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RESEARCH ARTICLE

Sustainable Development: How ESG Score Shapes Corporate Risk-Taking in Politically Linked Firms

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ABSTRACT

This study explores how ESG implementation affects the relationship between politically connected boards of commissioners and risk-taking behavior in Indonesia. It aims to understand how these firms' sustainable development, as reflected by their ESG performance, influences their approach to risk management and decision making. We applied ordinary least squares (OLS) regression to investigate these relationships. Political connection data were manually collected based on the company annual report. For the ESG scores, corporate risk, and other financial information from 2018 to 2023 were collected from DataStream. Next, the Generalized Method of Moments (GMM) and lagged variables are utilized to address potential endogeneity concerns. Politically connected firms through the board of commissioners can mitigate corporate risk; this effect is amplified by ESG implementation. Consequently, companies are encouraged to adopt ESG practices to maximize the beneficial influence of political connections. These findings remain robust, even after addressing potential endogeneity problems. This study has implications for business practitioners, policymakers, and academics in the development of ESG regulation in countries with high levels of political connections. Specifically, this study can serve as a reference for creating more transparent governance to support ESG implementation in emerging markets. The findings may also help investors or creditors gain a better understanding of how ESG affects the association between political connections and corporate risks in emerging markets; consequently, better investing and lending decision-making. This study offers originality by highlighting the intersection of political connections and ESG implementation in emerging markets, an area previously underexplored in the literature.

1 | Introduction

This study investigates whether politically connected boards of commissioners influence corporate risk and the role of ESG implementation, focusing on a firm's sustainable development. ESG scores are becoming increasingly relevant to the development of the global economy and society (Tsang et al. 2023)[1]. Conceptually and empirically, investment in ESG has been proven to be beneficial for stakeholders, especially creditors and investors, in evaluating a company's financial performance and risk for investment decision-making (He, Feng, and Hao 2023; Li et al. 2021; Ali et al. 2023; Widjaja et al. 2024; Sari et al. 2024; Dharmawan et al. 2024; Hadisurya et al. 2025). Specifically, companies with better sustainable development obtain more benefits, which are reflected in lower corporate risk (Zhao et al. 2023), thereby creating more stable operating performance (He, Feng, and Hao 2023). Furthermore, portfolios that consider investment in ESG factors have lower risk than those without ESG criteria (Kabderian Dreyer et al. 2023).

On the other hand, political connections play a crucial role in shaping the risks companies encounter. Both theoretical

perspectives and practical evidence indicate that government relationships influence the business risks of connected firms. Specifically, from the perspective of resource dependency theory, firms with political connections often enjoy access to resources, support, or protection that is unavailable to others. These connections can help them avoid bureaucratic delays, receive preferential treatment, and win government contracts (Fisman 2001). Political connections shield firms from the negative effects of corruption, minimize investment reduction, and give them a clear advantage over non-connected firms (Nguyen 2023). However, from the market discipline perspective, political connections can induce higher risk-taking by connected firms because of the reduced market discipline that such connections often entail. As such, political connections drive higher risk-taking in connected firms, but not in their competitors, as non-connected rivals adopt more conservative strategies due to their inability to access political benefits (Otchere et al. 2020).

Several studies find evidence that companies with political connections disclose more voluntary information than those without such connections (Dicko et al. 2020). By focusing on environmental responsibility, social impact, and strong governance, firms are less likely to engage in risky or unethical behaviors that could harm their reputation or invite regulatory scrutiny (Ali et al. 2023). However, there is no evidence that politically connected companies can minimize risk by implementing ESG practices. In this study, we examine whether the adoption of ESG practices may provide a framework for managing risks related to political instability, policy changes, and stakeholder concerns, ultimately fostering a more balanced and cautious approach to business decisions. We argue that ESG implementation can help reduce risk taking in politically connected firms by promoting more responsible and transparent corporate practices.

Our study contributes to the literature in several areas of political connections, sustainable development, and risk-taking. Specifically, our empirical research differs from the prior literature (e.g., Chin et al. 2024; Hadisurya et al. 2025) in several respects. First, we explore how sustainable development through ESG implementation can affect the relationship between political connections and corporate risk. Our research focuses on how ESG implementation can reduce risk-taking in politically connected firms by promoting responsible and transparent corporate practices. Chin et al. (2024) explored the effect of political connections on corporate risk and performance in Malaysia. However, they did not consider how sustainable strategies such as ESG implementation can influence the association between political connections and corporate risk. We fill this void by highlighting sustainable development in the relationship between political connections and a firm's risk. Second, we address this issue in the context of emerging markets such as Indonesia, where political connections have a significant impact on economic dealing (e.g., Joni et al. 2020a, 2020b). In politically connected economies, environmental regulations may be either weak or inconsistently enforced, leading to potential liabilities. It would be interesting to investigate whether companies with high ESG scores are likely to have strong environmental practices, mitigating risks such as fines, lawsuits, or reputational damage due to poor environmental stewardship in the context of Indonesia, where political connections play an essential role in business and law enforcement is relatively low.

This paper consists of six sections, beginning with an introduction. The second section explains the institutional background and development of the research hypotheses. The third section outlines the research method, and the fourth section presents and discusses the empirical test results. The fifth section focuses on additional tests to complement and strengthen the research results, and the sixth section presents the conclusions and suggestions.

2 | Politically Connected Firms and ESG Development in Indonesia

In emerging economies, such as Indonesia, establishing political connections can play a significant role in facilitating successful business operations. In practice, companies in Indonesia intentionally build strong relationships with the government and obtain access to government resources, such as funding and easy bureaucracy processes, through politically connected people assigned as supervisory board members in firms (Joni et al. 2020b). Since the reform era began in 1998, the landscape of political connections in Indonesia has shifted from a centralized model focused on the president to a more decentralized approach. This new pattern involves affiliations with former or current government officials appointed as members of the supervisory boards (Joni et al. 2020a).

The environmental protection movement in Indonesia began to take effect in the reform era, when the government opened opportunities for companies to promote their contributions to environmental and social issues, such as deforestation, pollution, and waste disposal, known as CSR [Corporate Social Responsibility] (Selin et al. 2023). This is reinforced by several laws in Indonesia, such as Law No. 19 of 2003, which requires State-Owned Enterprises (SOEs) to help small and medium enterprises, cooperatives, and communities with an allocation of 2% of profits for CSR. Furthermore, the 2007–2009 Global Financial Crisis prompted many companies to voluntarily disclose their performance in sustainability reports to investors (Rezaee et al. 2019). This shift highlights the growing importance of economic, governance, social, ethical, and environmental performance for stakeholders and organizations conducting business.

The ESG concept in Indonesia began to develop in 2013, when the Indonesia Stock Exchange (IDX) encouraged listed companies to voluntarily implement sustainability practices. In that year, green financing by banks reached approximately 1.37%, and the Indonesian government took this step (Rezaee et al. 2019). ESG development in Indonesia is further strengthened by the Financial Services Authority (OJK-Otoritas Jasa Keuangan) Regulation No. 51 of 2017, which requires financial services institutions, issuers, and public companies to run sustainable businesses and pay attention to environmental conditions. This is in line with Article 28 of the 1945 Constitution, which states that everyone has the right to live in physical and spiritual prosperity, have a place to live, and have a good and healthy environment.

However, like many other emerging market economies, ESG implementation in Indonesia is still not optimal despite many regulations that require ESG implementation. Only a few companies are required to implement ESG, while companies outside the sector still implement it voluntarily, usually inspired by international standards or stakeholder pressure. According to Rau and Yu (2024), there are two problems associated with ESG implementation. First, the quality of the published data raises concerns among the relevant parties. While company websites and Internet-based financial reports are primary sources of ESG information, the increasing number of companies publishing CSR reports for detailed ESG disclosures raises concerns about data reliability. Second, there are differences in the ESG ratings of institutional providers in each country. For example, differences in indicators, matrices, and methodologies lead to uncertainty in ESG ratings. Therefore, regulatory bodies are expected to provide company actions and directives, such as imposing sanctions for companies that do not implement ESG or issuing guidelines and standards to promote ESG to support environmental and social protection in Indonesia, which are currently absent.

This section provides an overview of the business environment and current stage of ESG implementation in Indonesia. As an emerging economy, the successful adoption of ESG practices relies on the joint efforts of the government and business leaders, while also being heavily influenced by regulatory bodies' monitoring capabilities and the political will to drive these initiatives forward. The next section presents the research hypotheses developed through an in-depth analysis of relevant theories and the existing literature.

3 | Hypothesis Development

3.1 | Political Affiliation and Corporate Risk

In this section, we develop research hypotheses based on relevant theories and existing literature. Previous research explains that the relationship between political connections and corporate risk can be explained through several theories, namely, Agency Theory (AGT) and Resource Dependence Theory (RPT). AGT highlights the separation of duties between managers and owners, which leads to information asymmetry (Jensen and Meckling 2019). This Type I agency conflict, driven by differing interests, is rare in Indonesia because of centralized governance, where owners often act as managers. Instead, Type II agency conflicts arising from differing interests between majority and minority shareholders are more common (Ding et al. 2015; Joni et al. 2020b, 2023). Based on the AGT, a politically connected Board of Commissioners (BOC) can help mitigate type II agency conflicts by acting as a watchdog and supervisor, reducing risk, and enhancing company performance. RPT explains the link between political connections and corporate risk. As Hillman et al. (2009) suggest, a politically connected board can benefit a company by facilitating access to government resources and easing policy processes.

Political ties are crucial when conducting business in developing economies, including Indonesia (Joni et al. 2020a). Political ties are mostly established through the appointment of current or former government officials to supervisory board positions in Indonesia's two-tier board structure (Joni et al. 2020a).[2] Through political personalities designated as supervisory board members, Indonesian corporations strategically cultivate strong relationships with the government to obtain government resources, including funding and streamlined bureaucratic procedures (Joni et al. 2020b).

Political supervisory boards offer significant advantages in mitigating corporate risk. Joni et al. (2020a) provide compelling evidence that politically affiliated firms' exhibit reduced business risk relative to non-politically connected firms, as demonstrated by Indonesian-listed corporations. They used the cost of capital as a proxy for business risks from the perspective of capital holders. Arifin et al. (2020) assert that transactional political connections can assist firms in effectively reducing their cost of debt, thereby mitigating overall risk exposure for the company in Indonesia. Ahmed and McMillan (2023) discovered that Gulf Corporation Council banks with political connections are able to decrease their debt levels more effectively than those without such connections, resulting in reduced risks and enhanced overall performance. According to a study by Chin et al. (2024), Malaysian listed companies with political connections take much less corporate risk and have better financial results than their counterparts. However, there is a lack of research to find evidence that political connections can reduce corporations' operational risk.

Based on the above discussion, we propose the following hypothesis:

H1. *Firms with political affiliations, particularly through their boards of commissioners, can mitigate corporate risk.*

3.2 | Political Affiliations, ESG, and Corporate Risk

Stakeholder Theory (SHT) argues that companies should pay attention to the interests of all parties involved, both directly and indirectly, including the company's board, government, employees, environment, and social community, because companies do not belong only to shareholders (Freeman and McVea 2005). In addition, the theory links processes to outcomes and offers a new way of managerial action, suggesting that companies cannot fulfill the needs of shareholders without considering the interests of other stakeholders (Pinheiro et al. 2024). Stakeholders drive corporate strategies through their identities, ideologies, and expectations. Therefore, companies must be able to create value for all interests, including employees, consumers, natural resources, and the environment (Freeman and McVea 2005; Xu et al. 2021).

An ESG score acts as a risk-management tool, signaling to stakeholders that a company is equipped to navigate the challenges of operating in politically connected environments through robust environmental, social, and governance (ESG) practices (Menla Ali et al. 2023). For instance, investors are wary of the heightened risks associated with politically connected economies. Companies with strong ESG scores are viewed as lower-risk investments that improve their access to capital. It is believed to

improve corporate governance, strengthen the relationship between political connections and corporate risk, and maintain a balance between corporate and stakeholder interests.

Research indicates that firms with political affiliations receive encouragement from government entities to engage in sustainability reporting and practice (Joni et al. 2020b; Rezaee et al. 2019). This has led to the emergence of various policies to promote environmental and social awareness (Mooneeapen et al. 2022; Tian et al. 2019). Consequently, politically connected companies with higher ESG scores achieve better performance, which is reflected in lower corporate risk. Moreover, companies with good political connections are encouraged to implement ESG in their operations to improve their image, which can attract more investors and help reduce risk (He, Feng, and Hao 2023). Zhao et al. (2023), for instance, showed that companies with good ESG demonstrations are easier to obtain equity funding, using data from listed companies in China in 2011–2018. Gao et al. (2023), Giese et al. (2019), and Park and Jang (2021) also found that ESG is a key factor in investment decision making because it can minimize corporate risk.

Based on the theoretical argument and prior empirical research, this hypothesis can be formulated as follows:

H2. *Firms with political affiliations, particularly through their boards of commissioners, reduce corporate risk, particularly when they achieve high ESG scores.*

4 | Research Methods

4.1 | Research Data and Sample

The data for this study were collected using two primary methods. Financial information was sourced from the Thomson Reuters database, whereas non-financial data, such as details on political connections and corporate governance, were manually collected from annual reports and company websites. This study used the Thomson Reuters database because most studies agree that the method for calculating ESG scores is reliable. The final sample for this study comprises 304 firm-year observations (64 firm-year observations are financial institutions), encompassing all companies listed on the IDX from 2018 to 2023. This timeframe was selected because of the implementation of ESG principles by the Government of Indonesia, following the enactment of Regulation No. 51 of 2017 concerning the Financial Services Authority (OJK) policies. During this period, a notable political connection existed between companies and the government, as evidenced by the involvement of several board members, including commissioners who were either current or former government officials (Joni et al. 2020b, 2020a; Junus et al. 2022).

4.2 | Variable Measurement

4.2.1 | Dependent Variable

We have included corporate risk as the dependent variable, which has been measured through operational risk, proxied by the standard deviation of return on assets (SD-ROA) over 5 years. This measurement is consistent with that of Harjoto and Laksmana (2018) and Mulia and Joni (2019).

4.2.2 | Independent Variables

To measure the influence of political connections as an independent variable, this study calculated the number of boards of commissioners who serve as former or active officials, such as ministers, military officials, members of parliament, and other bureaucrats appointed by the regional or central government (Joni et al. 2020a). These data were collected by closely examining the company profiles of company annual reports or company websites.

The measure of our independent variable is in line with the governance system applied in Indonesia, the two-tier board system, which adopts Dutch and European legal systems. This system divides the corporate board into two separate parts: Board of Directors [BOD] and BOC (Joni et al. 2020a). Under Indonesia's Company Law No. 1 of 1995, the duties of the BOC according to this provision include: (1) supervising and being responsible for management; (2) organizing the annual GMS [General Meeting of Shareholders] and other GMS according to its authority; and (3) conducting regular assessments of the performance of committees that support the implementation of its duties.

The moderating variable in this study was the ESG score. The ESG measurement uses an index score calculated from the Thomson Reuters database (Refinitiv Eikon) with 10 indicators in three categories. The first category is the environmental aspect, which includes the indicators of resource use, innovation, and emissions. The second category is the social aspect, which includes indicators of labor, human rights, community, and product responsibility. The third category is governance, which consists of management indicators, shareholders, and sustainable strategies.

In the main model, we used several control variables based on previous studies such as those of Cerqueti et al. (2022), Cohen (2023), Kabderian Dreyer et al. (2023) and Mulia and Joni (2019). The control variables were leverage (LEV), company size (FSZ), sales growth (SGR), board size (BDS), and company age (FAG). In addition, we controlled for industry (IDS) and year (YER) fixed effects. Industry fixed effects use the two-digit Global Industry Classification Standard (GICS). In the empirical model, we use the years 2018–2023 as the year fixed effects.

4.3 | Regression Method

Pooled ordinary least squares (OLS) regression was used to estimate the models. Next, we applied several empirical models to test Hypotheses 1 and 2, and presented them as follows:

Model 1

$$\begin{aligned} SD\_RAT = {} & \alpha_1 + \alpha_2 PC + \alpha_3 LEV + \alpha_4 FSZ \\ & + \alpha_5 SGR + \alpha_6 BDS + \alpha_7 FAG \\ & + \alpha_8 IDS + \alpha_9 YER \end{aligned} \quad (i)$$

Model 2

$$\begin{aligned} SD\_RAT = {} & \alpha_1 + \alpha_2 PC + \alpha_3 ESG + \alpha_4 PC^{*} ESG \\ & + \alpha_5 LEV + \alpha_6 FSZ + \alpha_7 SGR + \alpha_8 BDS \\ & + \alpha_9 FAG + \alpha_{10}\ IDS + \alpha_{11}\ YER \end{aligned} \quad \text{(ii)}$$

Table 1 provides the definitions of the variables in Models 1 and 2. For the analysis, we initially applied descriptive statistics, pairwise correlations, and multi-collinearity tests. Next, we test how political connections affect the relationship between ESG and corporate risk using OLS regression. We apply additional tests to address endogeneity issues using the Generalized Method of Moments (GMM) proposed by Arellano and Bond (1991). As a robustness test, we consider the influence of the COVID-19 pandemic, as in Ferriani and Natoli (2021).

5 | Empirical Results

5.1 | Descriptive Statistical Test

Table 2 presents the results of descriptive statistics from 304 observations of companies listed on the IDX during the observation period 2018–2023. Table 2 shows that the average SD_RAT was 3.239, with a range of 0.054–22.153. This value is consistent with the results of several previous studies (He, Ding, et al. 2023; Mulia and Joni 2019). The average independent variable for the BOC with political connections (PC) is 1.589, with a minimum value of 0 and a maximum value of 10. The median PC values were 1. This value is also consistent and within a reasonable range according to previous studies on PC in Indonesia (Dharmawan et al. 2024; Joni et al. 2020a, 2020b).

We also conducted a Pearson correlation test to examine the relationship between variables, except for industry and year fixed effects. Table 2 shows that the highest correlation is between ESG and company size (FSZ), which is 0.501. In addition, multicollinearity testing was carried out, which produced a Variance Inflation Factor (VIF) value. The VIF value in both the research models was less than 10 in the regression results in Table 3, indicating that there was no multicollinearity problem in the research model.

5.2 | Political Affiliation and Corporate Risk

Table 4 shows the results of the regression analysis that tested the relationship between political connections by the BOC (PC) and corporate risk (SD_RAT). Model 1 shows that the relationship between PC and SD_RAT is significantly negative at the 5% level (coefficient = −0.314, $t = -2.08$) with an R Square value of 0.3373, indicating that 33.73% of the variation in corporate risk is explained by the research variables. These results support

TABLE 1 | Variable definitions.

Variables	Definitions
Dependent variables	
SD_RAT	Standard deviation of return on invested capital over 5 years (Harjoto and Laksmana 2018; Mulia and Joni 2019)
Independent variables	
PC	The number of former or current military officers, ministers, or government officials appointed as members of the supervisory board (Faccio 2006; Joni et al. 2020a)
Moderating variables	
ESG	Environmental, social, and governance score based on the Thomson Reuters Database
Control variables—company characteristics	
LEV	Leverage is measured by dividing long-term debt by total assets (Harjoto and Laksmana 2018; He, Ding, et al. 2023; Chong et al. 2018)
FSZ	Natural logarithm of total assets (Gao et al. 2023)
SGR	Sales Growth (Harjoto and Laksmana 2018)
BDS	Number of company board members at the end of the fiscal year (Huang and Wang 2015)
FAG	Number of years since the company was founded (Bliss and Gul 2012)
Control variables—fixed effects	
IDS	Vector of industry indicator variables using two-digit GICS (Global Industry Classification Standard)
YER	Vector of year indicator variables: 2018; 2019; 2020; 2021; 2022; 2023

TABLE 2 | Descriptive statistics.

Variable	*N*	Mean	Std. deviation	Min	Max	Median
SD_RAT	304	3.239	3.796	0.054	22.153	2.178
ESG	304	50.314	19.534	12.590	87.860	48.390
PC	304	1.589	1.780	0.000	10.000	1.000
FSZ	304	24.563	1.538	19.757	28.314	24.460
SGR	304	4.921	17.014	−33.41	137.53	0.089
LEV	304	46.697	117.481	0.000	752.71	0.523
BDS	304	6.138	2.700	3.000	21.000	6.000
FAG	304	46.763	23.832	1.000	128.000	43.000

Note: The following table presents a summary of the descriptive analyses of the main variables. The research sample included 304 companies in the observation period of 2018–2023. SD_RAT is the standard deviation of the return on invested capital over the 5 years. The PC is the percentage of former or current military officers, ministers, or government officials appointed as members of the supervisory board. ESG score is based on the Thomson Reuters Database. We measure LEV by dividing long-term debt by total assets. FSZ is the natural logarithm of total assets. SGR is a company's sales growth. BDS is the number of board members in the company at the end of the fiscal year. FAG is the number of years the company was founded.

TABLE 3 | Pearson correlation test.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. SD_RAT								
2. ESG	0.128**							
3. PC	−0.175*	0.343*						
4. FSZ	−0.286***	0.501*	0.488*					
5. SGR	0.200*	0.120**	0.027	0.032				
6. LEV	−0.085	0.127**	0.117**	0.158*	0.179*			
7. BDS	−0.036	0.320***	0.338*	0.483*	0.022	0.000		
8. FAG	−0.133**	0.420*	0.339*	0.467*	−0.036	0.186***	0.270*	

Note: The following table presents the results of the Pearson correlation test for 304 company observations for all the variables. The definitions of these variables are listed in Table 1.
*Indicate a significance level of 10%.
**Indicates a significance level of 5%.
***Indicates a significance level of 1%.

Hypothesis 1, which shows that PC have a positive effect on companies in reducing risk because the lower the SD_RAT value, the lower the corporate risk.

The results of this study were consistent with the findings of Joni et al. (2020a); Arifin et al. (2020); Nguyen (2023), and Chin et al. (2024) which show that PC can reduce fraud, thereby reducing corporate risk. The presence of a politically connected BOC provides benefits to the company through effective oversight and supervision functions, which help reduce corporate risk because every decision on the BOC affects the company's operations. The BOC has the special task of providing direction and supervising the BOD in implementing the company's operations. This is in line with Agency Theory, which explains that the presence of a BOC who carry out their supervisory and oversight functions can overcome agency conflicts and provide benefits to the company. According to Agency Theory, firms with PC through the BOC can provide benefits, as reflected in lower corporate risks. In addition to Agency Theory, these results are also supported by Resource Dependency Theory, which emphasizes the relationship between the organization and its environment, especially dependence on external resources. A politically connected BOC provides connections to the company through easier access to information, policies, loans, legal protection, and others, thereby helping reduce the company's risk.

5.3 | Political Affiliation, ESG Score, and Corporate Risk

Table 4 reports the results of the regression analysis of Model 2, which tests the influence of ESG interactions on PC and corporate risk. Model 2 shows that the interaction variable between PC and ESG has a significant negative effect at the 5% level (coefficient = −0.014, $t = -2.07$) with an R Square value of 0.3831. These results are similar to the findings of He, Feng, and Hao (2023), who argue that paying attention to ESG performance significantly helps reduce corporate risk taking, thereby creating a more stable operating environment. Implementing ESG empowers companies

TABLE 4 | Political affiliation, ESG, and corporate risk-pooled OLS.

STD_RET		
Variable	**Model 1**	**Model 2**
PC	−0.314** (−2.08)	0.633 (1.42)
ESG		0.065*** (3.79)
PC*ESG		−0.014** (−2.07)
FSZ	−1.562*** (−4.71)	−1.408*** (−6.10)
SGR	0.054 (0.34)	0.032 (0.20)
LEV	−0.015 (−1.34)	−0.013 (−1.13)
BDS	0.304*** (2.78)	0.256** (2.31)
FAG	0.019* (1.69)	0.009 (0.79)
IDS	Included	Included
YER	Included	Included
Average VIF	2.24	4.08
R^2	0.3373	0.3831
Adj R^2	0.2878	0.3323
F	6.81	7.53
Prob > F	0.0000	0.0000
N	303	303

Note: Table 4 presents the regression estimation results. This table also includes the control variables (FSZ, SGR, LEV, BDS, FAG, IDS, and YER). In this study, *, **, and ***indicate significance at the 10%, 5%, and 1% levels, respectively. Table 1 presents the definitions of the variables.

TABLE 5 | Political affiliation, ESG, and corporate risk-GMM.

STD_RET		
Variable	**Model 1**	**Model 2**
PC	−0.314** (−2.14)	0.633*** (1.76)
ESG		0.065* (3.19)
PC*ESG		−0.014** (−2.31)
FSZ	−1.562*** (−6.05)	−1.408*** (−6.81)
SGR	0.054 (0.32)	0.032 (0.20)
LEV	−0.015 (−0.93)	−0.013 (−0.81)
BDS	0.304** (2.44)	0.256** (2.40)
FAG	0.019*** (2.61)	0.009 (1.21)
b0	43.037*** (6.94)	35.998*** (7.96)

Note: Table 5 presents the GMM test results for each model. This table also includes the control variables (FSZ, SGR, LEV, BDS, FAG, IDS, and YER). In this study, *, **, and ***indicate significance at the 10%, 5%, and 1% levels, respectively. Table 1 presents the definitions of the variables.

to significantly reduce risks, particularly in environments in which PC are influential. The interaction between political affiliation and ESG provides substantial advantages that not only mitigate corporate risk but also enhance overall stability and reputation. By prioritizing ESG initiatives, companies position themselves to thrive in a complex landscape, turning potential challenges into opportunities for growth and success.

This is in line with SHT, which explains that a strong ESG score clearly shows that a company can successfully navigate the complexities of politically connected environments. By demonstrating genuine commitment to environmental protection, social responsibility, and ethical leadership, companies with high ESG scores can effectively manage risk, enhance their reputation, and strengthen their competitive positions (Gao et al. 2023; Giese et al. 2019; Park and Jang 2021; Al Rabab'a et al. 2024). Sustainable strategies, including ESG implementation, can enhance the ability of politically connected firms to lower their risk.

6 | Additional Testing

6.1 | Endogeneity Testing

We also conduct additional tests to address the endogeneity issue, which is a critical concern in corporate governance research. This is due to the possibility that companies that already have good risk management capabilities or high ESG performance can establish political relations in order to gain more benefits through these connections. Therefore, to overcome endogeneity and heteroscedasticity problems in this study, the Generalized Method of Moments (GMM) method was used (Arellano and Bond 1991). Overall, the GMM test results in Table 5 show results that are consistent with the regression results in Models 1 and 2 in Table 3.

We used lagged variables to address endogeneity concerns. It is argued that the possibility of endogeneity is unlikely to be significant when lagged variables are applied. The results show that the regression results are generally consistent with all the models reported in Table 4 (Model 1 [Coefficient: −0.392; $t = -1.95$], Model 2 [Coefficient: −0.011; $t = -1.19$]). In addition, we re-run all regressions after excluding 64 firm-year observations for financial institutions in our sample, and the results are generally consistent with all models reported in Tables 4 and 5[3].

6.2 | Additional Political Affiliation Measure

We conduct an additional test to strengthen the research results by regressing the politically connected BOC and corporate risk using different measurement indicators. In this regression test, the political connection of the BOC is measured by a dummy variable, where 0 is for companies that do not have a politically connected BOC, and 1 is for companies that have a politically connected BOC. Table 6 shows the results of the regression analysis on the relationship between the politically connected BOC and corporate risk, which are consistent with the research results in Table 4.

Table 6 shows that Model 1 finds a significant negative relationship between PC and SD_RAT at the 5% level (coefficient = −1.132, $t = -2.42$) with an R Square value of 0.3409, indicating that the research variable has a 34.09% effect on corporate risk. Model 2 shows that the interaction between ESG and the relationship between PC and SD_RAT is significantly

TABLE 6 | Additional political affiliation measure—pooled OLS.

STD_RET		
Variable	**Model 1**	**Model 2**
PC	−1.132** (−2.42)	1.840*** (1.47)
ESG		0.086 (4.13)
PC*ESG		−0.061** (−2.40)
FSZ	−1.496*** (−4.47)	−1.119*** (−5.80)
SGR	0.051 (0.32)	0.043 (1.64)
LEV	−0.014 (−1.23)	−0.002 (−0.52)
BDS	0.260** (2.44)	0.221** (2.05)
FAG	0.017 (2.56)	0.013 (1.20)
IDS	Included	Included
YER	Included	Included
Average VIF	2.22	3.17
R^2	0.3409	0.3957
Adj R^2	0.2917	0.3459
F	6.92	7.94
Prob > F	0.0000	0.0000
N	303	303

Note: Table 6 presents the results of the regression estimation. This table also includes the control variables (FSZ, SGR, LEV, BDS, FAG, IDS, and YER). In this study, *, **, and ***indicate significance at the 10%, 5%, and 1% levels, respectively. Table 1 presents the definitions of the variables.

negative at the 5% level (coefficient = −0.061, t = −2.41) with an R Square value of 0.3957, indicating that this interaction has a 39.57% effect on corporate risk. This shows that companies with a BOC with political connections can benefit from the resources they have, thereby reducing corporate risk. Furthermore, ESG implementation strengthens this relationship, which further minimizes corporate risk. Therefore, companies are advised to focus on environmental aspects as part of their efforts to achieve profitability goals.

Furthermore, employing the percentage of former or current government officials on supervisory boards as a proxy for political connections, we replicated the findings presented in Table 4.[4] This consistency extends our examination of the interaction between a high political connection (dichotomized at the median value of political connection) and ESG scores in influencing corporate risk (coefficient = −0.532, t = −2.23), yielding results congruent with those previously reported in Table 4.[5]

7 | Conclusions

In this study, we investigate whether politically connected boards of commissioners affect corporate risk and examine the role of ESG implementation in this relationship in Indonesia, where the level of political connection is high and the implementation of a dual-board system [BOD who are responsible for the operation and BOC play an important role in supervising and monitoring]. The results reveal that a politically connected BOC positively impacts a company by reducing the risks it faces. The members of the BOC with political connections, through their resources, can help companies reduce risks, such as access to resources, ease of obtaining loans, and policy information. In addition, the supervisory functions of the BOC help companies implement good governance. Through supervisory duties, the BOC provides direction or advice to the BOD in implementing the company's operations, which can improve the company's image and reduce the risk of loss. The results also show that the interaction of the ESG score with political connections and corporate risk provides positive benefits for the company, which is indicated by a decrease in risk. Our findings confirm that implementing robust ESG practices is critical for companies, particularly those with significant political connections. Although these connections offer potential advantages, they also introduce unique risks. Strong ESG frameworks mitigate these risks by demonstrating responsible corporate behavior, enhancing reputation, and aligning with evolving stakeholder expectations, ultimately strengthening a company's overall position.

This study's findings have several implications. First, it contributes to the literature by exploring the interaction between ESG, political connections, and corporate risk, an area that has received limited attention in prior research. Second, this study expands the literature and provides practical implications regarding the two-tier board system in Indonesia, which is common in many countries worldwide. Third, this study provides new insights into the impact of political connections on corporate risk, demonstrating that political connections can help reduce risk, which is further strengthened by the implementation of ESG in emerging markets such as Indonesia. Our findings provide a better understanding for investors and policymakers on how political connection and ESG implementation can be an effective tool to reduce risks in the context of emerging markets, particularly Indonesia.

However, our study may have had limited acceptability under certain conditions. First, we evaluated political connections solely through the BOC, relying exclusively on the company's annual report. This narrow focus means that we overlook other significant avenues of political connections, such as those involving controlling owners and various indirect channels. Second, our ESG scores were sourced from the Thomson Reuters database, which restricts our sample to companies that publicly disclose their ESG practices. Future research should broaden the scope of political connections by incorporating indirect links using qualitative research methods, and should also consider measuring ESG scores from corporate sustainability reports in addition to databases. It also recommends using a larger and more diverse sample to strengthen the generalizability of the study.

Author Contributions

Joni Joni, as the first and corresponding author, has been primarily responsible for drafting the manuscript and revising it critically for important intellectual content. He also granted the final approval of the version to be published and agrees to be accountable for all aspects of the work in ensuring its accuracy and integrity. Rapina Rapina, as the second author, contributed significantly to the conception and design of the study, as well as data acquisition and analysis. She participated sufficiently in the work to take responsibility for the relevant parts of the

content. Shawgat S. Kutubi, as the third author, made major contributions to the analysis and interpretation of the data, providing essential input in shaping the study's findings.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] The ESG score is developed under international ESG framework which refers to the commitment of the corporation to integrate several key global concerns, including environmental (e.g., efficiently resource use, emission, innovation in environmentally friendly products and services, etc.), social (e.g., workforce, human rights, community impact, product, and service responsibility, etc.), and governance (e.g., accountability, transparency, board structure, shareholder rights, etc.) factors (Li et al. 2021).

[2] The governance system applied in Indonesia is the two-tier board system, which adopts the Dutch and European legal systems. This system divides the corporate board into two separate parts: Board of Directors (BOD) and Board of Commissioners (BOC) or Supervisory Board (Joni et al. 2020a). Under Indonesia's Company Law No. 1 of 1995, all listed companies are required to form a Board of Directors and a Board of Commissioners.

[3] All results are available upon request.

[4] The result is not tabulated due to space constrain. It can be provided upon request. The association between political connection and risk in Model 1 is negative and significant [coefficient = −1.567, $t = -1.67$]; the interaction variable in Model 2 is also negative and significant [coefficient = −0.091, $t = -2.02$].

[5] The complete tabulated results are available upon request.

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