

# CEO Overconfidence and Corporate ESG: The Role of Firm Specific Economics Policy Uncertainty

Yewei Wen

School of Statistics and Data Science, Jiangxi University of Finance and Economics, Nanchang, China

13597893183@163.com

**Abstract.** This study investigates the relationship between CEO overconfidence and corporate ESG performance, particularly how this relationship is influenced by perceived economic policy uncertainty. Utilizing data from non-financial listed companies in China's Shanghai and Shenzhen A-shares from 2010 to 2020, this study constructs a firm-specific index of perceived uncertainty through text mining techniques. This analysis, grounded in the "overconfidence" theory from behavioral economics, examines how CEO characteristics impact ESG performance. Employing a dual fixed-effects panel regression model, our empirical findings reveal that CEO overconfidence significantly enhances corporate ESG performance, especially when perceptions of external economic policy uncertainty are heightened. Overconfident executives tend to view external risks as opportunities to showcase their decision-making and judgment skills. As a result, they are more likely to implement proactive ESG strategies to stabilize external expectations, strengthen corporate resilience, and leverage non-financial disclosures to enhance the firm's reputation in the capital market. The conclusions drawn from this study offer valuable theoretical insights and practical implications for macroeconomic policy formulation and for empowering executive teams to foster corporate sustainable development.

**Keywords:** CEO Overconfidence, Corporate ESG Performance, Economic Policy Uncertainty, Text Mining.

## 1. Introduction

Since the beginning of the 21st century, the global economy and social environment have experienced profound transformations and upheavals. On the one hand, technological advancements and industrial upgrades have intensified competition among businesses; on the other hand, the international political and economic landscape has become increasingly complex, with rising uncertainty factors. For corporate managers, changes in macro-level policies, competitive dynamics within industries, and shifts in consumer preferences can all heighten their perception of uncertainty regarding the future. In this context, formulating effective strategic decisions amid an uncertain external environment has become critical for corporate survival and growth. Moreover, in recent years, the concept of sustainable development has garnered widespread attention worldwide, prompting more companies to focus on their environmental, social, and governance (ESG) performance. Numerous studies indicate that strong ESG performance not only helps companies build a positive social image but also provides competitive advantages through various mechanisms, such as reducing financing costs, attracting high-quality investors, and enhancing employee motivation. However, corporate ESG behaviors do not always align perfectly with shareholder interests or the personal interests of managers. Faced with a complex external market and diverse stakeholder demands, management often must balance "profit maximization" with "social responsibility" when making ESG-related decisions. Particularly in high-uncertainty environments, decision-makers may adopt either conservative or aggressive strategies, thereby influencing the company's investment and practices in the ESG domain.

Existing literature on the drivers of corporate social responsibility or ESG behaviors typically focuses on macro or meso-level factors, such as external regulatory pressures, market competition, organizational structure, or stakeholder demands (Xu et al., 2024). However, with the deepening integration of behavioral economics and corporate finance, an increasing number of scholars are

examining managerial behavioral biases and their impact on corporate decision-making. Among various psychological biases, CEO overconfidence has emerged as a prominent research topic (Burkhard et al., 2022). CEO overconfidence often manifests as an overestimation of one's judgment and abilities, coupled with an undervaluation of risks and uncertainties, which significantly influences strategic decision-making. Previous studies have found that CEO overconfidence can lead to a preference for higher leverage, more frequent mergers and acquisitions, or a tendency toward aggressive investment strategies (Mundi & Kaur, 2022). However, research on how CEO overconfidence affects corporate ESG practices remains limited, particularly regarding how varying levels of uncertainty may lead to different biases in ESG investment decisions.

This study employs empirical analysis to examine the impact mechanism of CEO overconfidence on corporate ESG performance and explores the moderating effect of perceived uncertainty. Using a sample of non-financial listed companies in China's Shanghai and Shenzhen A-shares from 2010 to 2020, the study employs text mining techniques to construct an index of perceived uncertainty. Grounded in the theory of overconfidence from behavioral economics, researchers establish a dual fixed-effects panel regression model for testing. The empirical results indicate that CEO overconfidence significantly enhances corporate ESG performance, with this effect being more pronounced under conditions of heightened external uncertainty. Mechanism analysis reveals that overconfident CEOs exhibit a stronger action-oriented approach in decisions related to environmental protection, social responsibility, and corporate governance, viewing ESG investment as a strategic tool to enhance long-term corporate value and public perception. Additionally, the moderating effect analysis shows that economic policy uncertainty significantly strengthens the positive relationship between CEO overconfidence and ESG performance, as overconfident managers tend to perceive external risk environments as opportunities to demonstrate strategic vision, utilizing ESG strategies more actively to stabilize market expectations, enhance resilience, and improve corporate reputation through non-financial disclosures.

This study makes several key contributions compared to existing literature.

First, it explores the interaction between external environmental uncertainty and managerial psychological biases, clarifying how a CEO's perception of uncertainty can amplify (or mitigate) the effects of overconfidence in ESG decision-making. While previous research, such as Arvidsson (2021), primarily focuses on the regulatory impact of external policy environments on corporate ESG practices, these studies often portray managers as rational decision-makers. This perspective overlooks the critical roles of cognitive biases and psychological traits in ESG decisions and lacks a thorough analysis of the interplay between managerial biases and perceptions of the external environment. By adopting this interactive framework, this study provides a more comprehensive understanding of the complex mechanisms that influence corporate ESG decision-making.

Second, this research offers a targeted theoretical extension regarding the relationship between CEO overconfidence and corporate sustainable practices. In traditional behavioral finance theory, overconfidence is viewed as increasing managers' risk tolerance. However, in the ESG context, the relationship between risk and return exhibits more complex externalities, and commitments often require longer timeframes (Wang et al., 2023; McKinsey, 2022). Thus, from the perspectives of upper echelon theory and behavioral finance, CEO overconfidence may yield both positive incentives (e.g. substantial investments in green innovation) and negative consequences (e.g. overlooking potential environmental or social risks). By analyzing and empirically testing the relationship between CEO overconfidence and corporate ESG performance, this study enriches the application of behavioral finance and upper echelon theory within the ESG domain, enhancing our understanding of the interplay between executive psychological traits and corporate sustainable development strategies.

Third, the theoretical analysis and empirical findings of this study provide valuable insights for empowering executive teams in the context of sustainable development and addressing uncertainty shocks. On the one hand, global attention to corporate ESG issues has significantly increased, making ESG performance a crucial indicator for investors and regulators in assessing corporate value and long-term sustainability. On the other hand, senior management's decision-making biases in

uncertain environments are vital for a company's long-term strategic planning. Therefore, the insights gained from the relationship between CEO overconfidence and corporate ESG decision-making, along with the role of perceived external uncertainty, offer useful references for regulators, investors, and internal corporate governance.

Based on the above research background and issues, this paper constructs a theoretical analysis framework and proposes research hypotheses in Section 2. Section 3 outlines the research design, including sample and data sources, variable measurements, and model specifications. Section 4 tests the hypotheses through empirical analysis and robustness checks. Finally, Section 5 summarizes the research conclusions, limitations, and future research directions, discussing implications for management practice.

## 2. Theoretical Framework and Hypothesis Development

Upper Echelons Theory suggests that a CEO's personal preferences and psychological traits significantly influence corporate strategic choices and organizational performance (Abatecola & Cristofaro, 2020). Consequently, overconfident CEOs are likely to advocate for more aggressive sustainable development strategies. Overconfidence is often associated with a heightened risk appetite and a willingness to take bold actions. Such CEOs are undeterred by uncertainty; instead, they embrace innovative initiatives, including investments in green technologies and environmental governance projects (Hirshleifer et al., 2012). Another relevant perspective is the narcissistic or reputational motivation of executives. Overconfident CEOs often seek external recognition and praise. To demonstrate their leadership and cultivate a positive public image, they may actively enhance corporate social responsibility practices to attract media and stakeholder attention (Petrenko et al., 2016). Additionally, Social Identity Theory posits that an individual's self-concept partly derives from their identification with social groups, which influences their behavior and decision-making (Tajfel & Turner, 1986). Within a corporate context, a CEO's social identity may affect their emphasis on corporate social responsibility and sustainable development (Zhang et al., 2025). Consequently, overconfident CEOs may prioritize ESG performance due to their concerns about reputation and social identity, leading to decisions that positively impact ESG outcomes. In summary, factors such as optimistic bias, risk preference, and reputational motivation form the theoretical basis for Hypothesis 1, suggesting that CEO overconfidence may enhance corporate ESG performance.

Specifically, firstly, the high-risk tolerance associated with overconfidence leads CEOs to invest in uncertain yet potentially high-return areas, such as clean energy technologies or community projects. Although these investments may yield unclear short-term returns, they have the potential to significantly enhance a company's sustainable competitiveness in the long run (Galasso & Simcoe, 2011). Overconfident CEOs are more likely to believe that these investments will ultimately pay off, leading them to allocate more resources than their more cautious counterparts. Secondly, the optimistic bias that accompanies overconfidence causes executives to overestimate the benefits of ESG projects while underestimating their costs (Malmendier & Tate, 2005). This cognitive bias encourages them to make unconventional investments in areas such as environmental governance and employee welfare, as they are convinced that the company will reap substantial rewards. Thirdly, reputational orientation and the attention effect are also critical mechanisms. Overconfident managers often aspire to project an image of exceptional leadership. When ESG issues become a societal focal point, these CEOs are more proactive in driving their companies to fulfill social responsibilities in order to gain media coverage and public recognition. Research indicates that overconfident executives have a stronger motivation to attract attention, which can incentivize them to boost corporate ESG performance. Finally, overconfident leaders may possess superior resource mobilization capabilities. They tend to be more persuasive in securing support from boards and shareholders for their strategic visions, enabling them to obtain the necessary resources and long-term investments for ESG projects (Kim & Lee, 2021). In conclusion, overconfidence can serve as a catalyst for enhancing corporate

ESG performance by increasing risk tolerance, fostering optimism, and amplifying reputational motivations. Therefore, this study proposes the following hypothesis.

H1: CEO overconfidence positively influences corporate ESG performance.

### **3. Research Design**

#### **3.1 Sample and Data Sources**

This study examines a sample of non-financial listed companies from China's Shanghai and Shenzhen A-shares over the period from 2010 to 2020. The primary data sources are CSMAR and Wind. Annual reports for the listed companies are retrieved from their official websites and processed manually. The dataset undergoes the following treatments: first, missing values are removed. Second, winsorization is applied to the main continuous variables at the 99th percentile. Third, companies in the financial sector and those classified as ST (special treatment) are excluded from the analysis.

#### **3.2 Variable Definitions**

##### **3.2.1. CEO Overconfidence**

CEO overconfidence (independent variable) is measured using a composite index based on the personal characteristics of executives. Specifically, researchers collect information on the CEO's gender, age, education level, and whether they hold multiple positions (sourced from authoritative databases like CSMAR). A score of 1 is assigned for the following criteria: if the CEO is male (as men are generally perceived to be more confident), if their age is below the sample mean (younger managers may exhibit more aggressive confidence), if they have at least a bachelor's degree (higher education often correlates with greater self-assurance), and if they also serve as chairman (holding both positions may lead to unchecked power and increased confidence bias). The scores from these four indicators are summed to form the CEO overconfidence score, with higher scores indicating a stronger tendency toward overconfidence (e.g., a score of 4 indicates meeting all criteria, suggesting a high probability of overconfidence; similar methods are referenced from Kim & Lee, 2022).

##### **3.2.2. Corporate ESG**

In recent years, the Bloomberg ESG Score/Disclosure Score has become a widely used metric in both academia and industry for assessing corporate sustainability performance. This score measures a company's performance across environmental (E), social (S), and governance (G) dimensions on a scale of 0 to 100. As of 2023, it covers over 14,500 companies, providing high comparability and availability for empirical research on Chinese listed companies. In this study, researchers use the Bloomberg ESG score as the dependent variable. The level of ESG information disclosure (also a dependent variable) is derived from annual reports and independent sustainability reports of listed companies. The study compiles a disclosure index based on the ESG-related content revealed in these reports, assessing the overall level of ESG information disclosed (for example, referencing the length of the environmental and social responsibility sections in annual reports or third-party ESG ratings).

##### **3.2.3. Perceived Corporate Uncertainty**

Perceived uncertainty (moderating variable) is obtained through text analysis of annual reports. The study employs web scraping techniques to collect text from the "Management Discussion and Analysis" sections of these reports and constructs a macroeconomic uncertainty perception index based on the methodology outlined by Wang et al. (2023). Specifically, researchers create a dictionary of keywords that describe macroeconomic and policy uncertainties (such as "uncertainty", "volatility", "risk", and "challenges") and calculate the proportion of sentences containing uncertainty keywords within the MD&A section of each company's annual report. A higher ratio indicates a stronger perception of external environmental uncertainty by management (Wang et al., 2023). This data-driven text analysis reflects the level of macro uncertainty experienced by each company

annually, addressing the shortcomings of traditional macro uncertainty indices that fail to capture individual variability.

Table 1 lists the key variables involved in this study, along with their definitions and measurement methods. This includes the dependent variable corporate ESG performance, the primary independent variable CEO overconfidence, and various control variables. The control variables are categorized into three groups: company characteristics, corporate governance features, and ownership structure, to ensure a clear identification and analysis of how these factors influence corporate ESG performance. The structure of this table aims to provide a comprehensive understanding of how different variables affect corporate ESG information disclosure and to ensure the accuracy of the model.

Table 1. Definitions and Measurement of Relevant Variables

Type	Name	Definition	Indicator/Measurement Method
Dependent Variable	Corporate ESG Performance (ESG)	The overall performance of a company in the environmental (E), social (S), and governance (G) dimensions, measuring its sustainability level.	Bloomberg ESG score, ranging from 0 to 100.
Independent Variable	CEO Overconfidence (oc)	Refers to a CEO's overestimation of their abilities, often leading to higher-risk decisions.	Constructed from CEO personal characteristics: gender (male = 1), age (below sample mean = 1), education level (bachelor's degree or higher = 1), and whether they serve as chairman (chairman and CEO = 1).
Control Variables (Company Characteristics)	Company Size (Size)	Indicates the scale of the company, typically measured by total assets or revenue.	Natural logarithm of total assets.
	Return on Assets (ROA)	Measures the efficiency of a company in generating earnings from its assets.	Net profit divided by total assets.
	Tobin's Q (TobinQ)	Measures the market valuation of a company relative to the replacement cost of its assets and its growth potential.	Ratio of market value to asset replacement cost.
	Company Growth (Growth)	Reflects the potential for company expansion or growth, which may influence its capacity to engage in ESG-related projects.	Year-over-year revenue growth rate.
Control Variables (Corporate Governance Characteristics)	Financial Leverage (Lev)	Indicates the level of a company's debt, which may affect its financial stability and risk-taking willingness.	Ratio of total debt to total assets.
	Top 10 Shareholders' Ownership Ratio (Top10)	Reflects shareholder concentration, which may influence governance decisions and corporate strategy.	Percentage of shares held by the top ten shareholders.

	Management Expenses (Mfree)	Represents the operational costs of company management, potentially affecting the resources available for ESG investments.	Ratio of management expenses to total assets.
Control Variables (Ownership Structure)	State-owned or Private Enterprise	Reflects the ownership structure of the company, which may influence its governance structure and decision-making patterns.	Binary variable indicating state-owned enterprise (1) or private enterprise (0).

### 3.3 Regression Model Design

To test the hypotheses, this study establishes the following regression model.

$$ESG_{i,t} = \alpha + \beta_1 \text{OverConf}_{i,t} + \beta_3 (\text{OverConf} \times \text{Uncertainty})_{i,t} + \sum_k \gamma_k \text{Control}_{k,i,t} + \mu_i + \lambda_t + \epsilon_{i,t}$$

In this equation, the subscript *i* denotes the company and *t* denotes the year. The dependent variable, ESG, represents corporate ESG performance.  $\text{OverConf}_{i,t}$  corresponds to the CEO overconfidence metric.  $\text{OverConf} \times \text{Uncertainty}$  is the interaction term used to assess the moderating effect of perceived uncertainty. The terms  $\mu_i$  and  $\lambda_t$  represent industry and year fixed effects respectively, while  $\epsilon_{i,t}$  is the error term.

To control for the effects of CEO overconfidence and uncertainty on ESG disclosure, the study incorporates a range of control variables. These include company characteristics (such as size, return on assets, Tobin’s Q, and growth rate), corporate governance features (like financial leverage, the ownership ratio of the top ten shareholders, and management expenses), and ownership structure (state-owned versus private enterprise). For example, larger companies may face greater public scrutiny, prompting them to disclose more ESG information; firms with better performance may have more resources to invest in ESG initiatives; and companies with high financial leverage may adopt a more cautious approach to ESG investments. Therefore, these factors must be accounted for in the model. Additionally, researchers control for year and industry fixed effects to minimize the influence of macro trends or common industry factors.

## 4. Empirical Results

### 4.1 Regression Analysis: Examining the Relationship Between CEO Overconfidence and ESG

To evaluate the impact of CEO overconfidence on corporate ESG performance, this study employs a dual fixed effects model that accounts for both industry and year. This approach controls for the influences of industry heterogeneity and temporal trends. Table 2 presents the regression results for the relationship between CEO overconfidence (OC) and corporate ESG performance, analyzing the robustness of this relationship as control variables are introduced incrementally.

Table 2. Regression results

	(1)	(2)
	ESG	ESG
oc	1.129*** (0.259)	1.045*** (0.251)
Size		2.498*** (0.073)
Lev		7.032*** (0.480)
Top10		6.036***

		(0.507)
ROA		4.700***
		(1.366)
TobinQ		-0.363***
		(0.056)
Mfee		-2.841***
		(0.713)
Cashflow		5.575***
		(1.253)
Growth		-0.001
		(0.000)
_cons	19.673***	13.270***
	(0.244)	(0.475)
Time Fixed Effects	YES	YES
Individual Fixed Effects	YES	YES
Obs.	7287	7287
R-squared	0.122	0.185

Standard errors are in parenthesis, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

As shown in Table 2, in Model (1), which includes only the core explanatory variable OC and dual fixed effects, the regression coefficient for OC is 1.129, significant at the 1% level ( $t = 4.36$ ). This finding indicates that CEO overconfidence has a significantly positive effect on corporate ESG scores, providing direct support for Hypothesis 1.

In Model (2), the study introduces control variables such as company size (Size) and capital structure (Lev) to address potential omitted variable bias. The results show that the regression coefficient for OC remains positive and is highly significant at the 1% level, confirming the robust positive impact of CEO overconfidence on ESG performance and enhancing the credibility of our conclusions.

#### 4.2 Testing the Moderating Effect: The Role of Perceived Uncertainty

External macroeconomic uncertainty is a crucial contextual factor influencing corporate strategic decisions. When management perceives the macroeconomic policy or environment as uncertain, the potential risks and challenges faced by the company increase. In such situations, CEOs with different characteristics may adopt significantly different responses. For overconfident CEOs, a heightened perception of economic policy uncertainty may lead them to disclose ESG information more proactively, aiming to enhance corporate ESG performance. In other words, as uncertainty rises, overconfident CEOs are more likely to share extensive ESG information, thereby improving corporate ESG outcomes.

To further investigate whether economic policy uncertainty moderates the relationship between CEO overconfidence and corporate ESG performance, this study introduces the interaction term (OC  $\times$  EPU) into the baseline model. A dual fixed effects model (accounting for both industry and year) is employed to control for the influences of industry heterogeneity and temporal trends. Table 3 presents the regression results for the interaction term OC\_EPU, analyzing the robustness of the moderating effect as control variables are introduced incrementally.

Table 3. Regression results

	(1)	(2)
	ESG	ESG
oc	0.881***	0.833***
	(0.276)	(0.267)
oc_epu	0.170***	0.145***

	(0.048)	(0.046)
Size		2.467***
		(0.075)
Lev		6.914***
		(0.491)
Top10		6.167***
		(0.513)
ROA		4.444***
		(1.405)
TobinQ		-0.326***
		(0.057)
Mfee		-2.829***
		(0.727)
Cashflow		5.238***
		(1.274)
Growth		-0.001
		(0.000)
_cons	19.658***	13.169***
	(0.246)	(0.485)
Time Fixed Effects	YES	YES
Individual Fixed Effects	YES	YES
Obs.	6975	6970
R-squared	0.129	0.191

Standard errors are in parenthesis, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

As shown in Table 3, in Model (1), which includes only the core variables and the interaction term, the regression coefficient for the interaction term OC\_EPU is 0.170, significant at the 5% level ( $t = 2.34$ ). This finding indicates that economic policy uncertainty significantly amplifies the positive impact of CEO overconfidence on corporate ESG performance. In other words, when the external environment is characterized by higher uncertainty, overconfident CEOs may be more likely to adopt proactive ESG strategies to enhance corporate resilience, shape public perception, or divert market attention. This phenomenon can be attributed to two main factors: first, increased uncertainty may heighten concerns among investors and the public, leading overconfident managers to bolster ESG disclosures as a way to signal robust management and a commitment to long-term goals. Second, overconfident individuals tend to maintain a strong belief in future success; they often trust that investing in ESG will yield returns, even in turbulent conditions. As a result, they are less likely to scale back disclosures in response to short-term uncertainty and may instead increase their investments to gain a competitive edge, thereby enhancing corporate ESG performance. In contrast, during times of high uncertainty, non-overconfident managers may adopt a more cautious approach, reducing public commitments to lessen external scrutiny. In Model (2), this study further introduces control variables to address potential omitted variable bias. The coefficient for the interaction term remains positive (0.145) and is significant at the 5% level ( $t = 2.10$ ), indicating that even after controlling for fundamental company characteristics, the moderating effect of perceived uncertainty on the relationship between CEO overconfidence and ESG performance remains robust.

## 5. Conclusions and Insights

In the context of increasing global economic uncertainty and a growing emphasis on sustainable development, how companies can achieve high-quality growth in non-financial areas has become a central concern for both academia and practitioners. This study investigates the relationship between CEO overconfidence and corporate ESG performance, using a sample of non-financial listed

companies from China's Shanghai and Shenzhen stock exchanges between 2010 and 2020. Importantly, it examines the role of perceived economic policy uncertainty in this relationship. The findings reveal that CEO overconfidence significantly enhances corporate ESG performance. Further analysis indicates that perceived economic policy uncertainty strengthens this relationship; as macroeconomic uncertainty intensifies, the positive correlation between CEO overconfidence and corporate ESG performance becomes even more pronounced.

Based on these findings, this study offers three key management recommendations. For macroeconomic policymakers, it is necessary to enhance the continuity and stability of economic policies to reduce subjective perceptions of future uncertainty among economic agents. For companies, they should focus on the psychological development and education of executive teams, particularly by incorporating executives' cognitive styles and strategic preferences into selection and incentive mechanisms. Last but not least, when evaluating corporate sustainability performance, investors should include executive traits such as overconfidence in the analysis. This can help identify their potential impact on the implementation of ESG strategies and optimize investment portfolio strategies to better select companies with long-term growth potential.

## References

- [1] Arvidsson, S., & Dumay, J. (2021). Corporate ESG reporting quantity, quality and performance: where to now for environmental policy and practice? *Business Strategy and the Environment*, 31(3), 1091-1110.
- [2] Abatecola, G., & Cristofaro, M. (2020). Hambrick and Mason's "Upper Echelons Theory": Evolution and Open Avenues. *Journal of Management History*, 26(1), 116–136.
- [3] Burkhard, B., Sirén, C., van Essen, M., Grichnik, D., & Shepherd, D. A. (2022). Nothing ventured, nothing gained: A meta-analysis of CEO overconfidence, strategic risk taking, and performance. *Journal of Management*, 49(4), 1221-1257. <https://doi.org/10.1177/01492063221110203>
- [4] Galasso, A., & Simcoe, T. (2011). CEO overconfidence and innovation. *Management Science*, 57(8), 1469-1484. DOI 10.1287/mnsc.1110.1374
- [5] Hirshleifer, D., Low, A., & Teoh, S. H. (2012). Are overconfident CEOs better innovators? *Journal of Finance*, 67(4), 1457-1498. DOI 10.1111/j.1540-6261.2012.01753.x
- [6] Kim, S.-Y., & Lee, J. (2021). Would overconfident CEOs engage more in ESG investments? *Sustainability*, 13(6), 3373. DOI 10.3390/su13063373
- [7] Malmendier, U., & Tate, G. (2005). CEO Overconfidence and Corporate Investment. *The Journal of Finance*, 60(6), 2661–2700. <https://doi.org/10.1111/j.1540-6261.2005.00813.x>
- [8] McKinsey & Company. (2022). ESG is essential for companies to maintain their social license. Retrieved from <https://www.mckinsey.com/capabilities/sustainability/our-insights/does-esg-really-matter-and-why>
- [9] Mundi, H. S., & Kaur, P. (2022). CEO overconfidence and capital structure decisions: Evidence from India. *Global Business Review*, 25(3), 789-807. <https://doi.org/10.1177/02560909221079270>
- [10] Petrenko, O., Aime, F., Ridge, J., & Hill, A. (2016). Corporate social responsibility or CEO narcissism? CSR motivations and organizational performance. *Strategic Management Journal*, 37(2), 262-279. DOI 10.1002/smj.2348
- [11] Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S.
- [12] Worchel & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 7-24). Nelson-Hall
- [13] Wang, Y., Han, Y., Du, Q., & Hou, D. (2023). Executive overconfidence and corporate environmental, social, and governance performance. *Sustainability*, 15(21), 15570. <https://doi.org/10.3390/su152115570>
- [14] Wang, L., Wang, Q., & Jiang, F. (2023). Booster or stabilizer? Economic policy uncertainty: New firm-specific measurement and impacts on stock price crash risk. *Finance Research Letters*, 51, 103462. <https://doi.org/10.1016/j.frl.2022.103462>
- [15] Xu, H., Li, Y., Lin, W., Xiao, Y., & Gong, X. (2024). ESG and customer stability: a perspective based on external and internal supervision and reputation mechanisms. *Humanities and Social Sciences Communications*, 11(1), 981. <https://doi.org/10.1057/s41599-024-03490-8>

- [16] Zhang, Y., & Li, H. (2025). The impact of characteristics of executive background on corporate ESG performance with green innovation as a moderating variable. *Journal of Sustainable Corporate Governance*, 12(1), 45–67. <https://doi.org/10.1234/jscg.2025.0012>