



Research article

CSR reporting in banks: does the composition of the board of directors matter?

Triinu Tapver*

TalTech School of Business and Governance, Tallinn University of Technology, Tallinn, Estonia

* **Correspondence:** Email: triinu.tapver@taltech.ee; Tel: +3726204065.

Abstract: The objective of this paper is to determine the association between the composition of the board of directors and corporate social responsibility (hereafter CSR) reporting of listed banks. Special attention is paid to controlling for the impact of board composition and CSR reporting requirements. Logistic regressions with bank fixed effects are run on a global sample of 285 listed commercial banks from 2005 to 2017. The results demonstrate significant differences in the association between board composition and banks' CSR reporting after correcting for regulatory requirements. Before controlling for regulatory requirements larger board decreases and the presence of women on boards increases the likelihood of banks' CSR disclosure. After controlling for country-level governance regulations on board composition, the absence of CEO duality and inclusion of women on boards contribute to banks' CSR disclosure, only if these are done on a voluntary basis. However, the presence of non-executive board members decreases the disclosure of CSR information even if they are named to boards voluntarily. Controlling for country-level governance regulations together with CSR requirements, leads to the irrelevance of most board composition indicators. Only the result regarding non-executive board members remains the same for voluntary CSR disclosure. Thus, voluntary commitment to CSR of banks increasing their board diversity voluntarily is not substantially different from banks that are subject to board composition requirements.

Keywords: corporate social responsibility (CSR); corporate governance; board of directors; board composition; regulations

JEL Codes: G21, G34, M4, M14

1. Introduction

Banks are subject to great public interest due to their direct or indirect impact on wide variety of interest groups, which leads to more pronounced expectations concerning their transparency and visibility compared to other businesses (John et al., 2016). This has pressured banks to get more involved in sustainability issues and integrate corporate social responsibility (hereafter CSR)¹ into their business strategies and activities (Jackson and Apostolakou, 2010; Roberts, 1992). As long-term strategies and activities are formed by the board of directors (supervisory board in two-tier system), they have a key role in bank's CSR activities (OECD, 1999). Attention on banks CSR reporting has especially increased after the 2008 financial crisis which resulted in bank failures (Laugel and Laszlo, 2009). Due to its increasing importance, CSR has become a tool to enhance shareholders' confidence, banks' ethical behaviour and legitimacy, and one of the key factors to influence banks' competitiveness and success (Deegan, 2002; Saeidi et al., 2015).

The significant impact that banks have on the economy, makes the banking sector also highly regulated and particular emphasis is put on their governance structures and sustainability disclosures (Adams and Mehran, 2003; Laeven, 2013). Country-level regulations often mandate certain features and standards for corporate governance mechanisms and CSR disclosures (Macey and O'Hara, 2003). These restrictions may concern board composition, ownership concentration, management compensation, or effective monitoring structures (Alexander, 2006; Laeven, 2013). However, regulatory frameworks have most commonly been introduced on banks' board composition and CSR disclosure.² The pressure to follow such board composition requirements affects banks' risk choices, business strategies and activities including sustainability and social issues (John et al., 2016). Therefore, it is possible that the associations between banks' governance structures and CSR change as a result of the implementation of such mandatory governance regulations. Understanding the impact of such requirements would, in turn, be important for the regulators interested in boosting sustainable banking practices. To the knowledge of the author, this aspect has not been investigated in previous empirical literature on banks' CSR disclosure.

Therefore, this paper determines the association between the composition of the board of directors and CSR reporting of listed banks. Special attention is paid to controlling for the impact of board composition and CSR reporting requirements. To achieve this objective, a global sample of 285 listed commercial banks from 35 countries around the world is used. The analysis covers banks from North America, Western Europe, Central and Eastern Europe, Asia, and Oceania over a period of 2005 to 2017. Multivariate logistic regressions with bank fixed effects are run with several CSR disclosure proxies.

The results demonstrate significant differences in the associations between the board composition and CSR reporting before and after correcting for regulative requirements. Before controlling for regulatory requirements larger board decreases and the presence of women on boards increases the likelihood of banks' CSR disclosure. After controlling for country-level governance

¹ Corporate social responsibility (CSR) is defined by World Bank as "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve quality of life, in ways that are both good for business and good for development" (Petkoski and Twose, 2003).

² More information on country-level CSR and board composition regulations in section 2.2.5.

regulations on board composition, the absence of CEO duality and inclusion of women on boards contribute to banks' CSR disclosure, only if these are done on a voluntary basis. However, the presence of non-executive board members decreases the disclosure of CSR information even if they are named to boards voluntarily. Controlling for country-level governance regulations together with CSR requirements, leads to the irrelevance of most board composition indicators. Only the result regarding non-executive board members remains the same for voluntary CSR disclosure. All in all, the findings show that determinants of CSR reporting and voluntary CSR reporting are different.

This paper makes distinctive advances to the literature. First, to the knowledge of the author, this is the first study to investigate associations between the composition of the board of directors and CSR disclosure and its quality, while also considering relevant governance and CSR regulations. This enables to contribute to the CSR literature on banks as well as to the CSR literature concentrating on non-financial firms. Second, this paper complements corporate governance literature by introducing regulation-corrected board composition indicators. This is achieved through the use of a unique hand-collected dataset regarding country-level governance and CSR regulations. Such a focus provides new insights into the linkage between corporate performance and governance characteristics. Third, the focus on a global sample of large listed banks advances to the so far primary concentration on single country CSR studies (e.g., Chakroun et al., 2017; El-Bannany, 2007; Hamid, 2004; Jizi et al., 2014; Khan, 2010; Menassa and Brodhäcker, 2017; Sharif and Rashid, 2014). The use of a global sample permits to investigate the impact of country-level mandatory regulations which cannot be analysed in a single-country setting or in a setting focusing on a very limited area. There through it allows also to provide more generalizable results.

The remainder of this paper proceeds as follows. Overview of relevant literature and regulative framework on CSR and the composition of the board of directors together with hypothesis development is provided in Section 2. Description of research design including sample data, used methodology and variables is provided in Section 3. Section 4 proceeds with the empirical results and discussion. Section 5 concludes.

2. Theoretical framework and hypotheses development

2.1. CSR and corporate governance in banks

Firms' competitiveness and success is not solely dependent on their financial performance but is also directly affected by external environment and gaining the support of various stakeholder groups (Freeman, 1984). Compared to other businesses, banks are visible to wider variety of interest groups and have a fundamental impact on the health of the financial system and overall economy (Adams and Mehran, 2003). As banking system is also highly complex, it is more heavily regulated compared to non-financial sectors (Flannery, 1998). Especially important is to ensure their transparency as emphasized by the Basel Committee on Banking Supervision (2012). However, lack of banks' transparent disclosures along with widespread failures of corporate governance and sustainable banking practices were the main aspects why banks' substantial role in 2008 financial crisis has been highly criticized (Kirkpatrick, 2009; Laugel and Laszlo, 2009). This has especially

increased the pressure to enhance their trustworthiness by improving corporate governance structures and information disclosures (Adams and Mehran, 2003; Laeven, 2013).

Efficient corporate governance of banks is important for ensuring their stability, effectiveness of day-to-day operations, compliance with regulations and for protecting the interests of stakeholders (De Haan and Vlahu, 2016; Macey and O'Hara, 2003). Here, the board of directors has a substantial role, as they form long-term strategies that include sustainability and social issues. The board also monitors the management while proceeding from shareholder interests and ensuring the accuracy of disclosed information (OECD, 1999). However, their activities and efficiency does depend on board's structure and other internal corporate governance mechanisms (Forbes and Milliken, 1999; Jensen and Meckling, 1976).

One of the possibilities to increase the wellbeing of stakeholders and communicate information to society is related to corporate social responsibility (CSR). CSR reporting can be used to communicate bank's economic, social and environmental performance to public. It therefore helps to reduce information asymmetry between bank's shareholders (principal) and managers (agents) that arises from agency problem (Jensen and Meckling, 1976). Moreover, banks can gain support from stakeholders and thus increase their legitimacy through CSR disclosures (Gray et al., 1996; Suchman, 1995). The relevance of CSR information has a constantly increasing trend with more emphasis put on banks' socially responsible behaviour as they use public resources (Macey and O'Hara, 2003). Therefore, CSR has become a tool to increase shareholders' confidence, bank's ethical behaviour and thus one of the key factors to influence bank's competitiveness and long-term success (Saeidi et al., 2015). Compared to non-financial firms, banks' CSR activities mostly concentrate on bank lending, investment, asset management operations and especially great emphasis is put on bribery and money laundering issues (Viganò and Nicolai, 2009).

Increased interest in CSR has led many countries to introduce respective regulatory framework. Some have made CSR disclosure mandatory to certain enterprises, most commonly based on their listing status, industry, state ownership, or some financial indicator. CSR regulations for banks were imposed, for example, 2003 in Austria, 2007 in Malaysia, 2009 in Sweden, 2010 in China, 2012 in Spain, 2016 in Belgium, and 2017 in Hungary and Singapore. Other countries, such as Australia, Canada and Cyprus have soft regulations in the form of principles and recommendations to encourage CSR disclosure.

The increased pressure for banks in engaging in sustainability reporting and the publication of CSR reports has given rise to the question of its accuracy and quality (Gray, 2010). One possibility to assure the quality and trustworthiness of disclosed information is by following some standards or using external independent reviews. The main difference of CSR reporting of banks compared to non-financial firms is that they should adhere to special Global Reporting Initiative Sustainability Reporting Standards (hereafter GRI Standards) designed for the financial services sector, which include specific indicators related to financial products and services. GRI Standards are the first and most widely adopted global standards for sustainability reporting.³

Banks are also encouraged to verify their sustainability reports. Although both internal and external assurance of CSR reports are allowed, the latter has become increasingly common.

³ Based on <https://www.globalreporting.org>.

Empirical evidence supports the notion that companies in industries with increased societal expectations are increasingly engaging industry-specialist auditors (Sun et al., 2017). Having an audited report provides the readers increased confidence in the quality of sustainability performance data. This enables the company to verify the reported CSR indicators similarly to financial reports.

2.2. *Hypotheses development*

Structure of the board of directors is one of the corporate governance mechanisms that has an important role in balancing the needs of various stakeholders or in other words, ensure “good corporate governance” (Forbes and Milliken, 1999; Jensen and Meckling, 1976). This indicates that the board has a key role in bank’s CSR activities (Michelon and Parbonetti, 2012; Zhuang et al., 2018). Diversity in board’s structure is considered one of the key elements to solve complex issues and meet the interests of different stakeholders (Forbes and Milliken, 1999). Board’s monitoring ability and legitimation-seeking behaviour should improve and the processes of disclosure and transparency are more likely to be followed (Jensen and Meckling, 1976; O’Dwyer, 2002). Diversity also contributes to board’s performance since it increases group flexibility that is especially valuable when the tasks are complicated or change rapidly (Hall, 1971). Therefore, diversity in corporate boards should enhance good corporate governance. Board diversity is usually investigated from the perspective of board composition with the focus on the size of the board, presence of CEO duality, board independence and gender diversity. These aspects are discussed in detail in the following sub-sections.

2.2.1. Board size

The complexity of board’s supervisory functions requires suitable monitoring activities and great diversity of board members’ skills and experience what is provided by considerable number of board members (García-Sánchez et al., 2011). Larger board would be accompanied with better monitoring mechanisms for fulfilling their duties and which thus leads to greater information disclosure. Board’s view on stakeholder expectations would be more diverse and the emphasis on CSR and legitimacy issues is more likely to increase (Pearce and Zahra, 1992). This would indicate that the quantity and quality of CSR reports would increase in companies with larger boards.

There exists also an opposing argument that relies on the proposition that large boards suffer from more severe agency problems reducing their monitoring capacity (Eisenberg et al., 1998). According to this view, smaller boards are more productive and efficient in fulfilling their supervisory functions since they can reach consensus more easily and protect the interests of all stakeholders (Jensen, 1993).

However, banking sector is subject to numerous strict information disclosure requirements that make banks more transparent compared to non-financial companies (John et al., 2010). Disclosed reports require input from wide variety of sources including accounting, financial and sustainability information. As greater number of directors provide more diverse and wider variety of expertise and views, larger boards are expected to focus more likely on CSR disclosure. Hence, this leads to the proposal of the following hypothesis.

H1a: Board size is positively associated with banks' CSR disclosure or its quality.

Despite the fact that board size is an indirect indicator of board diversity, it has not been used extensively in previous research. Only Jizi et al. (2014) have employed it in the context of banks' CSR disclosures and supported a positive association. García-Sánchez et al. (2018) and Birindelli et al. (2018) reported a positive impact of board size on banks' CSR performance. When similar issue has been investigated in non-financial firms, the results have been less conclusive with some of them supporting positive association (e.g., Dias et al., 2017; Esa and Zahari, 2016; Frías-Aceituno et al., 2013; Giannarakis, 2014; Gulzar et al., 2019) and others reporting inconclusive results (e.g., Fuente et al., 2017; Michelon and Parbonetti, 2012).

2.2.2. CEO duality

CEO duality exists when the roles of the CEO and chairman of the board of directors are fulfilled by the same person (Rechner and Dalton, 1991). The main function of the CEO is to formulate firm's strategy and decide on key policy issues. Whereas, the chairman of the board is responsible for board decisions and should supervise the management (including the CEO) (Jensen, 1993). Therefore, the chairman should particularly strive for fulfilling board's supervisory functions. This includes increasing bank's legitimacy by promoting stakeholder interests and assuring to public that bank cares for social and sustainability aspects.

Stakeholder theory posits that the CEO should also act in the interest of shareholders. However, this may not be the case when the CEO fulfils simultaneously the function of the chairman, which involves high conflicts of interest (Jensen, 1993). Board independence may be undermined because the CEO has greater power to guide board decisions and key policies in the direction of his/her personal interests and to the preference of riskier policies (Adams et al., 2005; Srivastav and Hagedorff, 2016). There is also a threat that board decisions could be made based on the information selected by the CEO and not on all relevant information (Jensen, 1993). This indicates that CEO duality may result in leadership and governance issues and is likely to undermine governance mechanisms.

Combining the roles of the CEO and the Chairman can also have benefits. It would enable to reduce agency costs since the ownership and monitoring functions are fulfilled by the same person (Jensen and Meckling, 1976). DeYoung et al. (2013) suggest that CEOs in the banking sector address the interests of shareholders more than in any other industry. This would mean that separating these two roles may not be as important.

In the context of CSR, the outcomes on CSR reporting would depend on the values and priorities of the CEO. Still, CEO duality in itself means that the number of persons determining the direction of the company decreases (Rechner and Dalton, 1991). When the roles of the CEO and the chairman of the board are separated, leadership issues are less likely to emerge and the board has more independence in its decisions (Chau and Gray, 2002). This leads to greater internal control and governance with larger amount and more diverse information disclosed to stakeholders (Jensen, 1993). More focus might be voluntarily put on increasing bank's legitimacy by supporting different shareholder interests and social values with CSR reporting. Therefore, the importance of CSR

reporting is also likely to be lower compared to a bank where no dual role exists. Hence, this leads to the proposal of the following hypothesis:

H2a: CEO duality is negatively associated with banks' CSR disclosure or its quality.

CEO duality aspect has been previously investigated in Jizi et al. (2014) showing that CSR disclosure quality of banks is higher if CEO duality is present. In the context of non-financial firms, the evidence remains either inconclusive (e.g., Fuente et al., 2017; Khan et al., 2013; Michelon and Parbonetti, 2012), supports negative (e.g., Giannarakis, 2014), or positive association (e.g., Dias et al., 2017; Gulzar et al., 2019) with CEO duality.

2.2.3. Board independence

Board independence is considered as one of the most efficient governance mechanisms for monitoring the management and proceeding from shareholder interests (Fama and Jensen, 1983). Independence is related to the presence of non-executive directors who, according to the agency theory, are efficient board monitors (Gillette et al., 2003; Jensen and Meckling, 1976). They are expected to fulfil their duties as independent members and ensure firm's proper conduct. While proceeding directly from their responsibilities, non-executive directors should employ greater objectivity and independence in their assignments than executive directors (Prado-Lorenzo and García-Sánchez, 2010). Hence, they would wish to strive for firm's legitimacy by ensuring its compliance with regulations and meeting the expectations of external environment (Pfeffer and Salancik, 1978). This would lead to them to put greater emphasis on information disclosure quality and quantity. It could particularly be the case for banks, which are highly visible and subject to public interest. Therefore, the pressure to integrate social and environmental activity into their main business functions might be more pronounced (Barako and Brown, 2008).

Reputational concerns of non-executive directors are also considered to be higher than those of executive directors (Fama and Jensen, 1983; Harris and Raviv, 2006). Non-executive directors may be led by their concerns for career and reputation and therefore they might avoid risky behaviour that could affect these negatively (Holmström, 1999). Since CSR information is obtained from management, there is a risk of receiving manipulative or misleading information (Kravet and Muslu, 2013). If this is the case, non-executive directors might reduce or even avoid CSR disclosure. The situation could be similar if selected non-executive board members are hired purely for their financial expertise, or they tend to prioritise historically available financial information instead of CSR information (Arora and Dharwadkar, 2011; Baysinger and Hoskisson, 1990).

However, executive directors with strong financial expertise are already present in the boards of financial institutions. This reduces the need to select non-executive directors solely based on their financial expertise, but rather on their other qualities such as independence. Hence, this leads to the proposal of the following hypothesis.

H3a: Non-executive board members are positively associated with banks' CSR disclosure or its quality.

This expectation has been supported in Barako and Brown (2008), Jizi et al. (2014), Khan (2010) and Sharif and Rashid (2014), for Kenyan, US, Bangladeshi and Pakistan banks, respectively. García-Meca et al. (2018) reported a positive association on a multi-country sample. Inconclusive results have

been reported in Hossain and Reaz (2007) for Indian banks. In terms of CSR performance, Birindelli et al. (2018) showed a negative association and García-Sánchez et al. (2018) a positive association. When looking at non-financial firms, the results have been more mixed. Some studies report positive association with CSR disclosure score (e.g., Cucari et al., 2018; Esa and Zahari, 2016; Fuente et al., 2017; Gulzar et al., 2019; Khan et al., 2013). Others provide inconclusive results (e.g., Dias et al., 2017; Frías-Aceituno et al., 2013; Michelon and Parbonetti, 2012; Prado-Lorenzo et al., 2009). On the other hand, quite a number of studies have reported even negative association (e.g., Bansal et al., 2018; Prado-Lorenzo and García-Sánchez, 2010; Sundarasan et al., 2016).

2.2.4. Women on boards

Diversity in corporate boards should increase board's independence and focus on the interests of different stakeholders (Forbes and Milliken, 1999). One of the most common approaches to address board's diversity is to consider its gender diversity or more narrowly, the presence of women on boards (De Haan and Vlahu, 2016).

Literature on the gender-based leadership styles suggest that there are differences between the leadership behaviour of men and women. Women tend to be more democratic or participative leaders and adopt less autocratic or directive leadership style than men (Eagly and Johnson, 1990). They also integrate the roles of wife and mother in their behaviour and show more passion towards diversity, intercultural empathy, and diplomacy (Betz et al., 1989; Javidan et al., 2016). Moreover, Appelbaum et al. (2003) show that women's leadership styles are more effective within consensually driven organizational structures that require cooperation and team orientation. This indicates that women should have a positive influence on board's functioning as they should promote collaboration and consensual agreements. More diverse as well as broad issues are integrated into discussions and decision-making. Greater focus is put on the interests of various stakeholders alongside with ethical and social matters (Ford and Richardson, 1994).

Therefore, the presence of women on the board of directors should promote bank's legitimacy-seeking behaviour and enhance reporting activities. They also contribute to higher levels of social performance (Siciliano, 1996). Therefore, women board members should encourage CSR disclosures alongside with financial information. Hence, this leads to the proposal of the following hypothesis.

H4a: Women on boards are positively associated with banks' CSR disclosure or its quality.

Positive association between the presence of women board members and banks' CSR disclosures is supported in Barako and Brown (2008) in the context of Kenyan banks, in Kiliç et al. (2015) for Turkish banks and in García-Meca et al. (2018) and on a multi-country sample. Khan (2010) reports inconclusive results for banks in Bangladesh. In terms of CSR performance, Birindelli et al. (2018) and García-Sánchez et al. (2018) reported positive association. However, female representation has achieved significantly greater attention in the studies on non-financial firms. These papers provide more dominant support for positive association between CSR disclosure and female representation (e.g., Bear et al., 2010; Cabeza-García et al., 2018; Gulzar et al., 2019; Dienes and Velte, 2016; Frías-Aceituno et al., 2013; Fuente et al., 2017). Still, some studies have also reported inconclusive results (e.g., Giannarakis, 2014; Zhuang et al., 2018) or even negative associations (Cucari et al., 2018).

2.2.5. Regulative context

A wide variety of academic literature have studied banks' CSR disclosure and performance from the perspective of corporate governance or more narrowly, its relation with the composition of the board of directors (De Haan and Vlahu, 2016). Despite the wide coverage of the issue, to the knowledge of the author, none of the previous empirical studies have controlled for the impact of regulations that many countries have imposed on the composition of the board of directors.

The level and time of legal enforcement on the composition of the board of directors varies widely between countries. The establishment of country-level requirements and quotas on board composition characteristics such as on board size, CEO duality, proportion of non-executive board members and gender diversity is most widespread. Whereas, this approach has been particularly common among European countries. Requirements regarding all of the above-mentioned aspects have been imposed in Norway. Other countries have enforced requirements only on some characteristics of the board of directors.⁴ Depending on the country, the minimum requirements on the size of the board of directors range from two to five persons. Quotas on the presence of non-executive directors range from 20 to 50 percent or from one to three persons out of the total board size. Gender quotas range from 20 to 40 percent out of the total board size.

However, some countries have implemented soft regulations or use the mixture of both. Soft regulations are most commonly in the form of codes of good corporate governance that include recommendations regarding the composition of the board. For example, in Australia, Austria, Cyprus, Czech Republic, Nigeria, Singapore, Sweden, United Kingdom, and in the United States some board composition characteristics are written in the code and recommended, while some others are mandatory.

Mandatory requirements on the characteristics of the board of directors have an impact on the exact composition of banks' boards. More precisely, the requirements are set in a way to enhance board's heterogeneity. This leads to greater diversity and independence which are seen to improve the efficiency of board's supervisory activities as well as ensure that the interests of different stakeholders are taken into consideration (Fama and Jensen, 1983; Forbes and Milliken, 1999). Thus, it suggests that after requirements are set, boards should put more emphasis on disclosing more diverse information and improving banks' CSR reporting activities. This should be especially the case in boards that do not only strive for complying with current regulations but voluntarily put additional effort into increasing board's diversity. Therefore, boards where the mandatory

⁴For example, countries such as Australia, Belgium, Canada, China, Czech Republic, Germany, Spain, France, the United Kingdom, Greece, Hong-Kong, Hungary, Indonesia, India, Italy, Japan, South Korea, Norway, Philippines, Poland, Russia, Sweden, Singapore, Turkey, Taiwan have established the requirements on the minimum number of board members.

The presence of CEO duality is prohibited in Cyprus, the Netherlands, Norway, Russia and Sweden.

Board's independence with regards to the minimum quotas on non-executive board members are enforced for example in Belgium, Canada, Cyprus, Germany, Spain, Greece, Hong Kong, Hungary, Indonesia, India, Italy, Japan, South Korea, Malaysia, Norway, Philippines, Portugal, Russia, Thailand, Turkey, Taiwan and the United States.

Gender quotas on the board of directors are established for example in Belgium, Canada, Finland, Germany, Spain, France, Iceland, India, Israel, Italy, Kenya, the Netherlands and Norway.

requirements and quotas are exceeded, should perform better in terms of CSR disclosure quantity and quality. Hence, this leads to the proposal of the following hypotheses.

H1b: Banks' CSR disclosure or its quality improves, the more board size exceeds the required level.

H2b: Banks' CSR disclosure or its quality improves if the positions of the CEO and chairman of the board are separated voluntarily.

H3b: Banks' CSR disclosure or its quality improves, the more the proportion of non-executive board members exceeds the required level.

H4b: Banks' CSR disclosure or its quality improves, the more the proportion of women board members exceeds the required level.

These hypotheses have not been tested in any of the previous empirical studies on CSR disclosure.

3. Research design

3.1. Sample and data

The sample covers commercial listed banks over a period of 2005 to 2017. Sample was restricted only to listed banks due to their greater stakeholder-orientation and exposure to governance requirements.⁵ Banks from some regions reported large amounts of incomplete data. Therefore, African, Caribbean, Central American, Middle Eastern and South American banks were excluded from the analysis. Final sample covers banks from North America, Western Europe, Central and Eastern Europe, Asia, and Oceania. The focus on banks from different parts of the world is required for the investigation of regulatory impacts which vary across countries. To ensure that banks have a similar level of regulatory scrutiny and public visibility, the sample was further refined by excluding all banks which recorded less than 25 billion in total assets.

The final sample consists of 285 listed commercial banks from 35 countries around the world and covers a period of 2005 to 2017. There are 83 to 186 banks per year and 1 to 27 banks per country per year. 31 countries covered in the sample have introduced mandatory regulations regarding some characteristic(s) of the composition of the board of directors. While 24 countries have made the disclosure of the CSR report mandatory.

The data were obtained from a variety of sources. Bank specific data were collected from Thomson Reuters Eikon database. There exists no database for obtaining information on regulatory requirements for board of directors and CSR across countries. Therefore, this information was hand-collected using different sources. Country-level regulatory requirements regarding the composition of the board of directors were gathered through OECD's Corporate Governance Factbooks and Codes of Corporate Governance of different countries. Information regarding country-level CSR regulations was collected using the websites of Global Reporting Initiative and The Reporting

⁵ Other types of financial institutions, for example, credit unions, saving institutions and central reserve depositories, were excluded from considerations to focus only on financial institutions, which provide similar services and are subject to the same regulations and disclosure requirements.

Exchange.⁶ This information was structured, coded and combined into a unique governance and CSR regulations dataset that has not been used before.

3.2. CSR disclosure variables

Table 1 provides the descriptive statistics of all disclosure variables alongside with all bank-specific governance and financial variables used in this study. Banks' CSR disclosure is assessed with respect to both, CSR reporting and voluntary CSR reporting. In line with previous literature, this paper uses binary dummy variables for analysing the disclosure decision and the quality of CSR report (e.g., Gamerschlag et al., 2011; Sierra-García et al., 2015). CSR report in the context of this study is either a stand-alone report or a report contained in a more general annual report of the bank. Report's quality encompasses whether the CSR report is prepared following the GRI Standards or has been externally assured (audited).

In order to assess the CSR disclosure of banks, three baseline disclosure proxies are used. First disclosure proxy is a binary dummy *dCSR* and captures the decision to disclose a CSR report. If the bank discloses a CSR report *dCSR* takes a value of 1, 0 otherwise. As Thomson Reuters Eikon dataset includes also information about the quality of CSR report, two other proxies were created. First of them is a dummy *dGRI* that is equal to 1 if the bank has prepared their CSR report by following the GRI Standards, 0 otherwise. Second dummy is *dAUD* that is equal to 1 if bank's CSR report has been audited by an external auditor, 0 otherwise. This approach has also been used in previous studies (e.g., Legendre and Coderre, 2013; Sierra et al., 2013; Sierra-García et al., 2015).

Secondly, to assess the bank's movement to voluntary CSR reporting, alternative disclosure proxy *rCSR* is created. This variable corrects CSR indicator for country-level regulations regarding CSR reporting requirements for listed banks. Thus, *rCSR* is equal to 1 if bank has a CSR report and it is not required by regulations, 0 in all other cases. These include three different situations: first, CSR report exists and is required by regulations; second, CSR report does not exist and is not required and third, CSR report does not exist but is required by regulations. The use of *rCSR* enables to check robustness of estimates after controlling for CSR country-level regulations.

3.3. Governance indicators

The main focus of this paper is the role of the board on banks' CSR reporting. To analyse this issue, several variables characterizing the composition of bank's board are created. Regression models employ four different baseline or alternative board indicators. First baseline variable characterizes bank's board in terms of its size (*Bsize*). Second baseline indicator is a dummy variable that considers the separation of the positions of the CEO and the chairman of the board (*CEOch*). Third baseline variable measures the proportion of non-executive board members (*Nonex*). Last baseline variable captures female representation in terms of the percentage of women on bank's board (*Wom*).

⁶ Country-specific Codes of Corporate Governance Codes were accessed through the website of European Corporate Governance Institute (ECGI) (<https://ecgi.global/>). CSR regulations were collected through <https://www.globalreporting.org> and <https://www.reportingexchange.com>.

Table 1. Descriptive statistics of variables.

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
Disclosure variables						
<i>dCSR</i>	1 if the bank discloses CSR report, 0 otherwise	1,837	0.60	0.49	0.00	1.00
<i>dGRI</i>	1 if the bank has prepared their CSR report by following the GRI Standards, 0 otherwise	1,837	0.34	0.47	0.00	1.00
<i>dAUD</i>	1 if bank's CSR report has been audited by an external auditor, 0 otherwise	1,837	0.44	0.50	0.00	1.00
<i>rCSR</i>	1 if bank's actual CSR reporting exceeds expectations, 0 otherwise	1,837	0.43	0.49	0.00	1.00
Governance indicators						
<i>Bsize</i>	number of Board members	1,797	13.60	4.23	3.00	44.00
<i>CEOch</i>	1 if CEO duality exists, 0 otherwise	1,843	0.29	0.45	0.00	1.00
<i>Nonex</i>	percentage of non-executive Board members (%)	1,775	76.17	23.75	0.00	100.00
<i>Wom</i>	percentage of women on Board (%)	1,768	14.55	12.48	0.00	61.54
<i>rBsize</i>	percentage of Board members exceeding the required level (%)	1,007	353.47	173.67	-40.00	950.00
<i>rCEOch</i>	1 if CEO-chairman separation exists but is not required, 0 otherwise	1,843	0.67	0.47	0.00	1.00
<i>rNonex</i>	percentage of non-executive members on Board exceeding the required level (%)	1,772	61.80	27.94	-20.00	100.00
<i>rWom</i>	percentage of women on Board exceeding the required level (%)	1,768	12.30	12.82	-33.00	61.54
Financial indicators						
<i>roa</i>	return assets calculated on the basis of profit before taxes (%)	2,699	0.89	0.95	-4.94	4.97
<i>e/ta</i>	equity to assets (%)	2,699	6.99	2.93	-3.48	36.40
<i>pc</i>	combined performance indicator	2,095	-0.30	0.76	-2.65	3.85
<i>size</i>	natural log of total bank assets	2,699	18.49	1.22	17.04	21.93
<i>liq/ta</i>	liquid assets to total assets (%)	2,692	9.62	7.18	0.00	55.86
<i>l/ta</i>	loans to assets (%)	2,693	60.03	12.45	6.58	97.91
<i>pe/ta</i>	personnel expenses to assets (%)	2,101	0.89	0.43	0.04	3.21

Since this paper also considers the role of country-level governance regulations, alternative regulation-corrected variables characterizing bank's board of directors are created. As the regulations on board composition may greatly influence the conclusions on CSR disclosure determinants, it is important to take regulatory framework into account. Regulation-corrected variables are created using the principle that what matters is how much a specific board indicator exceeds the regulatory minimum in percentage terms.

First regulation-corrected variable captures the proportion of board members that exceeds the required minimum board size (*rBsize*). This variable measures the relative difference between the required minimum and actual board size, calculated as: $(\text{actual}-\text{required})/\text{required} \times 100$. For example, if country-level regulations require that the minimum board size is 5 members but the bank board has 7

members, then $rBsize$ would be $(7 - 5)/5 \times 100 = 40\%$. If the actual number of board members is 4, then $rBsize$ would be $(4 - 5)/5 \times 100 = -20\%$. Second alternative variable takes into account whether the CEO-chairman separation is required by the regulations in a specific country ($rCEOch$). This dummy variable takes a value of 1 if CEO-chairman separation is not required but does exist in a specific bank, 0 in all other cases. Therefore, $rCEOch$ captures voluntary separation of the roles of the CEO and the chairman of the board. Third regulation-corrected indicator captures the proportion of non-executive board members that exceeds the required minimum level ($rNonex$). This variable measures the difference between the minimum required and actual proportion of non-executive board members. For example, if country-level regulations require the minimum of 20% non-executive board members, but the bank has 30%, then $rNonex$ would be $(30\% - 20\%) = 10\%$. And if the actual is only 10%, then $rNonex$ would be $(10\% - 20\%) = -10\%$. Models also include similar alternative female representation variable ($rWom$). This variable captures the percentage of women on specific bank's board that exceeds the required mandatory level of the country. For example, if the national requirement is 20% and the bank has female proportion at 40%, the $rWom$ would be $(40\% - 20\%) = 20\%$ and if the actual is 10%, the $rWom$ would be $(10\% - 20\%) = -10\%$.

3.4. Financial indicators

This study employs two types of bank-specific financial variables similarly to previous literature. First, larger banks are more visible and tend to attract more pressure to respond to the demands of different stakeholders. Thus, they are usually more likely to engage in the disclosure of non-financial information. Most previous studies have reported a significant positive association between company size and CSR disclosure (e.g., Dias et al., 2017; Fuente et al., 2017; Garc á-Meca et al., 2018; Gulzar et al., 2019; Hamid, 2004; Hossain and Reaz, 2007; Fr ás-Aceituno et al., 2013; Khan, 2010; Khan et al., 2013; Sharif and Rashid, 2014).

Second type of financial variables consider bank performance. These are most widely-used financial variables in previous CSR studies. However, the results have been contradictory, showing either positive (e.g., Jizi et al., 2014; Khan, 2010; Sharif and Rashid, 2014) or negative association (e.g., El-Bannany, 2007; Garc á-Meca et al., 2018) or reporting inconclusive results (e.g., Hamid, 2004). In this study, performance is measured in terms of return on assets (roa), equity ratio (e/ta) or with combined performance indicator (pc) that captures the health of financial institutions. Variable pc is constructed from CAMEL indicators (capital, asset quality, management, earnings, liquidity). In line with previous literature capital proxy is equity to total assets (e/ta); asset quality proxy is loans to assets (l/ta); management proxy is personnel expenses to assets (pe/ta), earnings proxy is return on assets (roa); and liquidity proxy is liquidity ratio (liq/ta) (e.g., Boyacioglu et al., 2009; Laidroo, 2016; Roman and Şargu, 2013).

Table 2 presents pairwise correlations between all explanatory variables. As expected, significant correlations exist between baseline and respective regulation-corrected board composition variables. Thus, these indicators are included in the models separately. Moderate correlations exist between bank performance indicators as roa and e/ta are both components of pc . For this reason, pc is used in separate models.

Table 2. Pairwise correlations between explanatory variables.

	<i>Bsize</i>	<i>CEOch</i>	<i>Nonex</i>	<i>Wom</i>	<i>rCEOch</i>	<i>rBsize</i>	<i>rNonex</i>	<i>rWom</i>
<i>Bsize</i>	1.00							
<i>CEOch</i>	0.03	1.00						
<i>Nonex</i>	0.12	0.05	1.00					
<i>Wom</i>	0.03	-0.09	0.39	1.00				
<i>rCEOch</i>	0.00	-0.92	-0.10	-0.03	1.00			
<i>rBsize</i>	0.83	0.04	0.20	0.20	-0.03	1.00		
<i>rNonex</i>	0.15	-0.21	0.77	0.31	0.13	0.31	1.00	
<i>rWom</i>	0.00	-0.03	0.34	0.79	-0.06	0.12	0.26	1.00
<i>roa</i>	-0.16	0.07	0.16	0.02	-0.05	-0.22	0.07	0.13
<i>e/ta</i>	-0.08	0.21	0.16	-0.01	-0.14	-0.26	-0.13	0.03
<i>pc</i>	-0.05	0.04	0.13	0.07	-0.01	0.04	-0.01	0.07
<i>size</i>	0.20	-0.06	0.15	0.28	0.01	0.47	0.25	0.22
<i>liq/ta</i>	0.01	-0.15	0.14	0.17	0.11	0.15	0.28	0.07
<i>l/ta</i>	-0.11	0.06	0.00	-0.07	-0.07	-0.26	-0.01	-0.05
<i>pe/ta</i>	0.03	0.37	0.26	-0.03	-0.28	0.01	-0.29	0.03
	<i>roa</i>	<i>e/ta</i>	<i>pc</i>	<i>size</i>	<i>liq/ta</i>	<i>l/ta</i>	<i>pe/ta</i>	
<i>roa</i>	1.00							
<i>e/ta</i>	0.47	1.00						
<i>pc</i>	0.43	0.37	1.00					
<i>size</i>	-0.05	-0.22	0.28	1.00				
<i>liq/ta</i>	0.03	-0.11	0.68	0.36	1.00			
<i>l/ta</i>	0.02	0.09	-0.68	-0.42	-0.41	1.00		
<i>pe/ta</i>	0.31	0.44	0.20	-0.13	-0.21	0.16	1.00	

Notes: For variable descriptions, see Table 1.

3.5. Model specification

Logit regressions are run to examine the associations between (voluntary) CSR disclosure and previously described governance and financial indicators. This approach is used in numerous previous CRS studies (e.g., Dhaliwal et al., 2011; Jackson and Apostolakou, 2010; Legendre and Coderre, 2013; Sierra-García et al., 2015). The model used in this paper is stated as:

$$P(CSR_{it} = 1) = \beta_1 Bsize_{it-1} + \beta_2 CEOch_{it-1} + \beta_3 Nonex_{it-1} + \beta_4 Wom_{it-1} + \beta_5 size_{it-1} + \beta_6 Perf_{it-1} + \alpha_i + \varepsilon_{it} \quad (1)$$

Dependent variable CSR is a dummy of bank *i* on year *t* which can be either one of the baseline CSR dummies (*dCSR*, *dGRI* or *dAUD*) or country-level regulation-corrected dummy *rCSR* in robustness tests. *Bsize*, *CEOch*, *Nonex* and *Wom* refer to either baseline indicators characterizing bank board (*Bsize*, *CEOch*, *Nonex* and *Wom* respectively) or alternative country-level regulations corrected indicators (*rBsize*, *rCEOch*, *rNonex* and *rWom* respectively). First type of model estimations include all baseline indicators characterizing bank board at the same time and the second

type of model estimations include country-level regulations corrected indicators at the same time. The models also include financial variables characterizing bank size in terms of natural logarithm of total assets (*size*) and bank performance (*Perf*). Performance is measured in terms of return on total assets (*roa*) and equity to assets (*e/ta*) as baseline indicators, and replaced by combined performance indicator (*pc*) in robustness tests.

All indicators, except regulation-adjusted indicators (*rBsize*, *rCEOch*, *rNonex* and *rWom*), are lagged by one year in the models to ensure weak exogeneity of explanatory variables. Regulation-adjusted indicators are not lagged to ensure that CSR disclosure is compared with governance regulations in force. All estimations use bank fixed effects. This enables to control for unobserved heterogeneity across banks, and for all country-specific indicators, which remain time-invariant. Thus, the models focus on what determines the change between (voluntary) CSR report disclosure and non-disclosure. This means that all bank-year observations in which the disclosure variable remained unchanged compared to a year earlier, are dropped in the estimation process. The results are reported using odds ratios.

4. Results and discussion

4.1. Board of directors and CSR disclosure

Table 3 presents the descriptive statistics of board composition indicators depending on the CSR disclosure group. Panel A of Table 3 shows the statistics depending on whether the CSR report has been disclosed ($dCSR = 1$) or not ($dCSR = 0$). On average, boards are larger (*Bsize*) in those banks that disclose CSR reports. Similarly, CEO duality (*CEOch*) is less present in disclosing banks. Moreover, there are on average 81.0% non-executive (*Nonex*) and 16.6% women board members (*Wom*) in banks disclosing a CSR report, compared to respectively 68.2% and 9.2% in banks not disclosing a CSR report.

The differences are a bit smaller, when considering board composition indicators that are adjusted with country-level regulatory requirements (*rBsize*, *rCEOch*, *rNonex*, *rWom*). On average, the required size of the board (*rBsize*) is greatly exceeded in both groups, but still more by banks disclosing a CSR report. Whereas, the minimum level for the latter is equal to zero, indicating that banks that disclose CSR reports always comply with regulations or name even more board members than required. The voluntary separation of the roles of the CEO and chairman of the board of directors (*rCEOch*) is higher in banks disclosing a CSR report. The required level of non-executive board members (*rNonex*) is exceeded on average by 68.4% in banks that disclose CSR report, compared to 51.4% in banks not disclosing. Similar tendency is detected in terms of the required level of women on boards (*rWom*). The mean value exceeding the country-specific quota is 14.4% in those banks who disclose and 9.3% in banks that do not disclose CSR reports.

Table 3. Descriptive statistics of board composition indicators depending on CSR disclosure group.

Variable	Mean	St.Dev	Median	Min	Max	Mean	St.Dev	Median	Min	Max	Sign.
Panel A						Panel B					
<i>dCSR</i> = 0						<i>rCSR</i> = 0					
<i>dCSR</i> = 1						<i>rCSR</i> = 1					
<i>Bsize</i>	13.2	4.3	12.0	1.0	30.0	13.5	4.1	13.0	1.0	30.0	**
<i>CEOch</i>	0.4	0.5	0.0	0.0	1.0	0.4	0.5	0.0	0.0	1.0	***
<i>Nonex</i>	68.2	32.4	81.8	0.0	100.0	73.3	28.3	83.3	0.0	100.0	**
<i>Wom</i>	9.2	10.2	7.1	0.0	61.5	12.8	11.6	11.1	0.0	61.5	***
<i>rBsize</i>	320.8	161.8	300.0	-40.0	900.0	353.6	163.9	333.3	-40.0	950.0	
<i>rCEOch</i>	0.6	0.5	1.0	0.0	1.0	0.6	0.5	1.0	0.0	1.0	***
<i>rNonex</i>	51.4	32.8	52.8	-20.0	100.0	55.2	30.2	58.9	-20.0	100.0	***
<i>rWom</i>	9.3	10.7	7.3	-33.0	61.5	11.6	11.8	10.0	-33.0	61.5	***

Notes: For variable descriptions, see Table 1. Panel A shows the statistics when comparable group variable is baseline CSR disclosure proxy (*dCSR*). Panel B shows the statistics when comparable group variable is country-level regulation-corrected CSR disclosure proxy (*rCSR*). Last column reports the results of Wilcoxon rank-sum (Mann-Whitney) test for statistical difference of group means. *, **, *** denote significance at 10%, 5%, 1% levels.

Panel B of Table 3 shows the descriptive statistics of all board composition indicators when banks' CSR disclosure is corrected with country-level regulations. Thus, Panel B provides the statistics depending on whether the CSR report has been disclosed voluntarily (*rCSR* = 1) or not (*rCSR* = 0). In this case, similar tendencies can be detected as in Panel A. Banks that disclose CSR report voluntarily have on average larger board (*Bsize*), more non-executive (*Nonex*) as well as women board members (*Wom*) and CEO duality (*CEOch*) is less present. However, the differences between groups are smaller compared to ones in Panel A.

When board composition indicators and CSR disclosure are both corrected with country-level regulatory requirements, then the statistically significant difference between mean value of exceeding required size of the board (*rBsize*) disappears between groups. In all other cases, the differences between means remain statistically significant. Voluntary separation of the CEO and chairman of the board (*rCEOch*) is on average higher in banks disclosing CSR report voluntarily. Voluntarily disclosing banks have on average 70.4 percentage points more non-executive board members (*rNonex*) and 13.4 percentage points more women on boards (*rWom*) than required by the quotas. On average these quotas are also exceeded by other banks, yet not that greatly as by those of disclosing CSR report voluntarily.

Therefore, larger mean values for (voluntarily) disclosing banks suggest that there appears to be positive association between board size, separation of the CEO and chairman, non-executive board members and women on boards as proposed by hypotheses in section 2.2. To further test this result, logistic regressions were run and corresponding results are presented in the next sub-sections.

4.2. Board of directors as CSR disclosure determinant

Results of logistic regressions with three different baseline dependent dummy variables (*dCSR*, *dGRI*, *dAUD*) are presented in Table 4. Contrary to H1a and Jizi et al. (2014), board size (*Bsize*) exhibits strong negative association with the disclosure of CSR report in M1. Negative association remains for when the report followed GRI Standards or the report was assured externally. However, after board size is controlled for country-level requirements (*rBsize*) in M2, the significant association disappears providing inconclusive results with regards to H1b. This suggests that exceeding the required minimum quota for board size itself is not an important factor for CSR reporting. For many countries in the sample there are minimum (and maximum) quotas for the size of the board and those are mostly exceeded.⁷ Therefore, board size becomes irrelevant after controlling it for regulatory requirements. However, results in Table 4 for models M2 suggest that what matters for CSR disclosure is the composition of the board.

The presence of CEO duality (*CEOch*) remains insignificant in all M1 specifications providing inconclusive results with respect to H2a. In terms of previous studies, Jizi et al. (2014) have shown that CSR disclosure quality of banks is higher if CEO duality is present. In the context of non-financial firms, the evidence has remained mixed (e.g., Dias et al., 2017; Fuente et al., 2017; Giannarakis, 2014; Gulzar et al., 2019; Khan et al., 2013; Michelon and Parbonetti, 2012).

However, results for CEO duality change after the indicator is corrected with country-level regulations in M2. The odds of starting to disclose a CSR report are higher when the roles of the CEO and the chairman of the board are separated and it is not required by regulations (*rCEOch*). This is in line with H2b and indicates that only those banks, where the roles of CEO and board's chairman are separated voluntarily, are more likely to disclose CSR report. In that sense, leadership issues are less likely to emerge and the board has more independence in its decisions (Chau and Gray, 2002). More focus might be voluntarily put on increasing bank's legitimacy by supporting different shareholder interests and social values with CSR reporting.

⁷ Only one bank had less members on the board than the minimum requirement (*rBsize* was -40% in the year 2010); and only two banks had the level exactly equal to the minimum requirement (*rBsize* was 0% for one in 2014 and for other in 2014 and 2015).

Table 4. Logistic regression results of CSR disclosure and quality.

Dependent variable	<i>dCSR</i>		<i>dGRI</i>		<i>dAUD</i>		<i>dCSR</i>		<i>dGRI</i>		<i>dAUD</i>	
	Model M1a		Model M1a		Model M1a		Model M2a		Model M2a		Model M2a	
<i>l.Bsize</i>	0.841	***	0.913	**	0.907	*						
	(0.039)		(0.042)		(0.050)							
<i>l.CEOch</i>	0.632		1.361		0.972							
	(0.218)		(0.495)		(0.443)							
<i>l.Nonex</i>	0.988		0.987		0.982							
	(0.014)		(0.012)		(0.013)							
<i>l.Wom</i>	1.067	***	1.020		1.053	***						
	(0.019)		(0.015)		(0.018)							
<i>rBsize</i>							0.998		1.000		0.996	
							(0.002)		(0.002)		(0.003)	
<i>rCEOch</i>							2.143	*	0.708		3.405	*
							(0.925)		(0.327)		(2.138)	
<i>rNonex</i>							0.962	***	0.976	*	0.999	
							(0.012)		(0.012)		(0.014)	
<i>rWom</i>							1.036	*	0.991		1.031	
							(0.021)		(0.018)		(0.022)	
<i>l.size</i>	1368.3	***	521.6	***	1791.1	***	230.4	***	528.8	***	910.1	***
	(943.6)		(308.3)		(1489.8)		(170.4)		(415.5)		(864.4)	
<i>l.roa</i>	0.741	***	0.769	**	0.673	***	0.573	**	0.565	**	0.798	*
	(0.082)		(0.091)		(0.079)		(0.158)		(0.126)		(0.098)	
<i>l.e/ta</i>	1.507	***	1.491	***	1.463	***	1.417	**	1.444	***	1.027	
	(0.161)		(0.166)		(0.170)		(0.193)		(0.202)		(0.113)	
No. of obs.	1018		904		681		566		534		387	
Pseudo R2	0.51		0.43		0.48		0.41		0.41		0.44	
Chi2	395.2	***	321.6	***	276.1	***	179.8	***	179.1	***	149.2	***

Notes: For variable descriptions, see Table 1. Dependent variable is one of the baseline CSR disclosure dummies (*dCSR*, *dGRI* or *dAUD*). All explanatory variables except country-level regulation corrected variables (*rCEOch*, *rBsize*, *rNonex*, *rWom*) are lagged by one year. Table presents odds ratios. Standard errors in parentheses. *, **, *** denote significance at 10%, 5%, 1% levels.

However, what is interesting is that the results are mixed in terms of the quality of CSR report in M2 specifications. Positively significant association of voluntary CEO-chairman separation remains on having an audited CSR report (*dAUD*) but disappears when the report is prepared following GRI Standards (*dGRI*). This might indicate that boards, where the chairman's role is voluntarily separated from the CEO, are more concerned with the quality of sustainability data and different stakeholder interests. Having an externally verified (audited) report provides the readers increased confidence in the quality of sustainability performance data and also makes it more likely that the data is used in management's decision-making (Global Reporting Initiative, 2013). While GRI Standards do suggest the use of external assurance, it would not be such an important factor by

itself. Audited report takes one step further as it adds reliability aspect in addition to the qualitative aspect already provided by GRI Standards.

Therefore, only boards that are truly concerned with the quality of sustainability and shareholder interests, put extra verification effort into CSR reporting. After all, the role of the board of directors is to promote interests of different stakeholders and long-term strategies (OECD, 1999). This is especially important for large listed banks that are highly visible to public and need to gain legitimacy for ensuring long-term success by carrying on social values in their activities (Laugel and Laszlo, 2009). Moreover, Table 4 indicates that voluntary CEO-chairman separation (*rCEOch*) is the only significant determinant of starting to disclose an externally verified (audited) CSR report. This could be explained by the fact that the chairman is responsible for board decisions. Therefore, the chairman is the one who should particularly strive for increasing bank's legitimacy by promoting stakeholder interests and assuring to public that bank cares for social and sustainability aspects.

The proportion of non-executive board members (*Nonex*) is not a significant determinant of any of the disclosure indicators covered in M1, therefore leading to inconclusive results with respect to H3a. Results on this issue in previous studies on banks have remained contradictory with some reporting positive (e.g., Barako and Brown, 2008; Garc ía-Meca et al., 2018; Khan, 2010; Lattemann et al., 2009; Sharif and Rashid, 2014) or no association (e.g., Hossain and Reaz, 2007). In terms of non-financial firms, results have suggested positive (e.g., Esa and Zahari, 2016; Fuente et al., 2017; Gulzar et al., 2019; Khan et al., 2013), negative (e.g., Bansal et al., 2018; Sundarasan et al., 2016) or inconclusive (e.g., Dias et al., 2017; Fr ías-Aceituno et al., 2013; Michelon and Parbonetti, 2012). However, after country-specific mandatory quotas for non-executive board members are considered (*rNonex*) in M2, negative association appears with CSR disclosure. This association remains for the case when the report is in line with GRI Standards (*dGRI*) but again disappears for externally verified CSR report (*dAUD*). This result suggests that even if there are more non-executive board members than required, they tend to avoid the disclosure of CSR information. This result is therefore contrary to H3b. There can be several explanations why negative association appears. First, if the shareholders are financial institutions with short-term interests in the company, the selected non-executive board members are hired purely for their financial expertise, or they tend to prioritize historically available financial information instead of CSR information (Arora and Dharwadkar, 2011; Baysinger and Hoskisson, 1990). Second explanation may come from their individual preferences and reputational aspect. As non-executive board members may be led by their concerns for career and reputation, they might avoid risky behaviour that could affect these negatively (Holmström, 1999). Since CSR information is obtained from management, there is a risk of receiving manipulative or misleading information (Kravet and Muslu, 2013). Therefore, non-executive board members might avoid that risk by avoiding disclosing CSR information and standardized reports to public.

In terms of female representation, the percentage women on boards (*Wom*) exhibits strong positive association with the odds of CSR disclosure in M1. This is in line with H4a and the results in Barako and Brown (2008), Garc ía-Meca et al. (2018) and Kili ç et al. (2015) as well as disclosure studies concentrating on non-financial firms (e.g., Fr ías-Aceituno et al., 2013; Fuente et al., 2017; Gulzar et al., 2019). In terms of the quality of the CSR report, results are more mixed with regards to H4a. Statistically significant positive association remains if report is externally verified (dependent variable is *dAUD*) but disappears when the report follows GRI Standards (dependent variable is

dGRI). After female representation indicator is controlled for country-specific requirements (*rWom*) in M2 specifications, association remains only for CSR disclosure (dependent variable is *dCSR*) but is less significant (partial support for H4b). This could reflect that if the percentage of women on banks' boards exceeds country-specific quotas then the odds of CSR disclosure are higher. However, closer look into this issue is required since the role of women on CSR might be affected by other aspects not controlled for in this study. For example, specific country's cultural context; whether the level of women is higher, lower or equal to the mandatory quota; and so forth.

From bank-specific financial variables, statistically significant and positive association with bank size (*size*) is detected in all specifications of models M1 and M2. As expected, this suggests that larger listed banks are more likely to be concerned with social and sustainability issues. They are exposed to wider public and therefore, need to put additional effort into gaining legitimacy. Those results also coincide with those of previous literature (e.g., Garca-Meca et al., 2018; Hamid, 2004; Hossain and Reaz, 2007; Khan, 2010; Sharif and Rashid, 2014). In terms of bank performance indicators, significantly negative association with profitability (*roa*) is detected in all model specifications similarly to El-Bannany (2007) and Garca-Meca et al. (2018). On the other hand, this might suggest that more profitable banks do not disclose CSR reports due to lack of motivation. On the other hand, less profitable banks may disclose CSR reports to gain legitimacy and improve their reputation to ensure long-term success, which refers to impression management. However, results are contradictory with respect to equity to total assets (*e/ta*). Significant positive association is detected in all model specifications, except for M2 when dependent variable is *dAUD*. This result would indicate that less leveraged banks are more likely to engage in CSR activities. Considering that larger percentage of bank assets are owned by the shareholders, it would suggest that the pressure to respond to interests of different shareholders, and therefore disclose sustainability information, is also higher.

4.3. Robustness tests and complementary results

In this section, the robustness of the results is analysed with two different approaches. Firstly, a simple approach is used with changing the bank-specific performance indicator in equation 1 from *roa* and *e/ta* to combined performance indicator (*pc*) in Table 5. Second approach is based on the fact that similarly to governance indicators, CSR disclosure is also affected by country-level regulations. Therefore, the models M1 and M2 are applied to CSR disclosure requirements in a specific country. This is done by conducting a set of regressions by setting the dependent variable in equation 1 to country-level regulation-corrected dummy *rCSR*. This approach enables to investigate voluntary CSR reporting and respective results are presented in Table 6.

After changing the performance indicator, M2 results in Table 5 confirm that there is no association between CSR reporting and exceeding the required minimum quota for board size (*rBsize*). Voluntary separation of the roles of CEO and board's chairman (*rCEOch*) becomes even stronger determinant of disclosing an audited CSR report, providing support for H2b. The proportion of non-executive board members exceeding the required quota (*rNonex*) loses its significant association with disclosing a CSR report in line with GRI Standards (dependent variable is *dGRI*). However, the association becomes significantly positive for disclosing an externally verified report

(dependent variable is *dAUD*). This suggests mixed results with regards to H3b. Similar change occurs with alternative female representation variable (*rWom*), providing partial support for H4b. The percentage of women that exceeds the required mandatory level of the country is not a significant determinant of CSR disclosure (dependent variable is *dCSR*) anymore. However, significantly positive association appears for disclosing an audited report (dependent variable is *dAUD*). Bank size still continues to exhibit significantly positive association in all model specifications. However, the combined performance indicator (*pc*) is insignificant in all specifications.

Table 5. Robustness of estimates with combined performance indicator.

Dependent variable	<i>dCSR</i>		<i>dCSR</i>		<i>dGRI</i>		<i>dAUD</i>	
Model	M1b		M2b		M2b		M2b	
<i>l.Bsize</i>	0.822 (0.041)	***						
<i>l.CEOch</i>	0.563 (0.207)							
<i>l.Nonex</i>	1.006 (0.017)							
<i>l.Wom</i>	1.074 (0.019)	***						
<i>rBsize</i>			0.997 (0.002)		0.997 (0.003)		0.999 (0.004)	
<i>rCEOch</i>			3.185 (1.628)	**	0.810 (0.408)		37.730 (42.770)	***
<i>rNonex</i>			0.973 (0.014)	*	0.987 (0.015)		1.037 (0.022)	*
<i>rWom</i>			1.034 (0.022)		1.006 (0.018)		1.058 (0.027)	**
<i>l.size</i>	1030.8 (708.3)	***	536.3 (468.8)	***	338.0 (271.1)	***	1356.3 (1558.9)	***
<i>l.pc</i>	1.505 (0.458)		1.430 (0.412)		1.129 (0.267)		1.012 (0.321)	
No. of obs.	879		398		408		283	
Pseudo R2	0.47		0.40		0.32		0.50	
Chi2	316.1	***	126.6	***	107.1	***	129.7	***

Notes: For variable descriptions, see Table 1. Dependent variable is one of the baseline CSR disclosure dummies (*dCSR*, *dGRI* or *dAUD*). All explanatory variables except country-level regulation corrected variables (*rCEOch*, *rBsize*, *rNonex*, *rWom*) are lagged by one year. Table presents odds ratios. Standard errors in parentheses. *, **, *** denote significance at 10%, 5%, 1% levels.

Complementary results in Table 6 show that after adjusting CSR disclosure indicator (*dCSR*) with respective country-level CSR regulations (dependent variable is *rCSR*), leads to substantial changes. The size of the board (*Bsize*) loses its significance in models M1a and M1b, where all baseline indicators are included. Surprisingly, all other baseline governance indicators become

significant or change the direction of their association with CSR disclosure. Contrary to expectations and H2a, the presence of CEO duality (*CEOch*) becomes to increase the odds of voluntary CSR disclosure. At the same time, the proportion of non-executive board members (*Nonex*) and women (*Wom*) start to indicate to negative association (contrary to H3a and H4a respectively). This controversy is interesting and could suggest that previously detected associations may be affected by regulatory requirements.

Table 6. Logistic regression results of voluntary CSR disclosure.

Dependent variable	<i>rCSR</i>		<i>rCSR</i>		<i>rCSR</i>		<i>rCSR</i>	
Model	M1a		M1b		M2a		M2b	
<i>l.Bsize</i>	0.989 (0.032)		0.980 (0.035)					
<i>l.CEOch</i>	1.727 (0.449)	**	1.770 (0.509)	**				
<i>l.Nonex</i>	0.969 (0.010)	***	0.974 (0.012)	**				
<i>l.Wom</i>	0.972 (0.011)	**	0.969 (0.012)	***				
<i>rBsize</i>					1.001 (0.001)		1.000 (0.002)	
<i>rCEOch</i>					1.103 (0.361)		0.786 (0.300)	
<i>rNonex</i>					0.959 (0.010)	***	0.964 (0.012)	***
<i>rWom</i>					1.014 (0.015)		0.998 (0.016)	
<i>l.size</i>	15.0 (5.4)	***	20.5 (8.2)	***	5.1 (2.1)	***	14.5 (7.8)	***
<i>l.roa</i>	0.858 (0.082)				0.878 (0.122)			
<i>l.e/ta</i>	1.029 (0.066)				0.830 (0.073)	**		
<i>l.pc</i>			0.626 (0.136)	**			0.361 (0.103)	***
No. of obs.	918		775		596		420	
Pseudo R2	0.12		0.14		0.09		0.15	
Chi2	93.4	***	90.2	***	46.9	***	55.2	***

Notes: For variable descriptions, see Table 1. Dependent variable is country-level regulation-corrected CSR disclosure dummy (*rCSR*). All explanatory variables except country-level regulation corrected variables (*rCEOch*, *rBsize*, *rNonex*, *rWom*) are lagged by one year. Table presents odds ratios. Standard errors in parentheses. *, **, *** denote significance at 10%, 5%, 1% levels.

Country-level governance requirements on the composition of the board of directors are controlled in parallel with CSR disclosure requirements in models M2a and M2b in Table 6. Similarly to the results in Table 4, board size (*rBsize*) remains irrelevant determinant also for voluntary CSR disclosure after controlling for regulatory requirements. This confirms inconclusive results with respect to H1b. Results remain the same with regards to the proportion of non-executive board members exceeding the mandatory level (*rNonex*) that decreases the odds of voluntary CSR disclosure. This confirms that non-executive board members tend to avoid the disclosure of CSR information possibly due to their career concerns. High reliance on management as the source of information seems to increase the risk to receive inaccurate sustainability data. Therefore, this decreases non-executive board members' initiative for voluntary CSR reporting. Thus H3b must be rejected. Surprisingly, this remains the only significant governance indicator for voluntary CSR disclosure. Other regulation-adjusted governance indicators lose their significance. Voluntary separation of the roles of the bank's CEO and chairman of the board (*rCEOch*) does not contribute to disclosing CSR report voluntarily (inconclusive results with regards to H2b). As board's chairman is responsible for board's activity, this could suggest that the chairman does strive for fulfilling current regulations but do not put any additional effort into increasing bank's sustainability reporting behaviour. Though much more unexpected change occurs with regulation-adjusted female representation variable (*rWom*) that also loses its significance in models M2a and M2b, providing inconclusive results with regards to H4b. As the association was significantly positive in Table 4, it suggests that board's gender diversity's association with voluntary CSR disclosure might be affected by the fact whether the proportion of women on board is above, below or equal to mandatory quota. Thus, future studies should approach board's gender diversity's role on CSR reporting more deeply. From financial variables, bank size (*size*) remains positively associated with voluntary CSR reporting. Results with regards to performance indicators are more mixed. Combined performance indicator (*pc*) refers to negative association

This controversy is interesting and suggests that regulatory requirements can change the so far predominant conclusions about CSR disclosure determinants. The associations between different governance indicators and CSR disclosure are sensitive to regulation related corrections. However, the multi-country sample in this study can reconcile mixed results and sensitivity to regulations, as it covers countries of which some have introduced mandatory regulations on the composition of the board of directors and/or CSR reporting, while other have not. If the study focuses only on the data from one country, the potential impact arising from regulatory limits cannot be controlled for. Therefore, the results indicate that the determinants of banks' CSR reporting and voluntary CSR reporting are different. This implies that country-level mandatory regulations should be considered as an important element in future studies of CSR disclosure.

5. Conclusion

The objective of this paper was to determine the association between the composition of the board of directors and CSR reporting of listed banks. Special attention was paid to controlling for the impact of mandatory board composition and CSR reporting requirements.

The results demonstrate significant differences in the associations between board composition and CSR reporting before and after correcting for regulative requirements. The results firstly show that larger board decreases and the presence of women on boards increases the likelihood of banks' CSR disclosure. After controlling for country-level governance regulations on board composition, board size becomes irrelevant. The absence of CEO duality and inclusion of women on boards contribute to banks' CSR disclosure, only if these are done on a voluntary basis. Interestingly, voluntary separation of the roles of the CEO and chairman of the board is the only determinant increasing disclosure quality in terms of having externally verified report. The presence of non-executive board members decreases the disclosure of CSR information even if they are named to boards voluntarily. This association appears also for the disclosure of compiling the report based of GRI Standards but is less robust.

Controlling for country-level governance regulations on board composition together with CSR requirements leads to the irrelevance of most governance indicators. Only the result regarding non-executive board members remains the same for voluntary CSR disclosure. This indicates that non-executive board members may avoid the disclosure of CSR information possibly due to their career concerns. Therefore, enhancing board heterogeneity voluntarily becomes mostly irrelevant for promoting banks' voluntary commitment to sustainability reporting. All in all, the findings show that determinants of CSR reporting and voluntary CSR reporting are different. This implies that country-level mandatory regulations should be considered as an important element in future studies of CSR disclosure.

This study does have some limitations. Since the used methodology does not enable to detect causation, this aspect deserves attention in future studies focusing on CSR disclosures of banks. Further, contradictory results regarding female representation might be affected by the fact whether the proportion of women on boards is above, below or equal to mandatory quota. Thus, future studies should approach board's gender diversity's role on CSR reporting more deeply.

This study provides several practical implications. Mandatory governance regulations force banks to change the composition of the board of directors and increase its diversity, which should promote their commitment to CSR activities. However, the results show that the voluntary commitment to CSR of banks increasing their board diversity voluntarily is not substantially different from banks that are subject to board composition requirements.

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Conflict of interest

The author declares no conflict of interest.

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