Corporate Governance

The impact of ownership and board structure on Corporate Social Responsibility (CSR) reporting in the Turkish banking industry

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Abstract

Purpose – *The aim of this study is twofold. The first is to analyze the nature, extent and trend of corporate social responsibility (CSR) reporting in the Turkish banking industry under five sub-themes, namely, environment, energy, human resources, products and customers and community involvement. The second is to investigate the impact of ownership and board structure on CSR reporting by the banks.*

Design/methodology/approach – *The annual reports of the banks were examined for the period between 2008 and 2012 to analyze the CSR reporting of the banks, using content analysis and panel data analysis.*

Findings – *The results show that CSR reporting of the banks improved during that period of time. The findings of the study also revealed that there is a significant positive effect of size, ownership diffusion, board composition and board diversity on the CSR disclosure of the banks.*

Originality/value – *This study contributes significantly to the existing literature because the banking industry is generally excluded from the CSR studies. Further, there are few studies analyzing the effect of the ownership and board structure on the CSR disclosure. Finally, this study was conducted in a developing country with different regulations and socio-economic aspects as compared to developed countries. This study outlines important implications for regulatory bodies, organizations, the banking industry and other stakeholders.*

Keywords *Turkey, Disclosure, Corporate social responsibility, Ownership structure, Board structure, Banking industry*

Paper type *Research paper*

Introduction

Corporate social responsibility (CSR) has gained momentum as a new concept regarding the social impact of business enterprises and has become a popular notion among stakeholders, such as managers, investors, creditors, suppliers, customers, employees and policymakers. Several issues in this regard, such as pollution, resource depletion, waste, product quality and safety and the rights and status of the workers, have become the focal aspects of this growing attention (Gray *et al.*, 1987). Firms are expected to behave in a socially responsible manner while, at the same time, generating value for investors. Recent corporate scandals and corruption have indicated that over-focusing on financial results while disregarding other aspects of business has produced failures. Thus, CSR refers to finding a balance between the financial and non-financial goals of corporations, while acting in the best interest of society as a whole.

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Companies have accepted responsibility for the impact on society created by their activities and have become accountable to a wider audience than their shareholders and creditors (Hackston and Milne, 1996). As a result, the scope of disclosures by the entities has expanded to satisfy the needs of not only their shareholders and creditors but also their stakeholders, including customers, suppliers and the government as well as the general public. This necessitates the presentation of information divided among the economic, social and environmental activities of the entities, which is known as triple bottom line reporting (Deegan, 2004; Cormier *et al.*, 2011).

Many prior studies on CSR disclosure have excluded banks (Cormier and Gordon, 2001; Monteiro and Aibar-Guzmán, 2010; Siregar and Bachtiar, 2010). Although the number of studies which examine the CSR content of the banks' disclosures has increased in recent years, it remains inadequate. In addition, previous studies of CSR reporting concerning the banking industry have been rather descriptive. The subject needs to be dealt more comprehensively. The motivations behind CSR reporting in the banking industry are required to be documented. This research also analyzes the effect of the ownership and board structure of a bank on its CSR disclosure. There are few studies examining the effect of the ownership and board structure on the CSR disclosure by the banking industry. So far as can be ascertained, there is no study examining the CSR disclosure in the Turkish banking industry. This research will therefore provide detailed analysis regarding the impact of ownership and board structure on the CSR disclosure of banks. Moreover, this study contributes to the existing literature by proposing a non-linear relationship between board size and CSR disclosure. Only Siregar and Bachtiar (2010) and Cormier *et al.* (2011) have previously analyzed this non-linear relationship. In addition, the relationship between gender diversity on boards and the CSR disclosure is included in this research, something that has been lacking in other studies.

Finally, this study examines the CSR disclosure within the banking industry in Turkey. Up to the present, many of the studies regarding CSR disclosure have been conducted in developed countries. Turkey is currently one of the most important developing countries in the world; hence, analysis of CSR disclosure in the Turkish banking industry will present important implications for other developing countries.

This study primarily aims to investigate the nature, extent and trend of CSR reporting in the Turkish banking industry during the period from 2008 to 2012. Also, this paper examines the impact of ownership and board structure on CSR reporting level of Turkish banks.

The remainder of this paper is organized as follows. The first section presents a brief literature review related to the concept of CSR and its theoretical background. Next section explains CSR applications in the banking industry and in Turkey. The hypotheses of the study are developed in the third section. Section four presents the methodology. The fifth section documents the findings of this research, and the last section presents the conclusions and implications of this study.

Literature review

Sharma and Sharma (2011, p. 7) state that "CSR is a form of corporate self-regulation integrated into a business model." Various previous researchers pointed out the importance of CSR as a self-regulating mechanism through which a business ensures its active compliance with the spirit of the law, ethical principles and international norms (Rao and Kumari, 2013). Sukcharoensin (2012) argued that more profitable firms are inclined to utilize CSR disclosure as a self-regulating mechanism, as they are under political pressure and public scrutiny.

CSR disclosures include information regarding a corporation's activities, aspirations and public image regarding environmental, community, employee and consumer issues (Gray *et al.*, 2001). Companies use CSR disclosures for several reasons, such as enhancing the entity's position and image (Williams and Pei, 1999; Siregar and Bachtiar, 2010), promoting customer, community and government relations (Williams and Pei, 1999; Cormier *et al.*, 2011), legitimizing their activities (Branco and Rodrigues, 2006) and reducing information asymmetry between the entity's managers and its stakeholders (Cormier *et al.*, 2011). Furthermore, positive CSR disclosure enhances the company's favorable image in the eye of its customers, potential employees and investors (Alniacik *et al.*, 2011). On the other hand, negative CSR disclosure negatively affects the intentions of the company's stakeholders (Alniacik *et al.*, 2011). Besides, CSR is vital to the internal decision-making process, as it enables the measurement of the value of long-term relationships and assets by identifying strengths and weaknesses across the whole corporate responsibility spectrum (Vurro and Perrini, 2011).

There are also several theories which explain the CSR disclosure behavior of the entities. Two main theories have been utilized by prior studies to explain CSR disclosure: the legitimacy theory (Deegan and Rankin, 1996; Cormier and Gordon, 2001; Newson and Deegan, 2002) and the stakeholder theory (Ullmann, 1985; Roberts, 1992; Clarkson, 1995; van der Laan *et al.*, 2005).

Legitimacy theory proposes that there is a social contract between companies and society (Cormier and Gordon, 2001). Companies should legitimize their activities to fulfill the requirements of this relationship (Cormier and Gordon, 2001). Lindblom (1994; p. 2) defines organizational legitimacy as:

> [. . .] a status, which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy.

Accordingly, entities should act congruently with social values and community expectations (Branco and Rodrigues, 2008), and should be responsive to environmental pressures (Deegan and Rankin, 1996). The concept of social contract is central to organizational legitimacy (Newson and Deegan, 2002). According to this approach, companies attempt to fulfill these contracts in an effort to legitimize the company and its actions (Cormier and Gordon, 2001). Society allows organizations to continue their operations to the extent that they generally meet expectations (Newson and Deegan, 2002). When society's expectations are not fulfilled, that is, a company's actual or perceived behavior is not in accordance with social values and norms, a breach of contract exists and a legitimacy gap may develop (Branco and Rodrigues, 2006). On the other hand, if a company becomes successful in meeting the expectations of society and in fulfilling such contracts, it will maintain congruence with society (Cormier and Gordon, 2001). Entities disclose their CSR activities to fulfill those contracts and to close the legitimacy gap (Branco and Rodrigues, 2008). Disclosures are used to repair lost or threatened legitimacy, to gain or extend legitimacy and to maintain the current level of legitimacy (Branco and Rodrigues, 2008; p. 163). For instance, banks may legitimize their existence by disclosing their actions to restrain poverty and unemployment, as well as making a contribution to education and to society as a whole (Khan, 2010).

Stakeholder theory posits that the long-term survival and success of the corporation requires the support of its stakeholders (van der Laan, *et al.*, 2005). Stakeholders include creditors, employees, customers, suppliers, auditors, regulators and government, as well as the general public. These stakeholders have expectations regarding CSR activities of the entities, such as prevention of pollution, effective and efficient utilization of natural resources, work force diversity, employment of minorities, elimination of discrimination, etc. (Adebayo, 2000). Entities should act in accordance with the expectations of stakeholders to gain their support by using CSR as a communication channel (Barako and Brown, 2008) and by disclosing the environmental and social information that they demand (Freedman and Jaggi, 2005). For instance, companies should satisfy their consumers and employees economically without damaging the environment, depleting natural resources or subjecting their employees to dehumanizing working conditions (Achua, 2008), disclosing those accomplishments via several channels, including annual reports, Web sites, brochures, etc. Acting responsibly towards their stakeholders and ensuring good relationships will improve the overall performance of the firm and create benefits for its shareholders and other financial claimants in turn (Claessens and Yurtoğlu, 2013).

CSR in the banking industry

The scarcity of CSR reporting studies in the banking industry can be attributed to the perception that their role is limited when it comes to environmental pollution, product safety or employee safety. In fact, the financial sector, including banks, has a crucial role in the social and environmental activities of other industries due to their lending and investment policies (Douglas *et al.*, 2004; Branco and Rodrigues, 2008; Scholtens, 2009). According to Simpson and Kohers (2002), banks have both social and legal responsibilities because they finance entities which might possibly produce unsafe products or pollute the environment. Branco and Rodrigues (2006; p. 233) indicated that the activities of banks, incorporated in their lending and investment policies, are considered to be equally environmentally sensitive when compared to the direct impact of companies in industries that create pollution in the course of their operations. Furthermore, banks play an important role in the socio-economic development (Achua, 2008) and sustainability of countries. They operate as financial intermediaries between lenders and borrowers by sustaining cash flow and they play an important role during financial crises (Wu and Shen, 2013). According to Khan (2010), the banking industry has a high public visibility. As the public visibility of a company increases, its disclosure level may also increase because of pressure by society. Moreover, many resources used by the banks such as paper and energy result in waste (Branco and Rodrigues, 2006). As a result, information regarding policies concerning the activities of banks, such as contribution to energy and natural resources conservation and waste, has become an important aspect of their CSR disclosure (Branco and Rodrigues, 2006). As a result, the general perception regarding the banking industry relative to social and environmental issues has changed (Barako and Brown, 2008), and socially responsible banking has become a well-structured notion (Scholtens, 2009). Most banks are now presenting detailed information about their CSR activities via their annual reports, discrete sustainability or social responsibility reports.

As the importance of CSR disclosure in the banking industry has been recognized by researchers, the number of studies has increased. Hence, there is a growing body of studies that analyze the nature and extent of the CSR disclosure in the banking industry (Coupland, 2006; Barako and Brown, 2008; Branco and Rodrigues, 2008; Khan *et al.*, 2009, 2011); the effect of firm characteristics such as size, leverage and profitability on CSR disclosure of banks (Barako and Brown, 2008; Branco and Rodrigues, 2008; Khan *et al.*, 2011); and the effect of CSR disclosure on the market value or performance of the banks (Carnevale *et al.*, 2012; Wu and Shen, 2013). On the other hand, there are still only a few studies analyzing the effect of ownership and board structure on CSR disclosure in the banking industry (Barako and Brown, 2008; Khan, 2010).

Hypotheses

Bank size

Size is one of the most used factors to explain the CSR disclosure of entities in literature. Agency theory and legitimacy theory include some arguments concerning the relationship between size and CSR disclosure (Hackston and Milne, 1996). The underlying assumption is that size impacts CSR disclosure positively. Several reasons have been presented that favor this positive relationship. First, it is acknowledged that larger entities attract greater attention from the media, policymakers and regulators (Watts and Zimmerman, 1986). Hence, they are subject to pressure from both public and governmental regulatory bodies (Abbott and Monsen, 1979). Organizations which are politically visible are open to criticism by interest groups which advocate a green environment and improved social welfare (Belkaoui and Karpik, 1989; Naser *et al.*, 2006). Large entities disclose information that highlights their contribution to a friendly environment to placate those pressure groups (Naser *et al.*, 2006). As well, larger entities have more resources available for social activities than smaller ones and a larger asset base with which to spread the costs of those activities (Siregar and Bachtiar, 2010). Further, large entities have more resources to collect, analyze and present data, so they tend to disclose more information compared to medium and small ones (Naser *et al.*, 2006).

Majority of previous studies discovered that size creates a significant positive effect on the CSR disclosure of entities (Belkaoui and Karpik, 1989; Hackston and Milne, 1996; Haniffa and Cooke, 2005; Scholtens, 2009; Khan, 2010; Othman *et al.*, 2009; Rahman and Bukair, 2013). Hence, the following hypothesis has been developed:

H1. Bank size has a significant positive effect on the CSR reporting level of banks.

Because the number of branches is a proxy indicating visibility for customers (Branco and Rodrigues, 2008; Branco and Rodrigues, 2006), it has been used as a bank size variable in this research.

Ownership structure

Ownership structure is one of the most used variables to explain the CSR disclosure of companies in prior literature (Choi, 1999; Cormier and Gordon, 2001). The underlying assumption is that wider ownership diffusion enhances CSR activities or disclosure by the entities. As ownership diffusion increases, the expectations and demands by shareholders become broader (Keim, 1978). Being publicly listed increases ownership diffusion as well as the number of stakeholders. Therefore, publicly owned entities face more pressure to disclose additional information regarding their activities due to visibility and accountability issues (Choi, 1999; Cormier and Gordon, 2001). The benefits of disclosing social and environmental information will outweigh the costs for those publicly listed entities (Cormier and Gordon, 2001). Moreover, firms that are listed on the stock market are generally subject to several requirements from regulatory authorities (Monteiro and Aibar-Guzmán, 2010).

Prior studies found that listed banks disclose more social and environmental information compared to privately owned ones (Cormier and Gordon, 2001; Branco and Rodrigues, 2006). Consequently, being listed, the ownership diffusion is considered to be an important determinant of voluntary CSR disclosure. Thus, the following hypothesis has been developed:

H2. Ownership diffusion has a significant positive effect on the CSR reporting level of banks.

In this research, ownership diffusion is defined as the percentage of shares not held by known shareholders (Raffournier, 1995).

Board size

The board of directors is one of the most important elements of control mechanism in overseeing proper management of the conduct of business by their agents (Said *et al.*, 2009). Due to complexities within the banking sector, the boards of banks take on a special relevance within the framework of limited competition, intense regulation and higher informational asymmetries (de Andres and Vallelado, 2008). Thus, boards of banks play a vital role in controlling the behavior and strategy identification, with necessary implications, of their managers (de Andres and Vallelado, 2008).

Having more directors on a board may reduce discretionary power of managers (de Andres and Vallelado, 2008). On the other hand, having too many directors on the board will cause: lack of communication and coordination (deAndres and Vallelado, 2008; Said *et al.*, 2009; Rao *et al.*, 2012), slow decision-making (de Andres and Vallelado, 2008; Said *et al.*, 2009; Rao *et al.*, 2012), lack of unanimity (Rao *et al.*, 2012) and risk of excessive manager control (de Andres and Vallelado, 2008). A very large board size can result in a decrease in the quality of financial disclosures because the board of directors will be unable to carry out its roles effectively and efficiently (Said *et al.*, 2009). Siregar and Bachtiar (2010) have indicated that board size can have a positive effect on the CSR disclosure, but a very large board size will have negative effect upon it. This would result in a non-linear (concave) relationship between board size and CSR disclosure. Hence, the following two hypotheses have been developed:

H3a. Board size has a significant positive effect on the CSR reporting level of banks.

H3b. The relationship between board size and the CSR reporting level is non-linear.

Board composition

The ratio of outside directors to the total number of directors is defined as board composition (Hossain and Reaz, 2007). Outside directors are also referred to as non-executive or independent directors in prior literature (Hossain and Reaz, 2007; Ararat *et al.*, 2010; Khan, 2010).

The presence of independent directors on the board is seen as a control mechanism on the discretionary behavior of managers (Yurtoğlu, 2003) and on the actions of majority shareholders (Ararat *et al.*, 2010). They are the check and balance mechanism, not only ensuring that companies act in the best of interests of their owners but also in the best interests of other stakeholders (Khan, 2010). Several arguments in favor of the existence of independent directors on the board were proposed by the researchers in prior studies. For instance, independent directors can improve the supervision of management (de Andres and Vallelado, 2008); can reduce the conflict of interest amongst stakeholders (de Andres and Vallelado, 2008); and can foster board effectiveness (Said *et al.*, 2009; Rao *et al.*, 2012). Hence, independent directors contribute to the effective management of the entities by maintaining different perspectives and representing the stakeholders. They may also affect the CSR activities of the entities. According to Haniffa and Cooke (2005), independent directors may influence the CSR activities or disclosures of companies acting as agents of the stakeholders on the board. Boards with more independent directors will motivate companies to engage in CSR activities in congruence with societal values (Haniffa and Cooke, 2005; Khan, 2010). As a result, boards with more independent directors are more likely to ensure that the companies behave in a socially and environmentally responsible manner (Rao *et al.*, 2012).

Several studies have determined the significant positive impact of independent directors on the CSR reporting (Barako and Brown, 2008; Khan, 2010; Rao *et al.*, 2012). Thus, the fourth hypothesis has been developed as:

H4. The number of independent directors on the board has a significant positive effect on the CSR reporting level of banks.

Board diversity

One considerably debated characteristic of board diversity is gender (Rao *et al.*, 2012). Several researchers have proposed that board diversity affects the CSR reporting of the entities positively (Barako and Brown, 2008; Rao *et al.*, 2012). Several reasons have been documented underlying this approach, such as increased independence of the board, the quality of decisions being made and boardroom atmosphere.

According to Carter *et al.* (2003), board diversity increases the independence of the board because directors with heterogeneous gender, ethnicity or cultural backgrounds will ask questions that might not be asked by directors with homogeneous backgrounds. Hence, the independence of the board will be enhanced if there are female directors. Independence is one of the main factors that affect the accountability of the entities positively, resulting in an increase in the level of disclosure (Rao *et al.*, 2012).

Further, recruiting more women on corporate boards may bring a diversity of opinions to board discussions (Barako and Brown, 2008), as they have unique experiences, working styles and perspectives as compared to male directors (Huse and Solberg, 2006). According to Torchia *et al.* (2011), women on a board will enable it to make high-quality decisions because more alternatives will be considered with their diverse approaches. According to Huse and Solberg (2006), female directors have more wisdom and diligence than their male counterparts. Adams and Ferreira (2009) found that female directors increase board effectiveness. Thus, the existence of female directors on the board will increase the quality of decisions and may affect the solution of complicated issues such as CSR activities or disclosures.

Moreover, female directors create a good atmosphere in the boardroom and represent soft values as well as women's issues (Huse and Solberg, 2006). The study of Ibrahim and Angelidis (2011) has shown that women are driven less economically and more philanthropically, compared to males. Similarly, Williams (2003) found that the percentage of women on boards affects the firms' voluntary community service. It is obvious that the female directors are more sensitive about social issues and steer the board's decisions in this direction.

Consequently, the following hypothesis has been developed:

H5. The number of female directors on the board has a significant positive effect on the CSR reporting level of banks.

Research methodology

Sample

The sample of our research includes the banks which have operated between 2008 and 2012 in Turkey. We have excluded two groups of banks to get homogenous data, namely, development and investment banks and foreign banks which have only one or two branches. Then, we have determined 26 banks in four categories: state-owned, privately-owned, foreign and participation. Our final sample included 25 banks because we could not get one bank's annual reports even after calling and sending several e-mails.

Descriptive statistics

According to the descriptive statistics presented in Table I, CSR reporting level varies greatly among Turkish banks as the minimum (11.54 per cent) and the maximum (92.31 per cent) reporting values indicate. On the average, the disclosure rate is 39.52 per cent, and this rate shows that there is still a room for improvement in terms of CSR reporting. There are quite big-size banks (1514-branch) as well as very small-size banks (one branch bank) in the sample. As the average free float rate (14 per cent) demonstrates, ownership structure of banks is not highly diversified. While boards of banks include on the average 9.26 members, they include only 0.52 independent members and 0.76 female members on

Table I Descriptive statistics

Variables	*Minimum*	*Maximum*	*Mean*	*SD*
CSR	11.54	92.31	39.52	19.13
BRANCH	1.00	1514.00	380.44	396.07
FREE_FLOAT	0.00	0.50	0.14	0.16
BOARD_SIZE	6.00	14.00	9.26	1.59
INDP_MEMB	0.00	5.00	0.52	1.13
FEMALE_MEMB	0.00	3.00	0.76	0.81

Notes: CSR: Corporate Social Responsibility reporting level; BRANCH: number of branches; FREE_FLOAT: free float rate; BOARD_SIZE: number of board members; INDP_MEMB: number of independent members on board; FEMALE_MEMB: number of female members on board the average. Therefore, regulatory bodies are trying to increase independent and female members on boards by making regulations regarding corporate governance principles.

Results

CSR reporting index

Several prior studies have categorized CSR into different subthemes, for instance, Ernst and Ernst (1978) have classified the CSR disclosure as environment, energy, fair business practices, human resources, products and customers, community and others; Hackston and Milne (1996) as environment, energy, employee health and safety, employee, products, community involvement and others; Williams and Pei (1999) as environment, energy, human resources and management, products and customers and community; Gray *et al.* (1995) as human resource, environmental, community and customer; Cormier *et al.* (2011) as expenditures and risks, laws and regulations conformity, pollution abatement, sustainable development, land remediation and contamination, environmental management, labor practices and decent work, society and consumer and product responsibility. Thus, CSR disclosure has been classified into five subthemes in this research as environment, energy, human resources, products and customers and community involvement (Table AI).

In line with earlier studies, content analysis method has been applied to measure the extent of CSR reporting level of banks. Basically, we have analyzed the existence or absence of items in corporate reports, namely, annual report, stand-alone CSR report and sustainability report. In our study, we applied this approach by assigning a value of 1 in case an item of CSR is reported and 0 if it is not. The CSR reporting index for each bank was then calculated as follows:

$$CSR = \sum_{j=1} \frac{rj}{n}$$

Where,

rj = 1 if the item j is disclosed;
0 = if the item j is not disclosed; and
n = number of items.

We have measured overall CSR reporting level along with five subdimensions, namely, ENVIRONMENT (ENVTOTAL), ENERGY (ENRTOTAL), HUMAN RESOURCES (HRTOTAL), PRODUCTS and CUSTOMERS (PCTOTAL), COMMUNITY INVOLVEMENT (CITOTAL). The reporting level of each CSR dimension is illustrated in Figure 1. Overall, the CSR reporting level is growing across years in all dimensions. This is good news for Turkish banks, as they are improving in CSR reporting. According to the figure, PCTOTAL level around 70 per cent is well above the other dimensions throughout 2008-2012. Besides, HRTOTAL and CITOTAL are quite close to each other in terms of reporting level at above 40 per cent. By 2012, they are both above 50 per cent. The banks also show environmental sensitivity to some extent as the average level of ENVTOTAL is around 30 per cent. Finally, ENRTOTAL is the least reported dimension; however, it is showing an increasing trend to above 20 per cent by 2012. Particularly, there is a need for improvement in the dimensions of ENVTOTAL and ENRTOTAL.

Pearson correlation analysis

Before Panel data analysis, Pearson correlation analysis was carried out to see the bivariate relationships among the variables (Table II). Accordingly, there is a significant positive relationship between CSR and BRANCH (64.9 per cent; $p < 0.01$), as well as between CSR and FREE_FLOAT (64.4 per cent; $p < 0.01$) and between CSR and BOARD_SIZE (22.7 per cent; $p < 0.05$).

Figure 1 CSR reporting levels

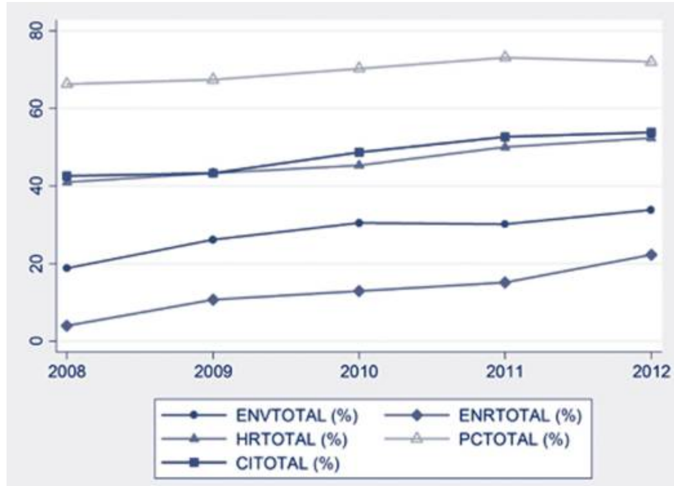

Table II Pearson correlation analysis

No.	*Variables*	*1*	*2*	*3*	*4*	*5*	*6*
1	CSR	1					
2	BRANCH	0.649**	1				
3	FREE_FLOAT	0.644**	0.411**	1			
4	BOARD_SIZE	0.227*	0.135	0.040	1		
5	INDP_MEMB	0.100	−0.002	0.165	0.197*	1	
6	FEMALE_MEMB	−0.020	−0.056	−0.079	0.327**	0.173	1

Notes: **Correlation is significant at the 0.01 level (two-tailed); *correlation is significant at the 0.05 level (two-tailed)

Panel data analysis

Panel data analysis was implemented in this research study, as it is a useful methodology which eliminates problems related to multicollinearity as well as an estimation bias to a certain extent. Also, the time-variant relationship between independent and dependent variables is specified by the panel data analysis (Baltagi, 2001). *F*-test is applied to determine which method performed best to choose between fixed-effect and pooled OLS. In the next stage of the analysis, the Breusche and Pagan Lagrange multiplier (LM) test was used to decide whether the random-effect model or the pooled OLS model was appropriate for the study. In addition, the fixed-effects model and the random-effects model were compared by using the Hausman's test. The proposed model is given as:

$$\text{CSR} = \beta_0 + \beta_1\text{BRANCH} + \beta_2\text{FREE\_FLOAT} + \beta_3\text{BOARD\_SIZE} + \beta_4\text{BOARD\_SIZE}^2 + \beta_5\text{INDP\_MEMB} + \beta_6\text{FEMALE\_MEMB} + \varepsilon.$$

The variables used in the model are defined as follows:

CSR	= Corporate social responsibility index
BRANCH	= Number of bank branches, which denotes bank size
FREE_FLOAT	= Percentage of shares held by unknown shareholders
BOARD_SIZE	= Number of members on board, which indicates board size
BOARD_SIZE^2	= Square of board size
INDP_MEMB	= Number of independent directors on board
FEMALE_MEMB	= Number of female directors on board

The least square dummy variable model (LSDV) was used to understand the fixed effects. The effect of independent variables is mediated by the differences between banks. The pure effect of independent variables was estimated by adding a dummy for each bank. Each dummy absorbs the effects peculiar to each bank. Besides using the LSDV, linear regression with a large dummy-variable set (areg) was used to estimate fixed effects. It fits a linear regression by absorbing the categorical factor (banks). The comparisons of obtained results are presented in Table III. The *F*-test was vital to determine which model (the pooled OLS model or the fixed effects model) to use. The results indicated that (10.60; $p < 0.01$) the fixed effects model was more appropriate to use than the pooled OLS model. In addition, the Lagrange multiplier (Breusch and Pagan Lagrangian multiplier test for random effects) test indicated which model to choose between a random effects regression and a simple OLS regression. According to the LM test result (83.96, $p < 0.01$), the random-effect model was superior to the simple OLS regression. Following *F*-test and LM test, it was necessary to decide which model to apply; the Hausman's test statistics (14.87; $p < 0.05$) revealed that the fixed effects model was more appropriate model compared to the random-effects model. After running the necessary tests for choosing the right model, the fixed effects model was found to be the most appropriate model for this research study. Therefore, the results of the fixed effect model were taken into consideration for further discussion about the implications of the study.

For autocorrelation, the likelihood-ratio test is not recommended, as an iterated generalized least squares (GLS) does not produce maximum likelihood estimates. Instead, a simple test for autocorrelation in the panel data was proposed by Wooldridge, (2002). According to the Wooldridge test (6.324; $p < 0.05$) for autocorrelation, our panel data had an autocorrelation issue (the null hypothesis was that there was no serial autocorrelation). Because the test statistic is significant at 0.05, the null hypothesis was rejected, thereby indicating the presence of a serial correlation. Also, there was a heteroskedasticity issue in our panel data which might influence the OLS results. A likelihood ratio test for heteroskedasticity was used. According to the test results, the null hypothesis (homoskedasticity) was rejected, indicating that the presence of a heteroskedasticity issue. To resolve the issue of heteroskedasticity, cluster-robust variance and covariance estimators were used (Wooldridge, 2002). The robust fixed effects model is given in Table III. The independent variables explained almost 54 per cent of the variation in the dependent variable.

According to the results, BRANCH was found to have a significant positive effect on CSR ($\beta = 0.07$; $p < 0.01$); thus, *H1* is accepted. This finding is compatible with prior studies (Hackston and Milne 1996; Cormier and Gordon, 2001; Haniffa and Cooke, 2005; Branco

Table III Estimated coefficients from the panel data analysis, years 2008-2012

Dependent variable *Independent variables*	*CSR* *OLS*	*LSDV*	*AREG*	*FE*	*RE*
BRANCH	0.02*** (6.76)	0.07*** (4.67)	0.07*** (4.67)	0.07*** (4.67)	0.03*** (5.03)
FREE_FLOAT	54.00*** (7.19)	49.80*** (2.72)	49.80*** (2.72)	49.80*** (2.72)	46.00*** (3.77)
BOARD_SIZE	5.85 (0.98)	1.90 (0.33)	1.90 (0.33)	1.90 (0.33)	1.34 (0.25)
BOARD_SIZE^2	−0.22 (−0.68)	−0.09 (−0.29)	−0.09 (−0.29)	−0.09 (−0.29)	−0.03 (−0.09)
INDP_MEMB	−0.08 (−0.08)	3.71** (2.27)	3.71** (2.27)	3.71** (2.27)	2.44* (1.81)
FEMALE_MEMB	−0.04 (−0.02)	3.12* (1.77)	3.12* (1.77)	3.12* (1.77)	2.55 (1.59)
CONSTANT	−10.3 (−0.39)	−10.5 (−0.32)	−6.56 (−0.22)	−6.56 (−0.22)	8.77 (0.34)
N	125	125	125	125	125
R^2	0.62	0.90	0.90	0.54 (overall)	0.58 (overall)
F-statistics/Wald χ^2	31.58***	27.13***	7.46***	7.46***	69.80***
F-test				10.60***	
LM-test					83.96***
Hausman's test				14.87**	
Heteroskedasticity test				148.98***	
Autocorrelation test				23.49***	

Notes: *t* statistics in parentheses; *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

and Rodrigues, 2006; Khan, 2010; Othman *et al.*, 2009; Rahman and Bukair, 2013). This suggests that larger banks feel more pressure from the public, and thus incorporate more CSR activities. Further, larger banks may have better resources for CSR activities (Monteiro and Aibar-Guzmán, 2010), and for disclosing their CSR activities (Othman *et al.*, 2009).

Similarly, FREE_FLOAT had a positive significant effect on the dependent variable (β = 49.80; $p < 0.01$), implying that *H2* is accepted. This result confirms those of the studies by Cormier and Gordon (2001) and Branco and Rodrigues (2006). Being listed on a stock exchange increases the visibility of the banks, and thus affects CSR disclosure positively. The relationship between visibility and the CSR disclosure level is also supported by legitimacy theory, which implies that well-known banks have more reason to legitimize their existence to society (Branco and Rodrigues, 2006). Hence, listed banks ascribe greater importance to CSR disclosure for their legitimation strategies compared to unlisted banks (Branco and Rodrigues, 2006).

In addition, the same fixed effect results revealed that there was a significant positive effect between INDP_MEMB and CSR (β = 3.71; $p < 0.05$); hence, *H4* is accepted. In other words, as the number of independent members on the board increases, the level of voluntary CSR disclosure increases. This finding is in concordance with many prior studies (Haniffa and Cooke, 2002; Barako and Brown, 2008; Khan, 2010; Htay *et al.*, 2012; Rao *et al.*, 2012) and verifies the effect of independent directors on CSR disclosure empirically.

Finally, FEMALE_MEMB had a weak statistically significant positive impact on CSR (β = 3.12; $p < 0.10$); thus, *H5* is accepted. This result confirms several studies in the prior literature (Barako and Brown, 2008; Rao *et al.*, 2012). As the proportion of female directors increases on the board, CSR disclosure of the banks increases. In other words, gender diversity on the board is a determinant of CSR disclosure by banks.

However, there was no statistical significance between BOARD_SIZE and BOARD_SIZE^2 and CSR; therefore, both *H3a* and *H3b* are rejected. Though the results suggested that there were no statistical significant relationships, the square of BOARD_SIZE had a negative impact on CSR, while BOARD_SIZE had a non-significant positive impact. This insignificant finding is contrary to Siregar and Bachtiar (2010). According to Siregar and Bachtiar (2010), larger boards will exercise monitoring activities more effectively, but boards that are too large will lose this effectiveness. In fact, there are contradictory results in the prior literature regarding the effect of board size on CSR disclosure. For example, there are several studies which found a positive association between the board size and CSR disclosure (Htay *et al.*, 2012; Rao *et al.*, 2012; Rahman and Bukair, 2013) as well as an insignificant relationship (Halme and Huse, 1997; Sufian and Zahan, 2013). According to Rahman and Bukair (2013), larger boards with collective knowledge and experience will lead to greater CSR disclosure. The relationship between board size and CSR disclosure should be investigated in further studies.

Conclusion

The present study initially investigated the extent and trend of CSR reporting in the Turkish banking sector in five dimensions, namely, environment, energy, human resources, products and customers and community involvement. Second, it examined the determinants of the CSR reporting level of the banks. This sector was selected, as there are few in-depth empirical studies regarding CSR reporting except for some descriptive and basic studies. The analysis for the period 2008 to 2012 was carried out by utilizing panel data analysis methodology. The extent of CSR reporting in the banking sector demonstrates a significantly growing trend during the analysis period in all dimensions. However, there is a need to improve in environmental and energy-related CSR activities, as well as a need to broaden the depth and scope of the CSR reporting. The panel data analysis proved that the size (number of branches), the free float, the number of independent members on the board and the number of female directors on the board are significant determinants of the CSR reporting level, whereas the board size and square of board size are not.

The number of branches is an important driver of CSR reporting. Having more branches means more employees, an increasing complexity in operations and increased consumption of planetary resources. This significantly impacts the CSR reporting level of the banks. “Free float” refers to the publicly traded portion of bank ownership on the organized stock exchange. Thus, a higher free float is an indication of more stakeholders as well as more visibility in the public domain, which necessitates transparency through publishing corporate reports, including CSR reports. Transparency also alleviates agency costs by reducing the information gap between managers and investors. Recent regulations regarding corporate governance require the inclusion of independent and female members on boards. Independent members balance the interests of insiders and outsiders, and they also monitor the activities of managers on behalf of investors. The findings imply that these independent members can influence directors in terms of undertaking more CSR initiatives, thus reporting related information. Female directors on board have a significant positive impact on CSR reporting. This could imply that they are likely to bring different perspectives to boards in terms of CSR activities such as charitable donations, environmental sensitivity, energy conservation and better working conditions. Therefore, having a diversified board in terms of both independent and female directors might stimulate boards, encouraging them to function more efficiently. As earlier studies have shown, the effect of board size on CSR reporting has been investigated. Although a significant impact of board size on the CSR reporting could not be proven, signs of the variables, board size and square of board size, have been found positive and negative respectively as supposed. This implies that board size plays a positive role (even if insignificant) on the CSR reporting and that this effect is reversed after a certain point has been reached. This might mean that a board can lose its efficiency when it is too large.

The findings have important implications for regulatory organizations, the banking industry, stakeholders, non-governmental organizations and firms. In recent decades, there has been a growing awareness regarding CSR activities among all sectors. Firms are expected to behave in a socially responsible manner, while focusing on financial performance. Further, stakeholders, such as shareholders, customers and suppliers, are concerned not only about the financial performance of the entities but also their social performance. Therefore, entities engage in CSR activities and disclose them through several channels. There are also several important drivers for engagement in CSR activities and subsequently reporting those initiatives for the banking sector. Banks perform the role of a locomotive in the economy of a country, as they are the major sources of capital for firms; therefore, it is assumed that they will consider all of the stakeholders’ expectations and rights. For example, as the banking industry is labor-intensive, it should consider the training needs of its employees, as well as providing healthy and safe working conditions, along with the basic rights of the employees. In doing so, the sector could increase the satisfaction of personnel, which eventually might lead to customer satisfaction, and in turn, increased financial performance. Furthermore, the banking sector is increasingly becoming a technology-intensive sector through online and mobile banking applications that means consuming a greater amount of energy. Therefore, setting an energy policy and attempting to reduce energy consumption through conservation and efficiency methods are very important CSR activities. Sensitivity concerning the environment can also be demonstrated by the banking industry in several ways, such as considering environmental factors through lending policies, as well as encouraging waste recycling, and also increasing the environmental awareness of their employees. The level of CSR reporting regarding products and customers is already high among the banks; this might reflect the fact that they are marketing their products, which puts their customers in the center of CSR reporting. Community involvement is what the public expects from banks, in terms of sponsoring educational, cultural and sportive activities. This type of CSR reporting also has a high disclosure level, indicating that the banks support volunteer activities. These activities will increase the social performance of the banks, which will thereby legitimize their activities and gain a positive public image with their higher social performance. Non-governmental organizations can also take part in enhancing the CSR awareness of the banks in the country by arranging informative meetings and workshops so that the banks behave in a more socially responsible manner.

CSR reporting is currently provided largely within the scope of the annual reports of banks. There is a minimal effort to publish a separate CSR report or sustainability report. At the same time, the global trend is to publish stand-alone CSR or sustainability reports due to their importance. At this point, regulatory organizations could provide guidelines and set a policy regarding CSR reporting to improve the current state of affairs. They could enhance the scope of CSR reporting by providing a framework. This would make the CSR reports of banks comparable, so that the stakeholders could evaluate the banks' CSR initiatives. Another point is that when credit decisions are made, the banks could require and utilize the CSR reports of applying firms along with financial reports and determine their ultimate credibility. Depending on CSR engagement and reporting, the banks might potentially reduce the borrowing costs of their customers. This would generate a cleaner, more energy efficient and highly satisfied employees and other stakeholders. Moreover, voluntary CSR activities and related disclosures are playing a crucial role as a self-regulating mechanism because banks are learning how to behave towards their employees, environment and social vicinity ethically in advance of adopting regulations and laws. Finally, globalization has a positive influence on developments in the CSR field. The interaction between nations and multinational firms has played an important role in the growing awareness of CSR among developing countries. In particular, the developed nations have contributed to the improvement of CSR by setting up the CSR agenda and presenting introductory examples of CSR implementations.

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Appendix

Table AI CSR disclosure items

Environment	
ENV1	Environmental policy statement
ENV2	Environmental goals and targets
ENV3	General environmental considerations (noise, air, water, visual quality)
ENV4	Environmental audit (reference to environmental review, scoping, audit, assessment including independent attestation)
ENV5	Environmental investment policies
ENV6	Environmental considerations in lending policies
ENV7	Environmental sensitivity in processes (waste, packaging, recycling, products and product development)
ENV8	Sustainability (any mention of sustainability or sustainable development)
ENV9	Environmental aesthetics (designing facilities harmonious with the environment, landscaping, contributions in terms of cash or art/sculptures, tree plantation etc.)
ENV10	Environmental training
ENV11	Environmental certification (ISO 14001 vs)
ENV12	Joint projects with other firms providing environmental management services
ENV13	Environmental awards
Energy	
ENR1	Disclosing the company's energy policies
ENR2	Voicing the company's concern about the energy shortage
ENR3	Energy conservation
ENR4	Energy of efficiency
ENR5	Utilization of waste materials
ENR6	Recycling and associated energy savings
ENR7	Efforts to energy consumption
ENR8	Increasing service efficiency
ENR9	Receiving an award for an energy conservation program
Human resources	
HR1	Employee health and safety
HR2	Employment of minorities
HR3	Employment of disabled people
HR4	Employee training
HR5	Employee assistance and benefits
HR6	Employee remuneration
HR7	Employee profiles
HR8	Employee morale
HR9	Relations with professional unions
HR10	Improvements to the general working conditions
HR11	Information on employee turnover
HR12	Information about support for day-care, maternity and paternity leave
Products and customers	
PR1	Explanations of major kinds of product/services
PR2	Service development and research
PR3	Service quality
PR4	Customer complaints/feedback/satisfaction
PR5	Consumer awards
PR6	Provision for disabled and aged customers
PR7	Provision for difficult-to-reach customers
Community involvement	
CI1	Donations to community activities and charitable bodies
CI2	Student employment
CI3	Support for education
CI4	Funding scholarship programs or activities
CI5	Sponsoring conferences, seminars or exhibits
CI6	Sponsoring sporting or recreational projects
CI7	Support for the arts and science
CI8	Supporting community self-help activities
CI9	Sponsoring public health projects
CI10	Supporting national pride/government sponsored campaigns
CI11	Supporting the development or local industries or community programs and activities

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