ACADEMIC JOURNALS
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Journal of Accounting and Taxation

Full Length Research Paper

Does corporate governance affect bank performance in Brazil, Russia, India, and China?

Simon M. S. So* and Simon Q. X. Liao

Faculty of Business Administration, University of Macau, Macao SAR, China.

This study utilizes a sample of 67 selected banks from four well-known developing countries, namely Brazil, Russia, India, and China (hereafter BRIC), over nine consecutive years from 2011 to 2019 to examine the effects of corporate governance on bank performance. The study aims to investigate whether the concept of corporate governance in developed countries can also be applied in the banking industry of BRIC. The two measures of bank performance analyzed are profitability and liquidity, and the study considers five indicators of corporate governance: board size, gender diversity, audit committee, foreign ownership, and ownership concentration. Employing pooled and panel regressions on the two proxies of each performance measure against the five selected corporate governance indicators, the results reveal that the proportion of female directors on a board positively affects the profitability of BRIC banks, while the presence of foreign owners can enhance the liquidity of the banks. However, in individual BRIC countries, bank performance appears to be influenced by different corporate governance indicators, likely due to cultural differences among these nations.

Key words: Corporate governance, bank performance, banking industry, BRIC.

INTRODUCTION

The term "BRIC" was initially coined by O'Neill (2001) to refer to the four major developing countries: Brazil, Russia, India, and China, identified as leading emerging market economies globally. This concept gained widespread usage worldwide, and since 2009, the four countries have convened annually at a formal summit, evolving into a formal organization. Kedia et al. (2006) forecasted that by 2025, the BRIC nations would contribute 25% to the global gross domestic product (GDP), with their share expected to rise to 60% by 2050. Additionally, other indicators such as population, labor force, and acceptance of foreign direct investment place them among the top 20 globally (Siddiqui,

2016). Given these factors, the BRIC economies are anticipated to sustain rapid growth and emerge as influential global powers.

In the modern business landscape, the banking sector assumes a crucial role as an intermediary between depositors and borrowers, facilitating deposits, processing payments, and issuing loans (Gobat, 2012). Furthermore, companies rely on the banking system to settle transactions and address other financial requirements, thereby facilitating the efficient flow of funds within the financial system, fostering economic development. Beyond collaborating with individuals or organizations, banks

engage in international networks to offer financial services to both local and overseas customers.

The relationship between banks and stability hinges largely on public confidence, implying that issues within one bank can easily propagate to others and financial institutions (Almahadin et al., 2021). Any significant disruption to banking operations can reverberate across society, underscoring the critical importance of banking industry stability in mitigating far-reaching economic and social repercussions.

Given the historical context, corporate governance has been an established concept for centuries but only gained significant prominence in the 1970s. With the globalization of business, corporate governance has garnered increasing attention from investors and stakeholders. Scandals such as Enron, Satyam, and the Lehman Brothers crisis have underscored the imperative for robust corporate governance practices. Corporate governance entails the establishment of specific rules by entities to ensure the company operates in the correct direction, guiding its operations and demonstrating integrity. As the business world evolves rapidly, corporate governance frameworks must keep pace to prevent future crises. Particularly in the context of financial globalization and liberalization, the discourse on corporate governance in financial institutions, especially commercial banks, has become a global concern. Given the significant external influences on financial institutions, their corporate governance is crucial for the overall economic system. As pivotal players in the financial industry, banks require heightened attention to their corporate governance compared to other entities. Therefore, investigating the recent performance of the banking industry in the BRIC countries presents an intriguing prospect.

Corporate governance, encompassing leadership and management practices within a company, aims to strike a balance between the interests of stakeholders, including customers, management executives, and the broader community (Sancha et al., 2022). Rashid et al. (2023) further define corporate governance as a framework comprising laws, practices, rules, and regulations that govern the operations, supervision, and control of a business. Its objectives include enhancing performance, implementing risk management policies and strategies, and reducing the likelihood of corruption and bankruptcy. Effective corporate governance not only guides the company but also showcases its business integrity, reinforcing its legitimacy to operate within society. Key objectives of an efficient corporate governance mechanism involve safeguarding shareholders' interests, mitigating agency problems, facilitating the separation of ownership and control, and instituting various supervisory checks to enhance firms' performance (Arora and Sharma, 2016).

Corporate governance, a concept long developed in mature markets, may not enjoy widespread adoption in emerging markets. While the BRIC nations have yet to attain the level of industrialization characteristic of developed countries, they have increasingly become significant providers of investment and foreign aid to other developing nations. Despite this, research on the BRIC countries, particularly within the banking industry, remains relatively limited. Estrin and Prevezer (2011) highlighted the complexity of the corporate governance structure in the BRIC due to differing cultures and legal systems among the four emerging markets. They also noted a relatively concentrated ownership structure with limited protection for small and medium shareholders. Lattemann (2014) found that in 2009, the largest 135 companies in the BRIC exceeded their national corporate governance requirements, embracing international best practices.

To date, there has been scarce comprehensive analysis of corporate governance and bank performance in the BRIC countries. This study applies several corporate governance indicators developed in mature markets to assess their applicability to the banking industry in the BRIC, aiming to fill this gap. This study is among the few that analyze the impact of corporate governance on bank performance across the BRIC as a whole. Existing literature primarily focuses on banks in developed countries (Arnaboldi et al., 2020; Cardillo et al., 2021; Farag and Mallin, 2017; John et al., 2016; Liu et al., 2017; Mateus and Belhaj, 2016; Owen and Temesvary, 2018; Pathan and Faff, 2013) or on individual BRIC countries' banks (Chan et al., 2016; Handa, 2018; Kaur and Vij, 2017; Liu et al., 2012; Oliveira et al., 2011; Orazalin and Mahmood, 2018; Sarkar and Sarkar, 2018; Vernikov, 2013).

A sample of 67 banks selected from the BRIC countries spanning the period from 2011 to 2019 is utilized to examine the correlation between corporate governance and bank performance. The study assesses profitability and liquidity as measures of bank performance, while considering five corporate governance indicators: board size, gender diversity, audit committee, foreign ownership, and ownership concentration. Employing Pooled Ordinary Least Squares (OLS) and Panel Generalized Least Squares (GLS) regressions, the analysis encompasses the entirety of BRIC banks and examines banks within each individual BRIC country. The findings of this study offer insights into the relationship between corporate governance and bank performance within the BRIC context, potentially aiding bankers in devising effective governance structures across the BRIC nations and individual BRIC countries. Additionally, this study contributes to the existing corporate governance literature within the banking industry of the BRIC nations.

LITERATURE REVIEW

Theoretical background

In today's landscape, banks face various pressures

stemming from evolving stakeholder demands and expectations, significantly influencing management behavior and actions. Consequently, management may exploit asymmetric information to the detriment of stakeholders. Several theories, including agency theory, stakeholder theory, and resource dependency theory, have been proposed to address this issue. When discussing corporate governance, agency theory often takes precedence, positing that principals (shareholders) delegate authority to agents (managers) to manage the company on their behalf (Jensen and Meckling, 1976). However, information asymmetry between the two parties can lead agents to act against the principals' best interests. Thus, principals must establish mechanisms to ensure agents consistently act in their best interests, with any resulting loss termed as agency cost. Additionally, Jensen and Meckling (1976) contend that corporate governance mechanisms such as board structure, ownership structure, and compensation are not only interrelated but also influenced by various variables including risk, physical and financial assets, cash flow, company size, and oversight. Conversely, due to the principal's lack of professional knowledge, they must rely on agents for decision-making, risking loss if they intervene (Shaprio, 2005). Moreover, some argue that agents may adjust rules slightly to better serve principals, while others strictly adhere to rules, exacerbating agency costs.

The stakeholder theory often excludes stakeholders who are not directly involved in business operations or company goals, narrowing the definition to primary, legitimate individuals and groups. If a company expends excessive energy attempting to accommodate the varied interests of different stakeholder groups, it may struggle to maintain normal business operations. Stronger relationships with primary stakeholders can enhance shareholder wealth by fostering competitive advantage. However, allocating corporate resources to social issues unrelated to primary stakeholders may fail to create value for shareholders (Hillman and Keim, 2001). Moreover, companies should prioritize stakeholders with power, legitimacy, and pressing needs. Managers must comprehend how stakeholders impact the company and strategically plan actions accordingly (Frooman, 1999). Interactions with primary stakeholders should cultivate a satisfying, mutually beneficial relationship, fostering long-term company development.

The resource dependence theory conceptualizes a company as an open system influenced by its external environment. According to Pfeffer and Salancik (1978), no company can be entirely self-sufficient and must obtain necessary resources from other entities to survive. Hillman et al. (2000) introduced a classification method considering demanders' resource dependence and environmental responsibilities. They retained the traditional category of inside directors but divided outside directors into three distinct categories, each serving a unique purpose in minimizing resource dependency.

Independent directors, in this classification, play a critical role not only in overseeing top management functions but also in providing resources to their respective companies, thus impacting company performance. Therefore, dimensions of director diversity such as gender, experience, and education level become crucial.

Corporate governance and bank performance

Peni and Vähämaa (2012) investigated the impact of corporate governance on bank performance during the 2008 financial crisis. Despite mixed findings, their results indicated that banks with stronger corporate governance mechanisms tended to exhibit higher profitability in 2008. Love and Rachinsky (2015) analyzed a sample of 107 banks in Russia and 50 banks in Ukraine surveyed by the International Financial Corporation from 2003 to 2006, concluding that corporate governance indicators had, at best, a second-order effect on operating performance in Russian and Ukrainian banks.

Salim et al. (2016) explored the relationship between corporate governance and the efficiency of Australian banks, finding that board size and committee meetings had robustly significant and positive effects on efficiency. John et al. (2016) observed that high leverage ratios in banking institutions create a trade-off between strengthening equity governance and maximizing enterprise value, highlighting the potential damage to company value and the financial system's stability through strong manager-shareholder links. Owen and Temesvary (2018) examined the relationship between gender diversity on boards and various measures of bank performance using data from 90 U.S. banks spanning 1999 to 2015, concluding that the relationship between gender diversity is U-shaped rather than linear, with female participation exerting a positive effect once a threshold level of gender diversity is reached. Ghalib (2018) investigated the relationship between corporate governance and bank profitability, finding that corporate governance factors significantly influenced bank profitability using public bank data from Indonesia.

Effect of board size on bank performance

Both the agency and resource dependency theories provide support for the notion of companies having a larger board size (Molla et al., 2021; Temba et al., 2023). These theories suggest that a larger board enables the company to leverage a more diverse array of expertise and perspectives, thereby potentially enhancing decision-making and overall organizational performance. Board size represents one of the most important and extensively studied elements of corporate governance in the literature (Amrani and Najab, 2022; El-Chaarani et al., 2022; Orozco et al., 2018; Sancha et al., 2022). However,

findings regarding its impact have been inconsistent and varied.

For instance, Arora and Sharma (2016) found a negative relationship between board size and bank performance in India, measured by ROA, attributing this to weak compliance with corporate governance codes in the Indian banking sector. Similarly, Nath et al. (2015) identified a significant negative association between board size and financial performance of pharmaceutical firms in Dhaka.

Conversely, studies by Temba et al. (2023) in Tanzania, Boachie (2021) in Ghana, and Almoneef and Samontaray (2019) in Saudi Arabia all revealed a positive and significant relationship between board size and financial performance of banks, measured by ROA and ROE. Malik et al. (2014) also suggested that a larger board size can enhance bank performance in Pakistan.

Moreover, Danoshana and Ravivathani (2019) noted that profitability measures such as ROE and ROA are positively associated with corporate governance factors including board size and audit committee in Sri Lanka. Given the preponderance of research indicating that larger boards have a positive effect on corporate governance, the first hypothesis is formulated as follows:

Hypothesis 1: Board size has a significantly positive effect on bank performance.

Effect of gender diversity on bank performance

Until the emergence of the Sustainable Development Goals (SDGs), notably SDG 5 – Achieve Gender Equality and Empower All Women and Girls, along with persistent advocacy efforts from women empowerment groups, the representation of women on boards or in senior positions was uncommon in developing economies. Across most industries, including the banking sector, male domination prevailed in the majority of BRIC countries, rooted in their traditionally patrilineal cultural backgrounds.

Research on the impact of female directors on board performance has produced varied results. Low et al. (2015) concluded that increasing the number of female directors positively affects firm performance in Asian firms. However, this positive effect of gender diversity seems to be mitigated in countries with higher female economic participation and empowerment, potentially due to tokenism, where forcing female director appointments or mandating gender quotas could hamper firm performance in culturally resistant settings. Conversely, Francoeur et al. (2008) found that the participation of women as directors does not appear to significantly influence firm performance, based on data from the Catalyst censuses of directors and women officers in the Financial Post's list of the 500 largest Canadian firms.

On the contrary, Adams and Ferreira (2004) suggested that boards with female directors tend to enhance firm cooperation, thus improving overall company performance. Carter et al. (2007), by analyzing all firms listed on the Fortune 500 from 1998 to 2002, concluded that gender diversity primarily impacts financial performance through the audit function, with less clarity on its effects through the executive compensation or director nomination functions of the board.

Khan et al. (2017) examined the relationship between gender diversity on corporate boards and firms' financial performance using 100 non-financial companies in Malaysia from 2009 to 2013, finding a positive impact of gender diversity on firm performance.

Considering the potential for female board members to provide alternative perspectives or opinions to firm management, the second hypothesis of this study is formulated as follows:

Hypothesis 2: Gender diversity has a significantly positive effect on bank performance.

Effect of audit committee on bank performance

The primary objective of the audit committee is to ensure the company's compliance with standards set by various accounting and auditing agencies, as well as internal processes guiding the company's operations. Fanta et al. (2013) suggested that the presence of an audit committee had a statistically significant negative effect on bank performance in terms of ROE and ROA for banks in Ethiopia. Using a sample of financial firms in Malaysia, Kallamu and Saat (2015) noted that independent audit committee members exhibited a significant positive relationship with profitability, while directors' dual membership on both audit and nomination committees showed a significant negative relationship with profitability.

Alqatamin (2018) found that audit committee size, independence, and gender diversity had a significant positive relationship with firm performance in Amman. Al-Homaidi et al. (2019) examined 30 Indian hotel companies and concluded that the audit committee significantly impacted ROA. However, Zhou et al. (2018) failed to find any association between the audit committee and firm performance in Athens. Given that the audit committee is established to enhance monitoring of the firm's daily activities, our third hypothesis is formulated as follows:

Hypothesis 3: Audit committee has a significantly positive effect on bank performance.

Effect of foreign ownership on bank performance

Foreign ownership refers to the extent of share ownership held by entities from foreign countries in a company located in another country (Al Amosh and Khatib, 2021). Chevalier et al. (2006) observed that multinational

corporations in Indonesia exhibit better liquidity compared to local companies, attributing this to potentially superior governance practices. However, the performance benefits of foreign ownership may vary depending on the national context of the country. Greenway et al. (2014) suggested that productivity and profitability improve with some level of foreign ownership in China, but excessive foreign ownership can lead to performance decline, underscoring the importance of domestic ownership for optimal company performance.

Kabir and Thai (2021) proposed that the presence of foreign investors reduces agency costs and enhances corporate performance among listed companies in Vietnam, as foreign investors bring valuable experience and a vested interest in their investments. El-Chaarani et al. (2022) further delineate that foreign investor, seeking good returns, are vigilant in ensuring compliance and effectively monitoring management activities to avoid sanctions in host countries, thereby promoting transparency and legitimacy through comprehensive information disclosure.

According to agency theory, foreign directors typically bring diversity that can enhance the growth and development of the financial system. Therefore, it is hypothesized that the presence of foreign owners would positively influence the investee, leading to the formulation of the fourth hypothesis as follows:

Hypothesis 4: Foreign ownership has a significantly positive effect on bank performance.

Effect of ownership concertation on bank performance

The agency theory posits that firms with diffused ownership structures are inclined to invest in projects that prioritize their own wealth maximization over the benefits of the organization or society. Edwards and Nibler (2000) suggested that non-financial German firms with higher ownership concentration tend to outperform those with more diverse ownership.

This is attributed to the greater monitoring incentives of significant investors compared to small shareholders who may have limited incentives to monitor company performance.

Dhnadirek and Tang (2003) found that a high level of ownership concentration is ineffective for firm profitability, with debt pressure and bank ownership showing negative and insignificant relationships with firm performance. They emphasized the need to address ownership concentration issues as a priority in the Thai banking industry. Yasser and Mamun (2017) demonstrated a positive association between ownership structure and market-based performance measures, such as ROA, Tobin's q, and economic profits in Pakistan. Rajverma et al. (2019) illustrated the influence of family ownership concentration on firm performance in India, impacting policy decisions

and firm profitability. Shahrier et al. (2020) discovered a significantly positive impact of ownership concentration on firm performance, measured by ROA and ROE, among Shariah-compliant firms. Nashier and Gupta (2023) suggested that concentrated ownership reduces agency costs as blockholders actively monitor company management, leading to improved firm performance.

Given that diverse ownership can provide different perspectives and potentially lead to varied development strategies for the company, it is hypothesized that more influential owners would be beneficial for the company. Therefore, the fifth hypothesis is formulated as follows:

Hypothesis 5: Ownership concentration has a significantly positive effect on bank performance.

DATA AND METHODOLOGY

All accounting and financial data are sourced from the Bank Focus database. The sample period spans from 2011 to 2019, chosen to capture the recovery period following the 2007-2008 financial crisis, primarily triggered by the collapse of Lehman Brothers in the U.S. To mitigate the crisis's influence on subsequent bank performance, the sample period commences from 2011. A total of 67 banks from the BRIC region are included in the study. The dataset comprises 603 balanced yearly observations, covering nine consecutive years, enabling balanced panel data regressions.

Both pooled Ordinary Least Squares (OLS) and panel Generalized Least Squares (GLS) regressions are conducted to analyze how corporate governance indicators affect bank performance proxies in the BRIC. The pooled regression incorporates bank and year fixed effects, while the panel regression employs random effects to ensure result robustness.

Due to the potential incidental parameters problem in the fixed-effects model, the random-effects model is preferred in GLS estimation.

In addition to examining the overall relationship between corporate governance and bank performance in the BRIC, the study also explores country-level relationships by dividing the sample into four sub-samples based on each BRIC country. Pooled and panel regressions are performed on each country separately.

The study investigates five corporate governance indicators in the banking industry of the BRIC: (1) board size (BOS), (2) gender diversity (GED), (3) audit committee presence (AUD), (4) foreign ownership (TOO), and (5) ownership concentration (OWC). Profitability and liquidity serve as measures of bank performance, each with two proxies. Profitability is proxied by return on assets (ROA) and return on equity (ROE), while liquidity is assessed using the ratios of net loans to total assets (NLTA) and net loans to total deposits and borrowings (NLTDB). Employing two proxies for each performance measure enhances the robustness of results. All the variables are summarized in Table 1.

Our basic testable model is as follows:

$$bank\ performance_{i,t} = \alpha_t + \sum_j \beta_j \times corporate\ governance_{ji,t} + \sum_k \delta_k \times control\ variable_{ki,t} + \varepsilon_t \quad (1)$$

where *bank performance* $_{i,t}$ is the proxy of the two measures of performance, ROA, ROE, NLTA, and NLTDB of bank i at year t; *corporate governance* $_{ji,t}$ includes the j selected indicators, namely BOS, GED, AUD, TOO, and OWC of bank i at year t; and *control variable* $_{ki,t}$ has the size (SIZE), the non-performing loan (NPL),   the

Table 1. Summary of variables.

Variable		Abbreviation	Definition
Dependent variable (bank performance)	Return on assets (profitability)	ROA	Net profit / Total assets × 100%
	Return on equity (profitability)	ROE	Net profit / Total shareholders' equity × 100%
	Net loan to assets (liquidity)	NLTA	Net amount of loans / Total assets × 100%
	Net loan to deposit and borrowing (liquidity)	NLTDB	Net amount of loans / Total amount of deposit and borrowing × 100%
Explanatory variable (corporate governance)	Board size	BOS	Total number of directors on a board
	Gender diversity	GED	Number of female directors / Total number of directors on a board × 100%
	Audit committee	AUD	1 if there is an audit committee and 0 otherwise
	Foreign ownership	TOO	1 if there are foreign owners and 0 otherwise
	Ownership concentration	OWC	Total shares held by the top five investors / Total shares issued by the bank × 100%
Control variables	Firm size	SIZE	Natural logarithm of year-ended total assets
	Non-performing loan	NPL	Non-performing loans / Total outstanding loans × 100%
	Capital adequacy ratio	CAR	(Tier 1 capital + Tier 2 capital) / Risk-Weighted Assets × 100%
	Country effect	CTY_C	1 if China and 0 otherwise
		CTY_I	1 if India and 0 otherwise
		CTY_B	1 if Brazil and 0 otherwise
	Bank effect	BANK	Different banks
	Year effect	YEAR	Different years

capital adequacy ratio (CAR) of bank i at year t. Furthermore, dummy variables, C_D1 (China), C_D2 (India), and C_D3 (Brazil), are used to control the country effect.

EMPIRICAL RESULTS

Descriptive statistics

Table 2 presents the summary statistics of all variables. The mean return on assets (ROA) is 1.005%, while the mean return on equity (ROE) stands at 11.884%. Notably, the mean ROE exceeds the mean ROA by more than 11 times, consistent with the high leverage commonly adopted by the banking industry. The mean net loans to total assets (NLTA) and net loans to total deposits and borrowings (NLTDB) ratios are 51.937 and 62.280%, respectively, indicating that more than half of the assets are financed by loans. Higher ratios suggest lower

liquidity, increasing the bank's risk of default. This may indicate that banks in the BRIC were relatively aggressive during the sample period.

The number of directors on the boards of BRIC banks ranges from 6 to 98, with two banks, one in Russia and another in Brazil, consistently maintaining over 50 board directors throughout the sample period. On average, there is approximately one female board director for every six board directors. While one Russian bank has female directors comprising half of the board, two banks, one in China and another in Brazil, have no female board directors.

Approximately one-third of the selected BRIC banks have an audit committee and foreign owners, indicating that it is not common for banks in the sample to have these features. The average ownership concentration is notably high at 69.904%, with 447 out of 603 observations showing ownership concentration exceeding 50%.

Table 2. Descriptive statistics.

Variable	N	Mean	Median	Maximum	Minimum	Standard deviation
ROA	603	1.005	1.083	6.520	-40.166	1.989
ROE	603	11.884	13.375	99.257	-67.648	12.138
NLTA	603	51.937	52.114	94.434	13.413	12.864
NLTDB	603	62.280	60.850	138.588	14.770	17.425
BOS	603	24.811	23	98	6	12.944
GED	603	15.486	15.385	50	0	9.089
AUD	603	0.378	0	1	0	0.485
TOO	603	0.378	0	1	0	0.485
OWC	603	69.904	72.790	100	18.320	25.146
SIZE	603	17.555	17.572	22.184	13.264	2.159
NPL	603	4.639	2.167	80.809	0.004	6.864
CAR	603	9.283	8.099	21.216	3.693	3.633
CTY_C	603	0.388	0	1	0	0.488
CTY_I	603	0.164	0	1	0	0.371
CTY_B	603	0.209	0	1	0	0.407

Table 3. Pearson correlations.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ROA	1														
ROE	0.665	1													
NLTA	0.011	-0.100	1												
NLTDB	0.041	-0.105	0.934	1											
BOS	0.019	0.045	-0.058	-0.094	1										
GED	0.048	-0.003	0.183	0.185	-0.262	1									
AUD	0.019	-0.022	0.119	0.127	-0.092	0.189	1								
TOO	0.078	0.025	0.150	0.126	0.024	0.146	0.154	1							
OWC	-0.015	-0.088	0.119	0.200	-0.085	0.162	-0.039	-0.086	1						
SIZE	0.037	0.190	-0.140	-0.217	0.460	-0.248	-0.019	-0.232	-0.016	1					
NPL	-0.395	-0.350	0.105	0.158	-0.021	0.081	0.002	0.284	-0.026	-0.236	1				
CAR	0.118	-0.087	0.242	0.348	-0.213	0.242	0.125	0.338	0.125	-0.467	0.160	1			
CTY_C	0.012	0.234	-0.382	-0.516	0.140	-0.183	-0.102	-0.408	-0.207	0.545	-0.387	-0.513	1		
CTY_I	-0.009	-0.103	0.282	0.287	-0.010	-0.120	0.070	-0.192	0.199	0.146	0.053	-0.071	-0.353	1	
CTY_B	0.075	-0.003	-0.199	0.020	-0.097	-0.114	-0.098	0.399	-0.174	-0.360	0.134	0.313	-0.409	-0.228	1

Correlation analysis

Table 3 presents the simple correlation between bank performance measures, corporate governance indicators, and control variables used in the study. A high positive correlation is observed between the two profitability proxies (r = 0.665) and between the two liquidity proxies (r = 0.934), which is expected.

Corporate governance indicators show weak associations with bank profitability proxies but stronger and more consistent correlations with liquidity proxies. There are no signs of potential multicollinearity issues among the corporate governance indicators, with correlation coefficients ranging from –0.262 to 0.189.

The relationship between the indicators and control variables is not strong, indicating appropriate selection of control variables. The correlation coefficient between bank size and board size (r = 0.460) is reasonable, suggesting that larger banks tend to have more board directors.

Lastly, a close negative association between bank size and capital adequacy ratio suggests that larger banks in the BRIC may rely more on deposits than capital to finance loans.

Corporate governance in BRIC

Table 4 presents the empirical regression results using all

Table 4. Pooled and panel regressions of bank performance on corporate governance using all selected banks in the BRIC.

Variable	Pooled				Panel			
	Profitability		Liquidity		Profitability		Liquidity	
	ROA	ROE	NLTA	NLTDB	ROA	ROE	NLTA	NLTDB
Constant	−0.756 (-1.224)	−3.814 (-0.622)	49.880 (9.712)***	50.028 (8.047)***	0.512 (0.783)	15.828 (1.251)	44.315 (3.080)***	45.955 (2.405)**
BOS	0.008 (0.968)	−0.008 (-0.217)	−0.011 (-0.262)	−0.036 (-0.707)	0.005 (0.619)	−0.061 (-1.432)	0.009 (0.189)	−0.024 (-0.571)
GED	0.018 (2.865)***	0.105 (2.457)**	0.023 (0.412)	0.084 (1.187)	0.017 (2.404)**	0.063 (2.453)**	0.082 (1.215)	0.118 (1.155)
AUD	−0.036 (-0.248)	−0.434 (-0.413)	0.322 (0.325)	0.965 (0.670)	−0.039 (-0.149)	0.049 (0.035)	0.071 (0.091)	1.519 (0.886)
TOO	0.187 (1.702)*	1.692 (1.564)	−1.521 (-1.630)	−2.440 (-1.997)**	0.068 (0.619)	−0.679 (-0.607)	−1.128 (-2.116)**	−1.729 (-2.107)**
OWC	0.001 (0.505)	0.002 (0.071)	0.037 (1.773)*	0.030 (1.204)	−0.008 (-2.247)**	−0.031 (-2.107)**	−0.003 (-0.128)	−0.018 (-0.811)
SIZE	0.051 (1.815)*	0.772 (2.818)***	0.263 (0.982)	0.724 (2.284)**	0.058 (2.016)**	0.294 (0.576)	0.692 (0.890)	1.198 (1.152)
NPL	−0.129 (-1.403)	−0.518 (-2.270)**	−0.133 (-1.379)	−0.132 (-0.955)	−0.129 (−2.115)**	−0.453 (-4.244)***	−0.002 (-0.081)	−0.018 (-0.559)
CAR	0.080 (2.994)***	0.054 (0.234)	0.441 (2.208)**	0.793 (2.854)***	0.039 (0.964)	−0.516 (-1.720)*	0.358 (1.102)	0.601 (1.091)
CTY_C	−0.127 (-0.337)	3.299 (1.376)	−13.848 (-7.228)***	−19.701 (-8.887)***	−0.598 (-1.650)*	0.909 (0.283)	−15.103 (-2.278)**	−21.850 (-2.771)***
CTY_I	0.200 (0.913)	−0.961 (-0.450)	0.839 (0.507)	3.125 (1.575)	−0.139 (-0.612)	−2.323 (-0.555)	−0.431 (-0.059)	1.025 (0.106)
CTY_B	0.585 (1.738)*	4.316 (2.061)**	−14.528 (-8.111)***	−9.750 (-4.032)***	0.604 (1.027)	3.491 (1.185)	−13.398 (-1.251)	−8.525 (-0.544)
BANK	FE	FE	FE	FE	RE	RE	RE	RE
YEAR	FE	FE	FE	FE	RE	RE	RE	RE
N	603	603	603	603	603	603	603	603
Adj. R^2	0.203	0.154	0.314	0.337	0.191	0.085	0.049	0.060
F	26.520***	19.222***	46.880***	51.933***	12.644***	6.089***	3.836***	4.490***

The t-statistics based on robust standard errors are reported in parenthesis. FE indicates fixed effect, while RE indicates random effect. N is the number of observations, Adj. R^2 is the adjusted R-squared, and F is the F-statistic. *$p < 10\%$; **$p < 5\%$; ***$p < 1\%$.

67 selected banks in the BRIC. In pooled regressions, gender diversity (GED) is significantly and positively related to return on assets (ROA) at the 1% level, while foreign ownership (TOO) is positively related to ROA at the 10% significance level. GED also exhibits a significantly positive relationship with return on equity (ROE) at the 5% significance level. However, board size (BOS), audit committee (AUD), and ownership concentration (OWC) do not show significant relationships with either ROA or ROE at conventional levels of significance.

These findings suggest that a higher proportion of female board directors may positively impact the profitability of BRIC banks.

Regarding liquidity, only TOO is significantly and negatively related to the net amount of loans to total deposits and borrowings (NLTDB) at the 5% level, and the relationship between OWC and the net amount of loans to total assets (NLTA) is positive and marginally significant at the 10% level. No other significant relationships with NLTA or NLTDB are found among the corporate governance indicators in the pooled regression.

Given the lack of consistent statistical results for the two liquidity proxies in the pooled regression, balanced panel data regression is conducted to confirm these findings. Since country is a time-invariant variable, fixed-effects models cannot accommodate country dummies. Therefore, the

panel regression estimates are conducted using a random-effects model in this study.

In panel regressions, consistent results show that GED has a significantly positive relationship with both ROA and ROE at the 5% level. Additionally, OWC is significantly and negatively related to both ROA and ROE. Concerning liquidity, only TOO exhibits a significantly negative relationship with both the NLTA and the NLTDB. The remaining four corporate governance indicators do not show statistically significant relationships with the two liquidity proxies.

In summary, two important findings emerge: GED positively impacts ROA and ROE, while TOO negatively impacts NLTA and NLTDB. Specifically,

Table 5. Pooled and panel regressions of bank performance on corporate governance using all selected banks in Russia.

| Variable | Pooled | | | | Panel | | | |
| | Profitability | | Liquidity | | Profitability | | Liquidity | |
	ROA	ROE	NLTA	NLTDB	ROA	ROE	NLTA	NLTDB
Constant	13.295 (1.798)*	28.947 (0.769)	20.073 (1.424)	13.648 (0.761)	19.289 (1.966)*	-6.444 (-0.142)	38.786 (1.905)*	46.573 (2.261)**
BOS	0.088 (2.673)***	0.668 (2.119)**	0.312 (2.629)***	0.228 (1.425)	0.085 (1.453)	0.102 (0.300)	0.464 (2.511)**	0.538 (2.893)***
GED	-0.008 (-0.224)	0.268 (1.738)*	0.784 (8.250)***	0.989 (8.009)***	-0.021 (-0.333)	0.269 (0.916)	0.549 (3.752)***	0.513 (1.966)*
AUD	-1.105 (-2.038)**	-8.166 (-1.617)	-6.602 (-3.520)***	-6.122 (-2.496)**	-1.134 (-2.016)**	-0.822 (-0.204)	–6.114 (-4.740)***	–3.973 (-2.564)**
TOO	1.092 (2.236)**	7.561 (2.107)**	0.208 (0.132)	1.785 (0.901)	0.644 (1.254)	-1.715 (-0.400)	0.517 (0.275)	0.726 (0.343)
OWC	0.001 (0.124)	0.155 (2.346)**	0.099 (2.101)**	0.058 (1.108)	-0.029 (-2.220)**	0.041 (0.641)	0.003 (0.051)	–0.040 (-0.703)
SIZE	-0.827 (–2.057)**	-2.974 (–1.237)	1.121 (1.348)	2.292 (2.055)**	-0.956 (-1.785)*	1.178 (0.459)	0.292 (0.401)	0.536 (0.757)
NPL	-0.343 (–2.005)**	-0.841 (–3.785)***	0.184 (1.589)***	0.162 (1.309)	-0.363 (-2.574)**	-0.734 (-4.568)***	0.269 (5.626)***	0.291 (5.676)***
CAR	0.116 (1.352)	-0.092 (–0.178)	-0.731 (–2.886)***	-0.809 (–2.539)**	0.055 (0.445)	-0.759 (-2.528)**	-0.474 (-1.062)	-0.379 (-0.724)
BANK	FE	FE	FE	FE	RE	RE	RE	RE
YEAR	FE	FE	FE	FE	RE	RE	RE	RE
N	144	144	144	144	144	144	144	144
Adj. R^2	0.445	0.206	0.333	0.304	0.457	0.074	0.071	0.032
F	26.551***	9.250***	16.940***	14.944***	16.032***	2.428**	2.372**	1.586

The t-statistics based on robust standard errors are reported in parenthesis. FE indicates fixed effect, while RE indicates random effect. N is the number of observations, Adj. R^2 is the adjusted R-squared, and F is the F-statistic. * $p < 10\%$; ** $p < 5\%$; *** $p < 1\%$.

a higher proportion of female directors on a board can enhance the profitability of BRIC banks, while the presence of foreign owners can reduce liquidity, as indicated by the ratios of net loans to assets and net loans to deposits and borrowings. Therefore, our second hypothesis, positing that more female directors on a board would lead to better bank performance, and the fifth hypothesis, suggesting that foreign owners would improve bank performance, is partially supported. However, hypotheses 1, 3, and 4 are not supported by our BRIC sample data.

Corporate governance in each BRIC country

Considering the diverse backgrounds of the BRIC countries, including variations in financial regulatory frameworks, economic advancements, and cultural contexts, this study conducts pooled and panel regressions separately for each BRIC country to assess whether corporate governance indicators have significant and distinct impacts within each nation.

Russia

In Table 5, focusing on banks in Russia, when pooled regressions are conducted, both BOS and TOO exhibit significant and positive coefficient estimates on both ROA and ROE. Audit committee (AUD) only demonstrates a significantly negative impact on ROA, while gender diversity (GED) and

ownership concentration (OWC) show positive relationships with ROE at the 10 and 5% significance levels, respectively. Regarding liquidity, all corporate governance indicators, except foreign ownership (TOO), significantly impact the net amount of loans to total assets (NLTA), with coefficient estimates of 2.629, 8.250, -3.520, and 2.101, respectively.

However, only gender diversity (GED) and audit committee (AUD) have significantly positive and negative relationships with the net amount of loans to total deposits and borrowings (NLTDB), respectively. The coefficient estimates of board size (BOS), ownership concentration (OWC), and foreign ownership (TOO) are not statistically significant at all conventional levels.

Based on the findings from both pooled and

Table 6. Pooled and panel regressions of bank performance on corporate governance using all selected Banks in China.

Variable	Pooled				Panel			
	Profitability		Liquidity		Profitability		Liquidity	
	ROA	ROE	NLTA	NLTDB	ROA	ROE	NLTA	NLTDB
Constant	0.771 (3.851)***	23.879 (6.843)***	-13.406 (-1.885)*	-20.238 (-2.585)**	2.116 (7.432)***	42.371 (8.813)***	16.501 (0.926)	10.425 (0.547)
BOS	0.001 (0.542)	-0.002 (-0.068)	0.057 (1.175)	0.065 (1.207)	-0.006 (-5.288)***	-0.102 (-8.046)***	-0.069 (–2.106)**	-0.077 (-1.960)*
GED	0.003 (1.218)	-0.089 (-2.258)**	0.090 (1.469)	0.104 (1.530)	0.000 (0.162)	-0.113 (-6.713)***	0.013 (0.121)	0.016 (0.129)
AUD	0.035 (1.046)	2.788 (5.139)***	-0.924 (-0.816)	-1.102 (-0.870)	0.175 (6.326)***	4.279 (10.024)***	3.950 (1.167)	4.164 (1.107)
TOO	0.025 (0.817)	1.401 (2.446)**	-1.586 (-1.551)	-1.902 (-1.689)*	-0.010 (-0.285)	0.935 (1.115)	-0.473 (-0.434)	-0.729 (-0.606)
OWC	0.001 (1.902)*	0.007 (0.613)	-0.008 (-0.270)	-0.002 (-0.072)	0.000 (-0.574)	-0.008 (-0.729)	-0.004 (-0.121)	-0.005 (-0.118)
SIZE	0.022 (2.057)**	0.061 (0.323)	1.958 (5.266)***	2.231 (5.415)***	-0.034 (-2.324)**	-0.706 (-3.253)***	0.549 (0.698)	0.825 (0.999)
NPL	-0.039 (-0.954)	-0.579 (-0.741)	0.086 (0.226)	0.133 (0.302)	-0.039 (-1.012)	-0.755 (-0.902)	0.159 (0.569)	0.209 (0.638)
CAR	-0.039 (-2.619)***	-1.327 (-4.123)***	2.911 (6.261)***	3.808 (7.466)***	-0.040 (-3.337)***	-1.343 (-4.874)***	2.800 (3.797)***	3.690 (4.464)***
BANK	FE	FE	FE	FE	RE	RE	RE	RE
YEAR	FE	FE	FE	FE	RE	RE	RE	RE
N	234	234	234	234	234	234	234	234
Adj. R^2	0.175	0.214	0.343	0.394	0.162	0.249	0.227	0.299
F	11.971***	15.119***	28.124***	34.777***	6.635***	10.656***	9.577***	13.399***

The t-statistics based on robust standard errors are reported in parenthesis. FE indicates fixed effect, while RE indicates random effect. N is the number of observations, Adj. R^2 is the adjusted R-squared, and F is the F-statistic. * $p < 10\%$; ** $p < 5\%$; *** $p < 1\%$.

panel regressions, it appears that none of the selected corporate governance indicators significantly enhance the profitability of banks in Russia. Specifically, in panel regressions, only the presence of an audit committee (AUD) and ownership concentration (OWC) exhibit negative impacts on return on assets (ROA) at a 5% significance level, while no significant relationship is observed with return on equity (ROE). Regarding liquidity measures (NLTA and NLTDB), board size (BOS) and gender diversity (GED) show significant and positive associations, whereas AUD exhibits a significantly negative impact on both proxies. Ownership concentration (OWC) and foreign ownership (TOO) do not demonstrate statistical significance. Overall, the results suggest that while the presence of an audit committee may increase liquidity, larger board size and a higher proportion of female directors could potentially decrease the liquidity of banks in Russia.

China

Based on the results presented in Table 6, when conducting pooled regression analysis for banks in China, only ownership concentration (OWC) shows a marginally significant and positive relationship with return on assets (ROA) at the 10% significance level. Conversely, audit committee presence (AUD) and foreign ownership (TOO) are significantly and positively associated with return on equity (ROE), while gender diversity (GED) exhibits a significantly negative impact on ROE. Regarding liquidity measures, only foreign ownership (TOO) demonstrates a marginally significant impact on the net loan to total deposits and borrowing (NLTDB), with no significant influence observed for the other corporate governance indicators on either net loans to total assets (NLTA) or NLTDB.

In panel regressions, it is evident that board size (BOS) has significantly negative coefficient estimates for both profitability and liquidity measures. Additionally, audit committee presence (AUD) exhibits a strong positive effect on both profitability proxies at the 1% significance level, while gender diversity (GED) is significantly related to ROE but with a negative coefficient estimate.

In summary, among the corporate governance

Table 7. Pooled and panel regressions of bank performance on corporate governance using all selected banks in India.

Variable	Pooled				Panel			
	Profitability		Liquidity		Profitability		Liquidity	
	ROA	ROE	NLTA	NLTDB	ROA	ROE	NLTA	NLTDB
Constant	0.033 (0.013)	-5.317 (-0.170)	232.560 (9.825)***	335.444 (11.630)***	0.033 (0.014)	-5.317 (-0.202)	84.040 (2.859)***	93.442 (3.082)***
BOS	0.005 (1.085)	0.109 (1.757)*	0.007 (0.136)	0.039 (0.456)	0.005 (0.973)	0.109 (1.590)	0.001 (0.019)	-0.041 (-0.490)
GED	0.021 (1.960)*	0.310 (2.196)**	0.046 (0.261)	0.458 (1.918)*	0.021 (2.017)**	0.310 (1.974)*	0.036 (0.114)	0.274 (0.640)
AUD	-0.481 (-2.002)**	-1.405 (-0.461)	0.406 (0.112)	5.373 (1.246)	-0.481 (-2.111)**	-1.405 (-0.467)	6.868 (1.737)*	8.450 (1.175)
TOO	0.010 (0.940)	-0.677 (-0.369)	3.001 (1.335)	0.039 (0.111)	0.010 (0.057)	-0.677 (-0.297)	0.707 (0.407)	0.129 (0.047)
OWC	0.002 (0.199)	0.031 (0.327)	-0.224 (-2.861)***	-0.241 (-2.367)**	0.002 (0.196)	0.031 (0.321)	-0.061 (-0.988)	-0.097 (-1.230)
SIZE	0.021 (0.180)	1.169 (0.819)	-7.960 (-7.104)***	-12.951 (-9.461)***	0.021 (0.207)	1.169 (1.060)	-0.86 8 (-0.516)	-0.558 (-0.362)
NPL	-0.190 (-4.448)***	-2.667 (-5.211)***	0.511 (2.709)***	0.791 (3.149)***	-0.190 (-4.538)***	-2.667 (-5.679)***	0.18 2 (1.692)*	0.145 (1.352)
CAR	0.149 (5.941)***	0.009 (0.027)	-2.229 (–4.109)***	–2.875 (-4.104)***	0.149 (10.823)***	0.009 (0.050)	-1.090 (-1.540)	-1.296 (-1.194)
BANK	FE	FE	FE	FE	RE	RE	RE	RE
YEAR	FE	FE	FE	FE	RE	RE	RE	RE
N	99	99	99	99	99	99	99	99
Adj. R^2	0.809	0.765	0.538	0.543	0.802	0.756	0.037	0.047
F	93.814***	72.298***	26.487***	27.037***	50.525***	38.937***	1.476	1.602

The t-statistics based on robust standard errors are reported in parenthesis. FE indicates fixed effect, while RE indicates random effect. N is the number of observations, Adj. R^2 is the adjusted R-squared, and F is the F-statistic. * $p < 10\%$; ** $p < 5\%$; *** $p < 1\%$.

indicators examined in our sample of 26 Chinese banks, only audit committee presence (AUD) consistently demonstrates significant associations with bank performance. While other indicators show varying levels of significance across different regressions, the coefficient estimate of AUD remains highly significant and positive in multiple regression analyses. These findings suggest that the presence of an audit committee is likely to positively impact the profitability of banks in China.

India

In India, among the corporate governance indicators analyzed, board size (BOS), gender diversity (GED), and the presence of an audit committee (AUD) show marginal associations with certain aspects of bank performance across different regression analyses, albeit at the 10% significance level. Specifically, BOS is marginally related to return on equity (ROE), GED to both liquidity proxies (NLTDB and NLTA), and AUD to ROE, NLTDB, and NLTA in various regressions. Additionally, AUD is significantly and negatively related to return on assets (ROA) in pooled regressions, while ownership concentration (OWC) exhibits a significantly negative impact on both liquidity proxies. Notably, GED emerges as the only consistently significant corporate governance indicator, showing a persistent positive association with bank profitability across both pooled and panel

regressions. Overall, the proportion of female directors on a board appears to be the most influential factor affecting bank profitability in India. Table 7 shows the pooled and panel regressions of bank performance on corporate governance using all selected banks in India.

Brazil

In Brazil, corporate governance influences profitability but not liquidity in the banking industry. As observed from Table 8, AUD, OWC, and TOO have significant relationships with the two profitability proxies, irrespective of whether pooled regressions or panel regressions are run. However,

Table 8. Pooled and panel regressions of bank performance on corporate governance using all selected banks in Brazil.

Variable	Pooled				Panel			
	Profitability		Liquidity		Profitability		Liquidity	
	ROA	ROE	NLTA	NLTDB	ROA	ROE	NLTA	NLTDB
Constant	-1.933 (-2.860)***	-13.807 (-1.441)	64.751 (4.856)***	45.891 (2.731)**	-1.206 (-0.732)	-11.089 (-0.554)	3.971 (0.108)	16.808 (0.296)
BOS	0.006 (1.115)	0.054 (1.154)	0.101 (0.857)	0.078 (0.472)	0.003 (0.533)	0.022 (0.331)	–0.125 (-3.205)***	–0.209 (-5.247)***
GED	0.006 (0.778)	0.101 (1.506)	0.318 (1.911)*	0.374 (1.424)	0.001 (0.096)	0.059 (0.774)	0.066 (1.082)	0.107 (1.501)
AUD	-1.208 (-5.759)***	-10.322 (-5.352)***	-6.472 (–2.163)**	-8.267 (-1.716)*	-1.127 (-2.747)***	-9.842 (-2.951)***	–3.171 (-0.249)	–3.909 (-0.158)
TOO	-0.428 (-3.479)***	-4.766 (-4.264)***	-6.669 (–2.016)**	-14.272 (-3.172)***	-0.430 (-2.587)**	-4.964 (-3.589)***	–6.079 (-0.502)	–11.696 (-0.542)
OWC	0.027 (5.166)***	0.267 (3.736)***	0.068 (0.616)	0.112 (0.791)	0.018 (3.307)***	0.196 (2.590)**	0.066 (0.695)	–0.019 (-0.124)
SIZE	0.042 (1.101)	0.620 (1.643)	-2.753 (–4.246)***	-1.410 (-1.409)	0.054 (0.782)	0.818 (1.234)	2.236 (1.152)	2.932 (1.220)
NPL	-0.003 (-0.613)	-0.021 (-0.372)	-0.062 (–0.619)	-0.033 (-0.197)	-0.003 (-0.945)	-0.016 (-0.460)	–0.153 (-7.561)***	–0.184 (-8.288)***
CAR	0.030 (1.569)	-0.577 (–3.084)***	1.515 (3.958)***	2.481 (3.784)***	0.032 (1.069)	-0.438 (-1.250)	0.548 (2.984)***	0.765 (1.151)
BANK	FE	FE	FE	FE	RE	RE	RE	RE
YEAR	FE	FE	FE	FE	RE	RE	RE	RE
N	126	126	126	126	126	126	126	126
Adj. R^2	0.336	0.304	0.252	0.197	0.042	0.073	0.073	0.051
F	15.097***	13.174***	10.394***	7.853***	1.680	2.229**	2.223**	1.834*

The t-statistics based on robust standard errors are reported in parenthesis. FE indicates fixed effect, while RE indicates random effect. N is the number of observations, Adj. R^2 is the adjusted R-squared, and F is the F-statistic. * $p < 10\%$; ** $p < 5\%$; *** $p < 1\%$.

significant in explaining liquidity in either of the two regressions. Considering profitability, although BOS and GED are not significant under any circumstances, regardless of pooled regressions or panel regressions, AUD and TOO have significantly negative relationships with both ROA and ROE, and OWC is significantly and positively related to these two proxies.

Considering liquidity, the coefficient estimates of BOS are negative and highly significant at the 1% level in panel regressions, whereas they are not significantly different from zero at all conventional levels, with the opposite positive sign in pooled regressions. AUD and TOO are also statistically significant when pooled regressions are run but not significant when panel regressions are run. GED and OWC are insignificant in all the

regressions. In summary, the existence of an audit committee and foreign owners negatively impacts profitability in the banking industry of Brazil, whereas high ownership concentration can help improve banks' profitability.

DISCUSSION

In analyzing the sampled banks in the individual BRIC countries, our study does not find any consistently significant relationship between the five selected corporate governance indicators and the two performance measures across the four countries. The BRIC countries have different geographical locations—Brazil in South America, Russia in Europe, and India and China in

Asia—and they have different cultures. Estrin and Prevezer (2011) proposed that the corporate governance structure of the BRIC countries is complex because of their different cultures and legal systems. Therefore, varied relationships between banks' performance and corporate governance are found in different BRIC countries. In Brazil, the existence of an audit committee, the presence of foreign owners and ownership concentration has significant effects on bank profitability only. In Russia, profitability is not affected by any corporate governance indicators, while liquidity is influenced by board size, the proportion of female board directors, and the existence of an audit committee. In the two Asian countries, only the proportion of female board directors and the existence of an audit committee

have positive impacts on bank profitability in India and China, respectively. Not surprisingly, there are no consistent empirical results across the countries. We should be aware that the BRIC is simply a "united" organization, not an entity. Owing to their different cultures, it is reasonable to deduce that bank performance is affected by different corporate governance indicators to varying degrees in different countries.

Corporate governance in Russia is significantly related only to liquidity, while it is significantly related to profitability in the other BRIC countries. The existence of an audit committee has a significantly positive impact on profitability in China but a negative impact in Brazil. Thus, it is challenging, or even impossible, to identify any consistent effects of corporate governance on bank performance among the four BRIC countries. Our results provide investors with a clue to form an effective investment strategy in the BRIC and inspire them to develop a unique investment strategy to better fit each BRIC country.

Conclusions

Similar to the findings of Oliveira et al. (2016), this study does not draw strong conclusions regarding the relationship between corporate governance and bank performance in the BRIC as a whole or among the individual BRIC countries, considering the cultural differences inherent among them (Estrin and Prevezer, 2011). The study investigates the relationships between five selected corporate governance indicators and two performance measures, profitability, and liquidity, within the banking sector of the BRIC countries. Across the pooled and panel regression analyses of 67 selected BRIC banks from 2011 to 2019, only a higher proportion of female directors and the presence of foreign owners demonstrate potential contributions to improving profitability and liquidity, respectively, of BRIC banks. However, other corporate governance indicators show no significant relationships with either profitability or liquidity in the BRIC.

Further examination of the relationship between corporate governance indicators and bank performance within each BRIC country reveals varying impacts. In Brazil, bank profitability is negatively influenced by the presence of an audit committee and foreign owners but positively correlated with ownership concentration, while no significant relationship with liquidity is observed across all corporate governance indicators. In Russia, unlike Brazil, bank profitability is unaffected by corporate governance, while liquidity is positively impacted by the existence of an audit committee but negatively affected by board expansion and an increase in the proportion of female directors. In India, only the proportion of female directors positively influences bank profitability, with no selected corporate governance indicator affecting liquidity. Similarly, in China, bank profitability is only influenced   by

the presence of an audit committee, and liquidity remains unaffected by any indicator.

This study primarily explores the applicability of corporate governance concepts from developed countries to the banking sectors of the major developing nations—the BRIC countries. Accordingly, based on our findings, investors can devise more effective investment strategies tailored to the BRIC as a whole and each individual BRIC country. Moreover, top management can utilize appropriate corporate governance practices to effectively manage banks. However, this study has limitations, including a relatively small sample size comprising 67 banks across four countries. Future research could expand the sample size and include other industries for cross-industry comparisons. Additionally, to mitigate the influence of cultural differences, research could focus on developing countries within the same region.

CONFLICT OF INTERESTS

ACKNOWLEDGEMENT

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