021 and nondisclosure of CEO pay	5	3	8
Total final sample firms	*30*	*20*	*50*
Total firm-year observations	300	200	500
Less: Unavailability of data	11	79	90
Final firm-year observations	*289*	*121*	*410*

	Firm-year observations		
Year	Banks	Financial institutions	Total
Panel B: Year-wise distribution			
2013	24	0	24
2014	27	0	27
2015	28	0	28
2016	30	19	49
2017	30	19	49
2018	30	18	48
2019	30	18	48
2020	30	16	46
2021	30	15	45
2022	30	16	46

Source(s): Authors' own work

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$$\textbf{\textit{Model}}\ \mathbf{1}\text{: } CEOCOMP_{it} = \beta_0 + \beta_1 FEBOD_{it} + \beta_2 BSIZE_{it} + \beta_3 BINDP_{it} + \beta_4 BMEET_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 AGE_{it} + \beta_8 SIZE_{it} + \beta_9 DIROWN_{it} + YearFE + IndustryFE + \varepsilon_{it} \quad (1)$$

$$\textbf{\textit{Model}}\ \mathbf{2}\text{: } CEOCOMP_{\text{it}} = \beta_0 + \beta_1 FEBOD_{\text{it}} + \beta_2 FEBOD \times INSTOWN_{\text{it}} + \beta_3 INSTOWN_{\text{it}} + \beta_4 BSIZE_{\text{it}} + \beta_5 BINDP_{\text{it}} + \beta_6 BMEET_{\text{it}} + \beta_7 LEV_{\text{it}} + \beta_8 ROA_{\text{it}} + \beta_9 AGE_{\text{it}} + \beta_{10} SIZE_{\text{it}} + \beta_{11} DIROWN_{\text{it}} + YearFE + IndustryFE + \varepsilon_{\text{it}} \quad (2)$$

$$\textbf{\textit{Model}}\ \mathbf{3}\text{: } CEOCOMP_{it} = \beta_0 + \beta_1 FEBOD_{it} + \beta_2 FEBOD \times INSTOWN_{it} + \beta_3 INSTOWN_{it} + \beta_4 FEBOD \times FRGNOWN_{it} + \beta_5 FRGNOWN + \beta_6 BSIZE_{it} + \beta_7 BINDP_{it} + \beta_8 BMEET_{it} + \beta_9 LEV_{it} + \beta_{10} ROA_{it} + \beta_{11} AGE_{it} + \beta_{12} SIZE_{it} + \beta_{13} DIROWN_{it} + YearFE + IndustryFE + \varepsilon_{it} \quad (3)$$

4.3 Model estimation and analysis

We employ ordinary least squares (OLS) regression for the panel data to test the hypotheses. Before performing regression analyses, we test the potential presence of multicollinearity using the variance inflation factors (VIFs) test. Further, we address the heteroskedasticity of observations, including robust specification in regressions. We include year- and industry-fixed effects to capture time and industry variation. The endogeneity issue is a potential concern in our empirical test. Firms with gender-diverse boards and non-gender-diverse boards might have some observable differences, which might affect our inferences. The entropy balancing approach is utilised to mitigate this observable heterogeneity bias. Two-stage least squares (2SLS) regression analysis addresses the potential reverse causality concern.

5. Empirical results

5.1 Descriptive analysis

Table 2 provides the descriptive statistics for all variables used in the main models. The average CEO compensation (*CEOCOMP*) in the financial sector, including banks and non-bank financial institutions listed on the DSE, is BDT 12.19 million annually. Rashid (2022) reported an average *CEOCOMP* of BDT 10.98 million for listed banks and non-bank financial institutions, while Rahman (2017) found an average of BDT 7.79 million for listed banks. On average, 13.90% of board directors in our sample are female, which is higher than the figure reported by Rahman (2017). The mean value of female participation on corporate boards in Bangladesh is comparable to that in India, which stands at 11.85% (Chatterjee and Nag, 2022), but lower than that in East Africa, where 25.10% of listed firms have female board members (Githaiga, 2023), the United States IT sector with 16.54% (Simionescu *et al.*, 2021), and the United Kingdom with 22.96% (Nawaz, 2022). On average, boards consist of 11.84 members, with 22.6% being independent. The average institutional ownership (*INSTOWN*), foreign

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Table 2. Summary statistics

	Obs	Mean	SD	P10	Median	P90
CEOCOMP (BDT'000)	410	12190.428	5139.090	5606.167	12259.935	18694.308
CEOCOMP	410	7.038	0.223	6.749	7.088	7.272
FEBOD	410	0.139	0.117	0	0.111	0.313
INSTOWN	410	0.204	0.106	0.07	0.197	0.339
FRGNOWN	410	0.028	0.071	0	0.003	0.058
BSIZE	410	1.05	0.144	0.845	1.041	1.279
BINDP	410	0.226	0.118	0.143	0.2	0.333
BMEET	410	2.733	0.473	1.946	2.773	3.258
LEV	410	11.036	6.133	1.386	11.354	17.41
ROA	410	0.004	0.024	0.001	0.008	0.015
AGE	410	1.403	0.127	1.23	1.38	1.58
SIZE	410	23.112	1.013	21.658	23.267	24.093
DIROWN	410	0.402	0.149	0.278	0.392	0.598

Source(s): Authors' own work

ownership (*FRGNOWN*), and director ownership (*DIROWN*) are 20.40%, 2.8%, and 40.2%, respectively. These figures are consistent with Das *et al.* (2023), who reported averages of 20.4%, 3.7%, and 39.3%, respectively.

The average return on assets (*ROA*) is 0.4%, and the average firm age (*AGE*) is 1.403 in terms of the log value of total years since incorporation. The natural logarithm of the market value of equity, used to measure firm size (*SIZE*), is 23.11. Financial firms are highly leveraged, with an average debt-to-equity ratio (*LEV*) of 11.04. The number of board meetings (*BMEET*), expressed in logarithmic terms, is 2.73. All continuous variables are winsorized at lower 1% and upper 99% to reduce the impact of outliers.

5.2 Pairwise-correlation and multi-collinearity issue

Table 3 displays the Pearson correlation coefficients along with their significance levels. The results show that *CEOCOMP* positively and significantly correlates with *FEBOD, INSTOWN, FRGNOWN, BSIZE, BMEET, LEV, ROA*, and *SIZE*. The pairwise correlations between all independent and control variables are below the threshold of 0.80 recommended by Gujarati (2009), indicating that multicollinearity is not a concern in the model. Furthermore, the VIF test (un-tabulated) confirms the absence of multicollinearity issues, as all VIF values for the independent variables are below 10.

5.3 Main regression results

This section presents the results from the estimation of Equations (1), (2), and (3), which test hypotheses H1, H2, and H3, respectively. The results are summarised in Table 4. The coefficients for *FEBOD* are positive and statistically significant at the 1% level in column 1 (coefficient = 0.317, p-value <0.01). This indicates that BGD has a significant positive impact on CEO compensation at the firm level. Firms with higher female representation on their boards tend to offer higher compensation to their CEOs. Bouteska and Mefteh-Wali (2021) show that in a sample of the US firms, poor governance conditions may lead to higher levels of CEO compensation. These findings align with previous studies, such as Lucas-Pérez *et al.* (2015), Benkraiem *et al.* (2017), Rahman (2017), and Nawaz (2022), which suggest that the inclusion of women on boards often stems from a tokenistic approach aimed at minimising stakeholders' pressure to ensure gender equality in firms. Given that their representation is likely to be symbolic and constitutes a negligible proportion of total board members, women directors may face challenges in effectively influencing CEO compensation decisions. Furthermore, the appointment of women on boards to ensure token representation is highly

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Table 3. Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) CEOCOMP	1.000											
(2) FEBOD	0.143*	1.000										
(3) INSTOWN	0.209*	0.279*	1.000									
(4) FRGNOWN	0.138*	0.101*	−0.201*	1.000								
(5) BSIZE	0.244*	−0.250*	0.008	−0.031	1.000							
(6) BINDP	−0.067	0.172*	0.023	0.235*	−0.437*	1.000						
(7) BMEET	0.173*	−0.177*	0.109*	−0.091	0.311*	−0.226*	1.000					
(8) LEV	0.349*	−0.103*	0.002	−0.064	0.273*	−0.109*	0.330*	1.000				
(9) ROA	0.290*	−0.076	−0.039	0.131*	0.211*	−0.317*	0.155*	0.271*	1.000			
(10) AGE	0.009	−0.021	−0.052	0.018	−0.166*	−0.122*	0.035	−0.049	−0.023	1.000		
(11) SIZE	0.450*	−0.079	−0.117*	0.331*	0.289*	−0.222*	0.407*	0.339*	0.437*	0.317*	1.000	
(12) DIROWN	−0.030	−0.110*	−0.305*	0.097*	−0.078	0.126*	−0.252*	−0.173*	0.040	−0.112*	0.119*	1.000

Note(s): This table presents Pearson's correlation coefficients between the variables used in the primary regression analyses. Superscript * corresponds to statistical significance at the 5% levels

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Table 4. Women directors, ownership structure, and CEO compensation—baseline results

	Dep. Var. = CEOCOMP		
	(1)	(2)	(3)
FEBOD	0.317***	0.848***	0.941***
	(4.28)	(6.01)	(5.72)
FEBOD × INSTOWN		−2.852***	−3.078***
		(−5.64)	(−5.29)
INSTOWN		0.792***	0.807***
		(6.65)	(6.71)
FEBOD × FRGNOWN			−1.632**
			(−2.33)
FRGNOWN			0.359*
			(1.93)
BSIZE	0.195***	0.161**	0.133**
	(2.70)	(2.50)	(2.08)
BINDP	0.180	0.153	0.149
	(1.59)	(1.41)	(1.27)
BMEET	−0.097***	−0.099***	−0.092***
	(−3.62)	(−4.08)	(−3.67)
LEV	−0.002	−0.001	−0.002
	(−0.91)	(−0.60)	(−0.79)
ROA	2.362***	2.184***	2.230***
	(4.08)	(3.85)	(3.86)
AGE	−0.111	−0.120*	−0.157**
	(−1.61)	(−1.79)	(−2.07)
SIZE	0.018	0.032**	0.033*
	(1.11)	(2.26)	(1.90)
DIROWN	−0.021	0.063	0.055
	(−0.28)	(0.90)	(0.77)
Intercept	6.776***	6.323***	6.366***
	(21.58)	(23.38)	(19.46)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	410	410	410
Adjusted R^2	0.489	0.542	0.543

Note(s): This table reports the regression results of the association between women directors (*FEBOD*) and CEO compensation (*CEOCOMP*) and the moderating roles of institutional ownership (*INSTOWN*) and foreign ownership (*FRGNOWN*). Column 1 shows the results of the link between board gender diversity and CEO compensation. Column 2 presents the regression results of the moderating effect of *INSTOWN*, while column 3 presents the moderating role of *FRGNOWN* on the association between *FEBOD* and *CEOCOMP*. Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The definitions of variables are given in Appendix

Source(s): Authors' own work

perceived as being influenced by the CEO, making them less likely to challenge or raise concerns regarding the compensation packages of those involved in their appointment. However, these findings contradict those of Usman *et al.* (2018) and Patnaik and Suar (2020), who reported a negative association between BGD and CEO compensation, suggesting that female directors can enhance firm-level governance by monitoring management actions, such as setting CEO compensation.

Hypothesis 2 (*H2*) posits that IO negatively moderates the relationship between BGD and CEO pay. To test this hypothesis, we estimated Equation (2), and the results are shown in Table 4, column 2. The key variable of interest, *FEBOD×INSTOWN*, represents the interaction effect of female board participation and IO on CEO compensation. As hypothesised, the interaction term has a significant negative coefficient (−5.64, *p*-value

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<0.01), indicating that the combined effect of gender diversity and IO reduces CEO compensation in Bangladeshi-listed financial firms. Female directors, combined with institutional ownership, may play an effective role in enhancing monitoring and control, thereby curbing CEO pay, which is consistent with the theoretical argument on female directors' effective monitoring roles. This result aligns with the findings of Ullah *et al.* (2020), who demonstrate that higher IO enhances governance quality, thereby weakening the positive impact of female board participation on CEO compensation. Similarly, Al-Duais *et al.* (2022) find that institutional ownership significantly influences corporate governance and financial reporting quality and is particularly effective in monitoring and limiting real earnings management in a developing country, specifically considering the case of Malaysia. Alfawareh *et al.* (2023) assert that, in Jordan's emerging market, institutional investors are more effective than individual investors at actively monitoring management; likewise, Bouteska and Mefteh-Wali (2021) claim that institutional investors in the United States are similarly better positioned to limit managerial power in setting remuneration decisions.

Hypothesis 3 *(H3)* posits that FO negatively moderates the relationship between BGD and CEO pay. To test this hypothesis, we estimated Equation (3), and the results are shown in Table 4, column 3. The key variable of interest, *FEBOD*×*FRGNOWN*, represents the interaction effect of female board participation and FO on CEO compensation. As hypothesised, the interaction term has a significant negative coefficient (−2.33, *p*-value <0.05), indicating that the combined effect of gender diversity and FO reduces CEO compensation in Bangladeshi listed financial firms. This finding is consistent with governance literature supporting those female directors, combined with foreign ownership, may play a pivotal role in enhancing corporate governance by effectively and efficiently safeguarding shareholders' interests through firm management oversight.

In the context of Chinese-listed non-financial firms, Ashraf and Qian (2021) find that having foreign directors on the board strengthens the board's oversight functions, leading to a reduced risk of corporate executives engaging in practices such as earnings manipulation. Ghaleb *et al.* (2021) also suggest that a diverse board of directors in Jordan helps protect the interests of various owners by curbing managers' opportunistic behaviours, such as earnings management, in the Jordanian market. In contrast, Akter *et al.* (2024) reveal that board diversity has no interaction with foreign ownership, implying no moderating effect on real earnings management, suggesting that firms in South Asian emerging economies should develop policies to ensure a diverse board in terms of gender, nationality, and structural directors to reduce earnings management. Among the control variables, board size (*BSIZE*), firm size (*SIZE*), and return on assets (*ROA*) are positively associated with CEO pay. In contrast, the number of board meetings (*BMEET*) and firm age (*AGE*) show a negative association with CEO pay.

5.4 Entropy-balancing analysis

Despite alternative model specifications and controls, we cannot entirely rule out potential observable heterogeneity across firms, which may bias our estimates. To mitigate this potential bias, we apply the entropy-balancing approach (Hainmueller and Xu, 2013). We categorise the sample into treatment and control groups based on female participation in the boardroom. Firms with at least one female director are classified as the treatment group, while firms without female directors are in the control group. Following Hainmueller and Xu (2013), we match all firm-level covariates across the treatment and control groups.

Panel A of Table 5 presents descriptive statistics before and after the entropy-balanced sample, highlighting the differences in mean values of covariates between the two groups before entropy balancing. After entropy balancing, the differences in mean and variance for all firm-level covariates between the treatment and control groups are almost eliminated. We then re-run the regressions for Models 1, 2, and 3 using the entropy-balanced sample. Panel B of Table 5 reports the regression results for hypotheses H1, H2, and H3 in columns 1, 2, and 3,

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Table 5. Entropy balancing analysis

	Before Entropy Balancing				After Entropy Balancing			
	Treatment		Control		Treatment		Control	
	Mean	Variance	Mean	Variance	Mean	Variance	Mean	Variance
Panel A: Sample descriptive statistics before and after entropy balancing								
BSIZE	1.048	0.018	1.057	0.029	1.048	0.018	1.048	0.026
BINDP	0.227	0.010	0.225	0.026	0.227	0.010	0.227	0.033
BMEET	2.713	0.261	2.794	0.107	2.713	0.261	2.713	0.159
LEV	10.61	36.86	12.33	38.01	10.61	36.86	10.62	45.55
ROA	0.004	0.001	0.004	0.001	0.004	0.001	0.004	0.001
AGE	1.401	0.016	1.408	0.018	1.401	0.016	1.401	0.016
SIZE	23.04	1.027	23.33	0.972	23.04	1.027	23.04	1.027
DIROWN	0.387	0.018	0.448	0.031	0.387	0.018	0.387	0.031

	Dep. Var. = CEOCOMP		
	(1)	(2)	(3)
Panel B: Regressions using entropy balancing sample			
FEBOD	0.536***	1.078***	1.084***
	(5.52)	(5.89)	(5.24)
FEBOD × INSTOWN		−3.051***	−2.892***
		(−4.84)	(−4.11)
INSTOWN		0.781***	0.749***
		(5.80)	(5.68)
FEBOD × FRGNOWN			−2.655**
			(−2.15)
FRGNOWN			0.845**
			(2.53)
Intercept	7.126***	6.609***	6.895***
	(18.82)	(19.55)	(18.35)
Control variables	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	410	410	410
Adjusted R^2	0.569	0.621	0.628

Note(s): This table presents the entropy balancing analysis. Panel A reports the descriptive statistics (mean and variance) of control variables between the treatment (board with at least one woman = 1) and control firms (board with no woman = 0) before and after the entropy balancing test. Panel B presents the regression results using an entropy-balanced sample. Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively

Source(s): Authors' own work

respectively. The coefficient for *FEBOD* (the proportion of female directors) in column 1 is 0.536 with a *t*-statistic of 5.52, indicating a significant positive relationship between BGD and CEO compensation. Additionally, the coefficient for *FEBOD×INSTOWN* in column 2 is −3.051 with a *t*-statistic of −4.84, suggesting that the interaction between gender diversity and IO is negative and statistically significant. *FEBOD×FRGNOWN* in column 3 is −2.655 with a *t*-statistic of −2.15, indicating that the interaction between gender diversity and FO is also negative and statistically significant. These findings confirm the robustness of our results after addressing potential observable heterogeneity bias.

5.5 Endogeneity analysis using the instrumental variable

An endogenous relationship between gender-diverse boards and CEO compensation is another potential concern that might affect our findings. For example, it could be argued that highly

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paid CEOs may seek to enhance their reputation with stakeholders by appointing token female directors to the board. We employ the two-stage least squares (2SLS) regression technique to address potential endogeneity due to reverse causality. Following recent research on gender diversity in boardrooms (e.g. Usman *et al.*, 2018; Almarayeh, 2023), we use a one-year lag in gender diversity as an instrumental variable (*LAGFEBOD*).

The 2SLS regression results are presented in Table 6. Column 1 shows that the coefficient estimate on *LAGFEBOD* is 0.900 with a *t*-statistic of 32.64, indicating a strong and significant relationship. In the second stage, the coefficient on *FEBOD* in column 2 is positive and statistically significant (coefficient = 0.401, *t*-statistic = 3.95), while the coefficient on *FEBOD*×*INSTOWN* in column 3 is significantly negative at the 1% level. Moreover, the *FEBOD*×*FRGNOWN* is also negatively significant, with CEO pay at the 5% level in column 4. These findings are consistent with our baseline results. To validate the instrumental variable, we conduct several tests. Column 2 reports the under-identification test (LR statistic) result of 526.31 with a *p*-value <0.001 and the weak identification test (Cragg-Donald *F* statistic) result of 1,149, which is well above the Stock-Yogo weak ID test critical value of 16.38. The instrumental variable test results reported in columns 3 and 4 for Models 2 and 3 are qualitatively similar. However, the *t*-statistics are slightly lower than those in column 2 but still significantly above the threshold values. These test statistics confirm the validity of the instrumental variable.

6. Additional analyses and robustness checks

6.1 Alternative measures of board gender diversity

To further strengthen the robustness of our results, we employ two alternative proxies of BGD, Blau Index (*BLAUIDX*) and Shannon Index (*SHANIDX*) (refer to Appendix for variable

Table 6. Two-stage least squares (2SLS) regression results

	FEBOD	*Dep. Var. = CEOCOMP*		
	(1)	(2)	(3)	(4)
LAGFEBOD	0.900***			
	(32.64)			
FEBOD		0.401***	1.099***	1.304***
		(3.95)	(3.93)	(3.71)
FEBOD × *INSTOWN*			−3.655***	−4.240***
			(−3.58)	(−3.45)
INSTOWN			0.964***	0.998***
			(4.97)	(4.99)
FEBOD × *FRGNOWN*				−2.397**
				(−2.23)
FRGNOWN				0.391*
				(1.82)
Intercept	−0.020	5.139***	4.783***	4.753***
	(−0.20)	(18.31)	(19.03)	(15.96)
Control variables	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	358	358	358	358
Adjusted R^2	0.797	0.310	0.391	0.396
LR statistic		526.31***	184.58***	139.00***
Cragg-Donald *F* statistic		1149.00***	230.06***	160.83***

Note(s): The table presents the results of the 2SLS analysis. Column 1 shows the results of the first stage where the dependent variable is *FEBOD* and regressed on the lag of *FEBOD*. The dependent variable in the second stage is *CEOCOMP*. Columns 2–4 report the results for hypotheses 1–3. Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively
Source(s): Authors' own work

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definitions). The results are displayed in Table 7. Both *BLAUIDX* and *SHANIDX* show a positive and significant relationship with CEO compensation at the 1% level in columns 1 and 4, respectively. However, all interaction terms (*BLAUIDX*×*INSTOWN*, *BLAUIDX*×*FRGNOWN*, *SHANIDX*×*INSTOWN*, *and BLAUIDX*×*FRGNOWN)* are negatively significant with CEO compensation in columns 2–3 and 5–6, respectively. Overall, our primary inferences remain robust when using these alternative measures of BGD.

6.2 Fixed vs. variable component of CEO compensation

CEO compensation can be divided into two main components: fixed and variable, as recommended by Benkraiem *et al.* (2017). The regression results analysing the impact of BGD on both fixed and variable CEO pay are shown in Table 8. In columns 1 and 4, *FEBOD* is significantly positive for fixed and variable CEO pay. These findings differ from those of prior studies, such as Lucas-Pérez *et al.* (2015), which suggest that BGD enhances board effectiveness and improves oversight of CEO compensation. However, our results align with Benkraiem *et al.* (2017), who attribute this to the mere presence of women on boards. The interaction term *FEBOD*×*INSTOWN* is negative and significant for variable CEO compensation (in columns 5 and 6), indicating that the monitoring role of gender diversity, supported by institutional stockholders, can influence the variable components of CEO pay.

Table 7. Alternative measures of board gender diversity

	Dep. Var. = *CEOCOMP*					
	(1)	(2)	(3)	(4)	(5)	(6)
BLAUIDX	0.261***	0.632***	0.688***			
	(4.76)	(6.07)	(5.63)			
BLAUIDX × *INSTOWN*		−2.138***	−2.262***			
		(−5.16)	(−4.82)			
BLAUIDX × *FRGNOWN*			−1.133*			
			(−1.91)			
SHANIDX				0.187***	0.428***	0.459***
				(4.99)	(6.02)	(5.55)
SHANIDX × *INSTOWN*					−1.448***	−1.506***
					(−4.87)	(−4.56)
BLAUIDX × *FRGNOWN*						−0.725*
						(−1.73)
INSTOWN		0.842***	0.854***		0.876***	0.885***
		(6.38)	(6.39)		(6.17)	(6.16)
FRGNOWN			0.372*			0.379*
			(1.87)			(1.86)
Intercept	6.752***	6.291***	6.350***	6.732***	6.260***	6.336***
	(21.98)	(23.81)	(19.77)	(22.21)	(23.96)	(19.91)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	410	410	410	410	410	410
Adjusted R^2	0.496	0.545	0.545	0.498	0.545	0.545

Note(s): The table presents the regression results using alternative measures of board gender diversity. Columns 1–3 show the results where board gender diversity is measured using the Blau Index (*BLAUIDX*), whereas columns 4–6 report the results using the Shannon Index (*SHANIDX*). Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively

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Table 8. CEO compensation (Fixed vs. variable)

	Dep. Var. = FCEOCOMP			*Dep. Var. = VCEOCOMP*		
	(1)	(2)	(3)	(4)	(5)	(6)
FEBOD	0.193**	0.334**	0.392*	0.551***	0.968***	1.136***
	(2.14)	(1.98)	(1.84)	(4.89)	(4.33)	(3.97)
FEBOD × INSTOWN		−0.990	−1.204		−3.016***	−3.529***
		(−1.34)	(−1.41)		(−3.27)	(−3.21)
INSTOWN		0.352**	0.359**		1.129***	1.159***
		(2.55)	(2.56)		(5.61)	(5.77)
FEBOD × FRGNOWN			−0.204			−1.562
			(−0.26)			(−1.24)
FRGNOWN			−0.138			0.112
			(−0.73)			(0.31)
Intercept	5.269***	5.156***	4.983***	5.158***	4.788***	4.620***
	(19.03)	(18.43)	(14.16)	(11.01)	(10.17)	(7.60)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	338	338	338	331	331	331
Adjusted R^2	0.416	0.422	0.420	0.405	0.449	0.447

Note(s): The table presents the regression results, breaking down CEO compensation into fixed and variable compensation. Columns 1–3 show the results where the dependent variable is the fixed portion of CEOCOMP, whereas columns 4–6 report the results where the dependent variable is the variable amount of *CEOCOMP*. Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Observations dropped as some of the sample firms did not disclose the breakdown of their CEO pay

Source(s): Authors' own work

6.3 Implication of tokenism and critical mass theory

This study further explores the influence of women directors through the lens of tokenism and critical mass theory in an emerging economy context. The explanatory variable, female board representation, is measured using two dummy variables: *1/2WOMEN*, indicating the presence of one or two female directors (Usman *et al.*, 2019; Brahma *et al.*, 2020), and *3/+WOMEN*, indicating the presence of three or more women on the board (Brahma *et al.*, 2020; Chatterjee and Nag, 2022; Dey *et al.*, 2023).

Table 9 presents the regression results for these measures of female representation in boardrooms on CEO remuneration. In support of the tokenism concept, *1/2WOMEN* shows a significant positive association with CEO pay in column 1, whereas *3/+WOMEN* becomes insignificant in column 2. The disappearance of a significant positive association between BGD and CEO compensation suggests that the monitoring role of female directors strengthens as their representation approaches a critical mass. In aligning with this outcome Dey *et al.* (2023) reveal that female representation in the boardroom does not significantly influence the market value of Bangladeshi banks, supporting the tokenism argument that appointing women directors may be more symbolic than impactful on financial performance. The negative and significant interaction term *1/2WOMEN×INSTOWN* in column 3 is significant at the 10% level, with a coefficient of −0.277. Additionally, the coefficient for *3/+WOMEN×INSTOWN* is significant at the 5% level with CEO pay in column 4, supporting the critical mass theory. These findings advocate appointing three or more female directors to ensure their compelling voice in decision-making. The coefficients of both *1/2WOMEN×FRGNOWN* and *3/+WOMEN×FRGNOWN* remain insignificantly negative in columns 5 and 6. Jayaraman *et al.* (2024) found that a critical mass of female directors positively moderates and strengthens the relationship between BGD and firm performance, although the study does not find a direct association between BGD and firm performance in the Indian context. Similar results have

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Table 9. Regression results examining the role of critical mass

	Dep. Var. = CEOCOMP					
	(1)	(2)	(3)	(4)	(5)	(6)
1/2WOMEN	0.060***		0.118***		0.119***	
	(3.35)		(2.95)		(2.81)	
3/+WOMEN		0.021		0.107**		0.108*
		(1.09)		(2.14)		(1.77)
1/2WOMEN × INSTOWN			−0.277*		−0.282*	
			(−1.79)		(−1.77)	
3/+WOMEN × INSTOWN				−0.466**		−0.446**
				(−2.44)		(−2.02)
1/2WOMEN × FRGNOWN					−0.087	
					(−0.47)	
3/+WOMEN × FRGNOWN						−0.141
						(−0.74)
INSTOWN			0.604***	0.550***	0.631***	0.566***
			(5.58)	(5.51)	(5.60)	(5.46)
FRGNOWN					0.285*	0.239
					(1.77)	(1.49)
Intercept	6.719***	6.908***	6.332***	6.495***	6.536***	6.678***
	(21.59)	(20.64)	(23.17)	(21.59)	(20.13)	(18.34)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	410	410	410	410	410	410
Adjusted R^2	0.481	0.466	0.524	0.510	0.525	0.511

Note(s): The table presents the regression results using different numbers of female directors on boards. Columns 1–2 show the results of whether the *FEBOD* and *CEOCOMP* link varies with the number of women directors whereas columns 3–4 and column 5–6 show the results of moderating roles of institutional ownership and foreign ownership, respectively. Numbers in parentheses are *t*-statistics. Superscripts ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The definitions of variables are given in Appendix
Source(s): Authors' own work

been uncovered by Kristie (2011), Torchia *et al.* (2011), and Joecks *et al.* (2013) in different contexts in support of critical mass theory.

7. Discussion and policy implication

To design an optimal CEO compensation plan that avoids conflicts of interest, a board requires greater independence, expertise, knowledge, abilities, and values (Hillman and Dalziel, 2003). Gender diversity enhances the design of top management's remuneration policy; yet prior studies on its impact on executive pay reveal mixed results. Lucas-Pérez *et al.* (2015), Rahman (2017), Benkraiem *et al.* (2017), and Nawaz (2022) empirically document a positive association between female boardroom participation and CEO compensation, while Usman *et al.* (2018) and Patnaik and Sour (2020) find an inverse relationship.

This research examines the association between BGD and CEO remuneration in the Bangladeshi financial sector. A statistically significant positive association is found between boardroom gender diversity and CEO compensation, suggesting a weak monitoring role of female directors. However, Lucas-Pérez *et al.* (2015) argue that female directors can play a pivotal role in board governance by implementing well-designed compensation packages linked to firm performance, thereby lowering agency costs, enhancing management reputation, and improving overall board efficacy. On the other hand, Li *et al.* (2007) stated that weak governance frameworks can cause management's incentives to become misaligned with the firm's goals, leading to inefficiencies that negatively impact shareholders.

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The study further finds that the moderating role of IO in the association between BGD and CEO pay is significantly negative, aligning with the findings of Ullah *et al.* (2020) in China. This suggests that IO can be an effective governance tool to enhance monitoring quality, negatively moderating the positive association between BGD and CEO pay. Moreover, the interaction term of FO and BGD is also negative and significant on the CEO pay. In line with these findings, Ashraf and Qian (2021) claim that foreign directors may enhance oversight and reduce earnings manipulation in Chinese-listed non-financial firms, while Ghaleb *et al.* (2021) note that a diverse board in Jordan protects owners' interests by curbing managers' opportunistic behaviours, including earnings management. Female directors can be instrumental in strengthening corporate governance by proficiently and efficiently protecting shareholders' interests through the oversight of firm management. These findings are robust, addressing endogeneity issues through entropy-balancing analysis and instrumental variable analysis, and are validated using alternative measures of BGD and the variable components of CEO remuneration.

These results support the critical mass theory, as the direct effect of female participation on CEO pay is significant with one or two board members but becomes insignificant with three or more female members. This supports the tokenism perspective on BGD, as suggested by Benkraiem *et al.* (2017) in France, Almarayeh (2023) in Jordan, and Unite *et al.* (2019) in the Philippines. However, the more vital negative moderating role of IO when female board representation reaches a critical mass underscores the importance of ensuring the monitoring role of female directors backed by institutional shareholdings. Women on boards, through their interactions with institutional and foreign stockholders, can improve corporate governance by supervising management activities, such as setting CEO compensation. This oversight can enhance the firm's financial performance, ensure the credibility of financial reports, and strengthen the firm's reputation.

The findings of this study contribute significantly to the ongoing global discourse on gender equality. Persistent gender discrimination has prompted various regulatory bodies worldwide to mandate quotas for female representation on corporate boards and enhance gender diversity in corporate governance, thereby promoting more equitable and inclusive business practices. These findings should interest lawmakers, professionals, and scholars who are interested in how BGD influences CEO compensation. The empirical findings also suggest some policy implications for the CG Code of Bangladesh to lessen the agency issue between shareholders and executives. First, the regulatory body should enforce stricter standards on disclosing detailed CEO remuneration, including clearly defined performance bonuses and other perquisites. The lack of disclosure in non-financial industries prevented us from including these sectors in the analysis, as many firms do not report separate CEO compensation in their published annual reports. Moreover, the disclosure of CEO compensation in the financial sector is not well-structured or uniform, and the compensation packages often lack long-term incentives such as bonus shares.

Second, the direct association we found between female board members and CEO pay is consistent with the results of Benkraiem *et al.* (2017), which suggest that female directors, when in the minority, may be less effective in monitoring CEO compensation. The study recommends that policymakers and regulators encourage and support the active participation of women in corporate boardrooms by setting quotas to ensure their voices are heard, as the existing CG Code of 2018 remains silent on this issue. Companies should select female directors with relevant expertise and qualifications rather than select them merely for symbolic representation. The minimal presence of women on corporate boards in the Bangladeshi financial sector highlights the need for a concerted effort to achieve equitable opportunities and long-term sustainable change. The presence of a critical mass of women on boards, in conjunction with institutional and foreign ownership, seems to reduce the likelihood of managers engaging in opportunistic behaviour and may also enhance human welfare and societal outcomes, thereby promoting gender equality as outlined in the United Nations Sustainable Development Goal 5 in developing countries.

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Finally, the study suggests that institutional and foreign stockholders can be an effective governance tool to enhance the monitoring role of gender-diverse boards. The moderating role of IO is stronger when female representation on the board reaches a critical mass in relation to CEO compensation. The BSEC should formulate policies and take steps to encourage both institutional and foreign investors to invest in businesses. Before establishing any relationship with a firm, investors are advised to carefully evaluate the strength of female participation and the organisation's IO and FO level.

8. Summary, limitations, and future direction

8.1 Conclusion

This study investigates the impact of female board participation on CEO compensation in the Bangladeshi financial sector and explores the moderating role of IO and FO in this relationship. Annual reports from 50 sample firms, covering the period from 2013 to 2022 and comprising 410 firm-year observations, were used for the analysis. The ordinary least squares method is applied to test our baseline hypotheses empirically. Further, the entropy-balancing method and instrumental variable analysis are applied to address the endogeneity issue. To ensure robustness, we also employed alternative measures of boardroom gender diversity and analysed subdivisions of total CEO compensation. Finally, the study uses tokenism and critical mass theory to interpret the findings.

Our results suggest that female directors may not effectively monitor CEO compensation, potentially serving more as symbolic representations on boards. The result is consistent with the tokenism perspective of female representation in the boardroom. This is particularly evident when considering critical mass theory, where the influence of female directors becomes insignificant as their numbers increase beyond a token presence. However, the monitoring role of female directors appears to strengthen when supported by both IO and FO, particularly when their representation reaches a critical mass of at least three women on the board, but this effect is observed only in the case of IO.

8.2 Limitations and future direction

Although its contributions are many, this study also has some limitations. First, our sample is drawn solely from publicly listed financial firms in Bangladesh, which limits the generalisability of our findings to unlisted financial firms and non-financial industries due to the nondisclosure of CEO compensation in published annual reports and other available secondary sources. Future studies may consider cross-country analyses to explore the hypothesised associations. Second, focusing exclusively on gender diversity and not considering diversity in terms of ethnicity, geography, and cultural background is another limitation that future research can overcome. Third, the study does not account for CEO power variables, which could affect compensation outcomes. Future research will consider a CEO power index that incorporates ownership, experience, and tenure when examining the association between board gender and CEO compensation. Finally, as the study relies on data from the annual reports of listed financial institutions, the accuracy of these reports directly impacts the reliability of our conclusions.

Despite these limitations, this study is the first to investigate the impact of female participation in boardrooms on CEO remuneration and the moderating role of institutional and foreign shareholders in the BGD-CEO compensation relationship in the context of Bangladesh's financial sector. The findings may motivate researchers to delve deeper into these issues, considering this study as an introduction to this topic.

Notes

1. Available at: https://wbl.worldbank.org/content/dam/documents/wbl/2020/sep/Bangladesh.pdf (accessed 17 August 2024).
2. We thank an anonymous reviewer for suggesting this variable as a moderator.

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References

Ahmed, A., Atif, M. and Gyapong, E. (2021), "Boardroom gender diversity and CEO pay deviation: Australian evidence", *Accounting and Finance*, Vol. 61 No. 2, pp. 3135-3170, doi: 10.1111/acfi.12696.

Ain, Q.U., Yuan, X., Javaid, H.M., Usman, M. and Haris, M. (2021), "Female directors and agency costs: evidence from Chinese listed firms", *International Journal of Emerging Markets*, Vol. 16 No. 8, pp. 1604-1633, doi: 10.1108/ijoem-10-2019-0818.

Akter, A., Wan Yusoff, W.F. and Abdul-Hamid, M.A. (2024), "The moderating role of board diversity on the relationship between ownership structure and real earnings management", *Asian Journal of Accounting Research*, Vol. 9 No. 2, pp. 98-115, doi: 10.1108/ajar-10-2022-0307.

Al-Duais, S.D., Malek, M., Abdul Hamid, M.A. and Almasawa, A.M. (2022), "Ownership structure and real earnings management: evidence from an emerging market", *Journal of Accounting in Emerging Economies*, Vol. 12 No. 2, pp. 380-404, doi: 10.1108/jaee-01-2021-0008.

Alamgir, M. (2024), "Slow growth of female HE enrolment puts SDG target at risk", *University World News*, 15 April, available at: https://www.universityworldnews.com/post.php?story=20240415174547846 (accessed 16 July 2024).

Alfawareh, F.S., Che Johari, E.E. and Ooi, C.A. (2023), "Governance mechanisms, firm performance and CEO compensation: evidence from Jordan", *Journal of Financial Reporting and Accounting*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/jfra-01-2023-0062.

Alhababsah, S. (2019), "Ownership structure and audit quality: an empirical analysis considering ownership types in Jordan", *Journal of International Accounting, Auditing and Taxation*, Vol. 35, pp. 71-84, doi: 10.1016/j.intaccaudtax.2019.05.006.

Ali, S., Farooq, M., Xiaohong, Z., Hedvicakova, M. and Murtaza, G. (2024), "Board characteristics, institutional ownership, and investment efficiency: evidence from an emerging market", *PLoS One*, Vol. 19 No. 2, e0291309, doi: 10.1371/journal.pone.0291309.

Almarayeh, T. (2023), "Board gender diversity, board compensation and firm performance. Evidence from Jordan", *Journal of Financial Reporting and Accounting*, Vol. 21 No. 3, pp. 673-694, doi: 10.1108/jfra-05-2021-0138.

Ashraf, B.N. and Qian, N. (2021), "The impact of board internationalization on real earnings management: evidence from China", *Sage Open*, Vol. 11 No. 3, doi: 10.1177/21582440211032640.

Bangladesh Bank (2014), "Prudential regulations for banks: selected issues", available at: https://www.bb.org.bd/openpdf.php (accessed 10 July 2023).

Bebchuk, L.A. and Fried, J.M. (2004), "Executive compensation as an agency problem", *The Journal of Economic Perspectives*, Vol. 17 No. 3, pp. 71-92, doi: 10.1257/0895330003769204362.

Benkraiem, R., Hamrouni, A., Lakhal, F. and Toumi, N. (2017), "Board independence, gender diversity and CEO compensation", *Corporate Governance: The International Journal of Business in Society*, Vol. 17 No. 5, pp. 845-860, doi: 10.1108/cg-02-2017-0027.

Bertrand, M. and Schoar, A. (2006), "The role of family in family firms", *The Journal of Economic Perspectives*, Vol. 20 No. 2, pp. 73-96, doi: 10.1257/jep.20.2.73.

Beuselinck, C., Blanco, B. and García Lara, J.M. (2017), "The role of foreign shareholders in disciplining financial reporting", *Journal of Business Finance and Accounting*, Vol. 44 Nos 5-6, pp. 558-592, doi: 10.1111/jbfa.12239.

Bouteska, A. and Mefteh-Wali, S. (2021), "The determinants of CEO compensation: new insights from United States", *Journal of Applied Accounting Research*, Vol. 22 No. 4, pp. 663-686, doi: 10.1108/jaar-08-2020-0176.

Boyd, B.K. (1994), "Board control and CEO compensation", *Strategic Management Journal*, Vol. 15 No. 5, pp. 335-344, doi: 10.1002/smj.4250150502.

Brahma, S., Nwafor, C. and Boateng, A. (2020), "Board gender diversity and firm performance: the UK evidence", *International Journal of Finance and Economics*, Vol. 26 No. 4, pp. 5704-5719, doi: 10.1002/ijfe.2089.

Downloaded from http://ftp.nowpublishers.com/jaar/article-pdf/26/6/271/10860708/jaar-03-2024-0102en.pdf by guest on 28 May 2026

Bugeja, M., Matolcsy, Z. and Spiropoulos, H. (2016), "The association between gender-diverse compensation committees and CEO compensation", *Journal of Business Ethics*, Vol. 139 No. 2, pp. 375-390, doi: 10.1007/s10551-015-2660-y.

Chatterjee, C. and Nag, T. (2022), "Do women on boards enhance firm performance? Evidence from top Indian companies", *International Journal of Disclosure and Governance*, Vol. 20 No. 2, pp. 155-167, doi: 10.1057/s41310-022-00153-5.

Chen, L., Han, M., Li, Y., Megginson, W.L. and Zhang, H. (2022), "Foreign ownership and corporate excess perks", *Journal of International Business Studies*, Vol. 53, pp. 1-22, doi: 10.1057/s41267-021-00466-7.

Cicchiello, A.F., Fellegara, A.M., Kazemikhasragh, A. and Monferrà, S. (2021), "Gender diversity on corporate boards: how Asian and African women contribute on sustainability reporting activity", *Gender in Management: An International Journal*, Vol. 36 No. 7, pp. 801-820, doi: 10.1108/gm-05-2020-0147.

Croci, E., Gonenc, H. and Ozkan, N. (2012), "CEO compensation, family control, and institutional investors in continental Europe", *Journal of Banking and Finance*, Vol. 36 No. 12, pp. 3318-3335, doi: 10.1016/j.jbankfin.2012.07.017.

Das, S.K., Khalilur Rahman, M. and Roy, S. (2023), "Does ownership type affect sustainability reporting disclosure? Evidence from an emerging market", *International Journal of Disclosure and Governance*, Vol. 21 No. 1, pp. 52-68, doi: 10.1057/s41310-023-00180-w.

Dey, P.K., Nakib, M. and Saha, N.K. (2023), "Does board gender diversity affect bank performance? New evidence from Bangladesh", *The Jahangirnagar Journal of Business Studies*, Vol. 12 No. 1, pp. 1-15.

Dhaka Stock Exchange (2023), "Sector wise company list", available at: https://www.dsebd.org/by_industrylisting.php (accessed 2 March 2023).

Eagly, A.H. and Carli, L.L. (2003), "The female leadership advantage: an evaluation of the evidence", *The Leadership Quarterly*, Vol. 14 No. 6, pp. 807-834, doi: 10.1016/j.leaqua.2003.09.004.

Fama, E.F. and Jensen, M.C. (1983), "Separation of ownership and control", *The Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325, doi: 10.1086/467037.

Fernandes, A.P., Ferreira, P. and Winters, L.A. (2017), "The effect of competition on executive compensation and incentives", *Journal of Human Resources*, Vol. 53 No. 3, pp. 783-824, doi: 10.3368/jhr.53.3.0215-6963r1.

Ghaleb, B.A.A., Qaderi, S.A., Almashaqbeh, A. and Qasem, A. (2021), "Corporate social responsibility, board gender diversity and real earnings management: the case of Jordan", *Cogent Business and Management*, Vol. 8 No. 1, 1883222, doi: 10.1080/23311975.2021.1883222.

Githaiga, P.N. (2023), "Board gender diversity, institutional ownership and earnings management: evidence from East African community listed firms", *Journal of Accounting in Emerging Economies*, Vol. 14 No. 5, pp. 937-969, doi: 10.1108/jaee-10-2022-0312.

Githaiga, P.N. and Kosgei, J.K. (2022), "Board characteristics and sustainability reporting: a case of listed firms in East Africa", *Corporate Governance: The International Journal of Business in Society*, Vol. 23 No. 1, pp. 3-17, doi: 10.1108/cg-12-2021-0449.

Gujarati, D.N. (2009), *Basic Econometrics*, TataMcGraw-Hill Education, New Delhi.

Guo, J., Huang, P., Zhang, Y. and Zhou, N. (2015), "Foreign ownership and real earnings management: evidence from Japan", *Journal of International Accounting Research*, Vol. 14 No. 2, pp. 185-213, doi: 10.2308/jiar-51274.

Hainmueller, J. and Xu, Y. (2013), "Ebalance: a Stata package for entropy balancing", *Journal of Statistical Software*, Vol. 54 No. 7, doi: 10.18637/jss.v054.i07.

Han, M., Ding, A. and Zhang, H. (2022), "Foreign ownership and earnings management", *International Review of Economics and Finance*, Vol. 80, pp. 114-133, doi: 10.1016/j.iref.2022.02.074.

Hartzell, J.C. and Starks, L.T. (2003), "Institutional investors and executive compensation", *The Journal of Finance*, Vol. 58 No. 6, pp. 2351-2374, doi: 10.1046/j.1540-6261.2003.00608.x.

Downloaded from http://ftp.nowpublishers.com/jaar/article-pdf/26/6/271/10860708/jaar-03-2024-0102en.pdf by guest on 28 May 2026

Hillman, A.J. and Dalziel, T. (2003), "Boards of directors and firm performance: integrating agency and resource dependence perspectives", *Academy of Management Review*, Vol. 28 No. 3, pp. 383-396, doi: 10.2307/30040728.

Jayaraman, J.D., Smita, R. and Nilakantan, N. (2024), "The impact of board gender diversity on firm performance: does critical mass matter?", *Journal of Applied Accounting Research*, Vol. 26 No. 1, pp. 249-277, doi: 10.1108/jaar-12-2022-0336.

Joecks, J., Pull, K. and Vetter, K. (2013), "Gender diversity in the boardroom and firm performance: what exactly constitutes a 'Critical mass?'", *Journal of Business Ethics*, Vol. 118 No. 1, pp. 61-72, doi: 10.1007/s10551-012-1553-6.

Kanter, R.M. (1977), "Some effects of proportions on group life: skewed sex ratios and responses to token women", *American Journal of Sociology*, Vol. 82 No. 5, pp. 965-990, doi: 10.1086/226425.

Karim, T., Rahman, M.B. and Shohrowardhy, H.S. (2022), "Women representation on boards of Directors of commercial Banks in Bangladesh: recent trends and best practices", *American Journal of Industrial and Business Management*, Vol. 12 No. 11, pp. 1667-1684, doi: 10.4236/ajibm.2022.1211091.

Khan, R., Dharwadkar, R. and Brandes, P. (2005), "Institutional ownership and CEO compensation: a longitudinal examination", *Journal of Business Research*, Vol. 58 No. 8, pp. 1078-1088, doi: 10.1016/j.jbusres.2004.02.002.

Krishnan, G.V. and Parsons, L.M. (2008), "Getting to the bottom line: an exploration of gender and earnings quality", *Journal of Business Ethics*, Vol. 78 Nos 1-2, pp. 65-76, doi: 10.1007/s10551-006-9314-z.

Kristie, J. (2011), "The power of three", *Directors and Boards*, Vol. 35 No. 5, pp. 22-32.

Li, D., Moshirian, F., Nguyen, P. and Tan, L. (2007), "Corporate governance or globalization: what determines CEO compensation in China?", *Research in International Business and Finance*, Vol. 21 No. 1, pp. 32-49, doi: 10.1016/j.ribaf.2005.12.003.

Lucas-Pérez, M.E., Mínguez-Vera, A., Baixauli-Soler, J.S., Martín-Ugedo, J.F. and Sánchez-Marín, G. (2015), "Women on the board and managers' pay: evidence from Spain", *Journal of Business Ethics*, Vol. 129 No. 2, pp. 265-280, doi: 10.1007/s10551-014-2148-1.

Mardini, G.H. and Lahyani, F.E. (2024), "Female directors' representation and intellectual capital efficiency: does institutional ownership matter?", *Journal of Applied Accounting Research*, Vol. 25 No. 3, pp. 397-419, doi: 10.1108/jaar-11-2022-0295.

Nasta, L., Magnanelli, B.S. and Ciaburri, M. (2024), "From profits to purpose: ESG practices, CEO compensation and institutional ownership", *Management Decision*, Vol. 62 No. 13, pp. 46-68, doi: 10.1108/md-06-2023-0932.

Nawaz, T. (2022), "How much does the board composition matter? The impact of board gender diversity on CEO compensation", *Sustainability*, Vol. 14 No. 18, 11719, doi: 10.3390/su141811719.

Park, J., Sani, J., Shroff, N. and White, H. (2019), "Disclosure incentives when competing firms have common ownership", *Journal of Accounting and Economics*, Vol. 67 Nos 2-3, pp. 387-415, doi: 10.1016/j.jacceco.2019.02.001.

Patnaik, P. and Suar, D. (2020), "Does corporate governance affect CEO compensation in Indian Manufacturing Firms?", *Journal of Public Affairs*, Vol. 20 No. 3, doi: 10.1002/pa.2115.

Rahman, M.M. (2017), "Determinants of CEO compensation: empirical evidence from listed banks of Bangladesh", *In Proceedings from The 7th International Conference of The Japanese Accounting Review (TJAR)*, Rokkodai Campus of Kobe University, Japan.

Rashid, A. (2015), "Revisiting agency theory: evidence of board independence and agency cost from Bangladesh", *Journal of Business Ethics*, Vol. 130 No. 1, pp. 181-198, doi: 10.1007/s10551-014-2211-y.

Rashid, M.M. (2022), "Corporate governance and CEO pay: evidence from financial companies of Bangladesh", *The Cost and Management*, Vol. 50 No. 3.

Downloaded from http://ftp.nowpublishers.com/jaar/article-pdf/26/6/271/10860708/jaar-03-2024-0102en.pdf by guest on 28 May 2026

Rimon, A. (2024), "Women still underrepresented in Bangladesh politics", *Voice of America*, 5 January, available at: https://www.voanews.com/a/women-still-underrepresented-in-bangladesh-politics/7428384.html (accessed 20 July 2024).

Sadeque, S.B., Haque, A., Nishat, N.J. and Mohona, N.T. (2023), "The impact of institutional ownership on CEO compensation among the NBFIs: Bangladesh perspective", *The Journal of Management Theory and Practice (JMTP)*, Vol. 4 No. 1, pp. 37-44.

Salehi, M., Zimon, G., Arianpoor, A. and Gholezoo, F.E. (2022), "The impact of investment efficiency on firm value and moderating role of institutional ownership and board independence", *Journal of Risk and Financial Management*, Vol. 15 No. 4, p. 170, doi: 10.3390/jrfm15040170.

Salehi, M., Jabbari, S., Hosseiny, Z.N. and Khargh, F.E. (2024), "Impact of corporate governance on tax avoidance", *Journal of Public Affairs*, Vol. 24 No. 3, doi: 10.1002/pa.2929.

Shiri, M.M., Salehi, M. and Radbon, A. (2016), "A study of Impact of ownership structure and disclosure quality on information asymmetry in Iran", *Vikalpa the Journal for Decision Makers*, Vol. 41 No. 1, pp. 51-60, doi: 10.1177/0256090915620876.

Simionescu, L.N., Gherghina, Ş.C., Tawil, H. and Sheikha, Z. (2021), "Does board gender diversity affect firm performance? Empirical evidence from Standard and Poor's 500 Information Technology Sector", *Financial Innovation*, Vol. 7 No. 1, 52, doi: 10.1186/s40854-021-00265-x.

Sumon, S.H. (2022), "Know the high salaried bank CEOs", *The Business Post*, 18 May, available at: https://businesspostbd.com/front/know-the-high-salaried-bank-ceos

Torchia, M., Calabrò, A. and Huse, M. (2011), "Women directors on corporate boards: from tokenism to critical mass", *Journal of Business Ethics*, Vol. 102 No. 2, pp. 299-317, doi: 10.1007/s10551-011-0815-z.

Ullah, F., Jiang, P., Shahab, Y., Li, H.-X. and Xu, L. (2020), "Block ownership and CEO compensation: does board gender diversity matter?", *Applied Economics*, Vol. 52 No. 6, pp. 583-597, doi: 10.1080/00036846.2019.1659490.

Unite, A.A., Sullivan, M.J. and Shi, A.A. (2019), "Board diversity and performance of Philippine firms: do women matter?", *International Advances in Economic Research*, Vol. 25 No. 1, pp. 65-78, doi: 10.1007/s11294-018-09718-z.

Usman, M., Zhang, J., Wang, F., Sun, J. and Makki, M.A. (2018), "Gender diversity in compensation committees and CEO pay: evidence from China", *Management Decision*, Vol. 56 No. 5, pp. 1065-1087, doi: 10.1108/md-09-2017-0815.

Usman, M., Farooq, M.U., Zhang, J., Makki, M.A. and Khan, M.K. (2019), "Female directors and the cost of debt: does gender diversity in the boardroom matter to lenders?", *Managerial Auditing Journal*, Vol. 34 No. 4, pp. 374-392, doi: 10.1108/maj-04-2018-1863.

Velte, P. (2023), "Institutional ownership and board governance. A structured literature review on the heterogeneous monitoring role of institutional investors", *Corporate Governance*, Vol. 24 No. 2, pp. 225-263, doi: 10.1108/cg-10-2022-0414.

Wen, F., Zou, Q. and Wang, X. (2021), "The contrarian strategy of institutional investors in Chinese stock market", *Finance Research Letters*, Vol. 41, 101845, doi: 10.1016/j.frl.2020.101845.

Yarram, S.R. and Adapa, S. (2021), "Board gender diversity and corporate social responsibility: is there a case for critical mass?", *Journal of Cleaner Production*, Vol. 278, 123319, doi: 10.1016/j.jclepro.2020.123319.

Yoshikawa, T., Phan, P.H. and David, P. (2005), "The impact of ownership structure on wage intensity in Japanese corporations", *Journal of Management*, Vol. 31 No. 2, pp. 278-300, doi: 10.1177/0149206304271766.

Yoshikawa, T., Rasheed, A.A. and Del Brio, E.B. (2010), "The impact of firm strategy and foreign ownership on executive bonus compensation in Japanese firms", *Journal of Business Research*, Vol. 63 No. 11, pp. 1254-1260, doi: 10.1016/j.jbusres.2010.06.012.

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BSEC (2018), "Corporate governance code", available at: https://www.sec.gov.bd/slaws/Corporate_Governance_Code_10.06.2018.pdf

Appendix

Table A1. Variable definitions

Variables	Description
Dependent variables	
CEOCOMP	The natural logarithm of total CEO compensation (in BDT), including basic salary, bonus, and all other allowances in a year
FCEOCOMP	The natural logarithm of fixed pay (basic salary) in BDT paid to the CEO in a year
VCEOCOMP	The natural logarithm of variable pay (bonus and all other allowances) in BDT paid to the CEO in a year
Independent variables	
FEBOD	The proportion of female board members to all directors on a board
INSTOWN	The proportion of shares held by institutions to all shares outstanding
FRGNOWN	The proportion of shares held by foreigners to all shares outstanding
BLAUIDX	$1-\sum^{n}_{i=1} P_i^2$, Pi refers to the fraction of board members in each category of a given attribute; *n* is the number of groups of a given trait
SHANIDX	$-\sum^{n}_{i=1} P_i In P_i$, Pi refers to the fraction of board members in each group of a given attribute, *n* is the number of groups of a given trait, *In* is the natural log of each category
1/2WOMEN	The dummy variable is set equal to one if a firm has one or two women directors in a year and zero otherwise
3/+WOMEN	The dummy variable is set equal to one if a firm in a year has three or more women directors in a year and zero otherwise
Control variables	
BSIZE	The natural logarithm of the total number of board of directors in a year
BINDP	The fraction of independent directors to the total board of directors in a year
BMEET	The natural logarithm of the total number of board meetings in a year
LEV	The proportion of total debt to total equity in a year
ROA	Total net income scaled by total assets in a year
AGE	The natural logarithm of the number of years since a company was incorporated
SIZE	The natural logarithm of the total market value of equity
DIROWN	The proportion of shares a sponsor or director holds to all shares held

Source(s): Authors' own work

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