

Do the Foreign Ownership Perform as a moderator in the Relationship between Corporate Governance and Performance of Indian Banks?

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Abstract

Purpose: In light of a several banking scandals, corporate governance has emerged as a critical area of focus. Therefore, this study evaluates the effect of corporate governance on the performance of public and private banks in India by moderating the effect of foreign ownership.

Design/methodology/approach: This research employs the panel data regression model for on data collected from the public and private Indian banks, with 250 observations from FY 2014-2015 to 2023-2024. It takes board size, CEO duality, gender diversity, and board composition as independent, foreign ownership as moderator, and Return on assets and Tobin's Q as dependent variables.

Findings: The results indicate that when the performance assessed by return on assets (ROA), then only CEO duality and foreign ownership are influencing the performance assessment of Indian banks significantly. On the contrary, when the banking sector performance is measured by Tobin's q, then only CEO duality is affecting significantly to the Indian banking sector's performance. Moreover, the findings provide strong evidence regarding the moderation effect of foreign ownership.

Originality/value: After reviewing the literature, the paper underlines limited studies conducted using foreign ownership as a moderator factor while assessing the impact of corporate governance on the performance of Indian banks.

Keywords: Corporate governance; Bank performance; Moderating impact; and Foreign ownership.

1. Introduction

Banks play a pivotal role in economic growth by acting as intermediaries that channel savings into productive investments. Banks mobilize idle funds from households and efficiently allocate them to essential financial transactions that drive economic activities. This process of financial intermediation channels resources efficiently, fostering investment overall economic growth. The financial health of a nation is significantly dependent on a robust banking system, particularly in emerging economies like India, where economic stability hinges on the ability of banks to serve both urban and rural financial needs. The banks and other financial intermediaries have been at the center of the crisis that has been occurring in the financial sector. One of the most significant structural causes of the crisis was the disintegration of their asset portfolios, which was primarily brought about by the failure of the credit management company (Ayadi, 2019). This happened mostly because of bad management in the banks of different countries and industries (Kirkpatrick, 2009), which is ultimately the part of corporate governance. Corporate governance, which has been around since the beginning of corporations, is simply the way that companies are governed and regulated. Effective corporate governance is not merely a regulatory requirement but a cornerstone for maintaining financial stability and public trust within the banking industry. In India, the significance of corporate governance in banks is amplified due to the sector's pivotal role in the economy. The Indian banking landscape is characterized by a diverse structure that includes public and private banks, regional rural banks, foreign banks, as well as urban and rural cooperative banks, each governed by different regulatory frameworks and governance standards. The governance frameworks of these institutions are critical for ensuring prudent risk management, ethical conduct, and sustainable growth. Many regulators and practitioners have paid a lot of attention to this issue because of the failures of companies with poor governance, such as "Enron, Lehman Brothers, Regal Treasury Bank Limited, WorldCom, and Commerce Bank" (Molla et al., 2021). Various theories can be used to explain it. Agency theory largely holds that managers' only objective is to safeguard and increase shareholder value because they are appointed to operate in the best interests of shareholders. The agency theory has drawn criticism, though, for not adequately defending the interests of other stakeholders who might not have

a monetary or non-monetary stake in the corporation. As a result, the stakeholder theory emerged, arguing that managers should not only concentrate on safeguarding and increasing shareholder wealth but also on protecting and serving the interests of other stakeholders (Freeman, 1984). This uncertainty has prompted numerous studies to test the hypothesis that effective corporate governance practices increase stakeholder value (Boachie, 2021). The efficacy of board controls for a bank's internal supervision was questioned during the global financial crisis for the period of 2007–09. The primary source of these issues was the boards of numerous financial institutions' allegedly unethical and erroneous conduct, which had a considerable detrimental influence on profitability after the crisis (Fernandes et al., 2018; Bhatia, 2021). Following the crisis, the Basel Committee (Basel, 2010) released a set of guidelines in October 2010 for improving corporate governance practices in the banking sector. These guidelines focused on the significance of the BODs, their qualifications and composition, the necessity of routinely monitoring firm-level risks, etc. (Sarkar and Sarkar, 2018). The board's responsibility is to ensure that the bank complies with all legal requirements and regulatory standards and runs with integrity. The board has been required to lay down policies on crucial areas such as investments, management, loans, and recovery of NPAs (Reddy et al., 2000). Ownership structures have a lot of impact on corporate governance, which in turn affects the performance of banks. First, based on the concept of a business's ownership structure, which is a combination of property rights, agency, and finance theories, it asserts that a firm's ownership structure regulates the rights and obligations of stakeholders (Jensen and Meckling, 1976). It consequently affects how corporate governance policies impact the firm's long-term and short term objectives. Second, based on earlier research like Shen et al., 2018 and Merilainen, 2016, it is concluded that ownership patterns may have a moderating effect on corporate governance and the performance of banks, but this area has been under-researched in India. Thus, the current study evaluated the moderating impact of foreign ownership on corporate governance and Indian bank's performance. There are a lot of studies that evaluate the individual influence of "CG on the performance of Indian banks". However, there is hardly any study that conducted the survey to analyze the moderation impact of ownership structure on the performance of Indian banks. Therefore, it has become imperative to study the effect of corporate governance on the performance of Indian private and public banks by mediating the impact of foreign ownership. A similar study has been conducted by Boachie, 2023 and Muhammad et al., 2023. However, Boachie, 2023 analyzed the "moderation impact of ownership structure on the performance of Ghanaian banks", and Muhammad et al., 2023 evaluated the moderation consequence of gender composition on the risk-taking behavior of firms. None of the studies considered a sample of Indian banks. Thus, the current study took a sample of Indian public and private banks. It includes corporate governance variables like board size, foreign ownership, CEO duality, board composition, and gender diversity. The study also controls for some bank-specific variables, like the age of banks, bank size, leverage, and capital adequacy ratio. Therefore, this study serves as an underwriting to the existing material in two ways. First, it adds to the body of current empirical literature by scrutinizing how corporate governance affects Indian bank performance. Second, it is the naval study to look into the role of foreign ownership in the connection between corporate governance and financial health, specifically regarding Indian banking sector. The remainder of this document is formatted as follows: The independent and dependent variables are discussed in the second sub section. Sub section 3 describes the technique, which includes a data sample, research methodologies, and variable measurement. The descriptive and regression results are shown in Sub section 4. Sub sections 5 and 6 explore the study's result as well as its policy implications.

2. Literature Review and Hypothesis Development

2.1 Theoretical Framework of the Study

For several decades, researchers and academics have focused on the governance guidelines of banks worldwide. The banking system facilitates the transfer of resources from savers to the underprivileged, promoting entrepreneurship and economic progress. Banks have a crucial role in driving economic growth in emerging economies, providing financing through loans (Vo, 2017). As, banking system is one of the highly regulated diligences that have a great impact on the economy of a country, there is a stringent need to have proper corporate governance guidelines. This study is grounded in agency theory as its primary focus, which stipulates the relation between principals and agents of the organization. It is the most commonly used theoretical framework to scrutinize corporate governance (Fama and Jensen, 1983; Jensen and Meckling, 1976).

2.2 Linkage of board size with performance

The number of board members is one of the most crucial factors in corporate governance. The resource dependency theory of corporate governance divulges that a more giant board leads to higher firm performance because, with a more giant board, firms can make environmental relations and secure crucial resources (Goodstein et al., 1994). Fanta et al., 2013; Aslam and Haron, 2020; Saidi and Shammari, 2013; Daadaa, 2020; and Habtoor, 2021 studied the effect of board size on the performance of banks. Studies assert that adding more board members leads to lower performance of banks. Hunjra et al., 2020 looked at the adverse relation of BDSIZE with bank risk. However, studies conducted by Al-Amarneh, 2014; Kajola, 2008; Alodat et al., 2021; and Boachie, 2023 interpreted a

significantly positive association with bank performance. Further, [Nyuur et al., 2020](#) found an inverse relation with profit margin and a positive relationship with ROA and ROE. [Dongol, 2021](#) advocated an inverse impact on ROA but a positive impact on ROE. However, some studies inferred an insignificant board size relation with banks' performance ([Okoyeuzu et al., 2021](#); [Arouri et al., 2014](#); [Sohail et al., 2017](#); and [Molla et al., 2023](#)). The following hypothesis has been constructed in light of the literature mentioned above:

H₁: Board size is significantly associated to bank performance.

2.3 Linkage of board composition with performance

It is measured by the proportion of NE directors among the board of directors. They are not fulltime employees of the company. The predominant role of NE directors is to mitigate agency problems by complying with all rules and regulations. Thus, they are more important than executive directors ([Sohail et al., 2017](#)). Many types of research have been conducted to detect the influence of board composition on banking outcomes. The insertion of more NE directors escalates the performance of banks ([Jackling and Johl, 2009](#); [Handa, 2020](#), and [Nyuur et al., 2020](#)). While, [Okoyeuzu et al., \(2021\)](#) inferred that more non-executive directors on the board might lower performance. Further, [Hunjra et al., \(2020\)](#) also found that bank risk is positively affected by the existence of non-executive directors on the board. On the other side, some studies have observed that it does not impact the performance whether the board has more executive or non-executive directors ([Boachie, 2023](#); [Kajola, 2008](#); [Daadaa, 2020](#); [Habtoor, 2021](#); [Molla et al., 2023](#); [Sohail et al., 2017](#); [Saidi and Shammari, 2013](#) and [Arora and Sharma, 2016](#)). The following hypothesis has been framed:

H₂: Bank performance is significantly affected by board composition.

2.4 Linkage of CEO Duality with performance

CEO duality refers to the position of both chairman and chief executive officer is affiliated with one person ([Naushad and Malik, 2015](#)). And that person supervises both management and the board. But [Vo and Nguyen \(2014\)](#) listed that more than one role might lead to mismanagement, leading to difficulties in executing tasks. So, there are inconclusive assertions related to the impact of CEO duality. [Arouri et al., 2014](#); [Saidi and Shammari, 2013](#); [Al-Amameh, 2014](#); [Daadaa, 2020](#) and [Issa et al., 2021](#) concluded that duties of CEO and Chairman performed by the same person do not affect the bank's performance. Similar results were found by [Arora and Sharma, 2016](#) with regards to the effect of duality on firm performance when assessed by ROA, net profit margin, ROE, stock returns, and TQ. The above results were contrary to [Aslam and Haron, 2020](#); [Kajola, 2008](#); and [Boachie, 2023](#); who propounded that managers who defend the interests of shareholders when performing the duties of CEO, also improve the performance of banks. Further, [Hunjra et al., \(2020\)](#) also found that bank risk is positively affected by the duality of the chief executive officer and chairman. Based on the above literature, the study hypothesizes that:

H₃: Bank performance is significantly affected by CEO duality.

2.5 Linkage of gender diversity with performance

The fraction of woman directors on a firm's board serves as a proxy for gender diversity. [Campbell & Minguez-Vera, 2007](#) imply that more female board members can lead to better monitoring and firm performance. [Jabari and Muhamad, 2020](#) detected that boards having women directors perform better than those that do not have any women directors. Similarly, [Okoyeuzu et al., 2021](#) detected a positive association of gender diversity with bank performance. Further, [Dongal, 2021](#) and [Menicucci and Paolucci, 2021](#) proclaimed the inverse relation of having women directors with the bank performance and bank risk, respectively. Whereas, [Molla et al., \(2023\)](#) came to the conclusion that having female board members does not significantly improve the bank's financial system. The following hypothesis has been framed on the basis of the above discussion:

H₄: Gender diversity is significantly related to the performance of the bank.

2.6 Linkage of foreign ownership with performance

As per [Stulz \(1999\)](#), companies with high foreign shareholding may perform better with effective monitoring, better management talent, and more financial resources. [Arouri et al., 2014](#); [Alodat et al., 2021](#); [Boachie, 2023](#); [Kobeissi and Sun, 2010](#) and [Dwivedi and jain, 2005](#) observed that foreign ownership is positively allied to bank performance, indicating that more foreign ownership leads to better performance of banks. Moreover, other studies failed to find a positive association between foreign shareholders and bank performance ([Zouari and Taktak, 2014](#); [Lensink and Naaborg, 2007](#); and [Abraham, 2013](#)). On the contrary, [Mateev and Bachvarov, 2021](#); [Al-Amameh, 2014](#); and [Rahman and Reja, 2015](#) discovered that foreign shareholding does not have any effect on bank performance. On the basis of the above discussion, it has been hypothesized that:

H₅: Foreign ownership is significantly associated with bank performance.

3. Research Methodology

3.1 Analytical Framework of the Study

This section elucidates the relation between all dependent variables (ROA and TQ) and independent variables (BDSIZE, BDCOM, CEODUA, GENDIV, FOROWN, AGE, LEV, BKSIZ, and CRAR). Irawati et al., 2019; Al-Amarneh, 2014; Andres and Vallelado, 2008; Molla et al., 2023; Kaur and Vij, 2017; Dwivedi and Jain, 2005 and Bhatt and Bhattacharya, 2015 found that having more directors on the board could lead to better performance. On the contrary, Arora and Sharma, 2016; Aslam and Haron, 2020; Fanta et al., 2013, and Saidi and Shammari, 2013 interpreted an inverse relation of board size on the performance. Thus, the size of the board is anticipated to have a positive impact on the performance of Indian banks. The board composition is estimated to have a positive impact on the performance of Indian banks. A similar assertion was concluded by Jackling and Johl, 2009; Handa, 2020, and Nyuur et al., 2020. Whereas, Okoyeuzu et al., (2021) depicted that more number of NE directors can lead to lower performance. Aslam and Haron, 2020; Okoyeuzu et al., 2021 and Arora and Sharma, 2016 concluded that CEO duality decreases the performance of banks. However, Lee et al., 2021 and Kaur and Vij, 2017 depicts that CEO duality improves the performance of banks. Thus, CEO duality is likely to have a positive relation with the Indian bank's performance. Okoyeuzu et al., 2021; Kaur and Vij, 2017; and Musah and Adutwumwaa, 2021 used gender diversity in their studies and found that the availability of female directors on the board improves the performance of banks. Therefore, gender diversity is anticipated to have a positive influence on the stability of Indian private and public banks. Arouri et al., 2014; Alodat et al., 2021; Boachie, 2023; Kobeissi and Sun, 2010 and Dwivedi and jain, 2005 observed that foreign ownership is positively allied to bank performance. Whereas, (Zouari and Taktak, 2014; Lensink and Naaborg, 2007; and Abraham, 2013) concluded the inverse relation of foreign ownership with the performance of banks. Therefore, the foreign ownership is likely to have a positive association with the performance of Indian banks. Irawati et al., 2019 and Fanta et al., 2013 used the capital adequacy ratio as a control variable in their study and depicted that CRAR is positively impacting the performance of banks. Thus, CRAR is expected to have a positive link with the performance of Indian banks. Bank age is also anticipated to have a positive impact on the Indian bank's performance. A similar assertion was provided by Bhatt and Bhattacharya, 2015. Regarding bank size, Al-Amarneh (2014) found the inverse relation while, Fanta et al. (2013) found a positive association of bank size with the performance. Thus, bank size is likely to have a positive impact on the Indian bank's performance. Another control variable, leverage, was used by Aslam and Haron (2020) in their study, which posits that leverage is positively affect the performance. However, Arouri et al. 2014 provided the contradictory results by stating the inverse link of leverage with performance. Therefore, leverage is anticipated to have a positive association with the financial health of Indian banks.

3.2 Sample of the Study

As of March 2023, there were 12 public and 21 private banks in India. However, the current study has excluded 8 private banks due to the unavailability of the research data for different variables of the study. Therefore, the final sample consists of 25 Indian banks, viz. 12 public and 13 private banks for the financial period of 2014-15 to 2023-24 with a sample observation of 250.

3.3 Data Collection

In order to explore the moderation impact of foreign ownership on corporate governance and bank performance, the study selected a sample of Indian public sector banks and Indian private sector banks. For collecting the required data, several sources were tapped. Data pertaining to capital adequacy ratio and bank specific variables, viz. size of bank (calculated as a log of total assets), leverage (measured as a ratio of debt to equity), capital adequacy ratio (CRAR), and bank age (difference between incorporation year and current year) were compiled from the Prowess database. The bank's annual reports were used to extract data related to corporate governance variables, i.e. board size, board composition, CEO duality, foreign ownership and gender diversity. All used data sources are reliable, as they have been used in earlier research (e.g., Mayur and Saravanan, 2017 and Sharifi et al., 2016 etc.).

3.4 Model Specification

To test the above stated hypothesis, the study has formed the following equation:

Bank Performance = *f*(*Corporate Governance, Foreign Ownership, Control Variables*)

In this t study, first of all, the “direct impact of corporate governance on the performance of Indian banks” has been evaluated. Besides this, the study evaluated the “moderation impact of foreign ownership on corporate governance and the Indian bank's performance”. The following regression equation has been formulated:

$$ROA_{i,t} = \alpha_0 + \beta_1 BDSIZE_{i,t} + \beta_2 BDCOM_{i,t} + \beta_3 CEODUA_{i,t} + \beta_4 GENDIV_{i,t} + \beta_5 FOROWN_{i,t} + \beta_6 BKSIZ_{i,t} + \beta_7 LEV_{i,t} + \beta_8 AGE_{i,t} + \beta_9 CRAR_{i,t} + \varepsilon_{it}$$

$$TQ_{i,t} = \alpha_0 + \beta_1 BDSIZE_{i,t} + \beta_2 BDCOM_{i,t} + \beta_3 CEODUA_{i,t} + \beta_4 GENDIV_{i,t} + \beta_5 FOROWN_{i,t} + \beta_6 BKSIZE_{i,t} + \beta_7 LEV_{i,t} + \beta_8 AGE_{i,t} + \beta_9 CRAR_{i,t} + \varepsilon_{it}$$

Where,

$ROA_{i,t}$ = Return on assets for bank i for the period t.

$TQ_{i,t}$ = Tobin's Q for bank i for the period t.

$BDSIZE_{i,t}$ = Board size for bank i for the period t.

$BDCOM_{i,t}$ = Board composition for bank i for the period t.

$CEODUA_{i,t}$ = CEO duality for bank i for the period t.

$GENDIV_{i,t}$ = Gender diversity for bank i for the period t.

$FOROWN_{i,t}$ = Foreign ownership for bank i for the period t.

$LEV_{i,t}$ = Leverage for bank i for the period t.

$BKSIZE_{i,t}$ = Bank size for bank i for the period t.

$AGE_{i,t}$ = Bank age for bank i for period t.

$CRAR_{i,t}$ = Capital adequacy ratio for bank i for period t.

$\varepsilon_{i,t}$ = Error term.

To study the moderation effect of foreign ownership on the corporate governance and bank performance of Indian public and private banks, the following equation has been formulated:

4

$$ROA_{i,t} = \sum_{l=1}^4 \beta_l \text{Corporate governance variables}_{i,t}$$

1

$$+ \sum_{f=1}^p \alpha_f \text{Foreign ownership}_{i,t}$$

f

$$+ \sum_{q=1}^p \sigma_q \text{Corporate governance variables} * \text{Foreign ownership}_{i,t}$$

q=1

N

$$+ \sum_{k=1}^4 \theta_k \text{Control variables}_{i,t} + \varepsilon_{i,t}$$

k=1

4

$$TQ_{i,t} = \sum_{l=1}^4 \beta_l \text{Corporate governance variables}_{i,t}$$

l=1

1

$$+ \sum_{f=1}^p \alpha_f \text{Foreign ownership}_{i,t}$$

f

p

$$+ \sum_{q=1}^p \sigma_q \text{Corporate governance variables} * \text{Foreign ownership}_{i,t}$$

q=1

N

$$+ \sum_{k=1}^4 \theta_k \text{Control variables}_{i,t} + \varepsilon_{i,t}$$

k=1

Where,

β_k , k is the coefficients of the variables of corporate governance

α_1 , f denotes the coefficient of foreign ownership

σ_q , indicates the coefficients of interaction terms between cg variables and foreign ownership θ_k indicates the coefficients of the control variables and: $\varepsilon_{i,t}$, represents the error term

4. Results and Discussions

Table I exhibits the summary statistics for each of the study's variables. Indian banks' performance indicators (ROA and Tobin's q) show an average of 54 percent and 21 percent, respectively, indicating poor performance by banks in India. The average number of BODs is 11, which is within the RBI's limit. The average number of NE directors is 7.5, indicating that just a small minority of them are executive directors.

[Table I. is about here]

Only 31 percent of chairmen are also CEOs. In Indian banks, the average percentage of foreign owners is merely 21 percent. This demonstrates that a foreign holding has just a minor role to play. The percentage of female directors on the board is only 0.12, indicating that the board is virtually entirely made up of male directors. The average leverage is 1 percent, indicating that Indian public and private banks use a modest percentage of borrowed funds to make assets available. The sample banks used in the study are somewhat small, with a mean of only 13 percent. The banks have been in this business for an average of four years. The average capital adequacy ratio is

15 percent, indicating that only a few banks are able to retain their capital for potential unforeseeable losses. Table II explicates the results of the Pearson correlation to examine the degree of association between the variables of the study. The correlation matrix is a measure to examine the degree of multicollinearity between the variables of the study. The result of the correlation analysis explicates that the correlation coefficient values for all the research variables are below 0.80, which asserts the non-existence of multicollinearity among the research variables (Garg et al., 2023). The values of VIF should lie between 1 and 5 to ensure that the particular model does not have the multicollinearity issue. Similarly, in the current analysis, the values of the VIF for all the variables range from 1.23 to 3.70, as presented in table III, which illuminates that the model is free from the issue of multicollinearity.

[Table II and III Is about here]

The study evaluates the direct impact of corporate governance on the performance of Indian public and private banks, using ROA and TQ as indicators. Second, it looks into the moderating impact of foreign ownership in determining how corporate governance affects the performance of Indian public sector banks and Indian private sector banks. Table IV illustrates that the value of adjusted R^2 is 0.60 (when the performance is measured by ROA) and 0.33 (when the performance is measured by TQ), which indicates that 60% and 33% of variations in the performance of Indian banks are affected by corporate governance. The value of D-W statistics (1.93 and 1.60) is less than 2.5, which depicts the nonexistence of auto-correlation. The f-statistics value of 12.22 and 14.76 is also significant with a P-value of zero, which indicates that variables can jointly affect the bank performance. Regression results depict that only CEO duality, and foreign ownership are significantly related with the performance when it is measured by return on assets (ROA). When the performance is measured by return on assets, out of the main variables only CEO duality and foreign ownership are significantly affecting the performance. However, out of the control variables, capital adequacy ratio, leverage, and bank age are significantly affecting the performance assessment of Indian public sector banks and Indian private sector banks. When the performance is measured by TQ, out of the main variables, only CEO duality is significantly affecting the performance. Moreover, all control variables are significantly impacting the banking performance in Indian context.

CEO duality is significantly and positively impacting ($\chi^2 = 0.33$, P-value= 0.02) the performance assessment of Indian banks. The positive coefficient of CEO duality concludes that when the same person serves the position of both chairman and CEO, then Indian public banks perform better. It supports the theory of stewardship, which propounded that if the same person has the position of both chairman and CEO, then it helps them to have better control over banks, which enhances their performance (Aslam and Haron 2020). A similar assertion was concluded by Aslam and Haron, 2020; Kajola, 2008; and Boachie, 2023. On the contrary, Aslam and Haron, 2020; Al-Amarneh, 2014; Arouri et al., 2014; Musah and Adutwumwaa, 2021; and Arora and Sharma, 2016 concluded that duality of CEO does not have any impact on the performance of banks.

Foreign ownership ($\chi^2 = 0.03$, P-value= 0.00) is significantly and positively impacting the banking performance in Indian context. The positive coefficient depicts that foreign ownership lessens agency costs by facilitating better monitoring of managers and yields better performance of firms (Arouri et al., 2014). The above assertion is alike to the assertions of Arouri et al. (2014), Alodat et al., (2021); Boachie, 2023; Kobeissi and Sun, 2010 and Dwivedi and Jain, 2005 who concluded that foreign ownership has a positive effect on the performance of banks. Whereas, studies conducted by Zouari and Taktak, 2014; Lensink and Naaborg, 2007; and Abraham, 2013 concluded that foreign ownership has an inverse effect on the performance of banks. When performance is measured by Tobin's q then, only CEO (p=0.08) duality show a significant relation with the banking performance in Indian context. The coefficient of -0.04 denotes that CEO duality has inverse relationship with the banking performance in Indian context. This result supports the theory of agency theory, which stipulates that CEO duality denotes “insider control”, where a strong CEO who also serve as a chairman can undermine the scrutiny of board (Vu, 2023).

[Table IV. Is about here]

Regarding control variables, the capital adequacy ratio ($\chi^2 = 0.16$, P-value= 0.00) has a significant and positive effect on the performance (ROA and TQ) of Indian public and private banks, which means that banks having enough capital against risk-weighted assets perform better. Studies conducted by Irawati et al. (2019) and Fanta et al. (2013) also support the result that the capital adequacy ratio helps to improve the performance of banks. Irawati et al. (2019) took a sample of Indonesian bank and Fanta et al. (2013) examined a sample of Ethiopian bank to explore the impact of corporate governance on bank performance. Another control variable, age is significantly but inversely affecting the performance (ROA and TQ) of Indian public and private banks. It may be due to the fact that older banks are not able to compete with the latest technologies, which leads to lower performance (Arora and Sharma, 2016). The result supports the study conducted by Bhatt and Bhattacharya, 2015 but with an inverse relation between bank age and bank performance. Leverage (P-value= 0.00) is significantly but negatively affecting performance (ROA and TQ). It indicates that during the period of high leverage, banks tend to have a low capital adequacy ratio. High leverage indicates higher risk, which motivates the managers to use more debt instead of equity as it is less costly than equity. And more use of debt encourages shareholders to demand a higher rate of return, which leads to low capital to meet future uncertainties (Aktas et al., 2015). This finding supports the

finding of [Al-Homaidi et al., 2018](#) who took a sample of Indian commercial banks to find out that which bank specific and country specific factors affect the capital adequacy ratio. Moreover, control variable bank size ($p=0.00$) is also significantly impacting the banking performance (TQ) in Indian context. The coefficient of -0.05 dictates that it is inversely related to Indian bank performance, when it is measured by Tobin's Q. It may be due to the fact that large banks have more operation cost, more marketing, which does not allow them to have benefit from economies of scale (Gupta & Mahakud, 2020)

4.1 Moderating Role of Foreign Ownership on the Performance of Indian Public and Private Banks

The value of adjusted R^2 explains the fitness of all models. Table V presents the regression results illustrating the moderating role of foreign ownership having impact of corporate governance on the performance of banks. With regards to performance measure return on assets (ROA), there is evidence that in model 1, out of explanatory variables, board size and foreign ownership are significant, while out of control variables age, leverage, and CRAR are significant. In model 2, out of explanatory variables, all variables are significant, whereas out of control variables bank size, leverage, and CRAR are significant. In model 3, out of explanatory variables, only foreign ownership is significant, whereas out of control variables, leverage and CRAR are significant. In model 4, out of explanatory variables, only foreign ownership is significant, whereas out of control variables, bank size, leverage, and CRAR are significant.

With regards to performance measure Tobin's Q (TQ), there is evidence that in model 1, out of explanatory variables, foreign ownership is significant, while out of control variables bank size, age, leverage, and CRAR are significant. In model 2, 3, and 4, no explanatory variable is significant, whereas all control variables are significant.

[Table V is about here]

After introducing the interaction term between foreign ownership and bank performance (ROA), the results indicate that it is significantly related to board size, gender diversity, and board composition. The positive coefficient of board composition implies that banks with more non-executive directors will improve the Indian bank's performance, when bank ownership is dominated by foreign shareholders. However, inverse coefficient of gender diversity and board size indicate that the effect of gender diversity and board size on bank financial health will degrade with more foreign ownership. However, the effect of CEO duality is insignificant on bank performance after introducing the interaction term of foreign ownership.

When the performance is measured by TQ, the results indicate that the effect of board size and gender diversity is significant on bank performance, when the interaction term was introduced. Gender diversity has inverse effect whereas, board size has positive effect. Moreover, after introducing the interaction term, the effect of board composition and CEO duality is insignificant on bank performance.

4.2 Robustness Analysis

The removal of insignificant variables from the table VI has confirmed the robustness of the study's results. This methodology has been used by many researchers to validate the robustness of the regression results ([Valadkhani and Layton, 2004](#), [Valadkhani, 2005](#), and [Xu et al., 2023](#)). The study's findings are quite robust since they remain unchanged even after removing the insignificant variables from the main findings. As a result, the coefficient's magnitude, significant level confirm that the results are highly robust.

[Table VI is about here]

5. Conclusion and policy implications

The paper reconnoitered the "impact of corporate governance and foreign ownership on the performance of Indian banks". To achieve this objective, the study used panel data regression on 25 Indian public and private banks for the financial year from 2014-15 to 2023-24. To measure the performance assessment of Indian public sector banks and Indian private sector banks, two indicators have been used; Return on assets (ROA) and Tobin's q (TQ). Among corporate governance variables, board size, board composition, duality of CEO, gender diversity, and foreign ownership have been selected. The study has also controlled some bank-specific factors (bank size, leverage, bank age, and capital adequacy ratio) to study the impact of corporate governance on the banking performance in Indian context. The final discussion of the study reveals that among the primary variables, CEO duality and foreign ownership all have a favourable impact on the performance of Indian public and private banks when it is measured by return on assets. Foreign ownership, and CEO duality depict the positive impact on the performance (ROA) of Indian public and private banks. Moreover, only CEO duality has significant impact on the banking performance in Indian context when it is measured by Tobin's Q. However, it has inverse impact on the performance (TQ). Out of the control variables, capital adequacy ratio, bank age, and leverage are the most significant predictors of the banking performance in Indian context when it is measured by ROA. Results show the inverse relation of bank age and leverage with the banking performance in Indian context, while the capital adequacy ratio shows a positive relation with the banking performance in Indian context. On the contrary, all control variables are significant predictors of the banking performance in Indian context when it is measured by Tobin's q. Their coefficients reveal that CRAR is positively related while bank age, leverage, and bank size are

inversely related to the banking performance (TQ) in Indian context. The current study also analyzes “whether foreign ownership has a moderating impact on corporate governance and bank performance”. As a result of the findings, it can be inferred that foreign ownership plays a significant moderating role on the banking performance in Indian context. The findings of the current study have some practical suggestions for policymakers, researchers, and investors in developing countries. It also indicates that if banks comply with corporate governance rules and directors properly, then their performance can be improved to higher extent.

This study may have numerous implications for the governments, policymakers, the Reserve Bank of India, and the management of the Indian bank for taking corrective measures to improve the performance of the banking sector in India. In accordance with the agency theory, results also point out that good corporate governance helps to reduce the agency cost for the firm. Apart from that, this study has some limitations also. As the current study includes Indian banks, the implications are applicable only to Indian banks.

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Table I. Results of Descriptive Statistics

Variables	Mean	Median	Max	Min	Std. Dev.
ROA	0.54	0.57	2.66	-5.39	1.04
TQ	0.21	0.12	1.25	0.02	0.21
BDSIZE	10.18	10.00	15.00	6.00	1.87
BDCOM	7.48	8.00	14.00	2.00	2.18
CEODUA	0.31	0.00	1.00	0.00	0.46
GENDIV	1.12	0.10	0.33	0.00	0.07
FOROWN	20.73	12.70	70.42	0.00	20.38
AGE	4.17	4.47	4.87	2.40	0.69
LEV	1.040	0.83	5.24	0.06	0.71
BKSIZE	12.71	12.65	15.64	9.69	1.23
CRAR	14.78	14.69	24.14	8.50	2.91

Source: Author calculations

Table II. Results of multicollinearity

	ROA	TQ	BDSIZE	BDCOM	CEODUA	GD	FOROWN	CRAR	BKSIZE	AGE	LEV
ROA	1.00										
TQ	0.46	1.00									
BDSIZE	0.27	0.13	1.00								
BDCOM	0.34	0.18	0.70	1.00							
CEODUA	-0.30	-0.36	-0.35	-0.41	1.00						
GD	0.14	0.11	0.06	-0.04	-0.20	1.00					
FOROWN	0.61	0.64	0.35	0.47	-0.53	0.29	1.00				
CRAR	0.63	0.42	0.13	0.17	-0.31	0.14	0.46	1.00			
BKSIZE	0.04	0.04	0.27	-0.16	-0.01	0.16	0.00	0.10	1.00		
AGE	-0.44	-0.77	-0.15	-0.28	0.36	-0.13	-0.74	-0.41	-0.11	1.00	
LEV	-0.21	0.21	0.18	0.08	-0.18	0.04	0.13	-0.17	0.34	-0.36	1.00

Source: Author Computation

Table III. VIF results

Variables	VIF values
BDSIZE	2.96
BDCOM	3.07
CEODUA	1.56
GENDIV	1.23
FOROWN	3.70
BKSIZE	1.73
LEV	1.66
AGE	3.18
CRAR	1.57

Source: Author Computation

Table IV. Impact of corporate governance on the bank performance

Variables	ROA (FE)	TQ (FE)
C	-0.66 (0.68)	1.46 (0.00)
BDSIZE	0.07 (0.14)	0.00 (0.75)
BDCOM	0.03 (0.53)	-0.01 (0.16)
CEODUA	0.33 (0.02)**	-0.04 (0.08)***
GENDIV	-0.14 (0.86)	-0.08 (0.46)
FOROWN	0.03 (0.00)*	0.00 (0.62)
AGE	-0.68 (0.04)**	-0.19 (0.00)*
LEV	-0.36 (0.00)*	-0.04 (0.00)*

BKSIZE	0.04 (0.66)	-0.05 (0.00)*
CRAR	0.16 (0.00)*	0.01 (0.00)*
Cross section	25	25
Time period	10	10
N	250	250
Adj. R²	0.60	0.33
Durbin-Waston	1.93	1.60
F-Statistics	12.22 (0.00)*	14.76 (0.00)*

Source: Author's Computations

*, ** and *** signifies sig. at 1, 5 and 10% respectively.

Table V. Moderating effect of foreign ownership between corporate governance and bank performance

Variable	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
s	(ROA)	(ROA)	(ROA)	(ROA)	(TQ)	(TQ)	(TQ)	(TQ)
C	15.35 (0.03)	8.03 (0.04)	-2.01 (0.02)	-2.33 (0.01)	1.56 (0.00)	1.66 (0.00)	1.68 (0.00)	1.59 (0.00)
BDSIZE	0.17 (0.00)*				0.01 (0.30)			
BDCOM		0.10 (0.00)*				0.00 (0.82)		
CEODU			0.10 (0.46)				-0.01 (0.67)	
A								
GENDI				0.36 (0.68)				0.22 (0.12)
V								
FORO	0.07 (0.00)*	0.04 (0.00)*	0.02 (0.00)*	0.03 (0.00)*	0.01 (0.01)*	0.00 (0.61)	0.00 (0.17)	0.00 (0.87)
WN								

AGE	-0.18 (0.09)***	-0.12 (0.26)	-0.09 (0.43)	-0.07 (0.54)	-0.13 (0.01)*	-0.13 (0.00)*	-0.14 (0.01)*	-0.14 (0.00)*
LEV	-0.42 (0.00)*	-0.41 (0.00)*	-0.37 (0.00)*	-0.38 (0.00)*	0.05 (0.00)*	0.05 (0.01)*	0.05 (0.00)*	0.06 (0.00)*
BKSIZE	0.06 (0.12)	0.09 (0.02)**	0.07 (0.11)	0.09 (0.04)**	-0.08 (0.00)*	-0.09 (0.00)*	-0.09 (0.00)*	-0.08 (0.00)*
CRAR	0.13 (0.00)*	0.13 (0.00)*	0.11 (0.00)*	0.12 (0.00)*	0.01 (0.00)*	0.01 (0.00)*	0.01 (0.00)*	0.01 (0.00)*
FORO WN*BD SIZ E	-0.01 (0.00)*				0.00 (0.00)*			
FORO WN*BD CO M		0.00 (0.04)**				0.00 (0.12)		
FORO WN*CE OD UA			0.00 (0.77)				0.00 (0.16)	
FORO WN*GE NDI V				-0.06 (0.05)***				-0.02 (0.00)*
Cross section	25	25	25	25	25	25	25	25
Time period	10	10	10	10	10	10	10	10
N	250	250	250	250	250	250	250	250

Source: Author's Computation

*, ** and *** signifies sig. at 1, 5 and 10% respectively.

Table VI. Robustness analysis of regression results of Indian Public Banks

Variable	ROA (FE)	TQ (FE)
C	0.29 (0.82)	0.05 (-0.21)
FOROWN	0.03 (0.00)*	-
CEODUA	0.30 (0.04)**	-0.03 (0.19)
CRAR	0.15 (0.00)*	0.01 (0.00)*
AGE	-0.56 (0.08)***	-0.13 (0.01)**
LEV	-0.33 (0.00)*	-0.05 (0.00)*
BKSIZE	-	-0.08 (0.00)*
Cross Section	25	25
Time Period	10	10
N	250	250