International Conference on Sustainable Economics, Management, and Accounting (ICSEMA 2026)
Proceedings
Vol. 02 Year 2026, 1447 – 1459
ISSN: 3109-3337

THE IMPACT OF ESG CAMPAIGNS AND SUSTAINABILITY COMMUNICATION ON STOCK PRICE CRASH RISK: A SYSTEMATIC LITERATURE REVIEW

Dwi Hertadi Labib Muttaqin[1*], Najmudin[2]

[12]Master of Management Study Program, Jenderal Soedirman University, Indonesia

[*]Email corresponding author: dwi.muttaqin@mhs.unsoed.ac.id

Abstract

This study aims to systematically review the literature on the relationship between environmental, social, and governance (ESG) campaigns, sustainability communication, and stock price crash risk. Although ESG disclosure is increasingly viewed as a mechanism for improving transparency and reducing information asymmetry, recent studies suggest that ESG-related information may also increase market risk when it is inconsistent, symbolic, or associated with greenwashing. Using the SPIDER framework, this systematic literature review examines empirical studies published in Scopus-indexed journals during 2019–2026. The initial search identified 107 documents after applying filters for English-language journal articles, final publication stage, and keywords related to stock price crash risk, ESG, and ESG performance. Following title and abstract screening, quality assessment, and relevance evaluation, nine articles were retained for data extraction and narrative synthesis. The findings indicate that credible ESG and CSR disclosure generally reduce stock price crash risk by improving information transparency, strengthening reputational capital, enhancing external monitoring, and improving firm performance. However, ESG rating divergence, ESG rating disagreement, excessive environmental disclosure, and greenwashing may increase crash risk by creating uncertainty, weakening investor trust, and amplifying information asymmetry. This review contributes to the literature by integrating ESG as both a risk-mitigation mechanism and a potential source of information risk, particularly in the context of energy firms and emerging capital markets.

Keywords: ESG disclosure; sustainability communication; stock price crash risk; greenwashing; systematic literature review

INTRODUCTION

Environmental, social, and governance (ESG) issues have become increasingly important in financial markets as investors, regulators, and firms pay greater attention to sustainability-related risks and opportunities. ESG information is no longer treated merely as a voluntary non-financial disclosure but has become part of market participants' assessment of firm value, risk management, reputation, and long-term sustainability. In capital markets, ESG disclosure and sustainability communication are expected to reduce information asymmetry between firms and investors by providing broader information on environmental responsibility, social engagement, governance quality, and long-term strategic orientation.

At the same time, the growing importance of ESG has generated a more complex debate. On one hand, credible ESG disclosure may improve corporate transparency, strengthen investor trust, and reduce the likelihood that managers conceal bad news. On the other hand, ESG communication may also become symbolic, inconsistent, or exaggerated. Firms may strategically use sustainability narratives to build a positive image while concealing unfavorable information. This condition creates the possibility that ESG communication does not always reduce market risk but may instead become a source of uncertainty, particularly when investors perceive a gap between sustainability claims and actual corporate behavior.

One important capital market risk related to corporate transparency is stock price crash risk. Stock price crash risk refers to the likelihood of an extreme negative movement in stock prices, commonly associated with the accumulation and sudden release of bad news. The theoretical logic behind stock price crash risk is rooted in information asymmetry and bad news hoarding. When managers withhold negative information for an extended period, bad news accumulates internally. Once the information can no longer be concealed, it is released to the market simultaneously, triggering a sharp decline in stock price. Therefore, mechanisms that improve transparency and external monitoring are expected to reduce crash risk, while mechanisms that obscure information may increase such risk.

The relationship between ESG and stock price crash risk is particularly relevant for the energy sector. Energy firms are highly exposed to environmental regulation, climate transition risk, carbon emission concerns, reputational pressure, and volatility in commodity markets. ESG campaigns and sustainability communication by energy firms may serve as important signals to investors regarding their commitment to environmental responsibility and long-term transition strategies. However, the same communication may also be questioned if it is perceived as symbolic or greenwashing. This dual possibility makes the ESG–stock price crash risk relationship an important area for systematic literature review.

Previous studies have examined ESG disclosure, ESG performance, ESG rating, CSR disclosure, ESG rating divergence, and environmental disclosure in relation to stock price crash risk. However, the literature remains fragmented in terms of geographical context, variable operationalization, methodological approach, and theoretical mechanisms. Many studies are concentrated in China, while evidence from other emerging markets, including Southeast Asia and Indonesia, remains limited. In addition, most studies use cross-sector samples, while sector-specific evidence for energy firms is still underdeveloped. These gaps create the need for a systematic review that integrates existing findings and identifies future research directions.

This study aims to synthesize the empirical literature on ESG campaigns, sustainability communication, and stock price crash risk. Specifically, this review addresses the following research question: How do ESG campaigning and sustainability communication affect stock price crash risk in publicly listed energy sector firms, and what are the underlying mechanisms and contextual factors that moderate or mediate this relationship? The review contributes to the literature by integrating evidence on ESG as both a mechanism for reducing crash risk and a potential source of information risk when sustainability communication lacks credibility.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Stock Price Crash Risk

Stock price crash risk is widely discussed in financial economics as a consequence of information opacity and managerial incentives to conceal bad news. The concept is generally associated with sudden, extreme negative stock returns that occur when accumulated negative information is released to the market. The bad news hoarding theory explains that managers may delay the disclosure of unfavorable information to protect their reputation, compensation, career prospects, or firm valuation. However, when the accumulated information reaches a threshold, the market reacts sharply, resulting in a stock price crash.

Empirical studies commonly measure stock price crash risk using indicators such as the negative coefficient of skewness (NCSKEW), down-to-up volatility (DUVOL), or crash probability. NCSKEW captures the asymmetry of firm-specific returns, where more negative skewness indicates a higher probability of crash risk. DUVOL compares the volatility of negative return weeks to positive return weeks. These measures are frequently used because they capture downside risk beyond ordinary volatility.

ESG Disclosure and Sustainability Communication

ESG disclosure refers to the communication of environmental, social, and governance related information to external stakeholders. Environmental disclosure may include information on emissions, energy efficiency, pollution control, climate strategy, and environmental risk management. Social disclosure may include employee relations, community engagement, human rights, and customer responsibility. Governance disclosure may include board structure, ownership, audit quality, executive compensation, and shareholder rights.

Sustainability communication is broader than ESG disclosure because it includes not only formal reports but also campaigns, narratives, sustainability reports, integrated reports, public announcements, and symbolic communication strategies. In the context of financial markets, sustainability communication serves as a signal that may influence investor perception. When the communication is credible and supported by substantive practices, it can reduce information asymmetry and improve investor confidence. However, when the communication is excessive, inconsistent, or symbolic, it may increase uncertainty and generate skepticism.

ESG, Information Asymmetry, and Crash Risk

Theoretically, ESG disclosure can reduce stock price crash risk by lowering information asymmetry. Firms that disclose ESG information provide investors with broader insights into non financial risks, governance quality, stakeholder relationships, and long-term sustainability. This transparency reduces the opportunity for managers to hide negative information. In addition, ESG disclosure may attract external attention from investors, analysts, media, and regulators, thereby strengthening monitoring and reducing managerial opportunism.

However, the relationship between ESG and crash risk is not necessarily straightforward. ESG information may differ across rating providers, and firms may disclose sustainability information strategically. ESG rating divergence can confuse investors because different rating agencies may provide conflicting assessments of the same firm. Excessive environmental disclosure may also indicate greenwashing when the firm uses positive sustainability language without substantive environmental performance. In such situations, ESG communication may increase information risk and stock price crash risk.

Review Framework

This systematic literature review uses the SPIDER framework because it is more suitable than PICO for management, finance, and social science reviews involving observational, quantitative, qualitative, and mixed-method studies. The SPIDER elements in this study are defined as follows: Sample refers to publicly listed firms, particularly energy sector firms or firms in environmentally sensitive industries; Phenomenon of Interest refers to ESG campaigns, ESG disclosure, CSR disclosure, sustainability communication, ESG rating, and greenwashing; Design refers to empirical quantitative, qualitative, and mixed-method research designs; Evaluation refers to stock price crash risk; and Research Type refers to peer-reviewed journal articles indexed in Scopus or Web of Science.

Because this study is a systematic literature review, formal hypothesis testing is not conducted. Instead, the review develops a conceptual synthesis of prior empirical findings and identifies research gaps for future studies.

RESEARCH METHODS

This study adopts a systematic literature review approach to synthesize existing empirical evidence on ESG campaigns, sustainability communication, and stock price crash risk. A systematic literature review was selected because it allows the researcher to identify, evaluate, and synthesize relevant studies in a transparent and replicable manner. The review process consisted of four main stages: formulation of the research question, literature search, study selection, quality evaluation, data extraction, and narrative synthesis.

The research question was developed using the SPIDER framework. The main research question was: How do ESG campaigning and sustainability communication affect stock price crash risk in publicly listed energy sector firms, and what are the underlying mechanisms and contextual factors that moderate or mediate this relationship? This framework guided the search strategy, inclusion and exclusion criteria, data extraction, and synthesis of findings.

The literature search was conducted using the Scopus database. Several filters were applied to ensure the relevance and quality of the retrieved studies. The publication year was limited to the period 2019–2026 to capture recent developments in ESG, sustainability communication, and stock price crash risk research. Only English-language publications were included, and the source type was restricted to journals. In terms of document type, the search was limited to articles, while the publication stage was restricted to final publications. The keyword filters applied in Scopus included "Stock Price Crash Risk," "ESG," and "ESG Performance." After applying these filters, 107 documents were identified as the initial search results for further screening.

The search strategy was designed by combining three main keyword blocks: stock price crash risk, ESG or sustainability communication, and publicly listed firms or energy-related contexts. The first keyword block included terms such as "stock price crash risk," "crash risk," "stock crash risk," "negative skewness," "NCSKEW," and "DUVOL." The second keyword block included "ESG," "ESG disclosure," "ESG performance," "ESG rating," "sustainability disclosure," "sustainability reporting," "CSR disclosure," "environmental disclosure," "carbon disclosure," and "greenwashing." The third block included terms related to listed firms, stock markets, capital markets, and energy or high polluting industries.

The screening process was conducted in several stages and was documented using a PRISMA style flow. The database search initially identified 107 records from Scopus. Before title and abstract screening, 82 records were removed because they were marked as ineligible by automation tools based on the applied database filters and relevance criteria. No duplicate records were removed, and no records were removed for other reasons. As a result, 25 records proceeded to the screening stage. These 25 records were screened based on title and abstract to assess their relevance to the relationship between ESG, sustainability disclosure, sustainability communication, and stock price crash risk. After screening, 25 reports were sought for retrieval. However, 16 reports could not be retrieved or were not available in full text. Consequently, nine reports were assessed for eligibility, and all nine were retained as the final sample for data extraction and narrative synthesis.

The inclusion criteria were as follows. First, the study had to examine publicly listed firms or capital market-related samples. Second, the study had to include ESG, CSR, sustainability disclosure, ESG rating, ESG performance, environmental disclosure, greenwashing, or related sustainability communication as a key variable. Third, the study had to examine stock price crash risk or a closely related crash risk proxy such as NCSKEW, DUVOL, or crash probability. Fourth, the study had to be published as a peer-reviewed journal article in English. Fifth, the article had to provide sufficient methodological and empirical information for extraction.

The exclusion criteria were as follows. Studies were excluded if they did not examine stock price crash risk, if ESG or sustainability was only mentioned as background information, if the research object was not related to publicly listed firms or capital markets, if the document type was not a journal article, or if the full text was not available. Articles that focused only on general stock returns, firm value, Tobin's Q, or ordinary volatility without addressing crash risk were also excluded.

Data extraction was conducted using a structured extraction table. The extracted components included the last name of the first author and publication year, research objective, research design, research location, population or research subject, treatment or independent variable, outcome or dependent variable, main findings, and research limitations. The extracted information was then synthesized using narrative synthesis and thematic analysis. Narrative synthesis was selected because the reviewed studies varied in terms of context, sample, ESG measurement, and empirical models.

RESULTS AND DISCUSSION

1. Overview of Reviewed Studies

The reviewed literature shows that the relationship between ESG, sustainability communication, and stock price crash risk is a relatively recent but rapidly developing research area. The studies included in this review were published between 2021 and 2025, indicating that this topic has gained momentum in recent years. Early studies mainly focused on testing the direct relationship between ESG or CSR disclosure and stock price crash risk. For example, Murata and Hamori (2021) examined ESG disclosure and crash risk in Europe, the United States, and Japan, while Thuy et al. (2021) investigated CSR disclosure and crash risk in Vietnam.

Subsequent studies expanded the discussion by examining ESG rating, ESG information disclosure, ESG performance, ESG rating disagreement, ESG rating divergence, and excessive environmental disclosure. This development indicates a shift in the literature from a simple question of whether ESG reduces crash risk to a more complex question of when and how ESG reduces or increases crash risk. Recent studies also show growing attention to the quality and credibility of ESG information, rather than merely the presence or volume of disclosure.

Geographically, the literature is dominated by studies from Asia, particularly China. Several studies use samples of A-share listed companies from the Shanghai and Shenzhen stock exchanges. Other studies focus on Vietnam, South Korea, Europe, the United States, and Japan. The dominance of China indicates strong academic interest in ESG and crash risk in a market characterized by rapid ESG development, multiple rating providers, and significant information asymmetry. However, the limited evidence from Southeast Asia and Indonesia indicates a geographical research gap.

Methodologically, all reviewed studies use quantitative empirical approaches based on secondary data. The dominant methods include panel regression, fixed effects, ordinary least squares, generalized method of moments, difference-in-differences, propensity score matching, mediation analysis, threshold effect models, and quantile regression. The dominance of quantitative approaches is understandable because stock price crash risk is generally measured using market-based indicators such as NCSKEW and DUVOL. However, the lack of event study, qualitative, and mixed-method approaches suggests an opportunity for future research.

2. Characteristics of Population and Research Subjects

The reviewed studies mainly examine publicly listed firms because stock price crash risk can only be observed through stock price and market return data. The samples include A-share listed firms in China, listed firms in Vietnam, Korean multinational firms, and major index constituents in Europe, the United States, and Japan. Most studies use firm-year observations and exclude financial firms due to their different regulatory and reporting characteristics.

Although this review is concerned with ESG campaigns and sustainability communication in the energy sector, most reviewed studies use cross-sector samples rather than energy-specific samples. Some studies conduct heterogeneity analyses on high-pollution industries, which are conceptually close to energy firms due to their environmental exposure. However, high-pollution industry analysis does not fully substitute for sector-specific research on energy firms. Energy firms face unique risks related to carbon emissions, climate transition, commodity price volatility, environmental regulation, and reputational pressure. Therefore, the limited sector-specific evidence represents an important research gap.

3. Operationalization of ESG and Sustainability Communication

The reviewed literature operationalizes ESG and sustainability communication in diverse ways. Some studies use ESG disclosure scores, while others use ESG performance, ESG ratings, ESG rating divergence, ESG rating disagreement, CSR disclosure indices, environmental disclosure, or excessive environmental information disclosure. This diversity reflects the complexity of ESG as a research construct.

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ESG disclosure generally captures the extent to which firms communicate sustainability related information to the market. ESG performance and ESG ratings reflect external assessments of firm sustainability quality. CSR disclosure indices often rely on content analysis and standards such as the Global Reporting Initiative. ESG rating divergence captures inconsistency across rating agencies, while excessive environmental disclosure captures the possibility of over-disclosure or greenwashing.

This variation implies that ESG cannot be treated as a homogeneous construct. ESG may function as a transparency mechanism when it is credible, consistent, and supported by substantive practices. However, ESG may also become a source of information risk when it is symbolic, inconsistent, excessive, or associated with greenwashing. Therefore, future research should distinguish between substantive ESG communication and symbolic ESG communication.

4. Main Findings on ESG and Stock Price Crash Risk

The overall pattern of findings indicates that credible ESG or CSR disclosure tends to reduce stock price crash risk. This finding is consistent with the argument that transparent firms are less likely to conceal bad news. ESG disclosure provides non-financial information that can reduce information asymmetry, improve investor confidence, and strengthen market monitoring. Studies such as Murata and Hamori (2021), Thuy et al. (2021), Xu et al. (2022), and Lee et al. (2022) generally support the view that ESG, CSR disclosure, or ESG performance can reduce future stock price crash risk.

However, the literature also shows that ESG does not always reduce crash risk. ESG rating divergence, ESG rating disagreement, and excessive environmental information disclosure may increase stock price crash risk. Zhang and Hsu (2025) show that divergence in ESG ratings can increase crash risk because conflicting ESG signals intensify information uncertainty and weaken external monitoring. Dong and Ma (2025) show that excessive environmental information disclosure may contain greenwashing elements and can increase crash risk by reducing information quality and transparency.

Thus, the most appropriate synthesis is not that ESG always reduces stock price crash risk, but that the effect of ESG depends on the credibility and quality of the information. Credible and substantive ESG communication tends to mitigate crash risk, while inconsistent, symbolic, or misleading ESG communication may increase crash risk.

5. Mechanisms Linking ESG to Stock Price Crash Risk

The reviewed studies identify several mechanisms that explain how ESG affects stock price crash risk. The first mechanism is information transparency. ESG disclosure can reduce information asymmetry between managers and investors by providing additional information about non financial risks and sustainability practices. Lower information asymmetry reduces the likelihood of bad news hoarding and therefore lowers crash risk.

The second mechanism is reputational capital. Firms that engage in credible ESG practices may develop stronger reputations among investors and stakeholders. A strong reputation can increase investor trust and reduce uncertainty about the firm's long-term prospects. However, when ESG information is inconsistent or perceived as greenwashing, reputational benefits may turn into reputational damage risk.

The third mechanism is external monitoring. ESG disclosure can attract greater attention from investors, analysts, regulators, and the media. This attention strengthens external monitoring and limits managerial opportunism. Conversely, ESG rating divergence may weaken monitoring because investors face difficulty interpreting conflicting ESG signals.

The fourth mechanism is firm performance. CSR disclosure may improve firm performance by strengthening stakeholder relationships and operational legitimacy. Better firm performance reduces managerial incentives to conceal negative information, thereby lowering crash risk. This mechanism is evident in Thuy et al. (2021), who show that firm performance mediates the relationship between CSR disclosure and crash risk.

6. Contextual and Moderating Factors

The impact of ESG on stock price crash risk varies across contexts. First, geographical and institutional contexts matter. The effect of ESG disclosure differs across Europe, Japan, and the United States, suggesting that investor behavior, regulation, market maturity, and institutional frameworks influence the ESG–crash risk relationship. Emerging markets may exhibit stronger effects because information asymmetry is generally higher and sustainability disclosure frameworks are still developing.

Second, ownership structure matters. Studies from China show that the relationship between ESG and crash risk differs between state-owned and non-state-owned enterprises. Non state-owned firms may be more vulnerable to the negative impact of ESG rating divergence due to weaker institutional backing and external monitoring.

Third, industry characteristics matter. ESG-related information is particularly important for high-polluting industries because these industries are more exposed to environmental regulation and reputational risk. This finding is relevant to the energy sector because energy firms face high environmental scrutiny and transition risk.

Fourth, governance quality matters. Independent directors, ownership concentration, managerial shareholding, audit quality, analyst coverage, and digitalization may influence whether ESG communication reduces or increases crash risk. Strong governance can improve the credibility of sustainability disclosure, while weak governance can allow ESG communication to become symbolic or opportunistic.

7. Limitations of Existing Literature

The reviewed literature has several limitations. First, the evidence is geographically concentrated in China, while studies from Southeast Asia, particularly Indonesia, remain limited. This restricts the generalizability of existing findings to other emerging markets with different institutional and regulatory environments.

Second, most studies use cross-sector samples. Although some studies examine high pollution industries, few studies specifically focus on energy sector firms. This is a significant limitation because the energy sector has distinctive ESG risks related to emissions, climate policy, and transition pressure.

Third, ESG measurement remains inconsistent. Some studies use ESG disclosure, others use ESG performance, rating, CSR disclosure, rating divergence, or greenwashing. These differences may produce inconsistent findings and make cross-study comparison difficult.

Fourth, the literature is dominated by quantitative panel data approaches. Although these methods provide robust statistical evidence, they do not fully capture how investors interpret ESG campaigns or sustainability communication in real time. Event study, qualitative research, and mixed-method approaches remain underused.

Fifth, the distinction between substantive and symbolic ESG communication is still underdeveloped. Many studies measure ESG disclosure quantitatively but do not fully assess whether disclosure reflects actual sustainability performance or merely impression management.

Research Gaps and Future Research Agenda

Based on the synthesis, several research gaps can be identified. First, there is a geographical gap. Future studies should examine ESG communication and stock price crash risk in Southeast Asian markets, especially Indonesia, where ESG regulation and investor awareness are still developing.

Second, there is a sectoral gap. Future research should focus on energy firms because they face unique sustainability risks, including carbon emissions, climate regulation, transition risk, and reputational pressure. Studying energy firms can provide more specific insights than cross-sector samples.

Third, there is a conceptual gap. Future research should distinguish between ESG performance, ESG disclosure, ESG rating, ESG campaign, sustainability communication, and greenwashing. These constructs are related but not identical, and each may have different implications for crash risk.

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ISSN: 3109-3337

Fourth, there is a methodological gap. Future research can use event study methods to examine market reactions to ESG-related events such as sustainability report publication, ESG rating changes, environmental controversies, and net-zero announcements. Textual analysis and natural language processing can also be used to assess the tone, readability, specificity, and credibility of sustainability communication.

Fifth, there is a mechanism gap. Future research should integrate information asymmetry, reputational capital, external monitoring, firm performance, investor attention, and greenwashing into a more comprehensive conceptual model. This integrated framework would help explain why ESG reduces crash risk in some contexts but increases it in others.

Summary of Extracted Studies

After completing the study identification, screening, retrieval, and eligibility assessment processes, the final body of literature consisted of nine articles that were considered relevant to the research question. These studies provide the empirical basisfor understanding how ESG-related information, CSR disclosure, sustainability communication, ESG rating differences, and environmental disclosure practices are associated with stock price crash risk. Although the final number of reviewed studies is relatively limited, the selected articles are conceptually relevant because they directly address the relationship between sustainability-related constructs and capital market downside risk. They also provide diverse perspectives across different market contexts, including China, Vietnam, South Korea, Europe, the United States, and Japan. This diversity allows the review to capture not only the dominant empirical pattern but also contextual differences in how ESG-related information is interpreted by investors and reflected in crash risk.

The extracted studies also vary in terms of ESG operationalization and methodological approach. Some studies examine ESG disclosure and CSR disclosure as transparency mechanisms, while others focus on ESG performance, ESG ratings, ESG rating disagreement, ESG rating divergence, or excessive environmental disclosure. This variation is important because it shows that ESG is not a single-dimensional construct. In some studies, ESG functions as a signal of transparency and long-term sustainability. In other studies, ESG-related information becomes a source of uncertainty when rating providers disagree or when firms disclose excessive environmental narratives that may indicate greenwashing. Therefore, the summary table is designed to provide a concise but analytically meaningful overview of the reviewed literature by highlighting the research context, ESG-related construct, stock price crash risk proxy, and main empirical finding of each article.

Table 1 presents a condensed summary of the nine studies included in this systematic literature review. The table is simplified to highlight the most important extraction components: author, research context, ESG-related construct, stock price crash risk proxy, and main finding. This format is intended to make the comparison across studies clearer and to support the subsequent narrative synthesis regarding the direction, mechanism, and contextual conditions of the ESG–stock price crash risk relationship.

Table 1. Summary of Extracted Studies

No.	Author (Year)	Research Objective	Design	Location	Population/Subject	Treatment	Outcome	Main Finding	Limitation
1	Chen (2024)	To examine managerial ownership and	Panel data; fixed effects;	China	Listed firms in Shanghai and Shenzhen, 2010–2021	Managerial ownership; ESG rating	NCSKEW, DUVOL	Managerial ownership increases crash	ESG is not the main independent variable

International Conference on Sustainable Economics, Management, and Accounting (ICSEMA 2026)
Proceedings
Vol. 02 Year 2026, 1447 – 1459
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		crash risk with ESG rating disagreement as mediator	mediation			disagreement		risk; ESG rating disagreement mediates the relationship	; China context
2	Li (2022)	To evaluate ESG ratings from different agencies using crash risk perspective	DID and OLS	China	A-share listed firms, 2016–2020	ESG ratings from six agencies	NCSKEW	Some ESG ratings reduce crash risk; environmental score is most relevant	Short period; only NCSKEW
3	Xu (2022)	To examine ESG disclosure and future crash risk	OLS; PSM-DID; IV; mediation	China	A-share listed firms, 2010–2019	ESG information disclosure	NCSKEW, DUVOL, CRASH	ESG disclosure reduces crash risk through information asymmetry and reputational capital	China context; ESG data provider limitation
4	Murata (2021)	To examine ESG disclosure and crash risk across regions	Fixed effects and dynamic GMM	Europe, US, Japan	Major market index constituents	ESG disclosure score	NCSKEW, DUVOL	ESG disclosure reduces crash	Large index firms;
5	Lee (2022)	To examine ESG perform	Panel regression	South Korea	Korean MNCs and non-MNCs	ESG, E, S, G scores	NCSKEW	Environmental and social	Korea-specific; MNC focus

		ance of Korean MNCs and crash risk						scores reduce crash risk for MNCs	
6	Thuy (2021)	To examine CSR disclosure, firm performance, and crash risk	OLS, LOGIT, GMM, Sobel test	Vietnam	225 listed firms, 2014–2019	CSR disclosure index	NCSKEW, DUVOL, CRASH	CSR disclosure reduces crash risk; firm performance mediates	Limited to larger listed firms; emerging market data constraints
7	Zhang (2025)	To examine ESG rating divergence and crash risk	Panel regression; mechanism analysis	China	A-share listed firms, 2015–2022	ESG rating divergence	NCSKEW, DUVOL	ESG rating divergence increases crash risk through reputation damage and reduced monitoring	Rating methodology differences; China context
8	Dang (2025)	To examine ESG practices and related party M&A asset valuation	Empirical regression; moderation and mechanism analysis	China	Listed firms with related party M&A	ESG practices	Asset overvaluation; crash risk	ESG reduces asset overvaluation and indirectly alleviates crash risk	Crash risk is not the main outcome

9	Dong (2025)	To examine excessive environmental disclosure and crash risk	Threshold, quantile, fixed effects	China	A-share firms issuing CSR reports, 2015–2023	Excessive environmental disclosure	NCSKEW, DUVOL	Excessive environmental disclosure increases crash risk; effective disclosure reduces crash risk	Textual greenwashing measurement; China context

Source: Author's synthesis based on reviewed articles

The summary of extracted studies indicates several important patterns. First, most studies provide evidence that ESG disclosure, CSR disclosure, or ESG performance tends to reduce stock price crash risk when the disclosed information is credible, consistent, and capable of improving market transparency. This pattern is consistent with information asymmetry theory and bad news hoarding theory, which suggest that broader and more reliable disclosure can reduce the opportunity for managers to conceal unfavorable information. Second, the studies also show that the risk-reducing role of ESG is not unconditional. When ESG-related information becomes inconsistent across rating agencies, excessive in narrative form, or potentially symbolic, it may increase uncertainty and weaken investor confidence. This is particularly evident in studies on ESG rating divergence and excessive environmental information disclosure, which show that poor-quality ESG communication can increase crash risk rather than reduce it.

Third, the extracted studies demonstrate that the ESG–stock price crash risk relationship is shaped by several mechanisms and contextual factors. The main mechanisms identified in the reviewed literature include information asymmetry, reputational capital, reputational damage risk, external monitoring, analyst coverage, undervaluation, firm performance, and greenwashing. Meanwhile, contextual factors such as country setting, ownership structure, market development, high-pollution industry classification, multinational status, and governance quality influence the strength and direction of the relationship. These patterns suggest that ESG communication should not be interpreted merely as a volume of disclosure, but rather as a quality-sensitive signal whose effect depends on credibility, institutional environment, and investor interpretation.

Overall, the extracted studies show that credible ESG, CSR, and sustainability disclosure generally reduce stock price crash risk through transparency, reputation, monitoring, and firm performance channels. However, ESG-related information may increase crash risk when it is inconsistent, divergent across rating agencies, excessive, or associated with greenwashing. This pattern supports the central argument of this review that ESG communication operates as a double-edged mechanism: it can mitigate crash risk when credible and substantive, but it can intensify information risk when symbolic or misleading. Accordingly, the table serves not only as a descriptive summary of the reviewed articles but also as the foundation for the thematic synthesis developed in the following discussion.

CONCLUSION

This systematic literature review synthesizes empirical studies on ESG campaigns, sustainability communication, and stock price crash risk. The findings indicate that ESG and CSRdisclosure can reduce crash risk when the information is credible, transparent, and supported by substantive sustainability practices. The main mechanisms include reduced information asymmetry, improved reputational capital, stronger external monitoring, and better firm performance.

However, ESG is not always a risk-reducing mechanism. ESG rating divergence, ESG rating disagreement, excessive environmental disclosure, and greenwashing may increase crash risk by creating uncertainty, weakening investor trust, reducing information quality, and obscuring the true condition of the firm. Therefore, ESG should be understood as a double-edged mechanism: it can reduce stock price crash risk when credible but may increase crash risk when symbolic or misleading.

Theoretically, this review contributes by integrating agency theory, information asymmetry theory, signaling theory, and stakeholder theory into a more nuanced understanding of ESG and crash risk. Practically, the findings suggest that firms should improve not only the quantity but also the quality and credibility of sustainability communication. Regulators should strengthen ESG reporting standards, reduce rating inconsistency, and monitor greenwashing. Investors should carefully assess whether ESG communication reflects substantive performance or symbolic disclosure.

This review has limitations. The reviewed studies are dominated by China-based evidence and cross-sector samples. Research on Indonesia, Southeast Asia, and energy sector firms remains limited. In addition, most studies use quantitative panel data, while event study and qualitative approaches remain underdeveloped. Future research should examine ESG communication and crash risk in energy firms, especially in emerging markets, and should distinguish between substantive ESG communication and symbolic ESG communication. Future studies may also use event study, textual analysis, or mixed-method designs to capture how investors interpret ESG campaigns and sustainability narratives.

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