

## RESEARCH ARTICLE

# Nudging toward diversity in the boardroom: A systematic literature review of board diversity of financial institutions

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## Abstract

Going beyond the mere gender diversity in the boardroom, this systematic review comprehensively covers the research on board diversity of financial institutions. More specifically, we cover gender diversity, as well as other characteristics of diversity, such as nationality, age, tenure, experience, education, ethnicity, and religion. A systematic literature review was employed using Scopus and Web of Science databases, covering all publications until May 2020, which resulted in 91 studies from 66 top-ranked journals in accounting, finance, and economic fields. We analyze them based on the journal, methodology, research construct questions, and theoretical perspectives. Our results highlight the substantial knowledge gaps and the inconsistent findings of prior studies on several aspects of the field, suggesting avenues for further studies in terms of research designs, settings, scope, and theories. We argue that there is a need to explore other board diversity attributes rather than focusing on the gender diversity of the boards of financial institutions to achieve sustainable development. Also, more work is outlined on topics related to board diversity of financial firms that receive limited attention from scholars, such as (but not limited to) environmental performance, capital structure, intellectual capital, innovation and earnings quality of financial institutions, as well as the indirect effect of policy settings.

## KEYWORDS

board diversity, corporate governance, corporate social responsibility, environmental management, firm performance, gender diversity, sustainable development, systematic literature review

## 1 | INTRODUCTION

Board diversity has gained considerable academic, political, and media attention at both national and global levels in recent years (Bassouly, Abdelfattah, & Tao, 2020; Cordeiro, Profumo, & Tutore, 2020; Cucari, Esposito De Falco, & Orlando, 2018; Li et al., 2017; Lu & Herremans, 2019; Nadeem, Gyapong, & Ahmed, 2020). Researchers, policymakers, and practitioners suggest that well-structured

boardrooms enhance the performance and organizational policymaking for all companies (Aggarwal, Jindal, & Seth, 2019; Alnabsha, Abdou, Ntim, & Elamer, 2018; Alshbili, Elamer, & Beddewela, 2019; Baker, Pandey, Kumar, & Haldar, 2020; Birindelli, Iannuzzi, & Savio, 2019; Ciocirlan & Pettersson, 2012; Sitthipongpanich & Polsiri, 2014). Similarly, it has been documented in the literature that more diversified board may bring benefits to the boardroom by improving connections and networking that could be beneficial for

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expanding business in areas might be overlooked (Bufarwa, Elamer, Ntim, & AlHares, 2020; Gulamhussen & Santa, 2015; Haque & Ntim, 2020; Khan, Hussain, et al., 2019; Khan, Khan, & Saeed, 2019; Pucheta-Martínez & Bel-Oms, 2019; Shahab et al., 2020; Shahab, Ntim, Chengang, Ullah, & Fosu, 2018; Shahab, Ntim, Ullah, Yugang, & Ye, 2020). Board diversity, for example, can assist firms in gaining different information and wider exposure to the environment from suppliers, customers, policymakers, as well as social groups and competitors (Elsharkawy, Paterson, & Sherif, 2018; Horbach & Jacob, 2018; Tingbani, Chithambo, Tauringana, & Papanikolaou, 2020). Moreover, board diversity enhances board independence and decision-making quality as it takes the views of underrepresented groups into account (Agyemang-Mintah & Schadewitz, 2019; Elmagrhi, Ntim, Elamer, & Zhang, 2018; Ferrero-Ferrero, Fernández-Izquierdo, & Muñoz-Torres, 2015; Glass, Cook, & Ingersoll, 2016). Supporting this view, García-Meca, García-Sánchez, and Martínez-Ferrero (2015) suggest that more diversity on the board helps to represent all shareholders better and promote better discussion within boardrooms.

To investigate the veracity of these claims, this paper therefore aims to contribute to the extant literature by addressing the above questions via an up-to-date and comprehensive systematic literature review (SLR) of the existing research on board diversity and firm outcomes in financial institutions. The aim is to synthesize, appraise, and extend current understanding of both the existing (i) theoretical perspectives and (ii) empirical evidence on the effects that board diversity has on a wide range of firm financial and non-financial performance, such as risk taking and efficiency, corporate social responsibility (CSR), and compensation and chief executive officer (CEO) pay and a various set of financial institutions performance measures (e.g., merger and acquisition [M&A], earnings management, intellectual capital, innovation, and ethical reputation).

Although board diversity is a growing trend being included in all corporate governance codes, there is still much focus on gender diversity only (Abdelfattah, Elmahgoub, & Elamer, 2020; Aggarwal et al., 2019; Hassan, Elamer, Sobhan, & Fletcher, 2020; He & Jiang, 2019; Malagila, Zalata, Ntim, & Elamer, 2020). Many countries have employed a quota for women on all listed companies boards. For example, the Norwegian government led this initiative by mandating to have women make up 40% for boardroom (Zalata, Ntim, Aboud, & Gyapong, 2019; Zalata, Ntim, Choudhry, Hassanein, & Elzahar, 2020). The EU approved similar legislation with a 40% goal by 2020. Around the world, other countries seek to improve the level of representation of women, such as France, Germany, Italy, Belgium, Denmark, Iceland, Malaysia, the Netherlands, and Spain. They have mandatory quotas ranging from 30% to 40% (Miller & del Carmen Triana, 2009; Terjesen, Sealy, & Singh, 2009; Tyrowicz, Terjesen, & Mazurek, 2020), whereas Finland, India, and the United Arab Emirates have mandated the presence of at least one woman on boards. Nevertheless, it is unclear whether gender is actually the most significant dimension of board diversity and there is considerably less research examining other characteristics. Also, despite the increasing number of empirical work on board diversity of financial institutions in recent years (see Figure 1), there is a limited set of review papers on this subject. The study by

Hagendorff, Collins, and Keasey (2007) is the only review study on financial institutions and the only review study that places primary focus on the corporate governance mechanisms association with bank mergers in the United States, including board diversity. More recently, Nguyen, Ntim, and Malagila (2020) conducted an SLR study on board diversity, but they limited the study to gender aspect of board diversity and the outcomes of the board diversity (firm performance). A bibliometric study on board diversity conducted by Baker et al. (2020) found that the frequency of “banks” keyword is used only 10 times with board diversity. It is thus suitable to pull together studies on the nature and influence of board diversity in financial institutions.

Unlike prior studies, we focus on financial institutions for a number of reasons. First, the financial sector is different in terms of the pervasive role of regulation and the opaque nature of its main activities (Elamer, Ntim, & Abdou, 2020; Elamer, Ntim, Abdou, & Pyke, 2019; Elamer, Ntim, Abdou, Zalata, & Elmagrhi, 2019; Hagendorff et al., 2007). Financial companies are subject to more strict regulations and compliance standards (Arnaboldi, Casu, Kalotychou, & Sarkisyan, 2020b; Elamer et al., 2020). Second, due to the availability of loan activities, banks are exposed to more risk and make information asymmetry acute agency issue for banks. Lastly, directors are responsible for making and approving all key decisions that exert a substantial influence on the efficiency and performance of the banks.

We review the literature using the SLR method. Specifically, the documents were identified after reviewing the similar publication and definitions of board diversity (i.e., Alhossini, Ntim, & Zalata, 2020; Baker et al., 2020; Kagzi & Guha, 2018; Khatib, Abdullah, Hendrawaty, & Yahaya, 2020; Nguyen et al., 2020). We follow the SLR of Baker et al. (2020) to detect the papers using keyword search related to board diversity. We included all publications until May 2020, and the final sample covers a total of 91 documents. This study highlights several opportunities for further research and offers integrated evaluation to the patterns of prior studies in terms of theories, methods, and diversity measurements. We also highlight the construct focus of research on board diversity of financial institutions.

In summary, we found that vast majority of board diversity research of financial firms concentrate on firm performance, yet the findings are inconclusive (see García-Meca et al., 2015; Kaymak & Bektas, 2008; Mohammad, Abdullatif, & Zakzouk, 2018; Ozatac, 2011). Therefore, more research needs to look beyond the direct influence of board diversity and explore the policy setting roles of the board of directors. Other constructs, however, have received less attention from scholars such as (but not limited to) capital structure (Adusei & Obeng, 2019; Palvia, Vähämaa, & Vähämaa, 2014), intellectual capital (Al-Musali & Ismail, 2015), and innovation (Iren & Tee, 2018). Additionally, over 50% of prior studies have used cross-country data or develop market observations, and there is a need for more single-country studies, especially on emerging markets. The sample literature has concentrated on the gender aspect as an indicator for board diversity, and little effort has been paid to the other aspects of the board diversity such as nationality, age, tenure, experience, education, ethnic, and religion.



**FIGURE 1** The number of published articles per year [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

This study contributes to the current literature by providing a comprehensive systematic review of research on board diversity of financial companies using a large number of studies. We contend that the maturity researches on this topic have paved the way for systematic review research that will help to understand the development, achievements, and knowledge gaps on this topic. Apart from a multidisciplinary focus, this novel work explores the development of theoretical perspectives rather than concentrating on resource and agency theories and highlighting the emerging theories in this field. Additionally, this study highlights the focus of the prior work in terms of board diversity measurements, contexts, and constructs related to board diversity of financial institutions that have been examined in the literature providing avenues for future work. To our knowledge, this research is the first comprehensive review on board diversity of financial institution studies. Thus, this SLR does not only extend extant research on board diversity concerns but also help in offering a better understanding of board diversity characteristics and their influences on firms' financial and non-financial performance. Practically, such institutions have substantial practical value to further improve corporate board systems and governance structures.

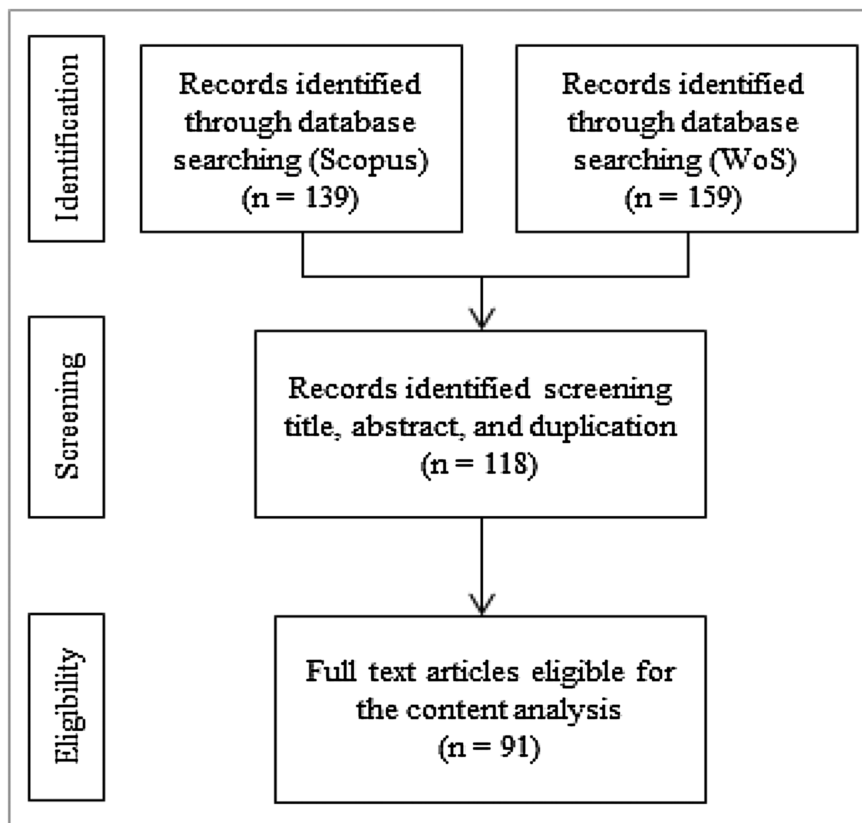
This paper is organized as follows: Section 2 presents the methodology adopted in the review process, Section 3 shows the SLR findings, Section 4 discusses the limitations of prior research and future research avenues, and Section 5 concludes the paper.

## 2 | SLR METHODOLOGY

We searched for all published documents on board diversity of financial institutions. To provide a comprehensive systematic review of the literature, we follow the SLR methodology of Amrutha and Geetha (2020), Cruz-González, Rodríguez, and Segovia (2020), and Sulaiman and Mustafa (2020) and rely on Scopus and Web of Science databases to search the following keywords: “board diversity,” “board composition,” “Female director\*,” “gender diversity,” “women director\*,” “board tenure,” “education\* diversity,” “ethnic diversity,”

“national\* diversity,” “cognitive diversity,” “demographic\* diversity,” “bank\*,” and “financial institution\*.” The board diversity keywords were identified after reviewing the similar publication and definitions of board diversity (i.e., Baker et al., 2020; Galbreath, 2017; Kagzi & Guha, 2018; Khatib et al., 2020; Tingbani et al., 2020). Boardroom diversity is the heterogeneity among the members of boards in terms of age, gender, ethnicity, nationality, education, and experience. It is essential for an organization to have more diverse boardroom in today's business environment because it provides a different perspective and insight (Khatib et al., 2020; Yang, Riepe, Moser, Pull, & Terjesen, 2019). The initial sample using the aforementioned keywords results in 159 and 139 research articles from Web of Science and Scopus databases, respectively. We excluded publications that did not primarily consider board diversity variables or did not address financial firms. After screening out the titles and abstracts for duplication and irrelevant articles, the number of sample was reduced to 118 publications that were subject to the full text evaluation. Then, this number was reduced by 27 articles during the full text assessment, and the final sample literature was 91 studies that explicitly address board diversity topic of financial companies. This method was adopted from other SLR studies in order to identify all publications included in our study (e.g., Li, Terjesen, & Umans, 2020; Sulaiman & Mustafa, 2020). Figure 2 shows the exclusion and inclusion criteria used in searching the literature on Web of Science and Scopus.

This study is not restricted to specific year or journal because we did not want only to present the findings of specific journals but instead explore the integrated development of the field and to include a complete collection of papers from this relatively nascent area of study. We initiated our search by using all keywords mentioned earlier. Then, after obtaining the preliminary set of documents, we screened the title and abstract of all articles to check for replication and relevance to board diversity of financial firms. The final number of documents included in this study is 91 articles. In line with Li et al. (2020), we concentrated on journal outlets, methodology, context, theory, diversity attribute, and construct under study.



**FIGURE 2** Flow chart of searching the literature

### 3 | SLR FINDINGS

#### 3.1 | Journal outlets

Table 1 shows that articles on board diversity of financial companies are distributed among 66 different journals and the largest outlets are *Corporate Governance (Bingley)* (seven papers), *Journal of Banking and Finance* (five papers), and *Corporate Governance: An International Review* (four papers). There are 52 journals with only one article each on board diversity of financial firms, which indicates that there is no concentration in a certain journal. The earliest research is by Pearce (1995), which is a quantitative survey study on the firm's sociometrically defined dominant coalitions and found no evidence on the linkage among the tenure of directors relative to that of the CEO.

The most influential papers in this field are 16 documents with more than 50 citations on Google Scholar each: Berger et al. (2014, 411 citations), Pathan and Faff (2013, 389 citations), García-Meca et al. (2015, 207 citations), De Cabo et al. (2012, 197 citations), Kaymak and Bektas (2008, 186 citations), Palvia et al. (2014, 156 citations), Kiliç et al. (2015, 142 citations), Muller-Kahle and Lewellyn (2011, 116 citations), and Wang & Hsu (2013, 104 citations).

#### 3.2 | Research methods employed

The field of board diversity in financial firms proliferated since 1995 and gained significant momentum with 73 publications in the last 5 years. Following Li et al. (2020), we categorize research

methodologies into four methods: qualitative, reviews, quantitative, and non-empirical research. Of the board diversity studies in financial institution, only one review research conducted by Hagendorff et al. (2007) reviewed the link between several governance attributes including board diversity and acquisition performance of financial firms in the United States. They suggest that the board diversity exert a significant function in aligning the agency conflict and preventing managers from pursuing value-destroying acquisitions. However, there is no comprehensive study reviewing multiple aspects of board diversity of financial companies.

Additionally, 87 studies are quantitative empirical research papers, whereas qualitative research on board diversity of financial firms does not exist. One paper is a review and the remaining three studies are non-empirical and focus on the following: progress of ethnic diversity United Kingdom's top corporate boardrooms (Singh, 2007), the political effect on the international financial system (Degtyarev, 2016), and bank board regulation (Enriques & Zetzsche, 2015). Of 87 quantitative research studies, four studies employ survey data (Al-Tamimi & Charif, 2013; Jamali, Safieddine, & Daouk, 2007; Pearce, 1995), whereas the others use archival data (84 papers), and one paper exploits a combination of archival and survey data (García-Meca et al., 2015).

#### 3.3 | Theoretical underpinning

Several theories have been used in the field of board diversity in financial firms. Before 2015, the literature relies on three theories,

**TABLE 1** Productive journals

Journal name	No. of publication				Publisher
	Pre-2009	2010–2014	2015–2019	Total	
<i>Corporate Governance (Bingley)</i>			7	7	Emerald
<i>Journal of Banking and Finance</i>		2	3	5	Elsevier
<i>Journal of Business Ethics</i>		2	1	3	Springer Nature
<i>Corporate Governance: An International Review</i>	2	1	1	4	Wiley-Blackwell
<i>Academy of Accounting and Financial Studies Journal</i>			2	2	Allied Academies
<i>Corporate Social Responsibility and Environmental Management</i>			2	2	Wiley-Blackwell
<i>Emerging Markets Finance and Trade</i>	1		1	2	Taylor & Francis
<i>International Review of Financial Analysis</i>			2	2	Elsevier
<i>Journal of Accounting in Emerging Economies</i>			2	2	Emerald
<i>Journal of Corporate Finance</i>		1	1	2	Elsevier
<i>Pacific Accounting Review</i>			2	2	Emerald
<i>Review of Managerial Science</i>			2	2	Springer Nature
<i>Sustainability Switzerland</i>			2	2	MDPI
<i>European Journal of Finance</i>		1	1	2	Taylor & Francis
Other journals (with one publication)	3	5	44	52	
Total	6	12	73	91	

Note. Example for journals with one publication: (1) *Accounting*, (2) *Journal of Financial Economic Policy*, (3) *Ekonomicky Casopis*, (4) *Finance Research Letters*, (5) *Global Business Review*, (6) *Sustainable Development*, (7) *Administrative Sciences*, (8) *Investment Management and Financial Innovations*, (9) *Managerial Finance*, (10) *British Accounting Review*, (11) *Economic Systems*, (12) *International Review of Finance*, (13) *Journal of Banking Regulation*, and (14) *Management Decision*.

including agency theory, resource dependency theory, and human capital theory, as shown in Table 2. In the last 5 years, however, a significant number of theories have been utilized by the literature, and the most common theoretical perspective utilized in the literature is the agency theory (29 articles [32% of the studies]) and the second one is the resource dependency theory (17 articles [18%]), followed by stakeholder hypothesis (eight articles [9%]), critical mass perspective (six articles [7%]), and human capital theory (five articles [6%]). In total, 31 different theoretical perspectives explicitly employed on this topic with 20 theories that have been utilized one time. There are 17 (18%) articles that did not explicitly apply any theory.

### 3.3.1 | Agency theory

The agency theory has been utilized in 29 quantitative pieces of research. This theory is typically linked to the conflict of interest result from the ownership separation (Fama & Jensen, 1983; Jensen & Meckling, 1976). The board diversity literature used it to explore topics such as board diversity influence on the agency conflict and performance of financial firms (Bektas & Kaymak, 2009; Boadi & Osarfo, 2019; Farag & Mallin, 2017; Ghosh, 2017; Kaymak & Bektas, 2008; Kusi, Gyeke-Dako, Agbloyor, & Darku, 2018; Shettima & Dzikarnaini, 2018; Talavera, Yin, & Zhang, 2018), CSR reporting quality of financial sector (Tapver, Laidroo, & Gurvits-Suits, 2020), CSR practices (Isabel María García-Sánchez, Martínez-Ferrero, &

García-Meca, 2018), environmental, social, and governance performance (Birindelli, Dell'Atti, Iannuzzi, & Savioli, 2018), mergers and acquisition performance (Chu, Teng, & Lee, 2016; Hagendorff et al., 2007; Hagendorff & Keasey, 2012), risk taking (Abou-El-Sood, 2019; De Vita & Luo, 2018; Yu et al., 2017), compensation policy (García-Meca, 2016), audit fees (Nehme & Jizi, 2018), earnings management (Fan, Jiang, Zhang, & Zhou, 2019), determinants of banks' bailouts (Fernandes, Farinha, Martins, & Mateus, 2016), and banks' efficiency (Ramly, Chan, Mustapha, & Sapiei, 2017). It is noteworthy that the agency argument helps us to understand the supervisory role of the board members to monitor and control management activities, whereas multiple theoretical perspectives enable us to better interpret the other roles of the board of directors. Therefore, a growing number of studies utilize multiple theoretical frameworks (i.e., Abou-El-Sood, 2019; García-Meca, 2016; Tapver et al., 2020).

### 3.3.2 | Resource dependency theory

The resource dependency perspective possesses that companies can better secure the needed resources with better corporate governance structure, including financial and non-financial resources. This theory explores the function of governance attributes in obtaining resources for all companies. In an industry as heavily regulated and opaque as banking industry (Kaymak & Bektas, 2008), knowledge is a vital form of business capital, and financial companies' improvement involves a

**TABLE 2** Theories across time

Theories	Pre-2009	2010–2014	2015–2020	Total
Agency theory	4	3	22	29
Resource dependency theory	2	3	12	17
Stakeholder theory			8	8
Critical mass theory			7	7
Human capital theory	1	1	3	5
Upper echelons theory			3	3
Social identity theory			3	3
Legitimacy theory			3	3
Stewardship theory			3	3
Social psychology theory			2	2
Other theories	1	2	17	20
Paper without theory	1	7	9	17

Note. Other theories include social impact theory, contingency theory, status characteristics theory, risk preference theory, group decision-making theory, institutional theory, behavioral theory, the reputation theory, the social cognition theory, the similarity attraction theory, the Blau theory of heterogeneity, gender socialization theory, the homophily theory, the option theory, game theory, the theory of bank risk taking, power theory, pecking order theory, trade-off theory, and life cycle theory.

variety of perspective, experience, and insights that can be acquired by board diversity (Khatib et al., 2020; Onuorah, Osuji, & Ozurumba, 2019). The resource dependence theory has been applied in 17 quantitative studies that discuss several topics related to board diversity such as bank performance (Boadi & Osarfo, 2019; Farag & Mallin, 2017; Ghosh, 2017; Talavera et al., 2018), compensation policy (García-Meca, 2016), CSR (Orazalin, 2019), bank efficiency (Adeabah, Gyeke-Dako, & Andoh, 2019) (Ramly et al., 2017), earnings management (Fan et al., 2019), and accounting quality (García-Sánchez, Martínez-Ferrero, & García-Meca, 2017).

### 3.3.3 | Stakeholder theory

The stakeholder theory holds that there should be a symbiotic relationship between the company and its external and internal shareholders and that the company's value depends on the company's ability to fulfill the need of its stakeholder. In other words, the directors of firms are saddled with the responsibility of ensuring that the needs of both the internal and the external shareholders of the firm are met. The discussion of the stakeholder hypothesis is mainly about designing a governance structure that addresses all stakeholder interests. Stakeholders include the company's employees, creditors, suppliers, community, and even competitors. In board diversity of financial institutions, eight studies have employed this theory (Abou-El-Sood, 2019; Birindelli et al., 2018; García-Sánchez et al., 2018; Kiliç et al., 2015; Kusi et al., 2018; Mohammad et al., 2018; Orazalin, 2019; Tapver et al., 2020). This theoretical perspective has become more prominent in recent years because scholars have now realized that the actions and contributions of each director to the board are different from one to another, depending on the age, experience, gender, ethnic, education, nationality, tenure, and so forth.

### 3.3.4 | Critical mass theory

The critical mass perspective suggests that minority of board members with certain characteristics (age, ethnic, gender, nationality, tenure, etc.) will fully exert their contribution to the boards after reaching a certain threshold (Kanter, 1977). Several studies in board diversity of financial institutions have applied this theory: the performance of environmental, social, and governance (Birindelli et al., 2018); bank performance (Farag & Mallin, 2017; Ghosh, 2017; Kramaric & Miletic, 2017); and earnings management (Fan et al., 2019). Kramaric and Miletic (2017) find that the performance of the bank is improved after having 20%–40% women on the management boards. In earnings management, Fan et al. (2019) suggest that the impact of women directors changes from positive to negative until the threshold of three or more female board member is reached.

### 3.3.5 | Other theories

Other theoretical perspectives are only hardly used. For instance, the *human capital theory* proposes that earnings and position disparities could be associated with the accumulative human capital value of people talent, background, and other characteristics. This theoretical perspective suggests that individuals from smaller categories who have obtained higher status are more likely to possess higher education and experience level that are required for their directorship opportunity. This theory has been applied to five research (De Cabo et al., 2012; Farag & Mallin, 2017; Ghosh, 2017; Singh, 2007; Talavera et al., 2018). The *upper echelon theory* is applied in three research, and it evaluates the interrelationship among organizational outcomes and the characteristics of top management team (Boadi & Osarfo, 2019; Nguyen, Hagendorff, & Eshraghi, 2015; Yu et al., 2017).

The *social identity theory* explains the means of defining people to their membership within groups based on certain characteristics like nationality, experience, age, and gender (Tajfel & Turner, 1986). This classification makes it difficult for the out-group individual to participate in such a group. It is discussed in three research (Adusei, 2019; Boadi & Osarfo, 2019; Delgado-Piña, Rodríguez-Ruiz, Rodríguez-Duarte, & Sastre-Castillo, 2020). To explain how corporate governance code should be flexible and give more authority to the top executives, three quantitative studies apply the *stewardship theory* (Boadi & Osarfo, 2019; Dong, Girardone, & Kuo, 2017; García-Meca, 2016). To this end, reviewing the theoretical frameworks employed in the literature indicates that there is growing attention toward multiple theoretical perspectives, and it is expected to see more work with the psychological and behavioral theories in future research to better interpret the other roles of board diversity.

### 3.4 | Geographical focus

Table 3 shows that 32 papers use multicountry data (e.g., Adusei & Obeng, 2019; Gallego-Álvarez & Pucheta-Martínez, 2020; Gangi, Meles, D'Angelo, & Daniele, 2019; García-Meca et al., 2015), with 10 of these researches focusing only on European context (Boitan & Nițescu, 2019; Farag & Mallin, 2017; Fernandes et al., 2016; Sghaier & Hamza, 2018). Also, the US market is evaluated by other 10 empirical research articles, the United Kingdom by five articles, Turkey by four articles, and Spain by four articles. The cross-market research was carried out based on data retrieved from as many as 69 nations (Adusei & Obeng, 2019). However, the distribution of empirical research points to the need of for more single-country studies, especially in emerging economies.

**TABLE 3** Geographic analysis of data focus

Country	Pre-2009	2010–2014	2015–2019	Total
United States	2	4	4	10
United Kingdom	1		4	5
Turkey	2	1	1	4
Spain		1	3	4
China			4	4
Nigeria			4	4
India			3	3
Ghana			3	3
GCC countries			3	3
Malaysia			2	2
Jordan			2	2
United Arab Emirates		1	1	2
Cross country		4	28	32
Other countries	1	2	10	13

Note. Other countries include Germany, Italy, Croatia, Costa Rican, Kazakhstan, Lebanon, Poland, Romanian, South Africa, Taiwan, Tanzania, Tunisia, and Zimbabwe.

Abbreviation: GCC, Gulf Cooperation Council.

### 3.5 | Modeling

Three survey studies include sample observations from 43 correspondent (Al-Tamimi & Charif, 2013), 61 correspondent (Jamali et al., 2007), and 125 correspondent, whereas archival researches with firm-level data involve observations from at least five banks (Shungu, Ngirande, & Ndlovu, 2014), or at most 6,729 banks (Palvia et al., 2014).

Table 4 shows that six of 87 quantitative studies have explored the moderation impact of several factors and only one study investigated the mediation approach. García-Meca et al. (2015) explore the moderating influence of the investor protection on the board diversity and bank performance association, suggesting that the performance of the bank is less influenced by board diversity in lower investor protection and weak regulatory contexts. Also, García-Sánchez et al. (2018) investigated the moderating role of investor protection on the CSR and board of director relationship. Additionally, Adusei (2019) studied the moderating effect of firm size on the female directors and technical efficiency association. Other studies included moderating variable into their model (see Al-Musali & Ismail, 2015; Gallego-Álvarez & Pucheta-Martínez, 2020; García-Meca, 2016).

A few papers use non-linear models to test non-monotonic associations (Arnaboldi et al., 2020b; Fan et al., 2019; Fernandes, Farinha, Martins, & Mateus, 2017; Kiliç et al., 2015; Wang & Hsu, 2013). For instance, Fan et al. (2019) contend that there is a non-linear association between earnings management and gender diversity of banks and this relationship shifts from positive to negative until the number of women on the board is three or more. Excluding descriptive research papers, quantitative studies test about four hypotheses that contain more than five regression models with over four explanatory variables on average.

**TABLE 4** Analysis of methods for empirical studies

Concepts under study	No. of papers	With mediator	With moderator	Avg. no. Of hypotheses	Avg. no. of explanatory variable	Avg. no. of regression models	Avg. no. of sample
Performance	32	1	2	3	3	7.6	84.4
Risk taking and efficiency	22	0	1	2.3	3.9	5.5	131
Corporate social responsibility	11	0	3	4.5	3.9	3.2	92.5
Compensation and CEO pay	4	0	0	2.75	3.5	6.25	46.3
M&A	2	0	0	3.5	4	9	98
Earnings management	2	0	0	6.5	6.5	2	58.5
Others	14	0	1	3.7	3.76	5.7	151.3

Abbreviations: CEO, chief executive officer; M&A, merger and acquisition.

The empirical studies have applied a wide range of regression methods including ordinary least square (Bektas & Kaymak, 2009; Cardillo, Onali, & Torluccio, 2020), probit (Fernandes et al., 2016; Nguyen et al., 2015), logit (Talavera et al., 2018; Tapver et al., 2020), 2SLS (García-Meca, Uribe-Bohórquez, & Cuadrado-Ballesteros, 2018; Owen & Temesvary, 2018), Heckman (Gangi et al., 2019), the difference in difference (Arnaboldi et al., 2020b; Berger et al., 2014), weighted least squares (Fernandes et al., 2017), and generalized method of moments (GMM; Ghosh, 2017; Pathan & Faff, 2013). Interestingly, there is no study applying structural equation model.

### 3.6 | Thematic results

We identify studies related to board diversity of financial firms. Then, we categorized the concepts studied into the following themes: (1) performance, (2) risk taking and efficiency, (3) CSR, (4) compensation and CEO pay, (5) M&A, (6) earnings management, and (7) other topics. We did not consider concepts that are represented by control variables, and we categorize the sample literature based on the explicit construct addressed by each study. Table 4 displays the concepts identified in the extant research.

#### 3.6.1 | Firm performance

The performance of financial companies is the most frequently discussed topic in relation to board diversity. The article by Kaymak and Bektas (2008) is the first to discuss the influence of board diversity on the performance of banks. They focus on tenure diversity and find it to be negatively associated with the performance of banks. However, diversity of boards in terms of gender appears to be the most frequent attribute that has been used in the literature to measure the board diversity. Twenty-six out of 32 research discuss the gender

diversity impact on performance, with 16 of these studies relying on gender to measure the board diversity (Ghosh, 2017; Pathan & Faff, 2013), yet the findings are inconclusive (see Table 5). For example, Adesanmi, Sanyaolu, Isiaka, and Fadipe (2019) used a small sample size (10 banks) and found evidence that gender-diverse boards increase the performance of banks in Nigeria. Similarly, García-Meca et al. (2015) reported a positive association between firm performance and gender diversity by utilizing a sample from nine countries. Other researchers, however, found it to be negative or no relationship (Dinu & Bunea, 2017 [Romania]; Mohammad et al., 2018 [Jordan]; Shettima & Dzolkarnaini, 2018 [Nigeria]). Talavera et al. (2018) suggest that diversity trigger in-group conflict in the decision-making process. Additionally, few researchers suggest that there is a non-linear association between performance and board diversity (Arnaboldi, Casu, Kalotychou, & Sarkisyan, 2020a; Owen & Temesvary, 2018). In contrast, Dinu and Bunea (2017) contend that there is a direct link between financial performance and gender diversity of banks in Romania.

With regard to the age diversity, Talavera et al. (2018) found evidence that in China, board age diversity generates interpersonal frictions and communication barriers within the boardroom. In contrast, Fernandes et al. (2017) reported that during the financial crisis, age diversity of board enhanced the performance of European banks. However, our findings indicate that the impact of board diversity on the performance of financial institution depends on the board diversity indicator, and it differs across countries. Hence, the cultural differences between countries might be another reason behind the inconclusive findings (Arnaboldi et al., 2020a). Another reason for the incompatibility of the previous results could be the methodological issues such as endogeneity (Onuorah et al., 2019) and small sample size (Jubilee, Khong, & Hung, 2018; Rafinda, Rafinda, Witiastuti, Suroso, & Trinugroho, 2018). It should be noted that there is a limited number of studies evaluating operational performance (Delgado-Piña et al., 2020; Kaymak & Bektas, 2008).



**TABLE 5** Example of studies on BD and performance association

Author	Diversity measures	Performance measures	Key findings
Category 1. Board diversity and firm performance: 32 studies			
Talavera et al. (2018), China	Age	ROE, ROA, Z-score, and NPL ratio	The more age-diverse boardroom sparks intragroup conflict in the process of decision making and hence negatively influences the bank profitability.
Shettima and Dzolkarnaini (2018), Nigeria	Gender	ROE and ROA	Gender board diversity does not replace the weak governance structure, which results in low performance.
García-Meca et al. (2015), international	Nationality and gender	ROA and Tobin's Q	High performance is achieved by more gender-diverse boards. National diversity, on the other hand, exerts a detrimental effect on the performance of banks. In weak investor protection market, BD exerts less impact on bank performance.
Pathan and Faff (2013), United States	Gender	Tobin's Q, NIM, ROAE, ROAA, and stock return	Performance of banks was enhanced by BD in the pre-SOX period, whereas after the crisis time and post-SOX, this influence is weakened.
Kaymak and Bektas (2008), Turkey	Tenure	ROA and assets growth	The tenure of a board exerts an adverse impact on the performance of corporate.
Mohammad et al. (2018), Jordan	Gender	ROA	The presence of women on the board does not influence the financial performance banks.
Dinu and Bunea (2017), Romania	Gender	ROA and ROE	There is an insignificant direct relationship between board diversity and the financial performance of banks in Romania.
Onuorah et al. (2019), Nigeria	Experience	ROA, ROE, ROI, ROC, and profit after tax	The BD has a significant influence on the performance, indicating that knowledge, skills, and abilities acquired by directors are critical for board effectiveness.
Rafinda et al. (2018), India	Nationality and gender	ROA, ROE, and Z score	Foreign directors lead to worse firm performance, whereas female directors do not influence bank performance.
Ozatac (2011), Turkey	Gender	ROA	Failed to detect any significant association between the diversity of top management and board with the performance.
Ali and Azmi (2016), Malaysia	Board is Islamic	Z score, ROA	Religion does not make a difference and non-Muslim directors can run the Islamic banking business as good as Muslim directors.
Fernandes et al. (2017), Europe	Experience, education, gender, nationality, and age	Buy-and-hold stock returns	During the 2006 crisis, the better performing banks have less busy supervisory and independent directors and higher diversity in terms of age, gender, and experience.
Ahmad and Alshbie (2016), Jordan	Gender	ROA	Gender-diverse board does not influence the performance of banks because women in Jordan business market come from non-business backgrounds.

Abbreviations: BD, board diversity; NIM, net interest margin; NPL, non-performing loans; ROA, return on asset; ROAA, return on average assets; ROAE, return on average equity; ROC, return on the capital employee; ROE, return on equity; ROI, return on investment.

### 3.6.2 | Risk taking and efficiency

Twenty-two articles have been published related to the interrelationship between board diversity of banks and risk taking and efficiency. A study conducted by Wang and Hsu (2013) was the first to shed light on board diversity and risk management in financial companies. They found that in financial institutions, high board diversity level can have a detrimental influence on monitoring effectiveness of boards. Similarly, for bank efficiency, board diversity appears to be associated with lower traditional risk but higher cost efficiency and profit (Dong et al., 2017). Furthermore, Adusei (2019) found that female directors exert a detrimental impact on the technical efficiency, and this effect changed to positive after evaluating the interaction between the diversity and size of boards, indicating that board diversity is sensitive to its size. Similarly, Ramly et al. (2017) suggested that female directors improve banks' efficiency only if they are independent directors. It remains uncertain whether board diversity positively or negatively influences risk taking and efficiency of the financial institution. The finding indicates that the impact of board diversity is sensitive to other governance attributes. Therefore, researchers are encouraged to evaluate the interaction of board diversity and other governance mechanisms. Also, there is the limited number of single-country studies on these topics as well as the contradictory findings (i.e., Abou-El-Sood, 2019; Dong et al., 2017; Rafinda et al., 2018; Yu et al., 2017). Table 6 summarizes some studies on board diversity and risk and efficiency of financial institution.

### 3.6.3 | Corporate social responsibility

CSR in a recent business environment has become a core issue for policymakers, regulators, and academics in terms of sustainability in the economic, environmental, and social areas. To cover themes, corporations in their policies and decision-making processes would need to integrate new environmental strategies. Given that banks are increasingly involved in environmental affairs in a direct way as firms, or indirect, by their lending activities, banks also have become an important subject of research (Birindelli et al., 2019). In the last 2 years, growing attention has been paid to CSR reporting and board diversity research in business practice and academic research, yet a limited number of research papers have conducted on the finance sector and the empirical conclusions of these researches were inconclusive (Birindelli et al., 2019; Orazalin, 2019).

For instance, Birindelli et al. (2019) suggest that the association between board gender diversity (BGD) and the environmental performance of banks is non-linear. García-Meca et al. (2018) find that in the banking sector, BGD favors the CSR information reporting, but this relation is moderated by the national cultural system. In comparison, the vast majority of the prior research confirms the positive relationship among board diversity and CSR (Birindelli et al., 2018 [international]; Kiliç et al., 2015 [Turkey]; Orazalin, 2019 [Kazakhstan]; Tapver et al., 2020 [international]). Female directors bring more insight and perception perspectives to

the board and consequently enhance the CSR reporting (Kiliç et al., 2015). Table 7 shows examples of studies on board diversity of financial companies and CSR. It should be noted that more than half of the existing studies are based on international data. There is therefore a need for board diversity and CSR reporting studies of finance companies in both developed and emerging markets. Also, prior studies examined the board diversity influence on CSR in terms of gender diversity only. There is no work that considered the other diversity indicators such as age, ethnicity, nationality, education, cultural background, and experience (Pucheta-Martínez, Bel-Oms, & Nekhili, 2019).

### 3.6.4 | Compensation and CEO pay

It is commonly held in the literature that the underlying factor of the economic crisis is the weak governance practices that result in poor compensation policies that motivate managers to consider taking excessive risk. Compensation policy has therefore become a central topic for policymakers, scientists, and regulators in recent years. Much work has been done on corporate governance, the characteristics of boardrooms, and the remuneration policy. A strand of research has emphasized the underlying roles of these characteristics in identifying the compensation policy within a firm, including board composition, independence, and CEO duality. However, there has been much less research focused on board diversity and compensation policy of financial institutions (four studies). Owen and Temesvary (2019) argue that banks take excessive risk because of the compensation schemes for CEOs, and these compensations are higher in the bank with more gender diversity. In contrast, García-Meca (2016) suggests that female representation on the board reduces the compensation of executives, but political connection increases it. Olaniyi and Obembe (2017) contend that CEOs' tenure, bank size, and previous CEOs' pay are the main drivers of board composition. Also, Al-Tamimi and Charif (2013) used survey data and found evidence that the role of directors is determined by their governance awareness, education background, experience, and compensation. Due to the lack of empirical work in this area, further work is warranted. Future studies could explore the other diversity indicator and their interaction with different governance attributes. Also, more work can examine the impact of cultural differences across countries on this area of interest.

### 3.6.5 | Merger and acquisition

In our sample literature, only two articles have addressed board diversity and M&A of financial institutions. Chu et al. (2016) confirmed the argument that value-loss M&A behavior can be prevented by a sound governance structure, but the board diversity has an insignificant impact on the M&A performance. However, the second study conducted by Hagendorff and Keasey (2012) suggested that mergers approved by a more diverse board (tenure, age, and background) are

**TABLE 6** Example of studies on BD, risk, and efficiency association

Author	Diversity measures	Key findings
Category 2. Board diversity and risk taking and efficiency: 22 studies		
Rafinda et al. (2018), India	Nationality and gender	The bank risk is positively affected by two measures of BD.
Wang and Hsu (2013), international	Age and tenure	In financial institutions, having a more BD can have an adverse influence on the monitoring efficiency of the boards.
Adeabah et al. (2019), Ghana	Gender	Board with nine directors, with two female members, is able to promote bank efficiency to up to maximum.
Abou-El-Sood (2019), GCC countries	Gender	Banks with more women on the board invest in less risky projects and this impact is different between conventional and Islamic banks.
Yu et al. (2017), international	Gender	Bank risk is positively associated with the board gender diversity, whereas it is opposite for the presence of female director on both corporate governance committee and audit committee.
Gangi et al. (2019), International	Gender	In the banking sector, BD exerts greater efficiency in the use of resources and a strong reputation may have on financial performance.
Sun and Liu (2014), international	Experience, tenure, and gender	The risk of the bank is significantly affected by board tenure, gender diversity, and the size of the board.
Lu and Boateng (2018), United Kingdom	Gender	BD has a significant negative influence on credit risk.
Sghaier and Hamza (2018), Europe	Gender	The risk profile of the acquiring bank is decreased by more gender diversity of the board and top management team.
Al-Yahyaee, Al-Hadi, and Hussain (2017), China	Gender and foreign directors	Boardroom gender diversity appears to be linked not only to higher profit and cost efficiency but also to lower traditional banking risk.
Chan, Koh, and Karim (2016), China	Gender, age, experience, and political connection	Because BD improves the problem solving of the board and provides more insight into the market and reducing risk, banks with more BD perform better than others.
Moussa (2019), Tunisia	Gender	Governance attributes affect risk behavior differently, including the presence of a woman on board.

Abbreviations: BD, board diversity; GCC, Gulf Cooperation Council.

positively associated with announcement returns. Due to the lack of studies on the performance of M&A of financial institutions, each study can be considered as unique research (Chu et al., 2016). Hence, there is ample room for future research to explore board diversity and the performance of M&A of financial institutions.

### 3.6.6 | Earnings management

The extant literature also uncovers the association between board diversity and earnings management of financial firms. However,

there are only two studies on this topic for financial firms. Fan et al. (2019) find that the bank earnings management and board diversity in terms of gender has an inverted U-shaped association. They suggest that earnings management declines when there are at least three female members on the board. On the other side, Kolsi and Grassa (2017) focused mainly on the board, ownership, and shariah board structure, including the educational background of Shariah board member. They found that Shariah board member with Accounting and Auditing Organization for Islamic Financial Institutions membership positively impacts earnings management. Although they confirmed the direct relationship between

**TABLE 7** Example of studies on BD and CSR association

Author	Diversity measures	Key findings
Category 3. Board diversity and CSR: 11 studies		
Frias-Aceituno, Rodriguez-Ariza, and Garcia-Sanchez (2013), international	BGD, board independence	Bank CSR commitment is positively influenced by BGD and board independence. These variables are more relevant to CSR in the market with more investor protection environment.
Gallego-Álvarez and Pucheta-Martínez (2020), international	(moderator) BGD, or board members with specific skills	Banks are less likely to report environmental information in liberal market economies compared with coordinated market economies cultures. In the latter market, GD encourages disclosing environmental information and this influence is different in the coordinated market.
Pucheta-Martínez et al. (2019), Spain	Institutional directors, independent directors, inside directors, BGD	CSR reporting is not affected by institutional directors, but it is significantly and positively influenced by gender diversity or board independence.
Birindelli et al. (2019), international	BGD and women CEO	The environmental performance of banks is non-linearly associated with the presence of female directors. This association is shaped by CEO's gender. Hence, the gender of leaders is a vital driver of environmental sustainability in banks.
García-Meca et al. (2018), international	Board independence and BGD	CSR information disclosure is significantly improved by more BGD and independence and this association is moderated by the cultural system.
Fakoya and Nakeng (2019), South Africa	BGD, board independence, firm size	Corporate energy usage is decreased with more gender-diverse board, while other characteristics of boardrooms are not related to the environmental performance of corporations. In contrast, board independent directors might increase environmentally related decisions.
Matuszak, Różańska, and Macuda (2019), Poland	In both management and supervisory boards; gender diversity, the chair is a female and foreign director	The ownership structure is a significant driver of the CSR disclosure activities. The characteristics of management boards exert a positive impact of CSR reporting. In contrast, this impact does not exist with the supervisory board.

Abbreviations: BD, board diversity; CEO, chief executive officer; CSR, corporate social responsibility.

governance and earnings management, the direction was mixed depending on the governance attributes (Kolsi & Grassa, 2017). However, board diversity is a promising area for future research due to the scarcity of empirical studies on this theme.

### 3.6.7 | Other topics

There are other topics that have been examined in relation to board diversity of financial firms. In our sample literature, 14 studies are grouped in this category. Two of them focused on the bailout of

banks in European countries (Cardillo et al., 2020; Fernandes et al., 2016), capital structure (Adusei & Obeng, 2019; Palvia et al., 2014), intellectual capital (Al-Musali & Ismail, 2015), innovation (Iren & Tee, 2018), conservatism accounting (Almutairi & Quttainah, 2019; García-Sánchez et al., 2017), and ethical reputation (Baselga-Pascual, Trujillo-Ponce, Vähämaa, & Vähämaa, 2018). These topics have also received less attention to financial institution researchers, and more researches are encouraged to explore these topics with board diversity attributes. For instance, there is only one study to investigate the link between board diversity and audit fees (Nehme & Jizi, 2018).

## 4 | DISCUSSION AND FUTURE RESEARCH AVENUES

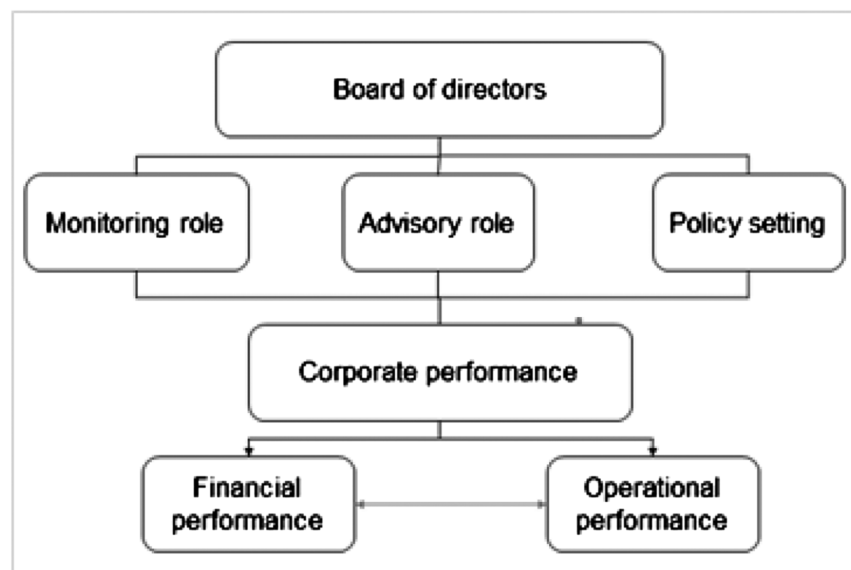
This section provides a discussion on several avenues for further research directions. In earlier sections, we summarize all theoretical perspectives that have been used in board diversity of financial institution researcher. It should be noted that despite agency and resource perspectives being the most common in this topic, psychological and behavioral theories have attracted the researchers' attention in the last 5 years (e.g., the behavioral theory, the reputation theory, and the social cognition theory). Before 2015, scholars have addressed the board diversity of financial companies from the agency and resource perspectives. After that, the debate has expanded to include more theories as a single theory has failed to comprehensively explain the impact of board diversity on several aspects of corporates (Khatib et al., 2020). Because it might be difficult to explain the implication of board diversity using conventional theories due to vast board diversity attributes, applying new theoretical lenses would help to better understand this issue. Also, the conventional theories are focusing on two means—monitoring role (agency view) and advisory role (resource view)—and neglecting the one important aspect board function, which is the policy settings. As shown in Figure 3, the three roles of the boardroom have an essential impact on the performance of organizations. Unlike the first two functions, the policy setting can be better measured through the indirect link between the board of directors and performance. Hence, there is a need to look beyond the direct impact of board diversity. In line with this argument, Ward, Brown, and Rodriguez (2009) also argue that this association might be indirect. For example, studies evaluated the policy setting role of the board of director by Detthamrong, Chancharat, and Vithessonthi (2017), Khatib, Abdullah, Kabara, Hazaea, and Rajoo (2020), and Khan, Hussain, et al. (2019).

However, we also identified seven emerging theoretical perspectives in this field: *stakeholder*, *critical mass*, *upper echelons*, *human*

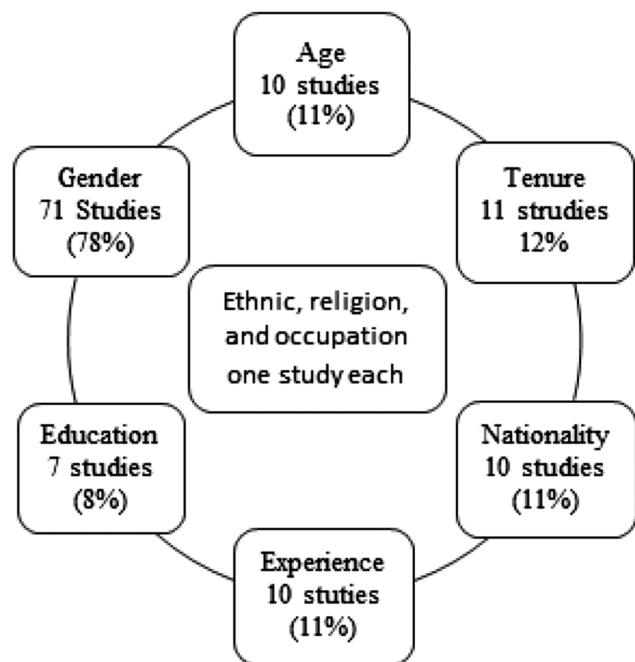
*capital*, *social identity*, *legitimacy*, and *stewardship theories*. These theoretical perspectives are applied in a growing number of researches recently. We encourage future work to consider the behavioral and psychological aspect to provide a better understanding of the board structure. The difficulty of collecting the data related to team- and individual-level perspectives might be challenging. This is evidenced by the limited number of survey studies in our sample literature. Surveys can be a good tool to capture team- and individual-level observations.

For research questions, given that this article targets firm-level governance, it is not surprising that the majority of studies question the direction and impact of board diversity on several aspects of financial firms. One gap has been noticed in the literature—very limited effort has been put forward to address the antecedents of board diversity of financial institutions (De Cabo et al., 2012; Jamali et al., 2007). Hence, we suggest further work to pay close attention to potential antecedents of board diversity. Additionally, it should be noted that most of the empirical work has focused more on the gender aspect of the board diversity compared with the other characteristics such as nationality, age, tenure, experience, education, ethnic, and religion (see Figure 4). Future research on these characteristics and the interaction between them is highly warranted. Moreover, there is a need to differentiate between the type of bank (saving, commercial, cooperative, Islamic banks, etc.).

Many research papers on the performance of financial firms specifically discuss the financial performance and two studies consider non-financial performance such as productivity and assets growth (Delgado-Piña et al., 2020; Kaymak & Bektas, 2008), pointing to the importance of addressing the non-financial (operational) measurements of performance in future studies, as expansion is the ultimate objective of modern and complex organizations (Daft, 2010). Prior studies on this diversity and performance result in inconclusive findings for several reasons including the methodological issues such as endogeneity and small sample size, and the cultural differences



**FIGURE 3** Roles of the board of directors



**FIGURE 4** Board diversity indicators used in prior studies

between countries could be another reason behind the mixed findings, as well as the diversity or the performance measurements used in different studies. Additionally, the extant literature often discusses the association between bank board diversity and performance, risk taking, or efficiency; there are profound gaps around the association of board diversity with several other aspects that have received less attention such as (but not limited to) audit fees, capital structure, CSR, intellectual capital, earnings management, remuneration policy, and innovation. We encourage further work to explore these themes. Additionally, the vast majority of prior work was based on across-nation observations, and a few research explored board diversity of financial institutions from single-country observations, pointing to the need for more single-country empirical work (both developed and emerging nations).

The sample literature exhibits a variety of research designs. For instance, most of the studies used ordinary least square regression, and GMM was also common in our sample. However, no studies applied structural equation modeling to analyze observations. Further work could take advantage of this technique to evaluate the policy setting role of boardrooms as it is a powerful tool to measure all variables in a single model. Qualitative studies to unpack the black box of board diversity are needed as such works do not exist. We also encourage scholars to apply non-linear regression specifications as it have been evidenced by a few studies.

## 5 | CONCLUSION

This paper aims to offer the most up-to-date research on board diversity of financial institutions. Our SLR analyzed 91 articles on board diversity of financial firms from 66 journals and categorized the

articles into a review (one article), non-empirical (three papers), and empirical (87 papers) studies. We also explored the theories that have been applied, with resource and agency perspectives being the most commonly used theories. Also, prior studies have applied a variety of regression methods. Particularly, ordinary least square regression is the most common technique, and several studies have employed GMM. However, a few empirical articles utilize a non-linear model to capture non-monotonic associations and there are no studies in our sample that utilized structural equation modeling. It should also be noted that a vast majority of empirical work is from evidence from an across-country sample, pointing to the need for single-markets work. After categorizing empirical documents based on the research construct, we found that a very little effort was directed to understand the antecedents of board diversity, whereas most of the prior work addressed the outcomes of board diversity (especially gender diversity).

This SLR contributes to the existing literature by providing a comprehensive review of research on board diversity of financial companies using a large number of studies with a multidisciplinary focus in order to systematize knowledge to benefit researchers, practitioners, and policymakers. We categorize concepts into seven board diversity outcomes and find mixed relationships among a variety of constructs. To this end, we suggest some avenues for further work. We found that more attention is needed on the relationships between all board diversity attributes and several aspects of the financial institution that have received less attention from researchers such as audit fees, capital structure, innovations, CSR, and earnings management.

In summary, this study provides several future research directions that are discussed in the previous section. We suggest that future work need to (i) consider the behavioral and psychological perspectives to provide a better understanding of the board structure; (ii) look beyond the direct impact of board diversity; (iii) conduct surveys or interviews because these methods can be good tools to capture team- and individual-level observations; (iv) pay close attention to potential antecedents of board diversity; (v) focus on the other board diversity indicators and not only gender diversity and the interaction between them; (vi) differentiate between banks' types (saving, commercial, cooperative, Islamic banks, etc.); (vii) consider non-financial measurements of firm performance as only two studies were identified considering the non-financial performance such as productivity and assets growth; (viii) count for the methodological issues such as endogeneity and small sample size; (ix) explore other themes in relation with board diversity such as (but not limited to) audit fees, capital structure, CSR, intellectual capital, earnings management, remuneration policy, and innovation; (x) consider the non-linear regression specifications as a few studies have evidenced it; and (xi) explore board diversity issue in a single country, especially developing economies, and consider the cultural differences between countries.

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