

# “The influence of corporate governance factors on intellectual capital performance: Panel data evidence from the Indian banking sector”

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# THE INFLUENCE OF CORPORATE GOVERNANCE FACTORS ON INTELLECTUAL CAPITAL PERFORMANCE: PANEL DATA EVIDENCE FROM THE INDIAN BANKING SECTOR

## Abstract

This study empirically examined the relationship between corporate governance factors, namely CEO duality, independent directors, board meeting frequency, board size, gender diversity, audit committee size and audit committee meetings, and intellectual capital performance. The above premise is studied using data of 26 commercial banks listed on the Indian Stock Exchange (NSE) from 2010 to 2020. The study used purposive sampling as the methodology and multiple regression models with VAIC and ROA as attributes. VAIC measures the efficiency of intellectual capital. ROA is used to determine financial performance. The results of the study reveal that the use of observational data, independent directors, frequency of board meetings and audit committee size has a positive and significant effect on intellectual performance at a 10% significance level. According to the study's findings, audit committee meetings have a positive impact on intellectual capital performance at a 1% significance level, while board size has a negative impact at a 5% significance level. Among the study results, CEO duality, board meeting frequency and board size have a positive and significant effect on financial performance with 1% significance. Board gender diversity has a negative impact on financial performance. The study's findings indicate that there is no single best way to design corporate governance that applies to all corporate situations, and that good corporate governance factors have a significant impact on improved intellectual capital performance.

## Keywords

board characteristics, corporate finance, financial institutions, gender diversity, knowledge-based performance

## JEL Classification

G20, G30, G34, O34

## INTRODUCTION

In the knowledge-based economy, intellectual capital performance (ICP) has long been recognized as a key strategic asset (Bontis, 1998,2002; Edvinsson & Malone, 1997; Roos et al., 1997; Stewart, 1998; and Sveiby, 1997). As a result, more focus is placed on issues related to IC evaluation, strategic planning, and reporting (Badia et al., 2019; Giuliani & Chiuicchi, 2019). Over the last several decades, the notion of IC has grown within a framework of dynamic capabilities, with its origins in the resource-based view of the organization (Teece et al., 1997). According to the most recent conceptualizations, intellectual capital needs to be supported both statistically as a "stock of knowledge" and dynamically as a firm's potential to reap economic benefits from the IC it holds. In other words, IC cannot be supported in any of these ways in isolation (Volkov & Garanina, 2007; Berezinets et al., 2016). As a result, directors must prioritize knowledge acquisition and knowledge application (Teece, 1981).

According to Van der Meer-Kooistra and Zijlstra (2001) intellectual capital increases the value of enterprises by facilitating the sharing of information and the formation of new facts. According to Petty and Guthrie (2000) The effectiveness of both the labor and the capital markets may be improved through intellectual capital. Additionally, academics have shown that intellectual capital has a good effect on the wealth and performance of organizations (Celenza & Rossi, 2014; Singh et al., 2018; Inkinen, 2015; Zerenler & Gozlu, 2008; Phusavat et al., 2011). Knowledge capital and intellectual capital are important for shareholders and investors to make sure that the managers are making decisions to increase shareholders' wealth through the best utilization of intellectual capital (Appuhami & Bhuyan, 2015).

Intellectual capital is a competitive and strategic resource that ensures better performance. However, it is hard for companies to control and manage knowledge capital. Depending on Van der Meer-Kooistra and Zijlstra (2001) if intellectual capital is not managed appropriately, its potential to add value would not be thoroughly utilized. Because of its complexity and diversity, the management of intellectual capital continues to be one of the most critical tasks for the accounting profession (Dzinkowski, 2000). Several studies have expressed the need of better understanding the function of corporate governance in order to protect and maintain intellectual capital in corporations (Safieddine, 2009). Corporate governance guarantees these choices that were made by management are taken in the best interests of the shareholders by ensuring that intellectual capital is used efficiently. Despite this, only a few studies have examined how corporate governance affects intellectual capital in businesses. It is especially troubling that there needs to be more understanding of the connection between governance and the effectiveness of intellectual capital.

Research studies in India have not tried to figure out how to good governance and intangible capital performance work together (Kamath, 2019b). Given that knowledge and intellectual capital are the core resources for any organizations and that they play primary roles in value creation, it is indeed critical to comprehend the effects of corporate governance factors on Indian firms and how corporate governance standards are applied to utilize intellectual capital successfully. Given the corporate governance and intellectual capital are important to stakeholders, it is necessary to identify the elements that influence the relation between the two. This study contributes in several different ways to the sum of previous research that has already been conducted. One, it brings to light that the earlier literature on CG & IC takes into account all the industries of the Indian economy. Most of the previous studies have looked at corporate governance and intellectual capital independently. Second, this study provides proper evidence of the correlation between corporate governance and intellectual capital by analyzing the data from banks that trade on the National Stock Exchange (NSE). As a result, the findings can help in bringing out a better understanding of corporate board governance and its impact on intellectual capital performance. This will ultimately influence the performance of banks in the Indian economy. Third, this study will help assist intellectual capital research by examining how corporate governance factors affect boards and organizational behavior of intellectual capital efficiency. Fourth, the research utilizes VAIC model, consisting of three components: human, structural, and employed capital. And lastly, the information collected will assist investors, shareholders, policymakers, regulators, authorities, and academicians in improving their understanding of intellectual capital. As presented, this study used the Value-added Intellectual Capital Approach to measure the efficacy of intellectual capital (Pulic, 1998).

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## 1. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In the literature, at least theoretically, there is a strong correlation between corporate governance practices and IC effectiveness. According to

Keenan and Aggestam (2001), corporate governance is concerned with analyzing and monitoring the production of corporate value. Increased value generation thus depends on maximizing a firm's intellectual capital. In addition, the persons, organizations, and processes that are engaged in governance practices represent a form of intellectual capital (Kiel & Nicholson, 2003; Hillman &

Dalziel, 2003; and Berezinets et al., 2016), tasked with building, enhancing, and leveraging the IC of the company as well as the firm's material and financial capital (Keenan & Aggestam, 2001). Therefore, there is an underlying connection between the notions of corporate governance and IC, since both deal with the creation and enhancement of company wealth and value.

The idea behind IC is that a company should be able to create and use its "knowledge capital." According to Edvinsson and Malone (1997) the term "intellectual capital" means information and knowledge applied to work to produce value. According to Brooking (1996), the term "Intangible Capital" (IC) refers to the aggregate of a company's intangible assets, including market, intellectual property, human-centered, and infrastructure, all of which are necessary for the company to operate effectively. Knowledge-based capital is crucial to value generation, regardless of definition. Current conceptualizations of IC emphasize knowledge execution over knowledge acquisition. According to Volkov and Garanina (2007) and Berezinets et al. (2016), IC represents an organization's capacity to convert current knowledge capital into future economic assets.

Human capital, as emphasized by Bontis (1998), is critical to a company, since it is a potential well-spring of creative energy and fresh perspectives. All of an organization's intangible assets that contribute to employee output are considered structural capital. This includes but is not limited to databases, organizational procedures, patents, and trademarks (Bontis, 2002). Knowledge gained via interactions with clients, vendors, joint venture partners, government agencies, and trade groups are all examples of the external ties that contribute to a company's "relational capital" (Scafarto et al., 2016).

### 1.1. Efficiency of intellectual capital performance and corporate governance

Some studies have sought to experimentally examine the effect of CG on intellectual capital efficiency in a few nations (Mohd-Saleh & Rahman, 2009). According to the results of a study conducted on all Malaysian exchange-listed companies between 2005 and 2007, the ownership structure

of a company, whether it be foreign, government, or family ownership, has a negative impact on ICP.

The empirical investigation of Taiwanese businesses indicated that industry type does have a role and that the impact of the owner's function on the IC's performance was flawless, especially in the high-tech sector (Liang et al., 2011). Similarly, a new study from Taiwan investigated how IC affects business performance, using CG as a moderating factor in KI enterprises. The strong financial performance of a company is shown in their accumulation of IC, and CG practices, which was also confirmed by their research (Wu et al., 2012). Another research conducted between 2007 and 2009 on 361 Taiwanese enterprises indicated a strong association between the value of intellectual capital and board features such as board size, the share of foreign directors, and autonomous directors. It was found that the ownership structure of a company has no impact on the value of the business (Wang, 2013). A Pakistani study found that CG, IC, and firm financial performance were interconnected meaningfully. Evidence suggests a favorable and statistically significant correlation between CG measures and IC efficiency. Indirect and via intellectual capital is also how CG is said to affect economic performance (Makki & Lodhi, 2014).

In a 4-year research on IC impact assessments in Indonesia, Mahmudi and Nurhayati (2015) discovered that CG-based features such as competence, board autonomy, and audit committee size are associated, while the number of board or audit meetings and audit independent board members has shown no effect. They have discovered that the Audit Committee has no connection or effect on its frequency. Although Veltri and Mazzotta (2016) found the impact of ownership models on the make-up of boards of directors in 179 Italian companies 2008 and 2010. They also emphasized the importance of CG characteristics on a company's financial performance (ROA).

Bohdanowicz (2014) examined 292 companies trading on Poland's Warsaw Stock Exchange between 2008 and 2013. The research revealed an adverse link between the effectiveness of human wealth and knowledge capital. Furthermore, board size negatively affects ICP and corporate

governance elements. Another study on Ethiopian banking industry aimed to assess CG's effect on intellectual capital; it was noted that board size and sex diversity have an effect on ICE for the period 2011–2015. It was also discovered, however, that the board members' remuneration showed no effect (Meressa, 2016).

Abidin et al. (2009) attempted to measure board characteristics' effect on IC performance and profitability at 75 Malaysian companies. According to their findings, a clear correlation involving board size and IC is provided. Safieddine (2009) argues, because of lack of good governance practices, that universities cannot attract and maintain ICs, based on a main research conducted in one American university only. The relationship between the CG, IC and corporate social responsibility for Istanbul industrial companies was examined by Altuner et al. (2015), who discovered a perfect connection and interaction with the variables. Mahmudi and Nurhayati (2015) show that board governance characteristics in the form of the number of independent directors and the audit size significantly affect a firm's intellectual capital efficiency. However, the independence of the audit committee, the number of annual board meetings and the supervisory expertise of the board commissioners did not significantly affect intellectual capital performance.

Faisal et al. (2016) analyzed how corporate governance affects the effectiveness of intellectual capital. They continued by saying that director ownership, board meetings, and CEO duality negatively affect intellectual capital's effectiveness in commercial banks listed on the Karachi Stock Exchange. Board composition does not affect performance.

Arifin (2016) examined corporate governance and intellectual capital in the Indonesian context, finding that all variables, except commissioners, directors, education-high school and capital employed efficiency, did not affect Tobins'Q significantly, and all variables were statistically insignificant for ROA.

Iqbal and Zaib (2017) discovered that board size and independence considerably increase the efficiency of intellectual capital in both forms of group banks (commercial banks and micro & development banks). Corporate governance also strongly influences intellectual capital in both

types of group banks. CG and ICP have a positive impact on profitability for each group. Kamath (2019a) conducted a seven-year study to examine the effect of corporate governance aspects on the intellectual capital efficiency of 95 Indian companies listed on the NSE. Only large-cap Indian enterprises' IC performance is affected by CG features. The major influences are board size and director independence. Board size significantly affects large-cap IC performance.

Shahwan and Habib (2020) found insufficient evidence to support the hypothesis that CG and ICP have improved over time. There was no correlation with effective company governance and financial issues. Additionally, intellectual capital efficiency negatively affected financial problems. CG and IC efficiency improved little over the study period. CG effectiveness does not affect financial problems. IC's efficiency score exacerbated financial issues.

## 1.2. Corporate governance and firm performance

Board size and firm ratio significantly affected firm value and market performance in 348 Australian listed businesses (Kiel & Nicholson, 2003). One further study of 347 Malaysian firms looked at the impact of major shareholders' stakes on board size (a positive sign), the presence of many directors (a negative sign), and financial and market performance. These companies' concentrated ownership shows widespread support. The board size depends on the company and its nature. However, the board, executive management, and duality appear unrelated (Haniffa & Hudaib, 2006).

Dwivedi and Jain (2005) examined 340 firms in 24 sectors from 1997 to 2001 to see how CG features like board size and financial performance affected proprietary construction enterprises in India. Performance was weakly positively correlated with board size. It varies across ownership patterns. According to Aboagye and Otioku (2010), corporate leadership and the success of rural and community banks in Ethiopia are not correlated. As far as the authors are concerned, the newly added codes have no effect on the outcomes. Following correction for bias due to sample selection and endogenous control, a pan-European

research, including 14 countries, demonstrated a positive correlation between CG evaluations and performance (Renders et al., 2010).

*H1: Corporate governance factors have an impact on intellectual capital of Scheduled Commercial Banks (SCBs) in India.*

*H1a: CEO Duality has a significant impact on intellectual capital performance.*

*H1b: Board size has a significant impact on intellectual capital performance.*

*H1c: Board meetings have a significant impact on intellectual capital performance.*

*H1d: Independence of the board has a significant impact on intellectual capital performance.*

*H1e: Audit Committee Size has a significant impact on intellectual capital performance.*

*H1f: Audit committee meetings have a significant impact on intellectual capital performance.*

*H1g: Gender diversity has a significant impact on intellectual capital performance.*

*H2: Corporate governance influences the financial performance of Scheduled Commercial Banks (SCBs) in India.*

## 2. RESEARCH METHODOLOGY

This research population is 26 scheduled commercial banks listed on the National Stock Exchange (NSE) in India from 2010 to 2020. Researchers employed a method called “purposive sampling” to compile their data. The information gathered is first organized in the form of a multiple regression analysis. Descriptive statistics for each of the variables are provided so that the nature of the data may be understood. Multiple Regressions is used to analyze the data as it helps to find the relationship between independent and dependent variables. The Pulic (2000), Chang (2007), and Edvinsson and Malone (1997) modified models are used to assess IC components. Literature uses audit committee independent variables (Hamdan

et al., 2013; Al-Musali & Ismail, 2014; Buallay, 2018). Prior studies also apply the board director’s independent factors (Hidalgo et al., 2011; Taliyang et al., 2011; and Rodrigues et al., 2017).

$$VAIC_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 BSIZE_{it} + \beta_3 BIND_{it} + \beta_4 BMEET_{it} + \beta_5 ACSIZE_{it} + \beta_6 ACMEET_{it} + \beta_7 FSIZE_{it} + \beta_8 LEV_{it} + \beta_9 FAEG_{it} + \varepsilon_{it}, \quad (1)$$

$$ROA_{it} = \beta_0 + \beta_1 CEO_{it} + \beta_2 BSIZE_{it} + \beta_3 BIND_{it} + \beta_4 BMEET_{it} + \beta_5 ACSIZE_{it} + \beta_6 ACMEET_{it} + \beta_7 FSIZE_{it} + \beta_8 LEV_{it} + \beta_9 FAEG_{it} + \varepsilon_{it}, \quad (2)$$

where Return on Assets (ROA), Value added intellectual capital (VAIC), CEO Duality (CEO), Board Size (BSIZE), Board Independent Directors (IND), Frequency of board meetings (BMEET), Audit committee size (ACSIZE), Audit committee meetings (ACMEET), Firm Age (FAEG), Firm Size (FSIZE), Leverages (LEV).

## 3. RESULTS

The data consist of 26 banks and 286 observations of the last eleven financial years of scheduled commercial banks in India. This information is used to analyze the effect of corporate governance on the financial and intellectual capital performance of Indian banks. The study used multiple regression models. The STATA (Statistics and Data Analysis) estimate is shown in Tables 2 and 3. There is strong statistical support for both models in the regression analyses.

The result shows that the average of CEO Duality and IND is about 0.93 and 4.9 with a range of 0-1 and 1-12, and Std. dev is 0.26 and 2.30, respectively. The average value of board diversity is 1.04 with a range of 0-3, and Std. dev is 0.81. Moreover, the mean value of BSZ and FBM are 12.14 and 12.28 with a range of 6-19 and 4-28, and Std. dev is 2.58 and 4.26. The average of ACS and ACM are 6.61 and 9.91 with a range of 3-13 and 4-18, and Std. dev is 2.12 and 2.66. The mean value of VAIC and VA are

**Table 1.** Descriptive statistics

Variable	Obs.	Mean	Std. dev.	Min	Max
CEO Duality	286	.9265734	.2612926	0	1
IND	286	4.905594	2.296031	1	12
Board Diversity	286	1.048951	.8150227	0	3
BSZ	286	12.14336	2.581393	6	19
FBM	286	12.28671	4.265113	4	28
ACS	286	6.618881	2.122113	3	13
ACM	286	9.91958	2.664352	4	18
VAIC	286	10.89439	2.835113	5.542972	20.74012
VA	286	269,358.3	400,352.8	5,490.495	2,961,582
HCE	286	9.916466	2.802863	4.675835	19.71206
SCE	286	.8909869	.0306892	.7861345	.9492696
CEE	286	.0869336	.0117967	.0550307	.1520061
Bank Age	286	74.66434	35.13562	6	126
Bank Size	286	10.04151	4.518796	4.788962	17.49216
LEV	286	22.45578	34.26708	.1070284	201.7199
ROA	286	.0063396	.014413	-.0636785	.082702

about 10.9 and 269,358.3 with a range of 5.54-20.74 and 5,490.49-2,961,582, and the Std. dev is 2.83 and 400,352.8. The average value of HCE and SCE are 9.91 and 0.89 with 4.67-19.71 and 0.78-0.94, and the Std. dev is 2.80 and 0.031. The mean value of CEE and Bank Age are 0.08 and 74.66 with 0.06-0.15 and 6-126, and the Std. dev is 0.01 and 35.13. The average value of Bank Size and LEV are 10.04 and 22.46 with 4.79-17.50 and 0.10-201.72, and the Std. dev is 4.51 and 0.10. The mean value of ROA is 0.006 with a range of -0.06-0.08 and the Std. dev is 0.014.

As shown in Table 2, the overall corporate governance factors explain the intellectual capital effectiveness of India's Scheduled Commercial Banks. Independent directors, board size, frequency of board meetings, audit size, audit meetings, and bank age influence intellectual capital performance. According to what was forecasted, the autonomy of directors positively affects the intellectual capital performance of financial institutions such as banks. This outcome is consistent with the findings of earlier studies by Abidin et al. (2009), Mahmudi and Nurhayati (2015), Meressa (2016),

**Table 2.** Regression analyses for corporate governance factors' impact on intellectual capital performance of scheduled commercial banks in India

VAIC	Coef.	St. err.	t-value	p-value	[95% Conf. Interval]	Sig.	
CEO-Duality	.996	.776	1.28	.201	-.532	2.524	-
IND	.192	.11	1.74	.082	-.025	.409	*
Gender Diversity	.09	.197	0.46	.649	-.299	.479	-
BSZ	-.184	.073	-2.51	.013	-.327	-.04	**
FBM	.089	.049	1.80	.073	-.008	.186	*
ACS	.164	.096	1.71	.089	-.025	.353	*
ACM	.266	.068	3.91	0	.132	.4	***
Bank Age	-.037	.006	-5.76	0	-.05	-.024	***
Bank Size	-.041	.065	-0.64	.523	-.169	.086	-
LEV	-.006	.006	-1.02	.309	-.019	.006	-
Constant	9.666	1.337	7.23	0	7.034	12.299	***
Mean dependent variable		10.894		SD dependent variable		2.835	
R-squared		0.239		Number of obs.		286	
F-test		8.645		Prob.> F		0.000	
Akaike crit. (AIC)		1,350.519		Bayesian crit. (BIC)		1,390.735	

Note: \*\*\* p < .01, \*\* p < .05, \* p < .1. CEO Duality, Independent Directors (IND), Frequency of board meetings (FBM), Audit committee size (ACS), Audit committee meetings(ACM), Bank Age, Bank Size, Leverages (LEV).

and Kamath(2019b). It is believed that the number of board members has a detrimental influence on the effectiveness of intellectual capital. It is also assumed that a bigger board size would bring in a wider variety of skills and knowledge with them (Kiel & Nicholson, 2003; and Kamath, 2019b) that it will further encourage transparency in decision making and bring more efficiency.

The regression analysis (Table 2) results show that the frequency of board meetings had a significant ( $\beta = 0.089$ ,  $P < 0.073$ ) impact on VAIC. The association between board meetings and ICP is significant. These results are consistent with research conducted by (Vafeas, 2003), which also found that the frequency of board meetings positively affects intellectual capital performance.

These findings also suggested that a high frequency of board meetings always ensures that intellectual capital performance also increases because it depends on board meetings' effectiveness. The number of board meetings and audit committee size positively affect intellectual capital efficiency. These results are in line with those of Li et al. (2012), who discovered that a larger audit committee improves the effectiveness of intellectual capital. It is anticipated that a rise in the number of audit committees will lead to a rise in banks' intellectual capital performance. Company performance,

particularly intellectual capital, is enhanced with the audit committee's help implementing the company's internal control. The efficiency of the Board of Commissioners is also improved. Intellectual capital performance is greatly improved when the audit committee meets. If the audit committee meets more often, they will do a better job. As a result, banks are making progress in optimizing the performance of their intellectual capital.

It is important to keep in mind that CEO-duality variable is a dummy variable, since the value may be either 0 or 1. This study shows that the coefficient of CEO-duality variable is not very significant. The results contradict those of Firstenberg and Malkiel (1994) who claimed that businesses led by a CEO duality underperformed financially. The negligible value of this variable suggests that there is no substantial difference in VAIC efficiency between banks with CEO-duality and those without. The coefficient is positive, although the model expected a negative association between CEO-duality and VAIC.

Results show that gender diversity is statistically insignificant ( $p = 0.649$ ) with IC performance. That means gender diversity has no significantly influence on IC efficiency in selected Scheduled Commercial Banks in India. The regression results show that bank size and leverage are insignificant

**Table 3.** Regression analyses for corporate governance factors impact on financial performance of Scheduled Commercial Banks (SCBs) in India

ROA	Coef.	Std. err.	t-value	p-value	[95% Conf	Interval]	Sig.
CEO-Duality	.008	.004	1.81	.072	-.001	.016	*
IND	0	.001	-0.20	.838	-.001	.001	-
Gender Diversity	-.002	.001	-2.01	.046	-.004	0	**
BSZ	.001	0	3.60	0	.001	.002	***
FBM	0	0	-1.69	.093	-.001	0	*
ACS	0	.001	-0.07	.94	-.001	.001	-
ACM	0	0	0.03	.978	-.001	.001	-
Bank Age	0	0	0.33	.742	0	0	-
Bank Size	-.001	0	-1.94	.053	-.001	0	*
LEV	0	0	2.52	.012	0	0	**
Constant	-.005	.007	-0.75	.455	-.02	.009	-
Mean dependent variable		0.006		SD dependent variable		0.014	
R-squared		0.130		Number of obs.		286	
F-test		4.099		Prob.> F		0.000	
Akaike crit. (AIC)		-1,632.175		Bayesian crit. (BIC)		-1,591.959	

Note: \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$ . Return on Assets (ROA) CEO Duality, Independent Directors (IND), Gender diversity, Frequency of board meetings (FBM), Audit committee size (ACS), Audit committee meetings (ACM), Bank Age, Bank Size, Leverages (LEV).



nificant and that bank age negatively affects intellectual capital performance. Users may view it unfavorably if they need help understanding the significance of the banks' size, age, and leverage in the financial statement.

Thus, hypothesis *H1* is proven and the variable considerably affects the intellectual capital performance of scheduled commercial banks. All five hypotheses (*H1b*, *H1c*, *H1d*, *H1e*, and *H1f*) are supported by the data, showing that the factors substantially affect IC performance (VAIC). But the *H1b* component had a negatively significant influence. *H1a* and *H1g* hypotheses are insignificant as the variables are impacted by VAIC.

As shown in Table 3, the overall corporate governance factors also explain the financial performance (ROA) of Indian commercial scheduled banks. The F-value indicates that corporate governance factors influence ROA. The P-value ( $P < 0.05$ ) is less than the critical value of accepting the hypothesis. This means that it has a significant impact on the financial performance of the scheduled commercial banks in India. CEO-duality ( $\beta = 0.008$ ,  $P < 0.10$ ) is positive and it has significant effect on financial performance during the research period. Thus, the coefficients suggest that the dual role of the CEO is likely to improve a banks' performance. The results are consistent with those of (Wicaksono, 2022), who found that CEO duality has a positive effect on firm performance.

It has been shown statistically that gender diversity has a negative effect on the performance of financial institutions ( $\beta = -0.002$ ,  $P 0.05$ ). When it comes to gender equality, the findings from the existing literature are mixed. Diversity in terms of gender has been found to have a detrimental impact on business success (Shrader et al., 1997). Research, however, has proven the opposite to be true (Dutta & Bose, 2007). According to the findings, enhancing bank performance is also better when there is less gender diversity.

These results showed that board size value of t-test revealed the estimation value is 3.60, Coef. value of 0.001 and p-value of 000 ( $p < 0.01$ ). Therefore, this indicates that the board size had a positive and significant ( $p < 0.001$ ) impact on financial performance (ROA). Research by AlHares et al. (2019) and Duc and Phan (2013) reached similar conclusions, namely that a larger board was associated with better financial results. Similarly, the data supported the notion that big board size results in optimal value maximizing outcomes for major corporations.

The results showed that the frequency board meetings value of t-test revealed the estimation value is -1.69, coefficient-value of 0.000 and p-value of 0.093 ( $p < 0.1$ ). Therefore, this indicates that the frequency of board meetings of directors was significant at the level of  $P < 0.01$  significance. It is concluded that the frequency board meetings had a positive and significant impact on financial performance (ROA). The results indicate that a larger number of board meetings increases bank financial performance. This finding is also confirmed by Dalton et al. (1998) and Sanda et al. (2010). These studies have found that board meetings positively affect financial performance.

This study's findings showed that Independent Directors of t-test value revealed the estimation value is -0.20, the coefficient value is 0.000 and the p-value is 0.838 ( $p > 0.05$ ). Ghosh (2006), and Sarkar et al. (2008) both showed that the Independent Director had an insignificant effect on financial efficiency (ROA). ACS and ACM have no significant impact. This suggests that the frequency of ACS and ACM lacks some predictive ability on the financial performance of banks. The evidence for this outcome is supported by Ararat et al. (2017) and Bansal and Sharma (2016).

Going by the findings of regression analysis, bank age does not significantly affect financial performance. Bank size and leverage have a statistically significant effect on ROA.

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## CONCLUSION

The aim of this study is to determine how corporate governance issues affect the intellectual capital performance of Indian banks. In the context of the relationship between CG and IC, it can be observed that corporate governance has the potential to influence management decision making.

The results also showed that the Board independence and board size showed a significant positive relationship with the financial performance (ROA) of the banks, whereas board diversity was found to have a negative influence on the financial performance (ROA) of banks. The results of the study suggest that the better the corporate governance, the better the financial performance of banks. This result indicates that corporate governance is an important factor for ensuring the financial soundness of banks. Therefore, it is important for the boards of the banks to ensure that the corporate governance practices are being implemented effectively.

## IMPLICATIONS FROM THE STUDY

The findings of the study can be useful to bank managers, regulators, legislators, and academicians. They would also help those in other financial sectors. The findings of this study would also enable standard setters and regulatory agencies in India to adjust the present corporate governance code to improve VAIC in Indian banks. While developing the IC, authorities should also think about drafting sector-specific recommendations for the banking industry. This study will motivate legislators to make rules because Indian banks depend on trained employees and technology to produce necessary abilities in a competitive scenario. Then this will transform the supervisor's behavior in understanding VAIC and taking the necessary steps to manage financial and intangible assets to increase efficiency and productivity.

## RESEARCH LIMITATIONS AND FUTURE DIRECTIONS

This study has a few limitations, which highlight the need for further studies. The study was conducted on the impact of corporate governance on the intellectual capital performance of the Indian banking sector. However, the intellectual capital of the Indian banks is also influenced by other corporate governance factors. Future studies should include other corporate governance factors. The study used secondary sources to gather data, mainly RBI Data Warehouse and IBS annual reports. Future studies can use primary data such as surveys and interviews to better understand factors affecting intellectual capital and financial performance. The study used the multiple regression method to investigate the effect of corporate governance on intellectual capital and financial performance. Future studies may employ alternative estimating methods such as scope analysis. VAIC technique was used in this study to measure intellectual capital, but this method is a difficult one. Future research may employ a different method to accurately quantify the intellectual capital of banks.

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