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How do ESG practices assist diamond companies in mitigating reputational damage during crises, such as those involving conflict over blood diamonds?

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Abstract:

In sensitive industries like diamond mining, crises over "blood diamonds" pose challenging reputational and financial risks. This study provides an empirical analysis of how environmental, social, and governance (ESG) practices help diamond companies minimize reputational damage in crisis situations.

Theoretically, it draws on resilience theory and signaling theory by conceptualizing a strong ESG commitment as a form of reputational insurance that both enhances firms' crisis resilience and serves as a protective signal of corporate responsibility.

Empirically, We analysed data from 2019 - 2023 of diamond companies' ESG scores and financial performance (i.e., ROA, ROE, and revenue) using panel data analysis and cross-industry comparisons. The results indicate that the diamond sector exhibits higher ESG performance in each sub-score compared with other industries.

In addition, organizations with strong ESG characteristics showed improvement in financial performance in the post-2020 period, particularly in terms profitability and revenue, although the relationship was weak between ESG and ROE. These findings imply that a solid commitment to ESG serves as reputational insurance in sectors with potentially greater ethical risk, which can increase companies' resilience to ethical controversies.

This study adds to the body of literature on reputational risk and signaling theory by demonstrating the value of ESG as a protective signal of corporate responsibility in crises. These findings suggest that in ethically sensitive sectors such as the diamond trade, proactive ESG strategies can serve as a form of reputational insurance, thereby strengthening an organisation's resilience and financial stability during turbulent periods. This is a message that is of particular relevance to investors when evaluating risk and to regulators when promoting corporate sustainability.

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Declaration on the Use of AI and Digital Tools

While writing this master's thesis, we made use of several digital tools to enhance the quality, accuracy, and clarity of our work in a responsible and transparent manner.

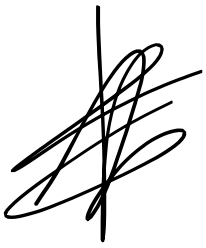
Specifically, ChatGPT was used to assist with the development and correction of R Studio code for statistical analyses, as well as with the generation of LaTeX code for table formatting. DeepL Translate and DeepL Write were instrumental in facilitating the translation and refinement of the thesis, with a particular focus on English editing. Finally, the Scribbr citation generator was used to format all references in accordance with APA 7th edition standards.

All content produced with the help of these tools was carefully reviewed, verified, and adjusted to meet academic standards. We take full responsibility for the final content, which reflects our independent reasoning, data analysis, and critical interpretation.

By signing this statement, we affirm that this thesis represents our original work, supplemented by the responsible use of artificial intelligence and digital assistance tools, in full respect of academic integrity.

24.05.2025

Bonouh Walid & Taybi Adil



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Adil

I would like to sincerely thank my parents for their constant support, encouragement, and love throughout my live and my studies. I am also very grateful to my brothers and sister for always being there for me and pushing me to do my best. Their presence gave me strength and motivation during every stage of this journey.

I would like to conclude with a short quote.

As Nelson Mandela once said, "It always seems impossible until it's done"

Walid

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1. Introduction

Diamond industry has faced increased scrutiny due to growing ethical concerns, particularly regarding the sourcing of conflict diamonds. These gemstones are extracted from regions where their trade has been linked to the financing of armed conflict and contributed to widespread human rights abuses (Bieri, 2016). These issues have intensified pressure from civil society, international organizations, and increasingly aware consumers, particularly following revelations that rebel groups in countries such as Sierra Leone, Angola, and the Democratic Republic of Congo have relied on illicit diamond revenues to fund violent campaigns (Global Witness, 2007). In response to this reputational vulnerability, many companies in the industry have had to re-evaluate their supply chains and adopt more transparent, socially responsible practices.

Furthermore, over the past decade, Environmental, Social, and Governance (ESG) issues have become a top priority for businesses, regulators, and academics. Increasing attention to climate change, inequality, and governance failures has highlighted the significant impact these factors have on firm performance and economic resilience. In addition, the global pandemic has served to emphasise the strategic importance of ESG standards in helping to navigate uncertainty and respond to systemic shocks (Thewissen & al., 2024).

As a result, ESG frameworks have been identified as instruments for addressing stakeholder concerns and rebuilding trust. While the Environmental pillar has historically dominated ESG discourse, the social dimension particularly in relation to labour rights, ethical sourcing, and community engagement has become central in sectors like diamond mining, where public awareness of human rights violations is acute. In this context, it is important to note that corporate reputation is not just about communication. It is also a strategic asset which is crucial for long-term viability (Jo & Na, 2012; Bieri, 2016).

However, an important question remains: to what extent are ESG practices effective in protecting companies' reputations, especially during an ethical crisis? Furthermore, how do these practices generate quantifiable economic benefits following an ethical crisis? Although ESG initiatives are generally presented as a form of reputation insurance, there have been few studies

on their effectiveness in high-risk, high-profile sectors such as diamond mining. The symbolism and compliance of ESG initiatives are more relevant in sectors that have already experienced ethical scandals.

Existing research suggests that ESG engagement may enhance long-term firm performance, reduce stakeholder criticism, and lower the cost of capital (Eccles, Ioannou, & Serafeim, 2014). Some scholars propose that ESG acts as a reputational buffer. Through its discretionary and ethically motivated actions, a company can build what Godfrey (2005) calls moral capital which represents a reservoir of goodwill accumulated when stakeholders perceive a company's initiatives as sincere expressions of its core values and character. Unlike mere compliance with legal or ethical standards, philanthropic acts that exceed expectations contribute highly to this reservoir. It works a bit like an insurance: it mitigates the impact of crises by protecting intangible assets based on relationships. When stakeholders perceive a company positively, they are more likely to continue supporting it, even in difficult times.

Conversely, if philanthropic initiative is perceived as opportunistic or manipulative, this goodwill erodes, and the company may face greater scrutiny or sanctions. Thus, the authenticity of corporate philanthropy is critical in determining whether it strengthens or weakens moral capital. Yet, ESG practices may serve as a strategic façade rather than a reflection of genuine ethical commitment. This gap between declared intentions and actual corporate behaviour fuels concerns about greenwashing and contributes to growing stakeholder disillusionment (Godrey, 2005; Seitz, 2016).

This thesis therefore addresses the following research question: ***How do ESG practices assist diamond companies in mitigating reputational damage during crises, such as those involving conflict over blood diamonds?***

This thesis aims to address these gaps by investigating whether ESG performance can mitigate reputational damage during sensitive crises, and whether this reputational resilience leads to improved financial performance in such a period. Using a panel dataset of diamond companies, the study investigates the moderating role of ESG as reputational score on financial indicators across

the crisis periods. Particular attention is given to identifying which of the three components (E-S-G) is most influential in shaping stakeholder reactions during these critical junctures.

The research is guided by the central hypothesis that firms with stronger ESG Score experience less reputational decline during crises, and that this reputational resilience supports stronger financial recovery afterwards. This dual impact on intangible and tangible outcomes is important to understanding the strategic value of ESG investment, particularly in sectors where public perception is closely linked to ethical accountability.

The study therefore seeks to identify which ESG components most effectively strengthen reputational resilience, with a view to offering relevant insights for corporate decision-makers, investors, and regulators. More generally, it contributes to ongoing debates on the authenticity and effectiveness of ESG-related practices and their role in shaping organisational responses during periods of reputational stress. As a result, ESG frameworks have gained attention as instruments for addressing stakeholder concerns and rebuilding trust.

The remainder of the thesis is structured as follows. Section 2 contextualizes the diamond industry and its specificities. Section 3 reviews the key literature on ESG, corporate reputation, and risk management. Section 5 outlines the data and methodology. Section 6 presents the main empirical results. Finally, Section 8 discusses the study's limitations and proposes avenues for future research.

2. The Diamond Industry and Its Specificities

2.1 Diamond market

The diamond market is a highly strategic sector of the global economy, incorporating a complex value chain that includes extraction, processing, distribution, and commercialization. Major corporations such as De Beers, Alrosa and Rio Tinto have long dominated the diamond industry, providing valuable economic support to many producing countries. However, significant changes in technology, interest in ethical and environmental considerations, and geopolitics are transforming the market (Lynde & al., 2022).

The global diamond market is characterized by concentrated production in specific regions. Global production fluctuates between 120 and 130 million carats annually, influenced by economic conditions, mining policies, and new discoveries (Lynde & al., 2022). Russia remains the leading producer, accounting for approximately 37.32 million carats of global rough diamond output in 2023, followed by Botswana, which produced 25.1 million carats. Then, Canada extracted 16 million carats, primarily from Arctic deposits. Moreover, the Democratic Republic of Congo, despite its largely informal mining sector, produced 14.1 million carats, while South Africa, historically a pioneer in modern diamond mining, saw its output decrease to 9.7 million carats (Statista, 2024).

The industry is divided into two primary segments: large-scale industrial mining and artisanal and alluvial mining. Industrial mining, a sector dominated by major corporations, extracts diamonds from primary deposits found in kimberlite formations. Artisanal and alluvial mining, primarily concentrated in Africa, relies on manual extraction techniques, making traceability and regulation more challenging (Weber, 2024).

In 2024, the global diamond market was valued at USD 101.03 billion and is expected to grow from USD 103.86 billion in 2025 to USD 129.53 billion in 2033 (Straits Research, 2024). This growth is largely driven by increasing consumer demand for diamond jewellery and the rise of lab-grown diamonds[1], which now account for approximately 20% of the total diamond market (Markets Insider, 2024). After extraction, rough diamonds are transported to major cutting and polishing centres, with Surat in India, processing 90% of the world's diamonds. Antwerp, Dubai, and New York also remain strategic hubs for diamond trading (Statista, 2024), these hubs serve not only as key sites for the industry but also as vital nodes in the global valuation and distribution network for diamonds (Valuae, 2023).

Diamonds are sold through various channels, including diamond exchanges, where traders set prices and finalise transactions, sales to larger jewellery brands to ensure ethical sourcing, and e-

[1] « A laboratory-grown diamond is a man-made diamond that is chemically, physically, and optically identical to a natural diamond. These diamonds are produced using advanced technological processes that simulate the high-pressure, high-temperature conditions of the Earth's mantle where natural diamonds form » (Gemological Institute of America, n.d.).

commerce, which is growing rapidly as consumers seek greater transparency in their purchases. The price of diamonds is impacted by the four Cs: carat, cut, clarity and colour as well as other ethical and environmental factors (De Beers, 2022). Demand for transparency and sustainability is growing among consumers and directly impacting the value of certified natural diamonds (McKinsey, 2023).

In addition, the emergence of lab-grown diamonds has had a substantial impact on the market, resulting in a significant decrease in wholesale prices due to technological advancements and an increase in supply. In 2023, the market value of lab-grown diamonds was estimated at $22.79 billion and is projected to grow to $74.45 billion by 2032 (Fortune Business Insights, 2024).

The diamond market is currently facing several significant challenges. Firstly, price volatility remains a persistent issue, influenced by supply and demand fluctuations, as well as macroeconomic and geopolitical trends. Secondly, the growing competition from lab-grown diamonds forces natural diamond producers to justify their value proposition through enhanced branding and ethical sourcing. Thirdly, regulatory changes are increasing pressure on supply chain transparency, requiring stricter adherence to traceability and ethical mining practices. Finally, evolving consumer preferences also play a role, with digital sales and direct to consumer channels gaining traction as buyers seek greater authenticity and convenience (De Beers, 2022).

To navigate these transformations, industry players are adopting technological innovation, with a particular focus on blockchain, for the purpose of certifying diamond provenance. Optimising distribution strategies through expanded online sales and greater market transparency will also be critical. Moreover, it is imperative to emphasise the significance of fortifying environmental and social commitments to ensure the preservation of consumer trust and the enhancement of the industry's reputation (Lynde & al., 2022).

2.2 Key Industry Players

The contemporary diamond industry is characterized by the dominance of a small number of major multinational corporations, which collectively control global extraction, processing, and distribution.

De Beers, which was established in the late 19th century by Cecil Rhodes, is a prime example of this. Rhodes consolidated multiple mining concessions in South Africa to form De Beers Consolidated Mines Limited. Through its subsidiary, the Diamond Trading Company, De Beers maintained a near-total monopoly over global diamond distribution throughout much of the 20th century, primarily by adjusting the supply of diamonds to stabilize prices. From the 1950s onwards, the discovery of new diamond deposits in Russia, Australia, and Canada gradually eroded this dominance. Nevertheless, De Beers continues to be a major player in the diamond industry, with gross sales estimated at $6.6 billion in 2022 and active operations in over 35 countries, including Botswana, South Africa, Namibia, Canada and Australia (Gemma, 2024; Diamond Portfolio, n.d).

Another key player is Alrosa, a Russian state-owned enterprise that has historically accounted for almost 30% of global rough diamond production. With its core operations based in Russia and expanding interests in Angola and Zimbabwe, where 22 new diamond deposits have recently been identified, Alrosa was poised for further growth. Nevertheless, the imposition of international sanctions in 2022 led to a substantial diminution of the company's global market presence, resulting in a reduction of revenues by approximately $4.5 billion (Gemma, 2024).

Finally, we should also mention Rio Tinto, which was founded in 1873. The company has also played a critical role in shaping the diamond industry. Following the 1979 discovery of the Argyle mine in Western Australia, the company gained prominence due to its reputation for producing diamonds of a rare pink and red hue. The Argyle mine operated for 37 years and yielded approximately 865 million carats prior to its closure in 2020. Concurrently, Rio Tinto operates the Diavik mine in Canada's Northwest Territories, which commenced production in 2003 and is scheduled to remain operational until 2026. Collectively, these operations have firmly established Rio Tinto's standing as a major global supplier, making substantial contributions to both the coloured and white diamond markets. The company reported annual revenues of $55.6 billion and maintains operations in Canada, Australia and Zimbabwe. These countries account for approximately 20% of global diamond output (Gemma, 2024; Rio Tinto, n.d).

2.3 Price Setting Dynamics

The price settings of the diamond industry are quite specific. De Beers exercised control over the supply of diamonds to maintain high prices. This was notably achieved by storing diamonds during periods of low demand and releasing them when the market was too dynamic (Diamond Portfolio, n.d). Today, the company no longer controls the global market, and diamond prices are more determined by supply and demand dynamics.

Additionally, the industry is currently experiencing a monumental decrease in prices, reaching record lows. The primary factor causing this trend is consumer demand for laboratory-grown diamonds. Consequently, consumers are seeing lower and lower prices, which has impacted the asking price for natural diamonds (GJEPC, 2024).

Then, rising ESG concerns are prompting consumers to demand greater traceability of valuable stones, thereby influencing market dynamics. Sanctions imposed on Russian goods, a major source of raw diamonds, have caused supply chain disruptions and price volatility (Flesher & Reiter, 2024). With buyers prioritizing diamonds with verifiable origins, this presents a significant opportunity for companies to differentiate through ESG initiatives, enhancing brand loyalty and market positioning (GJEPC, 2024).

2.4 The Kimberley Process

In order to address the issue of the use of diamonds as a means of funding armed conflict, a tripartite mechanism has been established. This mechanism is known as the Kimberley Process (KP) and involves governments, the diamond industry, and civil society. The KP emerged from mounting international concern in the late 1990s, following mounting evidence that the proceeds from rough diamonds were undermining peace efforts and even fuelling violent conflict in several African states. This highlighted the significant contribution that diamond revenues were making to various countries' efforts to sustain armed conflict. It is well documented that armed violence in Angola, Sierra Leone, the Democratic Republic of Congo and Côte d'Ivoire was in part funded by a rebel movement that exploits the value of diamond resources (Rousseau, 2018).

Influential reports such as A Rough Trade (Global Witness, 1998) and The Heart of the Matter (Smilli & al, 2000) played a central role in drawing international attention to the link between the diamond trade and violent conflict in West Africa. The latter, published in January 2000, provided detailed evidence of how the international diamond industry was directly and indirectly fuelling the civil war in Sierra Leone through its connections with rebel forces. These investigations not only exposed the complicity of certain trading networks but also triggered widespread media coverage and intensified pressure on governments and international organizations to take regulatory action (Rousseau, 2018).

In this context, the Kimberley Process was formally initiated in May 2000 at a meeting in Kimberley, South Africa, which was convened by the South African government. The assembly convened a range of key stakeholders, encompassing diamond exporting and importing states, non-governmental organisations (NGOs), and industry actors such as De Beers. These negotiations ultimately resulted in the establishment of the Kimberley Process Certification Scheme (KPCS), which was formally adopted in November 2002 and came into effect in January 2003. The initiative was endorsed by the United Nations Security Council through Resolution 1459 (Rousseau, 2018).

At the core of the KPCS lies a certification system mandating that each participating country issues guarantees verifying the legal and conflict free origin of rough diamond shipments. Furthermore, it is important to note that trade with non-participating states is prohibited. The scheme pursues two primary objectives: first, to stem the financial flows that fuel armed conflicts, and second, to safeguard the integrity of the legitimate diamond trade, which remains a crucial economic pillar for many countries. The Kimberley Process (KP) has reduced the proportion of conflict diamonds on the global market from an estimated 15% in the late 1990s to less than 1% today. It currently has 60 participants representing 86 countries, including the European Union and its 27 Member States, which together account for approximately 99.8% of global rough diamond production (European Commission, 2023).

Despite its broad international reach, the KP has attracted significant criticism. While the initiative's tripartite structure is often praised for its collaborative ethos, the power to make effective decisions lies solely with member states. Consequently, civil society organisations and industry representatives are excluded from formal voting processes. Furthermore, the requirement for

consensus on all decisions significantly impedes the process's capacity to implement timely reforms and respond to emerging challenges (Beevor, 2024).

One of the most frequently cited critiques targets the KP's definition of "conflict diamonds," which has remained unchanged since the initiative's inception. According to the official definition, conflict diamonds are defined as "***Rough diamonds used by rebel movements or their allies to finance conflicts aimed at undermining legitimate governments***". This definition explicitly excludes abuses perpetrated by state or corporate actors, even when diamond revenues are implicated in serious human rights violations. This limitation has attracted considerable criticism, notably in the case of Zimbabwe in 2006 where grave human rights abuses were documented in the Marange diamond fields (***See Appendix 9.3***). Despite these reports, Zimbabwe retained its KP membership, in response to this perceived failure, Global Witness withdrew from the KP in 2011 (Beevor, 2024).

Such tensions persist as of 2023. Numerous NGOs have called for the definition to be revised to include abuses committed by state and corporate actors, especially those involving the violent suppression of civilian populations. For instance, there are allegations that Russia is using revenues from diamonds mined in the Central African Republic to finance its military activities in Ukraine. However, as these practices fall outside the current scope of the KP's definition, they remain unaddressed within the framework (Beevor, 2024).

The KP also suffers from a notable lack of enforcement and sanctioning mechanisms. It does not possess any formal instruments for swiftly suspending or penalizing non-compliant members. Investigative reports by Global Witness (2007) and Partnership Africa Canada (2009) have documented systemic issues such as fraud, smuggling, and the falsification of certificates. These concerns point to a structural weakness: in the absence of a robust, independent verification mechanism, the KP remains heavily reliant on the good faith of its member states (Wexler, 2009).

Under current regulations, a KP certificate is valid for a single transaction, covering the transfer of rough diamonds from their point of extraction to their first sale prior to cutting and polishing. This limitation introduces critical gaps in traceability. For instance, if a diamond is certified in the Central African Republic and subsequently sold to an intermediary in the United Arab Emirates,

the intermediary is under no obligation to forward the original certificate to the next buyer, such as a purchaser in Antwerp. While some companies voluntarily implement stricter traceability protocols, such practices remain optional and are not mandated within the KP framework (Beevor, 2024). To better understand the limitations of the Kimberley Process, a case study has been added ***(refer to appendix 9.4).***

3. LITTERATURE REVIEW

3.1 Reputation Risk Management Theory

Over the past decade, reputational risk management has become a critical concern, with reputation estimated to account for 70 to 80% of a company's market value (Jones, 2021). In today's media saturated and socially connected environment, reputational threats are amplified, pushing companies to adopt robust and forward-looking strategies. Jones (2021) highlights the difference between brand and reputation: the brand is internally constructed through marketing, while reputation is externally shaped by public perception. A misalignment between the two creates what Eccles & al. (2014) call the "***Reputation-reality gap***" which increases vulnerability to crises.

According to Elnaz & al. (2021), risks generally fall into three categories: operational risks, which are predictable; strategic risks, which are tied to business objectives; and global risks, which are unpredictable and include natural disasters. Reputational risk often overlaps with strategic risk, as events such as financial errors, customer dissatisfaction or brand failure can quickly reshape stakeholder perceptions. Effectively managing these risks demands both a swift crisis response and sustained efforts to rebuild and maintain trust over time. Vizcaíno González (2010), states that early warning signs, such as stakeholder feedback or media signals, are essential for managing this type of risk.

Furthermore, sources of reputational risk are varied and include product defects, logistical delays, corruption, environmental violations, and rising stakeholder demands on sustainability and justice. Should there be a discrepancy between stated commitments and actual practices, there is a risk that companies could be accused of greenwashing, which would erode stakeholder trust (Klewes & Wreschniok, 2009). For instance, in 2018, the Diamond Producers Association (which

includes De Beers and Rio Tinto) launched the Total Clarity initiative to transparently report on the social and environmental impact of its members, with the aim of regaining public trust (Diamond Producers Association, 2019).

Finally, Gaultier-Gaillard & al. (2009) argue that managing corporate reputation, a key intangible asset, is particularly important in sectors subject to intense ethical scrutiny. In this respect, ESG practices act as a buffer to counter reputational harm and help firms balance their market position during crises. This report shows that firms which embrace ESG practices tend to be better prepared to address stakeholder issues and limit negative outcomes.

3.2 Signaling Theory

The Signaling theory (Spence, 1973) provides a valuable framework for analysing how companies convey credible messages about their ethical commitment, particularly through ESG practices.

In contexts where stakeholders (i.e. investors, consumers, regulators) have limited access to internal information, ESG initiatives serve as visible, signals that allow firms to stand out. Third-party certifications and standardized frameworks, such as the Kimberley Process or the Global Reporting Initiative (GRI), reinforce the credibility of these commitments (Aronson & al., 2024), while companies heavily engaged in greenwashing face stakeholder scepticism and reputational harm (Taj, 2016).

The effectiveness of ESG signals depends on three key factors: cost, verifiability, and interpretability. Ambitious actions, such as achieving carbon neutrality or full supply chain transparency, provides tangible evidence of ethical commitment. In contrast, generic or unmeasurable CSR declarations often fail to build trust (Negash & Akhbar, 2024). In their 2018 publication, Steigenberger & Wilhelm, (2018) emphasised the importance of aligning communication with stakeholder expectations by combining meaningful actions with coherent statements.

Internal governance also plays a key role in strengthening these signals. The establishment of ESG committees, the alignment of executive compensation with ESG performance, and the

implementation of comprehensive internal reporting systems are all evidence of a long-term commitment to ethical conduct (Bird & Smith, 2005). Such mechanisms make companies better equipped to anticipate reputational and regulatory risks. During crises, firms with strong ESG histories often benefit from what Gosain & al. (2024) call "***Insurance signals***" reputation capital accumulated over time that cushions the impact of negative events. On the other hand, when there is a disparity between ESG commitments and actions, it can exacerbate crises, as recent corporate scandals have illustrated.

Nonetheless, ESG signaling comes with challenges. It is important to note that over-signalling, whereby companies excessively promote their sustainability image without sufficient action, has the potential to erode stakeholder trust (Kirmani, 1993), while the high cost of credible signalling tends to advantage large, well-resourced firms over smaller competitors. In the context of evolving regulatory frameworks and increasing transparency requirements, companies are compelled to strike a delicate balance between authenticity, feasibility, and compliance (Zhao & Li, 2008).

3.3 Importance of ESG practices in reputational management

ESG practices, which encompass environmental, social, and governance aspects, also play a key role in corporate reputation by building trust, ensuring transparency, and aligning companies with social responsibility expectations. From the perspective of stakeholder and institutional theories, strong ESG performance enhances legitimacy and resilience. Conversely, underperformance can result in financial and reputational losses. As regulatory frameworks evolve and transparency requirements increase, companies must strike a careful balance between authenticity, feasibility and compliance (Yan, 2024; Munyikwa, 2022).

According to Friede & al. (2015), around 90% of studies have found a positive correlation between ESG factors and corporate performance, particularly in environmentally sensitive sectors. This is confirmed by He & al. (2023), who note stronger investor confidence and long-term gains in Chinese firms with robust ESG strategies. However, the impact varies depending on the industry, ownership, and regulation. Some studies have demonstrated neutral or even negative effects, primarily due to the high initial costs of implementing ESG strategies, particularly in non-state or resource-intensive sectors (Yan, 2024).

These practices offer a competitive advantage, attracting ethically conscious consumers, boosting media visibility and strengthening brand image and market position (Yan, 2024). They also create long-term value by anticipating environmental risks, ensuring fair labour practices and maintaining transparent governance (Rousseau, 2018). Beyond financial gains, ESG can enhance non-financial outcomes such as innovation, customer satisfaction and corporate culture, while also promoting diversity, inclusion and community engagement (Yan, 2024). However, these advantages can be undermined by greenwashing, which can damage trust, negatively impacting financial performance and reputation over time (Yu & al., 2020).

In addition, ESG criteria guide businesses toward sustainable and responsible behaviour. Beyond regulatory compliance, ESG integration can function as a buffer during reputational crises. Empirical studies suggest that companies with strong ESG performance are more resilient to market volatility and public backlash (Giese & al, 2019; Krueger & al., 2020).

This protective role, however, is not guaranteed. Its success depends on the nature of the crisis, media exposure, and the firm's pre-existing credibility (Servaes & Tamayo, 2013). Moreover, inconsistencies between ESG rating agencies raise questions about the reliability of ESG scores. Berg & al. (2022) highlight the differences in ESG evaluations, which make harder assessing a company's real reputational risk.

In essence, while ESG initiatives can strengthen reputational resilience, they must be interpreted within their specific sectoral and crisis contexts.

3.4 The strategic role of ESG in the extractive industry

Studies from Quebec, Zimbabwe, and China show that extractive companies focusing on stakeholder relations, transparency, and innovation tend to achieve stronger long-term economic performance. A common finding across these cases is the importance of governance and community dialogue in building social legitimacy. In Quebec and Zimbabwe, practices such as territorial consultations, benefit-sharing agreements, and targeted initiatives in areas like education, healthcare, and local employment have helped ease tensions and limit resistance to extractive operations. These approaches not only contribute to greater operational continuity but also enhance

the appeal of these companies to institutional investors increasingly mindful of non-financial risks (Turcotte & Lachance, 2023; Madzoke & al., 2024).

The concept of a "***Social license to operate***" defined as the tacit acceptance of stakeholders, appears to be essential in the mining sector, it is as important as a legal license. Without it, projects risk being disrupted, vandalized, or cancelled, while obtaining one allows more stable operations and a less vulnerable value chain (Kamenopoulos & Agioutantis, 2020). This shows that specific ESG practices improves reputation, attracts partners and opportunities, and constitutes reputational capital that could serves as a buffer in times of crisis (Jo & Na, 2012).

Furthermore, Fikru & al. (2024) and Zhang & Mao (2024) find that higher ESG scores, particularly in the governance and social dimensions, are positively correlated with key financial indicators such as return on assets (ROA), return on equity (ROE), and Tobin's Q[2]. Nevertheless, the efficacy of ESG practices differs between sectors. Ktat, (2017) shows that commitments to local communities, environment and human rights are key strategic priorities for CSR, particularly for the oil and mining industries, which are often criticized for their failure to comply with social and environmental standards.

Further empirical research demonstrates that ESG performance has measurable financial consequences. Chatterji et al. (2016) demonstrate that companies that are perceived as socially responsible have better access to capital, since investors associate engagement with environmental, social and governance (ESG) issues with lower informational asymmetry and non-financial risk. Similarly, Kim & Lyon (2012) provide evidence that consistent and credible environmental disclosures are associated with higher firm valuations, suggesting that ESG signals are increasingly incorporated into financial market assessments.

However, despite these positive findings on the impact of ESG commitments, several studies highlight the practical limitations of these mechanisms, particularly in the diamond sector. The

[2] Tobin's q is a ratio that measures the market value of a firm relative to the replacement cost of its assets. James Tobin originally proposed that investment decisions are influenced by this ratio, where a q greater than 1 encourages firms to invest in new capital, and a q less than 1 discourages such investment (Tobin, 1969).

IPIS (International Peace Information Service) report, summarized by Merket (2022), shows that the diamond supply chain remains vulnerable to abuse despite stated ESG commitments. The report describes how multinationals such as De Beers publish ambitious social goals in "***Building Forever***" which is the group's long-term sustainability strategy launched in 2020. It represents the company's commitment to making a positive and lasting impact across all its operations, particularly in diamond-producing countries. But in reality, incidents reveal persistent violations, including violence committed by security guards.

In an academic study, Previti (2016) assesses the effectiveness of the Kimberley Process and voluntary CSR initiatives in the US jewellery industry. It concludes that these instruments have had a limited impact on reducing imports of conflict diamonds and that companies have mainly used these mechanisms to protect their image. CSR labels and commitments enable companies to gain consumer trust, but do not always translate into substantial improvements in sourcing practices.

Big companies may, deliberately or not, find themselves involved in conflicts through their supply chains, tax arrangements, or relationships with authoritarian regimes (Belhoste & Nivet, 2018). De Beers, for example, historically financed the UNITA rebel group in Angola, exposing the company to accusations of complicity in human rights violations, a case occurred in 2015, when the UN sanctioned Badica and its Belgian subsidiary Kardiam for purchasing diamonds from armed groups in the Central African Republic and smuggling them via the DRC and Dubai to Antwerp. Under pressure from the sanctions, Badica invested in CSR and due diligence training, which led to its removal from the blacklist in 2021 (Beevor, 2024). This case illustrates how the threat or application of sanctions can push companies to take their ESG commitments more seriously, particularly in fragile or high-risk environments.

The ESG report published by CIBJO (2024) provides a roadmap for companies in the jewellery sector, highlighting the importance of integrating ESG practices at all levels of the company. Without clear and verifiable documentation, ESG initiatives risk becoming counterproductive by undermining companies' credibility. Horz et Elfassi (2020), explains that companies in the diamond sector have a strategic interest in strengthening their due diligence mechanisms to limit reputational risks associated with potential human rights violations or criminal activities. Rigorous due

diligence, based on OECD guidelines, can not only reduce operational risks, but also protect companies' reputations in the event of a sector crisis.

Thus, although diamond companies have strengthened their ESG measures to mitigate reputational damage, all these sources show that these mechanisms are often criticised for their limited scope, reliance on voluntary statements and frequent lack of independent verification. Therefore, the literature warns against the image effects of these measures if they are not accompanied by robust, verifiable structural reforms.

3.5 ESG Performance as Reputational Insurance

As previously discussed, there is a growing body of empirical evidence demonstrating a clear link between environmental, social and governance performance and measurable financial consequences. For instance, Chatterji & al. (2016) show that companies perceived as socially responsible enjoy better access to capital, as investors associate ESG engagement with lower informational asymmetry and non-financial risk. Similarly, Kim & Lyon (2012) provide evidence that consistent and credible environmental disclosures are associated with higher firm valuations. These findings suggest that ESG signals are incorporated into financial market assessments, particularly when transparency is verifiable.

From an operational perspective, ESG-oriented firms benefit from efficiency gains that contribute to financial stability. Servaes & Tamayo (2013) find that firms with stronger ESG credentials outperform peers, particularly in sectors where consumers are sensitive to CSR. These firms tend to experience reduced regulatory penalties, improved employee retention, and greater access to long-term capital factors that support predictable cash flows and reduced earnings volatility.

Godfrey & al. (2008) find that socially responsible firms experience less negative market reaction during crises, describing this as an ***"Insurance-like"*** effect. Lins & al. (2017) corroborate this view by showing that firms with higher levels of social capital outperformed others in terms of stock returns and profitability during the 2008 financial crisis.

3.6 Corporate reputation and stock price fluctuations

Corporate reputation, defined as stakeholders' collective perception of a company's integrity, credibility, and commitment to social or environmental responsibilities, is increasingly viewed as a critical intangible asset influencing firm valuation (Fombrun, 1996). This asset has become particularly relevant in contemporary capital markets, where sustainability and ESG considerations significantly impact investment decisions. Numerous empirical studies indicate that variations in stock prices can reflect shifts in a company's perceived reputation, particularly in contexts sensitive to ESG issues (Krüger, 2015; Derrien & al., 2021).

Empirical evidence clearly illustrates how reputational crises, especially those related to ethical misconduct or ESG controversies, trigger immediate negative stock market reactions. Coombs (2007), for instance, demonstrates that reputational damage following negative publicity events generally leads to substantial declines in market value. Investors rapidly revise their expectations, influenced by negative media coverage and public scrutiny. Prominent cases such as Volkswagen's Dieselgate, BP's Deepwater Horizon disaster and Facebook's Cambridge Analytica controversy exemplify the swift and significant stock price drops reflecting market-wide erosion of trust following reputational crises. The case of conflict diamonds and the Kimberley Process Certification Scheme provides a sector-specific example of this phenomenon ***(Please refer to Appendix 9.5)***.

This observation is supported by the findings of Krüger (2015), who provided quantitative evidence demonstrating that negative ESG news systematically generates negative abnormal stock returns. These findings suggest that ESG-related issues are no longer peripheral concerns, but rather integral to financial materiality, influencing both short-term market reactions and long-term valuation assessments. In addition, Derrien & al. (2021) have shown that ESG incidents can influence analysts' expectations about future cash flows, which in turn can affect firm valuation and market confidence over the long term.

Moreover, reputation functions as a cognitive framework through which financial signals are interpreted by investors and analysts alike. In their research, Joos & al. (2016) highlight how analysts integrate fundamental risks, including reputational risk, into their valuation models. Firms

perceived to have stronger reputations typically experience lower valuation uncertainty, more stable analyst price targets, and greater investor confidence. Hence, corporate reputation emerges as a stabilizing factor that mitigates volatility and enhances the accuracy of investor expectations.

A positive corporate reputation contributes proactively to stock price performance by decreasing perceived risk and reinforcing stakeholder trust. Luo & al. (2015) reveal that companies demonstrating superior social responsibility performance are more frequently recommended positively by financial analysts, subsequently achieving higher stock returns. From this perspective, reputation represents a forward-looking indicator of a firm's resilience and potential for sustainable long-term value creation. Fombrun (1996) earlier described this dynamic as symbolic capital, allowing firms to attract favourable media attention, secure investor loyalty, and access capital at reduced costs.

Sector-wide reputation effects, or reputation contagion, have also been documented in various industries. For example, Van Bockstael & Vlassenroot (2009) show how the diamond industry faced widespread reputational damage due to controversies surrounding conflict diamonds, leading to a systemic valuation crisis even for companies not directly implicated. This phenomenon highlights how sector-level reputational issues create powerful externalities, underscoring collective industry legitimacy as a crucial factor affecting individual firm valuations.

In sum, although stock price fluctuations do not constitute a direct measure of corporate reputation, they provide a useful proxy for observing shifts in reputational perception, especially in response to reputational crises or ESG controversies. These price variations offer valuable insights into investor sentiment, perceived ethical standards, and market expectations regarding future firm performance. In an investment landscape increasingly focused on transparency, corporate ethics, and sustainability, reputation becomes both a driver of firm valuation and a reflection of market trust.

4. Hypotheses

The objective of this study is to examine whether ESG performance can enhance the financial resilience of diamond companies during periods of crisis. In recent years, the diamond sector has faced scrutiny due to its historical links with blood diamonds. Although international initiatives such as the Kimberley Process have sought to address these concerns, repeated breaches and persistent governance gaps continue to undermine the industry's legitimacy.

In this context, ESG engagement is increasingly seen as a strategic tool for firms to manage reputational risk and build long-term stakeholder trust. ESG performance may not only reflect ethical commitments but also act as a form of "***Reputational insurance***" during crises, reducing the negative impact of external shocks on firm value and financial outcomes.

Our thesis is based on the idea that strong ESG engagement acts as a buffer against reputational damage and operational disruption during periods of external shock. It implies that ESG-oriented firms are better positioned to preserve stakeholder trust and access to capital, which in turn supports financial outcomes such as return on assets (ROA), return on equity (ROE), and total revenue, even in adverse conditions.

To assess this proposition, we formulate the following specific sub-hypotheses:

- ***H1: Diamond companies are more likely to adopt strong ESG strategies, resulting in higher ESG scores, particularly in the social and governance dimensions.***

- ***H2: Diamond companies with higher ESG scores are more financially resilient during crises***

5. Data & Methodology

The present study relies on a firm-level panel dataset constructed from multiple sources to examine the relationship between ESG performance and financial outcomes in the diamond industry. The core financial and sustainability variables were obtained primarily from private databases provided by our research supervisor, Professor James Thewissen, including data

extracted from Compustat and a proprietary ESG dataset. These resources offered access to standard accounting indicators, firm characteristics, and ESG scores on Environmental, Social, and Governance dimensions.

To enhance the completeness of the dataset and ensure sectoral comparability, additional information was retrieved from Bloomberg Terminal, which provided standardized ESG disclosure Scores, governance indicators, and firm-specific financial metrics not covered in Compustat. Furthermore, additional data was obtained from public annual reports, investor presentations and verified online databases to fill in any remaining gaps in the time series.

Initially, we collated approximately 400 observations of diamond companies. However, it should be noted that not all variables were consistently available throughout the dataset. As the sample was refined, incomplete entries were progressively filtered out. It is important to note that several companies have ceased to exist or have been absorbed by other companies within the same industry. It was determined that some were not publicly listed, and even when they were, they often failed to disclose essential information, such as ESG scores. Following the filtration process, approximately 80 observations were obtained, encompassing around 20 companies, with five years of data (2019 to 2023) per company where ESG score and other variables were available. However, it should be noted that certain companies were missing some variables, including the ESG score components.

We selected this range of year, because of the sharp impact of Covid-19 and the Russia-Ukraine conflict. Russia, through its state-owned company Alrosa, produced around 30% of the world's rough diamonds. Moreover, US sanctions imposed in February 2022 restricted financial flows with Alrosa, leading to supply chain disruptions (Narvecar, 2022). The European Union followed by banning Russian diamond imports starting January 2024, aiming to cut off a major source of funding for the war. Despite these developments, Russia has not been suspended from the Kimberley Process, revealing the shortcomings of current regulatory systems.

Here is the list of diamond companies included in our analysis. The sample includes firms involved in different segments of the industry, such as extraction, retail, and lab-grown diamond production.

Company	Tickers	Loc
Anglo American PLC	NGLOY	UK
BHP Group Ltd	BHP	AUS
BRILLIANTEARTHGPINC	BRLT	USA
CHOWSANGSANGINTERTIOLLTD	HKG:0116	AUS
CHOWTAIFOOKJEWELLERYGROUPLTD	1929HK	HKG
Dominion Diamond Corp	DDC	CAN
ENVELACORP	ELA	USA
GEMDIAMONDLTD	GEMD	UK
LUCAPADIAMONDLTD	LOM	AUS
Lucara Diamond Corp	LUCRF	CAN
LUKFOOKLTD	HKG:0590	HKG
Mountain Province Diamonds Inc	MPVDF	CAN
OSISKOGOLDROYALITIES	OR	CAN
PANDORAAS	PNDORA	DKK
PCJEWELLERLTD	PCJEWELLER	INDIA
PETRADIAMONDLTD	PDL	UK
Rio Tinto Group	RIO	UK
SIGNETJEWELERSLTD	SIG	USA
SUMITOMOELECTRICINUDSTRIES	5802T	JAP
TITANCOMPANYLTD	TITAN	INDIA

In line with the empirical strategy adopted to examine the financial consequences of ESG engagement in the diamond industry, the analysis will begin with the establishment of a comparative baseline. This step consists in assessing ESG performance metrics between diamond companies and firms operating in other sectors, both in aggregate form and across the environmental, social, and governance dimensions. Mean and variance comparisons will be carried out to determine whether the ESG positioning of the diamond industry differs significantly from that of the broader market. These preliminary diagnostics will be essential for contextualizing the regression results and for interpreting the specificity, if any, of ESG engagement in a sector exposed to heightened reputational scrutiny.

To control for potential distortions arising from collinearity among explanatory variables, a Pearson correlation matrix has been constructed (***see Table 2 in Appendix 9.2***). Variables showing

high collinearity were examined for conceptual overlap, and in cases where both statistical and theoretical redundancy were observed, these were excluded from the final model.

The analytical framework relies on a structured set of variables aimed at capturing firm-level financial performance, ESG engagement, and relevant structural controls. Three dependent variables are employed to assess firm outcomes: the natural logarithm of total revenue (***Log_Revenue***), which serves as a proxy for firm size and commercial performance; a binary variable ***Profitable***, equal to 1 if return on assets (***ROA***) is strictly positive, capturing the firm's operating profitability; and a binary indicator for return on equity (***ROEE***), equal to 1 if ROE is strictly positive, measuring profitability from a shareholder perspective.

To quantify ESG engagement, we use both composite and disaggregated indicators. The ***ESG_score*** represents a standardized composite score ranging from 0 to 1, reflecting overall ESG performance. This is complemented by the ***E_score***, ***S_score***, and ***G_score***, which isolate firm performance across the environmental, social, and governance pillars. In addition, a dummy variable ***high_ESG_median*** is included to indicate whether a firm's ESG score exceeds the global median across all sectors, allowing us to distinguish above-average ESG performers.

A comprehensive set of control variables is incorporated to account for alternative determinants of financial outcomes. ***Liquidity***, defined as the ratio of current assets to current liabilities, captures short-term solvency. ***CompanyAge*** measures the number of years since the firm's incorporation, accounting for lifecycle effects. ***BookToMarket***, the ratio of book equity to market capitalization, is used to control for valuation. ***SalesGrowth*** reflects annual growth in sales and captures commercial momentum. ***Leverage***, defined as total debt over total assets, controls for capital structure, while ***AssetTangibility*** indicates the proportion of tangible fixed assets in total assets, often associated with industry-specific operational models. We also include the logarithm of market capitalization (***log_MarketCap***) to proxy firm size and investor visibility, and the total number of ***Employees*** to account for labour scale. Finally, ***year fixed effects*** for 2020 to 2023 are included to control for temporal variation and macroeconomic shocks with 2019 as reference year (***For more details please refer to Table 1 in Appendix 9.1***).

6. Results

6.1 Variance and Means test between Diamond industry and others

We will begin by testing the first hypothesis through the application of *Levene's test* and *Brown-Forsythe test*, both of which assess the equality of variances between groups. The Levene test is used to assess the equality of variances using the mean. In contrast, the Brown-Forsythe test is a more robust alternative that relies on the median, making it less sensitive to extreme values

H1: *Diamond companies are more likely to adopt strong ESG strategies, resulting in higher ESG scores, particularly in the Social and Governance dimensions*.

These two tests aim to determine whether the variance in ESG scores and their components (*E, S, G*) differs significantly between diamond companies and other companies. Assessing this heterogeneity is essential to understanding the extent to which ESG practices are more or less homogeneous across sectors. This information serves to provide a more comprehensive and nuanced understanding of the observed variations in means between the groups. (***Refer to the table below for the results of the test***)

Table 3: Variance comparison between the diamond sector and other sectors using Levene and Brown-Forsythe tests

Score	Test	F	df1	df2	p-value
ESG_score	Levene	0.013	1	39076	0.9101
ESG_score	Brown-Forsythe	0.005	1	39076	0.9448
E_score	Levene	6.402	1	39033	0.0114*
E_score	Brown-Forsythe	1.015	1	39033	0.3136
S_score	Levene	133.3	1	39032	0.0000***
S_score	Brown-Forsythe	80.0	1	39032	0.0000***
G_score	Levene	4.153	1	39051	0.0416*
G_score	Brown-Forsythe	4.506	1	39051	0.0338*

Note: Asterisks indicate standard levels of significance: *** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; . $p \leq 0.10$.
The Levene test is based on the mean; the Brown-Forsythe test uses the median and is more robust to outliers.

The comparison of variances highlights significant heterogeneity in certain ESG dimensions between the diamond sector and other sectors. In this context, the Brown-Forsythe test is generally preferred due to its robustness to non-normality and unequal sample sizes.

- There is no significant difference in the variance of the overall ESG score, whether using the Levene test ($p = 0.9101$) or the Brown-Forsythe test. This suggests that, overall, ESG practices appear to be relatively homogeneous across sectors.

- The environmental score (***E_score***) shows a slight significant variance heterogeneity according to the Levene test although this result is not confirmed by the more robust Brown-Forsythe test.

- The social score (***S_score***) shows the strongest and most robust differences in variance, with both the Levene and Brown-Forsythe tests yielding extremely significant p-values ($p < 0.0001$). This clearly indicates a high dispersion of social practices among diamond companies compared to other companies, reinforcing the need for a sector-specific examination.

- The governance score (***G_score***) also shows little differences in variance, with both tests confirming statistical significance. This reflect some variability in how governance structures and practices are implemented in companies in the diamond sector.

In summary, although the total ESG score does not show differences in variance, its components, in particular the S_score and G_score, show statistically significant heterogeneity between diamond sectors and other sectors while E_score seems to have the same variance between the two group. This could suggest that while the overall ESG commitment may appear similar on the surface, the ways in which companies engage with social and governance issues differ widely, pointing to divergent priorities, levels of maturity, and possibly regulatory pressures.

6.2 Comparison of ESG averages

The objective of these tests is to determine whether there is a significant difference in ESG scores means (and their sub-components: E, S, G) between: diamond companies and companies in other sectors. Two types of t-tests are used: the student's t-test, which assumes equal variances between groups, and the Welch's t-test, a more robust alternative that does not require the assumption of equal variances, which is preferred in our case. (***Refer to the table below for the results of the test***)

H1: *Diamond companies are more likely to adopt strong ESG strategies, resulting in higher ESG scores, particularly in the Social and Governance dimensions*.

Table 4: Overall comparison of ESG scores between the diamond sector and other sectors

Score	Mean (Diamond)	Mean (All)	Difference (D All)
ESG_score	0.49	0.39	0.10
E_score	0.55	0.25	0.30
S_score	0.63	0.41	0.22
G_score	0.60	0.48	0.12

Score	Student t-test (p)	Welch t-test (p)
ESG_score	0.0000***	0.0000***
E_score	0.0000***	0.0002***
S_score	0.0000***	0.0949.
G_score	0.0000***	0.0000***

Note: Asterisks indicate standard levels of significance: *** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; . $p \leq 0.10$.
Welch's test is preferred when group variances differ.

The Table 4 show that diamond companies have significantly higher overall ESG scores (0.49 vs. 0.39; $p < 0.001$). The environmental score (***E_score***) shows the largest difference (+0.30), followed by the social score (+0.22), the governance score (+0.12). All differences are highly significant according to Student's and Welch's tests.

Although diamond companies achieve a higher average social score than companies in other sectors (0.63 versus 0.41), this difference is not statistically significant according to the Welch test (p = 0.0949), which is preferred when variances between groups differ. This weakens the robustness of the observed difference and suggests that the higher average may not reflect a consistent trend across the sector. However, the Brown-Forsythe test reveals a highly significant difference in the variance of the social score, indicating strong internal disparities within the diamond industry.

This shows that while some companies demonstrate strong social commitment, others make much weaker or even minimal efforts. The combination of a non-significant average difference and a highly uneven distribution suggests that the sector's social performance is driven by a few leading companies, rather than reflecting widespread or coordinated commitment. Overall, social practices within the diamond industry appear fragmented, perhaps due to a lack of common standards or divergent strategic priorities.

The results of the Levene and Brown-Forsythe tests indicate that there is a significant difference in the variance of governance scores between the diamond sector and other industries. Taken in isolation, these tests reveal heterogeneity between the two groups, without specifying which is more dispersed. To refine the interpretation, the observed averages must also be examined. In this case, diamond companies have a higher average governance score than companies in other sectors, but their number is much smaller. If, despite this small sample, the tests detect such variance, this suggests that scores within the sector are highly uneven.

It appears that a few companies with very well-structured governance appear to be driving up the average, while others are lagging significantly behind. This reflects significant internal disparity. It therefore seems likely that governance practices are not yet harmonised within the sector. Some companies stand out for their transparency and institutional strength, while others struggle to keep pace. This lack of consistency could be explained by a diversity of strategic approaches or a lack of alignment with common standards.

In terms of environmental scores, only the Levene test indicates a significant difference in variance between the diamond sector and the others. However, the Brown–Forsythe test, which is more robust to differences in sample size, does not confirm this. The difference between the two results calls for caution when interpreting them. In other words, despite the diamond sector having a significantly higher environmental average, its companies appear to adopt relatively similar approaches. There are no signs of significant fragmentation. This suggests that, unlike social and governance aspects, environmental commitments are more consistent and homogeneous within the diamond sector.

The Levene and Brown-Forsythe tests indicate no significant difference in variance between the diamond sector and other industries for the overall ESG score. This means that, overall, the variability in ESG performance is comparable between the two groups. Although the average score for the diamond sector is higher (0.49 vs. 0.39), this difference is not accompanied by greater dispersion. This apparent stability can be explained by a compensation between the three ESG dimensions, where the high heterogeneity of social and governance scores is mitigated by greater consistency in environmental practices.

Taken together, these findings provide partial support for Hypothesis 1, which suggests that diamond companies tend to exhibit strong ESG engagement, particularly in the social and governance dimensions. However, the high level of intra-sectoral variance observed across these components indicates that ESG strategies remain highly uneven. Rather than reflecting a cohesive, industry-wide commitment, the elevated scores seem to result from a subset of firms with particularly proactive reputational strategies. This fragmentation may weaken the sector's collective credibility and increase reputational interdependence, as the misconduct of a few actors could damage trust in the entire industry.

6.3 Annual means comparison of ESG scores: diamond sector vs. other sectors

This analysis aims to determine whether the differences of means observed in the previous test persist over time (2019-2023). It also identifies any shifts linked to external events such as sector crises, regulatory changes or reputational pressures (***Please refer to the table below for the results of the test***).

Table 5: Yearly comparison of ESG scores between the diamond sector and other sectors (2019–2023)

Year	Score	Student t-test (p)	Welch t-test (p)
2019	ESG_score	0.0458*	0.1987
2019	E_score	0.1768	0.1860
2019	S_score	0.0835.	0.1595
2019	G_score	0.1343	0.3819
2020	ESG_score	0.0644.	0.0977.
2020	E_score	0.0211*	0.0003***
2020	S_score	0.4993	0.4398
2020	G_score	0.0157*	0.0066**
2021	ESG_score	0.1231	0.1469
2021	E_score	0.0004***	0.0272*
2021	S_score	0.1414	0.4815
2021	G_score	0.0164*	0.0042**
2022	ESG_score	0.1555	0.1451
2022	E_score	0.0000***	0.0775.
2022	S_score	0.1082	0.4024
2022	G_score	0.0331*	0.0282*
2023	ESG_score	0.5022	0.4977
2023	E_score	0.0005***	0.2880
2023	S_score	0.0000***	0.3839
2023	G_score	0.1828	0.1030

Note: Asterisks indicate standard levels of significance: *** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; . $p \leq 0.10$.
Welch's t-test is preferred in the presence of unequal variances.

The annual comparison of ESG scores (***Table 5***), interpreted in conjunction with variance tests (***Table 3***), reveals more detailed information about sectoral ESG dynamics between diamond companies and other companies.

The yearly comparison of ESG scores between the diamond sector and other industries (see Table 5) provides partial support for Hypothesis 1, which suggests that diamond companies adopt stronger ESG strategies, particularly in the Social and Governance dimensions. The data demonstrate that ESG performance differences were not consistent over time and varied across dimensions.

From 2020 to 2022, diamond firms exhibited significantly higher Governance scores, with robust statistical support ($p < 0.05$ across both Student and Welch tests). This ongoing outperformance indicates that diamond companies have reinforced their internal controls, transparency, and ethical frameworks, potentially in response to reputational pressures associated with past controversies. The environmental dimension also demonstrated a consistent advantage for the diamond sector during these years, though with slightly less robustness in 2022. These findings suggest that diamond firms demonstrated a comparative lead in governance and environmental practices, especially in the aftermath of the pandemic.

However, the Social dimension does not demonstrate any consistent or significant advantage for diamond companies across the period. Despite the sector's exposure to social issues (e.g. labour rights, local communities), no clear statistical gap emerged. Furthermore, by 2023, the observed advantages in Environmental and Governance scores had diminished or disappeared, and overall ESG scores no longer differed significantly from those of other sectors. This suggests either a convergence, with other industries catching up, or increased variability within the diamond sector itself.

In summary, while the results confirm a temporary leadership of diamond companies in certain ESG dimensions, particularly Governance, they also show that this leadership was neither uniform nor sustained. Hypothesis 1 is therefore partially validated: diamond firms appear to have adopted stronger ESG practices in specific areas and years, but not consistently across all dimensions or throughout the study period.

6.4 Link between ESG practices and diamond company performance

In this second step, we will test the second hypothesis by examining the effect of a high ESG score on the probability of profitability among diamond companies The detailed results are presented in Table 6 ***(Please refer below***).

H2: *Diamond companies with higher ESG scores are more financially resilient during crises*

$$\begin{aligned}\text{Profitable}_{i,t} = \beta_0 &+ \beta_1 \cdot \text{high\_ESG\_median}_{i,t} + \beta_2 \cdot \text{fyear}_t \\ &+ \beta_3 \cdot (\text{high\_ESG\_median} \times \text{fyear}) \\ &+ \beta_4 \cdot \text{Leverage}_{i,t} + \beta_5 \cdot \text{AssetTangibility}_{i,t} \\ &+ \beta_6 \cdot \text{BookToMarket}_{i,t} + \beta_7 \cdot \log(\text{MarketCap}_{i,t}) \\ &+ \beta_8 \cdot \text{SalesGrowth}_{i,t} + \beta_9 \cdot \text{Employees}_{i,t} + \varepsilon_{i,t}\end{aligned}$$

- i designates the diamond company.
- t the year of observation (2020–2023) with 2019 as reference year.

Table 6: Regression Results: Impact of High ESG Score on the Profitability of Diamond Companies

Variable	Estimate	Std. Error	p-value	Significance
(Intercept)	1.289	0.233	0.001	***
high_ESG_median	-0.261	0.153	0.093	.
factor(fyear)2020	-0.564	0.241	0.022	*
factor(fyear)2021	-0.541	0.241	0.028	*
factor(fyear)2022	-0.762	0.250	0.003	**
factor(fyear)2023	-0.343	0.247	0.170	
Leverage	-0.379	0.116	0.002	**
Asset Tangibility	-0.139	0.031	0.001	***
Book-to-Market	0.153	0.066	0.024	*
log(Market Cap)	0.0219	0.0038	0.001	***
Sales Growth	-0.0023	0.0031	0.460	
Employees	4.75e-07	4.06e-07	0.246	
high_ESG_median × fyear2020	0.457	0.196	0.022	*
high_ESG_median × fyear2021	0.378	0.194	0.055	.
high_ESG_median × fyear2022	0.654	0.205	0.002	**
high_ESG_median × fyear2023	0.254	0.204	0.216	

Note: Signif. codes: *** p<0.001, ** p<0.01, * p<0.05, . p<0.1
OLS regression model. Adjusted $R^2 = 0.595$, residual standard error = 0.2205, n = 72 (8 observations removed due to missing data).

The results reveal several lessons. First, the variable ***high_ESG_median***, taken alone, is not significant at the 10% threshold (p = 0.093). In 2019, a high ESG score does not therefore seem sufficient to predict better profitability.

The factor(year) variables indicate the specific impact of each year compared to the reference year, which is 2019. The results show that 2020, 2021 and 2022 are associated with a decline in the profitability of diamond companies compared to 2019. This probably reflects the effects of the Covid-19 crisis and its economic impact on the sector. In contrast, 2023 appears to mark a certain recovery, although this improvement is not clearly established from a statistical point of view. Overall, these results suggest that the sector's profitability was particularly affected in the early years of the crisis, before stabilizing.

However, from 2020, the effect becomes clearly positive. Companies with an ESG score above the global median are significantly more profitable. This trend is confirmed in 2022, with an even more pronounced effect. The year 2021 also shows a moderate signal. These results suggest that ESG is becoming a good performance driver, especially in a post-crisis context, where societal expectations are higher and stakeholder pressure is more prevalent.

The ESG effect is therefore not immediately apparent, but it gains importance in years when resilience and legitimacy become strategic. This confirms the idea that ESG works more as a medium-term investment than as an instant performance factor.

Finally, several control variables reinforce the robustness of the model. Leverage, an indicator of indebtedness, has a negative effect on profitability, reflecting greater financial vulnerability. The is also tangibility of assets. Conversely, company size, measured by market capitalization, has a net positive effect: large structures are better equipped to manage risk and maintain profitability.

6.5 Impact of high ESG score on revenue for diamond companies

Following the analysis of ESG's impact on profitability, we now turn to the second dimension of financial performance by examining the relationship between ESG scores and revenue generation. This regression aims to assess whether diamond companies with higher ESG performance outperform their peers in terms of commercial outcomes. The model specifically

investigates whether this relationship evolves over time, particularly in response to external shocks such as the Covid-19 pandemic. The detailed results are presented in Table 7 (***Please refer below***).

$$\begin{aligned}\log(\text{Revenue}_{i,t}) = \beta_0 &+ \beta_1 \cdot \text{high\_ESG\_median}_{i,t} + \beta_2 \cdot \text{fyear}_t \\ &+ \beta_3 \cdot (\text{high\_ESG\_median} \times \text{fyear}) \\ &+ \beta_4 \cdot \text{Leverage}_{i,t} + \beta_5 \cdot \text{AssetTangibility}_{i,t} \\ &+ \beta_6 \cdot \log(\text{MarketCap}_{i,t}) + \beta_7 \cdot \text{BookToMarket}_{i,t} \\ &+ \beta_8 \cdot \text{SalesGrowth}_{i,t} + \beta_9 \cdot \text{Employees}_{i,t} + \varepsilon_{i,t}\end{aligned}$$

- i designates the diamond company.
- t the year of observation (2020–2023) with 2019 as reference year.

Table 7: Regression Results: Impact of High ESG Score on Log Revenue

Variable	Estimate	Std. Error	p-value	Significance
(Intercept)	6.716	1.627	0.0001	***
high_ESG_median	-0.971	1.027	0.349	
factor(fyear)2020	-3.652	1.588	0.025	*
factor(fyear)2021	-3.315	1.595	0.042	*
factor(fyear)2022	-3.745	1.653	0.027	*
factor(fyear)2023	-2.767	1.635	0.096	.
Leverage	2.703	0.827	0.0019	**
Asset Tangibility	-0.191	0.222	0.393	
BookToMarket	0.621	0.529	0.245	
log_MarketCap	0.108	0.026	0.0001	***
SalesGrowth	-0.028	0.020	0.175	
Employees	0.0000124	0.0000027	0.00002	***
high_ESG_median × fyear2020	3.988	1.319	0.0038	**
high_ESG_median × fyear2021	3.848	1.294	0.0044	**
high_ESG_median × fyear2022	3.775	1.368	0.0079	**
high_ESG_median × fyear2023	2.858	1.370	0.0416	*

Note: Signif. codes: *** p<0.001, ** p<0.01, * p<0.05, . p<0.1
OLS regression. Adjusted $R^2 = 0.595$, Residual Std. Error = 1.430, n = 72 (16 observations removed due to missingness).

The results show that the variable ***high_ESG_median***, representing companies with a high ESG score in 2019, has no significant effect on revenue. Its coefficient is negative (-0.971) but not significant, suggesting that a good ESG score did not generate more revenue in the diamond sector at that time.

The variables corresponding to the fiscal years indicate a general decline in revenue after 2019. The years 2020 to 2022 all demonstrate a significant negative effect, which likely reflects the economic impact of the pandemic on companies in the sector. The year 2023 also demonstrates a downward trend, albeit to a lesser extent. These results indicate a prolonged period of fragility for revenues, irrespective of other company characteristics.

However, interactions between a high ESG score and the fiscal years 2020 to 2023 reveal positive and significant effects, indicating a change over time. This means that ESG-performing companies saw their revenues increase more strongly than others from 2020 onwards, particularly in 2020 and 2021. These effects may reflect a growing appreciation of ESG practices in times of crisis or transition, such as the Covid-19 pandemic or regulatory pressures:

- In 2020, ESG companies saw their revenues increased by nearly 4 points (p-value = 0.0038).
- In 2021, the effect remains significant and high (coef = 3.848; p = 0.0044).
- In 2022, the effect persists (coef = 3.775; p = 0.0079).
- In 2023, the effect remains positive, although slightly weaker (coef = 2.858; p = 0.0416).

For, the control variables, it is evident that there are few factors that exert a significant influence on revenue. The positive effect of leverage indicates that indebtedness can be a catalyst for growth. In addition, the findings demonstrate a highly significant positive effect of firm size, measured by the logarithm of market capitalisation ($p < 0.001$). This observation would explain that larger firms tend to generate higher revenues. In a similar vein, the number of employees has been shown to be positively and significantly associated with revenue ($p < 0.001$), likely reflecting economies of scale or greater production capacity.

The second regression confirms a temporal shift in the relationship between ESG scores and revenue performance. While no significant effect is observed in 2019, interaction terms with the

years 2020 through 2023 are all positive and statistically significant. The strongest effects are recorded in 2020 and 2021, suggesting that ESG became a commercial differentiator in times of systemic disruption. These results imply that ESG may not directly drive sales in stable periods but can enhance a firm's market position when stakeholders, regulators, or consumers place greater emphasis on sustainability. The strong positive effects of leverage, firm size, and number of employees on revenue confirm that structural capacity and growth orientation also play a key role. This aligns with the view that ESG becomes valuable when embedded within a broader competitive and organizational strategy (Fikru et al., 2024; Zhang and Mao, 2024).

In conclusion, a good ESG score does not appear to have a direct effect on revenues in 2019 but becomes an asset from 2020 onwards. This result suggests that ESG acts as a vector of differentiation or resilience in times of upheaval, rather than an immediate driver of revenues.

6.6 Impact of high ESG score on ROE for diamond companies

To further explore the link between ESG performance and financial outcomes, we finally examine its association with shareholder returns. This third model focuses on the likelihood of achieving a positive return on equity (ROE), a key indicator of financial efficiency from the investor's perspective. The objective of this model is to examine whether companies with an ESG score above the overall median for all industries combined are more likely to generate a positive return for shareholders, which is another essential dimension of financial profitability. The detailed regression results are presented in Table 8 (***Please refer below***)

The model is estimated using a binary dependent variable called ***ROEE***, which takes the value of 1 if the return on equity is strictly positive, and 0 otherwise.

$$\begin{aligned}\text{ROEE}_{i,t} = \beta_0 &+ \beta_1 \cdot \text{high\_ESG\_median}_{i,t} + \beta_2 \cdot \text{fyear}_t \\ &+ \beta_3 \cdot (\text{high\_ESG\_median} \times \text{fyear}) \\ &+ \beta_4 \cdot \text{Leverage}_{i,t} + \beta_5 \cdot \text{AssetTangibility}_{i,t} \\ &+ \beta_6 \cdot \log(\text{MarketCap}_{i,t}) + \beta_7 \cdot \text{BookToMarket}_{i,t} \\ &+ \beta_8 \cdot \text{SalesGrowth}_{i,t} + \beta_9 \cdot \text{Employees}_{i,t} + \varepsilon_{i,t}\end{aligned}$$

- i designates the diamond company.
- t the year of observation (2020 to 2023) with 2019 as reference year.

Table 8: Regression Results: Impact of High ESG Score on ROE

Variable	Estimate	Std. Error	p-value	Significance
(Intercept)	1.296	0.306	8.43e-05	***
high_ESG_median	-0.082	0.205	0.690	
factor(fyear)2020	-0.610	0.296	0.044	*
factor(fyear)2021	-0.199	0.298	0.505	
factor(fyear)2022	-0.581	0.310	0.067	.
factor(fyear)2023	-0.322	0.307	0.298	
Leverage	-0.707	0.165	7.13e-05	***
Asset Tangibility	-0.023	0.044	0.611	
log(Market Cap)	0.012	0.005	0.024	*
Book-to-Market	-0.017	0.105	0.871	
Sales Growth	0.002	0.004	0.543	
Employees	3.545e-07	5.354e-07	0.511	
high_ESG_median1 × fyear2020	0.484	0.263	0.071	.
high_ESG_median1 × fyear2021	0.036	0.258	0.889	
high_ESG_median1 × fyear2022	0.419	0.273	0.130	
high_ESG_median1 × fyear2023	0.234	0.273	0.395	

Note: Significance levels — *** p<0.001, ** p<0.01, * p<0.05, . p<0.1
OLS regression model. Adjusted R^2 = 0.3204; Residual Std. Error = 0.2854 (df = 56); 29 observations deleted due to missingness.

The regression results show that the variable **high_ESG_median**, representing companies with ESG scores above the overall median, has no statistically significant impact on the likelihood of achieving a positive return on equity (ROE) (coefficient = –0.082; p = 0.690). This indicates that, in the diamond sector, a strong ESG performance does not correlate with positive shareholder profitability in the short term. The negative coefficient, although not significant, suggests a very slight downward trend, but the lack of robustness prevents any meaningful interpretation.

The interaction with the year 2020 is marginally significant at the 10% level, suggesting a possible positive effect of ESG performance on ROE during the first year of the pandemic. It should be noted that the impact of this effect is currently restricted and should be evaluated with a degree

of caution. Furthermore, the interaction terms between positive ESG scores and the years 2021 to 2023 are statistically insignificant. This finding indicates that, even during the post-crisis period when ESG could have been a strategic asset, firms with higher ESG scores did not outperform their peers in terms of positive ROE.

This result carries several implications. First, it confirms that ESG is not necessarily a driver of immediate financial return for the diamond industry, at least in terms of equity profitability. While previous models in the thesis showed that ESG might positively influence revenue or operating profitability (ROA) during crisis periods, this effect does not extend to shareholder profitability. This aligns with the view that the financial benefits of ESG are more indirect and long-term, rather than immediate.

In this context, ESG may still serve an essential purpose by reinforcing reputational capital, stakeholder loyalty, and crisis preparedness. These benefits, however, may not directly translate into ROE, particularly in sectors like diamond mining where reputational risks are high, but returns may be shaped by other structural factors.

Among the control variables, the analysis finds that firm size, measured by the logarithm of market capitalization, has a positive and significant effect on ROE ($p = 0.024$). This suggests that larger firms tend to be more profitable from a shareholder perspective, likely due to greater stability, diversification, and access to capital. In contrast, leverage has a strong and negative association with ROE ($p < 0.001$), highlighting the financial vulnerability that comes with high levels of debt.

In sum, this model does not support our second hypothesis that high ESG performance leads to higher ROE in the diamond industry. However, this does not undermine the strategic value of ESG, which may manifest through resilience, trust-building, and risk mitigation, rather than short-term profitability. These results are consistent with the idea that ESG acts as a form of long-term reputational insurance, particularly relevant in ethically sensitive sectors (Servaes & Tamayo, 2013; Chatterji et al., 2016), even if its effect on ROE remains limited in the short run.

6.7 Discussion of Hypotheses

The initial hypothesis of this study was that diamond companies adopted more developed ESG strategies than other sectors, particularly in the social and governance areas. The results tend to validate partially this hypothesis. Comparative tests of averages indicate that, over the period observed, companies in the diamond sector achieved significantly higher ESG scores than other companies in all dimensions but with some statistical nuance. This gap is particularly pronounced for environmental scores, followed by social and governance scores. These results suggest a stronger strategic commitment to ESG criteria in this specific sector.

It is interesting to note that, although the initial hypothesis focused on social and governance dimensions, the most pronounced and consistent difference appears in environmental scores. Not only are environmental averages significantly higher for diamond companies, but variance tests suggest a relatively homogeneous distribution of practices within the sector. This indicates that environmental efforts may be more systematically integrated into companies, perhaps due to external regulatory pressures or sector-specific sustainability concerns.

However, this overall reading is insufficient to capture the complex reality of ESG dynamics in the diamond industry. Variance tests provide essential additional insights. While the overall ESG score does not show significant differences in dispersion across sectors, its sub-components, particularly the Social (S) and Governance (G) scores, reveal marked internal heterogeneity. The Brown-Forsythe test, which is more robust to sample size imbalances and extreme values, shows a statistically significant dispersion of S and G scores, suggesting high variability in practices among companies within the same sector. Some companies have very strong and transparent structures, while others appear to lag behind.

The second hypothesis suggested that companies with higher ESG scores demonstrate greater financial resilience during periods of crisis. The empirical results provide partial support for this proposition. In the pre-crisis year 2019, firms with high ESG scores did not significantly outperform their peers. From 2020 onward, coinciding with the Covid-19 pandemic, firms with above-median ESG scores experienced stronger revenue growth and better operating profitability

(ROA), suggesting that ESG engagement may offer commercial and operational advantages during periods of uncertainty.

However, when it comes to shareholder profitability as measured by ROE, no significant relationship was found with high ESG performance, and no consistent pattern emerged across the crisis years. The slight divergence observed in 2020 remains statistically weak and does not support robust conclusions.

These findings indicate that while ESG may not lead to immediate financial gains for shareholders, it likely contributes to firms' resilience, stakeholder trust, and reputational strength factors that are not fully captured by short-term ROE performance. This partially confirms the second hypothesis. ESG engagement has been shown to reinforce operational continuity and stakeholder confidence during turbulent times. However, its financial impact may be more visible in the long run, rather than through short-term returns.

7. Conclusion

his thesis set out to determine ***to what extent ESG practices help diamond companies mitigate reputational damage during times of crisis***. The evidence suggests that robust ESG practices can indeed serve as a critical buffer, helping companies preserve stakeholder trust and limit reputational fallout, although this comes with important nuances.

Empirically, ESG engagement did not yield immediate financial gains under stable conditions, but it became a significant differentiator in the post-2020 crisis context. Firms with high ESG ratings experienced markedly better revenue outcomes during and after global disruptions. This pattern indicates that ESG functions as a source of resilience rather than a short-term sales driver. Since 2020, companies with above global median ESG scores have shown stronger profitability, with the effect becoming more pronounced in 2022 and moderately present in 2021. This suggests that ESG factors are playing an increasingly important role in driving performance, particularly in a context of heightened societal expectations and stakeholder scrutiny.

However, the relationship between strong ESG credentials and the likelihood of achieving a positive ROE remains limited. This indicates that while ESG engagement may not directly boost short-term financial returns, it contributes to long-term stability and protects firms when reputational risks are high.

Our findings reveal marked differences between the three ESG dimensions within the diamond sector. Scores for environmental and governance criteria are, on average, significantly higher than in other sectors. Environmental practices appear to be relatively consistent, suggesting that most companies follow similar standards. Governance, although generally stronger, shows greater disparities between companies. Social performance is the most fragmented, with some companies making concrete efforts while others remain passive.

These differences show that the sector's strong ESG profile is mainly based on the commitment of a few companies rather than on a collective effort. This disparity makes the sector vulnerable to reputational risks. When only some players take ESG seriously, the actions of one poorly performing company can damage the image of the entire sector. Superficial or symbolic commitments do little to protect reputation and may even fuel mistrust. In contrast, companies that demonstrate sincere and transparent ESG commitment are better positioned to build lasting trust and resilience.

From a theoretical standpoint, these insights are consistent with and extend existing frameworks on reputational risk management. This theory emphasis that companies can proactively shield their intangible assets like brand equity and trust by engaging in responsible practices; our results provide concrete evidence in our context. In line with signaling theory, a robust ESG record sends a credible signal of quality and integrity to the market, which in turn yields material benefits under pressure. Stakeholders interpret strong ESG performance as a proxy for sound management and ethical foresight, responding with greater confidence and patience during crises.

The finding that companies with positive ESG scores have managed the crisis relatively well supports the idea that ESG is like reputational insurance. This means that previous investments in ESG pay off by protecting the company when it faces adversity. However, our analysis also refines these theories by underscoring the importance of authenticity. Consistent with perspectives on

symbolic management, only truly substantive ESG engagement unlocks this insurance-like protection, whereas stakeholders are quick to discount initiatives perceived as insincere or purely cosmetic. This theoretical integration suggests that ESG works best as a long-term strategic safeguard one that signals true values and strengthens stakeholder relationships rather than as a short-term tactic for image management.

These findings highlight the need for regulators and industry bodies to strengthen ESG disclosure standards and accountability mechanisms. Greater transparency would reward companies that demonstrate ethical behaviour and environmental responsibility, thereby strengthening the credibility of the entire sector. Initiatives such as conflict-free supply chain certification and the promotion of sustainable mining practices could mitigate collective reputational risks.

In conclusion, this thesis emphasizes the strategic value of ESG, which extends beyond regulatory compliance and ethical intent. In ethically sensitive sectors such as the diamond industry, ESG engagement functions as a form of reputational insurance, protecting firms against stakeholder backlash and reinforcing resilience during periods of instability. However, its effectiveness is contingent on the credibility and consistency of implementation. As societal expectations and investor scrutiny continue to rise, companies that adopt robust and sincere ESG strategies will be better positioned to preserve legitimacy, maintain stakeholder trust, and sustain long-term value.

8. Limitations & Future Research

8.1 The limitations

This research is subject to several methodological and structural limitations that constrain both its empirical scope and the generalizability of its conclusions. A first and significant limitation pertains to data availability and consistency, particularly regarding ESG scores and reputation indicators within the diamond industry. Due to the small number of publicly listed companies in this sector and the high prevalence of privately held firms, comprehensive and standardized ESG data remains scarce. In many cases, firms had either ESG ratings or reputation-related data, but

rarely both, which necessitated a narrowing of the sample and restricted the scope of the statistical analysis.

The geographical distribution of companies further exacerbates this issue. Firms located outside the European Union, especially in jurisdictions with limited ESG disclosure mandates, tend to report selectively or not at all on sustainability-related indicators. In regions where ESG frameworks are still considered optional or lack institutional enforcement, data collection is fragmented and unreliable. This discrepancy in regulatory environments undermines cross-company comparability and limits the analytical robustness of ESG performance assessments.

A particularly critical constraint stems from geopolitical developments, namely the ongoing war between Russia and Ukraine. Russia is a significant player in the global diamond industry, as evidenced by its relationship with ALROSA, one of the world's largest diamond producers, which plays a pivotal role in global supply chains. Following the outbreak of the conflict in 2022 and the imposition of international sanctions targeting Russian entities, access to reliable and updated data on ALROSA and other Russian firms has been severely curtailed. These sanctions have affected both official company disclosures and third-party financial databases such as Bloomberg and Refinitiv, which no longer provide detailed ESG or reputational data for sanctioned firms. This information vacuum has created a structural blind spot in the dataset, significantly limiting the representativeness of the sample particularly since ALROSA accounts for almost 30% of global rough diamond production by volume.

Moreover, the concentration of market power within the diamond sector constitutes a structural limitation. The industry is dominated by a small number of vertically integrated actors such as De Beers (a subsidiary of Anglo American), ALROSA, and Lucara, who control large segments of upstream and midstream activities. This oligopolistic configuration reduces the variance in firm size, visibility, and sustainability reporting practices, making it difficult to draw statistically meaningful distinctions between firms. Additionally, because many actors operate within privately held structures or in jurisdictions with minimal transparency obligations, their exclusion from standard ESG datasets introduces a systematic bias in empirical analyses.

Another important limitation is related to the complexity and opacity of diamond supply chains, which often involve intermediaries, subcontractors, and multi-jurisdictional operations. Even when ESG disclosures are available at the corporate level, they may fail to capture risks embedded in lower-tier suppliers or in joint ventures operated through opaque partnerships. As a result, firm-level ESG ratings may understate exposure to ethical controversies, especially those linked to artisanal mining, child labour, or conflict financing. Lastly, the temporal dimension of the data introduces constraints. ESG performance and reputation are both dynamic and path-dependent, but available data often consist of yearly snapshots or aggregated scores, which obscure intra-annual fluctuations or short-term crisis responses. The absence of high-frequency data limits the ability to model how reputation evolves before, during, and after reputational shocks with sufficient granularity.

To summary, the limitations outlined above reflect a series of structural, geopolitical, and methodological constraints that affect the integrity and scope of the empirical investigation. The scarcity and fragmentation of ESG and reputational data, particularly in a sector dominated by opaque ownership structures and uneven regulatory environments, hinder cross-firm comparability and reduce the explanatory power of statistical models. Moreover, the exclusion of key market actors, the lack of granularity in time-series data, and the difficulty in tracing risks embedded in complex supply chains contribute to a partial and potentially biased representation of the industry's ESG landscape. These constraints do not invalidate the results obtained but do place necessary boundaries on their generalizability. They also highlight the importance of cautious interpretation and underscore the need for complementary research strategies capable of capturing the nuances that elude standard ESG datasets.

8.2 Future Research Directions

Building on the limitations identified in the present study, several promising avenues emerge for future research, both to refine the empirical foundations of ESG analysis in the diamond industry and to broaden the conceptual understanding of how reputational dynamics unfold in high-risk sectors.

A first direction would involve expanding the methodological toolkit beyond conventional ESG ratings and firm-reported data. Standard ESG datasets, while useful, often suffer from self-reporting biases and inconsistent coverage across firms and regions. Future studies could enrich analytical depth by integrating alternative data sources such as satellite imagery, civil society monitoring reports, and machine learning approaches to sentiment analysis derived from media and NGO discourse. These sources may reveal inconsistencies between stated ESG commitments and on-the-ground practices, particularly in contexts where third-party verification remains limited or absent.

Secondly, further research would benefit from in-depth, qualitative case studies of firms operating in fragile or low-transparency jurisdictions. These studies could offer detailed insights into how ESG policies are implemented internally, how firms manage conflicting stakeholder expectations and reputational risks during periods of crisis. This approach would improve our understanding of how ESG frameworks are operationalised beyond formal disclosure metrics.

Third, comparative analyses across extractive industries such as gold, cobalt, and rare earth minerals or oil could help contextualize the challenges specific to the diamond sector. Despite common reputational vulnerabilities, each industry operates under different consumer expectations, regulatory landscapes, and geopolitical pressures. A cross-sector perspective would offer insights into which governance mechanisms have proved most effective in aligning ESG performance with reputational resilience.

A fourth area of interest concerns the institutional context within which ESG practices are developed and perceived. Future research could examine how differences in legal enforcement, media freedom, civil society engagement, and political stability shape ESG transparency and stakeholder expectations. These dynamics are particularly relevant in jurisdictions characterized by regulatory capture, limited civic oversight, or contested governance, where ESG reporting may serve strategic rather than normative purposes.

Another avenue worth exploring is end consumers' perceptions of ESG practices. It would be useful to analyse the extent to which consumers are sensitive to diamond companies' environmental, social and governance commitments, and whether they consider the ethical origin

of the diamonds they purchase to be important. Such a study would provide a better understanding of whether sustainability efforts influence purchasing behaviour and brand reputation building. It would also pave the way for reflection on the role consumers can play in the transition to a more responsible diamond industry by exerting indirect pressure through their consumption choices.

Finally, further investigation is needed into the impact of international sanctions and geopolitical tensions on ESG disclosure and stakeholder engagement. The case of ALROSA, a major diamond producer that has been excluded from key financial databases due to international sanctions, demonstrates the limitations imposed on data access, as well as how ESG priorities can be reconfigured in politically sensitive environments. Research could explore whether firms under such constraints use ESG narratives to maintain access to global capital markets, or if isolation altogether reduces incentives for transparency.

9. Appendix

9.1 Table 1: Description of variables

Table 1: Description of Variables

Variable	Description	Unit / Type	Source
Dependent Variables (Financial Performance)			
ROA	Return on Assets = Operating Income Before Depreciation / Total Assets	%	Compustat / Bloomberg
ROE	Return on Equity = Net Income / Common Equity	%	Compustat / Bloomberg
Revenue	Net Sales	USD (log)	Compustat / Bloomberg
ESG Scores			
ESG_score	Environmental, Social and Governance overall score	Index (0–1)	ESG Dataset / Bloomberg
E_score	Environmental pillar score	Index (0–1)	ESG Dataset / Bloomberg
S_score	Social pillar score	Index (0–1)	ESG Dataset / Bloomberg
G_score	Governance pillar score	Index (0–1)	ESG Dataset / Bloomberg
Control Variables (Firm Characteristics)			
Leverage	Financial Leverage = Total Debt / Total Assets	Ratio	Compustat / Bloomberg
AssetTangibility	Tangible Assets = Gross PPE / Total Assets	Ratio	Compustat / Bloomberg
Liquidity	Liquidity Ratio = Current Assets / Current Liabilities	Ratio	Compustat / Bloomberg
SalesGrowth	Sales Growth = $(Sales_t - Sales_{t-1}) / Sales_{t-1}$	%	Compustat / Bloomberg
BookToMarket	Book-to-Market Ratio = Common Equity / Market Value	Ratio	Compustat / Bloomberg
Employees	Number of Employees (in thousands)	Numeric	Compustat / Bloomberg
MarketCap	Market Capitalization = Shares Outstanding × Price Close	USD (log)	Compustat / Bloomberg
Time and Other Controls			
fyear	Fiscal Year dummies from 2020 to 2023	Categorical	Compustat / Bloomberg

9.2 Table 2: Pearson Correlation Matrix

Table 2: Pearson Correlation Matrix

	ESG_score	E_score	S_score	G_score	ROA	ROE	MarketCap	Revenue	Employees	Leverage	BookToMarket	AssetTangibility	SalesGrowth
ESG_score	1												
E_score	0.22	1											
S_score	0.65***	0.27	1										
G_score	0.66***	0.27	0.42**	1									
ROA	0.34*	0.11	0.27	0.26	1								
ROE	0.16	0.11	-0.09	0.02	0.69***	1							
MarketCap	0.08	0.18	-0.06	0.16	0.31*	0.48**	1						
Revenue	0.49**	0.32*	0.48**	0.40**	0.59***	0.15	-0.06	1					
Employees	-0.14	-0.12	-0.03	-0.07	-0.05	-0.03	-0.02	0.16	1				
Leverage	0.39*	0.06	0.29	0.34*	-0.17	-0.51***	0.00	0.22	-0.07	1			
BookToMarket	-0.15	-0.13	0.13	-0.38*	-0.05	-0.08	-0.17	-0.13	0.10	0.13	1		
AssetTangibility	-0.29	0.53***	-0.16	0.15	-0.24	-0.29	-0.09	0.08	-0.13	-0.35*	-0.31*	1	
SalesGrowth	0.26	-0.19	0.22	0.10	0.29	0.19	0.03	0.08	0.06	0.12	0.14	0.08	1

Note: The table shows Pearson correlation coefficients.
Significance levels: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
Only the lower triangle of the symmetric matrix is shown for readability. The diagonal is set to 1 by definition.

9.3 Marange Diamond Mining in Zimbabwe

With a mining sector accounting for 12% of GDP and making a massive contribution to national exports, Zimbabwe is banking on its underground riches to achieve the ambitious target of USD 12 billion in annual revenues set by its Vision 2030. The country abounds in strategic resources, including diamonds, concentrated in Marange, which are home to 25% of the world's reserves (Musariwa et al., 2023).

The Marange diamonds were discovered in April 2006, shortly after De Beers withdrew from the region (Maguwu, 2022). By October of the same year, almost 35,000 miners and traders were converging on this rural region, upsetting its socio-cultural balance. This effervescence, described as a 'global rush' because of the diversity of the players involved, created tensions between local populations and new arrivals over issues of belonging, legitimacy and control of resources (Katsaura, 2010).

a) The Discovery and Militarisation of the Marange Mines

ZANU-PF (Zimbabwe African National Union-Patriotic Front) has been the dominant political party in Zimbabwe since the country gained independence in 1980. Originally founded as a national liberation movement, it was led for almost 40 years by Robert Mugabe, then by Emmerson Mnangagwa after the 2017 coup. Although it played a key role in the struggle against British colonial rule, ZANU-PF is criticised for its authoritarianism, disastrous economic management and heavy involvement in corruption, particularly in the exploitation of natural resources such as Marange diamonds. The partial privatisation of the mines has not improved the situation, as it has mainly enabled factions of the ruling party to strengthen their hold on the resources. Known for its disregard for international agreements, the Zimbabwean government eventually adopted policies in line with the Kimberley Process (Munier, 2016).

There are two main factions competing for influence within ZANU-PF:

- The Mujuru faction, led by former vice-president Joice Mujuru and her late husband, General Solomon Mujuru. This group promoted informal and poorly regulated mining, diverting part of the revenues to finance its own interests (Munier, 2016).

- The Mnangagwa faction, led by current vice-president Emmerson Mnangagwa, which has consolidated its control over the official diamond trade and used the Kimberley Process regulations to secure its market share (Munier, 2016).

The Zimbabwean government initially allowed 20,000 illegal miners to work on the Marange site. However, rather than sell their diamonds to the authorities, these miners preferred to sell them on the black market, often via Mozambique and South Africa. In response, the government deployed 600 police officers (ZRP) to secure the area, but instead of putting an end to illegal mining, they organised a sophisticated system of corruption. The police asked for bribes from the miners and allowed them to form police-controlled unions. A miner had to pay around USD 100 to access a mining site, and the police took up to 50% of the profits from diamond sales (Towriss, 2013).

In 2007, a Kimberley Process (KP) monitoring mission validated Zimbabwe's compliance with the rules of the process. However, from 2008, growing concerns emerged about acts of violence and smuggling linked to mining. In response to these violations, in July 2009 the KP's Working Group on Monitoring (WGM) recommended that Zimbabwe be suspended. However, this proposal was rejected by influential states such as Russia, South Africa, Namibia and the Democratic Republic of Congo, which blocked the implementation of this sanction (Wexler, 2023).

In October 2008, Mugabe deployed the Zimbabwe National Army (ZNA) in the Marange diamond fields under Operation Hakudzokwi (which means ‘You will not return’ in Shona), resulting in the deaths of at least 200 people in just five weeks. The aim of the operation was to drive out the artisanal miners, who represented the region's main source of income at a time of hyperinflation and economic crisis (Maguwu, 2013; Towriss, 2013).

The Zimbabwean Minister of Mines also opposed the decision, denouncing it as an attempt by Western nations to undermine the Zimbabwean economy. A compromise was then agreed upon involving a gradual army withdrawal from the mines while imposing stricter controls. However, further reports subsequently indicated that the army continued to dominate mining, raising questions about the effectiveness of the measures put in place (Wexler, 2023).

Tendai Biti, Minister of Finance in the government of national unity, revealed in 2010 that USD 30 million from diamond exports from Marange had disappeared without a trace from the public treasury accounts. This announcement highlighted the rampant corruption and total lack of transparency in the management of diamond revenues (Towriss, 2013).

The security forces, notably the Zimbabwe National Army (ZNA), the Zimbabwe Republic Police (ZRP) and the Central Intelligence Organisation (CIO), have directly benefited from diamond resources by controlling the sale of gems on the black market, thereby depriving the state of official revenue (Towriss, 2013). According to Nyamunda & Mukwambo (2012), ZANU-PF elites used these resources to finance the survival of the Mugabe regime, while excluding artisanal miners from the benefits.

b) Mining Governance and Corruption

Between 2006 and 2009, no revenue was recorded despite massive exploitation. Up to 400,000 people are thought to have been involved in illegal extraction and resale. In 2010, the first official sales brought in USD 85.29 million, but some of the funds did not reach the public treasury. In 2011, reported revenues (USD 233.74 million) were much lower than expected, due to diversions and undeclared exports. In 2012, although exports reached USD 563.56 million, a large part of the revenue escaped the authorities, and nearly USD 2 billion was reported to have been embezzled over three years. In 2013, forecasts were reduced to USD 400 million due to financial leaks and a lack of transparency. The sector is controlled by several companies, some of which have been implicated in corruption and placed under international sanctions. The main problem is the lack of effective regulation and coordination between institutions, which encourages massive misappropriation of funds (Manenji, 2017).

In 2010, former president Robert Mugabe publicly admitted that $15 billion from the diamond trade had disappeared. This lack of transparency weakened the credibility of the government and companies involved in mining (Mugova & Sachs, 2019).

In 2011, the Zimbabwean government, via the Minerals Marketing Corporation of Zimbabwe, entered into joint ventures with private companies to exploit diamond mines, an initiative supported

by the Kimberley Process. Mbada Diamonds, run by someone close to Mugabe, and Marange Resources, owned by a former military officer, have been accused of corruption and non-compliance with certifications, while circumventing the controls of the process. In the same year, the Democratic Republic of Congo took over the chairmanship of the Kimberley Process, which led to the lifting of sanctions against Zimbabwe in November, despite the controversies surrounding these companies. This decision was seen as motivated by political alliances rather than a desire for transparency, which led several NGOs, including Global Witness, to withdraw from the Kimberley Process. Their departure heightened criticism of the process's lack of independence and its inability to guarantee effective regulation of the diamond trade (Munier, 2016).

c) Environmental and social issues

Diamond mining in Marange has led to massive degradation of the land and ecosystems. Illegal and artisanal mining has led to severe soil erosion and uncontrolled deforestation, affecting local biodiversity. In addition, pollution of rivers by mine tailings and chemicals has compromised access to drinking water for neighbouring populations. The absence of strict regulations has led to the over-exploitation of resources, making the land infertile and unusable for farming. At the same time, uncontrolled extraction has led to lasting environmental disruption, with craters left open and deposits of untreated mining waste. The failure of the authorities to impose environmental standards has exacerbated this damage, threatening the sustainability of local ecosystems (Musariwa et al., 2023).

The police committed numerous abuses, including murders, torture and beatings of artisanal miners. This violence has continued, with hundreds of other deaths reported. The police regularly carry out arbitrary raids on villages, ransacking houses, arresting people without a warrant and demanding ransoms for their release (Maguwu, 2022).

Mining has led to an explosion in sexual violence and the exploitation of young girls, particularly in Hot Springs, Mukwada and Birchenough Bridge, where prostitution has become widespread. Girls aged between 12 and 16 are dropping out of school to marry or become prostitutes, with a failure rate of 75%. Many teenage girls become pregnant and are abandoned, while cases of HIV/AIDS infections are multiplying. The militarisation of the mines has also led

to sexual abuse by soldiers and foreign workers, resulting in the birth of mixed-race Sino-Zimbabwean babies. Corruption and a lack of state control allow companies like Anjin and Mbada Diamonds to continue exploiting without regard for human rights, leaving women in a cycle of poverty, abuse and exclusion (Muchadenyika, 2015).

Women from the community have also reported sexual assaults perpetrated by the military under the pretext of digging for diamonds. Some have been raped as punishment or sexually exploited to gain access to the mines. Militarisation has also restricted fundamental freedoms: residents must obtain special permits to travel, even within their own community. The cars of Marange residents require a special licence costing $400 more than for other Zimbabweans, or they are forced to use expensive and limited public transport. Repression also extends to the media and NGOs, which are prevented from investigating abuses. The community is isolated from the rest of the country, prevented from meeting or protesting, and lives under a regime of terror (Maguwu, 2022).

The participation of women in the mining sector, although recognised, remains marginal. In large mining companies, the proportion of women employed generally does not exceed 10%, and those who are hired are mostly in administrative or junior positions. Large-scale mining often leads to environmental degradation, which has a greater impact on women. Women must travel longer distances to find drinking water and firewood, which increases their domestic workload (Muchadenyika, 2015).

The current legislative framework does not permit the equitable distribution of wealth generated by mining. Community Share Ownership Trusts (CSOTs), which are intended to distribute 10% of mining revenues to local communities, are frequently exploited by political figures (Musariwa et al., 2023).

9.4 Limitations of the Kimberley Process: A Case Study of the Central African Republic

In the Central African Republic (CAF), rough diamonds only gain commercial value once they are cut and polished abroad, making their trade within the local market particularly complex. Consequently, artisanal miners depend heavily on pre-financiers who provide them with the necessary funds for extraction in exchange for a share of the eventual revenue. This trust-based

system was severely weakened when the country was suspended from the Kimberley Process in 2015, leading to a sharp decline in legal trade and a corresponding increase in smuggling activities. Purchasing offices such as Badica were sanctioned for conducting transactions in areas controlled by armed groups. The breakdown of the formal trading network has allowed smugglers to offer miners more competitive prices than official buyers, further weakening the existing infrastructure. Between 2016 and 2020, the value of diamonds illegally exported from the country was estimated between $183 million to $240 million (Beevor, 2024).

The legal export procedures in CAF are lengthy and complex, often discouraging miners and traders from using the formal market. Introduced in 2019, the remote inspection system, which relies on visual analysis of diamond parcels after export, has proven to be ineffective, potentially allowing fraudulent practices to continue. Poor image quality often makes batch assessment unreliable, and smugglers are reportedly able to replicate the expected fingerprinting criteria. Furthermore, the necessary documentation and images for inspection are often submitted with significant delays of several months. This has led to challenges in timely intervention by the monitoring team, as suspicious batch are already exported, and the stones are then distributed on the market with limited administrative traceability (Beevor, 2024).

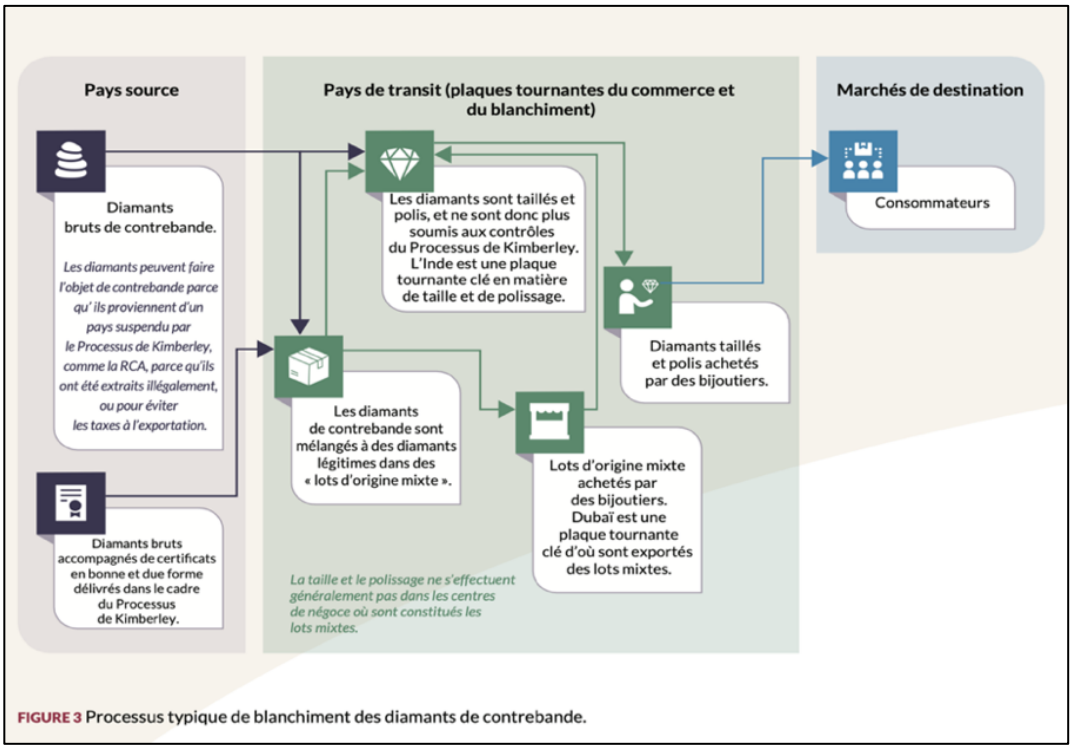

FIGURE 3 Processus typique de blanchiment des diamants de contrebande.

Reference: (Beevor, 2024)

There are three primary strategies that are commonly used to avoid the Kimberley Process:

- Mixing with legal diamonds: Rough diamonds are mixed with stones that have been sourced legally before being sealed at sub-prefecture offices, allowing them to be exported through official channels.
- Smuggling into neighbouring countries: Diamonds are trafficked into neighbouring states, particularly Cameroon, where their origin is laundered using falsified certificates. The stones are then exported to known hubs for diamond laundering, such as Dubai, or sent to India to be cut and polished, thereby evading Kimberley Process oversight. (***see map below***)
- Direct export by air: Some diamonds are flown directly to destinations such as Dubai or India, where they are cut, polished, and later integrated into mixed-origin parcels that often lack proper traceability (Beevor, 2024).

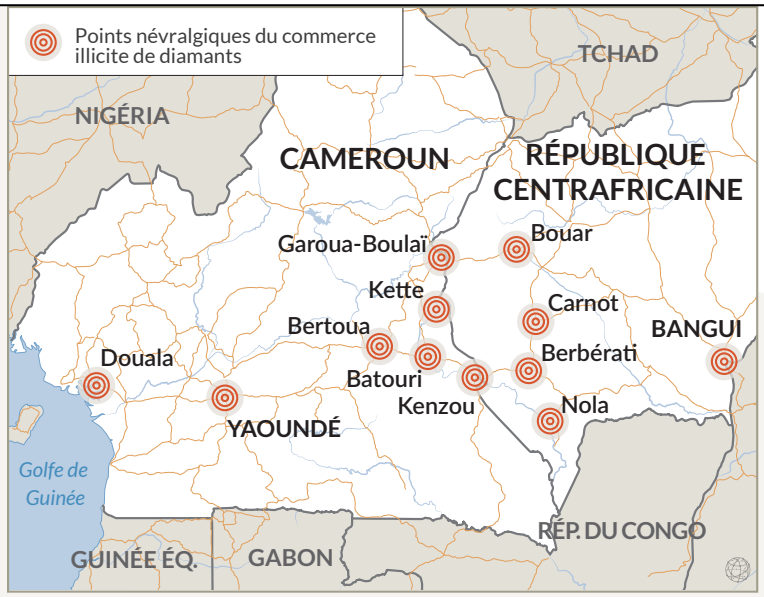

FIGURE 4 Points chauds du commerce illicite de diamants dans le sud-ouest de la République centrafricaine et l'est du Cameroun.

SOURCE : GI-TOC, Cartographie des plaques tournantes illicites en Afrique de l'Ouest, https://wea.globalinitiative.net/illicit-hub-mapping/fr/

Reference: (Beevor, 2024)

Dubai is a well-known centre for diamond laundering. The absence of adequate oversight regarding mixed-origin parcels, coupled with the utilization of fraudulent certificates, facilitates the entry of illicit diamonds into the legitimate market. Voluntary industry mechanisms are insufficient to curb these practices (Beevor, 2024).

Armed groups such as the "Séléka" and the "FPRC" derive income from diamonds through:

- Taxing mines, goods, and services.
- Taking a percentage of the diamond production.
- Imposing payments at roadblocks, including those operated by security forces such as Wagner (Beevor, 2024).

Unlike diamonds, gold is easier to extract and trade, and it maintains its value even in local markets. The increase in gold prices in 2020 resulted in more exports and in the first quarter of 2023, gold production in CAF was five times higher than diamond production. (Beevor, 2024).

The Kimberley Process was established to limit the ability of rebel groups to fund their operations through the trade of rough diamonds. However, the case of the Central African Republic demonstrates the high adaptability of these groups in securing financing. These groups have diversified their revenue streams, no longer relying solely on diamond trade, and have established taxes on various economic activities, including artisanal gold mining (Beevor, 2024).

In response to these challenges, companies like De Beers have introduced initiatives such as GemFair to enhance traceability and provide assurance to consumers. NGOs like Amnesty International continue to advocate for reforms to improve transparency and accountability within the diamond industry (Schulte et al., 2021).

9.5 Stock Market Reactions to Controversies Surrounding the Kimberley Process

The empirical study conducted by William Hutchins Seitz (2016), published in ***Business and Politics***, provides a rigorous analysis of how financial markets responded to a series of pivotal events related to the regulation of conflict diamonds. Specifically, the study examines the economic

effects of the Kimberley Process Certification Scheme (KPCS), established in 2003 to prevent the circulation of rough diamonds that finance armed conflicts (Seitz, 2016).

Using the event study methodology, Seitz measures cumulative abnormal returns (CARs) on the stock prices of a broad set of publicly traded companies in the diamond industry, including both mining firms and retail jewellers. The sample spans the period from 1999 to 2011 and includes firms operating across the entire value chain of the diamond sector. The events analysed range from UN Security Council resolutions and national legislation implementing the KPCS to internal decisions and public controversies affecting the scheme's credibility, such as the Wikileaks revelations and the withdrawal of Global Witness (Seitz, 2016).

a) Significant Impacts on Mining Companies

The findings reveal that mining companies were particularly sensitive to regulatory and political decisions. For example, when the UN Security Council announced a global embargo on diamonds from Sierra Leone on 5 July 2000, the average stock returns of mining companies declined by more than 9 % over a three-day window and by over 11 % over five days. Similarly, the ratification of the Clean Diamond Trade Act by the U.S. Senate in April 2003 coincided with a statistically significant decline in returns for mining companies, approximately -2.5 % over three days (Seitz, 2016).

These results challenge prior assertions that the KPCS may have benefitted large mining firms through regulatory capture. While some commentators had suggested that the scheme would consolidate the market by excluding informal or non-compliant actors, the evidence indicates that investors anticipated regulatory compliance to impose substantial costs rather than offering competitive advantages. The negative reactions suggest concerns about operational constraints, reduced market access or elevated compliance expenses (Seitz, 2016).

b) Reputational Sensitivity Among Retail Jewellers

In contrast, retail jewellery companies exhibited a different pattern of response. Rather than reacting primarily to formal regulatory developments, these firms were more affected by events that undermined the public perception of the KPCS's legitimacy. For instance, the resignation of

Ian Smillie, a key architect of the KPCS, in June 2009 resulted in abnormal returns of -3.8 % to -5.8 % for jewellery companies, depending on the event window analysed. Similarly, the Wikileaks revelations in December 2010, which exposed serious human rights violations in Zimbabwe's Marange diamond fields despite their KPCS certification, were followed by significant declines in the stock prices of retailers (Seitz, 2016).

By contrast, developments indicating an expanding legal supply led to positive market responses. An illustration is the unilateral decision in March 2011 by Mathieu Yamba, then Chair of the Kimberley Process, to permit diamond exports from Zimbabwe in opposition to Western member states. Retail jewellery companies made statistically significant gains. This likely reflects investor optimism regarding greater access to supply and increased bargaining power for retailers (Seitz, 2016).

c) Structural Divergence of Interests

A key insight from Seitz's study is the structural divergence of market responses between upstream and downstream segments of the diamond industry. No event in the dataset produced a statistically significant and simultaneous movement in the same direction for both mining and retail companies. This divergence underscores the distinct economic incentives at play: while mining firms are directly exposed to regulatory constraints, retail jewellers are primarily concerned with consumer-facing reputational risks (Seitz, 2016).

It is also worth noting that many institutional developments within the KPCS, such as plenary meetings or procedural reforms, had no measurable effect on market valuations, indicating that only events perceived as credible signals of change or crisis were priced in by investors (Seitz, 2016).

d) Conclusion

The study by Seitz (2016) provides compelling empirical evidence that conflict diamond regulations have exerted real and measurable impacts on firms in the diamond industry. Contrary to claims that the Kimberley Process would serve primarily the interests of large mining firms, the research demonstrates that such companies experienced significant losses in stock market value

following major regulatory actions. This suggests that regulatory compliance was viewed as painful rather than beneficial, at least in the short-term perspective of investors.

At the same time, the findings highlight the centrality of reputational concerns for retail jewellers. Events that compromised the perceived legitimacy of the KPCS, such as allegations of non-compliance or the withdrawal of civil society stakeholders, prompted an immediate negative reaction in the market. In this context, the KPCS serves not only as a technical regulatory framework, but also as a symbolic guarantee of ethical sourcing. This is essential for maintaining consumer trust and, by extension, shareholder value.

The Kimberley Process, therefore, should not be viewed merely as a symbolic exercise in ethical governance. Rather, it exemplifies how reputational and regulatory dynamics intersect in global markets, and how financial actors respond accordingly. For policymakers and industry leaders, this underscores the need for coherent, credible and transparent mechanisms if regulatory efforts are to be both ethically meaningful and economically sustainable.

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