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Gender influence, social responsibility and governance in performance

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Abstract

Purpose – This paper aims to analyze the influence of gender diversity on the relationship between corporate social responsibility (CSR), corporate governance (CG) and economic and financial performance of Brazilian publicly traded companies.

Design/methodology/approach – The sample comprises 68 non-financial public companies comprising the IBX100 index of BM&FBOVESPA. For that, it was used panel data modeling, correlation and ranking by TOPSIS method.

Findings – The results suggest a significant relationship between CG and economic–financial performance when mediated by gender diversity. This relationship was not observed between CSR and economic–financial performance. Thus, it can be concluded that in a diversified board of directors, in terms of gender, better monitoring of managers can occur because of the increase in their independence in decisions, as well as performance increase. These results diverge from the literature on the influence of women's participation in corporate boards in CSR. It is assumed that this result is because of the fact that the participation of women is recent in Brazil.

Research limitations/implications – The main limitations are the number of companies analyzed, the choice of ISE index to verify the CSR variable and the metric used to verify the CG mechanisms.

Originality/value – In general, this research contributes to the literature of the area, especially in Brazil, in confirming that the mediating variable gender diversity makes the relationship between CG and performance more significant.

Keywords Performance, Social responsibility, Governance, Gender

Paper type Research paper

1. Introduction

The corporate governance (CG) as an investor protection mechanism has become an important issue for financial markets after significant flaws related to accounting fraud.

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Therefore, investors are demanding that companies deploy strict CG principles to maximize returns on investments and reduce agency costs (Beiner *et al.*, 2006; Aras and Crowther, 2008).

The lack of research on the impact of other CG structures in CSR reports is, according Jizi *et al.* (2014), an indication of a mental disconnection between what is considered “good corporate governance” and how to ensure that companies, in a transparent manner, meet their social obligations to society. In this context, several studies have sought to investigate the relationship between intangible resources, such as gender diversity (Aguinis and Glavas, 2012), CG (Jamali *et al.*, 2007; Margem, 2013), CSR (Bear *et al.*, 2010) and economic–financial performance (Bear *et al.*, 2010). However, Margem (2013) argues that in Brazil, this issue is still little studied because of lack of data.

The Brazilian Institute of Corporate Governance (IBGC) (IBGC, 2011) considers that gender diversity on boards is a recent theme in the CG discussions in Brazil, but it begins to gain momentum, as some countries adopt compulsory rules or voluntary adhesions to female presence in senior management.

In a review of 588 published articles on CSR, Aguinis and Glavas (2012) provide insights into the use of intangible assets that include gender diversity as mediators of the relationship between CSR and financial performance. Several studies have confirmed that the positive impact of gender diversity on boards is linked to better classification of companies on the CSR and corporate reputation, as well as financial performance, institutional investment and stock price (Fombrun, 2006; Bear *et al.*, 2010).

The diversity of gender can affect the monitoring function of the management board. Having more women on the board enhances the experience of this, increasing the range of professional experience (Hillman *et al.*, 2002). While increasing the representation of women on boards is still a long process (Bear *et al.*, 2010), gender diversity on the board can help to ensure effective organizational control (Westphal and Zajac, 1995; Bear *et al.*, 2010).

Bear *et al.* (2010) state that the increase in the number of women on corporate boards can improve CSR and provide important signals to investors about the potential for improving the reputation and financial performance of companies. It is noteworthy that in 2011 about 66.3 per cent of Brazilian listed companies had no women on their boards. On the other hand, those companies that include the presence of women occupy 20 per cent of the chairs of boards. When comparing the percentage among countries, among the companies that have at least one woman on the board, Brazil found itself behind countries like China, India and Russia (IBGC, 2011).

By addressing future trends to the literature on governance and corporate social responsibility (CSR), Strandberg (2005) argues that in the future the procedures and governance structures should include policies and reviews aimed at disclosure of the nature and frequency of CSR practices developed by companies. There are still research gaps that need to be discussed, such as, the effect of mediation and intangible variables and the separation of analysis variables at individual and institutional level (Frooman, 1997; Schmidt and Rynes, 2003; Orlitzky *et al.*, 2003; Margolis *et al.*, 2009; Aguinis and Glavas, 2012).

Parente and Machado Filho (2013) have pointed out that in the context of Brazilian companies, CSR practices are dispersed and are not always part of the CG. They suggest that future research studies should invest in three areas: the importance of the institutional environment in promoting CSR and CG, the influence of the concepts of organizational performance and the role of councils and counselors in the CSR promotion (Parente and Machado Filho, 2013).

Within this context, the following research question arises:

RQ1. What is the influence of gender diversity in the relationship between CSR, CG and financial performance of Brazilian public companies?

Thus, this research aims to analyze the influence of gender diversity in the relationship between CSR, the CG and the financial performance of Brazilian public companies.

The study is justified by the importance of the topic for literature, for investors and the community in general, as gender diversity in board positions and directors may represent a differential in terms of CG practices (Adams and Ferreira, 2009), performance (Oba and Fodio, 2013) and actions aimed at CSR (Hillman *et al.*, 2000; Bear *et al.*, 2010); especially for national literature, since the paucity of research in this area.

In view of the findings of similar studies (Hillman *et al.*, 2002; Singh *et al.*, 2008; Adams and Ferreira, 2009; Bear *et al.*, 2010; Oba and Fodio, 2013), it is assumed that the inclusion of the mediating variable, gender diversity, supposedly would make the relationship between CSR, the CG and the most significant performance. It is argued, therefore, that greater participation of women in top positions, or greater gender diversity, is a trend and a necessary condition to improved financial performance, as CG mechanisms are present and adequately meet the principles set by IBGC, including especially the CSR.

2. Theoretical foundation

2.1 Corporate governance, corporate social responsibility and performance

The concept of CSR is relatively modern and after the publication of the book entitled *Social Responsibilities of the Businessman* (Bowen, 1953), which questioned the reasonableness of the business decision-making, many other articles on the subject were launched (Carroll, 1979; Lee, 2008; Freguete *et al.*, 2015).

According to Lee (2008), the dominant theme in the 1950s and 1960s was the ethical and social obligation of companies in a normative tone based on Bowen (1953), as it refers to the obligations of businessmen following lines of actions that are desirable in terms of goals and values to society. In the 1970s, with a tone of reconciliation between social and economic interests of companies (Wallich and McGowan, 1970), it was recognized that CSR should be consistent with the interests of shareholders, otherwise it will be questionable. With this, it goes on to provide a new logic that defends the CSR without compromising the interests of shareholders (Lee, 2008).

In the 1980s, Carroll (1979) addressed the model of performance as being consisted of a tripod (Wartick and Cochran, 1985; Wood, 1991). This implies, at first, social responsibility that addresses a range of issues in the economic, legal or voluntary measures. Second, it is related to social issues, on which the company has responsibilities, such as discrimination, product safety and the environment. Third, it is concerned with the philosophy or social responsiveness of the company (Carroll, 1979). Even in the 1980s, the concepts included business ethics, corporate philanthropy, social policy, stakeholder management and the beginning of the theories of sustainable development, corporate citizenship, corporate sustainability, corporate reputation and socially responsible investment, among other terms (Madrakhimova, 2013).

Since the 1980s, CG has attracted interest from investors, accountants and government as an option for resolving disputes between the agent and the principal, with a view of managing and improving the related shareholders' investment performance (De Carvalho, 2002; Aras and Crowther, 2008; Darus and Mohamad, 2011).

After the corporate scandals post Eron, around the 2000s, control mechanisms had been developed aiming to minimize accounting maneuvers, transparency in business operations

and to avoid involvement of managers in fraud. Among these control mechanisms are included independent audits, CSR and financial transparency (Gill, 2008; Jin and Drozdenko, 2010).

Thus, to establish mechanisms for monitoring managers, CG reduces the agency conflict and raises performance. However, according to Bozec *et al.* (2010), relationship studies between governance and performance in the post Eron period proved conflicting. In emerging countries, economies in transition, and in Europe, such surveys were consistent in which a positive relationship is generally found between CG practices and the company's performance, but showed contrary results in the USA where this relationship was not always observed. One possible explanation for these mixed results may lie in the different contexts of these nations, such as in emerging countries, where legal and cultural constraints are weak in their interaction with corporate behavior, compared with the developed countries. Therefore, company samples from these countries are more likely to find variations between CG practices and their outcomes (Bozec *et al.*, 2010).

Social responsibility is related to the CG because for a company to be socially responsible, it should practice governance and take into account the investor's, employees', suppliers', consumers', governments' and the third sector's wishes. The CG and CSR companies share many common characteristics that are likely to promote good CG and at the same time, a better CSR (Gonzalez, 2002; Ferreira, 2004; Szabó and Sorensen, 2013).

The survival of a company is affected not only by shareholders but also by other stakeholders such as employees, customers and governments (Lee, 2008). Thus, the concepts institutionalized by CSR during the past 40 years have changed substantially. CSR is no longer conceived as a moral responsibility of corporate managers, or a discretionary expense of executives that can harm the profitability of a company, but as a strategic resource to be used to improve the organization's performance (McWilliams *et al.*, 2006; Lee, 2008).

The quality of good governance now has a moral cooperative and behavioral ethic significantly expressed in the mechanisms of responsibilities, transparency and disclosure. That being, the conceptual focus of the governance has now been changed to an ample focus that involves stakeholders, shareholders and non-shareholders. In this vision, the stakeholders are groups and individuals who can affect and or are affected by the strategic result of a company considered the most influential to determine the corporate performance and include the clients, collaborators, suppliers, funders and communities (Jones and Wicks, 1999; Gill, 2008; Harrison and Coombs, 2012); Upon this scenario, lined up with the objective of this research, the next topic will show the theoretical support used in the development of the hypothesis established.

2.2 Development of hypotheses

Among the studies that have sought to relate CSR and performance, some such as Orlitzky *et al.* (2003), Tsoutsoura (2008), Choi *et al.* (2010) and Wang *et al.* (2015) found a positive relationship between CSR and the performance of Brazilian companies; as to Chrysostom *et al.* (2009), and Makni *et al.* (2009) found a negative impact. It should be noted that, the research studies look to measure the development of two lines of investigation that can be used in the financial development or the economic development. Therefore, this research is about the development inside a multidimensional vision, according to previous studies.

While realizing an analysis about the CSR and the financial development in 52 articles, Orlitzky *et al.* (2003) verify that the CSR is mostly correlated to be based on financial development rather than market indicators.

With regard to the relation of the CSR with the financial development, Tsoutsoura (2008) verified in a sample with 441 companies owned by the S&P 500, from 1996 to 2000, that the

CSR is positively related with a better financial development, seeing that the companies that have a solid financial development have more resources available to invest on the domains of social development, such as the workers relations, precaution toward nature and community relation. In that same line of investigation, but another sample with 1,222 Korean companies, from 2002 to 2008, [Choi et al. \(2010\)](#) used as a measurement for the financial development, ROE, ROA and Tobin's Q and found a positive relation between the financial development, the CSR and the companies.

But recently, the analysis realized by [Wang et al. \(2015\)](#), about the CSR and the financial development in 42 articles published between 2003 and 2013, suggests a positive effect between the variables, in a sense that this relation be stronger in companies that belong to developed economies rather than developing ones.

In the context of the 100 biggest companies in Brazil with an open capital, [Almeida-Santos et al. \(2013\)](#) analyzed the relation between the economic development and the corporate social reputation and argued that:

Since some companies investigated already are in the international market, the social reputation corporate could be a strategy utilized to better the return of their actions and consequentially the expansion of their business ([Almeida-Santos et al., 2013](#), p. 17).

It presupposes that companies adhere to CSR practices because of instrumental reasons, such as the expected financial results and internal values, and that there is a positive relationship between CSR actions, policies and financial results ([Aguinis and Glavas, 2012](#)). Expected results were similar to the studies of [Orlitzky et al. \(2003\)](#), [Tsoutsoura \(2008\)](#), [Choi et al. \(2010\)](#) and [Wang et al. \(2015\)](#), who found a positive relationship between CSR and financial performance. From the foregoing by literature, the following hypotheses supported the relationship between CSR and economic and financial performance of Brazilian companies:

H1. CSR is positively related to the economic performance of companies.

H2. CSR is positively related to financial performance of companies.

In a second moment, the relationship of the CG with the performance of Brazilian companies is researched. The study by [Silveira \(2004\)](#) reinforces the idea that a higher quality of CG has a positive impact on the value and profitability of companies. However, among the performance variables tested in the study, Tobin's Q was the only one that showed a positive relationship. Previous studies, such as [Larcker et al. \(2007\)](#), [Correia et al. \(2011\)](#), [Brenes et al. \(2011\)](#) found that CG characteristics are associated with the better performance of Brazilian companies.

Studies realized by [Judge et al. \(2003\)](#) in 45 Russian companies and by [Silveira et al. \(2003\)](#) in the Brazilian publicly traded companies conclude that a better structured governance leads to a better development of the companies.

While analyzing this relation in a sample of 495 companies in 25 emerging countries, [Klapper and Love \(2004\)](#) verified that there is great variation in the levels of adoption and the levels of CG between the countries and that the adoption is weaker in countries with a weak legal system. Generally, they conclude that a better CG is highly correlated with a better operational development and the business market.

However, [Politelo \(2013\)](#), while analyzing the national literature on the relationship between governance and performance, had not yet achieved a consensus on what mechanisms are members of the CG and what is its real effect on the performance of Brazilian companies.

It is suggested that the companies considered sustainable must possess certain characteristics or determinants of CG to achieve a favorable financial and environmental performance, namely, social and environmental investments, such as, mechanisms and measures to reduce the environmental impact (Waddock and Graves, 1997); company size; presence of multinational subsidiaries (Kolk, 2008); intangible assets, for example, best management practices, product quality, operational efficiency, attractiveness for investors, gender and ethnic variety (Aguinis and Glavas, 2012); diversity in the board composition (Rao and Tilt, 2013); independence; and board size (Jizi *et al.*, 2014). Therefore, the following hypotheses are tested:

H3. The CG is positively related to the economic performance of companies.

H4. The CG is positively related to the financial performance of companies.

Regarding the variable gender diversity, it is taken as a premise that the presence of women on the board can have a positive impact on social capital and social responsibility of companies because of higher rate of specialization, support and influence for the community (Hillman *et al.*, 2002; Singh *et al.*, 2008; Bear *et al.*, 2010). It would be more sensitive to CSR initiatives such as charity (Williams, 2003), more favorable work environments (Bernardi *et al.*, 2006) and environmental issues (Post *et al.*, 2011). The presence of women on corporate boards can signal to stakeholders that the company pays attention to women and minorities, and therefore is socially responsible (Bear *et al.*, 2010). It is assumed that companies having women holding positions in corporate boards and participating in environmental rankings as the ISE (corporate sustainability index [CSI]) are more likely to develop best CSR practices, just like they influence positively the general corporation development.

Empirical research found evidence of a positive correlation between the proportion of women and corporate performance (Erhardt *et al.*, 2003; Carter *et al.*, 2003; Hussein and Kiwia, 2009; Oba and Fodio, 2013). On the other hand, other studies found no significant relationship or the relationship found was negative (Shrader *et al.*, 1997; Rose, 2007; Rand, 2013), because other variables beyond gender diversity may have interfered with the performance, such as qualifications and experience (Almeida-Santos *et al.*, 2013).

Internationally, according to the studies done by Bear *et al.* (2010) with a sample of 689 US companies confirmed that the increase in the number of women on corporate boards can improve CSR. Investigating the relation of the mixture of gender in the council and the financial development in 100 Nigerian companies, using the return indicators about the capital employed (ROCE) as a measure on the financial development and the presence of a female director, proportion of women in the administration, Blau's index of heterogeneity and the mix of gender in council, Oba and Fodio (2013) reinforce the arguments that both the feminine presence in administration and the proportion of women in council have positive impacts in the financial development.

In the Brazilian context, when analyzing the influence of the feminine participation in the councils of administration about the performance of 120 Brazilian companies, in the period between 2010 and 2013, Silva Júnior and Martins (2017) verified that the companies with a higher gender diversity showed a better development, captured by Tobin's Q and by ROA, that being, a feminine presence influenced positively in the financial development.

When analyzing 658 of the companies opened in Brazil in the period between 2002 and 2009, Margem (2013) confirmed a positive relation between the diversity of gender and the CSR. Sustained on this theoretical approach, it is assumed that the relationship between the CSR and the performance becomes stronger when mediated by gender diversity of Brazilian companies. Therefore, the hypotheses of this research are as follows:

H5. The gender diversity explains the positive relationship between CSR and economic performance of companies.

H6. The gender diversity explains the positive relationship between CSR and financial performance of companies.

Given the growing demand for transparency and expectations for corporations to continuously measure, report and improve economic, social and environmental performance (Tsoutsoura, 2008), CG mechanisms are introduced to assist in the monitoring and relationship process of information users.

A good CG structure can be understood when it stimulates more capable managers and make them more accountable to investors. Empirical evidence suggests that improved financial performance may result from the increased presence of women on boards (Westphal and Milton, 2000; Francoeur *et al.*, 2008).

In some countries like Belgium, it is discussed the establishment of quotas for women in the public office and administration councils in the private sector by means of law projects that focus on equality and democracy. It is considered that the councils that are balanced in terms of gender and diversity have better decision-making process and, with that being, the efficiency of the company. In the case of the companies financed by the state, the democratic principles of representation should apply to the council. This parts from the assumption that the lack of women in the council is a sign that the gender inequality in the business market and quotas are considered as a policy used to correct this error, because women have the same democratic right to be equally represented in these councils. Another argument concerns the difference between female and male wages, but with the inclusion of more women on the company board, it will contribute to the narrowing of the difference between wages and women's independence (Celis, 2013).

In a council of more diverse administration, there may be a better monitoring of managers because of the increase of their independence (Carter *et al.*, 2010) and performance (Kin *et al.*, 2009). Thus, the greater the diversity of the board, the greater the potential for understanding and solving problems that can promote positive reviews (Hillman *et al.*, 2000; Bear *et al.*, 2010). The CG literature states that women attend more meetings and are more likely to be assigned to monitoring committees than men. If women participate actively in council meetings and the follow-up committee, they could increase the monitoring intensity of the council (Adams and Ferreira, 2009).

Councils with more female members are characterized by the potential for greater participation of the directors in decision-making (through attendance and attributions by the committees), by a more rigorous monitoring of the CEO (through greater sensitivity to the volume of business and performance) and an alignment with the interests of the shareholders (through compensation based on actions). Therefore, excessive monitoring can decrease the value of the company, although councils with more gender diversity seem more valuable to companies with a weak governance (Adams and Ferreira, 2009).

Thus, it is claimed that the premise of the presence of women in executive positions could lead to better CG in organizations (Adams and Ferreira, 2009), although national studies have considered only variables related to the administration board for measuring the CG (Margem, 2013).

The diversity on the board can also increase the network ties (Beckman and Haunschild, 2002) (Hillman *et al.*, 2000) with suppliers, customers, professional associations, banking networks, commercials, government agencies, community groups and nonprofit organizations. These networks can provide suggestions and experience, as well as promote cooperation with stakeholders (Beckman and Haunschild, 2002; Bear *et al.*, 2010).

Several studies have sought to investigate the understanding of the various aspects of the CG, including the effectiveness of the board of directors, their roles, responsibilities and composition of the boards, especially the size of the gender diversity and female representation on them (Hyland and Marcellino, 2002; Burke, 2003; Jamali *et al.*, 2007). Recent studies confirm the relationship between gender diversity, GC and performance, an example by Erhardt *et al.* (2003), Carter *et al.* (2003) and Campbell and Minguez-Vera (2008).

While analyzing the CG, gender diversity in the directory and the value of the companies listed in the Fortune 1000, Carter *et al.* (2003) confirm the relationship between both variables. The diversity of the directory was defined by the percentage of women, African-Americans, Asians and other minorities that belonged to the administration council. Also considering other CG measures, positive and significant relationships were found between the presence of women or minorities in the council and the value of the company using Tobin's Q. In general, the results of these authors provide important evidence of a positive relationship between the value of a company and the diversity in the administration council.

One of the first studies that analyzed Spanish companies, Campbell and Minguez-Vera (2008) evaluated through a chance test to see if the feminine participation in the council really affects the performance of a company or if companies with greater performance are simply prone to hiring more women. Results show that the positive relationship observed between the diversity of gender and the value of a company is because of the presence of female directors that affect the performance of a company and not the opposite.

In an interview with managers of Lebanese companies, Jamali *et al.* (2007) found that most managers and mid-level female managers believed that one of the alternatives to improve performance would be to introduce new government regulations, in line with CG practices at the international level to address the underrepresentation of women in influential positions and board. Therefore, based on the literature that supports this view, the research hypotheses are as follows:

- H7. The gender diversity explains the positive relationship between the CG and the economic performance of companies.
- H8. The gender diversity explains the positive relationship between the CG and the financial performance of companies.

It is expected to find a positive relationship between CSR and CG, mediated by gender diversity in economic and financial performance of the analyzed companies, as there are studies that have confirmed this relationship previously. The variables and their relationship with the hypotheses of this study are shown in Figure 1.

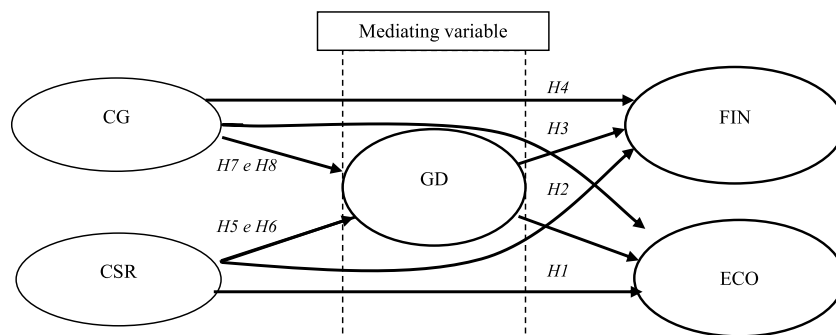
3. Method and procedures of research

3.1 Population and sample

The population of this research included the companies belonging to IBrX 100 BM and FBOVESPA, which measures the return on a theoretical portfolio composed by 100 stocks selected amongst the most traded on the BM&FBOVESPA, in terms of number of trades and financial value. From this list, financial companies, resulting in 76 organizations, were excluded. From these organizations, secondary data were collected from the BM&FBOVESPA website regarding governance mechanisms whose absence of data resulted in 68 companies being analyzed in 2014.

From the selected sample of 68 companies, 26 are listed on the ISE (CSI) of BM&FBOVESPA, which considers the aspect of corporate sustainability, based on economic efficiency, environmental balance, social justice and CG. It was taken into account

Figure 1.
Research Design with
indicators obtained
from TOPSIS
Analysis



Source: Authors

that the companies listed on the ISE use CSR as a strategy to increase the return of their actions (Almeida-Santos *et al.*, 2013) or their financial performance (Bear *et al.*, 2010).

3.2 Collection and data analysis

Data referring to the variables of diversity of Gender, CG and CSR were collected from the reference forms (RF) companies, released on the website of the BM&FBOVESPA and CVM. As to the financial information related to the financial performance were collected from the Economica database. The dependent variables, independent and mediator of the research, including how to measure and empirical studies using these variables, according to a survey conducted in the literature, are presented in Table I.

The selected variables include the mechanisms of governance, social responsibility index and performance indicators that were based on the literature. It is noteworthy that the gender diversity variable was considered as a mediator in the relationship between CG, CSR and financial performance.

4. Presentation and analysis of results

Initially, for the analysis of the data, it was sought to carry out the descriptive statistics of the variables. Therefore, it was observed that the average percentage of women on the corporate board (8.64 per cent) and the presence on the directors boards (36.76 per cent) are relatively low, seeing as, of the 68 companies analyzed, 43 have women occupying positions on corporate boards and 25 on the directors boards. Of these, there were a total of 110 counselors and 27 directors. Thus, it is observed that the predominance of women who take up the chairs on the corporate and directors boards is higher than 20 per cent, which is considered the national average presented in the IBGC (2009) report. The indicators of economic performance that have stability when compared with the average standard deviation were ROA (\bar{x} = 5.50 per cent, σ = 0.0703), ROS (\bar{x} = 9.62 per cent, σ = 0.1429), and DL (\bar{x} = 57.80 per cent, σ = 0.1781). Only ROE (\bar{x} = 17.09 per cent, σ = 0.3870) showed greater variability between companies. Both economic performance indicators such as financial performance indicators converge with the studies of Hussein and Kiwia (2009), Kang *et al.* (2010), Choi *et al.* (2010), and Oba and Fodio (2013).

To test the hypothesis shown in Figure 1, seeing as each group is represented by several indicators, except for CSR, the TOPSIS method was used (technique for order preference by

Dimensions	Code	Variable	Mensuration	Authors
<i>Mediating</i> Gender (GD)	GDB	Gender Diversity on the Board	Percentage of Women in the Board Corporate	Shrader <i>et al.</i> (1997), Carter <i>et al.</i> (2003), Erhardt <i>et al.</i> (2003), Rose (2007), Almeida-Santos <i>et al.</i> (2013), Oba and Fodio (2013)
	PFD	Presence of Female Director	Dummy – 1 is attributed if there are women occupying a position of board of directors and 0 otherwise	Oba e Fodio (2013), Margem (2013)
<i>Independent</i> CG	IB	Independence of the Board	Number of independent members on the total number of board members	Klapper and Love (2004), Mehdi (2007), Ehikioya (2009), Shan and Mclver (2011), Azim (2012), Iatridis (2013)
	SB	Size of the Board	Dummy – 1 is attributed the company that owns board of administration with 3 to 9 members and 0 in the other situations	Abor e Biekpe (2007), Christensen and Kent e Stewart (2010), Hsu and Petchsakulwong (2010), Ibrahim <i>et al.</i> (2010), Grove <i>et al.</i> (2011), Love (2011)
	BM	Board Meetings	Number of meetings of the board of directors in the year	Klapper and Love (2004), Larcker <i>et al.</i> (2007), Mehdi (2007), Bokpin (2011), Grove <i>et al.</i> (2011)
	RB	Board Remuneration	Remuneration of the board/ total of board members	Brown e Caylor (2009), Christensen, Kent e Stewart (2010), Grove <i>et al.</i> (2011), Love (2011), Azim (2012)
	RC	Remuneration Committee	Dummy – 1 is attributed to the company that has a compensation committee and 0 the case does not have	Klapper e Love (2004), Giovannini (2010), Grove <i>et al.</i> (2011), Love (2011), Azim (2012)
	AC	Audit Committee	Dummy – 1 is attributed to the company that has a audit committee and 0 the case does not have	Klapper and Love (2004), Larcker <i>et al.</i> (2007), Cheung <i>et al.</i> (2011), Love (2011), Iatridis (2013)
	SC	Size Committee	Number of members of the audit committee	Klapper and Love (2004), Cheung <i>et al.</i> (2011), Grove <i>et al.</i> (2011), Love (2011)
	CSR	ISE	Company listing on the CSI - ISE	Dummy – 1 for the company that is listed on the CSI and 0 otherwise Rezende <i>et al.</i> (2008), Almeida-Santos <i>et al.</i> (2013)
<i>Dependent</i> Economic performance (ECO)	ROA	Return On Assets	$\frac{\text{Net Income}}{\text{Total Asset}}$	Filatotchev <i>et al.</i> (2005), Abor e Biekpe (2007), Nicholson e Kiel (2007), Ehikioya (2009), Grove <i>et al.</i> (2011), Azim (2012)
	ROE	Return On Equity	$\frac{\text{Net Income}}{\text{Liquid Patrimony}}$	Filatotchev <i>et al.</i> (2005), Brown e Caylor (2009), Vieira <i>et al.</i> (2011), Azim (2012)

(continued)

Table I.
Construct of research

Dimensions	Code	Variable	Mensuration	Authors
	ROS	Return on Sales	$\frac{\text{Net Income}}{\text{Liquid Sales}}$	Fan <i>et al.</i> (2007), Kajola (2008), Azam <i>et al.</i> (2011), Nheri (2013)
	DL	Debt Levels	$\frac{\text{CL} + \text{NCL}}{\text{Total Asset}}$	All Al Farooque <i>et al.</i> (2007), Chen and Lin (2007), Campbell <i>et al.</i> (2011), Vieira <i>et al.</i> (2011), Iatridis (2013)
Financial performance (FIN)	RD	Return of Dividends	$\frac{\text{Dividends per share}}{\text{Market price of the shares}}$	Maury (2006), Basu <i>et al.</i> (2007), Chen and Li (2010), Correia, Amaral e Louvet (2011), Vieira <i>et al.</i> (2011)
	MB	Market to Book	$\frac{\text{Market price of the shares}}{\text{Book value of shares}}$	Filatotchev <i>et al.</i> (2005), All Al Farooque <i>et al.</i> (2007), Renders <i>et al.</i> (2010), Azim (2012)
	Q	Q de Tobin	$\frac{\text{VMA} + \text{D}}{\text{Total Asset}}$	Kent <i>et al.</i> (2010), Ibrahim and Samad (2011), Love (2011), San Martin-Reyna and Duran-Encalada (2010)

Table I. Source: Authors

similarity to ideal solution) as a multiple-criteria, decision-making technique. The variables were divided into five groups of analysis, namely GD, CG, CSR, ECO and FIN.

According to Vega *et al.* (2014), the TOPSIS analysis considers that the variables used are independent and the scientific studies of this analysis should minimize the dependency problem or multicollinearity among the variables. However, the use of financial indicators can generate multicollinearity problems. In this case, factorial analysis can reduce or eliminate these problems to select or indicate dimensions by grouping representative financial indicators. (Hsu, 2013). In this case, to minimize the problem of dependence between variables in the TOPSIS analysis, each group was analyzed with the help of a factor analysis to see if there are variables that can be grouped, according to Table II.

The first group defined as a mediating variable is the gender diversity, as expressed by two variables: GDB and PFD. With the aid of the factor analysis, it was found that the eigenvalue (FGD = 1.045 and DGD = 0.955) and per cent of variance of each factor (GDB and PFD = 52.24 per cent = 47.76 per cent) were similar, demonstrating that this group can be represented by two dimensions. To increase the robust conclusion of low dependence between variables, the indicator VIF (variance inflation factor) was calculated with a reference of null dependency being equal to 1.000 (MAROCO, 2011). Because the VIF maximum variable group is 1.001 and the correlation between DGB and PFD is low (Pearson = 0.03), the two variables for analysis were preserved TOPSIS (Table II).

The second group, defined as an independent variable, is related to CG variables. With a maximum VIF of 5,411, indicating multicollinearity between the variables, the numbers, with the help of the factor analysis, were reduced. The dimensions indicated by the eigenvalue (dim1 = 2,017; dim2 = 1,551; dim3 = 1.019; dim4 = 0.916; dim5 = 0.831) and percentage of explanatory variance (dim1 = 28.82, dim2 = 22.16, dim3 = 14.52, dim4 = 13.09 and dim5 = 11.87 per cent) were defined according to the similarity between the third and fifth dimension. Based on the inflection of the sedimentation graph, it is concluded that this group can be represented by five representative dimensions of CG.

	Var.	Cód.	Factorial Loads of Recoded Variables as input TOPSIS														
			VIF Initial	GD		CG		ECO		FIN							
				GDB	PFD	CG1	CG2	IB	RC	BM	CSR	ECO1	ECO2	FIN1	MB		
<i>Mediating</i>																	
Gender	1	GDB	1.001	1.000													
	2	PFD	1.001		1.000												
<i>Independent</i>																	
Governance	3	IB	1.044					1.000									
	4	SB	1.224			0.814											
	5	BM	1.168							1.000							
	6	RB	1.172			0.814											
	7	RC	1.081						1.000								
	8	AC	5.323			0.972											
	9	SC	5.411			0.972											
	CSR	10	ISE	1.000								1.000					
<i>Dependent</i>																	
Perf. Econ.	11	ROA	2.528									0.938					
	12	ROE	1.290										0.782				
	13	ROS	2.509									0.938					
	14	END	1.466										0.782				
Perf. Fin.	15	RD	1.228											0.843			
	16	MB	1.003												1.000		
	17	Q	1.225												0.847		
VIF of Coded variables				1.001	1.001	1.055	1.071	1.021	1.061	1.092	1.000	1.011	1.011	1.001	1.001		

Source: Research data

Table II.
Grouping variables and Pearson correlation

Therefore, the AC and SC variables were transformed into a variable (CG1) with a loading factor of 0.972, while the SB and RB variables were transformed in the second variable (CG2) with a factor load of 0.814. The other variables, because of their low multicollinearity, kept the original ones, which were IB, BM and RC. Thus, relative the control group with the recoded variables presented VIF maximum 1.092, which indicates that the multicollinearity problem for TOPSIS analysis was minimized. In this case, the CG group with the recoded variables had a maximum VIF of 1.092, which indicates that the problem of multicollinearity for the TOPSIS analysis was minimized. As a result, it was judged that the new recoded variables did not need an orthogonal factor rotation, seeking to preserve the recoded variables as close as possible to the original ones.

The independent variable CSR, being represented by a single variable, had no need for recoding. The third group of variables, defined as a variable dependent on the organizational performance, was divided into economic performance and financial performance.

The economic performance subgroup is composed of the variables ROA, ROE, ROS and END. Through the factor analysis, two dimensions were identified and defined as ECO1 (grouping ROA and ROS) and ECO2 (ROE and END). The first dimension, defined as ECO1, consists of ROA and ROS (eigenvalue = 2.115 and percentage of variance = 52.88 per cent) with a resulting factor loading of 0.938. The second dimension includes ROE and END (1.212 eigenvalue and percentage of variance = 30.30 per cent) with a resulting factor loading of 0.782. Since the recoded variables, the maximum VIF was established at 1.011 and is considered a low multicollinearity between variables.

Likewise, the financial performance subgroup comprises the RD, Q and MB variables with multicollinearity indicated by a VIF maximum of 1,225 which was reduced to two dimensions. The first dimension is formed by the indicators RD and Q (eigenvalue = 1.433 and percentage of variance = 47.75 per cent) and called FIN1, with a factor loading of 0.845. The second dimension (eigenvalue = 0.998 and per cent of variance = 33.27 per cent) is composed only by the indicator MB for which the original value was maintained. Since the ones with recoded variables are indicated by a VIF maximum of 1,001, it was judged not necessary to have an orthogonal rotation between dimensions.

Seeing as the purpose of encoding is to reduce multicollinearity indicated between variables, the maximum VIF of 1,092 found indicates that the recoding variables shown are suitable for TOPSIS analysis.

The relationships between the variables of the search model were obtained by a set of five linear equations. Maroco (2011, p. 761) states that “the analysis of mediating variables can be done by using simple linear regressions to evaluate the significance of the relations expressed in the points” of the research model. First, the mediation was verified by the statistical relationship between the independent variables (CG and CSR) and the mediating variable (GD), according to equation (1). Subsequently, the relationship between the independent variables (CG and CSR) and whether the mediator variable (GD) corroborates to explain the dependent variable (ECO and FIN) was tested in equations 2 and 3. Finally, the relationship between the independent (CG and CSR) and dependent variables (ECO and FIN) without the variable mediator was tested according to equations 4 and 5:

$$GD = \beta_0 + \beta_1 CG + \beta_2 CSR \quad (1)$$

$$ECO = \beta_0 + \beta_1 GD + \beta_2 CG + \beta_3 CSR \quad (2)$$

$$FIN = \beta_0 + \beta_1 GD + \beta_2 CG + \beta_3 CSR \quad (3)$$

$$ECO = \beta_0 + \beta_1 CG + \beta_2 CSR \quad (4)$$

$$FIN = \beta_0 + \beta_1 CG + \beta_2 CSR \quad (5)$$

The results of the models, the values of standardized coefficients and their significance and other indicators related to the regression are shown in Table III.

Observing the *F*-test with *p*-value ≤ 0.10 , equations 1, 2 and 3 have “at least one of the independent variables with significant effect on the dependent variable” (Maroco, 2011, p. 681). To see if more than one independent variable influences the dependent variable, and therefore support or reject the hypotheses, the significant coefficients with *p*-value ≤ 0.10 were considered.

To test *H1*, if the CSR is positively related to the economic performance of Brazilian companies, the relationship between CSR was calculated, eliminating the effect of influence of CG (equation 4) in ECO performance and resulting in a relation that remains positive and not significant (*p*-value = 0.661). Therefore, *H1* is rejected.

As for *H2*, if the CSR is positively related to financial performance of Brazilian companies, it was found that the relationship of CSR eliminating the effect of CG (EQ5), the financial performance. The relationship is negative and insignificant (*p*-value = 0.243), so *H2* is rejected.

Table III.
Analysis of regression indicators obtained with TOPSIS analysis

VAR	Equation 1		Equation 2		Equation 3		Equation 4		Equation 5		
	β	<i>p</i> -value	β	<i>p</i> -value	β	<i>p</i> -value	β	<i>p</i> -value	β	<i>p</i> -value	
GD	–	–	0.281	0.034	0.255	0.054	–	–	–	–	
CG	0.340	0.005	0.047	0.715	–0.058	0.657	0.001	0.992	0.089	0.483	
CSR	0.055	0.642	0.093	0.448	–0.173	0.162	0.084	0.661	–0.149	0.243	
Dependent			GD		ECO		FIN		ECO		FIN
R^2			0.115		0.097		0.069		–0.025		0.031
Test <i>F</i>			2.853		2.172		2.555		0.057		0.966
Sig.			0.066		0.100		0.064		0.945		0.387
VIF Máx			1.008		1.259		1.259		1.000		1.001
<i>p</i> -value Teste KS			0.118		0.786		0.242		0.564		0.225

Source: Research data

Regarding *H3*, if the CG is positively related to the economic performance of Brazilian companies, it was found that the ratio is positive and no significant interaction with CRS (equation 4) (*p*-value = 0.992). Therefore, *H3* is also rejected.

To test *H4*, if the CG is positively related to financial performance of Brazilian companies, the relationship is positive, but not significant (equation 5) (*p*-value = 0.483). In this case, *H4* was also rejected.

The following hypotheses tested the influence of mediation of gender diversity. The analysis is presented in three steps. First, the relationship between the independent variable and the mediator variable was verified, second, between the mediator variable and the dependent variable and third, if the presence of a mediator variable in the model reduces the importance of the independent variable (Maroco, 2011).

As for *H5*, if gender diversity explains the positive relationship between CSR and economic performance of Brazilian companies, it was found that the relationship between the independent variable CSR and the mediator variable GD (equation 1) is positive and not significant (*p*-value = 0.642). Although the relationship between the mediator GD and the dependent variable ECO (EQ2) is positive and significant (*p*-value = 0.034) in an allusion to trajectory analysis (Maroco, 2011), *H5* is not supported. It corroborates for this conclusion the fact that the explanatory power of the CSR variable in the model with mediation (equation 2 = 0.093) did not change significantly (equation 4 = 0.084) when without mediation.

Similar to the previous case, *H6* states that if gender diversity explains the positive relationship between CSR and financial performance of Brazilian companies, it was found that the relationship between the independent variable CSR and the mediating variable GD (EQ 0.1) is positive and not significant (*p*-value = 0.642), and even if the relationship between the mediator GD and the dependent variable FIN (EQ3) is positive and significant (*p*-value = 0.054) the hypothesis is not supported. Confirming the conclusion, the coefficient ($\beta = -0.173$) with mediation (equation 3) did not change the explanatory power of CSR variable in the model significantly ($\beta = -0.149$) when without mediation (equation 5).

For *H7*, if the gender diversity explains the positive relationship between the CG and the ECO (economic performance) of Brazilian companies, it was found that the path between the independent variable CG (equation 1) and variable mediator (*p*-value = 0.005); and the mediator variable (EQ2) and economic performance (*p*-value = 0.034) is positive and significant. Therefore, *H7* is supported. The conclusion is reinforced, seeing as the *F*-test and

the statistical relationship between CG and ECO without the mediating variable GD (equation 4) is insignificant (p -value = 0.992). Thus, the mediating variable carries the effect of the independent variable on the dependent variable (Baron and Kenny, 1986; Maroco, 2011).

Finally, for H_8 , if the gender diversity explains the positive relationship between the CG and the financial performance of Brazilian companies, it was found that the path between the independent variable CG (equation 1), the variable mediator (p -value = 0.005); and the mediator variable (equation 3) and financial performance (p -value = 0.054) is positive and significant. Seeing as the relationship between CG and FIN (equation 5) is negative and insignificant (p -value = 0.483), the mediating variable carries the effect of the independent variable on the dependent variable, and therefore, H_8 is supported.

The summary description of the assumptions, supporting equations, statistical relationship and conclusion of the assumptions are described in Table IV.

Non-significant results for $H1$ and $H2$ are supported by the findings of Chrysostom *et al.* (2011) and Makni *et al.* (2009). It differs from the results of Orlitzky *et al.* (2003), Tsoutsoura (2008), Choi *et al.* (2010), Aguinis and Glavas (2012) and Wang *et al.* (2015), who found a positive relationship between CSR and performance.

One of the first studies to analyze this relationship in an emerging market (Brazil) was performed by Crisóstomo *et al.* (2011). Keeping in mind the characteristics of the Brazilian market, the authors point out that the set of social stakeholders is still not be able to strongly consider the CSR as a decision criterion in their consumption and investment alternatives, and that for the Brazilian companies, the CSR is incapable of contributing positively to the financial performance of a company, seeing as that the predominant view is that expenses on CSR are a diversion of resources from the main activity of the company.

While companies have characteristics or determinants of CG that are defended by the literature as favorable to a good financial and environmental performance, as environmental investments (Waddock and Graves, 1997) and gender diversity (Aguinis and Glavas, 2012) these features were not decisive in the companies analyzed.

It should be noted that the CSR was measured by means of the CSI, in which it is considered that the companies that are part of the index adopt practices of CSR formally among the other management policies and have differentiated characteristics of CG. The other companies, not part of the index, that were analyzed may also adopt CSR practices, but it is considered that they may not use their practices to increase performance and would have a lower likelihood of CSR being positively related to economic and financial

Assumptions	Positive relationship predicted by hypothesis	Equations support	Sign of statistics relationship	Significance of the statistical relationship	Conclusion
$H1$	CSR ↔ ECO	EQ4	+	Not significant	Rejected
$H2$	CSR ↔ FIN	EQ5	-	Not significant	Rejected
$H3$	CG ↔ ECO	EQ4	+	Not significant	Rejected
$H4$	CG ↔ FIN	EQ5	-	Not significant	Rejected
$H5$	CSR ↔ GD ↔ ECO	EQ1; EQ2, EQ4	+++	Not significant	Rejected
$H6$	CSR ↔ GD ↔ FIN	EQ1; EQ3; EQ5	++-	Not significant	Rejected
$H7$	CG ↔ GD ↔ ECO	EQ1, EQ2, EQ4	+++	Significant	Supported
$H8$	CG ↔ GD ↔ FIN	EQ1; EQ3; EQ5	+++	Significant	Supported

Table IV.
Conclusion summary
of assumptions

Source: Authors

performance. In general, these companies are assumed to have lower adoption levels of CSR practices than those belonging to the CSI, and although they are listed on the stock exchange, they do not belong to the index.

Non-significant results for the *H3* and *H4* are supported by the results of studies by Alves and Mendes (2004) and Bhagat and Bolton (2008). They diverge from the ones defended by Erhardt *et al.* (2003), Judge *et al.* (2003), Silveira *et al.* (2003), Carter *et al.* (2003), Klapper and Love (2004), Hussein and Kiwia (2009) and Oba and Fodio (2013). Thus, it appears that in relation to the sample studied, the presence of women on corporate boards does not signal to stakeholders that the company pays attention to minorities, or that, in social terms, it is different from others, contrary to what was presented by Bear *et al.* (2010). The sample companies, that have women holding positions in corporate boards and participating in environmental rankings, are not likely to develop the best CSR practices.

Non-significant findings for *H5* and *H6* in line findings from Shrader *et al.* (1997), Rose (2007) and Margem (2013). Different from the literature regarding the influence of the participation of women on corporate boards in relation to CSR (Hillman *et al.*, 2000; Singh *et al.*, 2008; Bear *et al.*, 2010), since the number of women in corporate boards does not reflect in improvement in CSR practices, or even in different social and environmental performance.

The positive results found in the link proposed by *H7* and *H8* assumptions are in line with the findings of Carter *et al.* (2003), Erhardt *et al.* (2003) and Campbell and Minguez-Vera (2008). The findings are also in line with the assumptions of Kin *et al.* (2009) that a more diverse board of directors may experience a better monitoring of managers, because of the increase of their independence and improved performance. Thus, it is suggested that gender diversity in management positions could lead to better CG in organizations (Adams and Ferreira, 2009).

In addition to the summary of the conclusions related to the hypotheses described in Table II, the following is a comparative outline of the results found in the present research with results of similar studies carried out in the context of different countries, aiming to expand the international discussion on the theme, according to Table V.

5. Conclusions and recommendations

This research examined the influence of gender diversity in the relationship between CSR, CG and the financial performance of Brazilian public companies.

It was found that, out of the 68 companies analyzed, 43 have women occupying positions in corporate boards and 25 on the board of directors. The proportion of women who make up the corporate board and the directors board is in line with the national average, being higher than 20 per cent, according to the IBGC (2009) report, although this percentage is lower than the average of other countries, such as Sweden, for example, who has at least a woman representative in 100 per cent of the companies. (IBGC, 2009).

The results show that there is a positive relationship between gender diversity as a mediator of the relationship between CG and economic and financial performance, in which *H7* and *H8* were accepted. Although CSR is part of a set of principles of good CG, there is a distance from the other attributes of governance. In the analyzed case, there is relation to the presence of women on corporate and directors boards with corporate performance.

It is assumed that, in the case of the analyzed companies, there are no differences in the performance of women as members of corporate and director boards, in terms of encouraging CSR practices, nevertheless, it was observed in terms of corporate governance. It is assumed that this result is because of the fact that the participation of women on corporate boards is recent in Brazil, in the sense that their involvement in the definition and disclosure of environmental actions is small. This is true to the extent that the companies

Hypothesis	Authors	Sample/ Country	Conclusions/ Possible explanations
<i>H1 and H2</i>	Crisóstomo <i>et al.</i> (2011)	78 Brazilian companies in the period of 2001-2006	The results indicate a negative effect of the CSR on the creation of value for companies, and a neutral relationship between CSR and company profitability. This negative influence can be explained by the relationship with employees and environmental action, or by greater pressure exerted by stakeholders strongly concerned with maximizing company value
	Makni <i>et al.</i> (2009)	179 Canadian companies in the period of 2004-2005	The results show that corporate social initiatives lead to such as environmental programs lead to poor short-term performance. Because of the relatively small size of Canadian companies when compared to US companies, for example, environmental initiatives are very costly and do not seem to be considered as solid investments by the Canadian market. Government subsidies may be required to offset the short-term negative impact on financial performance in these companies. In addition, socially responsible companies have lower profits and reduced shareholder wealth, which in turn limits socially responsible investments
<i>H3 and H4</i>	Alves and Mendes (2004)	144 Portuguese companies in the year of 1990	Analyzing jointly the practices of CG verified that there is no significant relation with the performance of the companies. They also found a negative relationship between disclosure of information about company policy and returns. In general, they emphasize the need to adopt governance practices related to the board in the organizations
	Bhagat and Bolton (2008)	American companies in the period of 2000-2003	The authors did not find a significant relationship between CG and corporate performance. In addition, they found that board independence has a negative relation to performance, suggesting that independent board members may be useful in disciplining and monitoring the board, but not in performance. They point out that in those organizations that have independent members on the board for the purpose of improving performance, this does not occur. However, if the purpose is to discipline the management of under-performing companies, the independence of the board may contribute to the change of results
<i>H5 and H6</i>	Shrader <i>et al.</i> (1997)	200 American companies in the period of 1992-1993	The results suggest that a higher percentage of women in management or on the board of directors are disproportionately associated with higher financial performance. A higher percentage of women in high management positions negatively influence the performance of companies. One possible reason for this conclusion may be the fact that there is no sufficient "critical mass" of women at the highest levels of management to have a relevant impact on company decisions, since women in high management/ leadership positions constitute only 4.5% of the teams in the companies. They also verified that women hold high-level jobs positions for a short time

Table V.
Comparative
Summary of Results

(continued)

Hypothesis	Authors	Sample/ Country	Conclusions/ Possible explanations
	Rose (2007)	Every Danish company listed in the Copenhagen stock market in the period of 1998-2001	The results show that the gender measured by the percentage of women who make up the council does not influence the performance of the companies. This result may be explained by the fact that the former board members have a traditional view of management and may suppress any "special" features of non-board members. Thus, there may be a socialization process where unconventional board members (women) have adopted the behavior and standards of conventional business leaders, and may be the only way to be considered qualified in the eyes of key decision makers and other stakeholders. As a consequence, the gains of existing female members in the council are not reflected in any measure of performance chosen
	Margem (2013)	658 Brazilian companies in the period of 2002-2009	The author verified that there is no statistically significant relationship between the presence of women on the board of directors and management positions to the value of companies, but there is a negative relationship between the presence of women in the board and the performance of companies
H7 and H8	Carter <i>et al.</i> (2003)	638 companies in the year of 1999	They analyzed the relationships between CG, gender diversity in the board of directors and the value of companies and found positive relationships between the presence of women or minorities in the board and the value of the company, with Q. de Tobin
	Erhardt <i>et al.</i> (2003)	112 companies in the period of 1993-1998	The results supported the hypothesis that the diversity in the executive board is positively associated with the return on investment and the return on assets. Thus, the diversity on boards has a positive impact on overall organizational performance. The authors suggest that diversity can be associated with the effectiveness in the supervisory role of boards of directors, as one of the central issues of CG is the degree to which a CEO may have influence on the board of directors. In addition, greater gender diversity in boards provides a broader base of information and perspectives and can contribute more effectively to the decision-making process, creating value and improving performance
	Campbell and Mínguez-Vera (2008)	68 Spanish companies in the period of 1995-2000	They found a positive effect of gender diversity in the board on firm performance. The results suggest that, at the very least, an increase in gender diversity can be achieved without destroying the firm's value to Spanish shareholders or investors, that is, investors can positively assess the contributions made by female directors. In general, they verified that investors in Spain do not penalize companies that increase the participation of women directors and that greater gender diversity can generate economic gains. They also believe that the positive discrimination in favor of women's commitments recommended in Spain's 2006 Unified Governance Code should persist as a feature of the CG scenario

Source: Authors

Table V.

analyzed have an average of 8.64 per cent of women occupying positions in the board of directors and 36.76 per cent in executive positions.

Thus, it appears that the actions developed by counselors and directors are directed to CSR practices because of instrumental reasons like the increase in financial results and not because of ethical issues or greater sensitivity to environmental issues (Aguinis and Glavas, 2012). Moreover, it is assumed that a more diverse board of directors may experience a better monitoring of managers because of the increase of their independence and better performance (Kin *et al.*, 2009; Carter *et al.*, 2010).

Overall, the results of this research have several implications on three main issues. For gender diversity, it is suggested that the number of women occupying top positions in councils is not enough to positively influence Brazilian companies to develop better CSR practices. This result can be explained by the length of time in the position, by adopting a behavior similar to (previous) members of the boards or because it is a particular characteristic of the Brazilian market. However, it is pointed out that gender diversity strengthens the relationship between governance and performance, providing a broader base of information and perspectives for decision-making, which can add value to investors.

For CG, the results suggest that the practices developed by Brazilian companies do not bring better returns, as well as the set of tested variables related to the council and directories do not strengthen performance. It is suggested that there is need for a change in governance practices related to the boards and their implementation by management organizations.

For performance, the results suggest that firm value is determined by governance that includes the participation of women in councils. It is recommended that the investors positively evaluate the involvement of female members in the councils and/or directories and in the decisions made.

The main limitation of this research was that the amount of companies analyzed, choice of ISE index to check the CSR variable and the metric used to verify the CG mechanisms, seeing as other variables, could have been used.

It is suggested for future research to extend the sample work with other environmental indicators such as GRI, to make comparisons. It also recommended the inclusion of variables to provide a more detailed view of CG characteristics. Finally, it is advised that the relationship between gender diversity and CSR of the organizations to be qualitatively analyzed, aiming to discuss in a more detailed and in-depth way the relationship in the context of Brazilian companies, including the various social, environmental and dimensions of sustainable management.

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