

# THE EFFECT OF MANAGEMENT FACTORS OF BOARD CHARACTERISTICS AND BANKS' SPECIFIC ON BANKS' PERFORMANCE: EMPIRICAL EVIDENCE FROM THE EMERGING ECONOMY

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## Abstract

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The study aims to examine the impact of management factors of board characteristics and banks' specific on the financial performance of Indian listed banks. To achieve the study objectives, data are extracted from 38 listed banks from the ProwessIQ database that covers the period from 2010 to 2019. Fixed and random effect models are used for analyzing the data. Further, a two-stage least square (2SLS) analysis is employed for treating the endogeneity problem. The main findings revealed that size, deposits and advances, and current ratio negatively and significantly impact the financial performance of the banks. On the contrary, market capitalization and age positively and significantly impact the financial performance of Indian listed banks. Furthermore, results showed that the board's diligence and independence positively and significantly affected the financial performance. The study contributes to the existing body of knowledge by focusing on the important sector with is banking sector in developing countries. The banking sector in India represents a major component of the financial system with more than 70 percent of total assets in the financial sector that requires special attention to corporate governance in theoretical and empirical fields.

**Keywords:** Management Factors, Board, Size, Independence, Diligence, Bank, Performance

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## 1. INTRODUCTION

The financial sector plays a vital role in the development of economies, making its contribution to economic

growth that should be consistently monitored (Altawalbeh, 2023; Bajaher et al., 2021). The banking sector is an industry that demands maximum adherence to corporate governance practices and

principles. The worldwide financial and banking crisis of 2007-2008 unearthed the significance of enhancing and understanding bank governance (Gebba, 2015). It is the financial nature that requires accountability, transparency, monitoring, and legal compliance to mitigate existential corporate risks. Turlea et al. (2010) noted that banks have high-risk exposure to fraud and self-dealing transactions as compared to other non-banking companies. Banks, in particular, heavily rely on customer trust, which has led governments to focus on supporting their stability and enhancing their ability to manage risks (Altawalbeh, 2023). As a result, banks are subjected to stricter control and regulations compared with other industries, as they are at the helm of safeguarding depositors' interests, maintaining the payment apparatus's firmness, and minimizing systemic risk. Given that risk is a major concern for the financial sector, weaknesses in institutions' governance systems and risk management functions have been identified as key factors contributing to the recent financial crisis (Altawalbeh, 2023). Therefore, it is essential and imperative to ensure the implementation and compliance of robust corporate governance practices that ensure an efficient and effective banking environment that stimulates and retains public confidence and that of its shareholders.

Corporate governance seeks to create and sustain a business environment marked by strong transparency and accountability, ultimately promoting stability, where governance systems should serve as a tool to foster investment, which relies heavily on trust and integrity (Altawalbeh, 2023). The need for corporate governance in the banking sector is a critical and crucial requirement. This is because the economy and industrial performance hinge on the health of banking institutions. In other words, the banking sector provides a snapshot of the performance of the economy. In this regard, corporate governance establishes a set of guidelines, standards, practices, principles, and procedures that seek to control, monitor and ensure the effective upholding of acceptable management standards of banking (Mullineux, 2006). The expanding scale, variety, interdependence, and intricacy of the Indian financial system highlight the importance of and need for bolstering corporate governance standards, procedures, and guidelines in banks (Das & Chinara, 2022). In addition, bank fraud involving the lending practices of Punjab National Bank to investors with poor credit ratings has throttled the need to reexamine the implementation of banking lending control mechanisms. The rise in non-performing assets provides a background for stricter lending control. However, corporate malpractices in India date back to the failure and ultimate collapse of Satyam, which is often regarded as India's very own Enron. Government ownership of major banks in India provides a perfect environment for regulatory slips, ineffective control, poor accountability, and undesirable malpractices (Singh et al., 2016).

Since the inception of structural economics in the 1990s, the banking sector in India has witnessed tremendous growth. The economic liberalization in this sector was characterized by minimum control of rates of interest and credit, improved banking supervision, removal of barriers to entry, greater autonomy of public banks, and removal of efficiency impediments (Ghosh, 2016). Furthermore, Ghosh

(2016) noted that to boost productivity and efficiency in the banking sector, India embarked on a liberalization program in the 1990s. After the implementation of economic structural adjustment programs, the banking sector in India flourished to the point where it aided the growth and expansion of other sectors (Singh et al., 2016). However, the Reserve Bank of India (RBI) pointed out that the ultimate growth and expansion of this banking sector witnessed major corporate governance hurdles. Enhancing and fortifying the confidence of investors and shareholders in the bank would be facilitated by the adoption of efficient corporate governance methods in the banking industry. The main industry that provides the capital needed to carry out the daily economic operations in the real sector is banking. In order to fulfill their wider social responsibility, regardless of their ownership structure, the banking sector must implement stronger corporate governance practices, norms, and procedures that will win over the confidence of creditors, investors, and customers. These measures will also help to foster resilience, control mechanisms, transparency, and the mitigation of overall governance risks (Das & Chinara, 2022). Banks in India are regulated and controlled by the RBI Act, 1934, the Indian Companies Act, 2013, and the Indian Banking Regulation Act, 1949. The existence of a sound banking environment is essential for sustainable growth and development. This is because a strong and sound banking industry creates a financial ecosystem that effectively and efficiently sources and channels funds and financial products in a manner that improves and grows the economy of any country (Singh & Sharma, 2016).

Developed countries and developing countries have been reviewing and strengthening governance systems to better protect shareholders' wealth (Altawalbeh, 2023). Developed countries have been extensively researched regarding the influence that corporate governance variables have on the performance and operation of banks. This means that there is adequate literature for developed nations in comparison to developed ones. As a result, contemporary findings in developing countries, in this case, the Indian context, have been deemed to be not conclusive enough researched. In this regard, the study examines the influence of management variables of corporate governance on the financial performance of banking institutions in India.

As far as the research gap the current study seeks to provide an empirical outcome that establishes the importance of management factors and bank-specific on the performance of Indian banks. Numerous factors have motivated the authors to conduct this study to select India to be a suitable case. Firstly, the intra-sector nature of the industry means the research focuses on and analyses all types of banks within the banking sector in light of the ongoing regulatory reforms. Secondly, the study focuses on management factors, bank-specific and their role in banks' performance, an area that is rarely researched. Prior studies have concentrated on the role of various chief executive officer (CEO) characteristics in bank performance. Therefore, the study concludes that management factors and banks' specific would bear a significant relationship with bank performance in India during the period from 2010 to 2019.

The rest of the paper is structured as follows. Section 2 overviews the relevant literature. Section 3 explains the methodology used in the study. Section 4 observes the results and Section 5 discusses them. The last Section 6 presents the main findings and describes some limitations of the study along with future research directions.

## 2. LITERATURE REVIEW AND HYPOTHESES DESIGN

### 2.1. Banks' specific and financial performance

An effective system of corporate governance controls is considered crucial in aligning the institutional performance that affects the interests of shareholders (Faozan et al., 2023). Financial performance is one of the main variables that may be tailored to assess a bank's success in a typical developing economy. Based on the literature, studies believe that banks' specific factors are susceptible to affecting bank performance (Alper & Anbar, 2011; Singh & Sharma 2016; Ebenezer et al., 2017). Other studies considered different banks' specific factors that have a significant role in banking performance (Francis, 2013; Bougatef, 2017). Furthermore, Faozan et al. (2023) indicated the role of good corporate governance in the relationship between intellectual capital and the financial performance of Sharia banking in Indonesia. Their results highlighted the significant role of good corporate governance in moderating the relationship between intellectual capital and financial performance in Islamic banks. In addition, the findings indicated the importance of integrating strong governance practices that improve financial outcomes.

One of the vital banks' specific factors is leverage which refers to the total debt divided by total assets (Bose et al., 2017). Banks with larger equity (lower leverage) have lower returns on equity (ROEs) but better returns on assets (ROAs) (Athanasoglou et al., 2008). Leverage's effect on financial performance has been the subject of numerous research (Athanasoglou et al., 2008; Almaqtari et al., 2018). Some studies found a positive impact of leverage on financial performance that was measured by its profitability (Athanasoglou et al., 2008; Tahir & Anuar, 2016), while others found a negative impact on banks profitability (Almaqtari et al., 2018).

Bank size is another factor that affects the performance. Fanta et al. (2013) examined the impact of corporate governance on commercial banks' performance which is measured by ROE and ROA. The results showed that bank size had a statistically significant positive effect on bank performance. In addition, Alper and Anbar (2011) found that the size of a bank affects its profitability positively. Conversely, other studies (Gul et al., 2011; Singh & Sharma, 2016) showed a negative effect of bank size on performance measured by profitability. Furthermore, Kulkarni (2023) conducted a study in the Indian context to investigate the relationship between board size, board meetings, and the financial performance of the banks. The results revealed no significant relationship between board size, board meetings, and financial performance.

Market capitalization has a noteworthy and favorable impact on banks' performance, it is derived by multiplying its issued share capital with

its market price per share. The capitalization of all firms quoted on a stock market is proportional to the entire capitalization of that stock market (Barua et al., 2016). For instance, a study conducted by Qurashi and Zahoor (2016) in the Middle East documented a positive relationship between the market capitalization of banks and bank performance that was measured by return on investment (ROI) but did not find an association between the market capitalization of banks and ROA and ROE. In the Indian context, Barua et al. (2016) determined significant elements that influenced the performance and operations of Indian banks. The study listed credit risk exposure, financial leverage, bank capitalization, and the structure of ownership as having a significant influence on banks' performance.

Additionally, deposits constitute the largest source of funds for banks in India, and customer deposits are a primary fountain of liquidity. In fact, the law requires banks to maintain and ensure liquidity to comply with the daily cash demands of customers (Singh & Sharma, 2016). Some studies have explained the cash-deposit ratio as aggregate cash to aggregate deposits (Alper & Anbar, 2011). In line with this result, it can be noted that the relationship between banks' performance and deposits has garnered widespread attention. As with different studies conducted in different financial ecosystems and countries. Gul et al. (2011) recorded a negative interaction linking deposits and banks' profitability. This outcome is supported by Lee and Hsieh (2013), who make further steps to explain that the more deposits a bank receives or accepts, the greater the chances of it becoming more profitable.

One of the key factors affecting how well banks operate financially is banks' capital. Srinivasan and Swaminathan (2016) found that the debt-to-equity ratio is used to analyze it and show the bank's level of financial leverage. A greater ratio suggests that a particular bank is comparatively better than other banks with smaller ratios. In addition, Getahun (2015) recommended using gross capital or shareholders' capital/total assets. In this line, the capital adequacy ratio (CAR) is a risk assessment barometer that determines the bank's available capital funds in proportion to the weighted risks emanating from the bank's exposure (Alper & Anbar, 2011). A study performed by Ebenezer et al. (2017) on commercial banks discovered the presence of a positive link between adequacy and profitability. Furthermore, Morrison and White (2001) noted that adequate capital allows for sufficient liquidity, where a larger CAR signifies a great degree of protection for depositors. It also implies that the bank is in a position to withstand unanticipated sudden shocks leading to losses.

Banks' age has a crucial impact on banks' performance, it is calculated as the difference of the years from the analyzed period to the foundation year. Dietrich and Wanzenried (2011) investigated the impact of banks' specific macroeconomic indicators and industry-related factors that extend an influence on the ability of 453 commercial banking entities located in Switzerland to be profitable. The findings indicated that bank age does not have any significant effect on profitability, because of their extensive expertise and solid

reputation in the industry, bank age is predicted to positively and considerably affect the performance. The bank's liquidity is a crucial component that explains its ability to meet banks' financial obligations. Ebenezer et al. (2017) found a favourable association between liquidity and banks' performance. Banks' liquidity indicates the capacity of banks to meet their deposit obligations with readily available liquidity (Getahun, 2015). The banks' liquidity is one of the main factors contributing to banks' failure and success it can be determined by matching the existing current assets to existing current liabilities (Bougatef, 2017), where a higher liquidity ratio indicates that banks are more liquid, hence the higher yield may have an opportunity cost.

Based on the discussion above the study developed the following hypothesis:

*H1: Banks' specific factors have a significant positive effect on the banks' performance.*

This hypothesis can be divided into the following sub-hypotheses:

*H1a: Leverage has a significant positive impact on banks' performance.*

*H1b: Bank size has a significant positive impact on banks' performance.*

*H1c: Market capitalization has a significant positive impact on banks' performance.*

*H1d: Deposits and advances have a significant positive impact on banks' performance.*

*H1e: Capital adequacy has a significant positive impact on banks' performance.*

*H1f: Banks' age has a significant positive impact on banks' performance.*

*H1g: liquidity has a significant positive impact on banks' performance.*

## **2.2. Management factors of board characteristics and financial performance**

The banking sector plays a critical role in both local and global economies that is widely recognized, and has a unique significance in the business environment. Banks' management traits have an impact on banking performance the board of directors play a key role in corporate governance (Altawalbeh, 2023). Furthermore, the board of directors and senior executives play a crucial role in preserving the stability and safety of banking institutions (Basel Committee on Banking Supervision, 2006). In addition, board attributes play a crucial role in supervising, directing, and controlling bank activities (Altawalbeh, 2023).

Several studies discussed the relationship between banks' performance and board of directors futures (Byrne, 1996; Lipton & Lorsch, 1992; Liang et al., 2013; Basel Committee on Banking Supervision, 2006). Other studies have evaluated a variety of corporate governance including the board of directors factors to ascertain how they affect banks' performance. Lee and Isa (2015) appraised the association between remuneration due to board directors and the subsequent performance of banking entities in the context of Malaysia. In the Indian context, Ghadamyari and Abadi (2020) showed a positive effect of board directors' characteristics on banks' performance in the public and private sectors.

Board diligence plays a major role in banks, performance, and the effectiveness of board activity

is commonly assessed by the number of times of board meetings as a kind of directors' diligence. Board diligence, as indicated by the frequency of board meetings, emerged as an important factor (Fariha et al., 2022). The discussions and resolutions of the board meetings are not visually observable. In this regard, the number of times or frequency in which meetings are held is used as a proxy for the purpose of the current study that affects banking performance. Therefore, the more meetings the board has, the more proactive and ardent the board and allow more effective operations, monitoring, controlling and supervision mechanisms. This is supported by Liang et al. (2013) who observed that directors' diligence is an effective way of increasing operational performance. Other studies found that board meetings have a positive and significant association with banks' performance (Bajaher et al., 2021; Fariha et al., 2022) Moreover, Lipton and Lorsch (1992) presented that boards that are actively diligent have a high tendency to execute their roles and duties in a manner that is beneficial to shareholders.

The size of the board is given particular consideration by research and management as one of the important factors that affect banks' performance. In this regard, Adams and Mehran (2012) indicated that the board's size or magnitude is positively correlated with organizational performance. In addition, Liang et al. (2013) indicated that board size has significantly and favorably affected banks' performance. Some studies such as Fanta et al. (2013) examined the impact of corporate governance including the board size on commercial banks' performance measured by ROE and ROA. The findings indicated that board size and the existence of an audit committee on the board had a statistically significant and negative effect on bank performance measured by ROE and ROA. Furthermore, Bajaher et al. (2021) found that board size has a significant and positive impact on financial performance. On the contrary, other studies conducted by Muttakin and Ullah (2012) showed a positive association between board size and banks' performance. They argue that larger boards bring diverse knowledge and skills, enhancing operational excellence,

Another important factor of broad directors that affects banks' performance is the independent board of directors. In literature, Fariha et al. (2022) explored various board characteristics and their effect on banks' performance. Findings revealed that the independence of the board of directors negatively and significantly affects banks' performance. In the Middle East context, Elbahar et al. (2021) investigated the impact of board characteristics on bank performance over the period from 2013 to 2017. The main findings showed that audit committee independence has an insignificant impact. In the same context, Bajaher et al. (2021) examined the impact of corporate governance on the performance of financial institutions in Qatar. The study identified some management factors for corporate governance: board size, board meeting frequency, board composition, board diversity, and role duality. The findings indicated the relationship between firm performance and role duality. In addition, role duality leads to lower managerial accountability and complicates the attribution of poor performance.

It also showed that board independence has a positive and significant association with ROA but it recorded insignificant with ROE and earnings per share (EPS).

As mentioned in the previous discussion, the following hypothesis is formulated:

*H2: Management factors of the board of directors have a significant positive impact on banks' performance.*

This hypothesis is divided into the following sub-hypotheses:

*H2a: Board of directors' diligence has a significant positive impact on banks' performance.*

*H2b: Board of directors' size has a significant positive effect on banks' performance.*

*H2c: Independent board of directors has a significant positive effect on banks' performance.*

### 3. RESEARCH METHODOLOGY

#### 3.1. Data collection and sample

The research seeks to explore how management factors of the board of directors including (board directors' size, board of directors' diligence, and board of director's independence), and banks specific factors including banks' leverage, size, capitalization deposit in advance, capital adequacy, age and liquidity affect banks performance of publicly traded banks in India measured by ROA, EPS, and return on capital employed (ROCE) and ROE. The research utilizes data from the ProwessIQ database that covers a period from 2010 to 2019. The sample of the study includes 38 listed commercial banks after excluding the banks that have incomplete data during the research period.

#### 3.2. Research factors and model specifications

##### 3.2.1. Research factors

To achieve the study objectives, the analysis was conducted to investigate the effect of management factors on the board of directors: board directors' size (*BS*), board of directors' diligence (*BD*), and board of directors' independence (*BI*) on banks' performance. Besides that, the study aims to determine the effect of banks' specific factors: leverage (*LEVE*), banks' size (*SIZE*), market capitalization (*MC*), deposits and advances (*DA*), capital adequacy (*CA*), age of the banks (*AGE*), and liquidity (*CR*) on Indian banks performance. Hence, this study seeks to shed light on the crucial factors that contribute to strong financial performance in the banking sector. Therefore, a comprehensive panel dataset comprising 38 publicly listed banks was utilized, covering a period from 2010 to 2019. This extensive dataset allows for a thorough examination of the various elements influencing the financial success of banks over nearly a decade, offering valuable insights into the trends and patterns that shape the industry's performance. The current study is based on secondary data that are extracted from the ProwessIQ database. The study runs two regressions: in the first regression, financial performance is regressed against banks' specifics, and in the second regression, financial performance is regressed against banks' specific and board of directors' characteristics.

Table 1 provides a detailed overview of the variables examined in this study. It outlines the key factors that were analyzed to understand their impact on the banking sector's financial performance.

**Table 1.** Variables' definition

<i>Variables</i>	<i>Symbol</i>	<i>Measure</i>	<i>Evidence</i>	<i>Expected sign</i>
<b><i>Dependent variable</i></b>				
Return on assets	<i>ROA</i>	Net profit / Total assets	Naeem et al. (2017)	
Earnings per share	<i>EPS</i>	Net profit / Number of outstanding shares	Naeem et al. (2017)	
Return on capital employed	<i>ROCE</i>	Net profit after tax / Total issued capital	Hawashe (2014), Uremadu (2012)	
Return on equity	<i>ROE</i>	Net profit / Total equity	Lin and Zhang (2009), Berger et al. (2010)	
<b><i>Independent variables: Banks' specific</i></b>				
Leverage	<i>LEVE</i>	Total liabilities / Total assets	Saravanan et al. (2017)	+
Banks size	<i>SIZE</i>	It is the natural log of total assets	Berger et al. (2010), Lin and Zhang (2009)	+
Market capitalization	<i>MC</i>	Price of common shares and preferred shares × outstanding common and preferred shares	Qurashi and Zahoor (2016), Barua et al. (2016)	+
Deposits and advances	<i>DA</i>	Total deposits and advances	Berger et al. (2010), Lin and Zhang (2009)	+
Capital adequacy	<i>CA</i>	Equity / Total assets	Dietrich and Wanzenried (2011), Bougatef (2017), Ongore and Kusa (2013)	+
Age of banks	<i>AGE</i>	Log (Current year – year of establishment)	Berger et al. (2010)	+
liquidity	<i>CR</i>	Current assets / Current liabilities	Bougatef (2017), Alper and Anbar (2011), Francis (2013)	+
<b><i>Board characteristics</i></b>				
Board diligence	<i>BD</i>	Total number of meetings attended by all board members divided by the total number of meetings held during the year.	Francis et al. (2015), Johl et al. (2015)	+
Board size	<i>BS</i>	It represents the total count of individuals serving on a bank's board of directors.	Gani and Jermias (2006), O'Connell and Cramer (2010)	+
Board independence	<i>BI</i>	This is the ratio of independent directors to the total number of directors on the board.	Saravanan et al. (2017)	+

### 3.2.2. Model specifications

The study analyzes how banks' specific factors and the management factors of the board of directors influence financial performance and understand their effects on key financial metrics. By evaluating these elements, the study aims to provide a comprehensive understanding of how different governance and operational characteristics contribute to the overall financial success of banks. It appears that banks are heterogeneous, which means that

each bank has its own characteristics. Panel data allows for controlling unobservable heterogeneity. Therefore, fixed, and random effect models are used in this study; the general equation is given below.

The study runs two regressions which are also presented below.

Regression 1 — financial performance is regressed against banks' specific, and Regression 2 — financial performance is regressed against banks' specific and board of directors' characteristics are as follows:

$$FP_{it} = \alpha + \beta_1 \sum_{j=1}^8 \text{Banks' specific}_{it} + \beta_2 \sum_{j=1}^3 \text{Board characteristic}_{it} + \varepsilon_{it} \quad (1)$$

#### Regression 1

$$FP_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \varepsilon_{it} \quad (2)$$

$$ROA_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \varepsilon_{it} \quad (3)$$

$$EPS_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \varepsilon_{it} \quad (4)$$

$$ROCE_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \varepsilon_{it} \quad (5)$$

$$ROE_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \varepsilon_{it} \quad (6)$$

#### Regression 2

$$FP_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \beta_8 BS_{it} + \beta_9 BI_{it} + \beta_{10} BD_{it} + \varepsilon_{it} \quad (7)$$

$$ROA_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \beta_8 BS_{it} + \beta_9 BI_{it} + \beta_{10} BD_{it} + \varepsilon_{it} \quad (8)$$

$$EPS_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \beta_8 BS_{it} + \beta_9 BI_{it} + \beta_{10} BD_{it} + \varepsilon_{it} \quad (9)$$

$$ROCE_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \beta_8 BS_{it} + \beta_9 BI_{it} + \beta_{10} BD_{it} + \varepsilon_{it} \quad (10)$$

$$ROE_{it} = \alpha + \beta_1 LEVE_{it} + \beta_2 SIZE_{it} + \beta_3 MC_{it} + \beta_4 DA_{it} + \beta_5 CA_{it} + \beta_6 AGE_{it} + \beta_7 CR_{it} + \beta_8 BS_{it} + \beta_9 BI_{it} + \beta_{10} BD_{it} + \varepsilon_{it} \quad (11)$$

## 4. RESEARCH RESULTS

### 4.1. Descriptive analysis

Table 2 shows the mean, maximum, minimum, and standard deviation of the study's variables. The study used *ROA*, *EPS*, *ROCE*, and *ROE* as proxies for measuring Indian banks' financial performance; their mean values are 0.53, 18.32, 2.55, and 5.19 with 1.4222, 40.094, 9.786, and 20.110 standard deviation, respectively. These results indicated that there is significant variability in the financial performance of Indian banks, as shown by the wide range of mean values and high standard deviations for *ROA*, *EPS*, *ROCE*, and *ROE*. This suggests differences in profitability, efficiency, and overall financial health among the banks studied. Regarding banks' specific factors, Table 2 reveals that while the minimum values of *LEVE*, *SIZE*, *MC*, *DA*, *CA*, *AGE*, and *CR* are 0.01, 3, 3487, 1515, 0, 16, and 0.10, the maximum values are 6, 8, 6308540, 50972629, 0.36, 155, and 12. Furthermore, it is indicated that the mean values of *LEVE*, *SIZE*, *MC*, *DA*, *CA*, *AGE*, and

*CR* are 1.31, 6.11, 309082.36, 3709025.55, 0.01, 79.01, and 3.96 with 0.89, 0.59, 657076.57, 5422063.07, 0.02, 35.37, and 2.01, respectively. Regarding the board of directors characteristics, Table 2 mentions that, on average, the board size of Indian listed banks is 13 members. The data also shows that some banks have much larger boards, with the maximum size reaching up to 32 members. These results suggest that Indian listed banks generally have moderately sized boards, with an average of 13 members, but there is considerable variation, with some banks having significantly larger boards of up to 32 members. This variability in board size could impact the banks' governance and decision-making processes. The average scores for board independence (*BI*) and board diligence (*BD*) are 0.36 and 0.70, respectively. This means that, on average, independent directors make up 36% of the board in Indian listed banks. Moreover, the *BD* score of 0.70 suggests that board members attend 70% of the board meetings.

Table 2. Descriptive statistics

Variable	Min	Max	Mean	Std. dev.
<b>Banks performance</b>				
ROA	-5	10	0.53	1.422
EPS	-107	244	18.32	40.094
ROCE	-42	21	2.55	9.786
ROE	-85	64	5.19	20.110
<b>Banks' specific</b>				
LEVE	0.01	6	1.31	0.893
SIZE	3	8	6.11	0.589
MC	3487	6308540	309082.36	657076.566
DA	1515	50972629	3709025.55	5422063.068
CA	0	0.36	0.01	0.021
AGE	16	155	79.01	35.370
CR	0.10	12	3.96	2.011
<b>Board characteristics</b>				
BD	0.307	0.99	0.70	0.140
BS	5	32	13.45	3.252
BI	0	1	0.36	0.284

#### 4.2. Correlation analysis

As results are shown in Table 3, *LEVE*, *MC*, and *CA* are positively and significantly associated with *ROA*

of Indian listed banks. The results are in line with the results of Tahir and Anuar (2016), who found a positive impact for *LEVE* on *ROA*. Besides that, *MC* is positively and significantly linked with the *ROA* of Indian listed banks, and this result aligned with the results of Barua et al. (2016). Furthermore, the results in Table 3 showed that *CA* has a positive and significant relationship with *ROA*. This result is supported by Ebenezer et al. (2017). On the contrary, *DA*, *AGE*, and *CR* have a negative association with banks' performance, and the result is consistent with Lee and Hsieh (2013) and Gul et al. (2011) who argue that the negative interaction between *DA* and *ROA*. In addition, *AGE* correlates negatively and significantly with *ROA*, which is supported by Dietrich and Wanzenried (2011).

In terms of the result of *CR*, it was found that *CR* correlates negatively and significantly with the *ROA* of the selected banks, which is consistent with the results of Alper and Anbar (2011), Bougatef (2017), and Francis (2013). Furthermore, *SIZE* and *CR* have a significant relationship with *EPS*, *ROCE*, and *ROE* of Indian listed banks.

Table 3. Correlation matrix

	ROA	EPS	ROCE	ROE	LEVE	SIZE	MC	DA	CA	AGE	CR	BD	BS	BI
ROA	1													
EPS	0.438**	1												
ROCE	0.759**	0.525**	1											
ROE	0.870**	0.534**	0.938**	1										
LEVE	0.233**	-0.020	-0.078	0.076	1									
SIZE	-0.378**	0.122*	-0.220**	-0.235**	0.044	1								
MC	0.162**	0.218**	0.085	0.102*	0.083	0.437**	1							
DA	-0.134**	0.100	-0.119*	-0.114*	0.136**	0.668**	0.607**	1						
CA	0.321**	-0.072	-0.048	0.076	0.240**	-0.462**	-0.081	-0.141**	1					
AGE	-0.332**	-0.094	-0.086	-0.186**	-0.411**	0.087	-0.402**	-0.024	-0.171**	1				
CR	-0.465**	-0.292**	-0.355**	-0.387**	-0.311**	0.211**	-0.228**	0.040	-0.117*	0.412**	1			
BD	0.142**	0.037	0.158**	0.129*	-0.177**	-0.129*	0.091	-0.150**	-0.038	-0.079	-0.068	1		
BS	-0.203**	0.138**	0.030	-0.025	-0.059	0.469**	0.143**	0.435**	-0.240**	0.225**	0.110*	-0.560**	1	
BI	0.180**	0.021	0.175**	0.120*	-0.066	-0.374**	0.082	-0.257**	-0.047	-0.324**	-0.223**	0.281**	-0.312**	1
VIF					1.59	3.28	2.55	2.74	1.66	1.93	1.43	1.74	2.19	1.59

Note: VIF – variance inflation factor; \*, \*\*, and \*\*\* means that the *p*-value is less than 0.05, 0.01, and 0.001, respectively.

On the other hand, Table 3 results indicated that *MC* has a positive and significant relationship with banks' performance measured by *EPS* and *ROE*. This result aligned with Barua et al. (2016). In contrast, *DA* is recorded negatively and significantly linked with *ROCE* and *ROE* of Indian banks at a 0.05 level of significance which is supported by Gul et al. (2011) and Lee and Hsieh (2013). In the same vein, *AGE* is negatively and significantly linked with the *ROE* of Indian banks at a 0.01 level of significance. This result is consistent with Dietrich and Wanzenried (2011).

In terms of the board of directors factors, the results in Table 3 show the association between the board of directors' characteristics and the financial performance of Indian listed banks, where board diligence (*BD*) and board independence (*BI*) are positively and significantly associated with *ROA* and *ROCE*. These results are aligned with studies by Liang et al. (2013), and Lipton and Lorsch (1992). However, board size (*BS*) indicates a negative and significant relationship with *ROA* for Indian listed banks. This means that larger boards are associated with lower *ROA*. Conversely, board size shows a positive and significant relationship with *EPS*, indicating that larger boards are linked to higher *EPS*. Both relationships are statistically significant at the 0.01 level.

#### 4.3. Regression analysis

Regression analysis is employed to examine the effect of the factors of banks specific and board directors on the financial performance of Indian listed banks. As indicated in Table A.1 (see Appendix), the results of the regression analysis demonstrate that *LEVE* has a positive and significant impact on *ROA* and *ROE* at the 0.01 and 0.05 levels of significance, respectively. This implies that, for every percent increase in leverage, the corresponding increases in *ROA* and *ROE* are 0.232 and 3.953, respectively. At the 0.01 level of significance, bank *SIZE* has a negative and substantial impact on the *ROA*, *ROCE*, and *ROE* of the chosen banks, with corresponding coefficients of -1.408, -13.41, and -26.508. Furthermore, at the 0.01 level, *MC* has a favorable and significant impact on the financial performance of Indian listed banks as determined by *ROA*, *ROCE*, *EPS*, and *ROE*.

On the contrary, debt to assets (*DA*) shows a negative and significant effect on the financial performance of Indian listed banks when assessed using *ROA*, *ROCE*, *EPS*, and *ROE* in regression Model 1. However, in regression results, *DA* shows a positive and significant impact on the same performance metrics. This suggests that the effect of

DA on financial performance may vary depending on the given model. Moreover, the regression analysis reveals that capital adequacy (CA) has a negative and significant impact on the financial performance of Indian listed banks, specifically in terms of ROCE and ROE. The coefficients for CA are -85.797 for ROCE and -115.185 for ROE, indicating that an increase in CA by these values corresponds to a one percent decrease in ROCE and ROE, respectively. This result highlights that higher CA is associated with lower returns in these performance measures, pointing to a potential trade-off between maintaining adequate capital and achieving higher returns.

The results presented in Table A.1 indicate that AGE has a positive and significant impact on the financial performance of Indian listed banks, as measured by ROA, ROCE, and ROE. The coefficients for AGE are 0.46, 3.232, and 7.54, respectively. In contrast, the variable current ratio (CR) shows a negative and significant impact on ROA, ROCE, EPS, and ROE, with coefficients of -0.147, -1.708, -5.533, and -2.952, respectively. It suggests that a higher CR is associated with poorer financial performance across these metrics.

Regarding the board of directors characteristics, the results in Table A.1 reveal that board diligence (BD) has a positive and significant effect on the financial performance of Indian listed banks.

In addition, BS has positively and significantly influenced ROA, ROCE, EPS, and ROE. However, BI does not show a significant effect on the financial performance of these banks. This result implies that while BD and BS have a clear positive impact, BI does not appear to significantly influence financial outcomes in this context.

As mentioned in Table 4, the study investigates endogeneity factors of banks' specific, and board directors characteristics, and financial performance due to unobservable heterogeneity. To address the endogeneity issues, Yermack's (1996) instrumental variables framework is followed. Lagged values of the dependent variables and the fitted values of the primary models are estimated using the direct effect models. Furthermore, a regression model with two-stage least square (2SLS) is employed, which comprises five sequential steps and includes bank specific variables as predictors and board characteristics variables as exogenous variables. The results in Table 4 show that the 2SLS models' findings are similar to the prior models' effects, which are shown in Table A.1. Overall, Tables A.1 and 4 indicate similar findings for factors of banks' specific and board directors' characteristics. The results suggest that the main estimation using direct models aligns with the 2SLS models, indicating the absence of an endogeneity problem.

Table 4. Endogeneity analysis — 2SLS regression

Variables	ROA		ROCE		EPS		ROE	
	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T
LEVE	0.315 {0.00}	0.125 (3.25)	2.267 {0.66}	0.215 (2.645)	-1.22 {0.12}	1.15 (-1.89)	1.251 {0.00}	0.321 (1.321)
SIZE	-0.875 {0.00}	0.416 (-6.22)	-06.55 {0.00}	1.212 (-3.66)	-1.22 {0.25}	1.37 (-1.024)	-3.238 {0.00}	1.55 (-1.325)
MC	0.054 {0.00}	0.11 (3.89)	0.21 {0.00}	0.226 (4.55)	0.09 {0.00}	1.112 (3.112)	0.125 {0.00}	0.088 (1.872)
DA	0.752 {0.00}	0.22 (-3.02)	0.09 {0.00}	0.11 (-1.67)	0.048 {0.00}	1.14 (-1.678)	0.982 {0.00}	0.214 (-1.65)
CA	3.254 {0.15}	0.421 (1.891)	-12.11 {0.00}	2.64 (-1.11)	-3.24 {0.55}	12.33 (-2.44)	-2.138 {0.04}	0.125 (-0.987)
AGE	0.645 {0.01}	0.125 (4.81)	1.987 {0.00}	0.821 (4.87)	2.11 {0.02}	1.66 (1.617)	2.371 {0.00}	0.632 (1.817)
CR	-0.245 {0.01}	0.312 (-4.55)	-0.879 {0.00}	0.325 (-3.21)	-1.03 {0.00}	1.234 (-1.22)	-1.55 {1.678}	0.895 (-1.325)
BD	1.879 {0.03}	0.615 (3.22)	5.387 {0.00}	2.11 (4.01)	29.58 {0.046}	2.410 (1.367)	1.088 {1.476}	1.421 (2.864)
BS	0.124 {0.01}	0.137 (4.02)	1.964 {0.00}	0.521 (3.21)	2.49 {0.000}	0.312 (1.555)	1.367 {0.00}	0.687 (2.254)
BI	-0.876 {0.55}	0.469 (-1.57)	-1.257 {0.11}	0.441 (-1.66)	2.42 {0.52}	1.365 (1.66)	-0.847 {1.027}	1.258 (-2.352)
C	-31.22 {0.00}	1.245 (-4.33)	-36.21 {0.00}	21.23 (-2.11)	-12.97 {0.00}	1.55 (-2.66)	-11.63 {0.00}	9.128 (-1.36)
R <sup>2</sup>	0.54	0.48	0.45	0.51	0.54	0.48	0.45	0.51
Adj. R <sup>2</sup>	0.53	0.46	0.44	0.50	0.53	0.46	0.44	0.50
F-Statistic	22.142	18.312	16.454	18.123	22.142	18.312	16.454	18.123
Prob(F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note: The values in curly brackets are the p-values and the values in parentheses are the t-values.

## 5. DISCUSSION

Based on the previous discussion of research findings related to the factors of banks' specific and board directors' characteristics, the LEVE has positively affected banks' performance, which means that when Indian-listed banks increase their leverage, their ROA and ROE also increase. This finding indicates that banks are effectively using debt to finance their operations and investments. Furthermore, debt can be a cheaper source of

financing compared to equity, especially in a lower interest-rate environment. This cost advantage can enhance the net interest margin and overall profitability, positively affecting ROA and ROE. This finding is in line with the results of Athanoglou et al. (2008) who argued that banks with lower leverage exhibit lower ROE but higher ROA. Therefore, the results supported an anticipated direction of the study. Hence H1a is supported for ROA and ROE, but not for ROCE and EPS.



Additionally, the findings reveal that *BS* has a negative and significant impact on the *ROA*, *ROCE*, and *ROE* of the selected banks. These findings indicate that newly established banks are more profitable than old-established banks. This result could be explained by the fact that as banks grow larger, they may experience diminishing returns to scale. This means that the additional benefits gained from expanding operations do not proportionally increase profits. As a result, larger banks might find it harder to maintain high profitability ratios like *ROA*, *ROCE*, and *ROE*. These results contradict Alper and Anbar (2011) who found a positive association between banks' size and profitability. However, Gul et al. (2011) and Singh and Sharma (2016) found a negative association between banks' size and profitability, which means that *H1b* is rejected.

The findings demonstrate that *MC* has positive and significant impacts on *ROA*, *ROCE*, *EPS*, and *ROE* which indicate that when *MC* increases, the *ROA*, *ROCE*, *EPS*, and *ROE* of the selected banks will also increase. This indicates that higher market capitalization often reflects greater investor confidence in a bank's financial stability and growth prospects. The positive perception can lead to increased investment and customer trust, enhancing the bank's financial performance. Furthermore, banks with higher market capitalization typically have easier access to capital markets and can secure funding at more favorable terms. The results are in line with Qurashi and Zahoor (2016) and the expected sign of the study. Hence, results indicate that *H1c* is accepted. Fourth, findings in Table A.1 reveal that *DA* has a significant impact on the financial performance of Indian listed banks measured by *ROA*, *ROCE*, *EPS*, and *ROE*. This result is explained by the fact that deposits and advances are the backbone of banks which has an ultimate effect on their performance. These findings are in line with the findings of Gul et al. (2011). The results indicate that *H1d* is rejected.

In terms of capital adequacy, the results found that *CA* negatively and significantly affects the financial performance of Indian-listed banks, which means that when *CA* increases, the performance of Indian-listed banks decreases. This result contradicts Ebenezer et al. (2017), who found that *CA* has a negative association with commercial banks' profitability. Hence, *H1e* is rejected because the results do not support the study's anticipated outcomes.

Regarding the banks' age, the results showed that *AGE* has a positive effect on *ROA*, *ROCE*, and *ROE*. This means that when the age of banks increases, *ROA*, *ROCE*, and *ROE* also increase. In addition, findings indicate that older banks often have more experience in managing operations, navigating market conditions, and understanding customer needs. The accumulated expertise can lead to more effective decision-making and strategic planning, improving financial performance metrics like *ROA*, *ROCE*, and *ROE*. Moreover, long-established banks generally benefit from a strong reputation and trust built over time. These findings contradict the findings of Dietrich and Wanzenried (2011), who found an insignificant impact on banks' profitability and supported the expected results of the study, which indicate that *H1f* is accepted in the case of *ROA*, *ROCE*, and *ROE*. Moreover,

the findings showed that *CR* has a negative and significant impact on the *ROA*, *ROCE*, *EPS*, and *ROE* of the selected banks, which explains that when banks keep more liquidity to meet their obligations, that leads to a decline in their performance, which means that *H1g* is rejected.

Additionally, the findings showed that *BD* has a positive impact on banks' performance, which means that when *BD* increases, *ROA*, *ROCE*, and *ROE* also increase. This result could be explained by the fact that diligent boards are more likely to provide effective oversight of management practices and strategic decisions. This rigorous oversight helps ensure that the bank's operations align with its goals and regulatory requirements, leading to improved financial performance. Further, boards that are diligent in their duties are more likely to focus on robust risk management practices. These results are supported by Bajaher et al. (2021), Byrne (1996), Fariha et al. (2022), and Lipton and Lorsh (1992) who believed that boards that are actively diligent have a high tendency to execute their roles and duties in a manner that is beneficial to shareholders. Therefore, the results confirmed the study hypothesis, which means that *H2a* is accepted.

In terms of *BS*, the results reveal that *BS* has a positive and significant impact on *ROA*, *ROCE*, *EPS*, and *ROE*, which indicates that when *BS* increases, *ROA*, *ROCE*, *EPS*, and *ROE* also increase. This result indicates that a larger board often brings together a diverse group of individuals with varied skills, experiences, and perspectives. This diversity can enhance decision-making by incorporating a broader range of viewpoints and expertise, leading to more effective strategies and improved financial performance. This result is consistent with Adams and Mehran (2012), Bajaher et al. (2021), Liang et al. (2013), and Muttakin and Ullah (2012), who found that *BS* was positively related to the banks' performance, which implies that *H2b* is accepted. In conclusion, findings revealed that *BI* has not significantly affected the financial performance of Indian-listed banks. The result is consistent with Fariha et al. (2022) and contradicts the expected sign of the study, which implies that *H2c* is rejected.

## 6. CONCLUSION

The study aims to experimentally investigate how the management factors of the board of directors and the banks' specific affect the financial performance of Indian listed banks. A panel data collection of 38 listed banks is utilized, spanning the years 2010 to 2019. Secondary data taken from the ProwessIQ database served as the foundation for the investigation. Regression analyses were performed in order to accomplish the study's goals.

Based on *ROA* and *ROE*, the results showed that *LEVE* significantly and favorably affects Indian listed banks. The chosen banks' *ROA*, *ROCE*, and *ROE* are adversely and considerably impacted by size. Moreover, *MC*, *DA*, *CA*, and *AGE* have a significant impact on *ROA*, *ROCE*, *EPS*, and *ROE*. *BD* and *BI* have a positive effect on *ROA*, *ROCE*, *EPS*, and *ROE*. Further, the study found a positive association between board characteristics and bank performance. Therefore, it is time for Indian policymakers to set consistent board of directors' policies in the banking sector and make them

mandatory. Furthermore, banks have to adopt these policies and organize and participate in awareness campaigns towards corporate governance, which may increase the transparency in the banks' function, which in turn helps the management gain the trust of investors.

It is acknowledged that corporate governance is one of the interesting topics that has recently attracted more attention from many researchers. This field receives the least attention banking governance in particular. There aren't many studies on the subject of corporate governance in Indian banks, according to Sandhya and Parashar (2020). Thus, the literature in the Indian context would contribute to the understanding of the relationship between the corporate governance of Indian banks and their financial performance. Bank corporate governance is extremely delicate and requires close observation. Therefore, banks must work to enhance their governance processes since they impact value and performance. In addition, banks must work to enhance the quality of their assets by implementing appropriate lending policies and credit appraisal processes.

The study contributes to the existing body of knowledge in the field of the banking sector in one of the developing countries. The banking sector in India is a significant component of the financial

system with more than 70% of total assets in the Indian financial sector). As a result, this industry requires special attention to corporate governance (Biswas et al., 2022). Further, by focusing on Indian listed banks, the research fills a gap in the literature regarding emerging markets. The findings provide valuable insights for policymakers, regulators, and practitioners in India, offering practical recommendations for enhancing governance practices to improve financial performance. Finally, the use of a panel dataset spanning from 2010 to 2019 allows for a thorough analysis of trends and changes over time, enhancing the study's reliability and relevance.

The study has some limitations that shed light on future research. It has appeared that different institutions need different governance approaches; therefore, the study recommends future researchers conduct case studies with empirical analysis. In addition, audit committee variables due to the non-availability of data were not covered in the study; therefore, besides the variables that are included in this study, future researchers are encouraged to study audit committee variables. Finally, other performance measures, such as marketing-based measures, can be used by future research to have a comprehensive view of the impact of board characteristics on banks' performance.

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APPENDIX

Table A.1. Regression models

Variables	Regression 1 Fixed/ROA		Regression 2 Fixed/ROA		Regression 1 Fixed/ROCE		Regression 2 Fixed/ROCE		Regression 1 Fixed/EPS		Regression 2 Fixed/EPS		Regression 1 Fixed/ROE		Regression 2 Fixed/ROE	
	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T	Coef. / P	Std. / T
LEVE	0.232 {0.01}	0.097 (2.398)	0.239 {0.01}	0.096 (2.49)	0.991 {0.214}	0.795 (1.24)	1.065 {0.16}	0.764 (1.394)	-2.371 {0.45}	3.192 (-0.74)	-2.425 {0.44}	3.18 (-0.76)	3.953 {0.021}	1.703 (2.32)	4.109 {0.014}	1.655 (2.482)
SIZE	-1.408 {0.00}	0.312 (-4.51)	-1.392 {0.00}	0.308 (-4.51)	-13.41 {0.00}	2.56 (-5.23)	-13.219 {0.00}	2.459 (-5.37)	-11.578 {0.26}	10.275 (-1.12)	-11.78 {0.25}	10.236 (-1.151)	-26.508 {0.00}	5.481 (-4.83)	-26.169 {0.00}	5.328 (-4.911)
MC	0.001 {0.02}	0.001 (3.11)	0.001 {0.03}	0.001 (3.01)	0.001 {0.00}	0.001 (3.18)	0.001 {0.00}	0.001 (3.10)	0.001 {0.00}	0.001 (4.85)	0.001 {0.00}	0.001 (4.801)	0.001 {0.001}	0.001 (3.24)	0.001 {0.002}	0.001 (3.159)
DA	-0.001 {0.01}	0.001 (-2.43)	0.001 {0.00}	0.001 (-2.64)	-0.001 {0.05}	0.001 (-1.94)	0.001 {0.01}	0.001 (-2.34)	-0.001 {0.00}	0.001 (-8.69)	0.001 {0.00}	0.001 (-8.993)	-0.001 {0.009}	0.001 (-2.63)	0.001 {0.003}	0.001 (-2.97)
CA	1.752 {0.56}	3.07 (0.571)	2.336 {0.45}	3.052 (0.76)	-85.797 {0.001}	25.206 (-3.40)	-77.894 {0.00}	24.35 (-3.19)	-71.793 {0.47}	101.162 (-0.71)	-39.515 {0.69}	101.344 (-0.39)	-115.185 {0.034}	53.962 (-2.13)	-100.99 {0.056}	52.754 (-1.914)
AGE	0.46 {0.00}	0.095 (4.84)	0.459 {0.00}	0.094 (4.90)	3.232 {0.00}	0.779 (4.15)	3.226 {0.00}	0.746 (4.32)	5.909 {0.06}	3.126 (1.89)	6.159 {0.048}	3.106 (1.983)	7.54 {0.00}	1.667 (4.52)	7.521 {0.00}	1.617 (4.652)
CR	-0.147 {0.00}	0.037 (-3.99)	-0.132 {0.00}	0.037 (-3.60)	-1.708 {0.00}	0.302 (-5.66)	-1.518 {0.00}	0.292 (-5.19)	-5.533 {0.00}	1.21 (-4.57)	-5.03 {0.00}	1.216 (-4.13)	-2.952 {0.00}	0.646 (-4.57)	-2.598 {0.00}	0.633 (-4.106)
BD			1.146 {0.01}	0.484 (2.37)			14.148 {0.00}	3.859 (3.66)			29.58 {0.066}	16.059 (1.842)			26.942 {0.001}	8.36 (3.223)
BS			0.09 {0.00}	0.026 (3.52)			1.132 {0.00}	0.204 (5.55)			2.49 {0.004}	0.848 (2.936)			2.11 {0.00}	0.442 (4.778)
BI			-0.325 {0.35}	0.35 (-0.92)			-3.502 {0.21}	2.791 (-1.25)			8.206 {0.481}	11.617 (0.706)			-7.065 {0.244}	6.047 (-1.168)
C	-26.87 0.001	7.824 (-3.435)	-28.82 {0.00}	7.746 (-3.72)	-164.58 0.011	64.233 (-2.562)	-189.71 {0.002}	61.812 (-3.06)	-332.92 0.197	257.79 (-1.291)	-409.61 {0.112}	257.254 (-1.59)	-419.679 0.003	137.51 (-3.052)	-466.02 {0.001}	133.913 (-3.48)
R <sup>2</sup>	0.646	0.661	0.496	0.544	0.517	0.529	0.453	0.493								
Adj. R <sup>2</sup>	0.6	0.613	0.43	0.479	0.453	0.462	0.381	0.421								
Durbin	1.298	1.375	1.024	1.172	1.04	1.058	1.035	1.159								
F-statistic	13.903	13.754	7.498	8.412	8.135	7.934	6.311	6.861								
Prob(F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000								

Note: The values in curly brackets are the p-values and the values in parentheses are the t-values.