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Gender Diversity Effects on Corporate Policies:

A Portuguese and Spanish Case Study

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to obtain a master's degree in Finance

by

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Abstract

This dissertation analyses how gender diversity in corporate boards influences corporate policies decisions in Portugal and Spain. More specifically, this thesis seeks to address the moderating role of gender diversity on ESG practices, investment decisions and capital structure.

A panel data sample of 74 non-financial Portuguese and Spanish was conducted, consisting in 3050 firm-year observations for the period 2013-2022. The results appear to show that gender diversity on corporate boards implies no significant impact on corporate investment decisions and capital structure. However, a more detailed investigation suggests that increased gender diversity is associated to less investment in intangibles assets and greater leverage, a finding that contrasts with initial expectations.

The study enriches the existing literature by filling the gap in research that connects board gender diversity to the policies in question, with a specific focus on Portugal and Spain during the selected period.

Keywords: Gender Diversity, ESG, Corporate Policies

Resumo

A presente dissertação visa realizar uma análise abrangente de como a diversidade de género nos conselhos administrativos influencia as decisões corporativas em Portugal e em Espanha. Mais especificamente, esta tese procura abordar o papel moderador da diversidade de género nas práticas de ESG, decisões de investimento e de estrutura de capital.

Foi conduzido um painel de dados de 74 empresas não financeiras portuguesas e espanholas, consistindo em 3050 observações para o período de 2013 a 2022. Os resultados parecem mostrar que a diversidade de género nos conselhos de administração não implica um impacto significativo nas decisões de investimento e na estrutura de capital. No entanto, uma investigação mais detalhada sugere que um aumento na diversidade de género está associado a menos investimento em ativos intangíveis e maior alavancagem, uma descoberta que contrasta com as expectativas iniciais.

O estudo enriquece a literatura existente ao preencher a lacuna na pesquisa que conecta a diversidade de género nos conselhos administrativos com as políticas em questão, com um foco específico em Portugal e Espanha durante o período selecionado.

Palavras-Chave: Diversidade de Género, Políticas Corporativas, ESG

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Abbreviations

BGD – Board Gender Diversity

ESG – Environmental, Social and Governance

CSR – Corporate Social Responsibility

BS – Board Size

BIM – Board Independent Members

Introduction

One of the pertinent questions critical to the economy and business nowadays is the promotion of diversity and Environmental, Social and Governance (ESG) practices. This subject has become increasingly popular in society and particularly on what relates to gender with the emergence of the Me Too Movement. Not only did this movement make real change, but it also affected gender diversity in corporate cultures. According to google scholar, the earliest academic papers discussing topics such as gender diversity in business, first emerged in the 1980s. Currently, a search on gender business for the year of 2023, yields approximately 158,000 results, reflecting the growing interest and emphasis on this area.

The persistence of the glass ceiling materialises still stimulates the interest in studying gender disparity in management practices and decision-making. The increasing number of females attending business schools, entering the workforce, and ascending the management ladder reflects a dynamic shift in traditional paradigms (Hurley & Choudhary, 2020). In this context, the presence of women at the board level should shape corporate governance and critical decisions-making areas, including risk management, organizational structure and financial strategies.

This area of research presents several developments, notably in relating gender diversity with ESG practices that are presented and discussed in the Literature Review section.

To some degree, this project has been inspired by Teodosio et al. (2023) work, which is focused on the impact of gender diversity on the corporate board of directors, with a special focus on the Portuguese context. The findings of Teodosio et al. (2023) suggest that the presence of gender encourages the use of

short-term loans against bank credit, as a strategy to mitigate the rising in companies' risk. By comparing the role of gender diversity in corporate policies, this dissertation extends the research on gender diversity through decision-making processes in both Portugal and Spain. The selection of these countries is supported by their similar historical and cultural similarities. Therefore, the evolution of gender diversity presents a compelling area of study due to the presence of more traditional gender roles in these societies. In this way, Portugal and Spain represent great cases for analysing the progress and influence of gender diversity in corporate boardrooms.

Moreover, the study intends to enrich the discourse by debating and exploring the performance implications of ESG criteria simultaneously with gender diversity. Such approach, to the extent of our knowledge, has never been attempted in the context of Portugal and Spain. The inclusion of ESG practices can widen the existing debate and provide the reader with a more comprehensive understanding of the relationship between sustainable practices and an approach to corporate governance. Given the conservative nature of both countries, examining how these elements interact within the corporate landscape offers valuable insights into the evolving dynamics of business practices in regions where traditional values deeply influence social and economic structures.

To support this analysis, a panel data study was conducted from 2013 to 2022, focusing on Portuguese and Spanish public listed companies. By doing so, this study significantly contributes to the exiting body of literature, by investigating the complex interplay between gender diversity, corporate policy and ESG considerations within these two European countries.

The remaining of this thesis is as follows. Section 1 reviews the existing literature on the effects of gender diversity on corporate policies. The sample selection, variables and methodology used is presented in Section 2. Section 3

describes the descriptive statistics, the correlation matrix, and the empirical results. Finally, Section 5 concludes the study.

1. Literature Review

Over the past few years, the relationship between gender diversity within corporate boards and the resultant implications for corporate governance have attracted immense scholarly interest, as highlighted by Wagana & Nzulwa (2016). This growing interest could be attributed to the growing awareness that gender diversity plays an increasingly influential role in decision-making processes, corporate performance, corporate social responsibility (CRS) initiatives, environmental sustainability practices and capital structure (Liao et al., 2015; Siong Chin et al., 2019). Ben Saad & Belkacem (2022) underscores the importance of gender balance within the workforce, stating “Creating and maintaining a gender-balanced workforce is essential to business strategy, viability and competitiveness”. Their research further reveals that board gender diversity leads to greater firm transparency and a reduction in risk-taking behaviors, which significantly affect the financial strategic decision-making processes (Ben Saad & Belkacem, 2022). Building upon these findings, additional studies have further explored the financial implications of gender diversity on corporate boards. A. Ahmed & Atif (2021) provide a compelling case in point, investigating the relationship between female board representation and the company’s financial strategies. They discovered that “women on the board have a positive association with the firm’s use of debt financing” (A. Ahmed & Atif, 2021).

At the same time, ESG has become more pertinent in assessing the broader implications of corporate decisions on sustainability, ethical conduct and social responsibility (Pucheta-Martínez et al., 2023). Indeed, as the landscape has been evolving, there has been a critical shift towards recognizing that effective

governance cannot be limited to financial performance and measures, but rather advocating for environmental responsibility, social wellbeing and governance integrity (Yarram & Adapa, 2021).

This research examines and highlights the significant impact that gender diversity on boards has on the implementation and outcomes of a firm's ESG strategy. Female corporate directors are recognized for diversifying the skills that enter the boardroom, which can have positive implications for firms. For instance, firms with three or more women directors show an improvement in their environmental performance (Cordeiro et al., 2020a). Based on this contribution, women seem to demonstrate committed social responsibility and more committed community service (Cordeiro et al., 2020b). Women have long been considered as more community socially responsible actor than men, showing that they also prefer open conversations that accentuate decision-making focusing on corporate social responsibility (CSR). Literature reviews and meta-analyses, such as those conducted by Dawar & Singh (2016) and Byron & Post (2016) show the resilience of the above stated position, female directors are more aware of their environmental and social surroundings and tend to be more responsive. This perception is in harmony with the stakeholder inclusivity approach where the more diverse a board of directors is, the more likely it is to consider sustainability risks (Bord & O'connor, 1997). Additional empirical evidence, such as the Nuber & Velte (2021) establish a strong linear that is evident between board gender diversity and carbon performance. This is evidenced by the improvement in mitigation strategies and the intensity of emissions.

Nelson (2015) introduces a different angle on risk taking between genders by questioning the conventional assumption of gender-related differences in attitude to risks and claims that the methodologies previously applied to assess this notion were flawed in many aspects. This criticism has reshaped the discussion about the traditional roles of each gender in corporate risk-taking.

Thus, it represents a breakthrough towards a more sophisticated inquiry into how gender diversity affects the efficiency of corporate governance and risk management. Siong Chin et al. (2019) and Liao et al. (2015) offer a valuable insight into the mechanisms through which board gender diversity improves corporate governance, increasing firms' value and the dedication to environmental accountability. These mechanisms include the improvement of problem-solving approaches with innovative and creative solutions, improvement in corporate reputation and increased transparency and accountability, better risk management and enhancement of the organization's relationship with stakeholders by aligning its activities with the value of the community on gender equality and environmental conservation. Their findings support both economic and moral arguments in favour of increased gender diversity, suggesting that it is not only an indicator of social justice but also a competitive necessity.

To connect gender diversity to ESG considerations, Pucheta-Martínez et al. (2023) and Yarram & Adapa (2021) further examine the relationship between gender diversity and CSR, suggesting that the presence of gender diverse boards makes it more likely that the firm will be involved in CSR activities because female directors are often perceived as more ethical and socially responsible and improve reputation and brand image, given that gender diversity is often viewed positively by consumers, investors and other stakeholders. Gender diverse boards could also influence corporate priorities towards embracing CSR initiatives due to female having a better understanding of the consumer preferences, given that women make a significant proportion of consumer decisions, and align with global trends and regulations, due to the fact that global awareness and regulation around gender equality and sustainability grow. Therefore, this connection shows that gender diversity affects a firm's social commitments and practices. Regarding the implications of board gender diversity on capital structure and corporate performance, according to Teodosio

et al. (2023) and Wagana & Nzulwa (2016), despite the beneficial gender impact on decision-making and governance, the effect on financial structuring and performance seems to be less meaningful. Thus, it is crucial to identify the conditions under which gender will contribute to the optimal corporate performance.

This chapter highlights the crucial role that gender diversity plays in advancing corporate governance and aligning it with modern ESG goals. While striving to navigate the complex business landscapes of our time, corporations must embrace the paradigm of inclusivity on boards, ensuring that their decision-making is grounded on sustainability and ethical leadership.

2. Data & Methodology

2.1 Sample

To conduct this study, data were collected using the Refinitiv Eikon database, focusing on publicly traded companies in Portugal and Spain. The initial data panel sample consisted in 3050 firm-year observations for the period of 2013 to 2022. The selection of this timeframe was driven by the availability of the data over the study period.

From the initial sample, 204 firms were excluded given the incomplete information for the variables selected. Additionally, 15 firms were omitted due to the missing data regarding to gender and ESG criteria. At last, 12 financial and insurance listed firms were excluded because of their own regulation for accounting that affects in a different way financial characteristics. Therefore, the final sample consists of 74 non-financial Portuguese and Spanish firms.

Moreover, this sample includes firms from several industries, given that they are concentrated in three core sectors, communications (8,10%), construction

(16,21%) and utilities (16,21 %). Table 1 presents the distribution of the entire sample of companies, organized by industry and country.

Table 1: Industry Distribution

Industry	Country	
	Portugal	Spain
<i>Commercial and Industrial</i>		
Communications	2	4
Construction	1	11
Manufacturing		
Chemicals. Plastic and Rubber		1
Food and Beverages	1	2
Pulp and Paper	2	2
Oil and Gas	1	1
Steel, Aluminium and other Metals		2
Real State		6
Retail	2	2
Services	1	1
Utilities	4	8
Other		2
<i>Health</i>		
Pharmaceutical		5
Technology		3
<i>Transportation</i>		1
<i>Other</i>		9
Total	14	60

The final sample of this dissertation is formed by 740 firm-year observations, consisting 81% of Spanish companies and 19% Portuguese ones.

2.2 Variables

2.2.1. Dependent Variables

The core analysis of the study is to understand the impact of gender diversity and ESG efforts on corporate policies, in terms of investment and financing decisions, as well as examining the role of the board gender diversity in shaping the relationship between ESG and corporate policies. For that purpose, it was

established two main dependent variables that allows an examine towards investment policies and capital structure.

In the context of assessing the impact on the investment policies, an intangible asset ratio was conducted. The ratio is calculated by dividing a firm's intangible assets by total assets (INTATA). A company's relatively high ratio indicates a long-term strategy to maximize innovation capacity to achieve sustained growth prospects. A low ratio, in turn, may indicate a more conservative approach to the business framework the company operates in. This ratio determines the company strategy, its performance and survival prospects.

For the other corporate policy, capital structure, a long-term debt ratio was applied. This ratio is measured by long-term debt over total assets and allows the understanding of how much a company relies on long-term debt to finance its business and growth (LONG_TA). In one hand, it might be risky if a company uses a lot of long-term debt but, in the other hand, it can also mean that the company is pursuing growth opportunities.

2.2.2. Independent Variables

The first key explanatory variable is the board gender diversity (GENDER), defined as the percentage of women on the board of directors of each company and on each year. The second key explanatory variable is ESG, an index that represents a firm's performance across the reported information in the environmental, social, and corporate governance pillar.

As well as the overall index, we also consider each of its components, individually, to better understand the effect on corporate governance. The environmental pillar measures how effectively a company adopts better managements practices to avoid environmental risks and optimize environmental opportunities. The social pillar is measured by a company's success to generate trust and loyalty within its employees, reflecting its

reputation. Governance pillar measures the commitment of the company's board members and executives act within the shareholder's best interest.

2.2.3. Control Variables

Corporate governance and firm-specific characteristics were included in the study as control variables. To control the influence of corporate governance characteristics on both capital structure and investment decisions, it was used Board Size (BS), Board Independent Members (BIM). Board Size indicates the total number of individuals on a company's boards of directors and may impact a company's financing activities. While larger boards can increase information transparency, they might also complicate communication and decision-making Ahmed (2019) BIM is defined as the percentage of independent members comprised within the overall board composition. Independent board members play a crucial role in supervising management and minimize agency costs, which are essential factors for improving the quality of information and decision-making efficacy.

Firm characteristics are known as variables that impact capital structure, due to that, they are also included in this research as control variables. The variables in question are firm size and return-on-assets (ROA). Firm size is measured as the natural logarithm of company's total assets. This variable could affect capital structure in multiple ways, given that larger firms have the advantage of economies of scale and are able to expand their liabilities due to their experience Alves et al. (2015) ROA is the ratio of net income over total assets. This ratio can lead to different results regarding its effect on capital structure. According to the trade-off theory, companies with higher profitability tend to have higher levels of indebtedness.

Table 2 presents the nature, designations, symbols, and measurement approaches for each variable incorporated in the research.

Table 2: Variable Measurement and Definition

Nature	Variable	Symbol	Measurements
Dependent Variable	Intangible Asset Ratio	INTATA	Intangible Assets over Total Assets
Independent Variable	Long-term Debt Ratio	LONG_TA	Long-term Debt over Total Assets
	ESG	ESG	Companies score on eco, social and governance practices
	Environmental Pillar	EP	Companies score on its influence on ecosystems
	Social Pillar	SP	Companies score on its commitment on social responsibility
	Governmental Pillar	GP	Companies score on its ethics, transparency, and accountability
Control Variable	Firm Size	SIZE	Natural logarithm of total assets
	Return on assets	ROA	Net Income/Total Assets
	Board Size	BS	Number of directors on the board
	Board Independence	BIM	Percentage of independent members on the board
	Board Gender Diversity	GENDER	Percentage of female directors on the board

2.3. Models

In this section, the models for the regression analysis are established, incorporating all the variables previously selected to examine the role of ESG considerations in shaping corporate policies. To test these relationships, a data panel model was applied.

Endogeneity concerns could make it difficult to draw accurate conclusions about the dynamics between the ESG, gender, and corporate policies variables. To mitigate any potential endogeneity risk in this study, the main regression model was conducted using one-year lagged values for all the explanatory and control variables.

To perform an econometric analysis of the dataset, it was used the fixed-effects models in a panel data framework. Following the methodology detailed above,

it was developed and analysed four basic models designed to determine the effect between the independent variables and the investment policies. First, it was established a model with the ESG criteria as a dependent variable for the analysis. This model plays a crucial role in thoroughly understanding the comprehensive effect of ESG standards on financial decision. Thus, the initial model will be developed as follows:

$$\begin{aligned} INTATA_{it} = & \alpha + \beta_1 GENDER_{i,t-1} + \beta_2 ESG_{i,t-1} + \beta_3 SIZE_{i,t-1} + \beta_4 ROA_{i,t-1} \\ & + \beta_5 BS_{i,t-1} + \beta_6 BIM_{i,t-1} + \eta_i + \nu_t + \varepsilon_{it} \end{aligned} \quad [1]$$

Where *INTATA* is the ratio of intangible assets to total assets for firm *i* at time *t*; η_i is the firm fixed-effects, which is intended to eliminate the impact of unobservable firm-specific and time-invariant heterogeneity; ν_t is the time-fixed effects, which is included to control for unobserved time-variant effects to all firms in the selected sample; *i* represents the firms; *t* represents time dimension; ε_{it} represents the error term.

To better comprehend the unique effects attributed to the environmental, social and governance components of the ESG framework, the original model was independently replicated for each pillar with all its originality preserved.

Both gender and ESG concerns were also present in assessing how they affected corporate financial decisions, specifically the debt structure. To this end, a complementary model was created, expanding in the previous one and introducing the long-term det ratio as a priori independent variable and is described as follows:

$$\begin{aligned} LONG_TA_{it} = & \alpha + \beta_1 GENDER_{i,t-1} + \beta_2 ESG_{i,t-1} + \beta_3 SIZE_{i,t-1} + \beta_4 ROA_{i,t-1} \\ & + \beta_5 BS_{i,t-1} + \beta_6 BIM_{i,t-1} + \eta_i + \nu_t + \varepsilon_{it} \end{aligned} \quad [2]$$

To evaluate the implication of individual ESG pillars on the long-term debt ratio, three additional models were designed using the same logic as with the investment ratio models.

3. Results

3.1. Descriptive Statistics

Before proceeding to analyse the results obtained from the previously defined models, it is essential to first perform a descriptive statistics analysis. This will help identify the general characteristics of the described variables and find some patterns and tendencies within the sample selected. Table 3 displays the descriptive statistics conducted for whole sample. Additionally, separate descriptive statistics were performed for each country, Portugal and Spain.

Table 3: Descriptive Statistics - Total Sample

	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>Kurtosis</i>	<i>Skewness</i>
INTATA	740	0.000	0.843	0.089	0.136	10.783	3.047
LONG_TA	740	0.000	1.058	0.244	0.157	2.068	0.856
ESG	740	0.627	90.773	63.197	17.653	1.209	-1.065
EP	740	3.876	98.137	64.810	21.452	0.327	-0.881
SP	740	0.432	98.194	72.251	20.396	1.266	-1.225
GP	740	0.867	95.049	49.025	21.836	-0.819	-0.153
SIZE	740	16.843	25.765	21.887	1.712	0.017	-0.275
ROA	740	-4.177	0.603	0.025	0.175	474.719	-19.900
BS	740	5.000	23.000	12.509	3.533	0.124	0.481
GENDER	740	4.348	55.556	24.278	10.848	-0.582	0.122
IBM	740	5.556	88.889	46.314	15.616	-0.337	0.253

The table reports the number of observations (*N*), minimum (*Min*), maximum (*Max*), mean, standard deviation (*SD*), kurtosis and skewness for all the variables used in this study. From the table, it is possible to see that INTATA demonstrate

very low means at 0.089, indicating that companies allocate a relatively small proportion of their total assets to intangible assets. A high kurtosis of 10.783 and a high positive skewness of 3.047, of the INTATA variable, is indicative of few outliers with especially high value, with most entities being bunched up at the lower end. The LONG_TA also presents a low mean, suggesting that companies throughout the sample have a small percentage of their capital structure financed through long-term debt. Its skewness value is 0.856, which involves a moderately right-tailing distribution. This, in turn, means that most firms rely little on long-term debt.

ESG display a good average score of 63.197, which reveals a tendency towards higher ESG scores, and with a relatively high standard deviation of 17.653. The negative skewness of -1.065 reveals the tail to the left. Additionally, ES and SP have higher means (64.810 and 72.251, respectively), which perform better than GP (value of 49.025). The negative skewness for EP and SP indicates a larger concentration of entities with high scores and the distribution for GP is more symmetric, with skewness of -0.153. The range of GP (min value of 0.867 and max value of 95.049) suggests significant differences in governance practices among entities.

Regarding the SIZE variable, with a mean of 21.887, it should be noted that the distribution of the values is narrow. This fact indicates little variation in the size of the entities. The ROA measure document a high kurtosis of 474.719 and a significant negative skew on 19.900, that reveals several outlying companies with extremely profitability.

The analysis of BS reveals an average of 12.509, a standard deviation of 3.533 and a minimum and maximum values of 5 and 23, respectively. The range of variation shows that BS has significant diversity in preferences across the different companies. The rightward skewness of BS implies that a large number of entities have larger board sizes. With regards to GENDER, the average

percentages are 24.278, which shows the moderate representation of female across firms. The standard deviation of 10.848 and the leftward skewness of -0.582 depicts companies have varied levels of representation, with some firms being male dominated. Finally, the IBM variable has a mean of 46.314, which suggests that on average, nearly half of all board members are independent. The range from 5.556 to 88.889 shows a variation of board independence among firms.

Table 4: Descriptive Statistics - Portugal

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>SD</i>	<i>Kurtosis</i>	<i>Skewness</i>
INTATA	140	0.000	0.843	0.109	0.204	7.110	2.875
LONG_TA	140	0.000	0.505	0.216	0.135	-0.827	0.048
ESG	140	16.464	87.430	63.139	16.070	1.592	-1.352
EP	140	3.876	93.675	65.466	21.236	1.785	-1.429
SP	140	12.773	93.993	69.035	18.513	1.217	-1.197
GP	140	5.758	93.016	49.995	23.149	-1.115	0.016
SIZE	140	18.280	24.798	22.004	1.436	0.156	-0.463
ROA	140	-4.177	0.150	-0.001	0.374	118.365	-10.642
BS	140	6.000	23.000	14.467	4.474	-1.029	0.149
GENDER	140	4.348	50.000	23.202	11.308	-0.734	-0.086
IBM	140	5.556	87.500	43.310	16.645	0.198	0.274

Table 5: Descriptive Statistics - Spain

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>SD</i>	<i>Kurtosis</i>	<i>Skewness</i>
INTATA	600	0.000	0.731	0.084	0.115	6.225	2.392
LONG_TA	600	0.000	1.058	0.251	0.162	2.206	0.934
ESG	600	0.627	90.773	63.211	18.026	1.137	-1.017
EP	600	5.692	98.137	64.652	21.525	0.043	-0.759
SP	600	0.432	98.194	73.017	20.766	1.344	-1.264
GP	600	0.867	95.049	48.794	21.533	-0.745	-0.207
SIZE	600	16.843	25.765	21.859	1.769	-0.057	-0.234
ROA	600	-0.500	0.603	0.031	0.070	15.802	-0.261
BS	600	5.000	21.000	12.043	3.098	0.056	0.239
GENDER	600	5.263	55.556	24.528	10.737	-0.569	0.185
IBM	600	14.286	88.889	46.927	15.345	-0.482	0.273

Table 4 and table 5 are the descriptive statistics performed separately to the Portuguese and Spanish companies. From those tables, it is possible to conclude that the average value of INTATA is higher in Portuguese firms and LONG_TA mean is higher in Spanish ones. Despite that, the average values in both variables do not show significant disparities between countries. It is also worth mentioning that the spread and proclivity of the ratio LONG_TA are significantly higher in Spain, as its skewness and kurtosis are also positive. The similarity between the countries is notably remarkable when assessing the ESG, with the mean values being almost identical. This similarity is, however, slightly stronger in Portugal, which is corroborated by the lower deviance from the mean and higher kurtosis, even though the distribution still leans toward several entities taking values below the calculated average. The EP, SP, and GP measures demonstrate a similar distribution in the two countries, and the same is suitable for SIZE, even though the Portuguese demographic is slightly more slanted toward larger firms. The two countries manifest dramatically different distributions regarding ROA, as the mean value in Portugal is almost at zero, and the kurtosis and skewness are notably higher in this study. Based on the figure, the mean Portuguese firm achieves almost no asset profitability, whereas the Spanish mean value suggests that, on average, the country performs slightly better. The situation is the opposite regarding BS and IBM, in which Portuguese firms' board are slightly larger and less independent than their Spanish counterparts. Accounting for the GENDER, the mean values are slightly higher in Spain, although the distribution still seems to feature a wide range of gender levels and highlight a clear dominance of less diverse firms.

3.2. Correlation Matrix

In this section it performed a correlation analysis of the variables included in the developed models. The purpose of this analysis is to determine how the

different variables are related. Therefore, the following tables provide the Pearson correlation matrix for the total sample and subsamples based on the countries under consideration.

Table 6: Pearson Correlation Matrix - Total Sample

	INTATA	LONG_TA	ESG	EP	SP	GP	SIZE	ROA	BS	GENDER	IBM
INTATA	1.000										
LONG_TA	0.141***	1.000									
ESG	-0.103***	0.199***	1.000								
EP	-0.185***	0.197***	0.869***	1.000							
SP	-0.096***	0.123***	0.895***	0.739***	1.000						
GP	0.040	0.169***	0.665***	0.357***	0.391***	1.000					
SIZE	-0.027***	0.267***	0.566***	0.597***	0.491***	0.262***	1.000				
ROA	-0.104	-0.015	0.078	0.088**	0.062	0.065	0.046	1.000			
BS	-0.025	0.230***	0.262***	0.313***	0.259***	-0.010	0.554***	-0.033	1.000		
GENDER	0.040	0.061	0.110***	0.065	0.084**	0.146***	-0.043	0.091***	-0.260***	1.000	
IBM	0.012	-0.016	0.252***	0.113***	0.110***	0.468***	0.112***	-0.038	-0.205***	0.228***	1.000

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

The Pearson Correlation Matrix, presented in the Table 6, reveals a significant negative relationship between ESG and INTATA and a positive one with LONG_TA. This relationship suggests that the higher the ESG score, the lower the intangible assets ratio and the higher the long-term debt ratio. As expected, Table 6 shows a strong correlation with the overall ESG scores and the individual pillars EP, SP and GP. However, EP and SP are negatively related to the intangible assets ratio but related positively to the long-term debt ratio.

Large companies also exhibit a strong positive correlation with long-term debt ratio and a negative relationship with the intangible asset ratio, indicating that larger companies tend to hold higher long-term debt. Also, SIZE has a positive relationship with ESG pillar, indicating that larger companies have better ESG metrics. ROA does not display a strong correlation with the other proxies for financial performance but a slight positive relationship with EP.

For the corporate governance variables, BS displays a positive correlation with LONG_TA and ESG, which means that companies with larger boards have higher long-term debt and have better ESG performance. Thus, BS reveals a strong negative correlation with ROA. The proxy variables indicating gender diversity (GENDER), turns out to be positively related to ESG, most of the ESG pillars and ROA. At last, IBM are practically not correlated to INTATA and LONG_TA, but shows a positive correlation with ESG and GP, signalling better overall ESG performance.

Table 7: Pearson Correlation Matrix - Portugal

	INTATA	LONG_TA	ESG	EP	SP	GP	SIZE	ROA	BS	GENDER	IBM
INTATA	1.000										
LONG_TA	0.506***	1.000									
ESG	-0.158*	0.222***	1.000								
EP	-0.372***	0.174**	0.877***	1.000							
SP	-0.070	0.194**	0.894***	0.785***	1.000						
GP	0.166*	0.184**	0.608***	0.247***	0.325***	1.000					
SIZE	0.117	0.332***	0.734***	0.695***	0.690***	0.351***	1.000				
ROA	-0.241***	0.170**	0.282***	0.307***	0.215**	0.172*	0.190**	1.000			
BS	0.072	0.532***	0.237***	0.213**	0.387***	-0.072	0.589***	0.047	1.000		
GENDER	0.038	-0.236***	-0.181*	-0.214**	-0.226**	0.059	-0.376***	0.176**	-0.520***	1.000	
IBM	-0.127	-0.242***	-0.060	-0.188**	-0.148	0.216**	-0.102	-0.109	-0.363***	0.184*	1.000

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

Table 8: Pearson Correlation Matrix - Spain

	INTATA	LONG_TA	ESG	EP	SP	GP	SIZE	ROA	BS	GENDER	IBM
INTATA	1.000										
LONG_TA	0.046	1.000									
ESG	-0.100	0.197**	1.000								
EP	-0.107	0.176**	0.849***	1.000							
SP	-0.107	0.100	0.898***	0.697***	1.000						
GP	-0.006	0.173**	0.681***	0.317***	0.411***	1.000					
SIZE	-0.076	0.263***	0.534***	0.562***	0.454***	0.243***	1.000				
ROA	-0.102	-0.262***	-0.097	-0.066	-0.090	-0.029	-0.047	1.000			
BS	-0.090	0.222***	0.290***	0.338***	0.270***	0.004	0.591***	-0.126	1.000		

GENDER	0.024	0.095	0.184*	0.097	0.148	0.190**	0.020	0.068	-0.159	1.000	
IBM	0.063	0.008	0.319***	0.183*	0.157	0.531***	0.159*	-0.009	-0.135	0.256***	1.000

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

The correlation analysis of Table 7 and 8, referring to Portugal and Spain, respectively, reveals that both countries have high positive correlations between ESG score and its pillars, EP, SP and GP. These matrices also show a high positive correlation between ESG and LONG_TA, indicating a common trend where the intensity of the ESG scores is associated with the proportion of long-term debt. Also, from the tables, it is evident, in both countries, that companies with a larger board size (BS) are significantly more correlated with LONG_TA.

In the Portuguese scenario, the EP exhibits a significantly stronger negative correlation with INTATA, compared to Spain. Moreover, the correlation coefficient of SIZE, ESG score, and its pillars are significantly more pronounced in Portugal than in Spain. This shows that firm size is more correlated with ESG indicators in the Portuguese context. A similar trend is also evidenced within ROA in Portugal. In Spain, the IBM show a strong positive correlation with the GP, while in Portugal, this relationship can be described relative to the LONG_TA as non-significant due to a negative effect. This distinction in the discussed factor may be linked to the specifics of corporate governance in the countries, which is important for financial structuring and ESG incorporation.

3.3. Regression analyses

At this point, the results of the regressions performed are analysed. The econometric approach is fixed-effects models in a panel data. As mentioned in the models' section, the four regressions are made for each of the dependent variables. In this section it will perform three different analyses. Initially, it will be examined the relationship between the dependent variables and the board

gender diversity, the overall and the individual ESG criteria. Then, it will be tested the interaction between the independent variables and the variable GENDER for a better understanding of its moderator effect. At last, a robustness test will be conducted.

3.3.1. Baseline Results

Table 9 presents information on the results of a basic analysis examining the effect of gender diversity and ESG on both intangible assets and firm financing. Panel A shows the impact of the ESG criteria on the investment policy, Panel B the impact on the capital structure.

As for the variable GENDER we do not find any statistically significant result for the impact of gender on neither intangible intensity (INTATA), nor on firm financing (LONG_TA). This outcome may reflect the cultural context of Spanish and Portuguese societies. The companies in this study are located in conservative countries, suggesting that the presence of women on Portuguese and Spanish boards might not yet be sufficient to impact the investment and capital structure corporate policies.

Table 9: Basic Analysis

Panel A: Intangible Assets Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.2448* [0.06]	0.2564** [0.05]	0.2279* [0.09]	0.212 [0.11]
ESG	0.0004*** [0.00]			
EP		0.0006*** [9.01]		
SP			0.0001 [0.33]	

GP				0.0002*
				[0.08]
SIZE	-0.0072	-0.0084	-0.0059	-0.005
	[0.24]	[0.17]	[0.34]	[0.41]
ROA	-0.0442**	-0.0458**	-0.0455**	-0.0460**
	[0.03]	[0.02]	[0.03]	[0.03]
BS	-0.0009	-0.0006	-0.0009	-0.0009
	[0.26]	[0.42]	[0.43]	[0.27]
GENDER	-0.0002	-0.0002	-0.0002	-0.0002
	[0.33]	[0.23]	[0.43]	[0.26]
IBM	-1.2388	1.7661	3.7772	-2.1803
	[0.93]	[0.90]	[0.79]	[0.99]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Within R-squared	0.077	0.105	0.061	0.067
N	479	479	479	479

Panel B: Long-term Debt Ratio

	Model ESG	Model E	Model S	Model G
Const	0.8863***	0.8623***	0.8065**	0.7857**
	[0.01]	[0.01]	[0.01]	[0.01]
ESG	0.0009**			
	[0.02]			
EP		0.0008**		
		[0.02]		
SP			0.0004	
			[0.22]	
GP				0.0006**
				[0.04]
SIZE	-0.0303**	-0.0293*	-0.0257*	-0.0244
	[0.05]	[0.05]	[0.09]	[0.10]
ROA	0.0158	0.0155	0.0165	0.0163
	[0.32]	[0.33]	[0.30]	[0.31]
BS	0.0012	0.0017	0.0014	0.0013
	[0.60]	[0.45]	[0.54]	[0.55]
GENDER	-0.0006	-0.0006	-0.0005	-0.0007
	[0.31]	[0.27]	[0.37]	[0.19]
IBM	-0.0005	-0.0004	-0.0004	-0.0006
	[0.21]	[0.32]	[0.27]	[0.17]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes

Within R-squared	0.044	0.043	0.034	0.04
N	481	481	481	481

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

As can be observed, in the case of the effect of ESG, we find a positive and statistically significant coefficient for the ESG variable in Panel A, suggesting that firms with higher ESG are associated with higher proportion of intangible assets.

As for the control variables, SIZE and ROA have a negative relationship that is consistent in all models, with ROA being significant. Therefore, bigger companies and companies with higher ROA tend to have a lower intangible assets ratio. The BS, GENDER and IBM are not significant, which suggests that the intangible assets ratio is not dependent on these factors for this sample.

Regarding the individual components, it is possible to observe that in both panels only EP and GP have a positive statistically significant coefficient, which means that higher the EP and GP scores, are connected with higher proportion of intangible assets and more dependence on long-term debt.

Panel B, allows us to assess ESG is positively related to long-term debt ratio, meaning that better ESG scores make companies more reliant on long-term debt. SIZE is significantly negative in the first two models, meaning that bigger firms are less reliant on long-term debt. The variables ROA, BS and GENDER have no significant impact on long-term debt ratio, and it shows that these factors do not significantly influence firms' capital structure in terms of long-term debt within this sample.

3.3.2. ESG and Corporate Policies: The Role of Gender

In this section we further explore the relationship between ESG and corporate policies by considering the role of gender diversity. The models tested in this section differ from all those considered above to the extent that interaction terms are now also included. The relevant regression results are provided in Table 10,

which adds a new variable to the setting, representing the interaction between the GENDER variable and the ESG, EP, SP and GP variables, respectively. Specifically, Panel A of the Table 10 presents the interaction effects on investment policy, coded as INTATA, and Panel B shows the results of the incorporation of these interaction terms with the capital structure variable, expressed as LONG_TA.

Table 10: Interaction Effects

Panel A: Intangible Assets Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.2405* [0.07]	0.2226* [0.09]	0.2226* [0.10]	0.2282* [0.07]
ESG	0.0001 [0.59]			
ESG×GENDER	-1.545* [0.07]			
EP		0.0002 [0.21]		
EP×GENDER		2.1595*** [0.00]		
SP			-5.1415 [0.98]	
SP×GENDER			6.1631 [0.42]	
GP				-1.2166 [0.94]
GP×GENDER				7.6215 [0.19]
SIZE	-0.0061 [0.32]	-0.0058 [0.34]	-0.0052 [0.40]	-0.0053 [0.38]
ROA	-0.0442** [0.03]	-0.0449** [0.02]	-0.0462** [0.03]	-0.0456** [0.03]
BS	-0.0009 [0.26]	-0.0004 [0.56]	-0.0009 [0.27]	-0.0009 [0.26]
GENDER	-0.0012** [0.04]	-0.0017*** [0.00]	-0.0006 [0.30]	-0.0006* [0.09]
IBM	-3.2408	-6.3681	3.467	-9.9823

	[0.82]	[0.99]	[0.81]	[0.94]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Within R-squared	0.085	0.124	0.063	0.071
N	479	479	479	479

Panel B: Long-term Debt Ratio

	Model ESG	Model E	Model S	Model G
Const	0.9962*** [0.00]	0.9718*** [0.00]	0.8647*** [0.01]	0.8588*** [0.01]
ESG	-1.2554 [0.98]			
ESGxGENDER	4.6351** [0.01]			
EP		-6.6701 [0.89]		
EPxGENDER		4.2890** [0.01]		
SP			-0.0002 [0.75]	
SPxGENDER			2.6642 [0.15]	
GP				-0.0001 [0.91]
GPxGENDER				2.8052* [0.08]
SIZE	-0.0324** [0.03]	-0.0318** [0.04]	-0.0265* [0.08]	-0.0261* [0.08]
ROA	0.0269 [0.10]	0.0288* [0.08]	0.0228 [0.17]	0.0216 [0.18]
BS	0.001 [0.66]	0.0016 [0.46]	0.0012 [0.59]	0.0012 [0.59]
GENDER	-0.0035** [0.01]	-0.033*** [0.01]	-0.0024* [0.09]	-0.0022** [0.03]
IBM	-0.0005 [0.19]	-0.0004 [0.33]	-0.0004 [0.28]	-0.0006 [0.15]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Within R-squared	0.056	0.058	0.039	0.048
N	481	481	481	481

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

As shown by the table above, ESG factors and several other factors significantly affect the intangible asset ratio and the long-term debt ratio. From Panel A it's possible to see a negative significant interaction between ESG and gender (ESGxGENDER), suggesting that the ESG score might change when considering the gender of the involved firms, potentially changing its association with the company's intangible assets. ROA also proves to be significantly and negatively correlated with the intangible assets ratio in all models.

From the Panel B, the only significant interaction on the long-term debt ratio is the ESGxGENDER, while all other ESG factors paired with gender exhibit some significance in various models. The size of a company plays a significantly negative role in the long-term debt ratio in all models, while gender is again significantly negative in several. All the models are balanced by including year and country fixed effects. Overall, the gender plays a significant role in the relationship between ESG factors and financial ratios independently and as a part of the interaction term.

3.3.3. Robustness Tests

Robustness tests evaluate how consistent and reliability the results are for different scenarios, assumptions or specifications. In order to analyse the robustness of the results from the previous section, three additional tests are performed.

First, in order to check how the relationship between the independent variables and the percentage of intangible assets behaves, the dependent variable for investment will be changed to the ratio of tangible assets to total assets, as shown below in the Table 11, Panel A. Also, debt structure will be changed from long-term debt ratio to short-term debt ratio, as presented in Table 11, Panel B.

Table 11: Change in the Dependent Variable

Panel A: Tangible Assets Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.7552*** [0.00]	0.7436*** [0.00]	0.7721*** [0.00]	0.7880*** [0.00]
ESG	-0.0004*** [0.01]			
EP		-0.0006*** [0.00]		
SP			-0.0001 [0.33]	
GP				-0.0002* [0.27]
SIZE	0.0072 [0.24]	0.0084 [0.17]	0.0059 [0.34]	0.005 [0.41]
ROA	0.0442** [0.03]	0.0458** [0.02]	0.0455** [0.03]	0.0460** [0.03]
BS	0.0009 [0.26]	0.0006 [0.42]	0.0009 [0.28]	0.0009 [0.27]
GENDER	0.0002 [0.33]	0.0002 [0.23]	0.0002 [0.43]	0.0002 [0.26]
IBM	0 [0.93]	0 [0.90]	-0.00003 [0.80]	0 [0.99]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
N	479	479	479	479

Panel B: Short-term Debt Ratio				
	Model ESG	Model E	Model S	Model G
Const	6519.39** [0.04]	5863.73* [0.06]	6197.41** [0.05]	6003.08* [0.05]
ESG	8.3192** [0.03]			
EP		2.9259 [0.37]		
SP			4.6002 [0.13]	
GP				6.6546***

				[0.01]
SIZE	-324.526**	-285.868*	-303.535**	-290.462**
	[0.03]	[0.05]	[0.04]	[0.04]
ROA	-49.5439	-27.0082	-28.3253	-34.5543
	[0.76]	[0.87]	[0.86]	[0.83]
BS	16.2647	20.5456	16.073	15.4413
	[0.43]	[0.32]	[0.44]	[0.46]
GENDER	2.9885	2.7246	3.9993	1.3717
	[0.57]	[0.60]	[0.91]	[0.79]
IBM	-0.1854	0.8871	0.4443	-1.1327
	[0.96]	[0.81]	[0.91]	[0.77]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
N	475	475	475	475

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

The tangible assets ratio is negatively influenced by the overall ESG score, meaning that with high ESG scores, the ratio is low. Among the ESG components, the EP has the most significant but negative influence, compared to the SP and GP, with the governance pillar effect being significant but less pronounced. The control variables have a different influence on the tangible assets ratio. SIZE and ROA positively influence this variable, while BS, GENDER and IBM do not have a meaningful impact.

From Panel B, the analysis of the short-term ratio shows that the ESG score correlates with a positive sign to the ratio. This implies that firms with higher ESG score, have a higher short-term debt ratio. The GP as a stronger positive statistical influence on the dependent variable. In one hand, SIZE has a negative impact, which implies that bigger firms have a lower short-term ratio. On the other hand, profitability does not impact the ratio. The GP variable has a stronger positive statistical influence on the dependent variable. Similar to Panel A, the corporate governance control variables are also not significant variables.

The second robustness test performed in this study, was the performing of tests with the original models of this study but without the control variables. This

test helps isolate and clarify the direct relationship between the explanatory and dependent variables. This approach can provide a more straightforward interpretation of how changes in the ESG criteria (overall and individual components) directly affect the investment and capital structure policies. Table 12 above, illustrates the results of this robustness test.

Table 12: Regressions without Control Variables

Panel A: Intangible Assets Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.0657*** [0.00]	0.0577*** [0.00]	0.0841*** [0.00]	0.0793*** [0.02]
ESG	0.0005*** [0.01]			
EP		0.0006*** [0.00]		
SP			0.0001 [0.41]	
GP				0.0002** [0.02]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
N	498	498	498	498

Panel B: Long-term Debt Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.2135*** [0.00]	0.2152*** [0.00]	0.2270*** [0.00]	0.2419*** [0.00]
ESG	0.0007* [0.00]			
EP		0.0007** [0.03]		
SP			0.0004 [0.16]	
GP				0.0002 [0.32]
Year fixed effects	Yes	Yes	Yes	Yes

Country effect	Yes	Yes	Yes	Yes
N	499	499	499	499

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

Panel A presents that the overall ESG score is positively associated with the intangible assets ratio, and it suggests that firms with strong ESG commitments are more likely to invest in intangible assets. Particularly, the EP relationship with the INTATA was stronger than the entire ESG score, showing that there is a notable connection between environmental efforts and investment in intangible assets. SP and GP also impacted the intangible assets ratio. However, the governance manifested only a small yet meaningful positive impact indicating the potential role of governance in asset management strategies.

As for the Panel B, both ESG and EP presented a positive and significant impact on the LONG_TA. This can mean that ESG and specifically environmental firm are more likely to keep the long-term debt higher. In the case of SP and GP, the effects are less pronounced considering the LONG_TA, with the GP one not affecting at all.

Ultimately, such targeted approach with the absence of control variables allows for shedding light on the nuanced but apparent link between ESG convictions and financial decisions. The obtained findings imply that ESG activities, namely environmental initiatives, contribute to greater investments into intangible assets, as well as have a significant influence on capital structure establishment.

Table 13: Interaction Effects with Variables Variation

Panel A: Intangible Assets Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.189 [0.21]	0.0245 [0.87]	0.1938 [0.20]	0.1986 [0.19]

ESG_VAR	0.0004			
	[0.82]			
ESG_VARxGENDER_VAR	-0.0021			
	[0.81]			
EP_VAR		-0.0068		
		[0.17]		
EP_VARxGENDER_VAR		0.0053		
		[0.69]		
SP_VAR			0.00008	
			[0.97]	
SP_VARxGENDER_VAR			0.0028	
			[0.86]	
GP_VAR				-0.0036
				[0.25]
GP_VARxGENDER_VAR				0.0069
				[0.40]
SIZE	-0.0032	0.0041	-0.0035	-0.0036
	[0.64]	[0.55]	[0.62]	[0.60]
ROA	-0.0607***	-0.0599***	-0.0608***	-0.0599***
	[0.00]	[0.00]	[0.00]	[0.01]
BS	-0.0014	-0.0019**	-0.0014	-0.0015
	[0.12]	[0.04]	[0.13]	[0.26]
GENDER_VAR	0.0022	0.0026	0.002	0.0016
	[0.45]	[0.38]	[0.50]	[0.60]
IBM	-0.00002	-0.00001	-0.00002	-0.000009
	[0.86]	[0.93]	[0.87]	[0.95]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
N	422	479	479	479

Panel B: Long-term Debt Ratio				
	Model ESG	Model E	Model S	Model G
Const	0.7112*	0.7008*	0.7078*	0.7152*
	[0.05]	[0.06]	[0.05]	[0.05]
ESG_VAR	0.0159***			
	[0.00]			
ESG_VARxGENDER_VAR	-0.0883***			
	[0.00]			
EP_VAR		0.0026		
		[0.86]		
EP_VARxGENDER_VAR		0.0124		

			[0.75]	
SP_VAR			0.0184***	
			[0.00]	
SP_VARxGENDER_VAR			-0.1208***	
			[0.01]	
GP_VAR				-0.0007
				[0.94]
GP_VARxGENDER_VAR				0.016
				[0.51]
SIZE	-0.0208	-0.0202	-0.021	-0.0211
	[0.22]	[0.25]	[0.21]	[0.22]
ROA	0.013	0.0166	0.0125	0.0172
	[0.42]	[0.32]	[0.44]	[0.29]
BS	0.0021	0.0019	0.0026	0.0025
	[0.41]	[0.47]	[0.31]	[0.35]
GENDER_VAR	-0.0085	-0.0125	-0.0085	-0.0102
	[0.31]	[0.15]	[0.31]	[0.25]
IBM	-0.0004	-0.0004	-0.0004	-0.0005
	[0.34]	[0.37]	[0.30]	[0.28]
Year fixed effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
N	423	417	423	423

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level, respectively

As the final robustness test, the Table 13 presents the results of the regressions with the variation of the dependent variables, the GENDER variable and the product of those variations.

Although the linear analysis, in Panel A, reveals little relevance of variations in ESG performance and gender diversity on the allocation to intangible assets, as all variation variables are insignificant, ROA is detected as a significant factor influencing decisions, being negatively associated with INTATA in all models. It, therefore, implies that as firms' profitability increases, there's a change towards tangible assets.

Regarding the Panel B, variations in the overall ESG score will result in an increase in the long-term borrowing, which can also be viewed as a deeper commitment to finance sustainable initiatives. However, the interaction with

GENDER variation negatively affects the LONG_TA. The fact that the coefficient associated with the SP variation is positive and significant shows interesting information related to how the integration of corporate social responsibility practices affect the financial structuring, particularly regarding the level of debt. Thus, it may indicate that companies operating more aggressively in social policies or improving their social performance are at the same time more likely to engage in the long-term debt.

4. Conclusion

This thesis explores the impact of board characteristics on corporate policies, particularly focusing on gender diversity within non-financial listed companies in Portugal and Spain. Through an examination of the moderating impact of gender diversity, this study aims to offer an evidence-based understanding of its effects on various factors including ESG, investments and leverage.

Initially, the empirical analysis reveals that gender diversity on boards does not exhibit significant influence, indicating that variations in the composition of women within a company's board have minimal effects on investment decisions and capital structure. However, a refined analysis incorporating interaction terms between gender diversity and environmental, social, and governance (ESG) criteria reveals that higher gender diversity limits investments in intangibles and contributes to an increase in leverage. These results contradict the general expectations outlined in the introduction. Given the higher risk aversion of women one would expect higher investments in intangibles associated with ESG, and reduced leverage. Limited prior research makes it challenging to fully substantiate these findings.

The observed results may be attributed to the relatively low representation of women on corporate boards in Portugal and Spain, countries characterized by

traditional and conservative societal norms. Notably, legislative efforts in both nations, the law No in Portugal, the “Ley de paridad” in Spain and the directive 10521/1/22 REV 1 in EU, aim to address gender imbalances on boards, with specific quotas introduced to enhance female representation. However, questions arise regarding whether these quotas merely fulfill regulatory requirements or genuinely empower women to influence corporate policies. Additionally, the phenomenon of women adopting traditionally male-aggressive behaviors in boardrooms, potentially driven by imposter syndrome, further contextualizes the findings.

This study contributes to the fields of corporate governance and gender studies by offering insights relevant to policymakers and board leaders striving for inclusivity, diversity, and sustainability within corporate environments. The implications extend to the development of corporate laws and strategies, as well as ongoing discussions regarding the significance of gender and sustainability in business practices. Notably, the study's focus on Portugal and Spain, given their conservative, religious and traditional backgrounds, and its integration of gender and ESG perspectives distinguish it within existing research on corporate governance.

Limitations of the thesis include the restricted sample size and the specific contextual factors of Portugal and Spain, which may limit the generalizability of findings. Regulatory measures mandating female representation on boards in these countries could also influence the results. Suggestions for future research include exploring alternative methodologies such as interviews with female board directors and surveys, as well as examining the board member selection process to assess qualifications and genuine influence.

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Appendices

List of Companies in the Sample

<i>Country</i>	<i>Company</i>
Portugal	ALTRI, S.G.P.S., S.A.
	CORTICEIRA AMORIM, SGPS, S.A.
	CTT - CORREIOS DE PORTUGAL, S.A.
	EDP - ENERGIAS DE PORTUGAL, S.A.
	EDP RENOVAVEIS, SA
	GALP ENERGIA, SGPS, S.A.
	GREENVOLT - ENERGIAS RENOVÁVEIS, S.A.
	JERÓNIMO MARTINS - SGPS, S.A.
	MOTA - ENGIL, SGPS, S.A.
	Navigator Company SA
	NOS, SGPS, S.A.
	PHAROL - SGPS, S.A.
Spain	REN - REDES ENERGÉTICAS NACIONAIS, SGPS, S.A.
	SONAE, SGPS, S.A.
	ACCIONA, SA
	ACERINOX, SA
	ACS, ACTIVIDADES DE CONSTRUCCION Y SERVICIOS, SA
	AEDAS HOMES SA
	AENA S.M.E. SA.
	ALMIRALL SA
	AMADEUS IT GROUP SA
	APPLUS SERVICES SA.
	ATRESMEDIA CORPORACION DE MEDIOS DE COMUNICACION SA.
	AZKOYEN, SA
	CELLNEX TELECOM SA
	CIE AUTOMOTIVE, SA
	COMPAÑIA DE DISTRIBUCION INTEGRAL LOGISTA HOLDINGS SA.
	CONSTRUCCIONES Y AUXILIAR DE FERROCARRILES, SA
	CORPORACION ACCIONA ENERGIAS RENOVABLES SA

DISTRIBUIDORA INTERNACIONAL DE ALIMENTACION SA
DURO FELGUERA SA
EBRO FOODS, SA
EDREAMS ODIGEO, S.A.
ENAGAS SA
ENCE ENERGIA Y CELULOSA SA.
ENDESA SA
ERCROS, SA
FAES FARMA, SA
FERROVIAL SE
FLUIDRA, SA
FOMENTO DE CONSTRUCCIONES Y CONTRATAS SA
GESTAMP AUTOMOCION SOCIEDAD ANONIMA
GLOBAL DOMINION ACCESS SOCIEDAD ANONIMA
GREENERGY RENOVABLES SA
GRIFOLS SA
GRUPO EMPRESARIAL SAN JOSE, SA
IBERDROLA, SOCIEDAD ANONIMA
INDRA SISTEMAS, SOCIEDAD ANONIMA
INDUSTRIA DE DISEÑO TEXTIL SA
INMOBILIARIA COLONIAL SOCIMI S.A.
LABORATORIOS FARMACEUTICOS ROVI SA
LAR ESPAÑA REAL ESTATE SOCIMI SA.
LLORENTE & CUENCA SA
MELIA HOTELS INTERNATIONAL SA.
MERLIN PROPERTIES SOCIMI SA.
METROVACESA SA
MIQUEL Y COSTAS & MIQUEL SA
NATURGY ENERGY GROUP SA.
NEINOR HOMES SOCIEDAD ANONIMA
NH HOTEL GROUP SA.
OBRASCON HUARTE LAIN SA
ORYZON GENOMICS SA
PHARMA MAR SA

PROMOTORA DE INFORMACIONES SA
PROSEGUR COMPAÑIA DE SEGURIDAD, SA
REDEIA CORPORACION SA.
REPSOL SA.
SACYR SA.
SOLARIA ENERGIA Y MEDIO AMBIENTE, SA
TALGO AS
TECNICAS REUNIDAS SA
TELEFONICA, SA
TUBACEX, SA
VISCOFAN SA
