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**Determinants of ESG Performance: The Impact of Board
Composition and Corporate Characteristics in French Public
Companies**

Author: Augustin Ducos-Ader
Student number: 614187
Thesis supervisor: Marius Hees
Second reader: Prof. Frank van Oort
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ABSTRACT

The increased relevance of ESG factors for corporate governance is a result of increased societal expectations of sustainable and responsible business practices. While extensive literature captures the general impacts of board composition, there seems to be a lack of research on the specific effects on companies at the European level, specifically in France, regarding their ESG performance. This study examines the factors behind the Environmental, Social, and Governance (ESG) performance of listed companies in France focusing on board gender diversity, independence, size and public scrutiny. We used a fixed-effects log-linear regression model applied to data derived from 39 companies listed under the CAC 40 index between 2014 to 2024. The findings indicate that gender diversity does not significantly impact ESG scores. Board independence shows a significant positive influence on ESG performance. Besides, there exist a positive relationship between ESG-related controversies and ESG score. Finally, the size of the board does not have a significant impact on the ESG score. The findings thus underline the fact that the board characteristics' effects on ESG performance are varied, with independent oversight and pressures from controversies acting as critical drivers.

Keywords: ESG performance, board gender diversity, independent directors, log-linear regression, fixed effects.

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CHAPTER 1 Introduction

The citation by Hoogendoorn, Guerra, and Van der Zwan (2015), “There has been a growing focus on the role that businesses play in preserving the environment since the sixties,” highlights the increasing emphasis on Environmental, Social, and Governance (ESG) metrics in the corporate world. This trend reflects a broader societal shift towards responsible and sustainable business practices. Investors and consumers, as key stakeholders, critically assess corporate ESG performance, driving companies to enhance their governance structures to meet these heightened expectations (Eccles, Ioannou, and Serafeim, 2014). Among various aspects of corporate governance, board composition receives significant attention. The importance of ESG considerations extends beyond improving firms’ reputations; it also contributes to long-term financial outcomes and the sustainability of the firms themselves (Eccles, Ioannou, and Serafeim, 2014).

Extensive research has been conducted to explore the debate on board diversity and corporate performance across various contexts. For instance, Terjesen, Sealy, and Singh (2009) and Adams and Ferreira (2009) postulate that diverse boards make better quality decisions and are efficient for corporate governance. The 2011 Copé-Zimmermann law in France, which mandates at least 40% female participation on corporate boards by 2017, illustrates legislative efforts to address gender inequality and enhance board effectiveness. This legislative move aims to reduce gender inequality and enhance board effectiveness. Research on board gender diversity's impact yields mixed results. Hillman, Shropshire, and Cannella (2007) illustrated that financial performance was higher in gender-diverse boards; the injection of a variety of different perspectives and improved governance practices could cause this. On the same note, Carter, Simkins, and Simpson (2003) argued that firms with more women on their boards were placed in more positive financial outcomes. Nevertheless, other research such as the work by Adams and Ferreira (2009), state a relation that is slightly complex and involves potential disadvantages of increased diversity, such as enhanced conflicts and slower decision-making processes.

Despite significant research on board diversity and composition, there is limited study on its impact on ESG performance specifically within the French market. This study aims to fill this gap by analysing how board characteristics influence ESG performance in publicly listed French companies.

This study primarily aims to evaluate through empirical evidence the relation between corporate board composition and characteristics on ESG performance disclosure by French publicly listed companies from 2014 to 2024. The specific research question guiding this study is: How do board composition affect the ESG performance of French publicly listed companies? This question is asked to be able to

infer the effectiveness of more gender-diverse, bigger, more independent boards and more public scrutiny in the advancement of corporate sustainability practices collectively.

This study employs data from Thomson Reuters Eikon™ Datastream, analysing it through a log-linear regression model with company and year fixed effects to assess board characteristics and ESG scores. This model includes variables for Board Gender Diversity, Board Size, Board Independence, Public Scrutiny, and Sales. By this methodology, board characteristics and other corporate factors that might affect ESG scores are analysed. The reason for this study is to put into context precisely the impacts of the composition of a company's board on ESG performance through rigorous statistical techniques and control for other relevant factors that might confound this relationship.

The study analyses the relationships through clear, established, and upfront empirical evidence in the context of French publicly listed companies. This paper is a significant contribution not only to a specific regulatory context but also to filling in gaps in the literature about the impacts of board mandates on ESG outcomes in France. Second, the findings provide valuable insight to policymakers for future legislative improvements regarding the effectiveness of board gender diversity, independence, and transparency on corporate sustainability. Third, the research shows corporate management that board composition is a strategic derivative for improved ESG performance. In conclusion, the study's findings offer practical insights for designing more effective and inclusive governance structures, potentially influencing future corporate policies and practices, by pointing to the possible benefits and potential limits associated with a specific composition of corporate boards.

Key findings indicate that female presence on boards does not significantly impact ESG scores, while board independence positively influences ESG performance, supporting arguments that independent oversight is beneficial in enhancing corporate governance. Moreover, there is also a positive association between ESG-related controversies and ESG scores, therefore firms facing ESG controversies and public scrutiny are more likely to improve their ESG activities. Finally, we did not find a significant relationship between the board size and the ESG score.

Following this introduction, Chapter 2 delves into a comprehensive literature review, exploring the development of sustainability practices in France, setting the theoretical background for this study, and the hypotheses. Chapter 3 explains the data and methodology used, where sources, description of variables, and regression models are described and defined, while Chapter 4 combines and comments on the results of this regression analysis concerning the background literature. Finally, Chapter 5

concludes the paper by summarizing key observations and limitations and providing recommendations for potential future studies.

CHAPTER 2 Literature Review

2.1 Social Responsibility and Sustainability

Social responsibility refers to the obligation of any organization to act in ways that would benefit society (Carroll, 1999). Therefore, this dimension calls for companies to be ethical in their operations and underline the need to give back to society through corporate responsibilities, as well as reduce adverse effects on society and the environment (Crane et al., 2019).

The practices of organizations with a strong commitment to social responsibility include ensuring ethical labour conditions characterized by fair treatment and compensation for employees, community engagement through philanthropy and volunteerism, environmental protection through the reduction of the organization's 'ecological footprint,' and consumer protection by providing safe and reliable products and services. Where the triple bottom line refers to social, economic, and environmental success, sustainability in a corporate context deals with running business in a way that ensures survivability in the long term by considering the environment, social, and economic factors (Elkington, 1997). The basic principle of sustainability is not doing anything that will undermine the ability of future generations to meet their own needs (WCED, 1987). A few of the key themes of sustainability include environmental stewardship: reducing waste, conserving natural resources, and reducing emissions (Hart, 1995). Social equity includes basic, fundamental fairness and justice within the workforce and society at large, while economic viability represents financial practices that ensure long-term growth and stability in markets and communities.

Most of the reasons why sustainable and long-term corporate governance is important for firms are varied; the major among them, however, is its enormous contribution to long-term corporate profitability. Sustainability-oriented companies can manage risks by spotting and minimizing environmental and social perturbations that may affect business operations (Porter & Kramer, 2006). Second, business practices oriented toward sustainability are usually associated with being innovative and efficient, saving costs, and enhancing competitiveness. The positive corporate image about sustainability in the company attracts consumers, investors, and talent and helps to enhance its long-term financial performance (Bhattacharya et al., 2009).

There is also a positive effect of sustainable governance on employees' happiness. When workers feel that their company is socially responsible, they generally become more engaged and productive (Bhattacharya et al., 2009). Lastly, an emphasis on social and environmental policies can help in staff retention since people would want to stay longer with employers who share the same values. Moreover, workers are most gratified with their work if they feel that their company is making useful contributions to society, which is associated with positive morale and productivity. Thirdly, sustainable business governance manages or controls externalities, which refer to the unintended results or aftereffects of corporate activities on society and the environment. Companies that consider human welfare and the environment positively will contribute to improved public health and reduced environmental degradation. Conversely, unsustainable business practices will cause negative externalities, such as pollution and depletion of natural resources, adversely affecting the long-term prospects of both firms and society (Crane et al., 2019).

However, there are challenges in measuring social responsibility and sustainability. While the rewards of social responsibility and sustainability are obvious, there lies a tough challenge in measuring these concepts concretely. One challenge is that many social and environmental outcomes are intangible and thus hard to measure (Ioannou & Serafeim, 2012). Additionally, firms must balance the different stakeholders' interests and priorities, making it difficult to establish standardized metrics. The measurement effort also reflects evolving standards of what constitutes responsible and sustainable practice in companies, requiring constant adaptation to new expectations and regulations (Ioannou & Serafeim, 2012). To fix this issue, we decided to choose the ESG score to measure the social responsibility and the sustainability of companies

2.2 Understanding ESG Scores

The most widely accepted framework in assessing a company's sustainability and ethical impact is represented by Environmental, Social, and Governance (ESG) metrics (Sullivan & Mackenzie, 2017) and that is why we chose it.

These metrics are to assess corporate performance in three primary dimensions: environmental, like carbon footprint, resource management, and ecological impact; social, covering areas such as labour practice, community engagement, and relations with customers; and governance, including board diversity, transparency, and ethical leadership (Khan, Serafeim, & Yoon, 2016). While ESG metrics provide a significant step toward standardization of how one measures sustainability performance, challenges persist regarding the comparability and standardization of these metrics across different industries and regions (Khan et al., 2016). Despite these dilemmas, ESG metrics play a very key role in helping companies and investors assess their sustainability efforts, as well as in making informed choices (Sullivan & Mackenzie, 2017).

These are typically composite scores derived from multiple indicators; in addition, each of the dimensions is given a specific weight. For instance, under the Environmental dimension, carbon footprint could be allowed much weight; on Governance, it could board diversity. All these weights are scaled to 100. The scores have been collected on the Thomson Reuters Eikon Datastream; it follows a specific way to weigh all the criteria. You can find in Appendix 1 the weighting it uses. You can find the whole calculation of the score in Reuters (2018).

Personalization of ESG scores is done using company reports, regulatory filings, and similarly found publicly available information. These data are analysed to come up with scores on each of the three dimensions that are further combined into one whole ESG score. These comprehensive and rigorous processes aim to consider most of the elements likely to influence a company's sustainability performance. Nevertheless, the lack of standardization between the various rating agencies sometimes leads to variations in results, which is a subject of criticism and improvement as part of ongoing efforts in this area (Chatterji, Durand, Levine, & Touboul, 2016).

2.3 Relevance of ESG Scores

These ESG ratings are of great importance to the company and its stakeholders. The key gains realized by the firms from the high ESG scoring or rating include better revenues, better reputation, improved firm operating model at low cost, effective risk management, and smooth capital borrowing. Much research has been conducted that demonstrates that well-rated firms in the context of ESG usually have lower capital expenses than low-rated companies (McKinsey, 2019).

Such ESG performance, involving appropriate social responsibilities, is likely to attract a new range of socially informed investors, retain customers, and increase the satisfaction and retention of employees. An investor would assign ESG scores with a view to helping in the investment towards companies likely to be sustainable through time. Investors place more weight on ESG consideration in the investment than before as it resonates with the belief that companies with good ESG practices put them in a better position to mitigate the risks and exploit the related opportunities that come with sustainability issues. This new wave of investment strategies comes with recognizing that sustainability issues can have financial impacts. For example, corporations with poor environmental practices can be penalized by regulations, and those with strong social policies will have more benefits with high productivity from their employees, as well as customer loyalty.

In essence, ESG ratings give customers and employees a general indication of one company's ethical standards and commitment to social responsibility. In recent years, more consumers become attentive to the possible environmental and social consequences of what they buy. They prefer supporting

companies whose values resonate with their own values. So, nowadays, there are many employees who look at their workplace with the very significant social motivation "to act ethically and sustainably at work", which can motivate job satisfaction and then loyalty in the future (Bode, Singh, & Rogan, 2015).

Additionally, ESG is used by regulatory authorities and policymakers to take direction in the oversight and regulatory strategies. It has been made clear by the governments and regulatory bodies that they have sustainability requirements, and companies with high ESG are better placed with these regulations floating in a rapidly changing regulatory landscape. Those progressive companies managing their ESG performances proactively can thus avoid most legal and compliance risks, making their operations stable over longer periods.

ESG scores increasingly denote how companies are recognized and valued more and more for their sustainable practices and ethics standards. Such scores provide guidelines for investors and consumers in choosing firms with good social responsibility but also make it easier for firms to adopt sustainability into business models. Since ESG performance and sustainability practices go hand in hand, whenever firms strive to improve their ESG performance, they are enhancing their sustainability. Improvements are then evidenced within them in risk management and operation efficiencies. This supports the interrelationship between ESG performance and sustainability, underscoring broader impacts on firm performance, as further discussed in the next section. Section 2.4 will elaborate on how and why sustainability practice improves corporate strategies toward long-term competitiveness and success, while at the same time taking on board the complexities and variations of this relationship across different industries and company profiles.

2.4 Sustainability and Firm Performance

Considerable literature supports the relationship of sustainability practices with firm performance. According to Eccles, Ioannou, and Serafeim (2014), firms with superior sustainability standards outperform their peers in the long run. Improvements will contribute to better risk management capabilities, operational efficiencies, and enhanced reputational benefits. Sustainability practices will reduce costs, mainly through resource efficiency, waste reduction, and energy savings, thus increasing profitability (Porter & van der Linde, 1995).

Porter and Kramer (2011) claim that with the integration of sustainability into business strategy, value is created for the company and society. The theory of shared value assumes that if societal problems are addressed, it can at the same time improve the competitiveness of a company. For example, investment in community development can contribute to the availability of a more competitive labour force, while at the same time, the firm may create an opportunity for developing new markets.

However, the relationship between sustainability and its relation to firm performance is more complex, and varies by the industry, company size, and geographic location. Luo and Bhattacharya (2006) suggest that the effects of sustainability are experienced more towards the consumer facing industry, where a brand's reputation is critical. More so, because of specific customers, firms with high ESG ratings stand out from the rest and can draw in a vast pool of loyal customers. Conversely, in industries with high regulatory oversight, compliance with environmental and social standards can directly impact operational licenses and market access (Hart & Ahuja, 1996).

Moreover, the impact of sustainability practices on financial performance is dependent upon the strategic orientation of the firm and the integration of ESG factors at the core of the firm's businesses. Companies that take a strategic approach to sustainability and integrate it into their business framework seem to derive more value compared to those for which it is a fringe area (Epstein & Roy, 2001). Strategic integration necessitates a full-fledged approach, including changes in the culture of an organization, the engagement of stakeholders, and long-term planning.

The literature also presents potential challenges and trade-offs of such sustainability schemes. An example is that sustainable practice implementation may have high up-front costs, but payback can be an extended period away. Furthermore, firms may find internal resistance to change, and such barriers require the right leadership to positively influence people's attitudes. Yet the common agreement in the literature is that the benefits of sustainability practices, in the end, outweigh the costs in the short run and they engender improved firm performance and resilience.

2.5 ESG Practices in France

Within France, the developments in sustainability practices are a result of the two sets of factors just cited: via the legal framework inherent in the bureaucratic atmosphere and as well from the cultural attitudes about the firm being responsible for improvement in the human atmosphere. The French government has responded proactively yet cautiously in promoting corporate sustainability.

The Copé-Zimmermann law of 2011 provides that not less than 40% of board members are prescribed to be female by the year 2017. This will ensure that at least 40% becomes the minimum gender threshold and help foster diversity in the management and boardrooms (Labelle, Francoeur, & Lakhali, 2015). On the contrary, in 2007, the Grenelle Environment was a significant landmark toward increasing environmental sustainability in France. All these elements have brought together administrative agencies, businesses and environmental movements to work out comprehensive policies aimed at reducing impacts and supporting the country's development. This shows that the French approach has always sought to integrate ideologies aimed at harmonizing environmental conflicts into the logical approach of economic planning.

The Act on Energy Transition for Green Growth of 2015 itself consolidated, beyond debate, the engagement of France in favour of sustainability. This law has set ambitious targets for reducing greenhouse gas emissions, increasing the use of renewable energies, and ensuring the efficient use of energy. As a lever of economic development, it would be massive under the practices of companies doing business more cautiously and, further, the need for new investments and technologies to keep with sustainable development.

This law was also a measure to support innovation and research in the field of sustainable development in order to make the necessary improvements and adaptations on an ongoing basis. From a corporate perspective, the Autorité des marchés financiers (AMF) required listed companies to include their sustainability report in their annual report from 2016 (AMF, 2016). This requirement replaced the previous corporate social responsibility reporting standard, which had been in force since 2001. AMF announced that it was making full reporting of the practices of companies on sustainability an obligation over a three-year duration, with total compliance enforceable by 2019. This regulatory framework emphasizes the transparency and accountability of companies, which must provide stakeholders with comprehensive information on their ESG performance.

This also highlights the social factors of the French context in the practice of sustainability. France has a strong tradition of social responsibility around the rights of labour and employees and community engagement. In this respect, the social dimension is represented in its approach to corporate governance, where companies are advised to adopt practices that engender social equity and community development (De Terssac & Béjean, 2017). Putting into sustainability strategies social considerations assured the coherence of these strategies with the broader European emphasis not just on environmental sustainability but on social justice and inclusive growth.

The presence of a set of regulatory mandates, collaboration, and cultural values necessarily develops a sense of sustainability in French practice. French companies are expected to take these sustainable practices seriously and to go to great lengths to demonstrate their commitment to ESG-based principles. The specific case of France allows us to reflect on the importance of regulatory frameworks and cultural attitudes, making it a generally useful insight for research and practice.

2.6 Theoretical Framework

This study is based on three theories: stakeholder theory, resource dependency theory, and upper echelon theory. Jointly, these theoretical underpinnings offer all the elements of the board composition, particularly, individual gender diversity effects on a firm's ESG performance.

Stakeholder theory requires that a company consider its employees, customers, suppliers, communities, and investors when strategizing for long-term business success. This theory is particularly applicable to ESG performance since the very essence of this theory emphasizes that the company should pay the same attention to social and environmental issues and economic interests in its strategic policy. According to the results of the review presented by Donaldson and Preston (1995), stakeholder theory suggests that from the corporate strategies, taking into account stakeholder interests manages to have long-term strategic benefits in competitive advantages. A more varied board, notably including a substantial fraction of women, would more likely consider the interests of diversified stakeholders.

Women are predisposed to be more empathetic and socially aware, allowing these issues to be considered more thoroughly in the boardroom (Bear, Rahman, & Post, 2010). Therefore, by successfully garnering interest in a broader category of stakeholders, companies have a better chance at enhancing their reputation and building trust, further critical elements of ESG performance. Stakeholder theory, when supported by the resource dependence theory, depends on the view that organizational success is dependent on the quality of an organization's access to external resources (Pfeffer & Salancik, 1978). According to resource dependency theory, organizations depend on a number of externally available resources, and must therefore effectively manage dependencies on these externally available resources. In the context of ESG performance, a diverse board can tap into resources that spread across different perspectives, skills, and networks. Hillman, Cannella, and Paetzold (2000) have dwelled on this subject by contending that gender diversity in the boardroom is likely to enhance effective decision-making and problem-solving because diversified groups tend to consider several options and perspectives. Such heterogeneity predominantly enhances the possibility of addressing wide-angle issues, mainly the complex ESG ones that hinge on innovative and multifaceted closures. Besides, the board, reflecting diversity in its composition, will be able to deal effectively with a diverse set of relevant external stakeholders, such as investors, regulators, and community groups, thus increasing the company's chances of attaining resources and gaining support (Hillman & Dalziel, 2003).

Upper echelons theory ties these perspectives together by asserting that the characteristics and values of top executives significantly influence organizational outcomes (Hambrick & Mason, 1984). This theory conjectures that the strategic choices and, as a result, the performance of the company are determined by board members based on their backgrounds, experiences, and value systems. In terms of ESG performance, diversity on the board, especially the type that involves a sufficient percentage of women, drives a company's focus on strategies for sustainability. As Hambrick (2007) explains, diverse boards will be more capable of consistently putting ESG issues on the current agenda, better integrating them into the company's core strategy, and ensuring effective management. This strategic focus on sustainable development can help improve ESG performance by creating a culture of responsibility and ethical behaviour throughout the organization.

Applying these theories offers a strong base for understanding the influence of board composition on ESG performance. Stakeholder theory dictates such an approach, as the interests, needs, and concerns of numerous stakeholders must be met if corporate activities are to be sustainable. In addition, resource dependence theory implicates significant contributions of board diversity towards gaining and controlling access to valuable and valued resources that increase the company's potential capacity for effectively addressing ESG issues. Therefore, the upper echelons theory relates precisely those ideas by showing that the choices in strategic decisions touching on ESG performance are determined by the board members' value orientation and characteristics.

These suggest that gender diversity on corporate boards can have a significant impact on ESG performance by taking into account a variety of stakeholder viewpoints, access to a diverse set of resources, and changing the organization's strategic focus in favour of a more sustainable development. This theoretical framework supports the hypothesis that a better gender balance on boards is associated with enhanced ESG performance at the corporate level. This foundation allows research about how other attributes of group composition, like independence and size, influence ESG results. These relations are mutually reinforcing and interdependent and, by an analysis of these relations, this study aims to shed deeper light on the determinants of ESG performance that then reflect on strategies for ensuring corporate sustainability practices.

2.7 Hypothesis Development

2.7.1 Board gender diversity

Several studies have reported that female representation on boards is positively related to the enhancement of ESG (Environmental, Social, and Governance) performance. The works also align with the theoretical basis for calling for multifariousness in views and stakeholder involvement to enhance sustainability. Importantly, this has implications for policy and practice to improve corporate governance and sustainability outcomes.

The previous section presented the theoretical underpinnings according to which diversity in board composition, including gender diversity, can improve a company's ability to manage ESG issues, notably through stakeholder theory, resource dependency theory, and upper-echelon theory. This section provides empirics that support these theoretical claims and shows real studies returning the positive effect of female board members on ESG performance.

For example, Bear, Rahman and Post (2010) have shown that, according to corporate social performance indicators, companies with more women on their boards perform better. It can be argued that gender

diversity in boards leads to greater sensitivity to ESG issues. Equally, Galbreath (2018) reiterated that gender-diverse boards are more prone to adopting environmental practices, which in turn triggers the company's performance under ESG. This relationship is more evident given that the numerous boards of directors will bring a broad perspective and a wide range of experience to the development of more comprehensive sustainability strategies.

Nielsen and Huse (2010) offer further insight into the mechanisms by which the effects of gender diversity on ESG performance might be mediated. At the top level of management, better monitoring and strategic control provide these mechanisms and, hence more vital notions of supervision and governance, all culminating in higher performance.

Gender-diverse boards participate as active and committed decision-makers, improving the quality and accountability of decisions. These results are supported by empirical evidence: Labelle, Francoeur, and Lakhali (2015) found that gender-diverse boards from France are related to setting up more transparent and generally better reporting standards mirroring the ESG performance of a typical country.

Exactly, women leaders at the board level are herein supported not only by stakeholder theory, in terms of detailing issues related to various stakeholders with varied interests, but also by resource dependence theory, in enhancing the capacity of the board to oversee complex ESG issues. The upper echelons provide further support for the argument that several women in the boardroom could potentially steer the company's strategic direction towards sustainability. Therefore, the first hypothesis is:

H1: An increased presence of women on corporate boards is related to better ESG performance in companies.

2.7.2 Independent Board

Existing research indicates that the independence of a company's board of directors can significantly enhance its engagement in corporate social responsibility (CSR) activities (Jo and Harjoto, 2011). Board independence is measured as the proportion of independent, unaffiliated directors relative to the total number of board members (Bhagat and Bolton, 2008). Due to independence from company management, independent directors are more likely to resist management pressure and act in a way that is in the best interest of the shareholders and stakeholders. According to Fama and Jensen (1983), better monitoring and reduced conflict of interest is a reason for making better decisions and having better governance with independent board members.

Several studies are in this view. For example, Weisbach (1988) found that independent boards replace ineffective CEOs more frequently and thus improve corporate performance. It thus follows that

independent board members who do not have affiliations with their companies would be in a better place to look at and challenge the policies and actions of the company objectively, which can bring a significant enhancement in the ESG performance of such a company. Beasley, (1996), found and documented cases where firms with a higher percentage of independent directors have "less tendency" to fraud, which obviously indicates or explicitly spells a high ethical check.

In addition, Fields and Keys (2003) argue that independent directors have diverse perspectives and experience, which is essential for dealing with complex ESG issues. They believe that independent boards can challenge management decisions and make worthwhile suggestions that would help develop effective ESG strategies. Thus, such increased monitoring activities by independent directors will enable companies to deal with the intricacies of ESG initiatives. By so doing, companies will be better placed to effectively apply these policies and, hence, contribute significantly to the company's good results.

However, some researchers have obtained contrary results, indicating that boards that are too large have negative effects. Independence, in general, is a good thing, but too much autonomy leads to a lack of cohesion and coordination. Adams and Ferreira (2007) noticed that too many independent members on the board led to a lack of communication and coordination in the decision-making process. The conclusion, therefore, must be that while independence is a good thing, there must be balance.

Thus, in an empirical study on this topic, Johnson, Schnatterly, and Hill (2013), concluded that it is perceived that firms with a balanced proportion of independent directors do well on ESG metrics. Finally, they conclude that a moderately independent board is ideal for providing the oversight and expertise needed to improve ESG performance without suffering the side-effects of too much independence. Therefore, the second hypothesis is as follows:

H2: A higher proportion of independent board members enhances the firm ESG performance.

2.7.3 Board size

The size of the board can be another significant aspect that could impact a firm's ESG performance. The composition and size of the board of directors have an impact on the company's ESG performance. The below section of the paper discusses the complex link between board size and corporate performance in ESG metrics.

The relationship between board size and corporate performance in ESG metrics has been intensely researched. Indeed, previous studies did find mixed results regarding the effect of board size on ESG outcomes, showing it to be a complex relationship.

Larger boards are found to offer a broader perspective and skill bank to the firm, which will help in decision-making with respect to ESG-related activities. Consequently, board diversity can easily enable broad and consistent practices in sustainability and governance standards. Larger boards also have the advantage of having members who can be assigned exclusively to dealing with ESG issues, ensuring adequate attention and resources for these issues.

Furthermore, corporations with larger boards will have better capabilities for handling and abating ESG-related risks because of the various skills and knowledge embodied in the board members. This can result in a more resilient and proactive approach toward ESG, which will finally attract higher ESG ratings.

The relationship, however, is not that simple. Jensen (1993) argues that the bigger the board members, the more inefficiencies and slower speeds in decision-making sets. Large boards can have coordination problems and conflicts of interest that may affect the efficient implementation of the ESG initiatives. In addition, larger boards may focus more on maintaining consensus and managing internal dynamics rather than ESG issues.

For example, Yermack (1996) showed that smaller boards are more efficient concerning financial performance because of the features associated with improved communication and decision-making efficiency. The argument could further be extrapolated to ESG performance when lean governance structures would make a more progressive turn towards ESG goals.

The influence may differ across industries and the firm's strategic priorities while moderating board size and ESG performance. In sectors where ESG issues are under greater scrutiny, it may be desirable to have larger boards, simply because these sectors require a particular type of knowledge and oversight. On the other hand, in the case of unregulated sectors, the advantage of a larger board may not be as obvious.

While large boards might bring diverse expertise that would add value to ESG performance and improve risk management, they also challenge efficiency and decision-making. Several contextual factors will determine the net effect of board size on these ESG outcomes.

H3: A larger board size will be positively associated with better ESG performance, provided the board is well constituted for handling ESG initiatives.

2.7.4 Public Scrutiny

Existing literature indicates that public scrutiny has a significant impact on a corporation's engagement in CSR activities, and that extends to ESG performance (Brammer and Millington, 2005). Public scrutiny is the level of attention and evaluation by stakeholders like the media, investors, customers, and civil society to the actions and policies of a company (Bansal and Clelland, 2004). Companies feel the pressure of public scrutiny and often adopt more responsible practices, simply to ensure that their reputation remains intact and that their stakeholders continue to have confidence in them.

Aguilera et al. (2007) have argued that high public scrutiny can result in pressure on behalf of the social class driving firms to maximize transparency and accountability levels, hence performing well in ESG areas. Well-publicized firms will make more efforts to satisfy society's expectations and norms by reducing opportunities for misbehavior and negative externalities.

In addition, public scrutiny is an external monitoring device that complements the monitoring effect of independent boards. Henriques and Sadosky (1999) have found that companies under high levels of public scrutiny will be more prone to ESG disclosure and performance, hence resulting in more transparency. Greater transparency could also have a positive impact on better decision-making and corporate governance through public accountability.

Yet, other researchers advise on the potential pitfalls of too much public exposure. Too high requirements to adhere to public opinions will likely make companies engage in superficial or symbolic CSR actions instead of real changes (Pfeffer and Salancik, 1978). According to the research of Campbell and Beck (2004), though public scrutiny can stimulate a social effort, simultaneously, it can have companies focus on expression management in the short term as opposed to the strategy in the long term.

To balance these effects, companies must deal with stakeholders in a constructive manner and attend to legitimate concerns without overreacting to some public pressures, which may just be passing. As McWilliams and Siegel (2001) observe, companies that manage public scrutiny are those that have integrated stakeholder feedback into strategic planning, thus assuring that their CSR efforts are both genuine and sustainable.

While public scrutiny is a driver for better ESG performance, companies have to walk a tightrope in the face of that scrutiny, in order to avoid the dangers of over-expectation and high external pressure. Hence, the fourth hypothesis is:

H4: Increased public scrutiny enhances firm ESG performance by promoting transparency and accountability.

Consequently, the hypotheses in this section raise the illustration of board composition in impacting ESG performance. Evidence in theory and empirical support posits clearly that gender diversity, board independence, board size, and public scrutiny are all critical factors in determining a corporation's sustainability outcomes. This paper tries to contribute to a deeper understanding of these determinants of ESG performance and policy-oriented insight for leadership of companies who are looking for improved governance and sustainability practices. Research design and analytical approaches adopted in the study for testing the following hypotheses are discussed in the subsequent subsection.

CHAPTER 3 Data

This study focuses on the largest French publicly listed companies in terms of ESG performance, in particular those included in the CAC 40 index. The CAC 40 is a leading French stock market index comprising 40 of the largest and most liquid companies trading on the Euronext Paris. These companies represent a wide range of industries, from finance to energy, consumer goods, and industrials, making them a representative sample in any study relating to corporate governance or sustainability practices in France.

This study will focus on France because it is at the forefront of the drive in promoting sustainability and CSR within the European Union. With respect to ESG practices, French companies are subject to quite a number of rigorous regulatory requirements; therefore, they may be representative cases of the efficiency and impact of such measures.

The CAC 40 index was selected, as it includes most of the major French companies, many of which are leaders in their sectors. These companies may not only set examples concerning standards for their particular industries within France itself but also have important operations globally. Therefore, their ESG practices can give insights to broader trends in corporate governance and sustainability at both national and international levels. This is ensured by the diversity of industries represented within CAC 40, where the research will be able to consider a variety of ESG issues and practices, which will thus correspond to the multifaceted character of corporate sustainability.

For this study, leading companies' data was sourced from Thomson Reuters Eikon™ Datastream, a secure and reliable financial database commonly applied in many academic and professional research processes. This will provide adequate coverage of company reports for data on both economic performance and sustainability practices. The sustainability data contains various ESG variables: direct and indirect emissions, environmental product innovation, human rights, and shareholder relations extracted from annual reports and other public sources.

This dataset contains the 39 largest publicly listed French companies, part of the CAC 40, covering information from 2014 to 2024 on one observation per year on January 1st. The ten-year bandwidth is chosen to capture the evolution and impact over time of board composition changes on ESG performance. It is the long-term nature of the data that allows in-depth analysis of trends and patterns, giving the research strength to effectively estimate the impact of gender diversity, board independence and board size on ESG outcomes.

The company Eurofins Scientific SE is not considered due to missing data related to the Combined ESG Score for 2014 and 2015. As such, 429 observations remained in the data set.

Specifically, this broad dataset will help the study to describe how changes in board composition have affected ESG performance across companies and over time. Since this research focuses on a few of the largest companies in France, this research, therefore holds valuable findings in work assessing corporate governance reform effectiveness and proving policy and practice into the future domain of corporate sustainability.

Dependent Variable

This paper uses an aggregate dependent variable called ESG Combined Score, which evaluates corporate performance across three dimensions: Environmental, Social, and Governance. The environmental score deals with a company's impact on the natural environment, such as carbon emissions, handling of waste by-products, and resource use. The Social Score measures the company's relationship with employees, suppliers, customers, and communities' issues such as labour practices, human rights, and community relations. The Governance Score refers to the quality of a company's governance practices: board structure, compensation policies of senior executives, auditing procedures, internal controls, and shareholder rights. These scores, then, must be aggregated and further normalized against the severity and frequency of high-impact ESG controversies to give a more balanced view of the company's quest for sustainability and its capacity to handle ESG-related challenges. The overall score will serve stakeholders with a clearer view of the effectiveness of execution towards commitments to sustainability practices within a company; hence, it's turned out to be one of the essential tools in assessing corporate sustainability performance accurately.¹

¹ Concerning the exact calculation of this score, you can refer to Thomson Reuters (2018), where every step is explained.

Independent Variables

The primary independent variable used in this study is the proportion of women on the corporate board, referred to as "Female on Board." This data will be sourced from Thomson Reuters Eikon™ Datastream, which gathers information from company-reported data in their annual reports. The proportion is calculated concerning the percentage of female directors against the total number of board members. Gender diversity is essential to be analyzed for its effect on ESG performance, as gender-diverse boards should be related to smoother board operations and, therefore, higher ESG ratings. The heterogeneous view, and often more collaborative governance approaches, by the female directors may influence a company's ESG performance, nudging it with different points of view and strategies on sustainability.

The second independent variable in this research study is the percentage of independent directors on the board, sourced from Thomson Reuters Eikon™ Datastream, referred to as "Independent Board". Independent directors hold no material relationship with a firm other than purely as a board member. They have to be expected to contribute impartial oversight and help strengthen corporate governance mechanisms by attenuating conflicts of interest. Independent directors may include professionals from other industries, academicians, and retired executives of other firms who can provide unbiased advice and monitoring. The higher the percentage of independent directors, the better the governance quality, which usually enhances ESG performance. We try to derive how board independence affects the quality of a company's governance and its ESG score.

Another independent variable in the study is Board Size, which measures the total number of members on the board. Larger boards can have more diverse perspectives and resources, which might enhance governance. However, they could also face coordination challenges. A broader range of opinions and expertise can positively influence ESG performance, though too large a board might hinder effective decision-making. This variable helps to account for the effects of board size on the overall governance and performance of the company.

ESG Controversies is the last independent variable, controlling for public scrutiny, and capturing events or developments that may damage the reputation of the firm. Concerning ESG criteria, data is also sourced from Thomson Reuters Eikon™ Datastream. It provides a comprehensive coverage of different types of controversies occurring and reported by media sources and other public sources. Some examples of ESG controversies include environmental spills, labor rights violations, corruption cases, and governance scandals. Controversies are scored for the severity of a company's controversy and ranked accordingly.

High controversy scores may lower ESG ratings and, therefore, might point to risks and governance problems for the company. In this way, including this variable shall control events with a negative impact on the ESG performance of the company. One should note that ESG controversy may affect

board composition, as significant events are sometimes followed by hires and fires at the board level. For example, a big governance scandal might spur the resignation or removal of board members, while an environmental accident may encourage hiring directors with ecological management expertise. This dynamic component makes it very difficult to isolate direct influences from board composition on ESG performance apart from the influence of controversies. In this respect, controlling for ESG Controversies allows for control of such potential disruptions. It gives a more fine-tuned approach to understanding the impact of board composition on ESG performance.

Control Variables

The first control variable, representing the financial performance of the companies, is sales, measured as a company's annual revenue in million USD. The dataset again stems from Thomson Reuters Eikon™ Datastream. More financially sound companies may be better positioned to invest in ESG-related practices, but high sales cannot constitute an indicator of good ESG performance in and of itself. The sustainability practices should also be assessed in their relationship with financial performance, considering how the revenue available to a company might affect its potential to address ESG issues. This variable explains the role that available financial resources play in either supporting or hindering ESG efforts.

CHAPTER 4 Method

4.1 Data Transformation

We did logarithmic transformations on critical variables for two main reasons. Firstly, the log transformation tends to stabilize the variance. Many times, in finance data, we see exponential growth rubric, hence heteroscedasticity of variance in residuals, which means that it is not constant. So, by transforming those variables into logarithmic form, we reduce heteroscedasticity, making them closer to homoscedasticity, hence improving the reliability of our regression model. These log transformations tend to linearize the relationships between variables. Many financial relationships are nonlinear, and the log form of such variables may help transform an intrinsically nonlinear relationship into a linear one. Such transformations then allow more accessible analysis and interpretation of the regression coefficients. Second, log transformations reduce the influence of outliers. Financial data can have extreme values that disproportionately affect regression results. Logarithms reduce this effect by compressing the range of the data. Log transformation was done for these variables, such as the ESG Combined Score, Board Size, and Sales.

We decided to include fixed effects for Company and Date in our regression model for two reasons. First, to control for unobserved heterogeneity: by including fixed effects, one can control for unobserved variables that may influence the ESG score, which is specific to each firm and period. These fixed effects allow one to isolate the impact of our main variables of interest, making the coefficient estimates more reliable. Second, the fixed effects control for time-specific and company-specific factors: year fixed effects pick up any temporal variation, be it regulation or economy-based, bearing on firms on average; company fixed effects pick up all intrinsic characteristics unique to each firm, such as corporate culture or other industry features. This will include both fixed effects that control for time variation and firm-specific variation, making our model more general and robust in producing accurate estimates of the impact of sales, and other variables on ESG performance.

4.2 Model Specification

The log-linear regression model was specified as follows:

$$\log(\text{ESG Combined Score}) = \beta_0 + \beta_1 \log(\text{Board Size}) + \beta_2 \log(\text{Sales}) + \beta_3 \text{ESG Controversies} + \beta_4 \text{Independent Board} + \beta_5 \text{Female on Board} + \alpha_i + \delta_t + \epsilon$$

Where:

- β_0 is the intercept.
- $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are the coefficients of the independent variables.
- α_i are the fixed effects for each company.
- δ_t are the fixed effects for each year.
- ϵ is the error term.

CHAPTER 5 Results & Discussion

Table 1: Log-Linear Regression results

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
log(Board Size)	0.274***	0.259***							0.128**
ESG Controversies			0.006***	0.006***					0.006***
Independent Board					0.000	0.000			0.002**
Female on Board							-0.001	-0.001	0.000
log(Sales)		0.044		0.081***		0.064		0.069*	0.072***
Intercept	3.450***	2.976***	3.795***	2.832***	4.212***	3.447***	4.224***	3.417***	2.478***
Number of observations	429	429	429	429	429	429	429	429	429

Notes: The sample comprises 39 companies analysed between 2014 and 2024. In Model 1, we analyzed the effect of the board size alone on the ESG score, while in Model 2 we added the control variable, log(Sales). In Model 3, we show the effect of ESG controversies alone on the ESG score, to which we added the control variable to form Model 4. In Models 5 and 6, we considered the impact of increasing independent board members on the ESG score alone and with the control variable respectively. In Model 7, we studied the impact of the increased presence of women on boards on companies' ESG scores; in Model 8 we added the control variable to Model 7. Finally, in Model 9, we aggregated every variable to reach our full model. The complete table can be found in Appendix B. The number of stars “*” indicates the statistical significance. “*” designates a significance of 10%, “**” means a 5% significance, and lastly, “***” indicates a significance of 1%.

In the regression analysis of the dependent variable ESG Combined Score, there are Board Size, ESG Controversies, Independent Board, and Female on Board as independent variables. The control variable is Sales. These variables provide significant insight through nine different models that bring out different aspects of how these factors influence ESG performance.

In the case of Model 1, which includes only the independent variable log Board Size, the coefficient for log Board Size is 0.274 and significant at the 1% level, thereby proving a positive association of larger board size with these higher ESG scores, possibly indicative of a very critical role that board size plays in driving companies' ESG performance. In the case of Model 2, the addition of the control variable log(Sales) has been introduced. The coefficient for log(Board Size) remains significant at the 1% level but declines slightly to 0.259. The coefficient for log(Sales) is 0.044, but it is insignificant, which implies that while board size remains an extremely strong predictor of ESG scores, sales alone do not have any direct significant influence when set against board size.

The third model looks in isolation at ESG Controversies as the explanatory variable of the ESG score. Its coefficient is 0.006, significant at the 1% level. What this positive and significant coefficient tells is that firms with more ESG controversies tend to have higher ESG scores in some fashion. However, this can be further interpreted by stakeholder theory: firms with more controversies would try harder to improve their ESG practices in a bid to offset negative public perception and regain stakeholder trust. Even after the control variable is added in Model 4, the coefficient for ESG Controversies remains at 0.006 and significant at the 1% level, hence reaffirming controversy as a driver for firms to improve their ESG performance.

Models 5 and 6 run the influence of increasing the number of independent board members on the ESG score alone and with the control variable, respectively. The coefficients for Independent Board in these models turn out to be insignificant; thus, having only independent board members is not what influences their ESG performance. This could be saying that, while independent directors are of huge importance concerning governance, their impact on ESG scoring is more convoluted and moderated by other factors not captured in these models.

Model 7 discusses how increasing the presence of women on boards is bound to improve firms' ESG scores. The coefficient for Female on Board in this model is -0.001 and not significant, so female representation on the board does not appear to have a direct, significant effect on ESG scores. Model 8 adds another control variable: $\log(\text{Sales})$, which further continues that non-significance. Its coefficient for Female on Board remains the same at -0.001 and is non-significant, while the coefficient for $\log(\text{Sales})$ is 0.069 and significant at the 10 percent level. This suggests that, although board diversity in terms of gender may not influence the increasing level of ESG scores, sales do so when considered with the aspect of board gender diversity.

Finally, Model 9 consolidates all variables and produces the full model for a comprehensive view of how these factors influence ESG scores in conjunction.

The coefficient on $\log(\text{Board Size})$ decreases further to 0.128, but remains significant at the 5% level, again reiterating that a larger board size goes with better ESG performance. Worthy of note is that the coefficient for ESG Controversies stays around -0.006 and remains significant at the 1% level, reiterating earlier interpretations about its role. In the full model, the coefficient for Independent Board becomes significant at 0.002 and at the 5% level, so independent board members do have a positive effect on ESG scores. The coefficient for Female on Board is insignificant, and the coefficient for $\log(\text{Sales})$ is 0.072 significant at the 1% level, showing that sales strongly positively correlate with ESG scores. Among the independent variables, $\log(\text{board size})$ turned out to be significant in models 1, 2,

and 9, featuring a strong positive influence on ESG scores. The significance of the variables ESG controversies in models 3, 4, and 9 means that the more the number of controversies faced by a firm, the more likely it is that its ESG scores may improve since there must be enhanced effort toward sustainability and its public perception. The results in Model 9, but nowhere else, do show that independent boards do have a small positive effect in certain contexts. Female on the board is never significant, from which one could infer that diversity along lines of gender has no impact on ESG scores. Log(sales) is significant in models 2, 8, and 9, indicating that higher sales are positively correlated with good ESG scores.

Hypothesis testing

All hypotheses formulated for this study were tested. A big board size will raise ESG performance; this was confirmed in Models 1, 2, and 9. The results support the hypothesis that ESG controversy positively affects ESG scores, as reported in Models 3, 4, and 9. In Model 9, partial confirmation is given to the hypothesis stating that an independent board improves ESG performance. Since it failed to be significant in all models, the hypothesis stating that having women on the board raises ESG scores is rejected.

In summary, this study identifies the monitoring mechanisms strongly related to ESG performance across firms. The large board size and high sales are always moving with good ESG performance, indicating that board structure and financial performance are critical to the outcome of sustainability. That means that ESG controversies and ESG scores are positively related, which might indicate that public scrutiny and stakeholder pressure are needed to drive improvements in ESG practices. More specifically, independent board members, while showing limited impacts on their own, contribute positively to a comprehensive model. Board gender diversity does not appear to bear any direct impact on ESG scores in this context. The in-depth analysis provides valuable insights into the factors driving ESG performance and the nuances of how a variety of factors interact to shape the sustainability outcome of companies.

To conclude, our results support H2, H3, and H3; but the first hypothesis, H1 is rejected.

CHAPTER 6 Conclusion

This research provides several critical insights into what drives ESG performance at companies. Here, we consider the findings, relate them to previous research, and interpret their implications with suggestions for further investigation.

We also found supportive evidence for the relationship linking ESG controversies to ESG scores. This could indicate that companies with more scandals adjust their ESG activities to offset negative public perceptions. Stakeholder theory suggests that such firms are, in general, more under the "radar" of stakeholders and, hence, more ready to improve their ESG performance in order not to incur reputational costs (Freeman, 1984; Donaldson & Preston, 1995).

The small effect of board size on ESG performance may indicate that neither is enough to drive ESG performance under this model. One would expect more responsible decision-making with an increased board size. Several reasons can be cited for the non-significant influence exerted by an increasing number of board members. Therefore, the finding contrasts the upper echelons theory by Hambrick and Mason (1984).

Finally, the effect of the presence of women in boards has mixed results, indicating significant and non-significant effects on ESG scores.

These findings are, therefore, consistent with much of the literature that underlines company size and financial capacity as base factors in good ESG performance. Nevertheless, the positive relation between ESG controversies and ESG scores represents an innovative point in the debate, as it suggests that public pressure might induce firms to be more concerned about ESG activities. Generally, large firms with more substantial sales perform better in the ESG metrics. This relationship is lent further credence by previous studies indicating that larger firms are relatively endowed with more resources to be invested in sustainability and governance initiatives, as Eccles et al. (2014); and Clark et al. (2015) put it. Usually, companies of this kind will have devoted specific departments and budgets for ESG activities that could further be translated into better ESG ratings.

Despite these insights, some limitations accompany this study. First, the data is cross-sectional, and this would lower the possibility of inferring any causality. The model might miss certain variables relevant to ESG performance, industry-specific factors, or international variations of these ESG standards. Log transformations, being statistically justified, can appear too simple to uncover some complex dependencies between modeled variables.

Future studies should assess panel data for a clear understanding of causality. Further fleshing out board effectiveness and diversity measures would add to an appreciation of their contributions to the drivers of ESG outcomes. Extending the analysis to the industry-specific and geographic factors might further increase the robustness towards generalizability. The findings set that drivers of ESG performance are firm size, financial capacity, public oversight, and to a certain extent the presence of women on board.

Results associated with resource availability and stakeholder pressure variables are significant configuration variables in structuring sustainability and governance practices within a company. More research is needed to provide more details on these insights and to detect other potential drivers of ESG performance.

APPENDIX A: [Combined ESG Scores Calculation Methodology]

Pillar	Category	Indicators in Rating	Weights	Pillar Weights
Environmental	Resource Use	19	11%	(11%+12%+11%)
	Emissions	22	12%	
	Innovation	20	11%	
Social	Workforce	29	16%	(16%+4.5%+8%+7%)
	Human Rights	8	4.50%	
	Community	14	8%	
	Product Responsibility	12	7%	
Governance	Management	34	19%	(19%+7%+4.5%)
	Shareholders	12	7%	
	CSR Strategy	8	4.50%	
TOTAL		178	100%	

APPENDIX B: [Log-Linear Regression Analysis of ESG Scores with the fixed effects coefficients]

Variable	Coefficient
Intercept	2.478***
C(Company)[T.Accor SA]	0.225**
C(Company)[T.ArcelorMittal SA]	-0.014
C(Company)[T.ArcelorMittal SA]	0.102**
C(Company)[T.BNP Paribas SA]	0.092**
C(Company)[T.Bouygues SA]	-0.126**
C(Company)[T.Capgemini SE]	-0.143**
C(Company)[T.Carrefour SA]	-0.029
C(Company)[T.Compagnie Generale des Etablissements Michelin SCA]	0.200*
C(Company)[T.Compagnie de Saint Gobain SA]	0.073
C(Company)[T.Credit Agricole SA]	-0.081
C(Company)[T.Danone SA]	0.191***
C(Company)[T.Dassault Systemes SE]	-0.049
C(Company)[T.Edenred SE]	0.031
C(Company)[T.Engie SA]	-0.070
C(Company)[T.EssilorLuxottica SA]	0.030
C(Company)[T.Hermes International SCA]	-0.177**
C(Company)[T.Kering SA]	0.148**
C(Company)[T.L'Air Liquide Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude SA]	-0.062
C(Company)[T.L'Oreal SA]	0.134**
C(Company)[T.LVMH Moet Hennessy Louis Vuitton SE]	-0.121**
C(Company)[T.Legrand SA]	0.242***

Variable	Coefficient
C(Company)[T.Orange SA]	0.037
C(Company)[T.Pernod Ricard SA]	0.023
C(Company)[T.Publicis Groupe SA]	0.150**
C(Company)[T.Renault SA]	0.092*
C(Company)[T.STMicroelectronics NV]	0.298***
C(Company)[T.Safran SA]	-0.324***
C(Company)[T.Sanofi SA]	0.136***
C(Company)[T.Schneider Electric SE]	-0.038
C(Company)[T.Societe Generale SA]	0.082*
C(Company)[T.Stellantis NV]	0.085
C(Company)[T.Teleperformance SE]	0.090
C(Company)[T.Thales SA]	-0.216***
C(Company)[T.TotalEnergies SE]	0.006
C(Company)[T.Unibail-Rodamco-Westfield SE]	0.358***
C(Company)[T.Veolia Environnement SA]	-0.006
C(Company)[T.Vinci SA]	0.010
C(Company)[T.Vivendi SE]	0.275***
C(Date)[T.2015]	-0.012
C(Date)[T.2016]	0.007
C(Date)[T.2017]	0.029
C(Date)[T.2018]	0.067**
C(Date)[T.2019]	0.072***
C(Date)[T.2020]	0.118***
C(Date)[T.2021]	0.099***
C(Date)[T.2022]	0.107***

Variable	Coefficient
C(Date)[T.2023]	0.129***
C(Date)[T.2024]	0.123***
log_Sales	0.072***
log_Board_Size	0.128**
ESG Controversies	0.006***
Independent Board	0.002**
Female on Board	0.000

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