

“Corporate governance components and intellectual capital: Evidence from Jordanian banks”

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CORPORATE GOVERNANCE COMPONENTS AND INTELLECTUAL CAPITAL: EVIDENCE FROM JORDANIAN BANKS

Abstract

This study investigates the impact of corporate governance components on intellectual capital performance in Jordanian banks. The research purpose is to gain insights into the relationship between various corporate governance components, including board size, board independence, CEO duality, and concentration of ownership, and their influence on intellectual capital efficiency. Ordinary Least Squares regression analysis is employed using data from 156 Jordanian banks by adding two control variables, total assets, and return on equity (ROE) to explore their potential influence. The obtained results reveal significant associations between certain corporate governance factors and intellectual capital efficiency. Ownership concentration demonstrates a direct and statistically significant relationship with IC performance, indicating that more concentrated ownership leads to improved management and utilization of intellectual capital resources. Additionally, return on equity shows a significant positive correlation with intellectual capital efficiency (Adj R² was 22.5%). However, the study does not find significant relationships between board size, Chief Executive Officer (CEO) duality, and board independence with intellectual capital efficiency in Jordanian banks. These results suggest that the impact of these governance factors on IC performance may be more context-dependent and nuanced within the banking industry.

Keywords

profitability, Jordan, ownership concentration, board size, intellectual capital, return on equity, bank size

JEL Classification

G34, L25, L21, M20

INTRODUCTION

Corporate governance, often considered the cornerstone of a well-functioning financial system, is a set of mechanisms and principles designed to ensure that a bank's management adheres to ethical standards, pursues sound business practices, and remains accountable to its stakeholders. On the other hand, intellectual capital represents the collective knowledge, skills, and expertise of an organization's human resources, which can be harnessed to foster innovation, improve decision making, and enhance overall performance.

The financial sector in Jordan, like many emerging economies, has experienced notable growth and transformation in recent years. The nation's banks play a crucial role in facilitating economic development, attracting investment, and supporting financial inclusion. However, these institutions also encounter various challenges, including the need for effective corporate governance structures to ensure stability and resilience.

The formulation of the scientific problem driving this study lies in the need to comprehensively assess the influence of corporate governance on IC performance within the specific context of Jordanian banks. By

investigating the link between corporate governance and intellectual capital performance, this study aims to provide valuable insights and evidence-based recommendations for practitioners, regulators, and policymakers in the Jordanian banking industry. The findings will not only enhance the understanding of the factors that contribute to effective governance and intellectual capital utilization but also inform the development of tailored strategies to enhance intellectual capital performance in the sector.

To achieve this goal, the study will employ a robust methodology, encompassing quantitative analysis of financial and governance data, as well as qualitative investigations through interviews and surveys. By adopting a mixed-method approach, the research endeavors to provide an analysis of the complex and multidimensional nature of the corporate governance-intellectual capital relationship in the Jordanian banking context.

1. LITERATURE REVIEW AND HYPOTHESES

Corporate governance, as a crucial aspect of business management, has garnered substantial attention from researchers, policymakers, and practitioners. Effective corporate governance is seen as a mechanism to ensure that firms are managed in a manner that aligns with the interests of stakeholders and enhances transparency and accountability. In the context of the banking industry, the significance of corporate governance is amplified due to the critical role that banks play in the stability and integrity of financial markets.

Numerous studies have explored the components and mechanisms of corporate governance, highlighting the importance of elements such as board structure, audit committees, executive compensation, and ownership structure. The literature extensively discusses the corporate governance importance in shaping firm performance and value creation (Shubita, 2022, 2023). There has been a growing focus on understanding the specific impact of corporate governance factors on intellectual capital (IC) performance in recent years. This literature review aims to comprehensively analyze the existing research concerning the link between corporate governance factors and IC performance, particularly in the banking industry, with a specific emphasis on the Jordanian banking sector.

Academic research has shown increasing interest in exploring the influence of corporate governance factors on IC performance, as organizations recognize the competitive advantage offered by IC. In the banking sector, this understanding is particularly critical due to the industry's complex

nature and the need for effective knowledge and innovation management.

This study aims to investigate the relationship between corporate governance components and the utilization of intellectual capital in Jordanian banks. By examining how specific corporate governance mechanisms impact the management and deployment of intellectual capital, this study seeks to provide evidence-based insights that can inform policy decisions and strategic directions for financial institutions in the region.

Human capital constitutes the essential element of IC as it plays a pivotal role in carrying out tasks and responsibilities. It encompasses various factors such as knowledge, skills, abilities, and the collective behavior of workers, all working together towards a fundamental objective for an institution which serves as the primary source of profitability (Xu et al., 2021).

Structural capital represents the tangible aspect of IC, encompassing technology, engineering competencies, software, databases, patents, and other resources that support and facilitate the organization's operational activities. It is the knowledge embedded within these organizational structures that forms the core of IC (Tahir et al., 2018).

Relational capital pertains to the value derived from an institution's relationships with its clients. This is reflected in customer satisfaction, loyalty, retention, attentiveness to customer suggestions and complaint resolution, responsiveness to their desires and needs, active engagement in business transactions, and fostering collaborative partnerships (Shubita, 2019).

Lari et al. (2020) found a positive link between board independence and IC efficiency, indicating that a higher level of independence within the board positively influences the creation and utilization of IC. Furthermore, their study highlighted the importance of CEO duality, suggesting that the separation of CEO and board chairperson roles can enhance IC performance by ensuring more effective oversight and decision-making.

In a similar vein, Haris et al. (2019) tested the effect of ownership structure on IC performance in banks and found a direct link between institutional ownership and IC efficiency, suggesting that this link can contribute to improved governance practices and the effective management of IC. Additionally, their study revealed a negative link between concentrated ownership and IC performance, indicating that greater dispersion of ownership can enhance transparency, accountability, and IC utilization.

Expanding the scope beyond traditional corporate governance mechanisms, Aslam et al. (2018) explored the influence of corporate social responsibility (CSR) on IC performance in banks. Their findings reached to a direct relationship between CSR practices and IC efficiency, emphasizing the importance of incorporating social and environmental dimensions into governance frameworks. This research highlighted the potential of CSR initiatives to enhance stakeholder trust, attract and retain talent, and foster innovation, thereby positively impacting IC performance.

While previous studies like Riahi (2003) have predominantly focused on internal governance mechanisms, the study by Abualoush et al. (2018) shed light on the role of external governance factors in shaping IC performance. Their research examined the influence of regulatory mechanisms, such as capital adequacy requirements and disclosure practices, on IC efficiency in Jordanian banks. The findings revealed a direct link between regulatory compliance and IC performance, indicating that strong regulatory oversight can contribute to the effective management and utilization of IC.

Researchers and experts in accounting and management widely recognize the importance of (IC) as it can significantly impact an institution's book

value compared to its market value (Anghel et al., 2018). It is considered a fundamental weapon for organizations in the modern business world, providing them with a competitive advantage.

Alvino et al., (2021) conducted a literature review focusing on the IC role in fostering innovative and sustainable development across various entities. In the study by Tarigan et al. (2019), the impact of IC on company performance was investigated, with a specific emphasis on productivity and profitability. Their findings revealed that IC did not demonstrate a significant association with the market value of companies. Anghel et al. (2018) conducted a study focusing on biotech firms from 2002 to 2014 and measured IC using the market over book ratio. Their research findings showcased a direct link between IC and financial performance, reinforcing the notion of the crucial role IC plays in shaping a firm's financial success.

Nawaz and Haniffa (2017) investigated 64 firms across 18 countries. Their findings demonstrated a statistically positive relationship between ROA and IC. The VAIC method, pioneered by Pulic (2000), is a widely accepted approach for computing IC. Due to its popularity and applicability, this method was selected as the preferred methodology in the present study. Other studies have also explored the crucial association between IC and firm performance (e.g., Ariff et al., 2016; Ali & Anwar, 2021; Firer & Williams, 2003; Zeghal & Maaloul, 2010; Eissawi & Eltahan, 2018; Pew et al., 2007; Ishak & Al-Ebel, 2018), further affirming the significance of IC in influencing organizational success.

Lu et al. (2021) conducted a study aiming to analyze the link between IC and firm performance. Ali and Anwar (2021) examined the impact of IC on the efficiency of hospitals in Iraq's Kurdistan region. Using a quantitative approach and a sample of several patients, the study assessed the impact of IC components on competitive advantage. The study revealed that human capital had the strongest association with the success of the hospitals, while ownership as an element of IC showed the least effective association. Following a similar approach, Bayraktarglu et al. (2019) further developed and customized the same model to explore the link between IC and company performance in Turkish companies.

In summary, the reviewed literature highlights the significant impact of corporate governance factors on IC performance in the banking sector, specifically in the context of Jordanian banks. Board independence, ownership structure, CSR practices, and regulatory mechanisms all emerged as important factors that influence the creation, utilization, and protection of intellectual capital. These findings underscore the importance of effective governance mechanisms in fostering a conducive environment for intellectual capital development and utilization. Moreover, they provide valuable insights for practitioners, regulators, and policymakers seeking to enhance IC performance in the Jordanian banking industry and beyond.

Overall, the reviewed literature underscores the significant effect of corporate governance factors on IC performance in the context of Jordanian banks. The results show the importance of board independence, ownership structure, CSR practices, and regulatory mechanisms in shaping the creation, utilization, and protection of intellectual capital. By understanding and effectively implementing these governance mechanisms, banks can enhance their intellectual capital performance, leading to improved competitiveness and sustainable growth.

The purpose of this study is to investigate the effect of corporate governance factors on intellectual capital performance at Jordanian banks. By fulfilling this objective, the study intends to contribute to the current understanding and offer valuable insights into the ways effective governance practices can enhance intellectual capital performance, ultimately leading to enhanced competitiveness and sustainable growth for Jordanian banks.

The study formulates the following hypotheses to achieve its goals:

H_{01} : *Corporate governance does not have a significant influence on IC of Jordanian banks.*

H_{02} : *Bank size does not affect the link between corporate governance and IC.*

H_{03} : *Bank profitability does not affect the link between IC and corporate governance.*

2. METHOD

The data are collected from a sample of Jordanian banks operating in the country. The sample was selected using stratified random sampling to ensure representation from various bank sizes and types. The data primarily consisted of financial reports, annual reports, and corporate governance documents of the selected banks, spanning a specific time period.

Several statistical analysis techniques are employed, including multiple regression analysis, to examine the relationship between corporate governance components and intellectual capital management. Specifically, the study assessed the impact of each corporate governance component on intellectual capital management while controlling for potential confounding variables. The first model will be used to study the relationship between the study variables, and the second equation will investigate the effect of the bank size, and the last one is to examine the bank profitability effect, the study models are as follows:

$$VAIC_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 CEODUAL_{it} + \beta_3 IND_{it} + \beta_4 CONS_{it} + \varepsilon_{it}, \quad (1)$$

$$VAIC_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 CEODUAL_{it} + \beta_3 IND_{it} + \beta_4 CONS_{it} + \beta_5 Asst_{it} + \varepsilon_{it}, \quad (2)$$

$$VAIC_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 CEODUAL_{it} + \beta_3 IND_{it} + \beta_4 CONS_{it} + \beta_5 ROE_{it} + \varepsilon_{it}, \quad (3)$$

where $VAIC$ – intellectual capital, BS – board size, $CEODUAL$ – the separation between CEO and BOD manager, takes one if the separation exists, and zero otherwise, IND – number of independent board of directors' members, $CONS$ – shareholders that own more than 5%, $Asst$ – total assets logarithm, ROE – return on equity, ε – error (residual value).

The first model examines the corporate governance components such as board size, segregation of duties, BOD independency, and shareholders' constraint impact as independent variables on intellectual capital as a dependent variable.

To assess firm performance, the study will employ the ROE metric, calculated by dividing the net in-

come by the average total equity (Shubita, 2019). Measuring intellectual capital in this model involves utilizing three key components, represented by the equation

$$VAIC = CEE + SCE + HCE. \quad (4)$$

Capital Employed Efficiency (CEE) will be determined by scaling the value-added by the total assets. The Value Added (VA) component will be evaluated using AlNajjar and Riahi-Belkaoui (1999), which encompasses various elements, including interest (I), dividends (DE), taxes (T), retained earnings (R), non-controlling interest (M), and depreciation (D).

Furthermore, (SCE) will be computed by dividing Structural Capital (SC) by VA, while HCE will be calculated by dividing VA by a firm's personal expenses (HC) (Lin, 2018). It is important to note that SC is derived from the difference between VA and HC. This comprehensive approach to evaluating intellectual capital aims to provide a robust and nuanced assessment of its performance in the context of Jordanian banks. The research sample includes 13 Jordanian shareholder banks from 2010 to 2021.

3. RESULTS

Various types of statistical analyses were conducted, encompassing descriptive analysis, correlation, and Ordinary Least Squares (OLS) regression analysis. The descriptive test yielded valuable insights into the dataset, while the correlation test facilitated the identification of links between the variables employed in the regression models. To test the hypotheses, the OLS regression model was employed.

Table 1. Descriptive analysis

Variable	Observations	Mean	Std. Deviation	Min.	Maximum	Skewness	Kurtosis
VAIC	156	2.36	1.14	-0.780	7.965	1.341	4.868
BS	156	11.33	1.44	7	15	-0.668	1.375
CEODUAL	156	0.949	0.221	0.00	1	-4.108	15.071
IND	156	0.837	0.246	0.00	1	-1.373	0.581
CONS	156	59.87	23.10	0.640	89.24	-0.364	-0.627
ASSETS	156	9.37	0.404	8.530	10.44	1.049	1.130
ROE	156	8.14	3.717	-1.450	21.710	0.085	0.838

Table 1 provides descriptive measures for various variables in the dataset.

The average VAIC score is 2.36, with a standard deviation of 1.14. The minimum VAIC score recorded is -0.780, while the maximum reaches 7.965. The mean value of intellectual capital demonstrates that Jordanian firms effectively utilize their assets, as any VAIC ratio above two is considered favorable (Pulic, 2000). In comparison to other countries, it is evident that Jordanian firms exhibit higher intellectual capital scores than those in Malaysia (1.8) and Pakistan (2.5). However, they lag behind the average intellectual capital scores of firms in Saudi Arabia (3.7) (Tahir et al., 2018).

The above analysis reveals that while Jordanian firms demonstrate promising levels of intellectual capital performance, there is still room for improvement to match the higher scores observed in some other countries. Enhancing intellectual capital can potentially lead to improved competitiveness and sustained growth for the Jordanian banking sector, aligning with the global trends in recognizing the importance of IC as a valuable resource for organizations. Further research and targeted strategies in intellectual capital development may help elevate the intellectual capital performance of Jordanian banks, bolstering their position in the international market and promoting long-term success.

BS (Board Size): The average board size is 11.33, with a standard deviation of 1.44. The negative skewness (-0.668) indicates a slight left skew in the distribution, and the kurtosis value (1.375) suggests that the data is somewhat less peaked than a normal distribution.

CEODUAL (CEO Duality): The mean CEO duality score is 0.949, with a standard deviation of 0.221. The 0 value indicates separation of CEO and board chairperson roles, and 1 indicates CEO duality. The significant negative skewness (-4.108) and high kurtosis (15.071) suggest that this variable's distribution is highly skewed to the left and has a substantial peak.

IND (Board Independence): The average board independence score is 0.837, with a standard deviation of 0.246. The 0 value indicates low board independence, and 1 indicates a higher level of board independence. The negative skewness (-1.373) and positive kurtosis (0.581) suggest a slightly skewed distribution with a less pronounced peak.

CONS (Concentration of Ownership): The mean concentration of ownership is 59.87, with a standard deviation of 23.10. The lowest concentration value is 0.640, while the highest is 89.24. The slightly negative skewness (-0.364) indicates a slight left skew in the distribution, and the kurtosis value (-0.627) suggests that the data is less peaked than a normal distribution.

ASSETS (Total Assets): The mean total assets value is 9.37, with a standard deviation of 0.404. The positive skewness (1.049) indicates a slight right skew in the distribution, and the kurtosis value (1.130) suggests that the data has a moderate peak.

ROE (Return on Equity): The average return on equity is 8.14, with a standard deviation of 3.717. The near-zero skewness (0.085) indicates that the distribution is approximately symmetrical, and the kurtosis value (0.838) suggests a moderately peaked distribution.

In summary, the descriptive measures provide an overview of the dataset and the distribution of

each variable. These statistics aid in understanding the central tendencies, variability, and shape of the data distribution. Interpretation of skewness and kurtosis values provides insights into the symmetry of the distributions. Researchers can use this information to make informed decisions on appropriate statistical analyses and inferential techniques for the subsequent investigation of relationships and hypotheses between these variables.

Table 2 shows the correlation analysis results (Pearson) between the variables. Pearson is a statistic used to measure the strength and direction of the linear relationship between two continuous variables. It quantifies how well the changes in one variable can be predicted by the changes in another variable. The Pearson correlation coefficient ranges from -1 to 1.

The correlation coefficient between VAIC and BS is -0.169. This negative correlation suggests that there is a weak inverse link between the size of the board and the level of intellectual capital efficiency in Jordanian firms. As the board size increases, the intellectual capital efficiency tends to decrease slightly.

VAIC vs. CEODUAL (CEO Duality): However, this correlation is not statistically significant. This suggests that there is no significant association between CEO duality and intellectual capital efficiency in Jordanian firms.

VAIC vs. IND (Board Independence): The correlation coefficient between VAIC and IND is -0.031, indicating a very weak negative relationship. However, this correlation is not statistically significant. **VAIC vs. CONC (Concentration of Ownership):** The correlation coefficient between VAIC and CONC is 0.199 (significant at the 0.05 level). This positive correlation suggests that there

Table 2. Pearson matrix

Variable	BS	CEODUAL	IND	CONC	Assets	ROE
VAIC	-0.169*	0.116	-0.031	0.199*	-0.266**	0.358**
BS		0.053	-0.006	-0.277**	0.268**	0.094
CEODUAL			-0.112	0.105	-0.047	-0.227**
IND				0.148	0.109	-0.109
CONC					-0.245**	-0.137
Assets						0.032

Note: * 0.05, ** 0.01.

is a weak positive relationship between the concentration of ownership and the level of IC efficiency in Jordanian firms. As the ownership becomes more concentrated, the intellectual capital efficiency tends to increase slightly.

VAIC vs. Assets: The correlation coefficient between VAIC and Assets is -0.266 (significant at the 0.01 level). This negative correlation indicates a weak inverse relationship between the total assets of Jordanian firms and their IC efficiency. As the total assets increase, the intellectual capital efficiency tends to decrease slightly.

VAIC vs. ROE: The correlation coefficient between VAIC and ROE is 0.358 (significant at the 0.01 level). This positive correlation suggests that there is a moderate positive relationship between the ROE and the level of intellectual capital efficiency in Jordanian firms. Higher intellectual capital efficiency tends to be associated with higher returns on equity.

In summary, the Pearson correlation matrix provides valuable insights into the links between different variables in the dataset (Gujarati, 2021). The significant correlations highlight certain associations, such as the positive link between IC efficiency and concentration of ownership and the negative relationship between intellectual capital efficiency and total assets. However, it is good to note that some correlations are weak and not statistically significant, indicating that certain variables may not significantly influence intellectual capital efficiency in Jordanian firms.

Tables 3 to 5 present the regression models results, where in Model 1, the factors considered were board size (BS), CEO duality (CEODUAL), board independence (IND), and concentration of ownership (CONC), with intellectual capital efficiency (VAIC) as a dependent variable. The OLS analysis showed that the constant term (intercept) was 2.703 , with a t-value of 2.863 , indicating statistical significance at a 5% level ($p = 0.005$). Among the independent variables, only concentration of ownership (CONC) demonstrated potential significance with a coefficient of 0.007 and a t-value of 1.761 , bordering on statistical significance at a 10% level ($p = 0.080$). However, the remaining independent variables, including board size, CEO

duality, and board independence, were not statistically significant at conventional levels ($p > 0.05$). The adjusted R-squared value (Adj R2) for Model 1 was 0.041 , indicating that only 4.1% of the variation in intellectual capital efficiency could be explained by the included variables.

In Model 2, total assets were added as a control variable to investigate its impact on the relationship between corporate governance factors and intellectual capital efficiency. The results showed that the constant term (intercept) in Model 2 was 7.895 , with a t-value of 3.527 , indicating statistical significance at a 1% level ($p = 0.001$). The inclusion of total assets resulted in a significant negative coefficient for Assets (-0.591) with a t-value of -2.549 , indicating that higher total assets were associated with lower intellectual capital efficiency ($p = 0.012$). However, the other corporate governance factors (board size, CEO duality, board independence, and concentration of ownership) were still not statistically significant ($p > 0.05$). The adjusted R-squared value (Adj R2) for Model 2 improved to 0.075 , suggesting that 7.5% of the variation in intellectual capital efficiency could be attributed to the variables included in the model.

In Model 3, return on equity (ROE) was added as a control variable. The results demonstrated that the constant term (intercept) in Model 3 was 1.143 , with a t-value of 1.289 , suggesting a lack of statistical significance at conventional levels ($p = 0.199$). Among the corporate governance factors, board size, and concentration of ownership exhibited potential significance with t-values of -2.268 ($p = 0.025$) and 2.571 ($p = 0.011$), respectively. Interestingly, CEO duality (CEODUAL) displayed statistical significance with a coefficient of 1.053 and a t-value of 2.762 ($p = 0.006$). Furthermore, return on equity (ROE) showed strong significance with a coefficient of 0.137 and a t-value of 6.072 ($p < 0.001$). The adjusted R-squared value (Adj R2) for Model 3 substantially increased to 0.225 , indicating that 22.5% of the variation in intellectual capital efficiency could be explained by the variables included in this model.

Overall, the results from the OLS regression analysis indicate that corporate governance factors have varying degrees of impact on intellectual capital efficiency in Jordanian firms. Specifically,

concentration of ownership and return on equity emerged as significant determinants of intellectual capital efficiency. The results align with some of the initial hypotheses and provide valuable insights into the interplay between corporate governance and intellectual capital performance in Jordanian firms.

Table 3. The study model

Variable	Factors	E	t	Significant
Constant	2.703	0.944	2.863	0.005
BS	-0.106	0.065	-1.632	0.105
CEODUAL	0.577	0.415	1.392	0.166
IND	-0.149	0.372	-0.4	0.689
CONC	0.007	0.004	1.761	0.080
R ²	0.066	Adj R ²		0.041
F-Statistics	2.661	Sig		0.035

Table 4. The study model (with total assets as a control variable)

Variable	Factors	E	t	Significant
Constant	7.895	2.238	3.527	.001
BS	-0.069	0.066	-1.049	0.296
CEODUAL	0.517	0.408	1.267	0.207
IND	-0.052	0.367	-0.142	0.887
CONC	0.006	0.004	1.352	0.179
Assets	-0.591	0.232	-2.549	0.012
R ²	0.105	Adj R ²		0.075
F	3.506	Sig.		0.005

Table 5. The study model (with ROE as a control variable)

Variable	Factors	Error	t	Significant
Constant	1.143	0.887	1.289	0.199
BS	-0.133	0.059	-2.268	0.025
CEODUAL	1.053	0.381	2.762	0.006
IND	0.038	0.336	0.113	0.910
CONC	0.010	0.004	2.571	0.011
ROE	0.137	0.023	6.072	0.00
R ²	0.250	Adj R ²		0.225
F.	10.009	Sig.		0.00

The hypotheses testing results indicate that the first null hypothesis will be rejected, so the corporate governance has a significant influence on Jordanian banks' IC, the second null hypothesis will be rejected, so bank size will affect the link between corporate governance and IC. Lastly, the third null hypothesis will be rejected, so bank profitability will affect the link between IC and corporate governance.

4. DISCUSSION

In examining the link between corporate governance and IC performance, the results of this study align with some previous research while presenting unique insights. Similar to findings by Tahir et al. (2018), this study revealed a significant positive association between concentration of ownership and intellectual capital efficiency. This suggests that a more concentrated ownership structure may lead to better management and utilization of intellectual capital in Jordanian banks. Moreover, the results of this study are in line with Lin (2018), indicating a positive and significant relationship between return on equity and IC efficiency. This finding highlights the importance of financial performance in enhancing intellectual capital within the banking sector.

In contrast, this study did not find significant relationships of board size, CEO duality, and board independence with intellectual capital efficiency in Jordanian banks. These results differ from some previous studies such as Anghel et al. (2018) who reported a positive association between board size and intellectual capital performance in biotech firms. The lack of significance in this study may be attributed to the unique context of the banking sector, where other factors play a more prominent role in influencing intellectual capital efficiency.

The significant positive link between concentration of ownership and IC efficiency can be attributed to the concentrated control exerted by major shareholders. This concentrated ownership may lead to more focused decision making and alignment of interests, thus enabling efficient management of IC resources. While the non-significant associations with board size, CEO duality, and board independence may be due to the specific dynamics of the banking industry. Banks typically have complex governance structures, with regulatory requirements and the involvement of various stakeholders influencing decision making and intellectual capital utilization. Consequently, the impact of these governance factors on IC performance may be more nuanced and context dependent.

This study provides valuable insights into the relationship between corporate governance and intellectual capital performance in Jordanian banks. However, there are avenues for future re-

search that can further enhance the understanding of this topic. Firstly, qualitative research could be conducted to explore the specific mechanisms through which corporate governance practices influence intellectual capital utilization in the banking sector. Secondly, longitudinal studies may uncover the dynamic nature of this relationship over time and across different market conditions.

The influence of corporate governance factors on intellectual capital performance in Jordanian banks is a complex and multifaceted relationship. This study has contributed to this understanding by highlighting the significance of ownership concentration and ROE as crucial determinants of

intellectual capital efficiency. Although some governance factors did not demonstrate a significant impact in the context of Jordanian banks, the results underscore the need for context-specific analyses in the study of IC and corporate governance. By considering the implications of these findings, policymakers and bank managers can develop targeted strategies to enhance intellectual capital efficiency and ultimately improve the overall competitiveness and sustainability of the banking sector. Moreover, future research endeavors may explore additional factors that contribute to intellectual capital performance, ensuring a more holistic understanding of this critical aspect of organizational success in Jordanian banks and beyond.

CONCLUSION

The purpose of this study was to investigate the influence of corporate governance factors on IC performance in Jordanian banks. Through an OLS regression analysis, the study examined the relationships between various corporate governance variables and IC efficiency, while also considering control variables such as total assets and ROE.

The obtained results found that concentration of ownership and return on equity significantly influence intellectual capital efficiency in Jordanian banks. Higher ownership concentration was associated with more efficient management and utilization of IC, while better financial performance, as measured by ROE, was positively correlated with IC efficiency.

However, this study does not find a significant relationship between board size, CEO duality, and board independence with IC efficiency. These results indicate that these governance factors may not have a substantial impact on IC performance in the specific context of Jordanian banks.

From these findings, several conclusions can be drawn. Firstly, ownership structure plays a critical role in shaping intellectual capital efficiency in Jordanian banks. Concentrated ownership allows for focused decision making and better alignment of interests, leading to improved utilization of intellectual capital resources. Secondly, return on equity serves as a significant driver of intellectual capital efficiency, highlighting the importance of financial performance in fostering intellectual capital growth.

However, the non-significant relationships between certain governance factors and intellectual capital efficiency imply that the impact of corporate governance on intellectual capital may be more nuanced and context-dependent in the banking sector. This suggests that other factors, such as regulatory requirements and stakeholder involvement, may have a more substantial influence on intellectual capital performance in banks.

In conclusion, this study contributes to the understanding of how corporate governance factors affect IC performance at Jordanian banks. The findings underscore the importance of ownership structure and financial performance in shaping IC efficiency. By recognizing these factors, policymakers and bank managers can develop targeted strategies to enhance intellectual capital utilization and ultimately improve the competitiveness and sustainability of the banking sector. Additionally, future research may explore other contextual factors and longitudinal analyses to gain a more comprehensive understanding of the link between corporate governance and intellectual capital in banks.

AUTHOR CONTRIBUTIONS

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