



Governance and social responsibility: what factors impact corporate performance in a small banking-oriented country?

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Governance and social responsibility: what factors impact corporate performance in a small banking-oriented country?

Abstract

Purpose: This paper aims to analyze the corporate governance and corporate social responsibility determinants of the Portuguese listed companies' performance, considering a different point of view by managers, shareholders, and other external stakeholders and investors.

Design/methodology/approach: To achieve this aim, we have used a sample of 34 non-financial listed companies in *Euronext Lisbon* between 2015 to 2020. We employed the panel data methodology to test the hypotheses formulated according to the literature review, specifically the Generalized Method of Moments (GMM) system estimation model proposed by Arellano and Bond (1991).

Findings: The main results point out that the determinants of corporate performance vary depending on the dependent variable considered. From the managers' perspective, the existence of an audit committee and expenses with the environment increase costs and reduce results, negatively influencing corporate performance, but the company's maturity adds synergies in resource management and positively influences performance. Shareholders consider that gender diversity and board independence positively influence performance while for external stakeholders and long-term investors, gender diversity and the social responsibility committee harm the performance of Portuguese companies. However, environmental and social expenditures have a positive effect, showing that the market's perception is that, in the long run, it is essential to eradicate poverty and protect the environment.

Originality/value: As far as the authors are aware, this study is the first one to analyze corporate governance and corporate social responsibility determinants on the performance of listed Portuguese companies. Our study shows that in a small banking-oriented country there is still a long way to go in terms of increasing social responsibility and governance among different stakeholders. It is essential to promote actions that lead to effective governance and awareness of social responsibility.

Key-words: Portugal Corporate Performance, Corporate Governance, Corporate Social Responsibility, GMM System

1. INTRODUCTION

The board of directors of a company is responsible for instituting the appropriate mechanisms to monitor and control its activity (Sá *et al.*, 2017). In addition, the board is responsible for reporting transparency so that stakeholders can trust the disclosed information. The global financial crisis of 2008 showed the inefficiency of these boards of directors and since then, there has been a growing interest in studying the impact of different characteristics of corporate governance on corporate performance (Majumder *et al.*, 2017; Reguera-Alvarado *et al.*, 2017). Corporate governance refers to systems, mechanisms, processes, and structures that control and manage companies (Aboagye and Otioku, 2010; Fama and Jensen, 1983; Jensen and Meckling, 1976). Better financial performance has often been highlighted as one of the main beneficiaries of adopting good CG mechanisms and structures in organizations. The literature also shows that these mechanisms play an important role in ensuring companies' competitiveness and sustainability (Aboagye and Otioku, 2010; Ehikioya, 2009; Hammami and Zadeh, 2019). Different company stakeholders may also have different perspectives on the effects of corporate governance on performance. Companies face increasing pressure to be environmentally proactive, seeking environmental solutions that simultaneously address pollution problems and increase sustainability scores and economic competitiveness (Wang *et al.*, 2015). Literature reveals that society is increasingly focused and concerned with corporate social responsibility. Companies that are proactive in terms of sustainable development must be able to create value for all stakeholders, leveraging the three dimensions of sustainability (economic, social and environmental), to achieve greater long-term performance (Claro and Claro, 2014; Fu, Tang, and Chen, 2020). This is grounded in stakeholder theory which is considered a theory of society (Freeman, 1984; Tricker, 2009). It is based on the network of formal and informal relationships, establishing how control is practiced in companies and how risks and results are shared with different stakeholders (Ortas, Álvarez, and Zubeltzu, 2017; Hussain, Rigoni and Orij, 2018). The current challenge for companies is to shift their priorities towards more holistic and multi-level performance appraisal models that encompass measures related to multiple stakeholders (Jamali, 2006; Adel *et al.*, 2019). Thus, companies with vision and attention to stakeholders will potentially tend to be companies focused on social responsibility and, consequently, with superior performance.

Therefore, currently, companies are increasingly committed to environmental, social, or governmental issues (Zhao *et al.*, 2018). Companies tend to improve their human dimension, preserve the environment, and have an increasing social awareness, which can contribute to improving their performance (Fonseca & Ferro, 2016; Rodriguez-Fernandez, 2016, Madaleno & Vieira, 2020).

This article aims to assess to what extent some characteristics of corporate governance and corporate social responsibility (CSR) influence the performance of companies listed on Euronext Lisbon, considering the different perspectives of managers, current shareholders, external stakeholders, and potential investors, in a period between 2015 and 2019. This period antecedes the period of the crisis caused by COVID-19, which will provide a picture of the effects of corporate governance on the performance of Portuguese companies before the pandemic that took place in 2020. In fact, some factors make this country with unique characteristics that deserve to be studied. Portugal was hit hard by the 2008 global financial crisis and the subsequent euro area debt crisis but has recovered strongly. At the end of 2019, GDP returned to pre-crisis levels and the decline in unemployment was one of the highest among OECD countries, with a decline of 10 percentage points compared to the maximum recorded during the crisis period¹. According to the Statistical Bulletin of the Bank of Portugal, the evolution of the average disposable income per family reached a maximum peak at the end of 2018 (since 2013). However, Portugal is one of the European countries with the greatest inequality in income distribution. In addition, the gender pay gap is also evident: in 2019, women received less than 75% of the average annual salary of men, at any level of education (Peralta, Carvalho, & Esteves, 2021). Regarding Corporate governance structure, the corporate board structure in Portugal is similar to that in most European countries, consisting of a single-tier system, which comprises the CEO, other executive directors, and non-executive directors (Sá, Neves, & Gois, 2017). Non-executive directors not only exercise the role of the director in decision-making but also have the role of supervising and evaluating the performance of executive directors (Alves, 2011).

The Portuguese Government has been approving a set of measures aimed, on the one hand, at reinforcing the participation of women in economic decision-making and, on the other hand, at the progressive elimination of the wage gap between women and men, but

¹ <https://www.oecd.org/corporate/ca/Avalia%C3%A7%C3%A3o-da-OCDE-do-Mercado-de-Capitais-de-Portugal.pdf>, accessed on 04/27/2022.

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3 despite the slight improvement, the participation of women is still very low in particular
4 compared to the European average (Resolution of the Council of Ministers No. 19/2012,
5 of 8 March, Decree-Law No. 159/2014, of 27 October). In fact, in 2010, the percentage
6 of women in the PSI-20 boards was only 5.4%, compared to the European Union average
7 of 11.9% (Center for Research in Economic and Organizational Sociology/Consortium in
8 Social Sciences and Management, 2021).
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13 In this way, Law 62/2017 of 1 August was decisive, in which the introduction of gender
14 quotas on the boards of directors in the public sector and listed companies was approved;
15 in this law, for listed companies, it is foreseen that each gender must be represented by at
16 least 20% as of January 1, 2018, and 33.3% as of January 1, 2020 (except for mandates
17 in progress). Considering the WoBómetro data for 2021, Portuguese listed companies on
18 the PSI-20 already have 28.1% of women, which is still below the European Union
19 average of 30% (Center for Research in Economic Sociology and
20 Organizations/Consortium in Social Sciences and Management, 2021).
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27 Moreover, Portugal is also interesting to study because Portuguese financial system is
28 mostly bank-oriented, which companies have a high level of concentration in their
29 ownership, low capitalization and a high number of inter-corporate shareholdings
30 (Gouveia *et al.*, 2018). Indeed, most assets of the financial system are controlled by
31 domestic banks (Crosignani, Faria-e-Castro & Fonseca, 2015), which is critical in crisis
32 periods with the fall in the asset values. Portugal still has a long way to go to reach higher
33 levels of development. However, this transformation requires Portuguese companies to
34 have access to a capital market that can finance long-term investments, support innovation
35 and facilitate entrepreneurship, allowing for the use of economies of scale and the
36 individual strengthening of the companies' balance sheets².
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44 In this context, we intend to answer four important research questions: i. What are the
45 corporate governance factors that most influence the Portuguese companies' performance
46 in a period of GDP growth? ii. Do these factors differ according to the different types of
47 stakeholders in the companies? iii. Has social responsibility been a key factor in
48 increasing performance levels? iv. Is the influence of the factors conditioned by the level
49 of capital market development?
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55 As far as we know, this study has not been done before. The main gap identified in the
56 literature is related to the fact that corporate governance and social responsibility factors
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² <https://www.oecd.org/corporate/capital-markets/>, accessed on 04/27/2022.

are not being studied simultaneously using panel data, on the performance of companies following the expectations/positioning of different stakeholders. At the same time, this study aims to assist managers, shareholders, and investors in their investment decision-making.

In an era in which the need to produce wealth and promote economic growth cannot override care for sustainability, the main motivation for carrying out this research is to understand whether the factors of social responsibility and governance structures are determining better performance levels in Portuguese companies. Although there are socially responsible practices in all types of companies, the concept of corporate social responsibility is mainly driven by large companies, which is also one of the main motivations for our choice of this sample.

This study contributes to the literature in several ways. First, it considers gender diversity and environmental expenditures for Portugal, a country of poor economic development, and exposed to various macroeconomic constraints, while seeking to understand how different stakeholders face these pressing issues.

Second, to the best of our knowledge, this is the first study to jointly analyze different characteristics of corporate governance and corporate social responsibility, also including the existence of an audit committee and a social responsibility board in Portuguese companies' performance measured both through accounting and market variables. For example, Cancela et al. (2020) and Vieira et al. (2019) studied listed Portuguese companies; however, they emphasize other determinants for other periods. Furthermore, Huang (2010) and Riyadh et al. (2019) do a similar study but analyze different markets and periods. Hence, our study expands the scarce existing literature for Portugal allowing a better understanding of the Portuguese market.

Thirdly, our work promotes a reading of results based on the different weights that the various stakeholders attribute to different performance factors.

The remainder of the paper is organized as follows. Section 2 provides a detailed review of the literature and the development of hypotheses. Section 3 presents the research design. In Section 4, the main results are discussed. Finally, Section 5 presents the conclusions, practical implications of work, and lines of future research.

2. LITERATURE REVIEW AND HYPOTHESES

The performance of companies can be measured through various proxies, following Neves, Baptista, *et al.* (2021), and Vieira *et al.* (2019). The first one is ROA, a traditional

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3 management indicator. Another profitability measure, based on accounting data, is ROE,
4 which measures the return on equity and allows shareholders to make better choices about
5 the return on their financial investments. In market view, Tobin's Q is one of the most
6 classical variables used to capture companies' performance, also used as an indicator of
7 future business growth opportunities, and the Stock Return, which represents the stock
8 price, is also considered an important market indicator. These performance indicators
9 show us different perspectives from stakeholders. On the one hand, ROA is a measure
10 used by managers, ROE by shareholders, Tobin's Q shows the view of external
11 stakeholders, and Stock returns from the perspective of potential investors. In this sense,
12 this approach is based on the stakeholder theory, in which companies that are proactive
13 at a sustainable level and corporate governance must be able to create value for all
14 stakeholders, to achieve greater long-term performance (Claro and Claro, 2014; Fu, Tang,
15 and Chen, 2020).
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29 **2.1. CORPORATE GOVERNANCE DETERMINANTS**

30 **2.1.1. BOARD SIZE**

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32 The board of directors is the main characteristic of companies' corporate governance
33 (Ongsakul *et al.*, 2021), and its task is to guide and authorize the company's strategic
34 decisions. These strategies, in turn, have an impact on the company's financial
35 performance and general capital expenditures (Terjesen *et al.*, 2016). In Portugal, the
36 Securities Market Commission does not define an optimal size for the board of directors.
37 Despite the board size being a variable that has been widely studied in the corporate
38 governance approach of companies, it presents divergent results depending on the sample,
39 methodology, and/or period analyzed. For example, Kalsie and Shrivastav (2016) studied
40 the impact of board size on the performance of Australian companies using Tobin's Q as
41 a performance measure, obtaining a positive relationship between these variables.
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50 Riyadh *et al.* (2019) studied the impact of board size on the corporate performance of the
51 two hundred and fifty largest energy corporations and concluded that increasing board
52 size allows for a reduction in agency costs, improving board effectiveness. Sehrawat *et*
53 *al.* (2020) examined the relationship in the context of non-financial Indian companies.
54 The results show that the Board Size does not affect the company's performance, in which
55 the dependent variable is ROA. On the other hand, when the dependent variable is Tobin's
56 Q, the size of the board reveals a positive impact on the company's performance. The
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3 positive effect can be explained by the fact that larger boards lead to more excellent
4 controls and greater performance (e.g., Adams and Mehran, 2012; Coles *et al.*, 2008;
5 Daily *et al.*, 1999).

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8 On the other hand, Palaniappan (2017), studying Indian listed companies between 2011
9 and 2015, empirically shows a negative and statistically significant relationship between
10 Board Size and the dependent variables ROA, ROE, and Tobin's Q. This negative effect
11 can be justified because more administrators lead to more conflicts from the perspective
12 of agency theory, conducting to worse performances (Jensen and Meckling, 1976).

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15 Given the non-consensual results observed in the literature, the first hypothesis without a
16 predefined sign is forward:

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21 **H1:** The Board Size influences Corporate Performance.

22 23 24 **2.1.2. GENDER DIVERSITY**

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26 Boards of directors with greater gender diversity have higher levels of knowledge and
27 different internal points of view, considering a more comprehensive range of solutions to
28 specific problems, thus improving strategy development and performance quality
29 (Hillman *et al.*, 2007). This is especially relevant in cases where, the group's tasks are
30 knowledge-intensive and the results of this process strongly depend on information
31 processing (van Knippenberg *et al.*, 2004).

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Kemp *et al.* (2015) and Li *et al.* (2017) show that women, compared to men, tend to be
more aware and concerned about problems related to environmental damage and personal
well-being. Women respect other people more, are more committed to the community,
and are more prone to charity and altruism. In addition, they also differ from men in
leadership style and organizational priorities, as they tend to be more innovative,
transparent, and egalitarian in their strategic vision, with policies more focused on
awareness and in the community, more involved in the interests of the interested parties
(Shaya and Abu Khait, 2017).

According to the social perspective, the board of directors must have a balance in terms
of gender, since women analyze situations and choose different strategies than men
(Moreno-Gómez *et al.*, 2018). Socially, it is also understood that diversity is a moral and
correct way to overcome discrimination and marginalization from management positions
in institutions (Carletti, 2019). Furthermore, from an ethical perspective, the
underrepresentation of women on boards is seen as discrimination, since it is unethical to

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3 exclude female administrators from top positions just because of their gender (Kılıç and
4 Kuzey, 2016). For this reason, gender diversity is already enshrined in national and
5 international legislation to protect the principle of equality and promote social justice
6 (Carletti, 2019). From these perspectives, the effect of gender on the performance of
7 organizations comes from gender diversity and not just from the fact that the company is
8 driven by men or women (Moreno-Gómez et al., 2018).

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10 The literature has shown that the greater the gender diversity in boards of directors, the
11 better the financial performance of companies and the greater the return to shareholders
12 due to female members increasing innovation, promoting a better understanding of
13 markets, and bringing to the board new visions to solve problems (Campbell and
14 Mínguez-Vera, 2008; Farrell and Hersch, 2005). Other authors like *Albitar et al. (2020)*;
15 *Boone et al. (2007)* *García-Meca (2016)*; *Lee et al. (2016)*; *Smith et al. (2019)* and
16 *Wintoki et al. (2012)*, show the same results using Tobin's Q and ROA as performance
17 measures. For *Riyadh et al. (2019)* diversity is one of the most important governance
18 mechanisms for companies with a significant impact on corporate performance.

19
20 On the other hand, *Adams and Ferreira (2009)*, using Tobin's Q and ROA, concluded that
21 greater gender diversity in the board can result in lower corporate performance due to
22 increased conflicts of opinions between members, resulting in less fluid communication
23 and less cooperation between members. *Rodríguez-Ruiz et al. (2016)* corroborated the
24 same results.

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26 Other studies also show a non-linear relationship between gender diversity and
27 performance, showing that gender diversity positively affects performance beyond a
28 certain threshold (e.g., *Owen and Temesvary, 2018*; *Proença et al., 2020*).

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30 Based on the literature presented, the following hypothesis is posed, without a predefined
31 sign:

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33 **H2:** Gender diversity on the Board of Directors influences Corporate Performance.

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2.1.3. BOARD INDEPENDENCE

An independent member of the board of directors does not have financial resources,
management, participation in actions or family relationships with other board members,
or any other relationships that may affect their ability to act independently (*Pathan and
Faff, 2013*; *Ramly et al., 2017*).

This independent member is a person external to the organization and their presence must
function as an internal control mechanism. It will contribute to an objective and impartial

management and will have the arbitrary capacity in situations of divergence between managers, aiming to mitigate agency problems between managers and shareholders and promote the interests of different stakeholders (Fama, 1980; Sá *et al.*, 2017). Thus, highly informed, independent, and qualified members can balance the Chief Executive Officers' (CEOs) influence and provide oversight (Stevenson and Radin, 2009).

In Portugal, the number of independent elements is imposed by the Portuguese Securities Market Commission, which defines the existence of a board of directors that is not fully independent, but whose proportion of independent directors exceeds 25%.

Literature has shown that greater board independence can lead to better performance. Napitupulu *et al.* (2020), analyzing 52 listed companies in Indonesia, concluded that company performance, as measured by ROA, is improved by a board of directors with independent members to provide guidance and supervision for the company management. Also, ben Barka and Legendre (2017) and Liu *et al.* (2015) point out a positive relationship between the board's independence and the company's performance measured by ROE and ROA. Huang, (2010) highlights that the presence of independent directors has a significantly positive impact on the financial performance of companies.

However, Terjesen *et al.* (2016), analyzing data from 3,876 companies in 47 countries, reveal, that the presence of independent members does not contribute to the company performance, using Tobin's Q and ROA as dependent variables. Singh *et al.* (2018) also found the same negative relationship.

Considering the previous literature, the following hypothesis is presented, with no predefined sign:

H3: The independent Board influences Corporate Performance.

2.1.4. AUDIT COMMITTEE

Corporate governance is a system of rules and conduct relating to the management and control of companies issuing shares admitted to trading on the regulated market. The Corporate Governance rules have been undergoing some changes over time, highlighting the formalization of an audit committee (Tricker, 2009). This commission is composed of a part of non-executive members of the board. This committee acts as a supervisory body. Its functions include obtaining internal information, reporting it, and supervising the information is closed to stakeholders to be presented fairly and truthfully (Zhou *et al.*, 2018).

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3 In Portugal, the Commercial Companies Code stipulates that this committee must have at
4 least three permanent members in listed companies, with most members being composed
5 of independent elements.
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8 Empirical literature supports that the presence of an audit committee is associated with
9 better monitoring of financial reporting and greater internal control (McMullen, 1996),
10 which could lead to more performance. Indeed, Fauzi *et al.* (2017) and Munisi and
11 Randøy (2013) precisely verify this positive relationship between the audit committee
12 and performance, measured by Tobin's Q and profitability measures. Hanoon *et al.*
13 (2020) show that the audit committee will improve internal control, reduce risks, fraud,
14 and theft, leading to more significant investor attraction and better performance.
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17 However, Hassan *et al.* (2016) and Puni and Anlesinya (2020) show that the existence of
18 an audit committee has a negative effect on the performance of banks, measured by ROE
19 and also by ROA. Also, Zhou *et al.* (2018) find a negative relationship between the
20 presence of an audit committee and performance, justifying this result as companies
21 create audit committees to fulfill the requirement, not serving any other purpose.
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24 Due to the divergence of results in the literature, the following hypothesis is presented
25 with no defined sign:
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28 H4: The existence of the Audit Committee influences Corporate Performance.
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33 34 35 36 **2.2. CORPORATE SOCIAL RESPONSIBILITY DETERMINANTS**

37 38 **2.2.1. CORPORATE SOCIAL RESPONSIBILITY COMMITTEE**

39 The Corporate social responsibility committee supports the board by overseeing strategies
40 designed to achieve social and environmental risks, overseeing management processes
41 and standards, and achieving compliance with sustainability responsibilities (Biswas *et*
42 *al.*, 2018). The existence of a corporate social responsibility commission represents the
43 company's concern, orientation, and commitment to sustainable development (Hussain
44 *et al.*, 2018).
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50 The main functions of the social responsibility commission should be directed toward
51 managing risks and opportunities for sustainability, meeting business objectives, and
52 fulfilling commitments to stakeholders (García Martín and Herrero, 2020; Peters and
53 Romi, 2015). According to García-Sánchez *et al.* (2019) and Gennari and Salvioni (2019)
54 corporate social responsibility committee may be constituted by a specialist in social and
55 environmental risks. This member must be autonomous and connect with the
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professionals who certify the organization's environmental management reports and systems.

Spitzeck (2009) states that companies that create a social and corporate responsibility commission in their organizational structure present a superior corporate social performance compared to companies that do not have this body in their organizational structure. In this sense, Liu *et al.* (2021), analyzing Chinese companies, showed that the presence of a social responsibility committee increases the financial performance of companies. Martínez-Ferrero *et al.* (2021) revealed that the existence of a social and corporate responsibility committee allows for the creation of mechanisms that guarantee a more significant commitment to the scope of social responsibility and the company's economic performance.

On the other hand, Sekhon and Kathuria (2019), using a panel of 137 companies listed on the CNX-500, from 2008 to 2017, demonstrated that the impact of corporate social responsibility on financial performance is negative or without a defined sign. When they used ROE as a measure of financial performance, the result was statistically significant and negative. However, when measured by Net Profit Margin (NPM) and ROA the impact of CSR is not significant.

Lastly, Cancela *et al.* (2020), studying companies of the Iberian Peninsula, revealed that does not exist a significant relationship between corporate social responsibility committee and performance (using ROA and Tobin's Q as performance measures).

There is scarce empirical literature showing the existence of a social and corporate responsibility commission that has an impact on performance. However, the relevance of their study is understood, and the following hypothesis is formulated:

H5: The existence of the Corporate Social Committee influences Corporate Performance.

2.2.2. SOCIAL EXPENSES

The debate about corporate social responsibility or corporate sustainability started at the end of the 20th century and increased drastically because social responsibility concerns are becoming a critical aspect of business activities (Zhang and Zhu, 2019). Corporate environmental responsibility is based on the concept of the triple bottom line (Elkington, 1998). Thus, social responsibility is achieved when the company aligns its objectives with environmental, social, and economic performance (Cancela *et al.*, 2020). Researchers and

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3 practitioners are paying growing attention to environmental, social, and economic issues
4 because stakeholders increasingly scrutinize sustainable impact (Cancela *et al.*, 2020;
5 Elkington, 1998; Hussain *et al.*, 2018). Following, Baumgartner & Rauter (2017), the
6 impact of environmental and social problems also depends on the perceptions of the
7 external stakeholders and the socio-cultural and economic conditions. Song *et al.* (2019),
8 based on stakeholders' theory, companies are faced with environmental and social
9 pressures. These authors suggest that companies invest organizational efforts and
10 resources in sustainable development since CSR practices can improve a company's
11 reputation with banks/lenders and investors and increase its growth opportunities
12 (Lozano, 2013; Paiva & Gavancha, 2018; Song *et al.*, 2019,)

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21 Companies that pay more wages and give more benefits and bonuses to their employees
22 are more aware of promoting social welfare (Neves, Baptista, *et al.*, 2021). According to
23 these authors, higher salaries for the workforce with greater skills that should add more
24 value to the firm than staff on lower wage rates are expected. In this sense, Faleye and
25 Trahan (2011) and Iverson and Zatzick (2011) explained that higher pay leads to greater
26 motivation in a more comfortable working environment and increases productivity and
27 consequent performance.

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34 Cao and Rees (2020) state that the expenses associated with investing in the well-being
35 of employees imply other investment opportunities. Thus, greater efficiency in the
36 investment in personnel can be relevant for business performance. Wei *et al.* (2020)
37 concluded that companies with greater worker well-being are more innovative and more
38 profitable.

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43 Neves *et al.* (2021) demonstrated a positive relationship between personnel expenses and
44 performance, with performance being measured through ROA and ROE.

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48 In contrast, Kim and Jang (2020) refer that the increase in workers' remuneration has an
49 immediate positive effect on company growth but negative in the long run. This result
50 suggests that managers need to select which position favors the company according to the
51 expectations of different stakeholders. Using EBITDA margin as a performance measure,
52 intrinsic to managers, Neves *et al.* (2021) showed that an increase in wages and other
53 benefits to workers decreases results and therefore decreases performance.

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58 Under the previous literature, we propose the following hypothesis:
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3 **H6:** Social expenses influence Corporate Performance.
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8 **2.2.3. ENVIRONMENTAL EXPENSES**

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10 As explained above, social responsibility involves the ability of companies to integrate
11 environmental factors into their management and daily operations.
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14 Companies must adjust their organizational structure to comply with environmental
15 requirements established by law and contribute positively to society and the environment.
16 Thus, they assume an environmental commitment to sustainable development and
17 promote their visibility among stakeholders (Kim *et al.*, 2017; Phiri *et al.*, 2018).
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20 Li *et al.* (2020) studied the effect of corporate environmental responsibility on corporate
21 value, mediated by business innovation. The results revealed that innovation reduces the
22 negative impact of corporate environmental responsibility on company value. Scientific
23 works that explore environmental expenditures as a determining factor of business
24 performance are scarce. For example, Cancela *et al.* (2020) defined environmental
25 expenses as a measurable variable of the level of ecological awareness.
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28 Due to the gap in the literature in the study of environmental expenditures, we propose
29 the following hypothesis:
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33 **H7:** The environmental expenses influence Corporate Performance.
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38 **2.3. SPECIFIC DETERMINANTS**

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40 **2.3.1. LEVERAGE**

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42 A company-specific variable, leverage, is considered relevant in our study since it can
43 influence decision-making. Miralles-Marcelo *et al.* (2014), sustain that firms look to
44 external capital to sustain their growth and sustainability in the future.
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47 For Chinese listed firms, Wu *et al.* (2012) found a positive impact of leverage on Tobin's
48 Q. According to Kartikasari and Merianti (2016), financial leverage has a significant
49 effect on company performance, suggesting that companies can manage their debt
50 efficiently, to generate future profits. In agreement with the previous results, Bărbuță-
51 Misu *et al.* (2019) confirm the existence of a positive relationship between corporate
52 indebtedness and performance given the positive effect of financial leverage.
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3 On the other hand, Serrasqueiro and Nunes (2008) demonstrated that the increase in
4 indebtedness, demanding periodic payments of interest and capital, compromises the
5 profitability of companies. Also, Pais and Gama (2015), according to an analysis of
6 Portuguese non-financial companies, attested to a significantly negative relationship
7 between the level of financial debt and corporate performance, measured through ROA.
8 Cancela *et al.* (2020) obtained a negative sign between the level of debt and the
9 performance of companies using ROA as a performance measure. In the same vein, Chen
10 *et al.* (2018) and Miralles-Marcelo *et al.* (2014) showed that debt intensity negatively
11 influences the ROA. Proença *et al.* (2020) found a negative relationship between leverage
12 and ROA and ROE, for the banking sector.
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23 **2.3.2. COMPANY AGE**

24 The influence of companies' age on their performance is a factor widely studied in the
25 literature (Delmar *et al.*, 2003).
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29 Ben Barka and Legendre (2017) demonstrated that company age has a positive impact on
30 the economic performance of companies, specifically on ROA. A more mature company
31 can take advantage of synergies in the more efficient management of its resources. The
32 market position of older companies is often synonymous with more performance. Studies
33 by Ericson and Pakes (1995) and Gaur *et al.* (2015) support this positive relationship
34 between age and performance. Coad *et al.* (2013) found mixed results. It is understood
35 that more mature companies experience increasing levels of productivity, profits, larger
36 size, lower debt ratios, and higher equity ratios. However, older companies were also
37 found to have lower expected growth rates of sales, profits, and productivity, leading to
38 lower levels of profitability. Dawar (2014), noticed that company age negatively
39 influences ROA in a study that sampled companies from India. Agarwal and Gort (2002)
40 obtained the same result, stating that there may be a decrease in performance because of
41 age due to less careful and inefficient management of resources, perhaps due to
42 overconfidence. Loderer and Waelchli (2010) and Pástor and Pietro (2003) also found
43 that performance decreases with increasing companies' age.
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57 **3. DATA, VARIABLES, AND METHODOLOGY**

58 **3.1 DATA**

Our study is composed of 34 companies listed on Euronext Lisbon, excluding financial companies, as they have different characteristics (Levine, 2004), and companies in the sports sector, as it is a particular sector and is not relevant for us (Farquhar *et al.*, 2005).

In this work we selected Portuguese listed companies as our sample. However, we excluded financial institutions since they have distinctive characteristics, namely with regard to agency problems, asymmetric information and specific regulations, so they should be studied independently (e.g., Pais & Gama, 2015; Sá *et al.*, 2017; Vieira *et al.*, 2019). These characteristics have repercussions on the boards of directors (Booth *et al.*, 2002) and on its capital structure (Adams and Mehran, 2012). Indeed, there are studies that only analyzed the Portuguese banking industry (e.g., Neves & Proença, 2021; Martins, 2018). In fact, initially, we selected Euronext Lisbon as a sample, consisting of 55 companies. However, after excluding the financial ones for the reasons mentioned above and to comply with the methodological conditions, namely the non-existence of the second-order correlation proposed by Arellano and Bond (1991), the 34 that make up our final sample remained.

The sample is comprised between 2015 and 2019, and we complete data for these years in the 34 listed companies under study. This period is after the Troika and before the Covid-19 pandemic, characterized by some stability and some slow economic growth.

The economic and financial variables were collected from the SABI database (Iberian Balance Sheet Analysis System), and the other corporate governance and corporate social responsibility variables were compiled from the Annual Reports and Corporate Governance Reports. These reports are available at the Portuguese Securities Market Commission and on the respective official websites of each company.

3.2. VARIABLES

3.2.1. DEPENDENT VARIABLES

To study corporate performance, we have considered different proxies, based on accounting data, ROA, ROE, and market data, Tobin's Q, and Stock Return. ROA is a pure management indicator, and ROE, which measures the return on equity, is a variable of special interest to shareholders. Tobin's Q is a variable for future growth opportunities and the stock return is a variable of interest to current investors. In Table 1, we resume these variables, as our dependent variables.

[Insert Tabel 1 about here]

3.2.2. INDEPENDENT VARIABLES

As expressed in our literature review, we divide the independent variables into three groups – corporate governance determinants, corporate social responsibility determinants, and specific determinants. This division is explained in Table 2.

[Insert Tabel 2 about here]

3.3. METHODOLOGY

According to Arellano and Bond (1991), dynamic panels present certain advantages, such as the control of endogeneity, greater control of possible collinearity between independent variables, and the minimization of the problem of the negligence of explanatory variables (Neves, 2018). In this sense, and following other studies (e.g., Neves and Proença, 2020; Proença *et al.*, 2020, Neves *et al.*, 2022) it is expected that past performance will influence present performance, so the best method to estimate this dynamic relationship is the commonly known method of generalized moments as the GMM Dynamic Estimator, developed by Arellano and Bover (1995) and Blundell and Bond (1998).

We performed all the tests recommended using this methodology: the Wald test, which allowed us to verify that the coefficients are significant; the Sargan test which allowed us to perceive that the instruments used are valid (where the null hypothesis is a null correlation between the instruments and the error term) and the Arellano & Bond test (AR1 and AR2) allowed us to examine the absence of autocorrelation (where the null hypothesis is the absence of error autocorrelation).

The GMM estimation method allows estimating models to correct eventual endogeneity problems, which exist when there is a correlation between the independent variables and the present or past values of the error term (Karim, 2020). In addition, the GMM system method also takes into account the causal link between independent and dependent variables (Bucevska and Hadzi Misheva, 2017). Thus, following Boadi and Osarfo (2019), as long as the validation tests of the GMM system are correct (second-order autocorrelation and instrument validity), the estimation models are consistent and can be interpreted as causal relationships.

Regarding the data, although we are only analyzing 34 companies, we studied the period from 2015 to 2019, which allows us to use the GMM-system for five years of consecutive information (Arellano and Bond, 1991, 1995). In addition, this methodology is appropriate when we have a high individuals and a small period, as is the case with this sample (Rumler and Waschiczek, 2016).

Considering the above, through this methodology, the following four models will be estimated:

$$ROA_{it} = \beta_0 + \beta_1 BSize_{it} + \beta_2 BDiv_{it} + \beta_3 BInd_{it} + \beta_4 AudCom_{it} + \beta_5 CSR_{it} + \beta_6 SExp_{it} + \beta_7 EExp_{it} + \beta_8 LEV_{it} + \beta_9 Age_{it} + \sigma_1 ROA_{it-1} + \varepsilon_{it} + v_i \quad (1)$$

$$ROE_{it} = \beta_0 + \beta_1 BSize_{it} + \beta_2 BDiv_{it} + \beta_3 BInd_{it} + \beta_4 AudCom_{it} + \beta_5 CSR_{it} + \beta_6 SExp_{it} + \beta_7 EExp_{it} + \beta_8 LEV_{it} + \beta_9 Age_{it} + \sigma_1 ROE_{it-1} + \varepsilon_{it} + v_i \quad (2)$$

$$Tobin's Q_{it} = \beta_0 + \beta_1 BSize_{it} + \beta_2 BDiv_{it} + \beta_3 BInd_{it} + \beta_4 AudCom_{it} + \beta_5 CSR_{it} + \beta_6 SExp_{it} + \beta_7 EExp_{it} + \beta_8 LEV_{it} + \beta_9 Age_{it} + \sigma_1 Tobin's Q_{it-1} + \varepsilon_{it} + v_i \quad (3)$$

$$SReturn_{it} = \beta_0 + \beta_1 BSize_{it} + \beta_2 BDiv_{it} + \beta_3 BInd_{it} + \beta_4 AudCom_{it} + \beta_5 CSR_{it} + \beta_6 SExp_{it} + \beta_7 EExp_{it} + \beta_8 LEV_{it} + \beta_9 Age_{it} + \sigma_1 SReturn_{it-1} + \varepsilon_{it} + v_i \quad (4)$$

where Greek letters denote parameters, i and t are, respectively, individual- (company-) and time-indices, and variables' notation are expressed in Tables 1 and 2 - ROA_{it} , ROE_{it} , $QTobin_{it}$, e $SReturn_{it}$ are the performance variables; $Bsize$ is the board size; $BDiv_{it}$ is the board gender diversity; $BInd_{it}$ is Board Independence; $AudCom_{it}$ is the existence of audit committee; CSR_{it} is the existence os corporate social responsibility; SE_{it} are the employee expenses; EE_{it} are the environmental expenses; LEV_{it} represents leverage; Age_{it} is the company age.

4. RESULTS

4.1. Descriptive Statistics

This chapter describes descriptive statistics (mean, minimum, maximum, and standard deviation) for the variables used in the sample. Regarding the dependent variables, in Table 3, we can conclude that the ROA has an average of 4%, while the ROE has an average of 11%; the Tobin's Q is 0.577 and the Stock return in logarithmic terms is 3.7.

Concerning the independent variables, it can be seen that, on average, the boards of directors have 8.6 members, with companies with 21 members. On average, women represent 15% of the board of directors, and the independent members represent 21.5% of the total board, fulfilling the legal requirement. There are more companies without an audit committee and a corporate social responsibility committee. Environmental expenditures are greater than social expenditures, on average. Debt represents 64% of total equity and the average age of companies is 3.3 logarithmic years.

[Insert Tabel 3 about here]

4.2. DISCUSSION OF RESULTS

In this section, the results obtained are presented, interpreted, and discussed, focusing attention on the main differences between the explanatory factors of the company's performance through four different dependent variables. These four variables can represent the views of different stakeholders.

In Table 4 we present the results of estimation models that use two accounting variables to assess performance (models 1 and 2), ROA, as an intrinsic management variable or a pure management variable, and the ROE, a variable of interest to the current company shareholders.

[Insert Tabel 4 about here]

As we can see in the table, the global view of the manager, through the ROA variable, is that maintaining the same levels of operating profitability over time is difficult, so the previous year's profitability does not necessarily have to imply more profitability in the current year. The same result was obtained by Neves, Baptista, *et al.* (2021).

In the same point of view of managers, the audit committee has a negative relationship with ROA, suggesting that tighter internal control does not help the manager pursue higher performance levels. The manager is aware that many of the internal control mechanisms are ineffective and entail high costs (Jensen, 1993). This result supports hypothesis 4 and the conclusions of Hassan *et al.* (2016) and Puni and Anlesinya (2020). Following Cancela *et al.* (2020); Miralles-Marcelo *et al.* (2014); Pais and Gama (2015) and Serrasqueiro and Nunes (2008), managers also consider that more debt can jeopardize profitability by requiring large amounts of periodic payments. Simultaneously, these decision-makers see the expenses related to the environment as an expense that is not

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3 rewarding in terms of the organization's internal performance (Cancela *et al.*, 2020).

4 Likewise, these managers realize that the maturity of companies can help to take
5 advantage of synergies through the knowledge obtained and that more maturity implies
6 more recognition in the market and, therefore more performance. This conclusion was
7 supported by Coad *et al.* (2013).
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10 From the shareholder's point of view, through the ROE performance measure, it is
11 possible to verify differences in sign and significance in the variables that determine
12 corporate performance, concerning the ROA variable, as a performance measure.
13 Specifically, under the Wang *et al.* (2018) arguments, we can understand that internal
14 control is an effective mechanism to mitigate the loss of economic value in negative
15 events, translating into higher firm performance. Another significant difference sign in
16 the impact that different variables have on performance is the company's age. From the
17 shareholder's perspective, the company's age does not guarantee more profitability,
18 possibly because investments are meager and do not generate more value. This result
19 validates the conclusions by Goto and Wilbur (2019) and Nadeem *et al.* (2017) who
20 demonstrate that the profitability of companies tends to decrease over the years, possibly
21 due to an erosion in the use of resources.
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24 Similarly, when using ROE as a performance measure, in the interest of shareholders, it
25 is possible to indorse, contrary to what happened from the manager's perspective, that
26 both the independence of the board of directors and the presence of women on this board
27 are fundamental in determining corporate performance. In fact, under the conclusions of
28 Moreno-Gómez *et al.* (2018) and Valls Martínez and Cruz Rambaud (2019), our results
29 indicate an increasing number of women on boards of directors is positively related to
30 higher corporate performance, corroborating our hypothesis 2. Thus, women have more
31 ethical concerns and do adequate business monitoring, conditioning favorably the
32 performance (Campbell and Mínguez-Vera, 2008; Farrell and Hersch, 2005). Moreover,
33 this result corroborates Shaya and Abu Khait (2017), that found that women are more
34 involved in the interests of the interested parties, so shareholders know that.
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37 The board's independence is also clearly reflected in the increase in business performance
38 (Ben Barka and Legendre, 2017; Manna *et al.*, 2016).
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41 Table 5 shows the results of estimating models that use two market variables to assess
42 performance (models 3 and 4), Tobin's Q, as a variable for future growth opportunities
43 and the stock return as a variable of interest to current investors.
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[Insert Tabel 5 about here]

As we can see, there is no sign of divergence in the significant variables in both models; however, the variable that most interests investors have a greater number of significant variables. From the perspective of stakeholders external to the organization, the presence of a greater number of women on the board does not improve performance, on the contrary, possibly suggests that greater risk aversion, characteristic of women, can lead to less productive investment and consequently the lowest performance (Palvia *et al.*, 2014). This result differs from that found when using ROE as a performance measure, suggesting that current shareholders have a different perception of the importance of women on the board than potential investors. Is it a reluctance to accept women as equals in decision-making, or for reasons of economy, volatile and heavily dependent on debt and third parties?

In the same vein, concerning the existence of a CSR committee, our result shows that in Portugal, those who are outside the company still have an “old traditional” image of the company, following the thought of Friedman (1970) who states that the only responsibility of companies is to maximize the profits of their shareholders (Sekhon and Kathuria, 2019). Despite the increased adoption of socially responsible practices, even in emerging markets (Amini and Dal Bianco, 2017), becoming this concept an important subject of empirical research in several developing economies, the fact is that the Portuguese, external to the company, do not yet realize that shortly to increase the performance of companies and the economy, it is crucial to meet this perception. Concerning the environmental expenses, both potential investors and current investors accept that these are necessary as a positive market sign and that in the medium-long term it is essential to improve business performance. In the view of current investors, interest in the stock returns, personnel expenses, and benefits associated with employees are also positively related to the increase in the stock market, given the greater motivation of employees, which leads to an improvement in productivity and consequent increase in performance. This investor is also aware that, due to the volatility of economies and possible contagion, the return earned in the previous year is not synonymous with a higher return in the current year.

Regarding board size, investors are certain that greater boards can lead to greater conflicts of interest and, therefore, less stock valuation. This result corroborates our hypothesis 1 according to Guest (2009); Palaniappan (2017) and Zabri *et al.* (2016). Finally, the

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3 independence of the board of directors is for these external stakeholders a positive
4 influencing factor on stock returns. This result suggests that boards dominated by internal
5 members are subject to more agency problems and that when monitoring and advising
6 are carried out in an “independent” manner, investors perceive greater value for the shares
7 (Brickley and Zimmerman, 2010).
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13 **4.3. Discussion summary**

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15 The results point out that managers, shareholders, external stakeholders, and potential
16 investors assign different weights to each of these characteristics, depending on their
17 interest in the company. It is noteworthy that only shareholders, through ROE as a
18 performance measure, consider gender diversity as a performance driver, perhaps because
19 they recognize that their results depend on the effort, dedication, and ethical values of
20 women.
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25 In short, regarding the market’s perception of the determinants of performance, women
26 do not show improvements in this performance as well as the social responsibility
27 committee. There is a long way to raise awareness among economic stakeholders,
28 especially if what is globally intended is to eradicate poverty and achieve gender equality.
29 Portugal already has gender quotas imposed, but their effects are not yet visible and have
30 not yet reached EU levels. Thus, considering social and ethical perspectives, only
31 shareholders see gender diversity as promoting greater social justice and greater ethics in
32 companies. For external stakeholders and short-term investors, gender diversity will not
33 be valuable as it is only a legal requirement and they believe that what is imposed does
34 not improve performance.
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43 Concerning environmental issues, it is now becoming aware that environmental
44 expenditures will in the future promote the company’s performance and that if nothing
45 else, there will be disastrous consequences for those who do not have environmental
46 responsibility. From an accounting perspective, the manager is only concerned with the
47 environmental expenses that will reduce the results and, consequently, corporate
48 performance. Current and future investors understand that social and environmental
49 issues are crucial for performance and that it will be this that will provide more growth
50 opportunities.
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56 However, the company’s shareholder has a clear perception that the independence of the
57 board can increase profitability.
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3 Given the above, and although there are codes of good governance in the PSI-20
4 companies, it is evident that social responsibility has different perceptions for the
5 different stakeholders of the companies. Thus, there is still some way to go to make social
6 responsibility an essential practical requirement in companies and not just a theoretical
7 figure.
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11 Thus, the results obtained allow us to answer all the research questions raised, suggesting
12 that despite the regulatory efforts and the pressure of the various agents internal and
13 external to the country, there is still much to be done concerning the issues of equality
14 and social responsibility, in a macroeconomic environment with an illiquid capital market
15 that needs to develop.
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22 **5. CONCLUSION**

23 **5.1. Concluding Remarks**

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26 This work studies the corporate governance and corporate social responsibility factors
27 that influence the Portuguese performance companies, from the perspective of different
28 stakeholders, and for this, two accounting variables and two market variables are used to
29 assess performance. Using data from 34 non-financial companies listed in the 2015-2019
30 period, the results highlight that the determinants of corporate performance vary
31 depending on the dependent variable considered (Vieira, et al, 2019). From the point of
32 view of managers, the existence of an audit committee as well as environmental expenses
33 negatively influence performance by not increasing efficiency but rather costs. The
34 maturity of companies, on the other hand, for enhancing the use of synergies in the more
35 efficient management of resources, has a positive relationship with performance.
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44 For shareholders, gender diversity and board independence positively influence
45 performance. Probably because they know that their profitability is due to the efforts and
46 motivation of women's work as well as greater pressure from external advisors for
47 innovative measures that promote position and profitability, acting as an internal control
48 mechanism and mitigating any conflicts of interest with the CEO.
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53 From the perspective of external stakeholders, interested in the future growth of
54 companies, and shorter-term investors, gender diversity and the social responsibility
55 committee have a negative impact on the performance of Portuguese companies. Perhaps
56 because the presence of women on boards of directors in Portugal is still recent and only
57 happened through the legal imposition of quotas. The existence of a social responsibility
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3 committee, from the perspective of these stakeholders, is not yet seen as a driver of further
4 performance. However, environmental and social expenditures have a positive effect,
5 suggesting that those outside the companies, the entire attentive public, are perfectly
6 aware of the need for a sustainable ecological culture and that only by improving the
7 working conditions of employees will a progressive improvement of the economy,
8 boosting consumption and more employment and gradually eradicating poverty and
9 leading to fairer and more egalitarian societies.
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15 16 **5.2. Practical Implications**

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18 Corporate governance and corporate social responsibility are essential concepts by which
19 companies voluntarily decide to contribute to more transparent business practices, a better
20 society, and a cleaner environment. Therefore, This work could be important for a wide
21 range of stakeholders: from the beginning to academics and researchers who understand
22 the state of development of these themes in a small country with an underdeveloped
23 capital market. As companies themselves face the challenges of a changing environment
24 in the context of globalization, there should be more aware that corporate social
25 responsibility can have direct economic value. Managers can also perceive the importance
26 of their decisions in business performance. While a company's primary responsibility may
27 be to deliver results, companies can at the same time contribute to social and
28 environmental objectives by integrating corporate social responsibility as a strategic
29 investment into their core business, management decisions, and operations. This work
30 can also be important for current and potential shareholders, as the future of the world
31 economy has to go through more sustainable investments, understood not as a cost but as
32 a long-term strategy, which will pave the way for a cleaner, more equitable society while
33 ensuring improved competitiveness. In fact, the reputation of a national and international
34 company, its image as an employer and producer, and also as an actor on the local scene,
35 certainly influence its competitiveness. Furthermore, corporate social responsibility
36 extends beyond the company's doors to the local community, business partners and
37 suppliers, customers, and public authorities who understand what currently exists and
38 what can be changed for a better world.
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57 **5.3. Limitations and Future Research**

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3 In this section, we present some limitations of our study. Since we try to look at the
4 limitations of our study as an opportunity to improve our research in forthcoming studies
5 and thus contribute to the understanding of this particular issue, we complement the
6 description of the limitations with some suggestions for future research. The first
7 limitation of this work is related to data collection since companies present the
8 information in a non-harmonized way. Our second limitation is related to the possibility
9 of omitting relevant variables. Although the possible variables that can influence
10 corporate performance are almost limitless, we focused our research on a limited number
11 of variables, which in no way can express the complexity of the business activity.
12 However, the evident small size of our sample (34 non-financial companies) limited the
13 inclusion of a larger number of variables in our study.
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17 The small sample size, combined with reports from previous studies that the practices and
18 role of the board of directors in approaching corporate performance may differ
19 significantly in different national settings (Ahrens et al., 2011), that the characteristics of
20 corporate governance may vary significantly across countries as a result of country-
21 specific factors such as regulation and capital market development level (Erkens et al.,
22 2012), and that social responsibility practices have different stages of development in
23 different countries (Halkos & Nomikos, 2021) limit any possibility to generalize our
24 results.
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27 Since the Portuguese capital market is characterized by a relatively low number of listed
28 companies, low capital market liquidity, and a high level of concentration in corporate
29 shareholding, it would be interesting to extend this study using a sample of companies
30 from several countries with similar characteristics. Also, it would be interesting to study
31 the impact of corporate governance characteristics on the performance of family
32 companies to understand the most striking differences, as well as to understand the level
33 of advance that other countries have regarding social and environmental issues from the
34 perspective of the various stakeholders.
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Tables

Table 1: Dependent variables

| Variable | Proxy | Authors |
|--------------|---|---|
| ROA | $\frac{EBIT}{Total\ Assets}$ | Neves, Henriques, <i>et al.</i> (2021); Neves <i>et al.</i> (2020); Vieira <i>et al.</i> (2019); Huang (2010) |
| ROE | $\frac{Net\ Profit\ Generated\ During\ the\ year}{Average\ equity\ of\ the\ firm\ at\ the\ year\ end}$ | Neves, Baptista, <i>et al.</i> (2021); Proença <i>et al.</i> (2020) |
| Tobin's Q | Tobin's Q modified version of Chung and Pruitt (1994): $Q = (MVE + PS + DEBT) / TA$, where MVE is the company's stock price multiplied by the number of common stock shares outstanding; PS is the liquidating value of a company's outstanding preferred stock; DEBT is the value of the company's short-term liabilities net of its short-term assets plus the book value of the company's long-term debt and TA is the book value of a company's total assets. | Neves, Baptista, <i>et al.</i> (2021); Sá <i>et al.</i> (2017); Siddiqui (2015) |
| Stock Return | $R_t = \ln(1 + R_t) = \ln\left(\frac{P_t}{P_{(t-1)}}\right) = \ln(P_t) - \ln(P_{(t-1)})$ where P is the stock price. | Vieira <i>et al.</i> (2019) |

Table 2: Independent variables

| Variable | Proxy | Authors |
|---|--|--|
| Corporate Governance Determinants | | |
| Board size (BSize) | Number of members of the board | Palaniappan (2017); Riyadh et al. (2019); Sehrawat <i>et al.</i> (2020) |
| Gender diversity on the board (BDiv) | Number of woman members of the board divided by the total number of members of the board | Riyadh et al. (2019); Cancela <i>et al.</i> (2020); Terjesen <i>et al.</i> (2016) |
| Board independence (BInd) | Number of independent members of the board divided by the total number of members of the board | Napitupulu <i>et al.</i> (2020); Terjesen <i>et al.</i> (2016); Riyadh et al. (2019); Huang (2010); Ullah, Muttakin, and Khan (2019) |
| Audit committee (AudCom) | Dummy variable with a value of 1 if the company has an audit committee, and 0 otherwise | Fauzi et al. (2017); Hanoon et al. (2020); Munisi and Randøy (2013) |
| Corporate Social Responsibility | | |
| Corporate social responsibility committee (CSR) | Dummy variable with a value of 1 if the company has an audit committee, and 0 otherwise | Cancela <i>et al.</i> (2020); Hussain <i>et al.</i> (2018) |
| Social expenses (SExp) | Expenses associated with employees. This measure included expenses related to employees in positions, benefits to employees, post-employment benefits, and social action expenses (ln social expenses) | Cancela <i>et al.</i> (2020) |
| Environmental expenses (EExp) | Expenses associated with electricity, water, and fuels (ln environmental expenses) | Cancela <i>et al.</i> (2020) |
| Specific Determinants | | |
| Leverage (LEV) | $\frac{\text{Total Debt}}{\text{Equity}}$ | Miralles-Marcelo <i>et al.</i> (2014); Serrasqueiro and Nunes (2008) |
| Age | Companies age (ln years) | Coad <i>et al.</i> (2013); Dawar (2014) |

Table 3- Descriptive Statistics

| Variables | Mean | Minimum | Maximum | Standard Deviation |
|------------------|-------------|----------------|----------------|---------------------------|
| ROA (%) | 4.070 | -47.861 | 57.788 | 9.619 |
| ROE (%) | 10.987 | -80.885 | 129.046 | 20.325 |
| Tobin's Q | 0.577 | 0.001 | 6.509 | 0.910 |
| SReturn | 3.723 | 0.007 | 17.795 | 4.255 |
| BSize | 8.678 | 3 | 21 | 4.347 |
| BDiv | 0.151 | 0 | 0.428 | 0.131 |
| BInd | 0.215 | 0 | 0.857 | 0.236 |
| AudCom | 0.351 | 0 | 1 | 0.479 |
| CSR | 0.354 | 0 | 1 | 0.479 |
| SExp | 10.912 | 4.235 | 13.674 | 1.725 |
| EExp | 14.049 | 7.745 | 19.085 | 3.008 |
| LEV | 0.643 | 0.015 | 2.271 | 0.323 |
| Age | 3.361 | 1 | 5.425 | 0.858 |

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Table 4: Results of the estimation models 1 and 2- ROA and ROE as the dependent variables

| | ROA | | | | ROE | | | |
|-----------------|-------------|----------------|---------------|----------|-------------|----------------|-------------|----------|
| | Coefficient | Standard error | Z | P-value | Coefficient | Standard error | Z | P-value |
| Constant | 129.403 | 55.564 | 2.330 | 0.020** | 178.366 | 90.311 | 1.980 | 0.048** |
| L1. | -0.445 | 0.051 | -8.720 | 0.000*** | -0.021 | 0.128 | -0.170 | 0.865 |
| BSize | 0.312 | 0.560 | 0.560 | 0.577 | 1.744 | 1.609 | 1.080 | 0.278 |
| BDiv | 1.289 | 5.199 | 0.250 | 0.804 | 68.252 | 16.641 | 4.100 | 0.000*** |
| BInd | 2.416 | 9.718 | 0.250 | 0.804 | 39.227 | 22.501 | 1.740 | 0.081* |
| AudCom | -305.305 | 125.451 | -2.430 | 0.015** | 520.581 | 291.892 | 1.780 | 0.075* |
| CSR | 4.651 | 3.177 | 1.460 | 0.143 | 0.005 | 6.124 | 0.000 | 0.999 |
| SExp | 2.254 | 3.818 | 0.590 | 0.555 | 2.106 | 12.447 | 0.710 | 0.866 |
| EExp | -5.985 | 2.238 | -2.670 | 0.007*** | -2.827 | 10.857 | -0.260 | 0.795 |
| LEV | -54.575 | 8.603 | -6.340 | 0.000*** | 47.277 | 40.655 | 1.160 | 0.245 |
| Age | 1.121 | 0.522 | 2.150 | 0.032** | -94.264 | 39.729 | -2.370 | 0.018** |
| Wald | | | 10205.540(10) | 0.0000 | | | 586.710(10) | 0.000 |
| Sargan | | | 7.435(7) | 0.385 | | | 6.744(7) | 0.456 |
| AR(1) | | | -1.316 | 0.188 | | | -1.895 | 0.058 |
| AR(2) | | | -0.782 | 0.433 | | | -1.569 | 0.116 |

Regression is performed using an unbalanced data panel consisting of 34 companies. The variables are duly defined in the Data, Variables, and Methodology section. It should also be noted that: i) *, **, and *** indicates significance levels at 10%, 5%, and 1% respectively; (ii) The Sargan test with a p-value greater than 5% shows that the instruments are valid, and the values in parentheses of the test represent degrees of freedom; (iii) The Wald test has a p-value of less than 5% which means that the joint significance and the coefficients are significant asymptotically distributed as χ^2 under a null hypothesis without significance, with degrees of freedom in parentheses; iv) The m1 test has a normal distribution N (0,1) and tests the null hypothesis of the absence of the first-order autocorrelation, against the alternative hypothesis of the existence of the first-order autocorrelation; v) The test m2 has normal distribution N (0,1) and with a p-value higher than 5% accepts the null hypothesis of the absence of second-order autocorrelation.

Table 5: Results of the estimation models 3 and 4- Tobin's Q and Stock return as the dependent variables

| | Tobin's Q | | | | SReturn | | | |
|-----------------|-------------|----------------|--------------|----------|-------------|----------------|-------------|----------|
| | Coefficient | Standard error | Z | P-value | Coefficient | Standard error | Z | P-value |
| Constant | -1.141 | 0.947 | -1.200 | 0.228 | -65.619 | 12.675 | -5.180 | 0.000*** |
| L1. | 0.191 | 0.167 | 1.140 | 0.254 | -0.329 | 0.068 | -4.810 | 0.000*** |
| BSize | -0.006 | 0.016 | -0.380 | 0.702 | -0.242 | 0.121 | -2.000 | 0.045** |
| BDiv | -0.430 | 0.197 | -2.180 | 0.029** | -4.092 | 1.570 | -2.610 | 0.009*** |
| BInd | -0.020 | 0.159 | -0.130 | 0.896 | 1.059 | 0.604 | 1.750 | 0.080* |
| AudCom | -0.001 | 0.620 | -0.000 | 0.998 | -1.356 | 6.101 | -0.220 | 0.824 |
| CSR | -0.273 | 0.068 | -4.020 | 0.000*** | -0.931 | 0.266 | -3.490 | 0.000*** |
| SExp | -0.288 | 0.087 | -0.330 | 0.741 | 3.425 | 0.985 | 3.480 | 0.001*** |
| EExp | 0.139 | 0.530 | 2.620 | 0.009*** | 2.832 | 0.585 | 4.840 | 0.000*** |
| LEV | -0.370 | 0.241 | -1.530 | 0.125 | -0.262 | 1.479 | -0.180 | 0.859 |
| Age | 0.065 | 0.101 | 0.650 | 0.515 | -0.154 | 0.078 | -1.960 | 0.050 |
| Wald | | | 1808.330(10) | 0.000 | | | 127.260(10) | 0.0000 |
| Sargan | | | 12.402(7) | 0.088 | | | 12.821(7) | 0.076 |
| AR(1) | | | -2.021 | 0.043 | | | -0.682 | 0.495 |
| AR(2) | | | 0.678 | 0.497 | | | -0.442 | 0.658 |

Regression is performed using an unbalanced data panel consisting of 34 companies. The variables are duly defined in the Data, Variables, and Methodology section. It should also be noted that: i) *, **, and *** indicates significance levels at 10%, 5%, and 1% respectively; (ii) The Sargan test with a p-value greater than 5% shows that the instruments are valid, and the values in parentheses of the test represent degrees of freedom; (iii) The Wald test has a p-value of less than 5% which means that the joint significance and the coefficients are significant asymptotically distributed as χ^2 under a null hypothesis without significance, with degrees of freedom in parentheses; iv) The m1 test has a normal distribution N (0,1) and tests the null hypothesis of the absence of the first-order autocorrelation, against the alternative hypothesis of the existence of the first-order autocorrelation; v) The test m2 has normal distribution N (0,1) and with a p-value higher than 5% accepts the null hypothesis of the absence of second-order autocorrelation.