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Board gender diversity and FinTech: evidence from the usage and the efficacy of financial services

Claudia Arena¹, Simona Catuogno¹, Valeria Naciti²

Abstract:

Financial technology innovation is a key enabling element in reaching a financially inclusive economic development. Moving from the management and governance theories on gender diversity, this research examines the effects of financial technology innovation (FinTech) adoption on the usage of financial services and banks' performance by accounting for the moderating role of board gender diversity. Using a sample of Italian banks observed during the period 2016-2020 and employing fixed-effects regression models we find that the board gender diversity strengthens the positive effects of FinTech on the usage and operating efficacy of financial services. This research provides theoretical contributions and practical implications for investors, government authority and financial supervisors.

Keyword: board gender diversity, FinTech, financial inclusion, operating performance, banks

1 Introduction

In the era of millennials, financial technologies (FinTech) are emerging as a solution that makes credit more accessible. Despite financial inclusion being a critical issue of underdeveloped countries, it is a hot topic for advanced economies as well. Indeed, the World Bank data suggest that EU population lacks adequate financial literacy on how to use their bank access.

FinTech's is an essential expression of financial sector innovation, and it is having a significant influence on the banking industry worldwide. It has reduced transaction costs and mitigated the information asymmetry problem [1]. Despite the fast move in

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the current bank practices, there is a research gap in establishing a univocal relationship between FinTech, competitiveness, and financial inclusion in the banking industry [2, 3] and our understanding of the factors driving FinTech impacts is quite limited [4, 5]. At the same time, with the diffusion of Fintech, the complexity of the bank corporate governance principles increases, and the authorities urge banks to take all necessary steps to create a more equal composition of their boards of directors' structures to deal with the compliance problems and the inherent financial frauds (e.g., Revolut corp). Literature suggests that banks with a diverse board of directors (BoD) tend to be more compliant with the standards and face fewer financial penalties than those with a male-dominated board [6]. Research also shows that companies with a balanced board composition perform better than those with male-only boards and generate more revenues than their male counterparts [7].

Moving from these arguments, this research examines role of board gender diversity for the effects of FinTech on the usage of financial services and bank performance. We draw on governance and management theories on gender diversity and hypothesize that a diverse composition of the BoD positively moderates the relationship between FinTech and the usage and operating efficacy of financial services. To this aim, we rely on a sample of Italian banks observed during the period 2016-2020 and capture the usage of financial services in terms of volume of customer deposits while the bank operating performance is measured by the return on assets.

We find that FinTech positively relates to the usage of financial services, but it does not directly affect the bank operating performance. We also find that gender diversity in boards strengthens the relationship between the provision of FinTech solutions offered by banks and both the usage and the operating efficacy of financial services.

This study makes several contributions to theory and practice. First, it puts the research on gender diversity in governance and management forward by spotlighting the role of diverse board in the provision of new business models that boost the use of financial services and bank performance.

Second, it advances the field of research on sustainability in the banking industry underlying how diversity of views in the adoption of financial technologies promote the use of financial services and the financial inclusion thus contributing to the sustainable development of the economy.

Third, we enrich the literature on the technological innovation with a finer understanding of the extent to which banks innovate their profile through the in-house provisions of FinTech solutions. We also provide practical implications by reinforcing the awareness of investors, government authority and financial supervisors on the need for financial inclusion policies and initiatives.

2 Theory & Hypothesis

2.1 The value of FinTech

The digitization process and the fourth industrial revolution (Industry 4.0) have caused the financial sector to rely on digital technologies (e.g., Internet, mobile devices, big data, blockchain, cloud computing) to connect customers who demand intelligent, but easy-to-use financial solutions with investment, insurance, and loan provision regardless of location and time [8, 9]. Financial innovation has attracted increasing attention of regulators, practitioners, and academics due to its ability to offer new business models and new services able to solve problems in the financial markets [3]. However, the use of digital technologies in the financial service industry has been denominated with a relatively new term that is “FinTech” [4]. The FinTech industry has grown differently across countries according to the level of maturity of the related ecosystems as characterized by entrepreneurial skills, technical and financial resources, governmental policy, and stakeholders demand [10].

According to Lee and Shin [11] FinTech comprises six business models embracing (i) online foreign payment, overseas remittances; digital-only branches banking; peer-to-peer payments; in-store mobile phone payments; (ii) investment management, financial planning, retirement and pensions tools; (iii) crowdfunding platforms; (iv) online loan providers, marketplaces and brokers; (v) capital market business model; (vi) insurtech and insurance. Additional FinTech business models include digital currency and cryptocurrency, robo-advisors, mobile point of sale (mPOS) [9].

In 2019, United Nations acknowledge that FinTech is one of the key innovations that can facilitate the financial inclusion intended as the delivery of financial services at affordable cost to all parts of society increasing the financial returns associated with it [2]. In particular, financial inclusion increases the efficiency in the management of

personal savings and daily life, allows the diversification of individual financial risks and supports economic growth. Indeed, it directs the financial resources toward individuals and small and medium enterprises (SMEs) whose access to finance is limited, especially in the aftermath of financial and economic crisis [12].

At the very basis of FinTech there are some principles related to low profit margin, light asset, expandability, innovation, and easy compliance [13]. As a matter of fact, FinTech helps the bank to streamline its processes, by reinventing the value chain and creating enhanced customer- oriented services. It increases the collaboration among stakeholders across industries allowing a reduction in transaction cost to the benefit of the existing customer base, the acquisition of new clients and the increasing of their engagement [1].

If managed strategically FinTech results in a reduction of asymmetric information problems, enhanced effectiveness, and efficiency [10]. Through the use of FinTech banks bring value to stakeholders to achieve competitiveness, increased profitability and improved control of risk resulting in a stronger market position [14].

Undoubtedly FinTech boosts the creation of economic and social growth [15]. In this regard, literature suggests that the usage of mobile payments is positively associated with financial inclusion across and within countries through its effects on increased bank credit [16, 17]. However, this stream of research is still in its infancy [5] and empirical studies have questioned whether FinTech adds economic value to the banking industry [10].

Most of the papers has addressed sub-fields of FinTech and presented conclusions based on the factors behind the investor behavior and the driver of the specific FinTech business models. Some studies reveal that there are several economic, geographical, and technological determinants of FinTech [18]. Other studies have analyzed the determinants of early-stage investments, the determinants of funding success [19, 20, 21], the role of legal and cultural traits and that of the enforcement of financial institution rules [20, 22].

Recent literature reveals that ownership structure and some other corporate governance characteristics are important driver of financial technology in banks. For example, some studies find that the level of government ownership of banks affects innovation performance [23]. Other scholars show that board structure and specific directors

features (e.g., independent directors, attendance rate of directors and directors with a financial or accounting background) affect the level of banks' financial innovation [24]. With specific reference to FinTech innovation, scholars suggest that a number of demographic characteristics of CEOs affect the implementation of the sustainable FinTech business model [25].

2.2 Board gender diversity, FinTech and the use of financial services

Bank-specific corporate governance research has revealed that optimal design of bank governance and bank regulation, implies the convergence of objectives of depositors, bank shareholders and society-at-large [26]. This specialness of banking entities requires boards that are bigger and more independent with a greater scrutiny than those in the non-financial sector. In addition, they are more likely to hold greater liability risk and to be much more accountable to their stakeholders and banking regulators [27]. Empirical evidence reports a link between the structure and features of boards of directors and the performance of banks. In particular, past research has demonstrated that a bigger board improves the efficacy of monitoring and control operations, allowing for improved risk management decision-making [28].

More recently, the debate on the complexity of corporate governance principles for banks has been enriched with the issue related to gender diversity. The topic of gender diversity in banks relates to the broader debate in corporate governance research calling for a balanced distribution between women and man in the top management of companies.

From a theoretical point of view, the link between board gender diversity and performance in banks can be explained under the framework of management and governance theories. In particular, the resource dependence theory [29, 30] emphasizes the board's key role as an essential link between the firm and the external environment and resources on which it depends, underlining that this link is crucial for maximizing corporate performance. In the same vein, the upper echelons theory [31, 32] states that organizational outcomes are partially predicted by executive background characteristics (including vision, capabilities, prior experience) of the top-level management team. Therefore, the top management team determines the formation of

organizational strategy and affects the other members' inter-organizational behavior. Under these perspectives, gender heterogeneity is an important characteristic that influences top management decision making and positively affects organization outcomes. Fostering organizational diversity decreases internal conflict, promotes inclusion of different ideas and increases intrinsic motivation and creativity as well as knowledge creation and transferal, which, in turn, stimulate the generation of new ideas and the innovative solutions.

Despite these theoretical arguments, findings from empirical research on the direct relationship between board gender diversity and bank performance are more contradicting [32]. Previous empirical studies [33] suggest that diverse boards are better able to lower operating costs [34] and improve financial performance [35]. However, the positive effect of gender lessens in the crisis periods. Differently, other studies report a negative or null relationship between gender diversity on the board and bank performance [36]. Analyzing multiple dimensions of diversity simultaneously, some scholars find that gender diversity increases bank performance while national diversity decreases it [37].

As a result, the attempt to univocally assess the direct performance benefits of board gender diversity does not appear to yield shared results.

As far as business strategy is concerned, empirical evidence has shown that the diversification of corporate bodies generates advantages for the effectiveness of group decision-making mechanisms [38, 39]. Therefore, gender diversity can contribute to avoiding dangerous cognitive biases as it favors the plurality of views, freely expressed, and the participatory board debate [40, 41].

FinTech innovations are an integral part of bank business strategy, and their adoption requires executives and directors take on an active role in promoting the technological change [42]. The adoption of FinTech entails a greater risk which results in additional corporate governance issues for banks. There is a need of a greater diversity in leadership style to increase the board effectiveness [43] and ensure that FinTech processes and systems satisfy all stakeholders requirements (i.e., shareholders, directors, executives, employee, and depositors) [3].

Greater diversity and the existence of different points of view, when perceiving environmental threats and opportunities, can prove to be fundamental in the dealing

with the complexity and the risk of FinTech. While men are more self-reliant, competitive, and decisive female leaders tend to be more democratic, participative and oriented towards enhancing the needs of others [44, 45]. The more gender-balanced teams are, the better the banks will be able to create an inclusive environment with organizational routines and procedures [46], ensuring that diverse managerial talents produce the FinTech's positive implications on bank performance. Furthermore, gender diversity seems to be a relevant characteristic when dealing with the implications of FinTech for the use of financial services and the financial inclusion. Many studies find that gender diversity plays a significant role in promoting sustainability initiatives and strategies [47, 48, 49]. Diverse boards do, in fact, contribute a unique combination of abilities to corporate bodies, including a propensity to guarantee compliance with the standards [6] trust and security of users, which results in better industry's future sustainable performance [50].

Therefore, we anticipate that increasing gender diversity in the board results in a higher quality of resources and information that leads to a successful strategic decision-making. This enhances, on the one hand, the adoption of innovative Fintech solutions and, on the other hand, the strategic management of Fintech business models to improve operating efficacy and the ability of bank to reach a wider client base through the use of Fintech services.

Thus, we hypothesize that board gender diversity improves the relation of FinTech on the usage and the operating efficacy of bank financial services. Our hypotheses are states as follows:

H1a: Board gender diversity positively moderates the relationship between FinTech and usage of financial services.

H1b: Board gender diversity positively moderates the relationship between FinTech and the bank performance.

3 Method

3.1 Sample and data collection

Our sample consists of 138 banks Italian and foreign banks operating on the Italian territory in 2020 in the period 2016-2020. Even though the initial sample had 690

observations (bank-year), the sample size was lowered due to a lack of data. Our final sample includes 104 unique banks. The data is primary, as it was collected manually from the balance sheets and on the banks' websites.

Table 1 summarizes all the variables included in the study.

Table 1. Description of variables

Variable	Description
<i>Dependent variable</i>	
FSERVICE_USAGE	Usage of financial services in terms of total customer deposits including time, savings and demand deposits
ROA	Net income by the average of its total assets
<i>Independent variable</i>	
FINTECH	Binary variable that takes the value of 1 when the bank offers at least 4 out of 8 FinTech business models, 0 otherwise.
<i>Moderator variable</i>	
BLAU BD	Blau index based on the gender diversity within the board
<i>Control variable</i>	
LNTA	Natural logarithm of total assets for banking size
TIER	Tier 1 capital/Risk weighted assets
RWA	Risk weighted asset intensity on total assets
BODSIZE	The total number of board members at the end of the fiscal year
INDBOD	Number of independent directors
INTEREST	Interest income on interest expense

Dependent variable: usage of financial services

According to prior literature the usage of financial services is one of the dimensions of the financial inclusion [51]. We follow this literature and measure the usage of financial services by relying on the volume of customer deposits (FSERVICE_USAGE).

Furthermore, we use return on assets (ROA) to observe the influence of FinTech on bank's performance.

Independent variables: FinTech

Our independent variable relies on the use of FinTech by banks, which might occur through in-house provisions of FinTech solutions and the collaboration with external FinTech firms or a combination of both. Therefore, we compute hand-collect data on these two aspects from banks reports and corporate websites and compute our measure

of FinTech as follows. First, we follow prior literature [11, 9] and assess whether the bank provides the following most widely used FinTech in-house services (FINTECH): (i) digital payment; (ii) cardless cash withdrawal from ATM; (iii) chatbot; (iv) online loan providers; (v) crowdfunding platforms; (vi) insurance; (vii) investment management services; (viii) robo-advisor.

Moderator variable: board gender diversity

Following the studies conducted on gender diversity [52, 53, 54], we calculated the Blau Index [55, 56]. This is calculated by the following formula:

$$1 - \sum p_i^2$$

where p equals the proportion of each group of interest (i.e., male and female) and i represents the number of groups (in this case, two). This creates a measure of gender diversity that ranges from 0 to 0.5 where a value of 0 represents complete homogeneity and a value of 0.5 represents maximum gender diversity (an equal number of men and woman).

Control variables

We account for extra variables that could influence the measurement of the dependent variables to avoid model misspecification. All the control variables were chosen on the basis of the most common criteria in the literature [57, 58, 14].

The first set of bank-specific control variables include, bank size (LNTA), capital (TIER), a measure of risk, that is, assets weighted by their risk (RWA) and interest income on interest expense (INTEREST).

The second set controls for the board's dimension (BODSIZE), independent directors (INDBOD).

Adding the control variables helps us to deal with the omitted variable issue. Moreover, we account for bank fixed effects and control for time dummy variables.

Descriptive statistics

Tables 2 and 3 exhibit descriptive statistics and the correlation between the variables used, respectively. The data are described using standard descriptive statistics: the mean value with the standard deviation for the numeric variables, minimum and maximum value (see Table 2).

The pairwise correlation coefficient between the dependent, independent, and control variables is shown in Table 3.

The variance inflation factor (VIF) values in this investigation are less than 10, showing that multicollinearity is not a concern.

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std.Dev	Min	Max
FSERVICE_USAGE	442	21.3354	1.5688	16.1270	26.7106
ROA	442	0.0036	0.0095	-0.0238	0.0633
FINTECH	442	0.1493	0.3568	0	1
BLAU_BD	442	0.2539	0.1618	0	0.5
LNTA	442	18.7032	3.7950	8.2171	24.3919
TIER	442	0.1632	0.0638	0.0765	0.4902
RWA	442	15.8118	80.5890	0	470.8017
BODSIZE	442	10.6199	2.6599	4	19
INDBOB	442	4.6652	2.4358	0	17
INTEREST	442	0.0158	0.0580	0	0.7178

Table 3. Pairwise correlation

Variables	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) FSERVICE_USAGE		1.000									
(2) FINTECH	1.19	0.459***	1.000								
(3) BLAU_BD	1.14	0.394***	0.225***	1.000							
(4) ROA	1.12	-0.075	0.011	-0.058	1.000						
(5) LNTA	1.22	-0.114**	-0.123***	-0.002	0.103**	1.000					
(6) TIER	1.10	-0.189***	0.110**	-0.095**	0.221***	-0.042	1.000				
(7) RWA	1.24	0.228***	0.117**	0.118**	-0.059	-0.394***	-0.060	1.000			
(8) BODSIZE	1.63	0.500***	0.287***	0.201***	-0.074	-0.121**	-0.030	0.195***	1.000		
(9) INBOD	1.67	0.452***	0.311***	0.253***	-0.044	-0.139***	-0.041	0.183***	0.602***	1.000	
(10) INTEREST	1.08	-0.251***	-0.061	0.106**	0.193***	0.036	-0.072	-0.007	-0.056	0.018	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

3.2 Regression model specification

To investigate the relationship between FinTech and the usage of financial services, and the relationship between FinTech and bank's performance, we estimate the following panel data models with fixed effects, clustering heteroscedasticity standard errors at the bank level to account for the serial correlation of the dependent variables for each bank.

The study regression equations are modelled as follows:

Equation (1):

$$\begin{aligned} FSERVICE_USAGE_{it} &= \alpha_i + \beta_1 FINTECH_{it} + \beta_2 BLAU_{it} + \beta_3 FINTECH \times BLAU_{it} \\ &+ \beta_4 LNTA_{it} + \beta_5 TIER_{it} + \beta_6 RWA_{it} + \beta_7 ROA_{it} + \beta_8 BODSIZE_{it} \\ &+ \beta_9 INDBOD_{it} + \beta_{10} INTEREST_{it} + \delta_t + \varepsilon \end{aligned}$$

Equation (2):

$$\begin{aligned} ROA_{it} &= \alpha_i + \beta_1 FINTECH_{it} + \beta_2 BLAU_{it} + \beta_3 FINTECH \times BLAU_{it} + \beta_4 LNTA_{it} \\ &+ \beta_5 TIER_{it} + \beta_6 RWA_{it} + \beta_7 FSERVICE_USAGE_{it} \\ &+ \beta_8 BODSIZE_{it} + \beta_9 INDBOD_{it} + \beta_{10} INTEREST_{it} + \delta_t + \varepsilon \end{aligned}$$

where FSERVICE_USAGE is the dependent variable, FINTECH (equation1) and ROA (equation2) are the independent variables, while BLAU refers to the board gender diversity variable.

In many recent banking investigations, panel regression has been used [59, 60 14] The model considers the customer deposits a proxy of the usage of financial services as the dependent variable; β_1 and β_2 are the independent variables, β_3 is our moderator variable used in our hypothesis test; β_4 - β_{10} are the control variables; δ_t is a year dummy; and α_i is a bank-specific fixed effect. Fixed effects account for bank properties that are constant throughout time.

4. Empirical results and discussion

4.1 Multivariate analysis

In this study, a panel data regression analysis was performed using two ordinary least squares models: fixed-effects model, and random-effects model. Hausman and Breusch–Pagan Lagrangian multiplier (LM) tests were used to select the best model. The results of the Hausman test revealed a P-value of 0.000. Overall, the fixed-effect model was shown to be the most appropriate model.

The results of the fixed-effect model are shown in Tables 4. BLAU_BD is specifically mentioned as a moderating factor in the association between FinTech and the usage of financial service and bank performance. The high degree of gender diversity, according to Hypothesis 1 will reinforce the link between FinTech and both the usage of financial services and bank performance.

Model 1 the regression results with dependent variables FSERVICE_USAGE, showing a positive and significant relationship between FinTech and the usage of financial services.

Indeed, Model 2 displays the regression results with the interaction between FINTECH and BLAU_BD, the findings demonstrate that gender diversity in the board strengthens the relationship between FINTECH and the usage of financial services at 5% statistical level of significance, supporting Hypothesis 1a

Model 3 and Model 4 presents the outcomes considering as dependent variable the ROA. Model 3 presents regression without interaction, reporting a non-significant relationship between FinTech and bank performance. Model 4 presents regression with interaction showing that there exists a positive coefficient at 5% statistical level of significance demonstrating that gender diversity in the board strengthens the relationship between FINTECH and ROA, supporting Hypothesis 1b.

Table 4. Main analysis

	FSERVICE_USAGE		ROA	
	(1)	(2)	(3)	(4)
FINTECH	0.258*** (0.0506)	0.0534 (0.0859)	0.001 (0.001)	-0.003 (0.002)
BLAU_BD	0.101 (0.161)	0.0623 (0.164)	-0.003 (0.008)	-0.004 (0.008)
FINTECH#BLAU_BD		0.639** (0.246)		0.013** (0.006)
ROA	-0.0569 (0.161)	-0.0700 (0.170)		
FSERVICE_USAGE			-0.001 (0.002)	-0.001 (0.002)
LNTA	-0.0177*** (0.0066)	-0.0187*** (0.0069)	-0.000 (0.000)	-0.000 (0.000)
TIER	0.493 (0.604)	0.574 (0.620)	-0.002 (0.014)	-0.000 (0.014)
RWA	-0.0003 (0.0005)	-0.0003 (0.0005)	-0.000 (0.000)	-0.000 (0.000)
BODSIZE	0.0005 (0.0146)	0.0005 (0.0149)	-0.001 (0.000)	-0.001 (0.000)
INDBOD	-0.0086 (0.0079)	-0.0123 (0.0084)	0.000 (0.000)	0.000 (0.000)
INTEREST	-4.860** (1.934)	-4.859** (1.885)	0.002 (0.016)	0.000 (0.016)
CONSTANT	21.64*** (0.173)	21.67*** (0.191)	0.031 (0.029)	0.038 (0.031)
YEAR FE	YES	YES	YES	YES
OBSERVATIONS	442	442	442	442
R-SQUARED	0.242	0.254	0.014	0.018

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5. Discussion and Conclusion

This research investigates the implication of gender diversity, measured as Blau index at the BoD levels on the relationship of FinTech with both the usage of financial services and bank performance.

Based on a sample from 442 bank-year observations, we perform a multivariate analysis and obtain results supporting the argument that gender diversity in board, strengthens the effects of FinTech on the usage of financial services and bank performance.

First, our findings reveal that board gender diversity in banks improves the positive implications of FinTech on the usage and operating efficacy of financial services. This result could be explained by the fact that gender inequality inside the organization's BoD can be viewed as a negative aspect, since it leads to poor communication, increased conflict, and decreased cooperation. Indeed, there is more frequent communication and inside a more gender diverse BoD group [14] which could lead to a faster innovation process.

These findings are in line with the study of Torchia et al. [61] who argues that gender equality in corporate boards implies that a board will be more varied and will have higher interaction, allowing for high-quality decision-making and creating more inventive and innovative solutions than in homogenous groupings. Additionally, Dezsó and Gaddis [62] investigate how gender diversity in top management affects organization's performance; they discover that having gender equality improves a firm's performance, whether its innovation strategy is a priority.

Similarly, our results support the study of Muhammad et al. [63] states that when there is a heterogeneous gender composition of members of the boardroom, a more gender diversity group has a diverse range of information, skills, and ideas, which are highly necessary in the value creation process, and this diversity will be exploited in an effective manner. Indeed, financial inclusion is dependent on effective bank governance. As banks adopt FinTech, their boards confront problems in strategizing and navigating possibilities and dangers in order to ensure responsible financial inclusion, which necessitates the development of new skills.

Good corporate governance is an important driver to promote the distribution of financial products and services that are suitable for the community's requirements: an inclusive financial policy is a community-focused, expanding financial service. People will be more likely to modify their financial habits as a result of financial inclusion, which will help the economy thrive [64].

This research has theoretical implications. Our findings are consistent with the arguments that the diversity among the members of the BoD provides a greater number of interconnections with the market and competitors, resulting in a new source of capital as well as a higher quality of resources and information.

which plays a pivotal role in supporting innovative strategies and financial inclusion.

This study offers managerial implications for the managers to promote gender egalitarianism by electing equal portion of men and women directors, in order to improve the technological and digital development of bank services and the availability of financial services. This point of view shows why greater gender equality in an organization may contribute to better decision-making, improving innovation process and the bank's outcomes. Indeed, FinTech innovations are an important component of a bank's overall business strategy, and their successful adoption necessitates executives and directors taking a proactive role in supporting technological transformation.

Finally, from a societal standpoint, our study emphasizes the significance of gender diversity to the value creation process. Despite recent improvements in regulation regarding gender equality, our findings demonstrate that if there is a balanced percentage of women and men in a group, a capacity compensation mechanism is created. In this light, businesses should implement internal rules and processes to ensure that women have the same rights and opportunities as men.

This study suffers from some limitations which can be addressed as food for thought for future research. First, we refer to the use of financial service as one of the most relevant dimensions of the financial inclusion. Future research could employ a more comprehensive approach to capture this multidimensional construct. Second, we measure gender diversity with the Blau index. Future studies might be based on different aspects related to the gender diversity such as the presence of a critical mass of women following the tokenism theory [65]. Third, our sample refers to the period

before the COVID pandemic. Given that the use of technology and telematics distribution channels by banks to ensure product and service offerings in the pandemic time, future research could take into account the effect of COVID-19.

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