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**ESG disclosure and financial performance of multinational enterprises:
The moderating effect of board standing committees**

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ESG disclosure and financial performance of multinational enterprises: The moderating effect of board standing committees

The study examines the impact of board committee indexes on the relationship between Environmental, Social, and Governance (*ESG*) disclosure, and accounting- and market-based performance measures of multinational enterprises (*MNEs*). Using quantile regression analysis and a large balanced panel data of 500 multinational companies operating in 40 countries from 2009 to 2019 (i.e., 5,500 firm-year observations), we uncovered the following significant associations: (i) a positive relationship between ESG disclosure and accounting performance indicators for large-sized *MNEs*, but this relationship is counteracted by the negative influence of the audit and sustainability committee indexes; (ii) the association between market-based performance outcomes and ESG disclosure is positively affected by the compensation, nomination, and sustainability committee indexes, while it is negatively influenced by the audit committee index; (iii) the combined board committee index has varying impacts on the connection between the components of *ESG* disclosure, and accounting and market-relevant performance metrics for different sizes of *MNEs*; and (iv) while the audit and sustainability committee indexes exert negative effects on the relationship between the components of *ESG* disclosure and performance measures, these effects are countered by the positive moderating impacts of the compensation and nomination committee indexes. The study concludes by discussing the policy implications of these results.

Keywords: Multinational Enterprises; *ESG* disclosure; audit committee; compensation committee; nomination committee; sustainability committee; Corporate Financial Performance.

1. Introduction

The environmental and social responsibility of multinational enterprises (MNEs) is primarily influenced by their governance practices at the firm level, which involve the composition and duties of directors and board standing committees (Dam et al., 2007). These board sub-committees make critical business decisions that significantly impact corporate financial performance and shareholders' value, such as setting executive pay, engaging external auditors, and hiring CEOs (Puni, 2015; Kolev et al., 2019). Therefore, board committees serve as essential internal governance mechanisms for aligning executives' motives with shareholders' interests (Alhossini et al., 2021; Hermalin & Weisbach, 2003; Elmghaamez & Ntim 2016). As a result, large sized MNEs are expected to maintain optimal board committee arrangements, leading to higher and better-quality financial outcomes. Specifically, efforts to enhance the functioning of board committees generally involve policies that ensure: (i) a greater number of integrated board committees; (ii) a higher proportion of outside directors; (iii) longer board membership tenure; and (iv) a larger quantity and quality of publicly released information (Chen & Wu, 2016; Ntim, 2013).

Most previous studies have focused solely on the relationship between publicly released environmental, social, and governance (ESG) information and a single form of board committee. However, the governance practices of the audit and sustainability committees have recently garnered notable attention. For instance, some studies have reported a significant positive association between the audit committee and ESG disclosure (Achim & Borlea, 2015; Garas & ElMassah, 2018; Arif et al., 2020; Buallay & Al-Ajmi, 2019; Raimo et al., 2021; Dwekat et al., 2020), while others have observed a negative link (Xie et al., 2018; Suttipun, 2021). Similarly, contradictory associations between sustainability committees and ESG disclosure have been reported (Eberhardt-Toth, 2017; Baraibar-Diez & Odriozola, 2019; Saeed, 2021; Elmaghrabi, 2021).

As a potential solution to this ambiguity, Fatemi et al. (2018) recommended, including firm governance mechanisms, such as board committees, as moderating variables in empirical studies. This recognition suggests that such arrangements could mitigate the negative consequences associated with the additional costs of ESG reporting. Furthermore, Samans and Nelson (2022) highlighted that companies with high ESG rating scores are better able to align their mission strategies with ESG-related risks. Consequently, recent studies have incorporated corporate governance standards as moderating variables in the association between ESG disclosure and financial performance. Notably, researchers have examined the effects of various factors, including board of directors' characteristics (Velte, 2019; Albitar et al., 2020; Duque-Grisales et al., 2020; Rossi et al., 2021; Zahid et al., 2022; Al-Hiyari et al., 2023), employee board representation (Nekhili et al., 2021), CEO's power (Velte, 2021), size and industry sensitivity (Zaiane & Ellouze, 2022), market competition (Vural-Yavaş, 2021), board

sustainability committee (Orazalin et al., 2023), and external institution governance mechanisms (Nguyen et al., 2021), among others, on the ESG disclosure–financial performance nexus.

More specifically, Samans and Nelson (2022) examined how the effectiveness of audit committee functions guarantees that ESG standards are accurately reflected in a company's published reports. The implication of this is that equity investors and other stakeholders have a true picture of the company's ESG credentials, which can have an associated impact on financial outcomes. Furthermore, Tumwebaze et al. (2021) emphasized the connection between financial performance and audit committee monitoring characteristics to ensure that companies comply with ESG regulations. Al-Shaer and Zaman (2019) investigated how compensation committees' governance systems for setting management pay incentivized executives to prioritize the achievement of stated ESG initiatives, leading to improvements in financial performance indicators. Similarly, Martínez-Ferrero et al. (2021) investigated the indirect role of sustainability committee characteristics as the mediating variable in the relation between board diversity and selected ESG performance indicators. Additionally, Uyar et al. (2021) employed sustainability committee characteristics as moderating variables in the association between CEO duality and sustainable growth outcomes. Furthermore, studies by Friede et al. (2015), Sarhan et al. (2019), Baraibar-Diez and Odriozola (2019), Duque-Grisales and Aguilera-Caracuel (2021), Mughal et al. (2020), and Velte and Stawinoga (2020) incorporated the intermediating role of international diversification of business operations and the number and interconnectedness of board committees existing in an enterprise.

Therefore, it is essential to ascertain the robustness of the relationship between ESG disclosures and financial performance by examining multinational firms listed on the major international financial markets. Such a study should validate the interaction effect of optimal board standing committees and the generalizability of the findings. However, most of the existing ESG literature has neglected the attenuating effect of optimal board committee structures when considering the responsiveness of financial performance outcomes to ESG disclosures. Hence, the aim of the current study is to examine the sensitivity of the relationship between ESG and financial performance of listed MNEs to the moderating impact of both individual and combination of the following four board committees: (i) audit; (ii) compensation; (iii) nomination; and (iv) sustainability committees. The hypothesis is that the presence of these board standing committees, as well as their aggregation, acts as an effective moderating factor that significantly alters the strength and direction of the relationship between ESG disclosure and corporate financial performance.

To sum up, this study investigates the impact of board committee indexes on the relationship between ESG disclosure, and accounting and market-based performance measures of MNEs. The study

utilizes quantile regression methods to control for the disparity in ESG disclosure scores and financial performance indicators among the selected MNEs. The results indicate that the combined board committee index has a significantly positive impact on the relationship between ESG disclosure and accounting measures for large-sized MNEs. However, the audit and sustainability committee indexes negatively affect the relationship between ESG disclosure and accounting performance indicators. On the other hand, the functions of the compensation and nomination committees positively influence the relationships between ESG disclosure and market-based performance metrics, while the quality of audit committee governance has an adverse effect. The combined board committee index also has varying effects on the relationship between individual ESG disclosures (ENVD, SOCD, and GOVD), and accounting and market-related measures, depending on the size of the MNEs. The compensation committee index positively influences the relationship between ESG disclosure components and accounting performance measures for large-sized MNEs, while the nomination committee index positively affects the relationship between ESG disclosure components and market-related performance outcomes. Overall, the findings highlight the significant impacts of individual board committees and their integration on the relationship between ESG disclosure and financial performance of MNEs, emphasizing the importance of considering the role of board committees in promoting transparency and enhancing accountability in ESG reporting.

Therefore, this paper contributes to the literature on the association between ESG disclosure and financial performance in three main ways. Firstly, it expands on previous studies by including four board committees (audit, compensation, nomination, and sustainability committees) that are recognized as important drivers of ESG standards and risk in MNEs by international stock market regulators. Secondly, the sample used in the study comprises the largest multinational corporations continuously listed on major global stock markets over an 11-year period, providing reliable evidence of the benefits of utilizing optimal interconnected board standing committees to reduce the costs of ESG information disclosure across different markets. Finally, the study employs individual board committee indexes and their aggregation as moderating variables in a quantile regression model, considering the individual weights of governance mechanisms and using a more robust index compared to previous studies.

The remainder of the paper is organized as follows: Section 2 discusses the theoretical concepts underlying the study. Section 3 reviews the empirical literature on the moderating effect of the four board standing committees on the ESG–financial performance relationship. Section 4 outlines the research methodology, including data sources, sample distribution, model specification, and estimation techniques. Section 5 presents descriptive statistics and empirical results. Finally, Section 6 concludes with a brief discussion of policy recommendations, limitations, and areas for future research.

2. Theoretical framework

The literature on the relationship between ESG disclosure and firm performance often draws on three theoretical perspectives: agency theory; stakeholder theory; and resource-based theory. In this section, we will discuss each of these theories and apply them to develop our hypotheses and interpret the empirical findings.

2.1 Agency theory

Agency theory, popularized by Jensen and Meckling (1976), suggests that management tends to prioritize short-term earnings over long-term sustainable outcomes due to a misalignment of goals between management (agent) and shareholders (principal). To bridge this gap, firms disclose financial and non-financial information to shareholders, minimizing the agency costs (Albitar et al., 2020; Romano et al., 2020; Alsayegh et al., 2020).

Drawing on agency theory, influential board committees play a crucial role in enhancing the link between ESG disclosure and firm performance. These committees should consider the expertise, independence from management, and activities of their members (Abidin et al., 2009; Alhossini et al., 2021). Additionally, Ntim (2015) found a positive association between board ethnic diversity and stock market valuation, while Ntim (2013) reported that board monitoring committees, such as audit, nomination, and remuneration committees, have a positive impact on firm value. This is because these committees consist of independent and expert members who can monitor executive directors' activities, thus enhancing the financial performance of firms. Furthermore, Muchemwa et al. (2016) observed that larger board committees with diverse and independent directors can significantly reduce agency costs by providing better access to external resources. Previous studies by Carter et al. (2010) also noted that board committees with diverse and independent members possess better information to advise management and exhibit a high level of ESG disclosure. Consequently, studies by Khan and Rehman (2020) and Hu et al. (2020) emphasized that the presence of board committees is essential for controlling management behaviour, improving transparency, and mitigating the principal-agent problem. The contributions of such governance structures should ultimately lead to better financial outcomes. Therefore, agency theory provides a foundation for our hypotheses regarding the impact of board committees on the relationship between ESG disclosure and firm performance.

2.2 Stakeholder theory

Stakeholder theory posits that firms disclose their financial and non-financial information to meet the requirements of various stakeholders (Albitar et al., 2020; Atan et al., 2018; Ahmed et al., 2021). Singh et al. (2018) argue that firms should establish a network of board standing committees to ensure that their executives focus on strategic issues and protect the interests of stakeholders beyond their majority shareholders. Hamman et al. (2010) support this argument by stating that companies can cultivate

positive relationships with different stakeholder groups through social and governance activities. These activities can lead to indirect benefits, such as improved public relations, a stronger corporate brand, and access to a larger pool of capital, ultimately resulting in higher financial returns. Therefore, Hamid and Ibrahim (2020) recommend the establishment of a separate sustainability committee to oversee strategic environmental and governance practices.

Luoma and Goodstein (1999) suggest that the legal system and firm size create variations in board representation of stakeholders. However, these variations do not affect stakeholder representation on standing board committees. According to stakeholder theory, board directors should consider the interests of all stakeholders, rather than solely focusing on maximizing shareholder value. This can be achieved by modifying corporate governance structures and legislation to engage diverse stakeholders in equity, economic, and political decisions (Freeman & Reed, 1983). Therefore, corporate governance mechanisms should include sustainability committees to enhance board effectiveness and maximize value for all stakeholders (Money & Schepers, 2007). To be influential, the arrangements of board committees should encompass two categories: monitoring committees (audit, compensation, and nomination committees) and advisory/productivity committees (finance, investment, and strategic committees, including corporate social responsibility) (Klein, 1998). By integrating these subcommittees into the board structure, firms can develop their governance systems to satisfy the interests of multiple stakeholders (Ayuso et al., 2014). According to the stakeholder philosophy, firms with effective monitoring and strategic committees are more likely to monitor managers' decisions to ensure alignment with the interests of diverse stakeholders (Sarhan & Al-Najjar, 2022).

2.3 Resource-based theory

Resource dependence theory can provide insights into how board committees can moderate the relationship between ESG disclosure and financial performance by mitigating resource dependencies. According to this theory, organizations rely on external resources to survive and thrive, and their ability to access and manage these resources is crucial for their performance (Ntim & Soobarooen, 2013; Pfeffer & Salancik, 1978).

By applying resource dependence theory to the context of ESG disclosure, board committees can be seen as mechanisms that help organizations manage their relationships with external stakeholders and access necessary resources. These committees can enhance transparency, accountability, and stakeholder engagement, which are essential for managing ESG-related risks and opportunities (Mallin & Michelon, 2017; Wu, 2018).

Furthermore, board committees can influence the allocation and utilization of resources within organizations, including financial, human, and social capital, which are important for implementing ESG initiatives effectively (Wang et al., 2020). For example, the compensation committee can design

incentive systems that align executives' behaviors with ESG goals, encouraging the allocation of resources toward sustainable practices (Cheng et al., 2021). The audit committee can provide oversight on ESG-related reporting and ensure the accuracy and reliability of disclosed information, thereby enhancing organizations' credibility and reputation with stakeholders (Hooghiemstra et al., 2019).

The nomination committee can play a role in board composition by selecting directors with relevant expertise and diverse perspectives on ESG matters, enabling organizations to access valuable knowledge and networks to support their ESG initiatives (Frynas et al., 2018). Finally, the sustainability committee, when present, can have a specific focus on managing ESG issues and integrating them into strategic decision-making processes (Michelon et al., 2019). Hence, these board committees, through their roles and functions, can moderate the relationship between ESG disclosure and financial performance by facilitating effective resource management, stakeholder engagement, and strategic alignment with ESG goals.

Resource-based theory, introduced by Barney (1991), examines how firms' resources are linked to their competitive advantage. Recent studies by Branco and Rodrigues (2006), Ahmed et al. (2021), Ruan, and Abdi et al. (2022) have recognized the relevance of resource-based theory in explaining the competitive financial benefits experienced by large firms that actively engage in ESG issues. According to these studies, it is argued that large multinational enterprises are more likely to integrate ESG evaluation into their board governance practices. This governance structure can enhance their global competitive advantage and reduce the cost of equity capital (Mohammad & Wasiuzzaman, 2021). Resource-based theorists propose that companies with high-quality internal resources, including skilled and knowledgeable board committee members, are more likely to achieve positive environmental and social performance outcomes (Abdi et al., 2022; Ahmed et al., 2021).

Consequently, optimizing the number of board committees with members possessing relevant expertise is expected to enhance ESG disclosure and contribute to improvements in corporate financial performance. This suggests that firms that effectively leverage their internal resources through the composition and functioning of board committees can achieve a competitive edge in terms of ESG and financial performance outcomes.

3. Empirical literature review and hypotheses development

3.1 The moderating effect of audit committees on the ESG-corporate financial performance nexus

The moderating effect of audit committees on the relationship between ESG and corporate financial performance can be understood from the perspective of agency theory. According to this theory, the presence of an audit committee is crucial in reducing information asymmetry and resolving conflicts of interest between managers and shareholders (Pozzoli, Pagani, & Paolone, 2022). Since managers are

responsible for decision-making, including those related to ESG issues, establishing effective monitoring mechanisms, such as an audit committee, can help control managerial opportunistic behavior (Watts and Zimmerman, 1986; Bacha et al., 2020). Consequently, the existence of an audit committee is essential for promoting ESG activities, which can lead to positive financial outcomes (Habbash & Alghamdi, 2017; Zahid et al., 2022).

Furthermore, drawing from resource dependence theory, companies with larger audit committees have access to a wealth of experience and expertise, enabling them to effectively monitor managerial disclosure behavior (Haj Salem et al., 2019; Albitar, 2015). Therefore, having a larger audit committee size should facilitate investments in environmental and social activities (Allegrini & Greco, 2011). However, it is worth noting that a larger audit committee size may also lead to delays in decision-making due to conflicting opinions (Albitar, Abdoush, & Hussainey, 2022).

The literature on the impact of audit committee attributes on corporate financial and non-financial performance outcomes is mixed. For instance, studies by Achim and Borlea (2015) and Suttipun (2021) reported a negative correlation between audit committee attributes and ESG disclosure scores for Romanian and Thai companies, respectively. Similarly, Xie et al. (2018) found a significant negative association between audit committee meetings and financial performance in a sample of publicly listed companies from 74 countries.

However, other studies (Garas & ElMassah, 2018; Bravo & Reguera-Alvarado, 2019; Buallay & Al-Ajmi, 2019; Dwekat et al., 2020; Arif et al., 2020; Raimo et al., 2021) have demonstrated a positive relationship between audit committee qualities and various ESG and financial performance outcomes. For example, Bravo and Reguera-Alvarado (2019) observed a positive correlation between female representation on audit committees and the quality of ESG disclosures. Likewise, Buallay and Al-Ajmi (2019) concluded that audit committee size, independence, and meetings have a positive influence on ESG reporting in GCC countries. Dwekat et al. (2020) and Albitar et al. (2022) found that audit committee size and independence enhance the quality of CSR information and ESG disclosure levels. Based on these findings, this study proposes the following hypothesis:

H1: Audit committee positively moderates the relationship between ESG and CFP of MNEs.

3.2 The moderating effect of compensation committees on the ESG-financial performance nexus

The moderating effect of compensation committees on the relationship between ESG and financial performance can be explained within the framework of agency theory. According to this perspective, an effective compensation system is essential for overseeing the functions of the board of directors and their standing committees (Nguyen et al., 2020). By aligning compensation with the needs of both management and shareholders, principal-agent problems can be reduced (Jensen & Meckling, 1976; De

Andres & Vallelado, 2008). Consequently, remuneration schemes that consider ESG and financial outcomes, such as stock prices, can incentivize management to pursue sustainable initiatives that maximize shareholder wealth (Batae, Dragomir, & Feleaga, 2021). This implies that the potential additional costs associated with implementing ESG activities can be offset by higher and more stable financial returns (Velte, 2016).

Several studies have provided evidence supporting the positive relationship between compensation committees and ESG performance (Velte, 2016; Suttipun, 2021; Achim & Borlea, 2015; Baraibar-Diez & Odriozola, 2019; Tamimi & Sebastianelli, 2017). For instance, Velte (2016) found a positive association between management compensation plans and ESG performance in a sample of 170 German companies listed on the Frankfurt Stock Exchange. Similarly, Suttipun (2021) identified a positive link between ESG disclosure and compensation committee characteristics in Thai-listed firms. Achim and Borlea (2015) documented a positive impact of remuneration committees on ESG disclosure scores using a sample of 65 companies listed on the Bucharest Stock Exchange. Baraibar-Diez and Odriozola (2019) revealed that firms with high-quality compensation committees demonstrated better ESG performance metrics when supported by a CSR committee. Tamimi and Sebastianelli (2017) discovered a positive relationship between higher ESG disclosure scores and executive compensation among a sample of S&P 500 companies. Additionally, Ammari et al. (2016) suggested that compensation committee qualities can facilitate the relationship between board composition and firm performance. However, previous research has often overlooked the moderating effect of standing committees. Therefore, this study argues that compensation committees can influence the strength and direction of the relationship between ESG and the financial performance of multinational enterprises (MNEs). Based on this argument, we propose the following hypothesis:

H2: Compensation committee positively moderates the relationship between ESG and CFP of MNEs.

3.3 The moderating effect of nomination committees on the ESG-financial performance nexus

The moderating effect of nomination committees on the relationship between ESG and financial performance can be understood from the perspective of agency theory. According to this theory, the conflict of interests between shareholders and management can be effectively resolved by establishing a nomination committee with the attributes to monitor the opportunistic behavior of managers. A high-quality nomination committee ensures that the interests of shareholders and managers are aligned by appointing individuals with similar goals and expertise to achieve the company's performance outcomes (Jensen & Meckling, 1976). This governance structure should ensure that management appraisal and reward schemes are closely linked to the company's ESG and financial performance measures, motivating managers to prioritize shareholder wealth maximization (Batae, Dragomir, & Feleaga, 2021). Furthermore, a high-quality nomination committee ensures diverse board composition that

represents various stakeholders, including employees, customers, and suppliers, allowing the company to adopt a broader perspective on ethical issues and improve its ESG standards (Ammari et al., 2016).

Stakeholder theory also provides another perspective on the moderating effect of nomination committees. According to this theory, diverse and independent nomination committees ensure that the board of directors considers the interests of all stakeholders in a firm's decision-making process, leading to improved ESG governance and related financial performance outcomes (Lantos, 2001; Campbell, 2007; Liu et al., 2018).

Empirical studies on the impact of nomination committees on ESG disclosure have yielded mixed findings. For example, Achim and Borlea (2015) and Suttipun (2021) found that nomination committee governance in Romanian and Thai listed companies was associated with lower ESG scores, while Lam and Lee (2012) reported a significant positive correlation between nomination committees and firm performance in Hong Kong listed companies. Similarly, Agyemang-Mintah (2015) uncovered a positive link between nomination committee attributes and financial performance of UK financial institutions, although Ruigrok et al. (2006) observed that the relationship is strengthened when nomination committees have more independent and female directors.

Several studies have also examined corporate governance characteristics as moderators in the ESG-CFP relationship. For example, Ahmad et al. (2021) found a significant moderating effect of firm size on the association between ESG disclosure and financial performance in UK firms, while Duque-Grisales and Aguilera-Caracuel (2021) revealed that financial slack and international geographic diversification significantly influenced the connection between ESG disclosure and company performance in Latin American multinational firms. Additionally, Velte (2019) reported CEO power as an effective moderator in the association between ESG disclosure and financial performance, and Nekhili et al. (2021) observed that employee representation on corporate boards reinforces this result. Furthermore, Elmghaamez and Gan (2023) emphasized the importance of considering the role of regulatory authorities in different countries when examining the intermediating impact of corporate governance on the ESG-CFP relationship across international markets. Based on these findings, we propose the following research hypothesis:

H3: Nomination committees positively moderate the relationship between ESG and CFP of MNEs.

3.4 The moderating effect of sustainability committees on the ESG-financial performance nexus

The moderating effect of sustainability committees on the relationship between ESG and financial performance can be explained through various theories, including agency, stakeholder, institutional, and resource dependence theories. According to agency theory, sustainability committees encourage directors to prioritize ESG matters, leading to a better principal-agent relationship and alignment of

stakeholder interests (Baraibar-Diez & Odriozola, 2019). Stakeholder theory views the creation of sustainability committees as a corporate strategy to engage with all stakeholders and establish processes and procedures accordingly (Baraibar-Diez & Odriozola, 2019). Institutional theorists argue that sustainability committees reflect a firm's acceptance of societal norms and help achieve legitimacy (DiMaggio & Powell, 1983; Lopez-Arceiz et al., 2022). Moreover, resource dependence theory suggests that sustainability committees legitimize a firm's ESG activities, enhance its public image, and facilitate access to external resources, such as expertise, capital, and relationships with other organizations (Pfeffer & Salancik, 1978; Russo & Fouts, 1997; Zhou et al., 2022). Having a larger number of independent and diverse directors on sustainability committees enables better sharing of resources and leads to improved decision-making and financial performance (Minciullo et al., 2022).

Previous research on the impact of CSR committee functions on ESG performance has produced mixed results. While Uyar et al. (2021) found no significant relationship between CSR committee governance and CSR performance in healthcare companies, most studies have reported a positive correlation between these variables (Eberhardt-Toth, 2017; Baraibar-Diez & Odriozola, 2019; Birindelli et al., 2018; Martínez-Ferrero et al., 2021; Saeed, 2021; Cucari et al., 2018; Suttipun, 2021; Velte & Stawinoga, 2020; Elmaghrabi, 2021). For example, Eberhardt-Toth (2017) found that firms with a CSR committee experienced better ESG performance, and Birindelli et al. (2018) observed a positive association between CSR committee activities and ESG performance in the banking sector. Saeed (2021) reported a positive impact of CSR committee existence on ESG performance in the energy sector, and Martínez-Ferrero et al. (2021) found a mediating effect of board diversity on the relationship between CSR committees and ESG performance. While some studies have found insignificant associations between sustainability committees and ESG performance (Velte, 2016), the overall evidence supports a positive relationship. Therefore, this study proposes the following hypothesis:

H4: Sustainability committees positively moderate the relationship between ESG and CFP of MNEs.

4. Research methodology

4.1. Sample and data authentication

The sample used in this study consisted of the top 500 MNEs from 40 countries that were consistently listed on major global stock exchanges between 2009 and 2019. Data for the study was collected from the Bloomberg database, which is widely recognized as a reliable source of information on board committee attributes, ESG disclosure, financial characteristics, and other relevant factors of MNEs. The dataset included financial metrics such as financial leverage, operating cash flow, liquidity, profitability, activity, and market ratios. To account for country-specific characteristics, the study also incorporated macroeconomic variables obtained from the World Bank website, specifically the international trade-to-GDP ratio and taxes on international trade as a percentage of revenue. By including the top 500

MNEs, this study aims to provide a comprehensive understanding of the moderating effect of board committees on the relationship between ESG disclosure and financial performance in MNEs.

The sample encompassed 13 industries, including electronics and home appliances, food, clothing and footwear, financial services, pharmaceuticals, retailing, telecommunications, oil and gas, automotive, airlines, manufacturing, services, and conglomerates. This diverse representation of industries allows for capturing the impact of board committees across different business sectors and facilitates generalizations of the findings regarding the enhancement of ESG disclosure and financial performance through board committees.

The selected sample period of 2009 onwards was chosen to mitigate the influence of the 2007-2008 financial crisis on the empirical analysis of the ESG disclosure–financial performance relationship. It is important to note that the financial crisis had a significant impact on MNEs with global operations. By starting the sample period in 2009, the study aims to provide a more representative and stable estimation of the relationship between ESG disclosure, board committees, and financial performance.

Please insert Table (1) here

4.2 Variable selection

4.2.1 Dependent variables

This study aims to achieve two objectives. Firstly, to examine the relationship between ESG disclosure (ESG) and corporate financial performance (CFP) in multinational enterprises. Secondly, to assess the moderating impact of individual and aggregated board sub-committees on the ESG–CFP relationship. The dependent variables used in the regression models consist of four accounting and market-based measures of corporate financial performance. The accounting-based performance measures include return on equity (ROE), return on assets (ROA), return on capital (ROC), and return on invested capital (ROI). The market-based measures include Tobin Q (TOBQ), sustainable growth rate, earnings per share (EPS), and dividends per share (DPS). These selected accounting and market-based performance variables encompass widely used financial performance indicators in the literature (Buallay, 2019; Almeyda & Darmansya, 2019; Elmghaamez & Olarewaju, 2022; Ahmad et al., 2021; Dalal & Thaker, 2019). By incorporating a range of accounting and market-based performance indicators, this study aims to demonstrate the robustness of the findings across different definitions of CFP employed in the literature.

4.2.2 Moderating variables

Previous studies have investigated various moderating factors to assess the strength of the relationship between ESG disclosure and corporate financial performance. These factors include audit quality (Zahid et al., 2022), CEO's power (Velte, 2021), board characteristics (Rossi et al., 2021), international

diversification and financial slack (Duque-Grisales & Aguilera-Caracuel, 2021), size and industry sensitivity (Zaiane & Ellouze, 2022), board skills (Al-Hiyari et al., 2023), market competition (Vural-Yavaş, 2021), type of employee board representation (Nekhili et al., 2021), and governance mechanisms (Nguyen et al., 2021). In this study, we focus on examining the moderating effect of four board standing committees (audit, compensation, nomination, and sustainability), as well as their aggregation, on the relationship between ESG disclosure and the financial performance of multinational enterprises (MNEs). To the best of our knowledge, no previous research has explored the role of board standing committees in facilitating the relationship between ESG disclosure and financial performance in MNEs that have maintained continuous listing on the 40 major stock markets worldwide over a ten-year period following the Enron global financial crisis in 2007-2008.

4.2.3 Explanatory variables of interest

Consistent with prior studies (e.g., Ahmad et al., 2021; Buallay, 2019; Velte, 2017; Weber, 2014; Xie et al., 2018; Dalal & Thaker, 2019; Almeyda & Darmansya, 2019), this study measures the quality of ESG reporting by MNEs using both the aggregate ESG score and its components – environmental, social, and governance metrics. The scores are calculated by the Bloomberg Terminal and will help determine the sensitivity of MNEs' financial performance to the interdependence of these responsibilities. Additionally, the study investigates the influence of four individual board standing committee indexes (audit, compensation, nomination, and sustainability) as well as their combination on the ESG–financial performance nexus of MNEs. In accordance with prior research, the selection of board committee attributes is based on the characteristics prescribed in the Sarbanes-Oxley Act of 2002 (Hundal, 2013). Overall, these attributes are directly linked to the board independence, activity, knowledge, skills, and experience (Elmghaamez & Ntim, 2016).

Similarly, following from previous studies (Elmagrhi et al., 2020; Sharma & Singh, 2009; Hassan, 2012; Vander-Bauwhede & Willekens, 2008; Shrivastav & Kalsie, 2017; Samaha et al., 2015), this study investigates the moderating effect of the combined board committee index on the relationship between ESG and financial performance to capture the joint impact of audit, compensation, nomination, and sustainability board standing committees. As shown in Table 2, the aggregated index is composed of 28 attributes drawn from all four individual board sub-committees.

The combined and individual indexes were created using a percentage coding method. The aggregate index (BCMTIND) was calculated by averaging the 28 individual attributes for each company each year, after dividing by their highest value to convert them to decimals. The four individual board committee indexes were also calculated using the same method, with a score of 100 percent indicating the highest number of board committee characteristics disclosed. Thus, the score for each year ranges from 0 to 100 percent, providing a more accurate representation of the board committee attributes of

MNEs compared to binary coding methods. This approach is consistent with the creation of corporate governance indexes used in a few prior studies (Aggarwal et al., 2019; Aggarwal et al., 2011).

4.2.4 Control variables

This study builds on previous research (Ahmad et al., 2021; Abdi et al., 2022; Shakil et al., 2019) and incorporates their suggested control variables. These control variables include sales to total assets, free cash flow yield, international trade to GDP ratio, and taxes on international trade as a percentage of revenue (Bajic & Yurtoglu, 2018; Yu et al., 2018; Davis et al., 2016). Moreover, this study employs the financial leverage ratio to account for the firms' capital structure, aligning with the trade-off theory. The trade-off theory suggests that companies with low growth, stable cash flows, and tangible assets tend to have a higher debt ratio in their capital structure (Abdi et al., 2022). Additionally, we controlled for variations in industry and country-level governance characteristics using dummy variables for the financial and service sectors, as well as the level of development of the country where the MNE is headquartered. Furthermore, we incorporated the World Bank-reported country governance characteristics as part of our analysis.

Please insert Table 2 here

4.3 Model specification

To examine the impact of board committee presence on the relationship between ESG and financial performance, this study utilizes balanced panel data of the top 500 largest multinational enterprises (MNEs) operating in multiple countries. The final sample was selected based on three criteria: (i) availability of aggregate and individual ESG scores from 2009 to 2019, (ii) availability of data on accounting and market-based performance measures from 2009 to 2019, and (iii) continuous stock market listing for the 11-year period under investigation. The study employs quantile regression models (Models 1 to 4) to investigate the moderating effect of board committee presence on the relationship between aggregate and individual ESG disclosure and financial performance of MNEs.

Model 1

$$\text{Equation (1): } CFP_{it} = \alpha_0 + \beta_1 ESG_{it} + \beta_2 BCMTIND_{it} + \sum_{i=1}^5 \beta_i Controls_{it} + \varepsilon_{it}$$

Model 2

$$\text{Equation (2): } CFP_{it} = \alpha_0 + \beta_1 ESG_{it} + \beta_2 BCMTIND_{it} + \beta_3 ESG_{it}BCMTIND_{it} + \sum_{i=1}^5 \beta_i Controls_{it} + \varepsilon_{it}$$

Model 3

$$\text{Equation (3): } CFP_{it} = \alpha_0 + \beta_1 ESG_{it} + \beta_2 AUDCIND_{it} + \beta_3 COMCINDEX_{it} + \beta_4 NOMCINDEX_{it} + \beta_5 SUSCIND_{it} + \sum_{i=1}^5 \beta_i Controls_{it} + \varepsilon_{it}$$

Model 4

$$\text{Equation (4): } CFP_{it} = \alpha_0 + \beta_1 ESG_{it} + \beta_2 AUDCIND_{it} + \beta_3 COMCINDEX_{it} + \beta_4 NOMCINDEX_{it} + \beta_5 SUSCIND_{it} + \beta_6 ESG_{it} AUDCIND_{it} + \beta_7 ESG_{it} COMCINDEX_{it} + \beta_8 ESG_{it} NOMCINDEX_{it} + \beta_9 ESG_{it} SUSCIND_{it} + \sum_{i=1}^5 \beta_i Controls_{it} + \varepsilon_{it}$$

Where $ESGD_{it}$ refers to the environmental, social and governance disclosure scores for an MNE i and in a certain year t , CFP_{it} relates to the corporate financial performance of MNEs, which includes the accounting- and market-based performance indicators, $BCMTINDEX_{it}$ stands for board committee indexes, $AUDCINDEX_{it}$ for the audit committee indexes, $COMCINDEX_{it}$ for the compensation committee indexes, $NOMCINDEX_{it}$ for the nomination committee indexes, $SUSCINDEX_{it}$ for the sustainability committee indexes and $Controls_{it}$ refers to the control variables, ε_{it} is the error term.

5. Empirical analysis

5.1 Descriptive statistics

Table 3 presents descriptive statistics for the dependent, independent, and control variables in this study, based on a sample of 500 MNEs from 2009 to 2019. The results reveal significant variation in the distribution of board committee attributes among the global enterprises in the sample.

For instance, the average (median) size of the audit committee is 3.2 (4.0) members, with a range of 2 to 10 members. These findings are consistent with prior research conducted by Soliman & Ragab (2014), Ofoeda et al. (2020), and Samoei & Rono (2016). The data also indicate that the average (median) number of independent directors on the audit committee is 2.8 (3.0), ranging from 1 to 15. These statistics align with previous studies that have found a positive correlation between a higher proportion of independent directors and improved corporate transparency (e.g., Crespi-Cladera & Pascual-Fuster, 2014). Furthermore, the number of non-executive directors on the audit committee ranges from 1 to 11, with an average of 3.0 and a standard deviation of 2.0, which adheres to the requirement of the UK code for at least three independent non-executive directors.

Regarding the compensation committees, the data indicate an average of 3.2 (median: 4.0) members, with a range of 1 to 12 and a standard deviation of 1.9. Approximately 50% of the MNEs in the sample have 3 members on their compensation committees, consistent with previous research done by Sun et al. (2009). Additionally, the number of independent directors on the compensation committees ranges from 1 to 12, with a mean of 2.6 (median: 3.0) and a standard deviation of 1.9. This suggests that 44% of MNEs have 3 independent directors on their compensation committees. Studies have shown that a higher proportion of independent directors on compensation committees is associated with lower CEO pay and higher CEO turnover (Dou et al., 2015).

Turning to the nomination committees, Table 3 reveals that the mean (median) size of these committees is 3.2 (4.0) members, ranging from 1 to 14. This finding aligns with previous studies by

Agyemang-Mintah (2015) and Arranz-Aperte (2015), which suggested that larger nomination committees lead to better financial performance. The average number of independent directors on the nomination committees is 2.6 (median: 3.0), ranging from 1 to 21. This implies that 38% of the MNEs in the sample have at least 3 independent directors on their nomination committees. Research has indicated that a higher number of independent directors on nomination committees results in greater resistance to CEO influence (Ruigrok et al., 2006; Eminet & Guedri, 2010). Additionally, it is noteworthy that the average (median) number of non-executive directors on the nomination committee is 2.9 (3.0), with a range from 1 to 20 non-executive directors on MNEs' nomination committees. Approximately 42% of the MNEs in the sample have at least three non-executive directors on their nomination committees, aligning with the recommendation that non-executive directors should constitute at least one-third of the board of directors (Pass, 2004). This composition provides valuable insights into performance, resources, and director recruitment and appointments.

Table 3 also provides information on the presence of a sustainability committee, represented as a binary variable, with a value of 1 indicating the existence of a sustainability committee and 0 otherwise. According to Baraibar-Diez and Odriozola (2019), companies with sustainability committees tend to demonstrate better ESG performance.

To assess collinearity among the variables included in the multiple regression models, two measures were employed: the variance inflation factor (VIF) and tolerance tests. Hair et al. (2019) suggested that a VIF value above 10 indicates severe multicollinearity, while a value of 10 or below is considered acceptable. The results presented in Table 3 indicate that the chosen variables in Models 1 to 4 exhibit minimal errors associated with multicollinearity, ensuring the validity of the regression models.

Please insert Table 3 here

5.2 Findings and discussion

5.2.1 The effect of board committees in moderating the ESG–financial performance relationship.

Table 4 presents the results of the regression analysis conducted to test hypotheses H1 to H4. This study uses quantile regressions to assess the impact of aggregate and individual board committee indexes on the relationship between *ESG* disclosure and financial performance (using both accounting and market-based measures) of MNEs. Velte and Stawinoga (2020) found that board committees can facilitate the link between governance and ESG performance. This finding is consistent with our results, which show that the aggregate *BCMTIND* has a negative moderating effect on the relationship between *ESG* and accounting measures (*ROA* & *ROC*) for MNEs with high *ESG* scores, and a positive moderating effect on the relationship between *ESG* and accounting measures (*ROE* & *ROI*) for MNEs with median and high *ESG* scores.

Our study examined the relationship between ESG disclosure and four accounting measures (*ROA*, *ROE*, *ROC*, and *ROI*) for MNEs with median and superior ESG scores. Our initial hypothesis, H1, posited that the *AUDCIND* would have a positive impact on this relationship, suggesting that a stronger audit committee would enhance the association between *ESG* disclosure and accounting performance. However, contrary to our hypothesis, our findings revealed a negative impact of the *AUDCIND* on the relationship between *ESG* disclosure and the accounting measures. This implies that, for MNEs with median and superior ESG scores, a higher *AUDCIND* score is associated with lower accounting performance, as measured by four financial indicators (*ROA*, *ROE*, *ROC*, and *ROI*). This result is in line with the findings reported by prior scholars (Achim & Borlea 2015; Suttipun, 2021; Xie et al., 2018), who found a negative correlation between audit committee attributes and ESG disclosure.

These results are consistent with the expectation suggested by resource dependence theory, which posits that companies with large audit committees are endowed with a wealth of experience and expertise to effectively monitor managerial disclosure behaviour. Hence, having a large-sized audit committee should facilitate investment in environmental and social activities (Allegrini & Greco, 2011; Haj Salem et al., 2019; Albitar, 2015). However, a large size of audit committees could potentially hinder a firm from making timely decisions due to conflicting opinions (Albitar et al., 2022).

The *COMCIND* has a positive effect on the relationship between *ESG* and our three accounting measures (*ROA*, *ROE*, and *ROC*) for MNEs with median and high *ESG* scores, and this effect is only significant at the upper tail of the distribution for *ROI* ratio. These findings are consistent with hypothesis H2. Additionally, these results are in line with prior research that found a positive relationship between compensation committees and ESG performance (Velte, 2016; Suttipun, 2021; Achim & Borlea, 2015; Baraibar-Diez & Odriozola, 2019; Tamimi & Sebastianelli, 2017). Furthermore, these results are consistent with the agency theory perspective, which suggests that compensation systems that are compatible with the needs of both management and shareholders help reduce principal-agent problems. Thus, remuneration schemes should be linked to company ESG and financial performance (Jensen & Meckling, 1976; De Andres & Vallelado, 2008).

The *NOMCIND* has a positive effect on the relationship between *ESG* and accounting measures (*ROA*, *ROE*, *ROC*, and *ROI*) for MNEs with low *ESG* scores. This is in line with prior research conducted by Lam and Lee (2012) and Agyemang-Mintah (2015), who reported a positive correlation between nomination committees and firm performance. This result is also supported by stakeholder theory, which assumes that effective governance of the nomination committee is crucial to ensure a diverse and representative board composition that includes employees, customers, and suppliers. This diverse composition allows the company to consider a wider range of perspectives on ethical issues, thereby enhancing their ESG performance (Ammari et al., 2016). However, we found a negative impact

on the relationship between ESG and our three accounting measures (*ROA, ROE, and ROI*) for *MNEs* with *ESG* scores at the upper tail of the distribution. These results are consistent with the findings stated by previous studies such as Achim and Borlea (2015) and Suttipun (2021), which found that the nomination committee has a negative impact on *ESG* scores.

Our results indicate that the *SUSCIND* has a positive effect on the relationship between *ESG* and our two accounting measures (*ROA and ROE*) for *MNEs* with high *ESG* scores. This finding is in line with previous studies that reported a positive correlation between the presence of *CSR* committee governance and firm performance (Eberhardt-Toth, 2017; Baraibar-Diez & Odriozola, 2019; Birindelli et al., 2018; Martínez-Ferrero et al., 2021; Saeed, 2021; Cucari et al., 2018; Suttipun, 2021; Velte & Stawinoga, 2020; Elmaghrabi, 2021). Collectively, these findings support the resource dependence theory viewpoint, which assumes that organizations are influenced by their external environment. Therefore, the establishment of sustainability committees helps legitimize a firm's *ESG* activities. A good governance structure plays a crucial role in providing access to diverse resources and fostering connections with other organizations. These resources and connections ultimately contribute to the overall *ESG* performance and effectiveness of the firm (Pfeffer & Salancik, 1978). Good governance codes often encompass principles and guidelines related to *ESG* factors. The existence of board committees plays a crucial role in implementing and monitoring the compliance of these codes within companies (Elmghaamez, 2021). However, we found a negative impact on the relationship between *ESG* and three accounting measures (*ROE, ROC, and ROI*) for *MNEs* with median and low *ESG* scores.

Table 5 presents the results related to market-based measures. The findings reported in Table 5 demonstrate the moderating effect of different board committee indexes on the relationship between Environmental, Social, and Governance (*ESG*) disclosure and market-based performance indicators (*TOBQ, SGR, EPS, and DPS*) for multinational enterprises (*MNEs*). These effects are influenced by the level of *ESG* scores.

Starting with the aggregate committee index (*BCMTIND*), we observe a negative impact on the relationship between *ESG* and *TOBQ* for *MNEs* with median and low *ESG* scores. However, the *BCMTIND* has a positive effect on the relationship between overall *ESG* and *SGR, EPS, and DPS* across *MNEs* with low, median, and high *ESG* scores. These findings align with the resource-based theory, which suggests that firms with better access to critical resources and capabilities tend to enhance their financial performance. Furthermore, the relationship between aggregated *ESG* and *TOBQ* and *SGR* is positively influenced by the *BCMTIND*, but only for *MNEs* with high *ESG* scores. This finding supports the stakeholder viewpoint that emphasizes firms' responsibilities to their various stakeholders, including investors and society, which can positively impact their financial outcomes (Albitar et al., 2020).

Moving to the audit committee index (*AUDCIND*), we find a negative impact on the relationship between *ESG* and *TOBQ* and *DPS* for *MNEs* with median and poor aggregated *ESG* scores. However, the *AUDCIND* has a positive effect on the relationship between *ESG* and *EPS*. These results highlight the role of compliance with social norms and regulations, as firms' adherence to these standards can positively influence their financial performance.

Regarding the compensation committee index (*COMCIND*), we observe a positive effect on the relationship between *ESG* and market-based measures (*TOBQ* & *DPS*), but only for *MNEs* with median overall *ESG* scores. This finding is consistent with the concept of legitimacy, suggesting that firms' compliance with social norms and regulations can positively impact their financial performance.

Analysing the nomination committee index (*NOMCIND*), we find a positive effect on the relationship between *ESG* and *TOBQ* for *MNEs* with low *ESG* scores. However, the *NOMCIND* negatively affects the relationship between *ESG* and *SGR*, but only for *MNEs* with median *ESG* scores. Additionally, the *NOMCIND* has a positive effect on the relationship between *ESG* and *EPS* and *DPS* across *MNEs* with low, median, and upper tail *ESG* scores. These findings align with the institutional theorist argument, emphasizing the positive impact of firms' compliance with institutional requirements on their financial performance (Campbell, 2007; DiMaggio & Powell, 1983).

Finally, the sustainability committee index (*SUSCIND*) demonstrates a positive effect on the relationship between *ESG* and *TOBQ* for *MNEs* with high *ESG* scores. Conversely, the *SUSCIND* has a negative effect on the relationship between *ESG* and *SGR* for *MNEs* with low, median, and high *ESG* scores. Furthermore, the *SUSCIND* has a positive effect on the relationship between *ESG* and *DPS* for *MNEs* with low and median *ESG* scores. However, the *SUSCIND* does not significantly moderate the relationship between *ESG* and *EPS* at all quantile levels. These findings are in line with previous evidence suggesting that the sustainability committee does not play a significant moderating role in the link between governance practices and sustainability performance.

In summary, the findings presented in Table 5 highlight the complex relationships between *ESG* disclosure, board committees, and market-based performance indicators for *MNEs*. The moderating effects vary depending on the specific committee index and the level of *ESG* scores. These results contribute to our understanding of how governance mechanisms interact with *ESG* practices to influence financial performance outcomes in multinational enterprises.

Please insert tables 4, & 5 about here

5.2.2 The effect of board committees in moderating the ENVD-financial performance relationship.

The effect of board committees on moderating the relationship between environmental disclosure (*ENVD*) and financial performance is examined in Table 6. The results indicate that the aggregate *BCMTIND* positively moderates the relationship between *ENVD* and accounting measures (*ROE*, *ROC*, and *ROI*) for MNEs across all quantile levels. This finding aligns with the results reported by Almeyda and Darmansya (2019), who found a significant positive association between environmental disclosure and corporate financial performance.

However, Table 6 shows that *AUDCIND* negatively affects the relationship between *ENVD* and two accounting measures (*ROA* and *ROC*), but only for MNEs with median and low *ENVD* scores. This finding is consistent with previous studies that identified a negative correlation between audit committee attributes and *ESG* disclosure scores (Achim & Borlea, 2015; Suttipun, 2021; Xie et al., 2018). However, the other two accounting-based measures (*ROE* and *ROI*) are positively influenced at low quantile levels. This result is in line with findings from other studies that highlight a positive relationship between audit committee qualities, financial performance, and *ESG* disclosures (Bravo & Reguera-Alvarado, 2019; Buallay & Al-Ajmi, 2019; Albitar et al., 2022). It is also consistent with the perspective of agency theory, which assumes that the presence of an audit committee is crucial in reducing information asymmetry and conflicts of interest between managers and shareholders (Pozzoli, Pagani, & Paolone, 2022).

The results suggest that the *COMCIND* positively affects the relationship between *ENVD* and the three accounting-based measures (*ROE*, *ROC*, and *ROI*), but only for MNEs with high *ENVD* scores. This finding is consistent with prior studies that found a positive relationship between compensation committees and *ESG* performance (Velte, 2016; Suttipun, 2021; Achim & Borlea, 2015; Baraibar-Diez & Odriozola, 2019; Tamimi & Sebastianelli, 2017). However, we found that the moderating effect of *COMCIND* on the link between *ENVD* and *ROA* is insignificant at all quantile levels. Additionally, Table 6 indicates that *NOMCIND* is positively associated with the relationship between *ENVD* and the four accounting-based measures (*ROA*, *ROE*, *ROC*, and *ROI*), but only for MNEs with low and median *ENVD* scores. On the other hand, *NOMCIND* negatively affects the relationship between *ENVD* and *ROE* and *ROI*, but only for enterprises with high *ENVD* scores. Furthermore, the results show that *SUSCIND* is negatively associated with the relationship between *ENVD* and the three accounting measures (*ROE*, *ROC*, and *ROI*), but only for MNEs with median *ENVD* scores. However, the interaction effect of *SUSCIND* on the relationship between *ENVD* disclosure and *ROA* is insignificant at all quantile levels. This result is consistent with the findings reported by Velte (2016), who also found an insignificant link between environmental disclosure and accounting-based performance metrics.

Regarding market-based measures, Table 7 presents the results of the moderation effects of various board committee indices on the relationship between environmental disclosure (*ENVD*) of multinational

corporations (*MNEs*) and their market-based performance measures, including market value (*TOBQ*), earnings per share (*EPS*), dividend per share (*DPS*), and sustainable growth rate (*SGR*).

Our results indicate that the aggregate *BCMTIND* positively affects the relationship between *ENVD* and market-based measures (*EPS*, *DPS*, and *TOBQ*), but only for *MNEs* with median to high *ENVD* scores. However, the aggregate *BCMTIND* has a negative impact on the relationship between *ENVD* and *Tobin Q* for *MNEs* with low *ENVD* scores. Furthermore, the results presented in Table 7 show that *AUDCIND* negatively influences the relationship between *ENVD* and *Tobin Q* and *DPS*, but only for *MNEs* with median to low *ENVD* scores. However, the association between *ENVD* and *EPS* is positively affected for *MNEs* with high *ENVD* scores.

The results demonstrate that the *COMCIND* positively influences the relationship between *ENVD* and *TOBQ* and *DPS* for *MNEs* with low to median *ENVD* scores. However, the relationship between *ENVD* and *EPS* is negatively affected, but only for *MNEs* with high *ENVD* scores. Table 7 also suggests that the *NOMCIND* positively influences the relationship between *ENVD* and market-based measures (*SGR*, *EPS*, and *DPS*), but only for *MNEs* with low to median *ENVD* scores. In contrast, *NOMCIND* is negatively correlated with the relationship between *ENVD* and *TOBQ* for *MNEs* with high *ENVD* scores, but positively associated with the relationship between *ENVD* and *TOBQ* for *MNEs* with low *ENVD* scores. Furthermore, from Table 7, it is observed that *SUSCIND* is positively correlated with the relationship between *ENVD* and *TOBQ* for *MNEs* with median to high *ENVD* scores. Conversely, *SUSCIND* negatively impacts the relationship between *ENVD* and *SGR* for *MNEs* with low to high *ENVD* scores. The results suggest that *SUSCIND* positively affects the relationship between *ENVD* and *DPS* for *MNEs* with low to median *ENVD* scores but does not interact with the relationship between *ENVD* and *EPS* at any quantile level.

Overall, the results in Table 7 are consistent with the literature that supports the positive relationship between environmental disclosure and corporate financial performance. For example, Almeyda and Darmansya (2019) found a significant positive association between environmental disclosure and selected market-based performance measurements. Similarly, Elmghaamez and Olarewaju (2022) confirmed the positive effects of environmental performance on stock prices and return on capital for product-based firms listed on the London Stock Exchange.

Please insert tables 6, & 7 about here

5.2.3 The effect of board committees in moderating the SOCD-financial performance relationship. Table 8 provides evidence of the moderation effect of various indexes on the relationship between the

disclosure of social and environmental information (*SOCD*) and accounting performance measures (*ROA*, *ROE*, *ROC*, and *ROI*) of multinational enterprises (*MNEs*).

The results suggest that the aggregate *BCMTIND* has a positive effect on the relationship between *SOCD* and *ROA* at the 0.75 quantile level, but a negative moderation between *SOCD* and *ROE* at the 0.95 quantile level. In contrast, the aggregate *BCMTIND* positively influences the link between *SOCD* and *ROE* at the 0.75 and 0.95 quantile levels. The *AUDCIND* has a negative impact on the relationship between *SOCD* and the four accounting measures (*ROA*, *ROE*, *ROC*, and *ROI*), but only for *MNEs* with low and median *SOCD* scores. On the other hand, the *NOMCIND* positively affects the relationship between *SOCD* and the four accounting-based measures (*ROA*, *ROE*, *ROC*, and *ROI*), but only for companies at low, median, and 0.75 quartile levels. However, the *NOMCIND* negatively affects the relationship between *SOCD* and accounting-based measures (*ROE* and *ROI*), but only for *MNEs* with the upper 0.95 of *SOCD* scores.

The *SUSCIND* negatively influences the relationship between *SOCD* and our four accounting measures (*ROA*, *ROE*, *ROC*, and *ROI*), but only for *MNEs* with median and low levels of *SOCD* scores. In contrast, the *SUSCIND* positively affects the relationship between *SOCD* and accounting-based measures (*ROA* and *ROC*), but only at the 0.95 quantile level. These findings are broadly in line with the results reported by previous authors, including Javalgi et al. (2009), who investigated the relationship between social disclosure and corporate performance. The corporate governance theories that align with these results are the agency and stakeholder models. According to the traditional agency theory by Jensen and Meckling (1976), greater disclosure of information on social matters helps enhance managerial accountability, thus reducing the information asymmetry between managers and investors. Additionally, the original stakeholder theory by Freeman (1984) suggests that organizations have multiple stakeholders with different interests. Therefore, social disclosures by firms should be relevant to diverse stakeholders.

Table 9 reports that the aggregate *BCMTIND* has a negative moderating effect on the relationship between *SOCD* of multinational enterprises (*MNEs*) and market-based measures (*TOBQ*) at the low, median, and upper 0.75 quantile levels of *SOCD* scores. This result is consistent with the theory of institutional distance, which proposes that companies in countries with weak institutions and low levels of governance quality will benefit more from increased *SOCD*. However, the aggregate *BCMTIND* has a positive impact on the relationship between *SOCD* of *MNEs* and two market-based measures (*EPS* and *DPS*) at the median and upper 0.75 quantile levels of *SOCD*. This finding supports the agency theory, which implies that increased *SOCD* can improve corporate transparency, hence lessening the

information asymmetry between management and stakeholders, resulting in increased financial outcomes (Jensen & Meckling, 1976).

The *AUDCIND* has a negative effect on the relationship between *SOCD* of *MNEs* and market-based measures (*TOBQ* and *DPS*), but only for *MNEs* with low and median *SOCD* scores. On the other hand, it positively affects the relationship between *SOCD* and *EPS* of *MNEs* at the median and upper 0.95 quantile levels. This result is consistent with the political cost theory, which suggests that companies operating in countries with political instability and high levels of corruption may face penalties for increased *SOCD* (Bebchuk & Fried, 2003).

The *COMPIND* positively influences the relationship between *SOCD* of *MNEs* and two market-derived measures (*TOBQ* and *DPS*) only for companies with low and median *SOCD* scores. However, the association between *SOCD* and *EPS* is negatively affected at the upper 0.75 and 0.95 quantile levels. The *COMPIND* also has an adverse effect on the relationship between *SOCD* of *MNEs* and the *SGR* ratio, but only for *MNEs* with low and median *SOCD* scores. These results align with the resource-based perspective that companies with limited resources face difficulties in implementing *SOCD* practices, leading to lower financial performance outcomes (Wernerfelt, 1984).

The *NOMCIND* is positively correlated with the relationship between *SOCD* of *MNEs* and the following market-related measures (*SGR*, *EPS*, and *DPS*), although this observation is only significant for companies with low, median, and upper 0.75 quartile levels of *SOCD* scores. Additionally, the *NOMCIND* positively affects the relationship between the *SOCD* and *TOBQ* of *MNEs*, but only for *MNEs* with low and 0.75 quartile levels of *SOCD* scores. These results are in line with the stakeholder hypothesis that increased *SOCD* can improve stakeholders' confidence in the company and lead to better financial performance (Freeman, 1984).

The *SUSCIND* positively affects the relationship between *SOCD* of *MNEs* and *TOBQ*, but only for *MNEs* with the upper 0.95 quartile level of *SOCD* scores. On the other hand, a negative moderation effect is reported for *SUSCIND* and the relationship between *SOCD* and two market-related measures (*SGR* and *EPS*) for *MNEs* with low, median, and upper 0.75 quartile levels of *SOCD* scores. The *SUSCIND* has insignificant effects on the relationship between *SOCD* and *DPS* ratio for *MNEs* at all quartile levels of *SOCD* scores.

Please insert tables 8, & 9 about here

5.2.4 The effect of board committees in moderating the GOVD-financial performance relationship.

The effect of board committees in moderating the *GOVD*-financial performance relationship is

examined in Table 10. The results shed light on the impact of different board standing committee indices on the relationship between governance disclosure (*GOVD*) of *MNEs* and various accounting measures, (*ROA*, *ROE*, *ROC*, and *ROI*). Overall, our findings support the agency perspective, emphasizing the crucial role of a firm's governance structure in aligning the interests of managers and shareholders, thereby enhancing financial performance.

Specifically, the results reveal that the aggregate *BCMTIND* has a negative effect on the relationship between *GOVD* and *ROA*, particularly at the 0.50 and 0.95 quartile levels of *GOVD* scores. However, it has a positive impact on the relationship between *GOVD* and *ROE*, but only at the 0.25 quartile level. These findings suggest that a high-quality corporate board system, as measured by *BCMTIND*, can contribute to improved accounting returns for *MNEs* (Fich & Shivdasani, 2006).

Furthermore, the *AUDCIND* negatively affects the relationship between *GOVD* and three accounting measures (*ROA*, *ROC*, and *ROI*) for *MNEs* with median *GOVD* scores. This result supports the argument that robust auditor committee arrangements play a crucial role in ensuring the reliability of ethical disclosures and their connection with financial outcomes (Bartov et al., 2002). On the other hand, the *COMCIND* has an insignificant effect on the relationship between *GOVD* and the selected accounting measures at all quartile levels of *GOVD* scores. This could be attributed to the limited variation in the *COMCIND* within our *MNE* sample, which may have failed to capture the complex interplay between governance disclosures and financial outcomes.

Lastly, the *SUSCIND* positively influences the relationship between *GOVD* and the *ROA* ratio, but this effect is only significant for *MNEs* with the upper 0.95 level of *GOVD* scores. Conversely, the *SUSCIND* negatively affects the relationship between *GOVD* and the *ROI* ratio at the 0.25 and 0.50 quartile levels of *GOVD* scores. These findings highlight the importance of considering the responsibilities of stakeholder engagement managers in shaping the financial performance of *MNEs* (Waddock & Graves, 1997).

The results presented in Table 11 explore the interaction effects of different sub-committee indices on the relationship between governance disclosure (*GOVD*) of multinational enterprises (*MNEs*) and their financial performance, as measured by the market-based measures (*TOBQ*, *EPS*, *DPS*, and *SGR*).

Notably, the aggregate *BCMTIND* has an adverse effect on the relationship between *GOVD* and *TOBQ* at the low and median quartile levels of *GOVD* scores. This finding aligns with prior research findings (Uyar et al., 2021; Almeyda & Darmansya, 2019). Conversely, *BCMTIND* positively impacts the relationship between *GOVD* and the market-based measures (*EPS* and *DPS*), specifically at the median and upper 0.75 quartile levels. This result supports previous empirical studies (Barney, 1991).

The *AUDCIND* has a negative effect on the relationship between *GOVD* and two market-based measures (*TOBQ* and *DPS*) for *MNEs* with low and median *GOVD* scores, consistent with previous research (Abdi et al., 2022; Ahmed et al., 2021). However, we found that *AUDCIND* has an insignificant moderating effect on the relationship between *GOVD* and two market-based measures (*SGR* and *EPS*) at all quantile levels. The *COMPIND* positively mediates the relationship between *GOVD* and the market-based measures (*TOBQ* and *DPS*) ratios for companies with median and 0.75 quantile levels of *GOVD* scores, in line with some prior studies (Barney, 1991). However, *COMPIND* has an insignificant mediating effect on the relationship between *GOVD* and two market-based measures (*SGR* and *EPS*) at all quantile levels of *GOVD* scores.

The *NOMCIND* positively mediates the relationship between *GOVD* and *DPS* ratio at the median and upper 0.75 quantile levels of *GOVD* scores, consistent with prior research (Uyar et al., 2021; Almeyda & Darmansya, 2019). On the other hand, *NOMCIND* negatively affects the relationship between *GOVD* and *TOBQ* at the median quantile level, in line with previous studies (Abdi et al., 2022; Ahmed et al., 2021). However, we found insignificant effects of *NOMCIND* on the relationship between *GOVD* and two market-based measures (*SGR* and *EPS*) at all quantile levels.

The *SUSCIND* has a positive effect on the relationship between *GOVD* reporting scores and two market-related measures (*EPS* and *DPS*) for low and median quantile levels. However, *SUSCIND* does not significantly impact the relationship between *GOVD* and *TOBQ* at all quantile levels. This finding aligns with the research by Uyar et al. (2021) and Almeyda and Darmansya (2019). These results support both the resource-based and stakeholders' hypotheses, suggesting that companies with better access to critical resources tend to adopt higher environmental and social standards, resulting in associated financial outcomes (Barney, 1991; Abdi et al., 2022; Ahmed et al., 2021).

Please insert table 10 & 11 about here

5.3 Robustness Analysis

Robustness analysis is a crucial aspect of an empirical research as it helps to ensure that the results obtained are reliable and unchanging to different estimation assumptions, conditions, and methods. In the context of this study, robustness analysis was conducted to test the validity of the results obtained from the conventional quantile regression models to the endogenous and unobserved variable problem. Consequently, we re-estimated models 1 to 4 at first difference with lagged dependent and explanatory variables comprising our selected accounting and market-based performance indicators and board committees as instruments to control for endogeneity. Desender and Epure (2021) and Sarhan and Al-Najjar (2022) have used similar internal instrument approach in their research. Additionally, using lagged financial performance variables as instruments is in line with the evidence that prior financial

outcomes affect future ESG disclosure scores (Chang & Lee, 2022). In addition, the decision to consider our four board committees as instruments is supported by the finding that firms with effective board committees and strong financial performance are more likely to engage in ESG activities, which enhances their sustainable competitive advantage (Chang & Lee, 2022).

The results of Hausman tests of the validity of the regression models at first difference with lagged internal variables as instruments indicate that the p -values for all models are greater than the significance level of 0.05. Hence, we may infer that errors associated with endogeneity and heterogeneity are minimized in the first difference instrumental quantile regression models. Nonetheless, we observed that the results of the re-estimated first difference instrumental quantile regressions are comparable to the results reported for the respective conventional quantile regression models. Such consistency indicates that our original results are robust to the potential endogeneity and heterogeneity biases arising from correlated and omitted explanatory variables respectively. This offers confidence in the estimated regression results with their associated policy recommendations.

Please insert table 12 & 13 about here

6. Conclusion

This study examines the role of combined and individual board committee indexes in moderating the relationship between *ESG* disclosure and the financial performance of multinational enterprises (*MNEs*) listed on major stock markets in 40 countries from 2009 to 2019 (i.e., 5,500 firm-year observations). The study employs four accounting-based measures, namely return on equity (*ROA*), return on assets (*ROE*), return on capital (*ROC*), and return on invested capital (*ROI*), in addition to four market-based measures: Tobin Q (*TOBQ*), earnings per share (*EPS*), dividends per share (*DPS*), and sustainable growth rate (*SGR*). These performance measures are used as dependent variables, while the aggregated *ESG* disclosure score and its three components serve as explanatory variables.

In summary, the study revealed that the combined board committee index has a positive impact on the relationship between *ESG* disclosure and accounting measures for large *MNEs*. The compensation and nomination committee indexes strengthen this relationship, while the audit and sustainability committee indexes weaken the association. The combined index has a negative effect on the relationship between *ESG* disclosure and *TOBQ* and *SGR*, but a positive effect on *EPS* and *DPS*. The audit committee index negatively influences the correlation between aggregate *ESG* and market-based performance indicators, while the compensation and nomination committee indexes have positive effects. The sustainability committee index reinforces the relationship between aggregate *ESG* disclosure and market outcomes, except for the *SGR* ratio. Additionally, the combined board committee index positively affects the relationship between *ENVD* and accounting-based performance measures for large *MNEs*, with the audit and sustainability committee indexes negatively impacting this

relationship. The compensation committee index positively affects ENVD for large MNEs, while the nomination committee index has a positive influence for small and medium MNEs. Also, the combined index positively influences the relationship between ENVD and market-related measures, by contrast to the negative impact of audit committee on EPS. The compensation committee index has a positive impact, and the sustainability committee index has a positive effect, except for the SGR ratio.

Additionally, our study found that combined board committee has positive impact on SOCD-accounting relationship in large MNEs. Audit committee has an adverse effect, sustainability committee varies with MNE size. Compensation committee influences accounting–SOCD link positively for large MNEs, nomination committee shows positive impact across quantiles. Combined board committee favours the association between SOCD–market measures in large MNEs, negatively affects the same in small MNEs. Audit committee hampers market–SOCD link, while compensation committee has favourable impact. Nomination committee influences certain market-based measures positively, while sustainability committee has mixed effects. Compensation committee reinforces the connection with market-based measures. Nomination and sustainability committees have mixed effects on market–SOCD nexus, depending on MNE size and choice of performance metric. We found that combined board committee moderates GOVD–accounting relationship differently for MNE sizes. Audit and sustainability committees negatively impact GOVD–accounting link, compensation committee has no significant impact. Nomination committee index weakens the correlation with accounting–GOVD in large MNEs. Combined board committee aids links between GOVD–market measures, hampers TOBQ for small MNEs. Audit committee negatively affects the link between GOVD governance and the market-based measures (TOBQ and DPS).

The findings of this study have important implications for policy makers, society, and academia. Policy makers should consider incorporating *ESG* disclosure requirements into regulatory frameworks, as the study highlights its significance in driving financial performance for multinational enterprises (*MNEs*). Moreover, the study emphasizes the importance of combining the activities of board committees, particularly compensation and nomination committees, in fostering the positive relationship between *ESG* disclosure and performance outcomes. For society, the results indicate that companies with strong *ESG* standards tend to outperform financially, providing valuable insights for investors interested in ethical and sustainable investment opportunities. From an academic standpoint, the research sheds light on the role of board committees in shaping the link between *ESG* disclosure and financial performance, offering new theoretical perspectives, and contributing to the understanding of corporate governance dynamics in the context of *ESG* practices. Lastly, *MNEs* should prioritize strengthening their combined board committee index, as it has a positive impact on the *ESG*-performance relationship compared with its individual components. This can be achieved by ensuring

that board committees members have the necessary expertise, knowledge, and experience to integrate *ESG* practices into decision-making processes.

To further advance the understanding of the role of board committee indexes in moderating the *ESG*-corporate performance relationship, future research can explore several avenues. *Firstly*, conducting a longitudinal analysis beyond the study period would provide insights into the evolving nature of this relationship in the post-Covid pandemic era. Understanding how the moderating effects of board committee indexes may change in response to shifting market dynamics and evolving *ESG* standards should guide *MNEs* in adapting their governance strategies. *Secondly*, industry-specific studies can delve into the unique *ESG* challenges and opportunities faced by different sectors. This would allow for tailored recommendations and best practices unique to each industry. Additionally, cross-country analysis can help uncover the influence of the quality of external institutions and regulations on the moderating effects of board committee indexes. Comparing *MNEs* operating in diverse countries would provide valuable insights for shaping governance practices globally. *Lastly*, qualitative exploration through interviews and case studies can provide a deeper understanding of the channels through which board committee indexes influence the *ESG*-corporate performance relationship. This qualitative approach can uncover additional factors and dynamics that quantitative analyses may not capture, enhancing the richness of future research in this area. Additionally, the study only considered a limited number of board committees (audit, compensation, nomination, and sustainability), and future research could explore the potential impact of other board advisory and monitoring committees, such as risk, compliance, strategy, and human resources committees, if data becomes available. Moreover, expanding the sample size to include a broader range of multinational enterprises, encompassing both public and private companies, would enhance the generalizability of the findings. By addressing these research gaps, future studies can further enrich our understanding of the complex interplay between *ESG* disclosure, board committees, and financial performance outcomes in multinational contexts.

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Appendices

Table 1: Frequency distribution of Multinational enterprises (MNEs) classified by sector

Codes	Sectors	Freq.	Percent	Cum.
1	Electronics Industry	71	14.2%	31.4
2	Food industry	55	11%	53.6
3	Clothing and Footwear	23	4.6%	17.2
4	Financial services	41	8.2%	42.6
5	Pharmaceutical	41	8.2%	72.6
6	Retailing	46	9.2%	81.2
7	Telecommunications	39	7.8%	89
8	Oil and gas	15	3%	64.4
9	Automotive industry	48	9.6%	12.6
10	Airline's sector	15	3%	3
11	Manufacturing Industry	39	7.8%	61.4
12	Service industries	52	10.4%	100
13	Conglomerate	15	3%	34.4
	Total	500	100	

Table 2: Summary definition and measurements of variables included in this study

Variables	Definitions and measurements	Sources
Financial performance		Bloomberg Terminal 2020
ROE	Return on Equity = Net Income / Shareholders' Equity	
ROA	Return on Assets = Net Income / Total Assets	
ROC	Return on Capital = (net income - dividends) / (debt + equity)	
ROI	Return on Invested Capital = net operating profit after tax / invested capital	
TOBQ	Tobin's Q Ratio = total market value of a firm / total asset value of a firm	
SGR	Sustainable growth rate	
EPS	Earnings per Share = (Net Income – Preferred Dividends) / Weighted Average Shares	
DPS	Dividends per share is the number of declared dividends issued by a company for every share.	
ESG disclosure scores		Bloomberg Terminal 2020
ESG	Aggregate Environmental, Social, and Governance Disclosure Score	
ENV	Individual Environmental Disclosure Score	
SOC	Individual Social Disclosure Score	
GOV	Individual Governance Disclosure Score	
AUDIT COMIT		Bloomberg Terminal 2020
SIOACMT	Size of Audit Committee	
NIDACMT	Number of Independent Directors on Audit Committee	
PIDACMT	Percentage of Independent Directors on Audit Committee	
IACMTCP	Independent Audit Committee Chairperson	
NNEDCMT	Number of Non-executive Directors on audit Committee	
ACMTMEN	Audit Committee Meetings	
ACMTMEP	Audit Committee Meeting Attendance Percentage	
YRSAUDE	Years Auditor Employed	
COMP COMIT		Bloomberg Terminal 2020
SIOCCMT	Size of Compensation Committee	
NIDCCMT	Number of Independent Directors on Compensation Committee	
PIDCCMT	Percentage of Independent Directors on Compensation Committee	
ICCMTCP	Independent Compensation Committee Chairperson	
NEDCCMT	Number of Non-executive Directors on Compensation Committee	
CCMTMEN	Number of Compensation Committee Meetings	
CCMTMEP	Compensation Committee Meeting Attendance %	
OUTCADV	Outside Compensation Advisors Appointed	
NOMI COMIT		Bloomberg Terminal 2020
SIONCMT	Size of Nomination Committee	
NIDNCMT	Number of Independent Directors on Nomination Committee	
PIDNCMT	Percentage of Independent Directors on Nomination Committee	
INCMTCP	Independent Nomination Committee Chairperson	
NEDNCMT	Number of Non-executive Directors on Nomination Committee	
NCMTMEN	Number of Nomination Committee Meetings	
NCMTMEP	Nomination Committee Meeting Attendance Percentage	
SUST COMIT		Bloomberg Terminal 2020
SUSTCMT	Sustainability Committee	
NEXDSUS	Non-Executive Director with Responsibility for Sustainability	
EXDIRSUS	Executive Director with Responsibility for Sustainability	
EXCOESG	Executive Compensation Linked to ESG	
ESGCOFB	ESG Linked Compensation for Board	
BCMTIND	The aggregate board committee indexes	
AUDCIND	Individual audit committee index	
COMCIND	Individual compensation committee index	
NOMCIND	Individual nomination committee index	
SUSCIND	Individual sustainability committee index	
CONTROL VAR		Bloomberg Terminal 2020
FINLEVG	Financial Leverage = total company debt/shareholder's equity	
SATOTAS	Asset Turnover Ratio = Net Sales /Average Total Assets	
FCFLOWY	Free Cash Flow Yield	
TRADGDP	The trade-to-GDP ratio is an indicator of the international trade in a country.	
TAXINTR	Taxes on international trade include import duties, export duties, and exchange taxes.	
FINSEDU	Financial sector dummy	
SERSEDU	Service sector dummy	
LEODEOH	Level of development of headquartered country	
WBGCH	The aggregate world bank reported country governance characteristics	

Table 3: Summary of descriptive statistics of all dependent, independent and control variables

Variable	Statistical dispersion						Collinearity	
	Obs	Mean	Std. Dev.	Variance	Min	Max	VIF	1/VIF
Outcome Variables								
ROE	5,500	15.0	29.7	884.8	-221.1	1048.6	1.01	0.98
ROA	5,500	5.7	9.2	84.3	-235.2	110.8	3.70	0.27
ROC	5,500	9.6	14.7	216.0	-288.2	219.9	5.15	0.19
ROI	5,500	9.0	13.4	180.1	-268.3	125.9	3.00	0.33
TOBQ	5,500	1.8	1.4	2.0	0.0	33.8	1.39	0.72
EPS	5,500	5.8	72.3	5222.8	-370.3	2155.2	13.50	0.07
DPS	5,500	2.7	39.8	1587.7	0.0	1761.2	13.34	0.07
Explanatory Variables								
ESG	5,500	37.7	17.1	292.4	0.0	82.6	486.41	0.00
ENVD	5,500	31.5	20.6	425.5	0.0	86.0	197.64	0.01
SOC	5,500	34.9	19.0	361.3	0.0	94.7	38.40	0.03
GOVD	5,500	54.2	14.7	215.7	0.0	85.7	23.34	0.04
Moderating Variables								
AUDIT COMT								
SIOACMT	5,500	3.2	2.0	4.0	2.0	10.0	10.00	0.09
NIDACMT	5,500	2.8	2.0	4.0	1.0	15.0	5.17	0.19
PIDACMT	5,500	66.9	42.9	1842.0	0.0	100.0	6.02	0.17
IACMTCP	5,500	0.7	0.5	0.2	0.0	1.0	4.64	0.22
NNEDCMT	5,500	3.0	2.0	4.1	1.0	11.0	10.00	0.08
ACMTMEN	5,500	7.1	5.0	24.7	0.0	53.0	1.90	0.53
ACMTMEP	5,500	63.4	40.9	1669.0	0.0	100.0	1.07	0.93
YRSAUDE	5,500	11.0	19.8	390.1	0.0	131.0	1.26	0.79
COMP COMT								
SIOCCMT	5,500	3.2	1.9	3.8	1.0	12.0	4.87	0.21
NIDCCMT	5,500	2.6	1.9	3.5	1.0	12.0	7.67	0.13
PIDCCMT	5,500	63.8	45.8	1420.1	0.0	100.0	4.08	0.25
ICCMTCP	5,500	0.7	0.5	0.2	0.0	1.0	3.60	0.28
NEDCCMT	5,500	3.0	2.0	3.8	0.0	12.0	7.03	0.14
CCMTMEN	5,500	4.0	3.5	12.2	0.0	28.0	1.91	0.52
CCMTMEP	5,500	57.7	43.0	1846.3	0.0	100.0	2.73	0.37
OUTCADV	5,500	0.4	0.5	0.2	0.0	1.0	1.84	0.54
NOMI COMT								
SIONCMT	5,500	3.2	2.2	4.8	1.0	14.0	4.48	0.22
NIDNCMT	5,500	2.6	2.2	4.8	1.0	21.0	5.47	0.18
PIDNCMT	5,500	59.0	43.3	1871.4	0.0	100.0	5.77	0.17
INCMTCP	5,500	0.6	0.5	0.2	0.0	2.0	3.29	0.30
NEDNCMT	5,500	2.9	2.2	4.9	1.0	20.0	6.51	0.15
NCMTMEN	5,500	2.9	3.0	8.9	0.0	40.0	1.74	0.57
NCMTMEP	5,500	53.2	43.8	1920.8	0.0	100.0	2.57	0.39
SUST COMT								
SUSCMT	5,500	0.3	0.4	0.2	0.0	1.0	1.08	0.92
NEXDSUS	5,500	0.0	0.0	0.0	0.0	1.0	1.00	1.00
EXDIRSUS	5,500	0.0	0.2	0.0	0.0	1.0	1.03	0.97
EXCOESG	5,500	0.1	0.4	0.1	0.0	1.0	1.12	0.89
ESGCOFB	5,500	0.0	0.1	0.0	0.0	1.0	1.06	0.94
Control Variables								
FINLEVG	5,500	5.2	33.7	1136.3	0.0	1813.0	1.00	0.99
SATOTAS	5,500	0.8	0.5	0.3	-0.6	3.8	1.01	0.99
FCFLOWY	5,500	5.2	70.3	4936.7	-2483.2	3721.6	1.01	0.99
TRADGDP	5,500	59.4	53.5	2859.7	22.1	442.6	1.02	0.98
TAXINTR	5,500	2.2	3.8	14.2	0.0	34.4	1.01	0.99
FINSEDU	5,500	0.08	0.27	0.07	0.0	1.0	1.32	0.75
SERSEDU	5,500	0.35	0.47	0.22	0.0	1.0	1.14	0.87
LEODEOH	5,500	0.79	0.40	0.16	0.0	1.0	5.72	0.17
WBGCH	5,500	78.7	16.97	288.17	25.61	98.79	5.22	0.19

Note: The abbreviations used in the tables are as follows: ROE represents Return on Equity, ROA represents Return on Assets, ROC represents Return on Capital, ROI represents Return on Invested Capital, TOBQ represents Tobin's Q Ratio, EPS represents Earnings per Share, and DPS represents Dividends per Share. The explanatory variables include ESG (Aggregate Environmental, Social, and Governance Disclosure Score), ENVD (Individual Environmental Disclosure Score), SOC (Individual Social Disclosure Score), and GOVD (Individual Governance Disclosure Score). The moderating variables consist of AUDIT COMT (Audit Committee), COMP COMT (Compensation Committee), NOMI COMT (Nomination Committee), and SUST COMT (Sustainability Committee). Control variables encompass FINLEVG (Financial Leverage), SATOTAS (Asset Turnover Ratio), FCFLOWY (Free Cash Flow Yield), TRADGDP (Trade-to-GDP Ratio), TAXINTR (Taxes on International Trade), FINSEDU (Financial Sector Dummy), SERSEDU (Service Sector Dummy), LEODEOH (Level of Development of Headquartered Country), and WBGCH (World Bank Reported Country Governance Characteristics).

Table 4: Quantile regression results of the interaction between ESG disclosure and aggregate and individual board committee indexes on the accounting-based measures of MNEs

DVs	ROA				ROE				ROC				ROI			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	0.001 (0.551)	0.001 (0.574)	-0.004** (0.024)	-0.013** (0.023)	0.000 (0.894)	-0.004* (0.055)	-0.011*** (0.004)	-0.054*** (0.000)	-0.004*** (0.003)	-0.005*** (0.000)	-0.006*** (0.007)	-0.024*** (0.000)	0.000 (0.894)	-0.005*** (0.000)	-0.007*** (0.000)	-0.019*** (0.003)
BCMTIND	0.001*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.008*** (0.000)	0.014*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.005*** (0.000)	0.007*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.007*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.058	0.091	0.103	0.115	0.059	0.059	0.059	0.059	0.093	0.093	0.093	0.093	0.118	0.118	0.118	0.118
ESG	0.001 (0.963)	0.001 (0.776)	-0.001 (0.766)	-0.024*** (0.000)	0.002 (0.714)	-0.002 (0.581)	-0.005 (0.316)	-0.026** (0.016)	-0.002 (0.561)	-0.006*** (0.005)	-0.005 (0.197)	-0.016*** (0.002)	0.003 (0.215)	-0.004** (0.039)	-0.002 (0.529)	-0.008 (0.128)
BCMTIND	0.001 (0.114)	0.003*** (0.007)	0.001 (0.725)	0.012*** (0.000)	0.002 (0.422)	0.004** (0.022)	0.001 (0.679)	-0.010** (0.048)	0.001 (0.714)	0.004*** (0.000)	0.003 (0.159)	0.001 (0.831)	-0.001 (0.525)	0.003** (0.019)	0.001 (0.742)	-0.003 (0.392)
ESG*BCMTIND	0.001 (0.735)	0.002 (0.446)	0.001 (0.125)	-0.002*** (0.006)	0.001 (0.740)	0.001 (0.553)	0.002** (0.023)	0.007*** (0.000)	0.001 (0.278)	0.001 (0.576)	0.001 (0.470)	0.002* (0.056)	0.001** (0.031)	0.000 (0.632)	0.001** (0.022)	0.003*** (0.001)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.093	0.093	0.093	0.093	0.118	0.118	0.118	0.118
ESG	0.001 (0.433)	0.001 (0.609)	-0.004** (0.027)	-0.014*** (0.008)	0.001 (0.615)	-0.004** (0.034)	-0.011*** (0.002)	-0.059*** (0.000)	-0.004*** (0.007)	-0.005*** (0.000)	-0.006** (0.014)	-0.024*** (0.000)	0.000 (0.941)	-0.005*** (0.001)	-0.007*** (0.001)	-0.021*** (0.004)
AUDCIND	0.001 (0.445)	0.001 (0.126)	0.002*** (0.006)	0.007*** (0.000)	0.001 (0.440)	0.004*** (0.001)	0.008*** (0.000)	0.012*** (0.005)	0.001 (0.484)	0.002* (0.055)	0.002 (0.114)	0.005* (0.065)	0.001 (0.215)	0.002* (0.051)	0.003* (0.060)	0.005* (0.060)
COMCIND	0.001 (0.720)	0.001** (0.023)	0.001 (0.335)	0.004 (0.181)	-0.002 (0.229)	0.001 (0.303)	0.004* (0.069)	0.011 (0.319)	0.001 (0.523)	0.002*** (0.009)	0.004** (0.042)	0.006 (0.300)	0.001 (0.277)	0.003*** (0.002)	0.005*** (0.001)	0.006 (0.147)
NOMCIND	0.001** (0.018)	0.001* (0.076)	0.002** (0.024)	-0.003 (0.456)	0.005*** (0.001)	0.003** (0.023)	0.001 (0.731)	-0.002 (0.836)	0.002** (0.050)	0.002* (0.075)	0.002 (0.437)	-0.001 (0.830)	0.001* (0.092)	0.002** (0.021)	0.000 (0.876)	0.001 (0.810)
SUSCIND	0.001 (0.906)	0.001 (0.248)	0.002* (0.057)	0.001 (0.888)	0.002 (0.364)	0.003** (0.041)	0.008*** (0.000)	0.021** (0.013)	0.002** (0.021)	0.002* (0.051)	0.003* (0.052)	0.006 (0.124)	0.001 (0.653)	0.002 (0.835)	-0.002 (0.300)	0.005 (0.282)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.093	0.093	0.093	0.093	0.117	0.117	0.117	0.117
ESG	0.001 (0.759)	-0.003 (0.132)	-0.001 (0.819)	-0.023*** (0.000)	-0.001 (0.886)	-0.005 (0.216)	-0.010** (0.029)	-0.014 (0.236)	-0.005** (0.039)	-0.007*** (0.005)	-0.002 (0.510)	-0.019*** (0.001)	0.002 (0.387)	-0.002 (0.367)	0.001 (0.966)	-0.014* (0.056)
AUDCIND	0.007** (0.019)	0.015*** (0.000)	0.012* (0.087)	0.016 (0.203)	0.019** (0.012)	0.023*** (0.004)	0.015 (0.160)	0.016 (0.739)	0.012*** (0.003)	0.021*** (0.000)	0.037*** (0.000)	0.059* (0.057)	0.012*** (0.000)	0.012*** (0.007)	0.012 (0.173)	0.028 (0.291)
COMCIND	0.004 (0.362)	-0.005* (0.086)	-0.011 (0.207)	-0.033*** (0.002)	-0.003 (0.780)	-0.017 (0.128)	-0.029** (0.025)	-0.048 (0.296)	-0.004 (0.516)	-0.010 (0.157)	-0.022 (0.111)	-0.064* (0.058)	-0.001 (0.767)	0.001 (0.881)	-0.012 (0.258)	-0.061** (0.024)
NOMCIND	-0.010** (0.016)	-0.005 (0.242)	0.001 (0.767)	0.048*** (0.001)	-0.019** (0.021)	-0.006 (0.441)	0.018** (0.036)	0.032 (0.550)	-0.013** (0.017)	-0.007 (0.148)	-0.007 (0.621)	0.011 (0.809)	-0.019*** (0.000)	-0.016*** (0.000)	-0.001 (0.953)	0.036** (0.016)
SUSCIND	0.001 (0.944)	0.009 (0.244)	-0.009 (0.388)	-0.040** (0.011)	0.025 (0.184)	0.038** (0.030)	0.040** (0.011)	-0.090** (0.018)	0.030*** (0.001)	0.017* (0.093)	-0.013 (0.429)	-0.010 (0.589)	0.022*** (0.006)	0.022** (0.030)	-0.005 (0.784)	0.006 (0.822)
ESG*AUDCIND	-0.002** (0.022)	-0.004*** (0.000)	-0.003 (0.129)	-0.003 (0.340)	0.250** (0.014)	-0.005** (0.014)	-0.002 (0.570)	-0.001 (0.944)	-0.003*** (0.009)	-0.005*** (0.000)	-0.010*** (0.000)	-0.015* (0.080)	-0.003*** (0.002)	-0.003** (0.025)	-0.003 (0.308)	-0.006 (0.396)
ESG*COMCIND	-0.001 (0.409)	0.002** (0.029)	0.003 (0.161)	0.010*** (0.001)	0.001 (0.894)	0.005* (0.097)	0.009** (0.014)	0.018 (0.172)	0.001 (0.430)	0.003* (0.074)	0.007* (0.056)	0.019** (0.030)	0.001 (0.669)	0.002 (0.842)	0.005* (0.094)	0.017** (0.021)
ESG*NOMCIND	0.003*** (0.008)	0.002 (0.162)	0.001 (0.852)	-0.014*** (0.000)	0.007*** (0.003)	0.003 (0.231)	-0.005* (0.065)	-0.010 (0.494)	0.004*** (0.006)	0.003* (0.063)	0.002 (0.547)	-0.003 (0.801)	0.006*** (0.000)	0.005*** (0.000)	0.001 (0.958)	-0.009** (0.037)
ESG*SUSCIND	0.001 (0.946)	-0.002 (0.293)	0.003 (0.331)	0.011*** (0.007)	-0.006 (0.209)	-0.009** (0.041)	-0.009** (0.040)	0.027** (0.023)	-0.007*** (0.002)	-0.004* (0.098)	0.004 (0.331)	0.004 (0.430)	-0.006*** (0.004)	-0.006** (0.028)	0.001 (0.895)	-0.001 (0.892)
Includes all controls	Yes	Yes	Yes	Yes	yes	yes	yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.116	0.116	0.116	0.116	0.059	0.059	0.059	0.059	0.094	0.094	0.094	0.094	0.118	0.118	0.118	0.118

Note: The abbreviations used in the tables are as follows: ESG represents Aggregate Environmental, Social, and Governance Disclosure Score, BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ESG*BCMTIND, ESG*AUDCIND, ESG*COMCIND, ESG*NOMCIND, and ESG*SUSCIND, capturing the interaction effects between ESG and specific committee indexes. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 5: Quantile regression results of the interaction between ESG disclosure and aggregate and individual board committee indexes on the market-based measures of MNEs

DVs	TQ				SGR				EPS				DPS			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	0.092*** (0.001)	0.026** (0.024)	-0.013 (0.240)	-0.010 (0.531)	0.002 (0.103)	-0.007*** (0.000)	-0.015*** (0.000)	-0.060*** (0.000)	0.001** (0.013)	0.001 (0.839)	0.001 (0.788)	0.006** (0.032)	0.050*** (0.000)	0.035*** (0.000)	0.028*** (0.005)	0.112*** (0.000)
BCMTIND	0.015*** (0.000)	0.019*** (0.000)	0.023*** (0.000)	0.018*** (0.000)	0.001 (0.482)	0.003*** (0.000)	0.005*** (0.000)	0.011*** (0.000)	0.001** (0.012)	0.002*** (0.000)	0.002** (0.023)	-0.003*** (0.005)	-0.004*** (0.000)	0.011*** (0.000)	0.019*** (0.000)	-0.015* (0.082)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.105	0.105	0.105	0.105	0.059	0.059	0.059	0.059	0.078	0.078	0.078	0.078	0.174	0.174	0.174	0.174
ESG	0.025*** (0.001)	0.001 (0.995)	0.006 (0.700)	-0.038 (0.306)	0.001 (0.850)	-0.007** (0.012)	-0.020*** (0.000)	-0.040*** (0.000)	0.001*** (0.002)	0.001** (0.039)	0.002*** (0.001)	0.009*** (0.000)	0.111*** (0.000)	0.155*** (0.000)	0.157*** (0.000)	0.195*** (0.000)
BCMTIND	0.096*** (0.000)	0.044*** (0.000)	0.009 (0.299)	0.032* (0.082)	0.002 (0.194)	0.003** (0.043)	0.009*** (0.000)	-0.001 (0.802)	0.001* (0.068)	0.002*** (0.031)	-0.002*** (0.000)	-0.005*** (0.001)	-0.043*** (0.000)	-0.068*** (0.000)	-0.071*** (0.000)	-0.079** (0.013)
ESG*BCMTIND	-0.023*** (0.000)	-0.007*** (0.003)	0.004* (0.088)	-0.004 (0.460)	-0.001 (0.138)	0.001 (0.761)	-0.001* (0.055)	0.003** (0.041)	0.001** (0.015)	0.001*** (0.000)	0.001*** (0.000)	0.001 (0.316)	0.012*** (0.000)	0.024*** (0.000)	0.026*** (0.000)	0.019** (0.044)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.107	0.107	0.107	0.107	0.059	0.059	0.059	0.059	0.079	0.079	0.079	0.079	0.189	0.189	0.189	0.189
ESG	0.099*** (0.000)	0.026** (0.021)	-0.012 (0.297)	-0.018 (0.229)	0.002 (0.139)	-0.007*** (0.000)	-0.015*** (0.000)	-0.064*** (0.000)	0.001*** (0.008)	0.000 (0.266)	-0.001 (0.226)	0.006*** (0.006)	0.047*** (0.000)	0.032*** (0.000)	0.028*** (0.004)	0.089*** (0.000)
AUDCIND	0.015*** (0.000)	0.013*** (0.004)	0.008* (0.074)	0.061*** (0.000)	-0.001 (0.251)	0.002*** (0.002)	0.006*** (0.000)	0.010 (0.233)	0.001 (0.224)	0.002** (0.032)	0.001*** (0.002)	0.005 (0.108)	0.003 (0.382)	0.004 (0.335)	0.021*** (0.002)	0.102*** (0.000)
COMCIND	0.013*** (0.000)	0.013*** (0.003)	0.018** (0.013)	-0.020 (0.103)	-0.002** (0.035)	-0.001 (0.264)	0.001 (0.572)	0.005 (0.627)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.012*** (0.000)	-0.020*** (0.000)	-0.011** (0.014)	-0.017* (0.051)	-0.066*** (0.001)
NOMCIND	0.003 (0.389)	0.007* (0.069)	0.009 (0.246)	0.002 (0.899)	0.003*** (0.001)	0.004*** (0.000)	0.003* (0.093)	0.001 (0.908)	0.001*** (0.000)	0.001*** (0.000)	0.001 (0.524)	0.001 (0.806)	0.001 (0.712)	0.004 (0.268)	0.002 (0.843)	-0.061*** (0.009)
SUSCIND	-0.011*** (0.000)	0.002 (0.683)	0.018*** (0.004)	0.001 (0.917)	-0.002* (0.068)	0.001 (0.511)	0.000 (0.837)	0.009 (0.206)	0.001*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.006** (0.038)	0.063*** (0.000)	0.102*** (0.000)	0.089*** (0.000)	0.067*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.104	0.104	0.104	0.104	0.059	0.059	0.059	0.059	0.082	0.082	0.082	0.082	0.194	0.194	0.194	0.194
ESG	0.021*** (0.005)	0.008 (0.520)	0.001 (0.993)	-0.020 (0.559)	-0.003 (0.237)	-0.012*** (0.000)	-0.022*** (0.000)	-0.053*** (0.000)	0.001 (0.143)	0.001 (0.913)	0.002 (0.710)	0.005 (0.292)	0.114*** (0.000)	0.153*** (0.000)	0.120*** (0.000)	0.145*** (0.006)
AUDCIND	0.223*** (0.000)	0.131*** (0.000)	0.093* (0.075)	0.138 (0.116)	0.006 (0.145)	0.007 (0.211)	0.009 (0.355)	0.028 (0.511)	0.001 (0.279)	0.001 (0.150)	-0.002 (0.119)	-0.017** (0.024)	0.057*** (0.000)	0.094*** (0.000)	0.016 (0.711)	0.163 (0.158)
COMCIND	-0.034 (0.144)	-0.065*** (0.005)	-0.078 (0.442)	-0.178 (0.118)	0.001 (0.897)	0.004 (0.603)	0.000 (0.975)	-0.039* (0.085)	0.001 (0.816)	0.002 (0.979)	0.002 (0.159)	0.006 (0.493)	-0.040** (0.017)	-0.090*** (0.000)	-0.008 (0.889)	0.004 (0.952)
NOMCIND	-0.030** (0.014)	0.023 (0.245)	0.007 (0.940)	0.158* (0.092)	-0.009 (0.309)	-0.010 (0.121)	-0.004 (0.708)	0.010 (0.815)	-0.002*** (0.003)	-0.002** (0.017)	-0.003** (0.014)	0.006 (0.559)	-0.066*** (0.000)	-0.095*** (0.000)	-0.113*** (0.005)	-0.198 (0.119)
SUSCIND	0.009 (0.776)	-0.011 (0.823)	-0.017 (0.788)	-0.279*** (0.002)	0.025** (0.025)	0.036*** (0.007)	0.047** (0.017)	0.032 (0.578)	0.002 (0.292)	0.003 (0.237)	0.011** (0.044)	0.005 (0.787)	-0.146*** (0.001)	-0.112** (0.035)	0.057 (0.543)	-0.323 (0.169)
ESG*AUDCIND	-0.058*** (0.000)	-0.034*** (0.000)	-0.022 (0.104)	-0.022 (0.335)	-0.002* (0.097)	-0.001 (0.394)	-0.001 (0.690)	-0.005 (0.634)	0.001 (0.466)	0.002 (0.318)	0.001** (0.019)	0.006*** (0.004)	-0.016*** (0.000)	-0.024*** (0.000)	0.003 (0.820)	-0.018 (0.613)
ESG*COMCIND	0.011* (0.072)	0.022*** (0.001)	0.026 (0.337)	0.042 (0.171)	-0.001 (0.666)	-0.001 (0.549)	0.001 (0.911)	0.013** (0.043)	0.001 (0.413)	0.001 (0.478)	-0.001** (0.012)	-0.005** (0.018)	0.007 (0.148)	0.022*** (0.000)	-0.002 (0.885)	-0.020 (0.375)
ESG*NOMCIND	0.010*** (0.004)	-0.003 (0.532)	0.001 (0.990)	-0.043* (0.088)	0.004 (0.154)	0.004** (0.043)	0.002 (0.529)	-0.003 (0.803)	0.001*** (0.000)	0.001*** (0.002)	0.001** (0.011)	-0.002 (0.557)	0.020*** (0.000)	0.030*** (0.000)	0.035*** (0.008)	0.041 (0.292)
ESG*SUSCIND	-0.002 (0.770)	0.004 (0.751)	0.009 (0.559)	0.076*** (0.002)	-0.007** (0.014)	-0.009*** (0.009)	-0.012** (0.015)	-0.006 (0.689)	0.001 (0.575)	0.001 (0.781)	-0.002 (0.181)	0.001 (0.892)	0.055*** (0.000)	0.050*** (0.001)	0.001 (0.991)	0.102 (0.105)
Includes all controls	Yes	Yes	Yes	Yes	yes	yes	yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.109	0.109	0.109	0.109	0.060	0.060	0.060	0.060	0.082	0.082	0.082	0.082	0.203	0.203	0.203	0.203

Note: The following abbreviations are used in the tables: ESG represents the Aggregate Environmental, Social, and Governance Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ESG*BCMTIND, ESG*AUDCIND, ESG*COMCIND, ESG*NOMCIND, and ESG*SUSCIND, representing the interaction effects between ESG and specific committee indexes. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 6: Quantile regression results of the interaction between environmental disclosure and aggregate and individual board committee indexes on the accounting-based measures of MNEs

DVs	ROA				ROE				ROC				ROI			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ENVD	-0.001 (0.174)	-0.001* (0.069)	-0.004*** (0.001)	-0.013*** (0.000)	-0.001 (0.464)	-0.004*** (0.007)	-0.007*** (0.000)	-0.013** (0.045)	-0.003*** (0.003)	-0.004*** (0.000)	-0.007*** (0.000)	-0.017*** (0.001)	0.001 (0.999)	-0.004*** (0.000)	-0.004*** (0.001)	-0.010*** (0.001)
BCMTIND	0.001*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.002*** (0.000)	0.005*** (0.000)	0.008*** (0.000)	0.012*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.005*** (0.000)	0.007*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.007*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.116	0.116	0.116	0.116	0.060	0.060	0.060	0.060	0.095	0.095	0.095	0.095	0.119	0.119	0.119	0.119
ENVD	-0.001 (0.279)	-0.001 (0.100)	-0.002 (0.108)	-0.013*** (0.006)	-0.002 (0.360)	-0.001 (0.664)	-0.004** (0.023)	-0.011** (0.017)	-0.002* (0.083)	-0.003*** (0.007)	-0.004*** (0.003)	-0.011*** (0.000)	0.001 (0.616)	-0.002** (0.042)	-0.002* (0.058)	-0.006 (0.102)
BCMTIND	0.001 (0.239)	0.001 (0.242)	0.002 (0.829)	0.004 (0.103)	0.001 (0.403)	0.001 (0.401)	0.001 (0.351)	-0.008*** (0.003)	0.001 (0.843)	0.001** (0.017)	0.001 (0.888)	0.001 (0.781)	-0.001 (0.203)	0.001 (0.411)	-0.001 (0.350)	0.001 (0.528)
ENVD*BCMTIND	0.001 (0.110)	0.001*** (0.001)	0.001*** (0.000)	0.002 (0.875)	0.001* (0.053)	0.001*** (0.000)	0.002*** (0.000)	0.007*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.002*** (0.000)	0.002*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.117	0.117	0.117	0.117	0.062	0.062	0.062	0.062	0.099	0.099	0.099	0.099	0.121	0.121	0.121	0.121
ENVD	-0.001 (0.218)	-0.001* (0.058)	-0.005*** (0.000)	-0.014*** (0.000)	-0.001 (0.492)	-0.004*** (0.002)	-0.008*** (0.000)	-0.015*** (0.002)	-0.003*** (0.002)	-0.005*** (0.000)	-0.007*** (0.000)	-0.018*** (0.000)	0.001 (0.951)	-0.004*** (0.000)	-0.004*** (0.001)	-0.012*** (0.000)
AUDCIND	0.001 (0.424)	0.001 (0.157)	0.002** (0.012)	0.007*** (0.004)	0.001 (0.336)	0.003*** (0.002)	0.008*** (0.000)	0.010 (0.151)	0.001 (0.731)	0.001 (0.197)	0.002 (0.162)	0.004 (0.142)	0.001 (0.239)	0.001 (0.190)	0.003* (0.093)	0.005** (0.016)
COMCIND	0.001 (0.657)	0.001** (0.044)	0.001 (0.461)	0.006 (0.133)	-0.002 (0.235)	0.001 (0.354)	0.002 (0.215)	0.016 (0.142)	0.001 (0.584)	0.002*** (0.007)	0.004** (0.029)	0.008 (0.110)	0.001 (0.284)	0.003*** (0.002)	0.005*** (0.001)	0.007** (0.067)
NOMCIND	0.001** (0.011)	0.001* (0.058)	0.002** (0.023)	-0.004 (0.309)	0.005*** (0.001)	0.004** (0.014)	0.002 (0.389)	-0.009 (0.384)	0.002* (0.063)	0.002** (0.041)	0.002 (0.376)	-0.002 (0.748)	0.001* (0.090)	0.002** (0.014)	0.001 (0.904)	0.001 (0.980)
SUSCIND	0.001 (0.955)	0.001 (0.182)	0.002** (0.043)	0.001 (0.834)	0.002 (0.286)	0.003** (0.024)	0.009*** (0.000)	0.017** (0.026)	0.003*** (0.008)	0.002** (0.016)	0.004** (0.019)	0.008* (0.062)	0.001 (0.643)	0.001 (0.885)	0.0002 (0.796)	0.004 (0.268)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.094	0.094	0.094	0.094	0.118	0.118	0.118	0.118
ENVD	0.001 (0.485)	-0.002** (0.045)	-0.002 (0.137)	-0.015*** (0.000)	-0.003 (0.211)	-0.003 (0.112)	-0.006*** (0.004)	-0.011** (0.019)	-0.003*** (0.004)	-0.004*** (0.001)	-0.004** (0.011)	-0.013*** (0.000)	0.001 (0.796)	-0.002** (0.037)	-0.002 (0.121)	-0.008** (0.043)
AUDCIND	0.003** (0.017)	0.004** (0.040)	0.006** (0.043)	0.005 (0.583)	0.008*** (0.001)	0.007*** (0.009)	0.001 (0.937)	-0.010 (0.529)	0.005*** (0.001)	0.006*** (0.000)	0.008 (0.134)	0.015 (0.543)	0.005*** (0.004)	0.004*** (0.007)	0.001 (0.889)	0.011 (0.380)
COMCIND	0.002 (0.177)	0.001 (0.850)	-0.004 (0.310)	-0.011 (0.564)	0.002 (0.615)	-0.004 (0.362)	-0.006 (0.385)	-0.018* (0.098)	0.002 (0.390)	-0.001 (0.818)	-0.004 (0.379)	-0.020 (0.247)	0.001 (0.604)	0.001 (0.656)	0.002 (0.739)	-0.022** (0.047)
NOMCIND	-0.004*** (0.003)	-0.003 (0.130)	-0.001 (0.763)	0.023 (0.277)	-0.010*** (0.006)	-0.003 (0.386)	0.008* (0.056)	0.024** (0.013)	-0.010*** (0.000)	-0.005 (0.160)	-0.002 (0.661)	0.007 (0.844)	-0.008*** (0.008)	-0.007*** (0.004)	-0.004 (0.413)	0.013* (0.054)
SUSCIND	0.001 (0.839)	0.001 (0.873)	-0.001 (0.805)	-0.020 (0.172)	0.011 (0.236)	0.014** (0.014)	0.016** (0.037)	-0.008 (0.420)	0.012** (0.042)	0.008* (0.068)	0.001 (0.946)	0.001 (0.999)	0.008** (0.036)	0.009** (0.014)	-0.001 (0.909)	0.012 (0.145)
ENVD*AUDCIND	-0.001** (0.040)	-0.001* (0.082)	-0.001 (0.189)	0.002 (0.971)	-0.002*** (0.006)	-0.001 (0.152)	0.003 (0.155)	0.007 (0.112)	-0.001*** (0.009)	-0.001*** (0.007)	-0.002 (0.278)	-0.002 (0.716)	-0.001* (0.056)	-0.001 (0.143)	0.001 (0.417)	-0.001 (0.765)
ENVD*COMCIND	0.001 (0.346)	0.002 (0.604)	0.001 (0.159)	0.005 (0.325)	-0.001 (0.460)	0.002 (0.206)	0.003 (0.134)	0.011*** (0.001)	0.001 (0.767)	0.001 (0.320)	0.003* (0.073)	0.008* (0.078)	0.001 (0.824)	0.001 (0.606)	0.001 (0.435)	0.008** (0.018)
ENVD*NOMCIND	0.002*** (0.000)	0.001** (0.038)	0.001 (0.375)	-0.007 (0.171)	0.004*** (0.000)	0.002* (0.058)	-0.002 (0.129)	-0.009*** (0.002)	0.003*** (0.000)	0.002** (0.026)	0.001 (0.400)	-0.003 (0.788)	0.003*** (0.001)	0.003*** (0.000)	0.001 (0.364)	-0.003* (0.088)
ENVD*SUSCIND	0.001 (0.907)	0.002 (0.966)	0.001 (0.635)	0.006 (0.165)	-0.003 (0.259)	-0.003** (0.032)	-0.003 (0.209)	0.006 (0.126)	-0.003* (0.080)	-0.002* (0.097)	0.001 (0.727)	0.001 (0.510)	-0.002** (0.020)	-0.003*** (0.009)	-0.001 (0.718)	-0.002 (0.320)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.117	0.117	0.117	0.117	0.061	0.061	0.061	0.061	0.097	0.097	0.097	0.097	0.121	0.121	0.121	0.121

Note: The abbreviations used in the tables are as follows: ENVD represents the Individual Environmental Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ENVD*BCMTIND, ENVD*AUDCIND, ENVD*COMCIND, ENVD*NOMCIND, and ENVD*SUSCIND, representing the interaction effects between ENVD and specific committee indexes. The P values are in parentheses, *p < 0.05, **p < 0.01, ***p < 0.001.

Table 7: Quantile regression results of the interaction between environmental disclosure and aggregate and individual board committee indexes on the market-based measures of MNEs

DVs	TQ				SGR				EPS				DPS			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ENVD	-0.004 (0.159)	-0.002 (0.627)	-0.024*** (0.002)	-0.028*** (0.042)	0.001 (0.926)	-0.005*** (0.000)	-0.009*** (0.000)	-0.023*** (0.005)	0.002*** (0.016)	0.001 (0.330)	0.001 (0.382)	0.005 (0.001)	0.039*** (0.000)	0.036*** (0.000)	0.041*** (0.000)	0.075*** (0.001)
BCMTIND	0.014*** (0.000)	0.020*** (0.000)	0.023*** (0.000)	0.021*** (0.000)	0.001 (0.735)	0.002*** (0.000)	0.005*** (0.000)	0.009*** (0.000)	0.001*** (0.004)	0.003*** (0.000)	0.001** (0.032)	-0.003*** (0.005)	-0.001 (0.263)	0.012*** (0.000)	0.018*** (0.000)	-0.012 (0.209)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.104	0.104	0.104	0.104	0.059	0.059	0.059	0.059	0.079	0.079	0.079	0.079	0.178	0.178	0.178	0.178
ENVD	0.002 (0.840)	-0.002 (0.674)	-0.013* (0.093)	-0.029** (0.064)	0.001 (0.948)	-0.003*** (0.003)	-0.009*** (0.000)	-0.022*** (0.000)	0.001*** (0.002)	0.002** (0.044)	0.001*** (0.006)	0.005** (0.012)	0.041*** (0.000)	0.065*** (0.000)	0.065*** (0.000)	0.071*** (0.000)
BCMTIND	0.035*** (0.005)	0.017*** (0.000)	0.004 (0.428)	0.021*** (0.004)	0.001 (0.846)	0.001 (0.796)	0.002 (0.149)	-0.006 (0.129)	0.001 (0.341)	0.002 (0.186)	-0.001*** (0.004)	-0.002* (0.090)	-0.013*** (0.000)	-0.022*** (0.000)	-0.019*** (0.001)	-0.020 (0.208)
ENVD*BCMTIND	-0.006* (0.073)	0.001 (0.356)	0.007*** (0.000)	0.001 (0.763)	0.001 (0.980)	0.001*** (0.000)	0.001*** (0.007)	0.005*** (0.000)	0.001*** (0.008)	0.001*** (0.000)	0.001*** (0.000)	0.001 (0.321)	0.004*** (0.000)	0.013*** (0.000)	0.013*** (0.000)	0.003 (0.498)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.104	0.104	0.104	0.104	0.061	0.061	0.061	0.061	0.080	0.080	0.080	0.080	0.191	0.191	0.191	0.191
ENVD	-0.004 (0.247)	-0.002 (0.691)	-0.025*** (0.003)	-0.027** (0.017)	0.001 (0.635)	-0.005 (0.000)	-0.009 (0.000)	-0.026 (0.005)	0.001*** (0.005)	0.001 (0.786)	0.001 (0.382)	0.005*** (0.001)	0.033*** (0.000)	0.029*** (0.000)	0.032*** (0.000)	0.059*** (0.000)
AUDCIND	0.013*** (0.000)	0.012** (0.014)	0.008* (0.089)	0.058*** (0.000)	-0.001 (0.472)	0.002 (0.043)	0.004 (0.000)	0.008 (0.114)	0.001 (0.116)	0.001** (0.032)	0.001*** (0.002)	0.006** (0.025)	0.003 (0.380)	0.006* (0.090)	0.026*** (0.000)	0.110*** (0.000)
COMCIND	0.010*** (0.000)	0.014*** (0.002)	0.020*** (0.005)	-0.019 (0.121)	-0.002 (0.030)	-0.001 (0.256)	0.000 (0.949)	0.005 (0.480)	-0.001*** (0.000)	-0.001*** (0.001)	-0.002*** (0.000)	-0.012*** (0.000)	-0.019*** (0.000)	-0.013*** (0.005)	-0.018** (0.044)	-0.059*** (0.004)
NOMCIND	0.004 (0.214)	0.009** (0.015)	0.007 (0.352)	0.002 (0.902)	0.003 (0.000)	0.004 (0.000)	0.004 (0.007)	-0.002 (0.803)	0.001*** (0.000)	0.001*** (0.000)	0.004*** (0.000)	0.001 (0.937)	0.004 (0.249)	0.006 (0.148)	0.003 (0.746)	-0.073*** (0.001)
SUSCIND	-0.006** (0.034)	0.002 (0.579)	0.019*** (0.003)	0.006 (0.688)	-0.002 (0.039)	0.002 (0.207)	0.001 (0.741)	0.012 (0.101)	0.001*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.004 (0.177)	0.059*** (0.000)	0.099*** (0.000)	0.081*** (0.000)	0.053*** (0.001)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.103	0.103	0.103	0.103	0.059	0.059	0.059	0.059	0.082	0.082	0.082	0.082	0.196	0.196	0.196	0.196
ENVD	0.022*** (0.000)	0.002 (0.598)	-0.014* (0.065)	-0.021 (0.141)	-0.001 (0.297)	-0.005*** (0.001)	-0.010*** (0.000)	-0.025*** (0.000)	0.001** (0.045)	0.001 (0.316)	0.002 (0.794)	0.005** (0.019)	0.047*** (0.000)	0.071*** (0.000)	0.061*** (0.000)	0.063*** (0.003)
AUDCIND	0.157*** (0.000)	0.049*** (0.000)	0.049*** (0.007)	0.085* (0.053)	0.006*** (0.003)	0.002 (0.344)	-0.001 (0.803)	0.001 (0.979)	0.001 (0.192)	0.001 (0.309)	0.002 (0.881)	-0.004 (0.239)	0.032*** (0.000)	0.039*** (0.000)	0.018 (0.309)	0.155** (0.027)
COMCIND	-0.008 (0.361)	-0.015 (0.167)	-0.010 (0.635)	-0.099* (0.078)	0.001 (0.964)	0.001 (0.606)	0.001 (0.786)	-0.014 (0.209)	0.002 (0.820)	0.002 (0.674)	0.001 (0.661)	-0.006** (0.037)	-0.026*** (0.000)	-0.034*** (0.000)	-0.024 (0.223)	-0.015 (0.608)
NOMCIND	-0.029*** (0.000)	0.007 (0.470)	-0.030* (0.075)	0.076* (0.090)	-0.008* (0.077)	-0.004* (0.066)	0.001 (0.883)	0.002 (0.998)	0.001* (0.061)	0.001* (0.087)	-0.001** (0.050)	0.004** (0.035)	-0.021*** (0.000)	-0.028*** (0.000)	-0.026** (0.025)	-0.156** (0.029)
SUSCIND	-0.013 (0.336)	-0.024 (0.107)	-0.029 (0.250)	-0.082** (0.010)	0.005 (0.253)	0.011** (0.025)	0.017** (0.017)	0.029 (0.184)	0.001 (0.382)	0.002** (0.038)	0.006*** (0.003)	0.010 (0.154)	-0.018 (0.162)	-0.036 (0.109)	0.033 (0.429)	-0.024 (0.831)
ENVD*AUDCIND	-0.042*** (0.000)	-0.012*** (0.001)	-0.011** (0.025)	-0.006 (0.626)	-0.002*** (0.002)	0.001 (0.785)	0.002 (0.196)	0.003 (0.707)	0.001 (0.578)	0.001 (0.847)	0.001 (0.127)	0.003** (0.042)	-0.010*** (0.000)	-0.011*** (0.000)	0.003 (0.573)	-0.013 (0.576)
ENVD*COMCIND	0.006** (0.022)	0.009*** (0.004)	0.010* (0.081)	0.023 (0.133)	-0.001 (0.484)	-0.001 (0.463)	0.001 (0.904)	0.005 (0.107)	0.001 (0.233)	0.002 (0.200)	0.001 (0.101)	-0.003*** (0.006)	0.004* (0.077)	0.008*** (0.003)	0.002 (0.719)	-0.018 (0.177)
ENVD*NOMCIND	0.010*** (0.000)	0.001 (0.791)	0.009* (0.059)	-0.021* (0.073)	0.003*** (0.009)	0.002*** (0.001)	0.001 (0.268)	0.001 (0.923)	0.001*** (0.000)	0.001*** (0.000)	0.001** (0.012)	-0.001 (0.246)	0.008*** (0.000)	0.013*** (0.000)	0.012** (0.036)	0.031 (0.205)
ENVD*SUSCIND	0.003 (0.434)	0.007* (0.093)	0.012* (0.086)	0.024** (0.007)	-0.002* (0.068)	-0.003** (0.029)	-0.005*** (0.007)	-0.007 (0.240)	0.001 (0.808)	0.003 (0.513)	-0.001 (0.203)	-0.001 (0.509)	0.025*** (0.000)	0.034*** (0.000)	0.006 (0.563)	0.027 (0.353)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.105	0.105	0.105	0.105	0.062	0.062	0.062	0.062	0.082	0.082	0.082	0.082	0.206	0.206	0.206	0.206

Note: The abbreviations used in the tables are as follows: ENVD represents the Individual Environmental Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ENVD*BCMTIND, ENVD*AUDCIND, ENVD*COMCIND, ENVD*NOMCIND, and ENVD*SUSCIND, representing the interaction effects between ENVD and specific committee indexes. The P values are in parentheses, *p < 0.05, **p < 0.01, ***p < 0.001.

Table 8: Quantile regression results of the interaction effect between social disclosure and aggregate and individual board committee indexes on the accounting-based measures of MNEs

DVs	ROA				ROE				ROC				ROI			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
S OCD	0.001 (0.892)	0.002 (0.676)	-0.003** (0.080)	-0.015** (0.011)	-0.001 (0.621)	-0.003* (0.051)	-0.006*** (0.009)	-0.036*** (0.000)	-0.003*** (0.008)	-0.004*** (0.000)	-0.005*** (0.002)	-0.022*** (0.000)	-0.001 (0.707)	-0.003*** (0.001)	-0.004** (0.020)	-0.015*** (0.000)
BCMTIND	0.001*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.008*** (0.000)	0.013*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.005*** (0.000)	0.007*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.007*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.094	0.094	0.094	0.094	0.118	0.118	0.118	0.118
S OCD	0.001 (0.956)	0.002 (0.637)	-0.002 (0.293)	-0.024*** (0.000)	-0.001 (0.736)	-0.002 (0.303)	-0.005* (0.051)	-0.023*** (0.002)	-0.001 (0.435)	-0.003*** (0.005)	-0.004 (0.127)	-0.017** (0.013)	0.001 (0.637)	-0.002 (0.135)	-0.001 (0.417)	-0.011 (0.125)
BCMTIND	0.001** (0.045)	0.002*** (0.004)	0.001 (0.291)	0.011*** (0.000)	0.002 (0.189)	0.004*** (0.001)	0.003 (0.112)	-0.008** (0.049)	0.001 (0.844)	0.003*** (0.000)	0.003* (0.073)	0.003 (0.433)	0.001 (0.773)	0.002** (0.038)	0.001 (0.917)	0.003 (0.439)
S OCD*BCMTIND	0.001 (0.847)	0.001 (0.958)	0.001* (0.051)	-0.002*** (0.003)	0.001 (0.540)	0.002 (0.260)	0.002*** (0.003)	0.007*** (0.000)	0.001** (0.021)	0.001 (0.200)	0.001 (0.243)	0.001 (0.304)	0.001*** (0.007)	0.001** (0.036)	0.001*** (0.000)	0.001 (0.394)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.094	0.094	0.094	0.094	0.118	0.118	0.118	0.118
S OCD	0.001 (0.989)	0.002 (0.784)	-0.003* (0.062)	-0.013*** (0.000)	-0.001 (0.654)	-0.004** (0.021)	-0.007*** (0.003)	-0.036*** (0.000)	-0.003** (0.015)	-0.004*** (0.000)	-0.005*** (0.003)	-0.023*** (0.000)	-0.001 (0.718)	-0.003*** (0.002)	-0.004** (0.021)	-0.017*** (0.000)
AUDCIND	0.001 (0.310)	0.001 (0.136)	0.002** (0.012)	0.007*** (0.000)	0.001 (0.372)	0.003*** (0.001)	0.007*** (0.000)	0.009** (0.036)	0.001 (0.594)	0.002* (0.097)	0.003* (0.086)	0.005** (0.050)	0.001 (0.264)	0.002* (0.073)	0.003* (0.097)	0.006** (0.010)
COMCIND	0.001 (0.779)	0.001** (0.021)	0.001 (0.368)	0.004 (0.111)	-0.002 (0.279)	0.002 (0.263)	0.003 (0.205)	0.008 (0.366)	0.001 (0.650)	0.003*** (0.005)	0.004** (0.041)	0.004 (0.276)	0.001 (0.242)	0.003*** (0.001)	0.006*** (0.000)	0.004 (0.188)
NOMCIND	0.001** (0.018)	0.001* (0.095)	0.002** (0.027)	-0.003 (0.321)	0.005*** (0.001)	0.003** (0.019)	0.002 (0.377)	0.001 (0.968)	0.002** (0.038)	0.002* (0.075)	0.001 (0.491)	0.001 (0.880)	0.001* (0.099)	0.002** (0.023)	0.001 (0.876)	0.002 (0.571)
SUSCIND	0.001 (0.942)	0.001 (0.232)	0.002** (0.044)	0.001 (0.872)	0.002 (0.307)	0.003** (0.026)	0.009*** (0.000)	0.023** (0.010)	0.003** (0.015)	0.002* (0.052)	0.003** (0.045)	0.008** (0.016)	0.001 (0.515)	0.001 (0.865)	-0.001 (0.524)	0.005 (0.147)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.115	0.115	0.115	0.115	0.059	0.059	0.059	0.059	0.093	0.093	0.093	0.093	0.117	0.117	0.117	0.117
S OCD	0.001 (0.854)	-0.001 (0.282)	-0.001 (0.607)	-0.021*** (0.000)	-0.003 (0.216)	-0.005** (0.016)	-0.012*** (0.003)	-0.020** (0.012)	-0.003** (0.026)	-0.005*** (0.001)	-0.002 (0.417)	-0.018*** (0.000)	0.001 (0.649)	-0.002 (0.127)	-0.001 (0.634)	-0.013* (0.076)
AUDCIND	0.004*** (0.009)	0.007** (0.015)	0.004 (0.270)	-0.003 (0.833)	0.009*** (0.003)	0.012*** (0.005)	0.005 (0.409)	-0.033** (0.021)	0.007*** (0.001)	0.007** (0.014)	0.016*** (0.002)	0.021 (0.153)	0.009*** (0.000)	0.008** (0.014)	0.005 (0.326)	0.019 (0.422)
COMCIND	0.002 (0.234)	0.002 (0.587)	0.004 (0.312)	0.004 (0.445)	0.002 (0.589)	-0.003 (0.534)	-0.009 (0.198)	-0.005 (0.642)	0.001 (0.755)	0.003 (0.503)	-0.004 (0.340)	-0.011 (0.257)	0.002 (0.425)	0.005 (0.103)	0.003 (0.656)	-0.008 (0.787)
NOMCIND	-0.005*** (0.001)	-0.007*** (0.002)	-0.006*** (0.009)	0.027* (0.089)	-0.013*** (0.003)	-0.009** (0.032)	0.008* (0.082)	0.029*** (0.000)	-0.014*** (0.000)	-0.009*** (0.008)	-0.007* (0.077)	0.005 (0.695)	-0.015*** (0.000)	-0.014*** (0.000)	-0.009** (0.045)	-0.004 (0.927)
SUSCIND	0.002 (0.589)	0.009** (0.038)	-0.007 (0.244)	-0.041*** (0.000)	0.029*** (0.007)	0.038*** (0.000)	0.046*** (0.003)	-0.024 (0.334)	0.028*** (0.000)	0.017*** (0.007)	-0.001 (0.927)	-0.034* (0.064)	0.013** (0.018)	0.011* (0.097)	0.000 (0.971)	0.001 (0.960)
S OCD*AUDCIND	-0.001** (0.016)	-0.002** (0.024)	-0.001 (0.521)	0.002 (0.545)	-0.002*** (0.007)	-0.002** (0.033)	0.001 (0.592)	0.011*** (0.002)	-0.002*** (0.006)	-0.002** (0.032)	-0.004*** (0.003)	-0.004 (0.272)	-0.002*** (0.000)	-0.002** (0.046)	-0.001 (0.580)	-0.003 (0.572)
S OCD*COMCIND	-0.001 (0.282)	0.001 (0.885)	-0.001 (0.438)	0.002 (0.813)	-0.001 (0.370)	0.001 (0.318)	0.004* (0.071)	0.005 (0.248)	0.001 (0.961)	0.002 (0.975)	0.003** (0.048)	0.005 (0.153)	0.001 (0.702)	-0.001 (0.359)	0.001 (0.627)	0.004 (0.674)
S OCD*NOMCIND	0.002*** (0.000)	0.002*** (0.000)	0.002*** (0.001)	-0.008** (0.041)	0.005*** (0.000)	0.004*** (0.002)	-0.002 (0.195)	-0.008** (0.012)	0.004*** (0.000)	0.003*** (0.001)	0.002* (0.057)	-0.002 (0.623)	0.005*** (0.000)	0.004*** (0.000)	0.003* (0.056)	0.002 (0.885)
S OCD*SUSCIND	-0.001 (0.559)	-0.002* (0.053)	0.002 (0.166)	0.011*** (0.000)	-0.007** (0.010)	-0.010*** (0.000)	-0.011** (0.011)	0.012 (0.107)	-0.007*** (0.001)	-0.004** (0.016)	0.001 (0.688)	0.011** (0.025)	-0.004** (0.013)	-0.003* (0.083)	0.001 (0.828)	0.001 (0.886)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.116	0.116	0.116	0.116	0.060	0.060	0.060	0.060	0.094	0.094	0.094	0.094	0.119	0.119	0.119	0.119

Note: The abbreviations used in the tables are as follows: S OCD represents the Individual Social Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include S OCD*BCMTIND, S OCD*AUDCIND, S OCD*COMCIND, S OCD*NOMCIND, and S OCD*SUSCIND, representing the interaction effects between S OCD and specific committee indexes. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 9: Quantile regression results of the interaction effect between social disclosure and aggregate and individual board committee indexes on the market-based measures of MNEs

DVs	TQ				SGR				EPS				DPS			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
SOC	0.015** (0.014)	0.008 (0.103)	0.002 (0.816)	-0.012 (0.376)	0.001 (0.832)	-0.007*** (0.000)	-0.012*** (0.000)	-0.042*** (0.000)	0.001 (0.257)	0.002 (0.936)	0.001 (0.684)	0.005** (0.037)	0.035*** (0.000)	0.039*** (0.000)	0.035*** (0.000)	0.089*** (0.000)
BCMTIND	0.014*** (0.000)	0.020*** (0.000)	0.022*** (0.000)	0.018*** (0.000)	0.001 (0.652)	0.003*** (0.000)	0.005*** (0.000)	0.009*** (0.000)	0.001*** (0.004)	0.001*** (0.000)	0.002** (0.026)	-0.003*** (0.002)	-0.001 (0.221)	0.011*** (0.000)	0.018*** (0.000)	-0.010 (0.192)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.104	0.104	0.104	0.104	0.060	0.060	0.060	0.060	0.078	0.078	0.078	0.078	0.176	0.176	0.176	0.176
SOC	0.040*** (0.000)	0.001 (0.896)	0.009 (0.309)	-0.039 (0.112)	-0.001 (0.586)	-0.006*** (0.000)	-0.012*** (0.000)	-0.038*** (0.000)	0.001* (0.077)	0.001 (0.264)	0.001** (0.024)	0.004** (0.029)	0.045*** (0.000)	0.067*** (0.000)	0.072*** (0.000)	0.095* (0.056)
BCMTIND	0.084*** (0.000)	0.030*** (0.000)	0.010* (0.085)	0.033** (0.010)	0.001 (0.187)	0.002*** (0.008)	0.006*** (0.000)	-0.002 (0.656)	0.001 (0.750)	0.002 (0.844)	0.003 (0.304)	-0.002 (0.160)	-0.015*** (0.000)	-0.021*** (0.000)	-0.023*** (0.000)	-0.013 (0.645)
SOC*BCMTIND	-0.020*** (0.000)	-0.003** (0.037)	0.004** (0.025)	-0.005 (0.191)	0.001* (0.095)	0.002 (0.786)	0.001 (0.638)	0.003** (0.026)	0.001 (0.334)	0.002** (0.011)	0.001** (0.024)	-0.001 (0.102)	-0.013*** (0.000)	0.011*** (0.000)	0.013*** (0.000)	0.001 (0.921)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.105	0.105	0.105	0.105	0.060	0.060	0.060	0.060	0.079	0.079	0.079	0.079	0.183	0.183	0.183	0.183
SOC	0.017*** (0.008)	0.009* (0.086)	-0.002 (0.821)	-0.019 (0.135)	0.001 (0.697)	-0.007*** (0.000)	-0.012*** (0.000)	-0.044*** (0.000)	0.001 (0.118)	0.002 (0.327)	0.002 (0.740)	0.007*** (0.000)	0.027*** (0.000)	0.032*** (0.000)	0.032*** (0.000)	0.077*** (0.000)
AUDCIND	0.013*** (0.000)	0.013*** (0.003)	0.008* (0.051)	0.059*** (0.000)	-0.001 (0.439)	0.002*** (0.004)	0.005*** (0.000)	0.004 (0.457)	0.001* (0.069)	0.001** (0.031)	0.001*** (0.003)	0.005*** (0.008)	0.005 (0.118)	0.004 (0.276)	0.022*** (0.001)	0.103*** (0.000)
COMCIND	0.010*** (0.000)	0.013*** (0.003)	0.017** (0.018)	-0.020* (0.095)	-0.002** (0.021)	-0.001 (0.408)	0.001 (0.691)	0.009** (0.017)	-0.001*** (0.000)	-0.001*** (0.001)	-0.002*** (0.000)	-0.013*** (0.000)	-0.022*** (0.000)	-0.013*** (0.005)	-0.016* (0.054)	-0.076*** (0.001)
NOMCIND	0.004 (0.150)	0.008** (0.050)	0.008 (0.308)	0.003 (0.809)	0.003*** (0.000)	0.003*** (0.001)	0.003* (0.053)	0.001 (0.912)	0.001*** (0.000)	0.001*** (0.000)	0.003 (0.384)	0.001 (0.528)	0.004 (0.257)	0.006 (0.133)	0.002 (0.810)	-0.052** (0.034)
SUSCIND	-0.008*** (0.003)	0.002 (0.619)	0.019*** (0.002)	0.003 (0.835)	-0.002** (0.038)	0.001 (0.359)	0.000 (0.754)	0.008 (0.168)	0.001*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.006** (0.036)	0.060*** (0.000)	0.101*** (0.000)	0.085*** (0.000)	0.067*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.103	0.103	0.103	0.103	0.060	0.060	0.060	0.060	0.082	0.082	0.082	0.082	0.195	0.195	0.195	0.195
SOC	0.039*** (0.000)	0.008 (0.271)	0.013 (0.120)	-0.015 (0.703)	-0.005** (0.010)	-0.011*** (0.000)	-0.018*** (0.000)	-0.043*** (0.000)	0.001 (0.200)	-0.002*** (0.001)	-0.002 (0.190)	0.001 (0.968)	0.037*** (0.000)	0.063*** (0.000)	0.066*** (0.000)	0.056 (0.163)
AUDCIND	0.185*** (0.000)	0.072*** (0.000)	0.018 (0.220)	0.008 (0.945)	0.007*** (0.009)	0.002 (0.548)	0.000 (0.970)	-0.033** (0.012)	0.001** (0.047)	0.001** (0.015)	0.001 (0.771)	-0.001 (0.853)	0.048*** (0.000)	0.056*** (0.000)	0.042** (0.014)	0.184*** (0.001)
COMCIND	-0.023* (0.070)	-0.014 (0.301)	0.031 (0.134)	-0.004 (0.980)	0.005 (0.277)	0.007** (0.013)	0.010 (0.494)	0.008 (0.516)	0.002 (0.680)	0.001 (0.365)	0.002 (0.818)	-0.007** (0.023)	-0.037*** (0.000)	-0.038*** (0.000)	-0.036** (0.046)	-0.081 (0.256)
NOMCIND	-0.024*** (0.006)	-0.004 (0.727)	-0.036** (0.035)	0.105 (0.197)	-0.012** (0.021)	-0.009*** (0.003)	-0.006 (0.298)	0.022** (0.010)	-0.001*** (0.000)	-0.001*** (0.008)	-0.002*** (0.009)	0.001 (0.617)	-0.036*** (0.000)	-0.049*** (0.000)	-0.050*** (0.000)	-0.115 (0.232)
SUSCIND	0.002 (0.912)	0.045* (0.098)	-0.029 (0.424)	-0.246** (0.024)	0.018*** (0.009)	0.034*** (0.000)	0.044*** (0.003)	0.017 (0.622)	0.005*** (0.000)	0.012*** (0.000)	0.013** (0.022)	0.032* (0.072)	0.053** (0.044)	0.046 (0.213)	0.087 (0.199)	0.054 (0.792)
SOC*AUDCIND	-0.047*** (0.000)	-0.017*** (0.000)	-0.002 (0.561)	0.013 (0.664)	-0.002*** (0.006)	0.001 (0.836)	0.002 (0.628)	0.010*** (0.005)	0.001 (0.142)	0.002* (0.083)	0.001 (0.183)	0.002** (0.044)	-0.014*** (0.000)	-0.015*** (0.000)	-0.004 (0.401)	-0.028 (0.140)
SOC*COMCIND	0.007** (0.029)	0.007* (0.059)	-0.003 (0.568)	-0.006 (0.878)	-0.002* (0.085)	-0.002*** (0.008)	-0.003 (0.508)	0.001 (0.941)	0.001 (0.625)	0.002 (0.321)	-0.001** (0.018)	-0.002** (0.025)	0.005* (0.070)	0.009*** (0.006)	0.006 (0.350)	0.005 (0.816)
SOC*NOMCIND	0.008*** (0.001)	0.004 (0.216)	0.012** (0.017)	-0.026 (0.214)	0.004*** (0.002)	0.004*** (0.000)	0.003 (0.128)	-0.005** (0.030)	0.001*** (0.000)	0.002*** (0.000)	0.001*** (0.001)	-0.001 (0.399)	0.013*** (0.000)	0.017*** (0.000)	0.016*** (0.002)	0.018 (0.546)
SOC*SUSCIND	-0.001 (0.753)	-0.011 (0.116)	0.012 (0.192)	0.068** (0.018)	-0.006*** (0.003)	-0.009*** (0.000)	-0.012*** (0.002)	-0.003 (0.783)	-0.001*** (0.000)	-0.002*** (0.000)	-0.003* (0.085)	-0.007 (0.162)	0.0020 (0.793)	0.011 (0.282)	-0.005 (0.770)	0.005 (0.929)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.107	0.107	0.107	0.107	0.064	0.064	0.064	0.064	0.083	0.083	0.083	0.083	0.199	0.199	0.199	0.199

Note: The abbreviations used in the tables are as follows: SOC represents the Individual Social Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include SOC*BCMTIND, SOC*AUDCIND, SOC*COMCIND, SOC*NOMCIND, and SOC*SUSCIND, representing the interaction effects between SOC and specific committee indexes. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 10: Quantile regression results of the interaction effect between governance disclosure and aggregate and individual board committee indexes on the accounting-based measures of MNEs

DVs	ROA				ROE				ROC				ROI			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
GOVD	0.002* (0.085)	0.004*** (0.007)	0.002 (0.284)	-0.003 (0.264)	0.003 (0.258)	-0.001 (0.513)	-0.003 (0.185)	-0.055*** (0.000)	-0.004** (0.010)	-0.001 (0.295)	-0.001 (0.749)	-0.010 (0.240)	0.001 (0.903)	-0.001 (0.502)	-0.003* (0.070)	-0.013* (0.085)
BCMTIND	0.001*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.002*** (0.000)	0.005*** (0.000)	0.008*** (0.000)	0.014*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.006*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.116	0.116	0.116	0.116	0.059	0.059	0.059	0.059	0.092	0.092	0.092	0.092	0.117	0.117	0.117	0.117
GOVD	-0.002 (0.307)	-0.007 (0.333)	-0.003 (0.394)	-0.028*** (0.000)	0.002 (0.844)	-0.008** (0.044)	0.002 (0.638)	0.001 (0.996)	-0.008** (0.043)	-0.010* (0.060)	-0.012 (0.125)	-0.010 (0.115)	0.004 (0.477)	-0.005 (0.235)	-0.003 (0.560)	-0.001 (0.685)
BCMTIND	0.003*** (0.007)	0.009** (0.021)	0.007*** (0.008)	0.020*** (0.000)	0.003 (0.634)	0.009*** (0.000)	0.004 (0.169)	-0.022*** (0.000)	0.004** (0.045)	0.009*** (0.003)	0.013*** (0.009)	0.004 (0.412)	0.001 (0.885)	0.006** (0.017)	0.004 (0.264)	-0.004 (0.150)
GOVD*BCMTIND	0.001* (0.062)	-0.002* (0.060)	-0.001 (0.121)	-0.004*** (0.000)	0.001 (0.891)	-0.001* (0.081)	0.001 (0.277)	0.009*** (0.000)	-0.001 (0.341)	-0.001* (0.069)	-0.002* (0.098)	0.001 (0.833)	0.001 (0.492)	-0.001 (0.253)	0.001 (0.988)	0.002*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.118	0.118	0.118	0.118	0.059	0.059	0.059	0.059	0.092	0.092	0.092	0.092	0.117	0.117	0.117	0.117
GOVD	0.002* (0.072)	0.004*** (0.006)	0.002 (0.434)	-0.004* (0.067)	0.004 (0.153)	-0.001 (0.483)	-0.003 (0.265)	-0.060*** (0.000)	-0.003* (0.097)	-0.001 (0.338)	0.001 (0.865)	-0.010 (0.293)	0.001 (0.899)	-0.001 (0.531)	-0.004** (0.048)	-0.013* (0.080)
AUDCIND	0.001 (0.534)	0.001 (0.138)	0.002*** (0.009)	0.007*** (0.001)	0.001 (0.624)	0.004*** (0.001)	0.008*** (0.000)	0.011 (0.117)	0.001 (0.623)	0.002* (0.067)	0.002 (0.204)	0.005* (0.051)	0.001 (0.303)	0.002* (0.053)	0.003 (0.104)	0.004 (0.191)
COMCIND	0.001 (0.717)	0.001** (0.036)	0.001 (0.299)	0.001 (0.517)	-0.002 (0.237)	0.001 (0.350)	0.004* (0.065)	0.017 (0.201)	0.001 (0.393)	0.002** (0.011)	0.004** (0.038)	0.003 (0.550)	0.001 (0.250)	0.002*** (0.004)	0.006*** (0.000)	0.004 (0.182)
NOMCIND	0.001** (0.018)	0.001 (0.111)	0.002** (0.035)	-0.001 (0.662)	0.005*** (0.001)	0.003** (0.039)	0.000 (0.942)	-0.007 (0.635)	0.002* (0.056)	0.001 (0.170)	0.001 (0.529)	0.001 (0.811)	0.001* (0.087)	0.002** (0.045)	-0.001 (0.702)	0.002 (0.578)
SUSCIND	0.001 (0.840)	0.001 (0.343)	0.002 (0.155)	-0.001 (0.700)	0.002 (0.326)	0.003** (0.036)	0.008*** (0.000)	0.012 (0.195)	0.002** (0.033)	0.002** (0.042)	0.004** (0.032)	0.005 (0.165)	0.001 (0.578)	0.001 (0.877)	-0.001 (0.367)	0.002 (0.637)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.116	0.116	0.116	0.116	0.058	0.058	0.058	0.058	0.092	0.092	0.092	0.092	0.116	0.116	0.116	0.116
GOVD	0.001 (0.989)	-0.008 (0.151)	-0.005 (0.357)	-0.010 (0.190)	0.001 (0.762)	-0.007 (0.336)	-0.005 (0.741)	0.017 (0.724)	-0.004 (0.268)	-0.009 (0.195)	-0.011** (0.032)	-0.009 (0.445)	-0.001 (0.821)	-0.001 (0.795)	0.002 (0.587)	0.004 (0.764)
AUDCIND	0.005 (0.175)	0.018* (0.055)	0.002 (0.773)	-0.030 (0.610)	0.021 (0.638)	0.022 (0.366)	0.003 (0.930)	0.052 (0.766)	0.016 (0.519)	0.030*** (0.007)	0.033*** (0.005)	0.023 (0.713)	0.001 (0.963)	0.014** (0.018)	0.010 (0.660)	-0.012 (0.830)
COMCIND	0.005 (0.768)	-0.002 (0.811)	0.008 (0.278)	0.017 (0.810)	-0.005 (0.936)	-0.015 (0.645)	-0.006 (0.868)	-0.074 (0.739)	-0.008 (0.802)	-0.017 (0.120)	-0.016 (0.688)	-0.042 (0.786)	0.015 (0.307)	0.003 (0.684)	-0.010 (0.734)	-0.005 (0.933)
NOMCIND	-0.007 (0.657)	-0.006 (0.624)	0.003 (0.657)	0.054*** (0.002)	-0.013 (0.626)	0.009 (0.551)	0.020 (0.118)	-0.002 (0.995)	-0.010 (0.513)	-0.003 (0.717)	0.006 (0.893)	0.031 (0.884)	-0.023*** (0.007)	-0.024*** (0.000)	0.006 (0.523)	0.016 (0.806)
SUSCIND	-0.001 (0.969)	0.019 (0.397)	0.005 (0.743)	-0.074*** (0.000)	-0.002 (0.979)	-0.004 (0.906)	0.009 (0.883)	-0.105 (0.322)	0.018 (0.573)	0.019 (0.219)	-0.017 (0.246)	-0.017 (0.734)	0.033*** (0.002)	0.048* (0.069)	-0.021 (0.425)	-0.035 (0.237)
GOVD*AUDCIND	-0.001 (0.197)	-0.004* (0.062)	0.001 (0.948)	0.009 (0.554)	-0.005 (0.642)	-0.005 (0.452)	0.001 (0.862)	-0.011 (0.810)	-0.004 (0.523)	-0.007** (0.011)	-0.008*** (0.008)	-0.005 (0.759)	0.001 (0.965)	-0.003** (0.036)	-0.002 (0.736)	0.004 (0.764)
GOVD*COMCIND	-0.001 (0.778)	0.001 (0.680)	-0.002 (0.337)	-0.004 (0.828)	0.001 (0.963)	0.004 (0.620)	0.003 (0.770)	0.023 (0.680)	0.002 (0.785)	0.005 (0.102)	0.005 (0.604)	0.012 (0.764)	-0.004 (0.329)	0.001 (0.936)	0.004 (0.583)	0.002 (0.887)
GOVD*NOMCIND	0.002 (0.603)	0.002 (0.558)	0.001 (0.884)	-0.013*** (0.002)	0.004 (0.480)	-0.001 (0.705)	-0.005 (0.120)	-0.001 (0.989)	0.003 (0.410)	0.001 (0.608)	-0.001 (0.916)	-0.008 (0.879)	0.006*** (0.004)	0.006*** (0.000)	-0.002 (0.478)	-0.004 (0.827)
GOVD*SUSCIND	0.001 (0.963)	-0.004 (0.440)	-0.001 (0.847)	0.018*** (0.000)	0.001 (0.951)	0.002 (0.819)	0.000 (0.984)	0.028 (0.290)	-0.004 (0.627)	-0.004 (0.296)	0.005 (0.130)	0.005 (0.668)	-0.008*** (0.002)	-0.012* (0.069)	0.005 (0.466)	0.009 (0.233)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.117	0.117	0.117	0.117	0.058	0.058	0.058	0.058	0.092	0.092	0.092	0.092	0.116	0.116	0.116	0.116

Note: The abbreviations used in the tables are as follows: GOVD represents the Individual Governance Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include GOVD*BCMTIND, GOVD*AUDCIND, GOVD*COMCIND, GOVD*NOMCIND, and GOVD*SUSCIND, representing the interaction effects between GOVD and specific committee indexes. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 11: Quantile regression results of the interaction effect between governance disclosure and aggregate and individual board committee indexes on the market-based measures of MNEs

DVs	TQ				SGR				EPS				DPS			
Quantile	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95	0.25	0.5	0.75	0.95
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
GOVD	0.191*** (0.000)	0.080 (0.135)	0.021 (0.144)	-0.004 (0.802)	0.003*** (0.006)	-0.004* (0.076)	-0.008*** (0.000)	-0.052*** (0.000)	0.001*** (0.007)	0.001 (0.200)	-0.001* (0.063)	0.001 (0.708)	0.035*** (0.000)	-0.001 (0.915)	-0.007 (0.444)	0.082*** (0.001)
BCMTIND	0.010*** (0.000)	0.018*** (0.000)	0.021*** (0.000)	0.018*** (0.000)	0.001 (0.200)	0.003*** (0.000)	0.005*** (0.000)	0.010** (0.000)	0.001** (0.016)	0.001*** (0.000)	0.002** (0.014)	-0.003*** (0.006)	-0.004*** (0.001)	0.013*** (0.000)	0.021*** (0.000)	-0.010 (0.231)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.111	0.111	0.111	0.111	0.058	0.058	0.058	0.058	0.079	0.079	0.079	0.079	0.173	0.173	0.173	0.173
GOVD	-0.024 (0.199)	-0.032** (0.020)	0.002 (0.905)	-0.112 (0.371)	0.002 (0.575)	-0.010** (0.043)	-0.019* (0.072)	-0.049 (0.432)	0.001 (0.154)	0.001 (0.165)	0.001 (0.228)	0.002 (0.760)	0.188*** (0.000)	0.180** (0.024)	0.138*** (0.000)	0.079 (0.222)
BCMTIND	0.134*** (0.000)	0.145*** (0.000)	0.039*** (0.008)	0.084 (0.245)	0.001 (0.777)	0.007** (0.024)	0.011* (0.066)	0.009 (0.800)	0.001 (0.462)	-0.001 (0.173)	-0.001 (0.132)	-0.004 (0.464)	-0.099*** (0.001)	-0.099** (0.030)	-0.075*** (0.000)	-0.007 (0.879)
GOVD*BCMTIND	-0.030*** (0.000)	-0.032*** (0.000)	-0.004 (0.240)	-0.016 (0.351)	0.001 (0.588)	-0.001 (0.147)	-0.002 (0.280)	0.002 (0.971)	0.002 (0.336)	0.001** (0.032)	0.003** (0.043)	0.001 (0.868)	0.024*** (0.001)	0.028** (0.013)	0.024*** (0.000)	-0.001 (0.901)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.121	0.121	0.121	0.121	0.058	0.058	0.058	0.058	0.079	0.079	0.079	0.079	0.177	0.177	0.177	0.177
GOVD	0.190*** (0.000)	0.080 (0.146)	0.021 (0.158)	-0.013 (0.378)	0.003** (0.013)	-0.003* (0.099)	-0.009*** (0.000)	-0.054*** (0.000)	0.001*** (0.002)	0.002 (0.235)	-0.001** (0.037)	0.003 (0.421)	0.030*** (0.000)	0.004 (0.465)	0.004 (0.585)	0.073*** (0.001)
AUDCIND	0.004 (0.110)	0.012*** (0.008)	0.009** (0.037)	0.058*** (0.000)	-0.001 (0.208)	0.002*** (0.003)	0.005*** (0.000)	0.009* (0.089)	0.001 (0.344)	0.002** (0.027)	0.001*** (0.002)	0.006 (0.111)	0.003 (0.312)	0.005 (0.192)	0.024*** (0.000)	0.095*** (0.000)
COMCIND	0.011*** (0.000)	0.010** (0.022)	0.016** (0.039)	-0.021* (0.099)	-0.002** (0.024)	-0.001 (0.192)	0.001 (0.634)	0.006 (0.232)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)	-0.011*** (0.000)	-0.023*** (0.000)	-0.009** (0.046)	-0.016* (0.057)	-0.069*** (0.001)
NOMCIND	0.004 (0.228)	0.009 (0.427)	0.007 (0.427)	0.003 (0.833)	0.003*** (0.001)	0.004*** (0.000)	0.003* (0.052)	0.001 (0.987)	0.001*** (0.000)	0.001*** (0.000)	0.002 (0.515)	-0.002 (0.472)	0.003 (0.358)	0.003 (0.372)	0.000 (0.961)	-0.054** (0.030)
SUSCIND	-0.011*** (0.000)	0.001 (0.768)	0.019*** (0.003)	0.003 (0.853)	-0.002* (0.079)	0.001 (0.844)	-0.001 (0.391)	0.011 (0.326)	0.001*** (0.000)	0.002*** (0.000)	0.004*** (0.000)	0.007** (0.024)	0.066*** (0.000)	0.103*** (0.000)	0.086*** (0.000)	0.070*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.110	0.110	0.110	0.110	0.058	0.058	0.058	0.058	0.082	0.082	0.082	0.082	0.193	0.193	0.193	0.193
GOVD	0.005 (0.766)	-0.014 (0.468)	-0.036 (0.192)	-0.065 (0.678)	-0.002 (0.611)	-0.006 (0.601)	-0.022** (0.015)	-0.064 (0.375)	0.003** (0.030)	0.001 (0.123)	-0.004 (0.520)	-0.006 (0.706)	0.207*** (0.000)	0.172*** (0.000)	0.073*** (0.001)	-0.109 (0.546)
AUDCIND	0.258*** (0.000)	0.239*** (0.000)	-0.021 (0.716)	-0.270 (0.674)	0.007 (0.181)	0.021 (0.109)	0.017 (0.415)	0.036 (0.656)	0.001 (0.269)	0.005 (0.134)	0.004 (0.620)	0.002 (0.978)	0.054** (0.020)	0.044 (0.112)	0.090*** (0.000)	0.334 (0.325)
COMCIND	-0.045 (0.577)	-0.092*** (0.001)	0.109 (0.454)	0.232 (0.374)	-0.006 (0.828)	-0.009 (0.522)	-0.018 (0.455)	0.043 (0.868)	0.001 (0.906)	-0.001 (0.580)	-0.001 (0.895)	-0.007 (0.417)	-0.045* (0.064)	-0.008 (0.847)	-0.066*** (0.005)	0.126 (0.526)
NOMCIND	-0.028 (0.800)	0.090* (0.051)	-0.013 (0.920)	0.108 (0.880)	-0.006 (0.840)	-0.007 (0.575)	0.013 (0.165)	-0.059 (0.818)	-0.001 (0.441)	-0.004 (0.264)	-0.004 (0.667)	-0.004 (0.955)	-0.038 (0.258)	-0.079** (0.036)	-0.109*** (0.000)	-0.388 (0.309)
SUSCIND	-0.005 (0.939)	-0.034 (0.753)	0.128* (0.079)	0.220 (0.713)	0.038*** (0.006)	0.005 (0.776)	0.051 (0.197)	0.004 (0.960)	-0.011* (0.089)	-0.006 (0.173)	0.013 (0.517)	0.052 (0.478)	-0.691*** (0.000)	-0.489*** (0.008)	0.086 (0.392)	0.193 (0.752)
GOVD*AUDCIND	-0.063*** (0.000)	-0.058*** (0.000)	0.008 (0.607)	0.079 (0.609)	-0.002 (0.125)	-0.005 (0.149)	-0.003 (0.582)	-0.007 (0.745)	0.001 (0.318)	-0.001 (0.156)	-0.001 (0.745)	0.001 (0.936)	-0.013** (0.027)	-0.010 (0.165)	-0.016** (0.016)	-0.059 (0.494)
GOVD*COMCIND	0.014 (0.498)	0.026*** (0.000)	-0.023 (0.522)	-0.063 (0.320)	0.001 (0.885)	0.002 (0.563)	0.005 (0.437)	-0.008 (0.896)	0.002 (0.862)	0.002 (0.948)	0.001 (0.745)	-0.001 (0.543)	0.006 (0.333)	0.001 (0.981)	0.012* (0.066)	-0.052 (0.288)
GOVD*NOMCIND	0.009 (0.754)	-0.020* (0.082)	0.005 (0.874)	-0.024 (0.891)	0.002 (0.757)	0.003 (0.402)	-0.003 (0.287)	0.014 (0.822)	0.001 (0.283)	0.001 (0.204)	0.001 (0.641)	0.001 (0.974)	0.011 (0.215)	0.021** (0.026)	0.028*** (0.000)	0.088 (0.369)
GOVD*SUSCIND	0.001 (0.957)	0.010 (0.700)	-0.025 (0.136)	-0.053 (0.718)	-0.010*** (0.003)	-0.001 (0.805)	-0.012 (0.181)	0.002 (0.924)	0.003* (0.065)	0.002* (0.064)	-0.002 (0.651)	-0.011 (0.542)	0.183*** (0.000)	0.141*** (0.002)	-0.003 (0.907)	-0.025 (0.865)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.123	0.123	0.123	0.123	0.058	0.058	0.058	0.058	0.082	0.082	0.082	0.082	0.195	0.195	0.195	0.195

Note: The abbreviations used in the tables are as follows: GOVD represents the Individual Governance Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include GOVD*BCMTIND, GOVD*AUDCIND, GOVD*COMCIND, GOVD*NOMCIND, and GOVD*SUSCIND, representing the interaction effects between GOVD and specific committee indexes. The P values are in parentheses, *p < 0.05, **p < 0.01, ***p < 0.001.

Table 12: The results of the first difference with lagged variables for the interaction between ESG disclosure and aggregate and individual board committees on accounting-based measures of MNEs

DVs	ROA				ROE				ROC				ROI			
Quantile	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	-0.010 (0.557)	-0.004 (0.770)	-0.004 (0.730)	-0.015 (0.289)	0.056 (0.480)	0.040 (0.531)	0.019 (0.742)	0.052 (0.448)	-0.006 (0.868)	0.008 (0.781)	-0.014 (0.597)	-0.014 (0.651)	-0.014 (0.653)	0.002 (0.924)	-0.009 (0.702)	-0.034 (0.214)
BCMTIND	-5.457*** (0.000)	-5.579*** (0.000)	-5.557*** (0.000)	-5.127*** (0.001)	-2.633 (0.706)	-2.123 (0.758)	-1.994 (0.773)	-3.366 (0.640)	-6.829** (0.030)	-7.009** (0.024)	-6.723** (0.031)	-6.481** (0.045)	-5.399* (0.053)	-5.660** (0.040)	-5.503** (0.046)	-4.548 (0.114)
DLAGDEPV	-0.173*** (0.000)	-0.173*** (0.000)	-0.173*** (0.000)	-0.174*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	-0.297*** (0.000)	-0.297*** (0.000)	-0.297*** (0.000)	-0.297*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.051	0.051	0.051	0.051	0.095	0.095	0.095	0.002	0.111	0.111	0.111	0.111	0.102	0.102	0.102	0.102
Hausman test	0.20 (0.651)	0.23 (0.630)	0.22 (0.639)	0.13 (0.723)	1.04 (0.308)	1.13 (0.287)	1.17 (0.279)	1.17 (0.280)	0.02 (0.877)	0.02 (0.880)	0.03 (0.853)	0.05 (0.825)	0.72 (0.394)	0.70 (0.402)	0.79 (0.374)	0.91 (0.341)
ESG	-0.025 (0.185)	-0.017 (0.248)	-0.014 (0.321)	-0.021 (0.225)	-0.005 (0.957)	0.006 (0.935)	-0.002 (0.976)	-0.035 (0.666)	-0.035 (0.394)	-0.018 (0.560)	-0.033 (0.255)	-0.018 (0.633)	-0.002 (0.956)	0.005 (0.859)	0.003 (0.900)	-0.029 (0.396)
BCMTIND	-6.755*** (0.000)	-6.909*** (0.000)	-6.616*** (0.000)	-5.532*** (0.001)	-7.829 (0.316)	-5.618 (0.450)	-4.411 (0.560)	-9.854 (0.211)	-9.250*** (0.009)	-9.681*** (0.004)	-8.901*** (0.009)	-6.742* (0.058)	-1.302 (0.692)	-1.124 (0.719)	-1.307 (0.681)	-1.345 (0.685)
ESG*BCMTIND	0.236* (0.080)	0.326** (0.025)	0.181 (0.104)	0.052 (0.555)	0.944 (0.138)	0.856 (0.213)	0.413 (0.431)	0.838** (0.044)	0.440 (0.125)	0.655** (0.034)	0.373 (0.115)	0.034 (0.858)	0.022 (0.935)	-0.027 (0.926)	0.010 (0.964)	0.097 (0.579)
DLAGDEPV	-0.173*** (0.000)	-0.174*** (0.000)	-0.174*** (0.000)	-0.173*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.310*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.704*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.052	0.052	0.052	0.052	0.096	0.096	0.096	0.096	0.112	0.112	0.112	0.112	0.079	0.079	0.079	0.079
Hausman test	0.33 (0.564)	0.29 (0.592)	0.39 (0.534)	0.20 (0.657)	0.97 (0.325)	1.09 (0.296)	1.11 (0.291)	1.20 (0.273)	0.01 (0.977)	0.01 (0.925)	0.01 (0.977)	0.02 (0.884)	0.33 (0.568)	0.31 (0.574)	0.23 (0.631)	0.19 (0.661)
ESG	-0.010 (0.566)	-0.004 (0.783)	-0.004 (0.724)	-0.015 (0.298)	0.059 (0.459)	0.043 (0.504)	0.020 (0.735)	0.053 (0.439)	-0.006 (0.869)	0.008 (0.776)	-0.014 (0.595)	-0.014 (0.648)	-0.014 (0.667)	0.003 (0.916)	-0.009 (0.699)	-0.033 (0.235)
AUDCIND	-1.455 (0.214)	-1.496 (0.200)	-1.491 (0.202)	-1.303 (0.271)	-0.913 (0.869)	-0.710 (0.897)	-0.675 (0.903)	-1.315 (0.814)	-1.335 (0.591)	-1.385 (0.577)	-1.318 (0.595)	-1.178 (0.639)	-2.849 (0.197)	-2.926 (0.184)	-2.889 (0.190)	-2.485 (0.265)
COMCIND	-3.333** (0.012)	-3.365** (0.011)	-3.366** (0.011)	-3.272** (0.014)	1.636 (0.793)	1.736 (0.781)	1.862 (0.765)	1.552 (0.804)	-3.996 (0.156)	-4.066 (0.148)	-3.970 (0.158)	-3.923 (0.164)	-1.694 (0.498)	-1.778 (0.476)	-1.729 (0.488)	-1.526 (0.542)
NOMCIND	0.374 (0.797)	0.354 (0.807)	0.373 (0.798)	0.418 (0.774)	1.587 (0.817)	1.706 (0.803)	1.622 (0.813)	1.481 (0.829)	-0.220 (0.943)	-0.231 (0.940)	-0.175 (0.955)	-0.173 (0.955)	0.404 (0.883)	0.377 (0.890)	0.414 (0.880)	0.513 (0.852)
SUSCIND	0.227 (0.870)	0.199 (0.886)	0.199 (0.886)	0.279 (0.841)	-14.799** (0.024)	-14.712** (0.025)	-14.602** (0.026)	-14.868** (0.024)	0.058 (0.984)	-0.004 (0.989)	0.082 (0.978)	0.120 (0.968)	-0.740 (0.778)	-0.814 (0.757)	-0.770 (0.769)	-0.596 (0.821)
DLAGDEPV	-0.173*** (0.000)	-0.173*** (0.000)	-0.173*** (0.000)	-0.173*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.310*** (0.000)	-0.311*** (0.000)	-0.310*** (0.000)	-0.3110*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.052	0.052	0.052	0.052	0.097	0.097	0.097	0.097	0.112	0.112	0.112	0.112	0.102	0.102	0.102	0.102
Hausman test	0.26 (0.612)	0.28 (0.593)	0.27 (0.605)	0.18 (0.668)	0.17 (0.676)	1.26 (0.262)	1.28 (0.257)	1.29 (0.255)	0.01 (0.917)	0.01 (0.922)	0.02 (0.894)	0.02 (0.880)	0.76 (0.383)	0.74 (0.389)	0.82 (0.365)	0.82 (0.366)

Table 12 Continued	ROE				ROE				ROC				ROI			
Quantile	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD	ESG	ENVD	SOC	GOVD
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	-0.025 (0.194)	-0.015 (0.309)	-0.013 (0.345)	-0.026 (0.143)	0.018 (0.844)	0.017 (0.815)	0.007 (0.918)	-0.013 (0.876)	-0.035 (0.403)	-0.016 (0.622)	-0.032 (0.272)	-0.022 (0.548)	0.001 (0.977)	0.004 (0.892)	0.002 (0.993)	-0.010 (0.770)
AUDCIND	-2.087 (0.103)	-2.117* (0.090)	-1.869 (0.135)	-1.828 (0.153)	-2.546 (0.673)	-2.347 (0.690)	-0.822 (0.889)	-3.535 (0.557)	-2.440 (0.369)	-2.499 (0.345)	-1.987 (0.454)	-1.906 (0.483)	-2.303 (0.340)	-2.514 (0.285)	-2.706 (0.251)	-2.269 (0.346)
COMCIND	-3.224** (0.026)	-3.521** (0.012)	-3.756** (0.012)	-2.953** (0.029)	1.119 (0.869)	1.721 (0.794)	1.338 (0.849)	0.762 (0.905)	-4.693 (0.126)	-4.852 (0.103)	-4.848 (0.126)	-3.786 (0.187)	-1.258 (0.644)	-1.690 (0.522)	-1.622 (0.564)	-1.044 (0.681)
NOMCIND	-0.308 (0.843)	-0.130 (0.931)	0.158 (0.919)	0.137 (0.928)	-0.657 (0.928)	0.406 (0.954)	0.185 (0.980)	-1.150 (0.872)	-0.564 (0.864)	-0.728 (0.819)	-0.523 (0.874)	0.141 (0.965)	0.323 (0.912)	0.101 (0.971)	0.646 (0.825)	0.966 (0.735)
SUSCIND	0.255 (0.857)	0.264 (0.851)	0.145 (0.917)	0.131 (0.927)	-14.110** (0.034)	-14.481** (0.029)	-14.502** (0.028)	-13.161* (0.052)	0.004 (0.999)	-0.009 (0.998)	-0.084 (0.978)	-0.016 (0.996)	-0.594 (0.824)	-0.856 (0.747)	-0.589 (0.823)	-0.072 (0.979)
ESG*AUDCIND	0.082 (0.515)	0.109 (0.380)	0.054 (0.594)	0.140 (0.177)	0.101 (0.866)	0.302 (0.606)	-0.110 (0.819)	0.076 (0.876)	0.165 (0.540)	0.208 (0.430)	0.094 (0.662)	0.181 (0.411)	-0.101 (0.672)	-0.127 (0.588)	-0.017 (0.930)	0.053 (0.786)
ESG*COMCIND	-0.083 (0.675)	0.012 (0.943)	0.070 (0.630)	-0.246* (0.074)	0.023 (0.980)	-0.103 (0.900)	0.065 (0.925)	0.120 (0.853)	0.177 (0.672)	0.226 (0.539)	0.158 (0.610)	-0.106 (0.717)	-0.127 (0.732)	-0.058 (0.860)	-0.003 (0.990)	-0.156 (0.546)
ESG*NOMCIND	0.225 (0.343)	0.195 (0.336)	0.049 (0.791)	0.142 (0.334)	0.768 (0.492)	0.549 (0.564)	0.537 (0.537)	0.584 (0.397)	0.008 (0.987)	0.128 (0.765)	0.072 (0.855)	-0.093 (0.765)	0.106 (0.812)	0.168 (0.660)	-0.048 (0.890)	-0.029 (0.917)
ESG*SUSCIND	0.003 (0.989)	-0.059 (0.734)	-0.039 (0.793)	0.150 (0.445)	-0.582 (0.555)	-0.182 (0.824)	-0.443 (0.523)	-0.711 (0.444)	0.067 (0.880)	-0.010 (0.979)	-0.009 (0.977)	0.141 (0.735)	-0.136 (0.730)	0.001 (0.990)	-0.176 (0.526)	-0.319 (0.390)
DLAGDEPV	-0.173*** (0.000)	-0.174*** (0.000)	-0.173*** (0.000)	-0.173*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.362*** (0.000)	-0.363*** (0.000)	-0.310*** (0.000)	-0.311*** (0.000)	-0.311*** (0.000)	-0.310*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)	-0.296*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.052	0.052	0.052	0.052	0.094	0.094	0.094	0.094	0.112	0.112	0.112	0.112	0.099	0.099	0.099	0.099
Hausman test	0.39 (0.532)	0.33 (0.563)	0.47 (0.494)	0.17 (0.677)	0.94 (0.333)	1.14 (0.285)	1.02 (0.311)	1.27 (0.259)	0.01 (0.962)	0.01 (0.972)	0.01 (0.954)	0.01 (0.906)	0.57 (0.449)	0.66 (0.417)	0.56 (0.453)	0.90 (0.342)

Note: The following abbreviations are used in the tables: ESG represents the Aggregate Environmental, Social, and Governance Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ESG*BCMTIND, ESG*AUDCIND, ESG*COMCIND, ESG*NOMCIND, and ESG*SUSCIND, representing the interaction effects between ESG and specific committee indexes. DLAGDEPV are the lagged dependent variables. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.

Table 13: The results of the first difference with lagged variables for the interaction between ESG disclosure and aggregate and individual board committees on market-based measures of MNEs

DVs	TQ				SGR				EPS				DPS			
Quantile	ESG	ENVD	S OCD	GOVD	ESG	ENVD	S OCD	GOVD	ESG	ENVD	S OCD	GOVD	ESG	ENVD	S OCD	GOVD
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	0.001 (0.501)	-0.001 (0.454)	0.001 (0.784)	0.008*** (0.000)	-1.310*** (0.006)	-0.492 (0.199)	-0.893** (0.011)	-1.635*** (0.000)	0.018 (0.444)	0.015 (0.408)	-0.001 (0.962)	-0.001 (0.984)	0.004 (0.879)	0.004 (0.874)	-0.019 (0.514)	0.001 (0.501)
BCMTIND	0.719*** (0.000)	0.752*** (0.000)	0.746*** (0.000)	0.495*** (0.004)	-35.778 (0.392)	-52.160 (0.206)	-44.108 (0.287)	-5.310 (0.902)	-2.339 (0.252)	-2.206 (0.274)	-2.015 (0.339)	-1.181 (0.687)	-1.234 (0.670)	-1.249 (0.667)	-0.592 (0.845)	0.719*** (0.000)
DLAGDEPV	-0.050*** (0.000)	-0.050*** (0.000)	-0.050*** (0.000)	-0.051*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	0.206*** (0.000)	0.206*** (0.000)	0.206*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	-0.050*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.026	0.026	0.026	0.031	0.048	0.048	0.048	0.048	0.062	0.062	0.062	0.062	0.079	0.079	0.079	0.079
Hausman test	1.64 (0.117)	1.98 (0.108)	1.24 (0.112)	1.29 (0.112)	0.96 (0.326)	0.81 (0.367)	0.80 (0.371)	1.25 (0.263)	0.63 (0.426)	0.59 (0.444)	0.58 (0.446)	0.58 (0.445)	0.42 (0.519)	0.36 (0.548)	0.40 (0.525)	0.23 (0.632)
ESG	0.001 (0.803)	0.001 (0.829)	0.001 (0.749)	0.004* (0.052)	-1.030* (0.056)	-0.341 (0.415)	-0.631 (0.102)	-1.529*** (0.002)	0.018 (0.498)	0.016 (0.439)	0.011 (0.552)	-0.002 (0.956)	0.005 (0.859)	0.003 (0.900)	-0.029 (0.396)	0.001 (0.803)
BCMTIND	0.655*** (0.001)	0.833*** (0.000)	0.848*** (0.000)	0.206 (0.280)	-12.032 (0.797)	-36.744 (0.410)	-14.196 (0.754)	2.557 (0.957)	-2.341 (0.306)	-2.175 (0.318)	-2.345 (0.289)	-1.302 (0.692)	-1.124 (0.719)	-1.307 (0.681)	-1.345 (0.685)	0.655*** (0.001)
ESG*BCMTIND	0.012 (0.449)	-0.020 (0.234)	-0.017 (0.174)	0.037*** (0.000)	-4.316 (0.2580)	-3.776 (0.360)	-5.114 (0.104)	-1.016 (0.684)	0.001 (0.989)	-0.008 (0.970)	0.020 (0.895)	0.022 (0.935)	-0.027 (0.926)	0.010 (0.964)	0.097 (0.579)	0.012 (0.449)
DLAGDEPV	-0.051*** (0.000)	-0.050*** (0.000)	-0.050*** (0.000)	-0.052*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	-0.215*** (0.000)	0.206*** (0.000)	0.206*** (0.000)	0.206*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.704*** (0.000)	-0.051*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.033	0.033	0.033	0.033	0.048	0.048	0.048	0.048	0.062	0.062	0.062	0.062	0.079	0.079	0.079	0.079
Hausman test	1.40 (0.106)	1.79 (0.105)	1.35 (0.102)	1.10 (0.142)	0.83 (0.363)	0.77 (0.379)	0.71 (0.399)	1.07 (0.300)	0.52 (0.469)	0.52 (0.468)	0.38 (0.536)	0.32 (0.570)	0.33 (0.568)	0.31 (0.574)	0.23 (0.631)	0.19 (0.661)
ESG	0.001 (0.498)	-0.001 (0.473)	0.002 (0.788)	0.008*** (0.000)	-1.283*** (0.007)	-0.484 (0.207)	-0.897** (0.010)	-1.568*** (0.000)	0.017 (0.480)	0.014 (0.455)	0.012 (0.470)	-0.002 (0.933)	-0.001 (0.981)	0.004 (0.879)	0.004 (0.871)	-0.019 (0.502)
AUDCIND	0.313** (0.020)	0.322** (0.016)	0.321** (0.016)	0.219 (0.106)	-81.433** (0.014)	-86.897*** (0.008)	-85.016** (0.010)	-67.303** (0.044)	-0.858 (0.595)	-0.807 (0.616)	-0.815 (0.613)	-0.751 (0.645)	0.165 (0.943)	0.151 (0.948)	0.148 (0.949)	0.419 (0.858)
COMCIND	0.085 (0.577)	0.097 (0.523)	0.093 (0.539)	0.035 (0.815)	-7.192 (0.848)	-11.496 (0.759)	-10.208 (0.785)	-2.387 (0.949)	3.760** (0.040)	3.778** (0.039)	3.795** (0.038)	3.858** (0.035)	0.322 (0.902)	0.298 (0.909)	0.302 (0.908)	0.460 (0.861)
NOMCIND	0.223 (0.181)	0.225 (0.176)	0.227 (0.173)	0.194 (0.244)	63.739 (0.120)	61.206 (0.136)	64.901 (0.114)	67.738 (0.100)	-5.772*** (0.004)	-5.739*** (0.004)	-5.790*** (0.004)	-5.733*** (0.004)	-1.219 (0.672)	-1.221 (0.672)	-1.237 (0.668)	-1.140 (0.692)
SUSCIND	-0.001 (0.994)	0.009 (0.953)	0.006 (0.970)	-0.043 (0.785)	12.118 (0.758)	8.342 (0.832)	9.519 (0.809)	16.191 (0.681)	0.244 (0.899)	0.260 (0.892)	0.274 (0.886)	0.330 (0.864)	-1.398 (0.613)	-1.419 (0.607)	-1.416 (0.608)	-1.279 (0.644)
DLAGDEPV	-0.051*** (0.000)	-0.050*** (0.000)	-0.050*** (0.000)	-0.052*** (0.000)	-0.214*** (0.000)	-0.214*** (0.000)	-0.215*** (0.000)	-0.214*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.023	0.023	0.023	0.023	0.050	0.050	0.050	0.050	0.063	0.063	0.063	0.063	0.079	0.079	0.079	0.079
Hausman test	1.47 (0.119)	1.58 (0.110)	1.59 (0.134)	1.58 (0.158)	1.23 (0.266)	1.09 (0.296)	1.21 (0.271)	1.49 (0.222)	0.93 (0.334)	0.89 (0.345)	0.89 (0.346)	0.64 (0.423)	0.66 (0.417)	0.60 (0.437)	0.66 (0.418)	0.44 (0.506)

Table 13 Continued	TQ				SGR				EPS				DPS			
Quantile	ESG	ENVD	SOC	GOV	ESG	ENVD	SOC	GOV	ESG	ENVD	SOC	GOV	ESG	ENVD	SOC	GOV
INDVs	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.	Coef.
ESG	0.001 (0.629)	0.000 (0.905)	0.001 (0.716)	0.004** (0.033)	-1.131** (0.038)	-0.415 (0.331)	-0.867** (0.025)	0.016 (0.553)	0.013 (0.534)	0.012 (0.519)	-0.006 (0.794)	-0.001 (0.970)	0.005 (0.861)	0.005 (0.867)	-0.029 (0.398)	0.001 (0.629)
AUDCIND	0.303** (0.039)	0.360** (0.012)	0.361** (0.012)	0.147 (0.312)	20.369 (0.569)	-40.474 (0.250)	-5.939 (0.865)	-0.932 (0.597)	-1.030 (0.549)	-1.026 (0.552)	-0.729 (0.679)	0.104 (0.967)	0.217 (0.930)	-0.044 (0.986)	0.086 (0.973)	0.303** (0.039)
COMCIND	0.123 (0.457)	0.121 (0.449)	0.128 (0.453)	0.038 (0.802)	20.665 (0.609)	-5.463 (0.890)	24.616 (0.556)	4.541** (0.023)	4.886** (0.011)	3.952* (0.055)	3.604* (0.053)	0.494 (0.863)	0.562 (0.839)	0.374 (0.899)	0.331 (0.901)	0.123 (0.457)
NOMCIND	0.136 (0.443)	0.235 (0.172)	0.237 (0.184)	-0.016 (0.928)	-33.722 (0.438)	29.410 (0.487)	-20.363 (0.639)	-6.549*** (0.002)	-6.626*** (0.001)	-5.873*** (0.006)	-5.826*** (0.005)	-1.378 (0.654)	-1.413 (0.635)	-1.174 (0.703)	-1.249 (0.677)	0.136 (0.443)
SUSCIND	0.024 (0.883)	0.017 (0.914)	0.018 (0.911)	0.020 (0.905)	3.762 (0.924)	2.682 (0.946)	5.359 (0.891)	0.320 (0.870)	0.322 (0.868)	0.320 (0.868)	0.313 (0.875)	-1.386 (0.621)	-1.407 (0.614)	-1.375 (0.620)	-1.341 (0.638)	0.024 (0.883)
ESG*AUDCIND	-0.004 (0.800)	-0.008 (0.572)	-0.007 (0.549)	0.000 (0.981)	-28.575*** (0.000)	-14.523*** (0.000)	-24.040*** (0.000)	-0.004 (0.980)	0.031 (0.856)	0.042 (0.766)	-0.052 (0.715)	0.010 (0.968)	-0.022 (0.929)	0.049 (0.809)	0.036 (0.862)	-0.004 (0.800)
ESG*COMCIND	-0.016 (0.466)	-0.007 (0.714)	-0.006 (0.709)	-0.023 (0.144)	-14.127** (0.010)	-5.223 (0.286)	-10.658*** (0.009)	-0.286 (0.292)	-0.458* (0.056)	-0.029 (0.886)	0.125 (0.508)	-0.063 (0.872)	-0.108 (0.754)	-0.008 (0.978)	0.028 (0.918)	-0.016 (0.466)
ESG*NOMCIND	0.037 (0.178)	0.001 (0.988)	0.001 (0.984)	0.065*** (0.000)	46.622*** (0.000)	18.955*** (0.001)	36.261*** (0.000)	0.343 (0.294)	0.484* (0.082)	0.013 (0.958)	-0.026 (0.898)	0.067 (0.887)	0.114 (0.775)	-0.036 (0.921)	-0.005 (0.986)	0.037 (0.178)
ESG*SUSCIND	-0.021 (0.376)	-0.007 (0.712)	-0.007 (0.678)	-0.023 (0.305)	-1.260 (0.830)	0.469 (0.924)	-0.268 (0.948)	-0.038 (0.895)	-0.019 (0.937)	-0.044 (0.829)	0.004 (0.990)	-0.001 (0.998)	-0.009 (0.980)	-0.031 (0.915)	0.067 (0.865)	-0.021 (0.376)
DLAGDEPV	-0.051*** (0.000)	-0.050*** (0.000)	-0.050*** (0.000)	-0.053*** (0.000)	-0.215*** (0.000)	-0.214*** (0.000)	-0.215*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.207*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	0.705*** (0.000)	-0.051*** (0.000)
Includes all controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-squared	0.024	0.024	0.024	0.024	0.050	0.050	0.050	0.002	0.060	0.060	0.060	0.060	0.076	0.076	0.076	0.008
Hausman test	1.87 (0.108)	1.20 (0.107)	1.87 (0.112)	1.89 (0.148)	1.32 (0.250)	1.10 (0.294)	1.22 (0.270)	1.66 (0.197)	0.90 (0.343)	0.86 (0.355)	0.68 (0.411)	0.80 (0.371)	0.64 (0.424)	0.59 (0.444)	0.46 (0.499)	0.60 (0.440)

Note: The following abbreviations are used in the tables: ESG represents the Aggregate Environmental, Social, and Governance Disclosure Score, while BCMTIND represents the aggregate board committee indexes. The AUDCIND represents the Individual Audit Committee Index, COMCIND represents the Individual Compensation Committee Index, NOMCIND represents the Individual Nomination Committee Index, and SUSCIND represents the Individual Sustainability Committee Index. The interaction terms include ESG*BCMTIND, ESG*AUDCIND, ESG*COMCIND, ESG*NOMCIND, and ESG*SUSCIND, representing the interaction effects between ESG and specific committee indexes. DLAGDEPV are the lagged dependent variables. The P values are in parentheses, *p < 0.05, ** p < 0.01, *** p < 0.001.