DOES GOVERNANCE QUALITY AFFECT TUNISIAN BANKS' BUSINESS STRATEGY PERFORMANCE?

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Abstract

This paper examines whether governance quality affects the effectiveness of business strategies in Tunisian banks. Using data from ten commercial banks observed from 2000 to 2021, the study analyzes how internal governance mechanisms influence strategic outcomes such as net banking income (NBI), market share, and credit policy. The results indicate that institutional investors and an effective board structure enhance strategic performance, while excessive control or power concentration reduces flexibility. Bank size and age also significantly affect outcomes, with older banks performing better. Robustness tests reveal a nonlinear effect of governance: moderate governance improves efficiency, but excessive governance becomes restrictive. Unlike earlier studies that report uniformly positive effects of governance, this research highlights a contextual and asymmetric relationship, showing that private banks benefit more from governance improvements than public (state-owned) banks. Finally, depending on whether the strategy is offensive or defensive, governance can vary in ways that support flexible strategic behavior.

Keywords: Bank Strategy, Governance Mechanisms, Offensive, Defensive, Market Share, Net Banking Income, Loan Policy

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1. INTRODUCTION

Banks play a key strategic role, especially in an emerging economy such as Tunisia. They provide financial intermediation between savings and investments as well as loans and facilitate business financing (Demirgüç-Kunt & Detragiache, 1998). Furthermore, in times of economic instability where macroeconomic uncertainty, political indecision, and complex consumer perceptions influence market behavior, the normative role of bank governance will be crucial in promoting the financial stability and profitability of such institutions (Shleifer & Vishny, 1997). How banks design and execute their business strategy (i.e., how they consider components such as lending, market share, and profitability) will only be partly determined by their governance mechanisms.

Bank governance concerns the organization of power structures and decision-making processes in banks. Many factors influence the orientation of decisions, including the composition of the board of directors, the transparency of practices, and the balance of power between shareholders and managers. According to Jensen and Meckling (1976), good governance aligns the interests of the bank's shareholders and managers and therefore leads to strategically beneficial decisions aimed at profitability and limiting any associated risks. These decisions influence the business policies of these banks and thus affect, for example, their provision of credit, financial risk management, and expansion of their investment portfolios. The role of the board of directors in governance was explained by Fama and Jensen (1983), who argued that independent and diverse members can achieve optimal decisions and better manage risks. In this regard, numerous studies have been conducted examining the relationship between bank governance and the strategic performance of financial institutions. For instance, Bhagat and Bolton (2008) showed that

independent boards are often positively correlated with financial performance, leading to better business strategies. Berger et al. (2008) additionally noted that banks with better governance engage in lower-risk strategies and are more focused on long-term profitability. Berger et al. (2005) also showed that banks with better governance, characterized by independent boards, adopt more aggressive business strategies, allowing banks to increase their net banking income (NBI) and market share (MS).

Bank governance becomes even more crucial in the context of market concentration, as demonstrated by Laeven and Levine (2009). In concentrated banking markets, strong governance becomes a key discriminator, allowing banks to better manage their credit policy and adopt effective strategies. In addition, Adams and Mehran (2012) explored the impact of diverse governance on bank strategy, highlighting that diversified and independent boards of directors allow for better credit management and diversification of financial products, thereby optimizing bank profitability. Bank governance reforms have evolved to help banks adapt to new regulations. Caprio et al. (2007) highlight that effective governance mechanisms enable banks to comply with regulations while remaining competitive. In contrast, public (state-owned) banks have more difficulty following these reforms. According to Dibra and Bezo (2021), good governance helps banks mitigate credit risks and adapt to crises. Elnahass et al. (2023) found that banks with strong governance and diverse boards are associated with greater stability and resilience, indicating that effective governance and board diversity enhance banks' performance. Zhao et al. (2025) confirm that effective mechanisms help manage risks and maintain profitability, unlike public banks with more rigid structures. According to the International Monetary Fund (IMF, 2015), public banks account for roughly 37–38% of total banking assets in Tunisia, positioning them as the dominant shareholder within the national banking sector. However, the public banks face governance concerns with respect to their transparency and politicization of decision-making, which affect performance. In contrast, private banks may have less economic power, but offer greater flexibility in governance, thus allowing them to act more responsively towards economic shocks.

Based on the above literature, this article aims to answer the following research question:

RQ: Does governance quality affect the effectiveness of Tunisian banks' business strategies (including profitability, market share, and credit policy management), and does this impact differ between public and private banks?

To answer this question, the paper contributes to the literature by providing new empirical evidence in an emerging economy. It examines how internal governance mechanisms affect business strategies and explores contextual differences between private and public banks. Additionally, this study examines whether governance encourages offensive (growth-oriented) or defensive (risk-averse) strategies, contributing to a deeper understanding of strategic behaviour in the Tunisian banking sector.

The remainder of this paper is structured as follows. Section 2 reviews the theoretical and empirical literature on governance and banking strategy. Section 3 presents the data, variables, and econometric models. Section 4 presents empirical evidence on the impact of internal governance mechanisms on business strategy. Section 5 conducts robustness checks to confirm the consistency of the results. Finally, Section 6 concludes the study by outlining its main findings, discussing its limitations, and suggesting directions for future research on governance and strategic performance in the Tunisian banking sector.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This section examines the impact of governance mechanisms on the business strategy of Tunisian banks. Elements such as the size and independence of the board of directors, CEO duality, and capital concentration affect strategic decision-making and bank performance. Hypotheses are formulated to assess their impact on profitability, market share, and credit policy.

2.1. Board size

Board size can affect a bank's business strategy. According to Yermack (1996), a large board of directors (BoD) can slow down decision-making and prevent a bank from quickly responding to market conditions and adjusting its lending policy, while a small board of directors lacks skill diversity, limiting strategic choices and negatively impacting bank revenue management and market share growth. Public banks in Tunisia are likely to have larger and more politicised boards, limiting their strategic flexibility and decision-making effectiveness. In contrast, private banks can adapt more quickly to economic challenges thanks to smaller boards and lower levels of political controversy. Consequently, while larger boards may be more inclined to innovate and grow, smaller boards tend to pursue more stable and prudent banking strategies.

Board size can play a significant role in a bank's business strategy. As Jensen and Meckling (1976) suggest, larger boards offer a broader range of opinions and perspectives regarding innovation, risk management, and profitability. However, the effectiveness of larger boards has its limits, as such boards become less dynamic and less able to respond to market changes (Kiel & Nicholson, 2003).

H1: A larger board size will have a positive effect on the business strategy of Tunisian banks as measured by market share, net banking income, and loans.

2.2. Board Independence

Board independence is a fundamental element of governance quality in banking institutions. According to Fama and Jensen (1983), it enables better control of management decisions and mitigates conflicts of interest. Bhagat and Bolton (2008) demonstrate that an independent BoD can improve profitability and facilitate more effective risk management. However, in Tunisia, independence is often limited in public banks, where boards are influenced by politics. This can hinder profit- and growth-oriented decision-making. Conversely, private banks with more autonomous boards are more ready to adopt performance-oriented strategies. However, a fully independent

BoD may be insensitive to the local context. Therefore, a balance is necessary. Consequently, the more independent the board of directors, the more flexible and competitively oriented the business strategy.

H2: Board independence has a positive effect on the business strategy of Tunisian banks, measured by market share, net banking income, and loans.

2.3. Duality of leadership

When one individual serves as both the CEO and the board chair, it often leads to significant governance issues. Duality not only weakens opposing viewpoints but also limits the authority of the board hierarchy (Boyd, 1995; Dalton et al., 1998). According to Ben Rejeb (2021), the duality of functions in management tends to concentrate power, increasing the possibility of political interference in Tunisian banks, which could be reflected in weakened financial performance. On the other hand, in private banks, decisions are made more quickly, but sometimes with less control in private banks (Fama & Jensen, 1983; Brickley et al., 1997). This concentration of power may also be viewed by some experts as a positive outcome, as it can lead to more proactive "fast" responses in turbulent situations (Johnson et al., 1996). Thus, it is important to address the balance between control and authority (Zahra & Pearce, 1989; Jensen, 1993; Daily & Dalton, 1994; Adams et al., 2010). As a result, duality may facilitate the speed of decision-making, but it will likely incur some cost in terms of governance, profit, and transparency in the future.

H3: The duality of the roles of CEO and Chairman of the board of directors negatively affects the commercial strategy of Tunisian banks due to excessive concentration of power and less transparent management.

2.4. Management ownership

Managers of a bank are more motivated to effectively manage the bank when they hold stock in the company. Jensen and Meckling (1976) argue that the more shares they own, the more actively they work to improve the bank's growth and profitability. This motivates them to effectively manage loans, risks, and earnings. However, if they own few shares, they are less motivated and often take fewer risks, which can hinder growth.

Managers of public banks in Tunisia hardly ever own stock. This reduces their influence on crucial choices. Private banks, on the other hand, are often more proactive and make decisions aimed at more effective risk and credit management. When managers are also owners, they think more long-term and seek profitable solutions. However, if a single person or a small group owns almost everything, this can lead to problems because they may only think about their own interests. Low management equity can also limit new ideas and the banks' competitiveness. In short, the more equity management invests, the more they help the bank succeed.

H4: Higher management ownership in banks has a positive impact on business strategy, especially in terms of profitability and market expansion.

2.5. Blockholders

Capital concentration significantly influences bank strategies. If only a few shareholders hold the majority of shares, decisions are made more efficiently and centralized (La Porta et al., 1999). This can be beneficial in complicated contexts. However, capital concentration limits the diversity of ideas and makes a bank less risk-averse and innovative. Capital concentration limits a bank's ability to explore new opportunities and markets. Moreover, the literature suggests that high capital concentration can also lead to agency issues (Shleifer & Vishny, 1997). This means that the strategic choices can be used to serve political and/or personal objectives, rather than corporate objectives that would enhance long-term performance. Public banks in Tunisia are under government influence, which may have negative impacts on their profitability due to political decisions. Furthermore, capital concentration can decrease innovation and smother the bank's attempts to act in a creative way by causing the firm to adopt a small number of safe and traditional strategies. This is damaging to its competitiveness. Finally, high concentration frequently relates to a low level of institutional ownership, so that it is harder to satisfy the interests of foreign investors; minority shareholders have low influence in strategic decisions, which indirectly affects external financing. In conclusion, since ownership is concentrated, attenuation mechanisms for faster decision-making do exist. They could prove to be unfavourable for strategic diversity as well as for innovation. Banks must find a balance to prevent such concentration from becoming a factor hindering their competitiveness and ability to adapt to market changes.

H5: Capital concentration has a negative effect on business strategies, making them more conservative and less focused on expansion and innovation, due to conflicts of interest between shareholders.

2.6. Institutional investors' ownership

Institutional investors have a fundamental impact on a company's strategic decisions. According to Agrawal and Mandelker (1990), they encourage bank managers to increase the bank's long-term profitability. Shleifer and Vishny (1997) note that these investors also facilitate more effective monitoring of managers' activities. Through their presence, banks can choose to pursue profit, control risks effectively, and develop their activities effectively (Gillan & Starks, 2003). Conversely, in Tunisia, these investors are virtually absent, particularly in public (state-owned) banks. In the latter, political considerations, rather than performance, influence decisions (La Porta et al., 2002; Cornett et al., 2010), as they prefer prudence to innovation, and, consequently, are less competitive. However, for Tunisian private banks, greater institutional investor participation may facilitate effective risk management and strategy implementation (Bushee, 1998) and give banks additional leverage in a challenging economic environment, enabling them to attract and win more investors (Bebchuk & Weisbach, 2010).

H6: The greater share of institutional investors in bank equity is associated with business strategies that are more focused on long-term profitability and innovation.

3. RESEARCH METHODOLOGY

3.1. Data collection

This study examines the 10 largest commercial banks out of 23 banks operating in the Tunisian market. These banks were selected based on their strong positions in the sector, particularly in terms of turnover, loan volume, and net banking income (NBI). These banks include: Banque de Tunisie (BT), Banque Nationale Agricole en Tunisie (BNA), Banque Internationale Arabe de Tunisie (BIAT), Housing Bank (BH), Attijari Bank (ABT), Société Tunisienne de Banque (STB), Amen Bank (AB), Arab Tunisian Bank (ATB), Union Bancaire pour le Commerce et l'Industrie (UBCI) and Union Internationale de Banques (UIB). The data was obtained from DataStream and the banks' official websites. The sample is observed during the 2000 to 2021 period, in which events of geopolitical significance also impacted the Tunisian economy and, consequently, the banking sector. This period was marked by the crises of 2007 (financial crisis), 2011 (social crisis), and 2020 (COVID-19 pandemic), which influenced banks' specific business strategies.

3.2. Variable measurement

3.2.1. Dependent variables

In this study, we use three dependent variables to measure the business strategy of Tunisian banks: market share (*MS*), loan ratio (*LOANS*), and net banking income ratio (*NBIR*).

Market share (*MS*) is a key indicator of a bank's business strength, measuring its competitiveness and ability to capture a proportion of the assets and customers available in the sector. It is often calculated as the ratio of a bank's revenue (*TR*) to total revenues of the banking sector, allowing for a direct assessment of its relative market position. According to Porter (1980), market share reflects a firm's competitiveness, and in the banking sector, a high market share signals a successful strategy for growth and expansion. In transition markets such as Tunisia, where competition is sometimes limited by concentrated ownership structures and complex regulation, market share becomes a fundamental indicator to assess the impact of a bank's business strategy.

$$MS_{i,t} = TR_{it} / \sum_{i=1}^{i=10} TR_{it} \quad (1)$$

Capon et al. (1990) state that companies generally respond to growth by offering different products and changing them. Market share appears to be a reasonably good indicator of the competitiveness and flexibility of Tunisian banks, especially in the changing landscape of the banking sector.

Loan ratio (*LR*) is one of the key indicators to understand the strategy of a bank in conducting its business. It explains how the bank manages growth, risk, and customer servicing. The ratio could be the absolute amount of loans (*LOANS*) to the total assets (*TA*) of the bank. This ratio reveals the approach to financing and strategic priorities.

$$LR_{i,t} = \frac{LOANS_{it}}{TA_{it}} \quad (2)$$

Berger et al. (1995) observed that loans represent the main source of bank income. High lending volumes indicate a bank's intention to grow and increase its market share. In contrast, low loan volumes indicate a bank's prudence and risk management. Because lending volumes attract and retain customers, they provide banks with choice. In Tunisia, offering a variety of loan types will facilitate bank growth and support the economy.

Net banking income ratio (*NBIR*) is a key variable for assessing a bank's business performance. It is calculated as the sum of net interest, commissions, and other banking income generated by the bank's core activities, namely financing, account management, and banking services. NBIR, therefore, reflects the gross profitability of banking operations before deduction of expenses and taxes.

$$NBIR_{i,t} = \frac{NBI_{it}}{TA_{it}} \quad (3)$$

Bikker and Hu (2012) considered *NBIR* as the most widely used indicator that measures how a bank is executing its business strategy. A considerably high value of *NBIR* indicates that the bank has successfully maximized its revenue sources while controlling its cost management. The bank's ability to attract a wider scope of customers is also imperative. A considerably high value for NBIR indicates that the bank can also leverage its assets effectively through loans and investments, and diversification of financial services.

3.2.2. Independent variables

We use variables linked to internal governance mechanisms, in particular variables representing ownership structure and board characteristics.

Ownership structure determines how a bank's shares are distributed and how shareholding influences decision-making. Ownership structure can be assessed by the following variables:

- *Concentration of capital* (*CONC*) is the share owned by the top five shareholders. If high, a small group controls the bank and can greatly influence decisions, particularly profits and risk.
- *Management ownership* (*MOW*) shows the number of shares owned by the managers of the bank. The greater the shares owned by managers, the more likely they are to act in the interests of the bank over the long term.
- *Institutional ownership* (*INST*): Refers to the ownership of bank shares by large investors, such as pension funds, insurance companies, and other financial institutions. These investors usually motivate the bank to improve performance and can influence decision-making by monitoring the bank and voting.

The board of directors can be measured in the following variables:

- *Board size* (*BSIZE*) is the total number of members on the board of directors. Larger boards may provide more skills, but they may cause slower decision-making.

• *Board independence* (*BIND*) is the share of independent board members. A larger share of independent board members generally produces better control and more impartial decisions.

• *Duality* (*DUAL*) represents whether the board chair and CEO are the same person. When one person combines both duties, too much power may result. When the functions are distinct, better management and oversight may be provided.

3.2.3. Control variables

This study uses three control variables:

• *Bank size* (*FSIZE*) is taken to refer to the total assets of the bank. Bigger banks usually have more resources to grow, invest, and provide a variety of services. They can also save on costs by way of reaching economies of scale.

• *Age of bank* (*FAGEL*) is the number of years since the foundation of the bank. Older banks may have more experience, trust, and stability with customers. Younger banks might be more flexible and open to new ideas.

• *Liquidity* (*LIQUID*) indicates the extent to which a bank can pay short-term obligations. A bank with good liquidity can act quickly and capture opportunities, while a bank with poor liquidity may face constraints on its growth.

Table 1. Measurement of variables related to baseline estimation

Variables			*Measure*	*Authors*
Dependent variables				
1)	Market share	*MS*	The ratio of a bank's revenue (*TR*) to the total revenues of the banking sector.	Berger et al. (2000), Beck et al. (2003)
2)	Loan ratio	*LR*	Ratio of total loans to total assets.	Demirgüç-Kunt et al. (2004), Iannotta et al. (2007)
3)	Net banking income ratio	*NBIR*	The ratio of the sum of net interest, commissions, and other banking income to the total assets.	Bikker et al. (2007), Molyneux et al. (1994)
Independent variables				
4)	Board size	*BSIZE*	Total board members.	Jensen and Meckling (1976), Yermack (1996)
5)	Board independence	*BIND*	Proportion of independent members to total board members.	Fama and Jensen (1983), Bhagat and Bolton (2008)
6)	Duality	*DUAL*	Dummy variable = 1 if the CEO is also the Chairman of the Board and 0 if not.	Boyd (1995), Dalton et al. (1998)
7)	Management participation	*MOW*	Percentage of shares held by board members.	Jensen and Meckling (1976), Adams et al. (2010)
8)	Concentration of ownership	*CONC*	The proportion of shares held by the firm's five main shareholders.	La Porta et al. (1999), Shleifer and Vishny (1997)
9)	Institutional investor ownership	*INST*	Percentage of shares held by institutional investors (banks, insurance, pension funds, etc.).	Agrawal and Mandelker (1990), Fama (1980)
Control variables				
10)	Liquidity	*LIQUID*	Short-term liquidity is the ratio of current assets to current liabilities	Berger et al. (1995), Molyneux et al. (1994)
11)	Bank size	*FSIZE*	Bank size is measured by the natural logarithm of total assets	Demirgüç-Kunt et al. (2004), Beck et al. (2006)
12)	Age of the bank level (1, 2, 3, 4)	*FAGEL*	Number of years since the bank was founded. Bank age (FAGEL) is measured in four levels: 1 for banks less than 20 years old, 2 for those between 20 and 40 years old, 3 for those between 40 and 60 years old, and 4 for banks over 60 years old.	Barth et al. (2004), Laeven and Levine (2009)

Source: Authors' elaboration.

3.3. Test model

We use the following dynamic model to determine the impact of governance mechanisms (ownership structure and board characteristics) on a bank's business strategy:

$$BankBusi_{it} = \alpha + \beta_0 BankBusi_{it-1} + \beta_1 Ownership_{it} + \beta_2 Board_{it} + \lambda X_{it} + \varepsilon_{it} \quad (4)$$

where:

• $BankBusi_{it}$ measures the bank's business strategy, defined by three possible variables: 1) net banking income ratio (*NBIR*), 2) bank market share (*MS*), and 3) ratio of loans (*LR*).

• $Ownership_{it}$ is measured by three variables: CEO participation (*MOW*), institutional investor participation (*INST*), and capital concentration (*CONC*).

• $Board_{it}$ is the variable measuring board characteristics represented by board size (*BSIZE*), board independence (*BIND*), and CEO holding multiple positions (*DUAL*).

• X_{it} represents the control variables represented by firm size (*FSIZE*), firm age level (*FAGEL*), and bank liquidity (*LIQUID*).

4. RESEARCH RESULTS

4.1. Descriptive statistics

According to Table 2, the *NBIR*, measuring the net profitability of banks, has an average of 0.046 with a high skewness (12.78), suggesting a highly concentrated distribution of profits. Market share (*MS*) and the loan ratio (*LR*) also have averages of 0.1 and 0.73, respectively, but the variability is notable, with relatively high standard deviations (0.039 for market share and 0.086 for loan ratio, indicating diversity in the performance of these indicators among Tunisian banks. Board size (*BSIZE*) has an average of 11.3 members with a high dispersion (standard deviation of 1.59), reflecting diversity in

the governance structure of banks. The duality results show that Tunisian banks are divided, with approximately 50% of institutions having a governance system where the CEO and the chairman of the board are the same person. Board independence (*BIND*) has an average of 0.34, suggesting a relative weakness of independence within boards of directors, which could limit the ability to make objective and strategic decisions.

Table 2. Descriptive statistics

Variables	*Mean*	*Min*	*Max*	*STD*	*Skewness*	*Kurtosis*
Dependent variables						
NBIR	0.0464	0.00003	0.5243	0.0339	12.7838	181,004
MS	0.1	0.0069	0.2012	0.0394	0.3339	2.1651
LR	0.7325	0.435	0.9155	0.0855	-0.7368	3.9057
Ownership structure						
MOW	0.3769	0.074	0.75	0.1673	0.1846	1.68663
INST	0.4984	0.1	0.86	0.1895	-0.2488	1.9486
CONC	0.5420	0.22	0.88	0.1462	-0.2384	2.2611
Score governance						
GOVS	2.45	0	5	1.0863	0.0215	1.9533
$GOVS^2$	7.1772	0	25	5.4705	0.6132	2.3110
Board characteristics						
BSIZE	11.3045	7	17	1.5942	-0.3973	3.7991
BIND	0.3386	0.09	0.64	0.1353	0.4794	2.4304
DUALITY	0.5022	0	1	0.5011	-0.0091	-0.0091
Control variables						
FSIZE	15.2308	12.3883	16.7719	0.7122	-0.3532	3.1530
FAGEL	2.6909	1	4	0.7432	-0.1038	2.6923
LIQUID	2.1107	0.462	185.68	12.4506	14.6675	216.7516

Source: Authors' elaboration.

Control variables are also important for understanding bank performance dynamics. Bank size has a mean of 15.23 with a low dispersion (standard deviation of 0.71), indicating a high homogeneity in the sizes of Tunisian banks. Bank age (*FAGEL*) has a mean of 2.69, indicating that most banks are between 20 and 60 years old. Skewness is -0.10, suggesting a slight concentration of banks under older categories. For the liquidity ratio, the low standard deviation and low kurtosis coefficients indicate relatively uniform liquidity management among banks, suggesting that most Tunisian banks maintain liquidity within ranges close to the mean of 2.11.

4.2. The impacts of internal governance mechanisms on the business strategy of Tunisian banks

The results presented in Table 3 highlight the impact of ownership structure (Reg1, Reg3, Reg5) and board characteristics (Reg2, Reg4, Reg6) on the business strategy of Tunisian banks.

4.2.1. Analysis of the impact of ownership structure

The lagged dependent variable ($BankBusi_{it-1}$) shows how much banks keep the same business strategy over time. Past NBIR exerts a moderate corrective effect (-0.085), while market share and the loan ratio present a strong positive inertia (respectively 0.77 and 0.61), reflecting continuity in the business strategy. For the manager's ownership (*MOW*), the results show that it has no significant impact on NBIR and the loans ratio (*LR*). However, it exerts a negative influence (-0.014, p-value < 0.05) and a significant influence on market share (*MS*), suggesting that when control is highly concentrated in the hands of the manager, this may limit the bank's ability to expand in the market. On the other hand, institutional ownership (*INST*) has a positive and significant impact (0.033, p-value < 0.05) on *NBIR*, indicating that a greater presence of institutional investors in the ownership structure contributes to improving bank business strategy. In addition, this variable has a positive and significant effect (0.068 with p-value < 1%) on the credit ratio (*LR*), suggesting that a strong presence of institutional investors could favour a more aggressive credit policy, encouraging the expansion of the bank's loan portfolio. Regarding the capital concentration (*CONC*), it has no significant impact on *NBIR* and the credit ratio (*LR*), but exerts a negative and significant effect (-0.026 with p-value < 1%) on market share (*MS*). These findings indicate that bank competition could be reduced by capital concentration by a few shareholders. Such an ownership structure may inhibit bringing innovations into the business and extending business activities.

4.2.2. Impact of board characteristics on business strategy

The dependent variable, which relates to past performance ($BankBusi_{it-1}$), has a strong and positive effect on both market share and loans as indicated by coefficients of 0.81835 and 0.63873, with a p-value of less than 0.01. This indicates that good past performance continues to facilitate improvements in credit and sustains market share. For board characteristics, board size (*BSIZE*) also provides significant positive effects on loans (coeff. = 0.00866, p-value < 0.01), which implies larger boards encourage more credit activities. However, board size negatively affects market share (*MS*) (coeff. = -0.00197, p-value < 0.01), indicating that a large board may decrease the strategic capacity to develop new market positions. Managerial duality (*DUAL*), where one person holds both the positions of chairman and CEO, was found to have a negative effect on profitability (coeff. = -0.02397, p-value < 0.01), but it has a positive effect on market share and loans (coeff. = 0.0038, p-value < 0.05; coeff. = 0.03449, p-value < 0.01). This indicates that

the combination of powers could damage profitability but promote credit and market share growth.

The presence of independent directors (*BIND*) has two statistically significant effects. First, it has a negative impact on NBI strategy with a coefficient of -0.0776 (p-value < 0.01), suggesting that more independent boards are associated with a reduction in income-based strategies. Second, it has a positive effect on market share strategy with a coefficient of 0.02588 (p-value < 0.01), indicating that independent directors tend to support strategies aimed at expanding market presence.

Table 3. The dynamics of the influence of internal governance mechanisms on the business strategy of Tunisian banks

Variables	*Net banking income ratio*		*Market share*		*Loan ratio*	
	Reg1	***Reg2***	***Reg3***	***Reg4***	***Reg5***	***Reg6***
$BankBusi_{it-1}$	-0.0859*	-0.06808	0.77754***	0.81835***	0.61929***	0.63873***
MOW	0.03176		-0.01423**		-0.02705	
INST	0.03332**		0.00002		0.06833***	
CONC	0.01171		-0.02657***		-0.03780	
BSIZE		0.00176		-0.00197***		0.00866***
DUAL		-0.02397***		0.00388**		0.03449***
BIND		-0.0776***		0.02588***		0.04205
FSIZE	-0.02892***	-0.03653***	0.00644***	0.00688***	-0.00792	0.00633
FAGEL	0.30426***	0.02577***	-0.00142	0.00067	0.02572**	0.02723**
LIQUID	0.00005	0.00021	-9.6e-06	-0.00004	-0.00076***	-0.00107*
Constant	0.37495***	0.55384***	-0.05260***	-0.07647***	0.32933***	-0.03094
P(chi² > 0)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N	210	210	210	209	210	209

Note: Models Reg1, Reg3, and Reg5 examine the impact of ownership structure on a bank's business strategy, measured through three indicators: NBIR, MS, and LR. In parallel, models Reg2, Reg4, and Reg6 study the influence of board characteristics on this same strategy using the same measurement criteria.
, **, * denote the significance of the variables, respectively, at the 10%, 5%, and 1% thresholds.*

Effect of control variables: bank size (*FSIZE*) shows a negative and significant effect on *NBIR* (-0.0289 in Reg1) and market share (*MS*) (-0.0365 in Reg2), suggesting that large banks may suffer inefficiencies or costs due to their operational complexity. On the other hand, its effect is positive and significant on the loan ratio (*LR*) in Reg3 (0.0064) and Reg4 (0.0068), indicating that a larger size favours the granting of credits. The age of the firm (*FAGEL*) positively and significantly influences *NBIR* (0.3043 in Reg1) and positive but moderate effect on loans (0.0257 in Reg5, and 0.0272 in Reg6), which reflects the competitive advantage of more experienced institutions. Finally, liquidity (*LIQUID*), although insignificant for NBIR and market share (*MS*), exerts a negative and significant effect on the loan ratio (*LR*) (-0.00076 in Reg5, and -0.00107 in Reg6), suggesting that high liquidity is not necessarily mobilized to strengthen credit, but may be out of prudence to face risk.

5. ROBUSTNESS CHECKS

After examining the individual impact of internal governance mechanisms using variables representing ownership structure and board characteristics, robustness tests were conducted to validate the stability of the results:

- *Test 1* — a composite governance score — was constructed to assess the overall impact of governance quality on banks' business strategy.
- *Test 2* involves segmenting the sample to compare the results of private and public banks, allowing for the identification of possible structural features.
- *Test 3* separates banks by the type of strategy adopted — offensive or defensive — to test whether the impact of governance varies depending on the chosen strategic orientation.

5.1. Test 1: Application of the governance score

By replacing individual ownership structure variables (such as *MOW*, *INST*, and *CON*C) and board characteristics (such as *BSIZE*, *DUAL*, and *BIND*) with the governance score, we test the hypothesis that high-quality governance, measured in aggregate, has a positive influence on banks' business strategy. A higher governance score would indicate a better quality of governance mechanisms, which should theoretically have a beneficial effect on banks' strategic indicators, such as *NBIR*, market share, and loan ratio.

The model proposed to test the impact of banking governance on the business strategy of Tunisian banks can be formulated as follows.

$$BankBusi_{it} = c + \theta_1 GOVS_{it} + \theta_2 GOVS_{it}^2 + \lambda X_{it} + \nu_{it} \quad (5)$$

where:

- $GOVS_{it}$ is obtained by aggregating the individual scores of variables related to ownership structure and board characteristics. It thus reflects the overall quality of governance mechanisms within the bank.
- $GOVS_{it}^2$ represents the square of the governance score, used to assess possible nonlinear effects of governance on business strategy.
- X_{it} denotes the control variables, which include factors such as the bank size, age, and liquidity, allowing for external influences on the institution's strategic performance.

To assess bank governance and calculate a consistent governance score, it is necessary to define minimum and maximum ranges for some key variables that directly influence governance quality. Table 5 below summarizes the methodology for calculating the governance score.

Table 4. Impact of governance quality on banks' business strategy

Variables	*Net banking income ratio*	*Market share*	*Loan ratio*
Panel A: All banks (N = 220)			
GOVS	-0.0071	0.0108**	0.0060
GOVS²	0.0014	-0.0027**	-0.0021
FSIZE	-0.0198***	0.0075***	-0.0023
FAGEL	0.0236***	-0.0112***	0.0085
LIQUID	-0.00002	0.0001*	-0.0009***
Constant	0.2916***	0.0082	0.7478***
R^2(within)	0.1125	0.2110	0.0550
Panel B: Private banks (N = 154)			
GOVS	-0.0139	0.0097**	0.0086
GOVS²	0.0022	-0.0021***	-0.0013
FSIZE	-0.0246***	0.0132***	-0.0008
FAGEL	0.0276**	-0.0118***	0.0073
LIQUID	-0.00007	0.0001**	-0.0008**
Constant	0.3631***	-0.0918***	0.6999***
R^2(within)	0.1373	0.4964	0.0549
Panel C: Public banks (N = 66)			
GOVS	-0.0020	0.0158*	0.0170
GOVS²	0.0006	-0.0039**	-0.0053
FSIZE	0.0036**	-0.0220***	0.0113
FAGEL	0.0031*	0.0105	-0.0010
LIQUID	0.0008	0.0052	-0.0569***
Constant	-0.0270	0.4381***	0.6548***
R^2(within)	0.4073	0.3222	0.3147

*Note: *, **, *** denote the significance of the variables, respectively, at the 10%, 5%, and 1% thresholds.*

Table 5. Governance score calculation

Dummies	*Condition*	*Meaning*
DUMCONC	= 1 if *CONC* is in the 20%–70% range, = 0 if not	Below 20% concentration has been considered a diffused ownership; this allows minority shareholders to counteract the influence of major shareholders. Above 70% concentration, however, creates an imbalance of power between majority and minority shareholders and conflicts of interest within a company (La Porta et al., 1999).
DUMMOW	= 1 if *MOW* is in the 5%–20% range, = 0 if not	Low management participation (less than 5%) does not give an incentive to maximize profits (Jensen & Meckling, 1976). On the other hand, a very high participation (above 20%) may cause conflicts of interest or disparity in decisions (Fama & Jensen, 1983).
DUMINST	= 1 if *INST* is in the 10%–40% range, = 0 if not	Low participation (below 10%) could be interpreted as inappropriate monitoring. Excessive participation (more than 40%) could have an excessive voice in management decisions and have implications for overall strategy affecting the bank (Agrawal & Mandelker, 1990).
DUMBsize	= 1 if *BSIZE* is in the range 5–15, = 0 if not	Inadequate size: less than 5 may lack diversity of skills, and too large size: more than 15, might slow down and make inefficient decisions (Yermack, 1996; Jensen, 1993).
DUMBIND	= 1 if *BIND* is in the 30%–60% range, = 0 if not	A lower percentage of independence (less than 30%) can limit objectivity in decision-making (Fama & Jensen, 1983). Excessively independent (more than 60%) might lead to fragmentation and internal disagreement, which would compromise the board's effectiveness (Bhagat & Bolton, 2008).
DUMDUAL	= 1 refers to the CEO and Chairman being different individuals, = 0 if not	Separation of roles is preferred because it allows better monitoring and a balance of powers (Boyd, 1995). Duality (the chairman of the board of directors and the CEO being the same person) leads to excessive concentration of authority, which leads to a lack of transparency and strategic imbalance (Dalton et al., 1998).

Note: GOVS = (1) + (2) + (3) +(4) + (5) + (6).

The governance score is obtained as follows:

$$GOVS = \sum DUMOWNERSHIP + \sum DUMBOARD \qquad (6)$$

With the total score, banks can be classified into three categories:

1) *Good governance* (score 5–6) with a balanced structure, effective decision-making, and clear distribution of power;

2) *Acceptable governance* (score 3–4) with moderate weaknesses in management, but basic governance mechanisms are in place.

3) *Poor governance* (score 0–2) marked by conflicts of interest, excessive concentration of power, which destroys strategic performance (for descriptive statistics of *GOVS* and *GOVS²* see Table 2).

The results of Panel A (Table 4) indicate that governance quality (*GOVS*) has a significant and positive effect on market share (0.0108, with p-value < 5%), indicating that better governance contributes to strengthening the competitive position of banks. However, the significance of the quadratic term *GOVS²* (-0.0027, p-value < 10%) reveals a non-linear relationship, where the positive effect of governance decreases beyond a certain level, reflecting a possible threshold or saturation effect. Bank size (*FSIZE*) negatively influences *NBIR* (-0.0198, p-value < 1%), which could indicate economies of scale, while it has a positive effect on market share (0.0075, p-value < 1%), reflecting a competitive advantage of size. Bank age (*FAGEL*) is positively linked to *NBIR* (0.0236, p-value < 1%), but its effect is negative on market share (-0.0112, p-value < 1%), which can be explained by the reduced agility of older institutions. Finally, liquidity (*LIQUID*) has a positive impact on market share (0.0001, p-value < 10%), but a significant negative effect on loans (-0.0009, p-value < 1%), reflecting prudent management of the excess liquidity in periods of uncertainty.

5.2. Test 2: Effect of governance score on the business strategy of private and public banks

The comparative analysis between private banks and public banks shows that the governance and control variables showed contrasting effects on the business strategies adopted by these types of banks. For private banks (Panel B), good governance quality (*GOVS*) seems to play an important role in improving market share (coefficient: 0.0097, p-value < 0.05); thus, it is considered that effective governance strengthens the competitiveness of private banks. The negative effect of governance score squared ($GOVS^2$) (-0.0021, p-value < 0.01) suggests a non-linear relationship, with too much control or formalism possibly being detrimental to strategic flexibility. The size of private banks (*FSIZE*) increases market share *MS* (0.0132, p-value < 0.01), but reduces net banking income *NBIR* (-0.0246, p-value < 0.01), which may indicate decreasing returns to scale. Moreover, bank age (*FAGEL*) favours profitability *NBIR* (0.0276, p-value < 0.05) but reduces market share (-0.0118, p-value < 0.01), an expression of a certain difficulty in adapting to market change. Finally, liquidity plays an uncertain role: it slightly increases market share (0.0001, p-value < 0.05), then limits the granting of credits (-0.0008, p-value < 0.05), a sign undoubtedly of more prudent management of resources.

Public banks (Table 4, Panel C) show the same effects, but with different intensities. The governance quality (*GOVS*) has a greater effect on market share (0.0158, p-value < 0.10), which means that in the public banks where governance is well-structured, it can play a decisive role in improving business performance (La Porta et al., 2002). The negative effect of governance score squared ($GOVS^2$) (-0.0039, p-value < 0.05) confirms the presence of an optimal point beyond which excessive governance would tend to become constraining (Tirole, 2006). In contrast to private institutions, the size of public banks yields a positive impact on net banking income *NBIR* (0.0036, p-value < 0.05), and this effect is negative on market share (-0.0220, p-value < 0.01); thus indicating an element of structural rigidity adverse to business agility. Bank age proved a moderately positive effect on income *NBIR* (0.0031, p-value < 0.10), implying institutional experience benefits (Demirgüç-Kunt & Levine, 2001). In contrast, liquidity has a much-pronounced negative effect on lending *LR* (-0.0569, p-value < 0.01), which contrasts with the results on private banks; thus, such low levels of conservativeness reveal an extremely cautious management policy limiting their capability as financial intermediaries.

Finally, we can deduce that while governance is a performance lever in both types of banks, the degree to which it turns out to be effective depends on the right mix. Private banks seem more dynamic, but that dynamic is subject to very limited returns to scale. In contrast, public banks benefit from their solidity and their governance, but suffer from management, sometimes overly rigid and too cautious.

5.3. Test 3: Impact of governance quality on defensive and offensive business strategies

The robustness test examines whether governance quality influences the defensive (when the dependent variable $BankBusi_{it}$ is below the industry average) and offensive (when the dependent variable $BankBusi_{it}$ is above the sector average) strategies of Tunisian banks. For banks with a defensive strategy, the impact of governance quality is expected to be limited, indicating prudence. For banks with an offensive strategy, good governance encourages growth and risk-taking, but excessive governance may hinder this growth.

Table 6. Quality of governance and defensive and offensive strategies

Variables	*NBIR model*		*MS model*		*LR model*	
	Defensive	***Offensive***	***Defensive***	***Offensive***	***Defensive***	***Offensive***
GOVS	-0.0026	0.0128	0.0102*	0.0278***	0.0294	0.0249
$GOVS^2$	0.0007	-0.0013	-0.0014	-0.0055***	-0.0066	-0.0056*
FSIZE	-0.0010	-0.0239***	0.0147***	-0.0053	-0.0046	0.0095*
FAGEL	0.0005	0.0041	-0.0069***	0.0073**	0.0469***	0.0054
LIQUID	-0.00003	0.0101*	0.0001*	0.0147***	-0.0009***	0.0032
Constant	0.0529***	0.3720***	-0.1447***	0.1597***	0.5874***	0.6049***
Wald chi2	10.32c	20.70***	81.24***	23.67	38.79***	9.67*
N	128	92	125	95	92	128

Note: A defensive strategy means the bank's MS, NBIR, and LR are lower than the industry average, while an offensive strategy means the bank's MS, NBIR, and LR are higher than the industry average.
, **, * denote the significance of the variables, respectively, at the 10%, 5%, and 1% thresholds.*

In the *NBIR model,* none of the governance-related variables (*GOVS* and $GOVS^2$) are significant, either in the defensive or offensive strategy. This indicates that governance quality does not appear to have a direct impact on the net income generated by banks. However, under an offensive strategy, bank size (*FSIZE*) has a significant negative effect (-0.0239, p-value < 0.01), suggesting that large banks, during growth, may suffer from high costs or a loss of efficiency (Berger & Mester, 1997). Similarly, liquidity has a positive effect (0.0101, p-value < 0.10), indicating that good liquidity management can help improve financial performance (Diamond & Rajan, 2001). Under a defensive strategy, no control variable showed a significant effect.

In the *MS-model*, governance (*GOVS*) has a significant positive effect on market share (*MS*) under defensive strategies (0.0102, p-value < 0.10), indicating that a well-governed bank remains highly competitive even under declining conditions (La Porta et al., 2002). This effect is greatly observed in offensive strategies (0.0278, p-value < 0.01). The square of governance ($GOVS^2$) is negative in offensive strategy (0.0055, p-value < 0.01), which suggests that excessive governance may obstruct strategic flexibility (Tirole, 2006). According to the findings, bank size (*FSIZE*) enhances market share

using the defensive strategy (0.0147; p-value < 0.01), while age (*FAGEL*) has a negative impact under the same strategy (-0.0069; p-value < 0.01). Conversely, under the offensive strategy, bank age positively influences bank market share (0.0073, p-value < 0.05), while liquidity (*LIQUID*) also has a positive effect in both strategies (0.0001, p-value < 0.10 under defensive; 0.0147, p-value < 0.01 under offensive), indicating that it is essential to have strong financial resources.

In the *LR model*, the governance score (*GOVS*) does not have a significant direct effect, which suggests that overall governance quality does not have a decisive influence on banks' lending policy. However, the square of this variable ($GOVS^2$) has a significant negative coefficient in the offensive strategy model (-0.0056, p-value < 0.10), indicating the presence of a non-linear relationship between governance and lending performance. This result suggests that beyond a certain threshold, excessive rules, controls, or supervision can hinder lending capacity by reducing decision-making flexibility and risk tolerance. This supports the analysis of Tirole (2006), who highlights the adverse impacts of overly rigid governance on organisational effectiveness. However, it qualifies the findings of Berger et al. (2005), who suggest that constant strengthening of governance mechanisms systematically improves bank performance. Therefore, these findings confirm that governance in the Tunisian context should be approached from a point of optimisation rather than a maximisation perspective, promoting a balance between discipline and strategic adaptability in credit risk management. Under the defensive strategy, bank age (*FAGEL*) has a strong positive effect (0.0469, p-value < 0.01), showing that older banks remain active in financing despite their caution (Demirgüç-Kunt & Levine, 2001). However, high liquidity reduces lending under this same strategy (-0.0009, p-value < 0.01), reflecting a more conservative risk policy (Diamond & Rajan, 2001). Finally, under an offensive strategy, bank size (*FSIZE*) has a positive effect (0.0095, p-value < 0.10), confirming that large banks are better equipped to develop their lending activities.

6. CONCLUSION

This study examined the effect of the governance mechanism and quality of banks on business strategy. These mechanisms include net banking income, market share, and loans. The empirical tests on Tunisian banks reveal a crucial role of governance, but with varying effects based on indicators that are being studied, types of banks (either public or private), and strategic orientation, whether defensive or offensive. In the baseline tests, several components of governance (ownership structure and board characteristics) have statistically positive and significant impacts on banking strategy, with profitability improvements and flexibility in credit development. Banks with too much governance or too rigid a governance structure appear to have negative effects on the bank's ability to grow or change with market conditions. These results indicate that banks have to find a proper midpoint between control and flexibility in management.

Robustness tests confirm these observations. Combining various governance mechanisms into an overall assessment, we found that high governance contributes to a bank's competitiveness. However, its effect is not always linear: beyond a certain level, overly strict governance can limit strategic flexibility and reduce the ability to grant credit, market position, and net banking income. A comparison between public and private banks reveals that private banks, often better governed, are more dynamic and better adapted to market developments. Conversely, public banks benefit from their solidity, but their more rigid governance limits their responsiveness. Finally, distinguishing between defensive and offensive strategies, we found that governance is particularly effective in supporting offensive strategies, focused on growth and gaining market share. Conversely, under a defensive strategy, its role is more moderate and indicates more prudence. In summary, good governance represents a real lever of strategic performance for Tunisian banks. However, it must remain balanced to avoid becoming an obstacle to innovation, credit, and growth.

This study has certain limitations. It focuses on Tunisian banks, which restricts the generalization of the findings to different economic contexts. Additionally, the measure of governance in this study incorporates only structural indicators, without taking into consideration any of the behavioural or cultural elements that shape strategic choice. Future research could improve the results by expanding the scope to other countries in the Middle East and North Africa (MENA) region and by considering ESG criteria or digital transformation indicators to gain a deeper understanding of the dynamics of banking innovation and sustainability.

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