

ORIGINAL ARTICLE **OPEN ACCESS**

Reputational Damage of Bank Misconduct: The Role of Regulation and ESG Performance

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Received: 17 November 2024 | **Revised:** 6 June 2025 | **Accepted:** 14 June 2025

Keywords: corporate governance performance | ESG performance | misconduct | reputational losses | sanctions

ABSTRACT

This study investigates the reputational losses incurred by banks due to detected misconduct and the impact of bank ESG performance on this reputational damage. We use a unique dataset of 400 fines assigned to 39 European listed banks from 2009 to 2022 by US and EU regulatory agencies. Applying the event study methodology, we demonstrate that detected misconduct leads to significant reputational losses. European banks suffer higher reputational penalties when sanctioned by domestic (EU) regulators rather than foreign (US) regulators. Moreover, banks' global ESG performance significantly mitigates reputational losses resulting from detected misconduct. Among the three sub-pillars of ESG performance, governance performance is shown to be crucial in reducing this reputational damage.

JEL Classification: G21, G34

1 | Introduction

The reputation of banks is in sharp decline due to misconduct. Since the start of the 2007–2008 subprime mortgage crisis that led to a full-blown financial crisis in Europe between 2008 and 2012, global financial institutions have experienced intense regulatory scrutiny to detect any misconduct (Resti 2017; Faugere and Stul 2021). This brought a greater-than-ever number of sanctions being imposed worldwide. Over the period 2008–2018, the 20 leading international banks paid misconduct fines amounting to £377 billion (Centre for Banking Research 2020), while from 2020 to 2023, regulators across the globe issued penalties of about \$26.8 billion to financial institutions (Fenergo 2023). US regulators are proven to be distinctly more active than Europe in sanctioning banks (Flore et al. 2021; Korzeb et al. 2024) and have hit foreign financial institutions particularly hard over the last 10 years (Arnaboldi et al. 2021; Fenergo 2023).

Preventing bank misconduct is a priority for financial regulators (Arnaboldi et al. 2021). Misconduct risk is a critical issue not only because it negatively affects banks' economic and financial performance but also because it erodes trust and public confidence in the safety and soundness of the financial sector, thus threatening bank reputation and financial stability (Fabrizi et al. 2021; Del Gaudio et al. 2022; D'Avino and Tselika 2024). Another priority of financial regulators is, therefore, to mitigate reputational damage following bank misbehavior. Our paper falls within this area and aims to investigate the effect of domestic versus foreign regulators and ESG performance on bank reputational losses resulting from detected misconduct.

Previous literature shows that the announcements of detected bank misconduct determine significant reputational losses for the affected financial companies (Brous and Leggett 1996; Jordan et al. 1999; Zeidan 2013; Fabrizio et al. 2021). Some characteristics

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of the monetary penalties, specifically the severity, the repetitiveness, and the type of violations, may influence this reputational damage (Pereira et al. 2019; Arnaboldi et al. 2021; Flore et al. 2021; Gowin et al. 2021). Some bank-specific factors can also impact reputational risk in the financial industry, that is, bank size, profitability, nationality, risk tolerance, and capitalization (Fiordelisi et al. 2013; Sturm 2013; Ferreira et al. 2019). Although previous studies have investigated the determinants of bank reputational losses arising from detected misconduct, some questions remain open. Specifically, it would seem that the role played by domestic versus foreign regulators in determining reputational losses and that of ESG performance remains totally unexplored as far as the banking industry is concerned.

Our paper attempts to fill these gaps. The analysis exploits a unique sample of 400 monetary sanctions imposed by US and EU regulators on 39 listed European banks between 2009 and 2022. The fines issued by US regulators are extracted from the Violation Tracker database, while those assigned by EU supervisors come from a unique hand-collected database comprising all monetary sanctions issued by the European Central Bank (ECB) and the National Supervisory Authorities (NSA), manually retrieved from official websites. We apply the event study methodology to investigate the role played by foreign versus domestic regulators in determining the reputational damage caused by detected misconduct. Furthermore, we investigate the possible mitigating effect of ESG performance on reputational penalties. Our findings, confirmed by several robustness checks, clearly show that bank shareholders assign higher reputational penalties to European banks when sanctions are assigned by domestic rather than foreign regulatory authorities. Moreover, our results demonstrate that these reputational losses are mitigated by high ESG performance and, specifically, a high level of governance performance.

The study of the reputational effects of detected misconduct in the banking industry is important for several reasons. First, banking activity relies heavily on trust and credibility. Since the global financial crisis revealed several instances of misconduct and unethical managerial behavior in the financial sector, confidence in banks has decreased drastically. Hence, reputational risk is one of the most significant risks currently confronting banks (Adeabah et al. 2023). Second, financial companies are highly interconnected and thus play a critical role in achieving global economic stability. Misconduct-related penalties may, therefore, become a source of systemic risk for the whole financial industry (European Systemic Risk Board 2015; Fabrizi et al. 2021; D'Avino and Tselika 2024). Third, the banking industry is highly regulated, with the responsible agencies having a large degree of autonomy when setting the rules for corporate behavior (Korzeb 2024). In this context, supervisory and regulatory styles may affect the reputational damage of detected misconduct. Furthermore, a specific focus on European banks is particularly interesting for two main reasons. First, it allows us to shed light on the influence of the introduction of the Single Supervisory Mechanism (SSM), which was created to strengthen financial system oversight, on detected bank misconduct. Second, as the US is the most important law enforcer both for US and European financial companies (Flore et al. 2021), the focus on European banks allows us to compare the effects of monetary sanctions issued by both domestic (EU) and foreign (US) regulators.

This study makes several contributions to the literature. First, we contribute to the research on the indirect effects of bank misbehavior (Pereira et al. 2019; Fabrizi et al. 2021; Flore et al. 2021). On the one hand, some previous papers in this field indicate that enforcement actions imposed on financial institutions are often followed by significant reputational losses (Fabrizi et al. 2021; Flore et al. 2021). On the other hand, further studies have investigated the characteristics of bank reputational damage (Gillet et al. 2010; Fiordelisi et al. 2013; Sturm 2013). Among this strand of literature, Fiordelisi et al. (2014) focus on the geographical context, showing that reputational losses of financial companies are greater in Europe than in North America. However, to our knowledge, no previous studies have so far investigated whether reputational penalties, specifically consequential to bank misbehavior, depend on the nationality of the plaintiffs. Hence, our paper adds to the existing literature by studying the reputational impacts of detected bank misconduct and comparing the effect of monetary sanctions imposed by domestic versus foreign regulators. This also enriches the literature on the effects of different supervision and regulatory styles in the financial industry (Carretta et al. 2015; Corbet and Larkin 2017; Korzeb 2024). Second, we contribute to the research on the impacts of ESG engagement in the banking sector. Previous studies in this area have focused on the relationship between ESG performance and bank risks (Chiaramonte et al. 2022). These studies show that higher ESG outcomes specifically reduce systemic (Curcio et al. 2024) and operational risks (Galletta et al. 2023). Surprisingly, to our knowledge, no paper has yet investigated the impact of ESG engagement on reputational risk in the banking sector. Hence, our paper expands current knowledge on the role of ESG performance in mitigating reputational risk resulting from detected misconduct. Third, we add to the research on the effect of corporate governance on bank risks (Srivastav and Hagendorff 2016; Anginer et al. 2018). The extant literature in this field has demonstrated that some corporate governance characteristics such as the quality of board monitoring and advising (Nguyen et al. 2016), board gender diversity (Arnaboldi et al. 2021), the CEO's tenure (Altunbaş et al. 2018), the proportion of independent directors and board size (Wang and Hsu 2013), significantly impact conduct risk in the banking sector. However, to our knowledge, no previous study has yet focused explicitly on how corporate governance affects reputational damage following misbehavior. Hence, our paper innovates the extant literature by investigating how high corporate governance quality in banks reduces reputational penalties following detected misconduct.

The remainder of this paper is organized as follows: Section 2 reviews the literature and develops three research hypotheses. Sections 3 and 4 describe the sample and the methodology. Section 5 presents the results, while Section 6 contains robustness tests and additional analyses. Finally, Section 7 presents the discussion and conclusions.

2 | Literature Review and Hypotheses Development

2.1 | Bank Misconduct and Reputational Losses

Financial regulators define conduct risk as “the current or prospective risk of losses to an institution arising from an

inappropriate supply of financial services, including cases of willful or negligent misconduct" (EBA 2014) and "the risk of inappropriate, unethical or unlawful behaviour on the part of an organization's management or employees" (European Systemic Risk Board 2015). How conduct risk manifests is manifold. They include mis-selling products in retail and wholesale markets, pressuring customers into cross-selling, creating barriers to switching financial products or service providers throughout a customer's life, and handling customer complaints unfairly (Resti 2017). Several strands of the literature examine misconduct and related conduct risk in the financial industry.

One strand of studies investigates the driving factors of detected misbehavior in banks. They show that the incidence of sanctions and enforcement actions is significantly affected by bank size (Sakalauskaite 2017), profitability (Del Gaudio et al. 2022), and risk-taking (Shive and Forster 2017; Lambert 2019). Some corporate governance factors, that is, the quality of board monitoring and advising (Nguyen et al. 2016), board gender diversity (Arnaboldi et al. 2021), the CEO's tenure (Altunbaş et al. 2018), the proportion of independent directors, and board size (Wang and Hsu 2013) are also identified as key determinants of conduct risk.

Another strand of the literature examines the direct costs of enforcement actions and sanctions imposed for bank misconduct. These costs are related to the decrease in bank capitalization, stability, profitability, and willingness to lend (Peek and Rosengren 1995; Köster and Pelster 2017; Caiazza et al. 2018; Danisewicz et al. 2018; Guerello et al. 2019). Other direct costs are related to the impact of enforcement actions and sanctions on a bank's risk profile, specifically on non-performing loans and risk-taking (Delis et al. 2017; Caiazza et al. 2018).

The third strand of the literature concentrates on the indirect costs of conduct risk. These costs are related to the adverse reactions of banks' stakeholders to the news of detected misconduct. Thus far, the literature has mainly focused on bank shareholders and investigated the negative stock market reactions registered by listed banks following the announcement of their misbehavior. The decrease in stock market returns due to the news of fraud, sanctions, and/or enforcement actions is considered a good proxy of the reputational damage consequential to these events (Karpoff et al. 2008; Gillet et al. 2010; Armour et al. 2017; Arnaboldi et al. 2021; Fabrizi et al. 2021; Gowin et al. 2021). Reputational risk behaves, in fact, like a secondary (derivative) risk (Cummins et al. 2006; EBA 2014; Adeabah et al. 2023), that is, a risk that occurs following a primary risk. Conduct risk is, therefore, a primary risk that can generate reputational damage. For this reason, the EBA (2014) requires banks to consider the number of sanctions received from official bodies during the year when conducting the assessment of their reputational risk. In this context, the negative stock market returns following detected misconduct registered by listed banks have been used by previous scholars to estimate the reputational damage related to conduct risk.

There is a body of literature on reputational penalties consequential to conduct risk within and outside the financial industry. In an event study setup, Karpoff et al. (2008) examine the penalties imposed on the 585 firms targeted by SEC enforcement actions for financial misrepresentation from 1978 to 2002. They find that the reputational losses, defined as the expected loss in the

present value of future cash flows due to lower sales and higher contracting and financing costs, are over 7.5 times the sum of all penalties imposed through the legal and regulatory system. Using the same methodology, Armour et al. (2017) show that reputational penalties registered by UK firms after 40 enforcement actions imposed by UK regulators were nearly nine times the size of fines. Other studies applying the same event study setup, focus specifically on financial companies. Seminal empirical evidence in this area comes from Brous and Leggett (1996) and Jordan et al. (1999). They find that the announcements of formal enforcement actions assigned to US banks by US regulators result in a large negative abnormal stock return for sanctioned banks. Zeidan (2013) identifies significant negative stock market reactions pursuant to 164 enforcement actions assigned to 128 publicly traded banks by US regulatory authorities from 1990 to 2009. The study shows that the adverse market reaction does not vary meaningfully in accordance with the severity and repetitiveness of the violations. These results partially conflict with the evidence by Pereira et al. (2019), who analyze 1526 enforcement actions against 423 US banking institutions assigned by US supervisory authorities from 2004 to 2015. They find that the formal announcement of enforcement actions leads to negative equity market reactions for the affected banks, and the severity of the sanction is a key driver of this negative reaction. Moreover, Gowin et al. (2021) collect 308 enforcement actions and sanctions issued by US regulators to US financial institutions from 2000 to 2018. Their results show that civil monetary penalties adversely affect banks' value in the next quarter, and neither the magnitude nor the type of violation can moderate this reputational damage. Furthermore, Arnaboldi et al. (2021) study the impact of 146 sanctions, resulting in either civil or criminal fines, issued by US regulators on 13 European-listed banks from 2009 to 2018. Using a standard event study methodology, the authors find that sanctions are followed by significant reputational losses and that economic sanction violations prompt significantly negative stock market returns in contrast to banking business, market, and administrative violations. Additionally, Fabrizi et al. (2021) study the security returns of 30 banks involved in the LIBOR scandal from March 2011 to December 2013. The authors find that banks accused of, or sanctioned for, manipulating LIBOR suffered significant reputational penalties after the announcement date. Finally, Flore et al. (2021) examine the stock market reactions to 251 enforcement actions exceeding \$5 million, assigned to 23 listed US and European banks by US and European regulators between 2005 and 2015. Although their analysis is limited to only 1 day preceding and 1 day after the announcement of the fines, they surprisingly show a limited but positive equity market reaction to the resolution of legal proceedings, both in the case of US and European plaintiffs. The authors interpret this evidence by considering that the announcement of sanctions removes the uncertainty concerning legal proceedings. Furthermore, Flore et al. (2021) show that bank stock returns following the news of enforcement actions are more pronounced in the case of higher monetary penalties.

Although some previous papers identify the existence of significant reputational penalties consequent to detected misconduct in the banking sector (Zeidan 2013; Arnaboldi et al. 2021; Fabrizi et al. 2021; Gowin et al. 2021), some open questions on the reputational damage following bank misbehavior remain. Specifically, the role of the regulatory and supervisory context in which

banks are embedded, specifically of the regulator's nationality, seems almost totally unexplored. Most previous papers (Brous and Leggett 1996; Jordan et al. 1999; Zeidan 2013; Pereira et al. 2019; Gowin et al. 2021) concentrate, in fact, on the reputational damage following enforcement actions and sanctions assigned to US financial companies from US (domestic) regulators. On the contrary, Arnaboldi et al. (2021) investigate the reputational penalties related to fines issued on European banks by US (foreign) supervisors. Only Flore et al. (2021) consider both US and European plaintiffs in their analyses of US and European banks, but the authors limit their analysis to the very short-term. Furthermore, they do not distinguish between domestic and foreign regulatory enforcers. Therefore, to our knowledge, extant literature has not yet investigated whether and how domestic versus foreign regulators' sanctions against the same bank determine different bank reputational penalties.

This is surprising given that sociology scholars show that compliance with the law and corporate discrimination lawsuits are highly affected by both the legal and political climate (Skaggs 2009) and the geographical contexts (Tomaskovic-Devey and Stainback 2007). Moreover, financial regulation is an issue where differences between Europe and the US are highly sensitive (Pugliese 2016) as the national culture and values are shown to significantly affect supervisory styles (Carretta et al. 2015; Korzeb 2024). Therefore, it is reasonable to expect that sanctions assigned to European banks may have a different reputational impact depending on whether they are issued by domestic or foreign regulators. This issue is particularly interesting considering that the US is distinctly more active than Europe in sanctioning banks (Flore et al. 2021; Fenengo 2023). Moreover, the US is the most important law enforcer not only for US banks but also for European ones (Flore et al. 2021). Since 2008, US regulators have, in fact, assigned aggressive sanctions against non-US banks, and European financial institutions have been fined four times more than their US counterparts by US regulators (Fenengo 2018; Arnaboldi et al. 2021). From a financial supervision perspective, US regulators are perceived as more stringent and severe than European ones, and their sanctions are generally heavier (Pugliese 2016). Moreover, US regulatory enforcers have greater international media visibility than their European counterparts. All of this can reasonably affect the reputational impact on banks that receive sanctions. All these differences between US and European regulators can reasonably affect the reputational impact on sanctioned banks.

Based on these considerations and the previous literature described above, we formulate the following research hypothesis:

H1. *The reputational damage suffered by European banks after detected misconduct is higher when fines are assigned by foreign rather than domestic regulators.*

2.2 | Bank ESG Engagement and Reputational Losses

Reputational penalties are critical for banks as their operations rely heavily on trust and credibility. Given that damage to reputation can significantly threaten the long-term survival of financial companies by compromising their competitiveness and their sus-

tainable development (Adeabah et al. 2023), the Basel Committee on Banking Supervision (BIS 2009) explicitly inserts reputational risk among Pillar II risks to be assessed within the internal capital adequacy assessment process (ICAAP). More specifically, European banks are required to identify potential sources of reputational risk to which they are exposed in terms of potential primary risk types, measure the amount of losses they might experience under adverse market conditions, and include reputational risk scenarios in regular stress tests (BIS 2009; EBA 2014).

Previous literature investigates reputational penalties in the banking sector from various perspectives.

The first strand of studies focuses on their measurement (De Fontnouvelle and Perry 2005; Gillet et al. 2010; Fiordelisi et al. 2014; Sturm 2013; Eckert and Gatzert 2019; Trostianska and Semench 2020). Within this research area, the most used approach for estimating reputational penalties consists of quantifying the adverse stock market reactions registered by banks following the announcement of the primary risk and estimating the excess of the loss in market value over the primary loss amount (Gillet et al. 2010; Fiordelisi et al. 2014; Sturm 2013; Zeidan 2013; Fiordelisi et al. 2014; Arnaboldi et al. 2021; Fabrizi et al. 2021; Gowin et al. 2021).

A further strand of the literature identifies the main implications of reputational losses in banks, that is, increased cost of capital and loss of customers, employees, business partners, and competitive advantage (Autore et al. 2019; Barakat et al. 2019; Trostianska and Semench 2020).

The third research area empirically investigates the factors affecting bank reputational damage (Gillet et al. 2010; Fiordelisi et al. 2013; Sturm 2013). Some of these studies focus on bank-specific variables and find that the reputational penalties increase as bank size, profitability (Fiordelisi et al. 2013), and risk tolerance (Ferreira 2019) increase but decrease in well-capitalized banks (Fiordelisi et al. 2013; Sturm 2013). Gillet et al. (2010) also identify bank nationality as a critical determinant of reputational damage in both European and US financial companies. Other studies concentrate on the characteristics of the primary loss that determine the reputational penalty. This literature finds that the relative size of the primary loss (Gillet et al. 2010) and its related event type (Gillet et al. 2010; Fiordelisi et al. 2013; Ferreira et al. 2019) and business line (Fiordelisi et al. 2013) significantly impact bank reputational losses. Further scholars focus on the role of external factors in affecting reputational penalties in the banking sector. Specifically, Barakat et al. (2019) find that the negative and litigious media tones following the announcements of the primary loss have an adverse reputational effect, while the uncertain media tone mitigates this negative impact. Moreover, Barakat et al. (2018) demonstrate that equity analyst recommendations increase reputational losses, while credit ratings reduce the debt-based reputational damage caused by fraud incidents.

To our knowledge, the role of ESG performance in affecting reputational risk in the banking sector has not yet been investigated (Adeabah et al. 2023). Specifically, no studies have empirically tested the role played by ESG activities in affecting reputational losses due to detected misconduct. This is surprising for different

reasons. First, an extensive body of literature, both within and outside the financial industry, recognizes that involvement in ESG activities positively affects corporate reputation (Lin et al. 2016; Asante-Appiah and Lambert 2023; Galletta et al. 2023; Mandas et al. 2024). If ESG performance is proven to improve the reputation of banks, it is reasonable to assume that it may also mitigate their reputational losses. Second, previous literature shows that higher ESG performance reduces not only the overall risk of financial companies (Chiaromonte et al. 2022) but also some bank-specific risks, specifically systemic (Curcio et al. 2024) and operational risks (Galletta et al. 2023). Therefore, higher ESG outcomes of banks may rationally be expected to reduce also reputational risk. Third, previous literature on non-financial companies demonstrates that ESG engagement mitigates the risk of reputational penalties following negative events (Klein and Davar 2004) and is strategically used by firms to repair reputational damage following corporate controversies (Lin et al. 2016). Hence, ESG practices are assumed to allow companies to earn “moral capital,” which helps them maintain stakeholders’ trust in bad conditions. In this context, following the risk “mitigation view,” corporate investments in ESG activities act as insurance policies for firms to mitigate the negative effects of future unfavorable circumstances (Li et al. 2019; Su et al. 2024). As ESG engagement is shown to mitigate reputational damage following adverse events in non-financial companies, it is reasonable to expect this “insurance-like effect” to be even greater in the European banking sector. This sector was, in fact, one of the first industries to show sensitivity to ESG issues, with European financial supervisors issuing specific regulations regarding ESG risks for banks (ECB 2020; EBA 2022, 2023, 2024).

Based on these considerations and building upon the aforementioned studies, we test the role played by the ESG performance of banks in reducing their reputational losses consequential to detected misconduct. We thus formulate the following research hypothesis:

H2. *ESG performance allows European banks to mitigate the reputational damage following detected misconduct.*

3 | Sample and Data

3.1 | Sanction Data

To construct our dataset, we first collected data on fines imposed on the 27 EU, Swiss, and UK-listed banks by US and EU regulatory agencies from January 1, 2009 to June 30, 2022.

The US fines were extracted from the Violation Tracker database, the main wide-ranging database on corporate misconduct recognized by extant literature (Arnaboldi et al. 2021) that collects information on penalties imposed by US regulatory agencies since 2000.

In the absence of a specific database on fines issued by European regulators, information on the monetary sanctions assigned to European banks was hand-collected. Unfortunately, European banks do not disclose the monetary cost of sanctions separately in their financial reports, and the availability of this information differs by country. To overcome this limitation, we created

a unique and original database by hand-collecting monetary sanctions issued by the European Central Bank (ECB) and the National Supervisory Authorities (NSAs) participating in the SSM. Sanctions issued by the ECB were retrieved from the ECB Banking Supervision website, while those issued by NCAs were retrieved from each national website. We do not consider fines imposed by the Swiss Financial Market Supervisory Authority as it publishes only anonymized fines. We also excluded the monetary sanctions assigned by UK regulatory agencies because their enforcement processes, involving only one public announcement accompanied by complete information on legal penalties, are not comparable to those of the European Central Bank (ECB) and the National Supervisory Authorities (NSAs) participating in the SSM (Armour et al. 2017).

Sanctions without a specific announcement date were deleted from the sample and we aggregated any sanctions assigned to the same bank into a single amount on the same day. Overall, we collected 400 fines imposed from 2009 to 2022 on 39 listed banks from the following 15 European countries: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain, Switzerland, Sweden, and the United Kingdom.

The final database contains the following information on the fines: the amount, the date, the type, an indication of whether it is civil or criminal¹, a short description of the offense, and the regulator assigning the sanction. The fines refer, among other behaviors, to charges for banking violations, money laundering practices, economic sanction violations, market manipulations, investor and consumer protection violations, tax violations, accounting and data submission deficiencies, and employment discrimination. Appendix 1 reports the complete list of the types of sanctions, while Appendix 2 shows some illustrative case studies that highlight the reasons behind the imposition of both civil and criminal sanctions. Focusing specifically on criminal sanctions, these typically involve severe penalties imposed on financial institutions for engaging in unlawful activities, such as violating economic sanction laws, facilitating money laundering, or manipulating financial markets. For instance, BNP Paribas was sentenced for conspiring to process transactions for sanctioned entities, while HSBC faced prosecution for violations of the Bank Secrecy Act and other regulations.

Table 1 shows the distribution of civil and criminal sanctions assigned to the sample banks by EU and US plaintiffs from January 1, 2009 to June 30, 2022.

Table 1 highlights some interesting evidence. First, US regulators imposed more sanctions on European-listed banks than EU regulators. Specifically, US regulatory agencies assigned 303 fines, significantly more than the 97 imposed by EU agencies. This supports previous evidence that US plaintiffs adopted a more aggressive approach to enforcing compliance, especially after the 2008 financial crisis (Flore et al. 2021; Arnaboldi et al. 2021; Korzeb 2024). Second, US and EU regulatory agencies overwhelmingly favored civil over criminal sanctions. Civil cases represent, in fact, the majority of fines assigned by US plaintiffs (282 out of 303), while criminal cases were relatively rare. This trend is even more pronounced when considering EU regulators, which imposed few criminal sanctions (6 over 97), which were

TABLE 1 | Number of sanctions assigned by plaintiff and year.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
US regulatory agencies	8	13	16	12	26	24	43	34	33	40	21	17	13	3	303
<i>Civil</i>	6	11	15	10	26	23	39	34	32	37	17	17	12	3	282
<i>Criminal</i>	2	2	1	2	0	1	4	0	1	3	4	0	1	0	21
EU regulatory agencies	0	10	2	2	7	4	0	6	12	15	24	12	3	0	97
<i>Civil</i>	0	10	2	2	6	4	0	6	10	14	24	11	2	0	91
<i>Criminal</i>	0	0	0	0	1	0	0	0	2	1	0	1	1	0	6
Total	8	23	18	14	33	28	43	40	45	55	45	29	16	3	400

Note: This table shows the distribution of civil and criminal fines assigned to the sample banks by EU and US plaintiffs from January 1, 2009 to June 30, 2022.

also sporadic (no more than 2 per year). This suggests a greater emphasis on civil penalties and corrective measures over punitive criminal actions. These data highlight a substantial discrepancy in regulatory intensity between US and EU agencies, with US agencies being more active and punitive, especially concerning civil sanctions. This may be explained by the increased regulatory powers introduced under the Dodd-Frank Wall Street Reform and Consumer Protection Act, which was enacted in response to the 2008 financial crisis. This legislation significantly expanded the powers of US plaintiffs, including the Securities and Exchange Commission (SEC) and the Department of Justice (DOJ). Dodd-Frank provided US regulators with enhanced enforcement authority, which included more extraordinary powers to pursue foreign banks operating within the USA or transacting in US dollars. This effectively brought many EU-based banks under closer scrutiny if they conducted substantial business within the US financial system. Regulatory culture differences may also explain dissimilarities between US and EU enforcement activity (Carretta et al. 2015; Korzeb 2024). The US regulators traditionally adopt a more aggressive enforcement approach than many EU ones. The latter historically relied more on cooperation and internal corrective measures than punitive sanctions (Pugliese 2016). Indeed, EU regulators tend to emphasize structural and compliance changes over fines, resulting in fewer but often broader regulatory actions within the EU.

Finally, considering the investigated time horizon, Table 1 shows that US regulatory agencies assigned the most fines between 2015 and 2018. Specifically, the highest numbers of sanctions were registered in 2015 (43) and 2018 (40). This period aligns with enhanced post-crisis regulatory scrutiny and enforcement efforts under the Dodd-Frank Act in the USA. However, EU plaintiffs imposed the most sanctions from 2017 to 2019, peaking in 2019 with 24 sanctions. Overall, a noticeable decline in assigned sanctions emerged after 2019, perhaps reflecting improved compliance among banks.

3.2 | Variables

Our sample consists of 39 European-listed banks affected by regulatory sanctions over the 2009–2022 period. We extracted bank ESG information from Asset4-Refnitiv Eikon, balance sheet and income statement data from Orbis Bank Focus, stock

market data from Thomson Eikon, and country data from the World Bank database.

Specifically, we use the ESG score (ESG_P), ranging from 0 to 100, to measure bank ESG performance based on public and self-reported bank information. ASSET4-Refnitiv Eikon analysts collect objective, relevant, and updated ESG information based on more than 630 company-level ESG measures extracted from their original data sources, such as CSR reports, integrated reports, annual reports, and NGO websites (Refnitiv 2022). The ESG score is constructed by summing three main pillar scores: the environmental pillar (E_P), the social pillar (S_P), and the corporate governance pillar (G_P). The environmental pillar comprises three categories: emissions, innovation, and resource use. The governance pillar is also the result of three variables: management, shareholders, and CSR strategy. Finally, the social pillar comprises four categories: workforce, human rights, community, and product responsibility.

Some bank-specific control variables are also considered in the empirical analyses. Specifically, profitability (ROE) and size (SIZE) are used, as extant literature suggests that these can significantly affect bank reputational damage (Pereira et al. 2019; Arnaboldi et al. 2021; Flore et al. 2021). We also consider inefficiency (INEFF) and risk (RISK), as previous studies show that bank reputational penalties rise as bank efficiency decreases (Pereira et al. 2019) and risk increases (Pereira et al. 2019; Arnaboldi et al. 2021; Flore et al. 2021). Moreover, bank capitalization (EQ) and liquidity (LIQ) are included in our study as they can impact bank reputational risk (Pereira et al. 2019; Arnaboldi et al. 2021; Flore et al. 2021). In detail, profitability (ROE) is proxied by the return on equity, calculated as net income from average shareholders' equity, while size (SIZE) is estimated as the natural logarithm of total assets. Bank inefficiency (INEFF) is measured by the cost-to-income ratio (the higher the ratio, the higher bank inefficiency), and the annualized volatility of daily stock returns quantifies bank risk (RISK). Furthermore, capitalization (EQ) is calculated as tangible common equity over total assets, while liquidity (LIQ) is proxied by the net stable funding ratio.

Previous literature shows that the severity of fines may also influence the banks' reputational damage due to detected misconduct (Pereira 2019; Arnaboldi et al. 2021; Flore et al. 2021; Gowin

et al. 2021). Thus, we consider the sanction amount (SANC), measured by the natural logarithm of the dollar amount of fines ($\ln SANC$). Following Flore et al. (2021), we also calculate the relative monetary penalties (RMP), that is, the size of penalties on bank market capitalization (MC). As criminal fines are shown to be more harmful than civil ones to the stakeholders of the bank (Pereira et al. 2019; Flore et al. 2021; Gowin et al. 2021), we also consider a dummy variable (TY) that equals 1 in the case of criminal sanction, and 0 in the case of civil sanctions. Furthermore, to test Hypothesis 1, we capture the nationality of regulators assigning the fines by the variable AG, proxied by a dummy taking values 0 and 1, respectively, for sanctions assigned by EU and US regulatory agencies.

The GDP growth rate (GDP), calculated as the annual percentage growth rate of GDP per capita based on constant local currencies and extracted from the World Bank database, is an additional control variable used in our analyses. Table 2 shows definitions, calculation methods, and data sources for all the variables considered.

3.3 | Descriptive Statistics

Table 3, Panel A reports descriptive statistics about the sanctions. The mean and median fine amounts are 169.51 million and 2 million dollars, respectively. Considering the relative monetary penalties (RMP), that is, the size of penalties on bank MC, the average and median values are 0.387% and 0.006%, respectively. This difference is due to some particularly large monetary penalties in the database. BNP Paribas reached a maximum of 8973 million dollars in 2015. Table 3, Panel A (a) shows that US authorities assigned 303 sanctions (76% of the sanctions on the sample banks), and their mean and median values are 222.10 million dollars and 5.25 million dollars, respectively. The mean and the median of fines assigned by EU plaintiffs are 5.34 million dollars and 0.27 million dollars, respectively, for 97 cases, that is, 24% of the sanctions on the sample banks. This confirms that US authorities, in general, are distinctly more active and more aggressive in terms of monetary penalties than EU enforcers in sanctioning banks. These data, related to the period 2009–2022, are consistent with the evidence of Flore et al. (2021) over the period 2005–2015. Table 3, Panel A (b) shows that the mean and the median of civil fines are 138.46 million dollars and 1.50 million dollars, while those of criminal fines are 514.82 million dollars and 78.48 million dollars, respectively. The fine database contains 367 cases of civil sanctions and 33 cases of criminal sanctions. This indicates that criminal fines are more severe and rarer than civil ones. This is consistent with previous evidence by Arnaboldi et al. (2021). Table 3, Panel A (c) reports the sample split according to bank nationality, specifically in EU (197 cases), UK (135 cases), and Swiss (68 cases) banks. The mean values of fines are 188.52, 188.33, and 150.03 million dollars for EU, UK, and Swiss banks, respectively. The median values are 4.59, 2.12, and 1.40 million dollars, respectively. This suggests that UK and Swiss banks paid higher penalties than the other EU banks between 2009 and 2022, as shown by Flore et al. (2021) over the period 2005–2015. Table 3, Panel B reports the descriptive statistics on bank-specific variables. It shows a significant variation in bank ESG performance, profitability, size, inefficiency, risk, capitalization, and liquidity.

Table 4 presents the variance inflation factor (VIF) and Pearson correlations. It indicates that VIF values and correlations between the variables are low. Therefore, our data presents no significant multicollinearity problems.

4 | Methods

4.1 | The Role of Regulators in Affecting Bank Reputational Losses Due to Misconduct

We use the event study methodology to answer our first research question (H_1), that is, to estimate the effect of sanctions announcements on bank stock prices. As suggested by Pereira et al. (2019) and Flore et al. (2021), we apply the market model (standard) event study originally described by Dodd and Warner (1983) and Brown and Warner (1985). Specifically, for each sanctioned bank, the stock market reaction is measured by the cumulative average abnormal return (CAAR) around the announcement date, using the standard market model (1):

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \quad (1)$$

where $R_{i,t}$ is the stock return of the bank i in the day t , $R_{m,t}$ is the return of the market index in the day t , and $\varepsilon_{i,t}$ is the white noise random component that is not correlated with $R_{m,t}$. The α_i and β_i are estimated by applying OLS-regression methodology for a time series of one full trading year (250 trading days) before the wider event window and regressing the daily returns for the stock i on the day t ($R_{i,t}$) on returns on the market index on day t ($R_{m,t}$). The estimated coefficients α_i and β_i are replaced in Equation (1) to calculate the expected return $\hat{R}_{i,t}$ for each bank i in Equation (2). Following previous literature (Gillet et al. 2010; Fiordelisi et al. 2013; Fabrizi et al. 2021), we adjust stock returns by adding the ratio between the monetary sanction (SANC) and the bank's MC. This adjustment represents the relative monetary penalty, that is, the penalty size relative to the bank's MC (Flore et al. 2021). The negative return resulting from the sanction event is added to the abnormal return at time 0 before computing the average abnormal return of each day t ($AR_{i,0}$) to isolate the reputational effect. Specifically, the abnormal return ($AR_{i,t}(Rep)$) following the sanction announcement of the bank i for day t is measured as follows (2):

$$AR_{i,t}(Rep) = R_{i,t} - \hat{R}_{i,t} + \left| \frac{SANC}{MC} \right| \quad (2)$$

where $\hat{R}_{i,t} = \alpha_i + \beta_i R_{m,t}$.

Following a standard approach, we consider various event windows before and after fines announcements: the widest event window extends from 20 days before the announcement day to 20 days after. This allows us to consider the possibility that the sanction event may have been forecast by investors or that the stock price reaction may have taken more days. The cumulative abnormal return $CAR_i(\tau_1, \tau_2)$ for each bank share i is determined by adding all the $AR_{i,t}$ for each day t within the event period $[\tau_1, \tau_2]$ (3):

$$CAR_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} AR_{i,t}(Rep) \quad (3)$$

TABLE 2 | Variable definition.

Variable	Description	Source
ESG performance (ESG_P)	An overall company score, ranging from 0 to 100, based on the self-reported information in the environmental, social, and corporate governance pillars.	Asset4
Environmental performance (E_P)	An overall company score, ranging from 0 to 100, based on the self-reported information in the environmental pillar.	Asset4
Social performance (S_P)	An overall company score, ranging from 0 to 100, based on the self-reported information in the social pillar.	Asset4
Governance performance (G_P)	An overall company score, ranging from 0 to 100, based on the self-reported information in the governance pillar.	Asset4
Profitability (ROE)	Return on equity, calculated as net income from average shareholders' equity.	Bank Focus
Size (SIZE)	The natural logarithm of market capitalization.	Thomson Eikon
Inefficiency (INEFF)	Cost-to-income ratio, calculated as total operating expenses against total operating income: the lower the ratio, the higher bank efficiency.	Bank Focus
Risk (RISK)	The annualized volatility of daily stock returns (3-year moving average).	Thomson Eikon
Capitalization (EQ)	Tangible common equity over bank total assets.	Bank Focus
Liquidity (LIQ)	The net stable funding ratio, calculated as available stable funding against required stable funding	Bank Focus
Sanction amount $Ln(SANC)$	The natural logarithm of the dollar amount of fines.	Violation Tracker and hand-collection by EU regulatory agencies' websites and press releases
Relative monetary penalty (RMP)	The size of penalties on bank market capitalization.	Violation Tracker, hand-collection by EU regulatory agencies' websites and press releases, Thomson Eikon
Sanctioning regulatory agency (AG)	A dummy variable taking values 0 and 1 for sanctions assigned by EU and US agencies, respectively.	Violation Tracker and hand-collection by EU regulatory agencies' websites and press releases
Type of sanction (TY)	A dummy variable taking values 0 and 1 for civil and criminal sanctions, respectively.	Violation Tracker and hand-collection by EU regulatory agencies' websites and press releases
GDP growth rate (GDP)	The annual percentage growth rate of GDP per capita based on constant local currencies.	World Bank database

Finally, the average CAR for the event period $[CAAR(\tau_1, \tau_2)]$ is calculated as the arithmetic mean of $CAR_i(\tau_1, \tau_2)$ for each of the n bank shares considered (4):

$$CAAR(\tau_1, \tau_2) = \frac{1}{n} + \sum_{i=1}^n CAR_i(\tau_1, \tau_2) \quad (4)$$

Four tests are calculated to determine whether the observed CAARs are statistically significant. As suggested by previous studies (Pereira et al. 2019; Flore et al. 2021), we employ two parametric tests: the t -test and the BMP test. The BMP test is the variance-change corrected standardized cross-sectional test introduced by Boehmer et al. (1991), calculated by adjusting the test statistic for serial dependence, as suggested by Mikkelsen and

TABLE 3 | Descriptive statistics.

	Obs	Mean	Median	S.D.	Min	Max
Panel A: Misconduct fines						
SANC (mL \$)	400	169.506	2.000	774.363	0.002	8973.600
RMP (%)	400	0.387	0.006	1.960	0.001	21.949
AG	400	0.758	1.000	0.429	0.000	1.000
TY	400	0.087	0.000	0.279	0.000	1.000
<i>(a) Plaintiff's nationality</i>						
USA (mL \$)	303	222.102	5.250	881.877	0.005	8793.600
EU (mL \$)	97	5.343	0.265	40.432	0.002	394.600
<i>(b) Criminal and civil</i>						
Civil (mL \$)	367	138.456	1.50	651.405	0.002	7200.000
Criminal (mL \$)	33	514.823	78.484	1549.568	0.002	8973.600
<i>(c) Bank regulation</i>						
Switzerland (mL \$)	68	188.519	4.590	678.863	0.006	5280.000
UK (mL \$)	135	188.332	2.119	699.568	0.005	5500.000
EU (mL \$)	197	150.027	1.400	853.126	0.002	8973.600
Panel B: Bank-specific and country variables						
ESG_P	378	79.754	81.020	10.898	25.540	95.390
E_P	378	86.860	89.390	10.805	13.270	98.990
S_P	378	81.904	84.740	10.191	33.470	97.580
G_P	378	77.513	80.890	15.612	19.140	97.370
ROE	400	0.054	0.078	0.163	−0.331	0.178
SIZE	400	17.315	17.381	0.909	11.704	19.522
EFF	400	0.715	0.692	0.161	0.448	1.288
RISK	400	0.392	0.341	0.181	0.040	0.781
EQ	400	0.139	0.118	0.112	0.001	0.390
LIQ	400	1.009	1.022	0.174	0.702	1.937
GDP	400	0.973	1.387	2.639	−9.100	25.000

Note: Observations, mean, median, standard deviation, minimum, and maximum. Definitions of the variables are reported in Table 2.

TABLE 4 | VIF analysis and Pearson correlation.

Variable	VIF	SANC	ESG_P	ROE	SIZE	EFF	RISK	EQ	LIQ	GDP	AG	TY
SANC	1.428	1.00										
ESG_P	1.309	0.059	1.00									
ROE	1.628	−0.000	0.274	1.00								
SIZE	1.984	0.051	0.464	0.355	1.00							
EFF	2.867	0.074	0.040	−0.351	−0.077	1.00						
RISK	1.507	−0.063	−0.215	−0.374	−0.364	0.187	1.00					
EQ	4.604	0.072	0.126	−0.074	0.219	0.399	0.197	1.00				
LIQ	3.276	0.031	0.119	0.204	−0.081	−0.059	−0.270	−0.366	1.00			
GDP	1.362	0.073	0.179	0.005	0.094	0.198	−0.123	0.375	−0.183	1.00		
AG	1.688	0.106	0.214	0.056	0.377	0.397	−0.188	0.392	−0.046	0.354	1.00	
TY	1.046	0.103	0.002	0.021	0.031	−0.009	0.014	0.030	−0.014	0.007	0.033	1.00

Note: Coefficients in bold are significant at 5%. Definitions of the variables are reported in Table 2.

Partch (1988). Moreover, we estimate two non-parametric tests (Pereira et al. 2019; Flore et al. 2021), that is, the rank test (CZ test) first introduced by Corrado (1989) and later refined by Corrado and Zivney (1992) and the Wilcoxon signed-rank test. Finally, to test the differences between CAARs of different subsamples, we calculate the two-sample *t*-test.

4.2 | The Role of ESG Performance in Mitigating Bank Reputational Losses due to Misconduct

To test our second research question (H_2), that is, to investigate whether bank ESG performance affects the reputational damage consequent to detected misconduct, we estimate the following OLS regression (5):

$$CAR_i(\tau_1, \tau_2) = \alpha_{i,t} + \beta_1 X_{i,t-1} + \beta_2 \sum Z_{i,t-1} + \beta_3 \ln(SANC)_{i,t} + \beta_4 AG_i + \beta_5 TY_i + \beta_6 GDP_{i,t-1} + \epsilon_{i,t} \quad (5)$$

where the dependent variable ($CAR_i(\tau_1, \tau_2)$) is the cumulative abnormal return for the *i*-th bank over the event window (τ_1, τ_2). X_i is alternatively proxied by ESG_P_{*i*} (Model 1), E_P_{*i*} (Model 2), S_P_{*i*} (Model 3), and G_P_{*i*} (Model 4), while Z_i is a vector containing the bank-specific variables described in Section 2.2. Equation (5) also considers some characteristics of the fines, specifically the sanction amount ($\ln SANC$), the type of sanction (criminal vs. civil) (TY), and the nationality (domestic vs. foreign) of regulators assigning the sanction (AG). Finally, the GDP growth rate (GDP) is an additional country control inserted in the model. To address the reverse causality potentially triggered by ESG performance characterizing a particular type of bank, we use lagged values of the regressors.

As banks endogenously choose their ESG performance, our estimations could be biased. To address the possible endogeneity concerns related to ESG performance, we conduct IV regressions and Heckman's (1978) two-step tests as robustness checks as shown in Section 6.1.

5 | Results

5.1 | The Reputational Impact of Detected Misconduct

Table 5 reports the evidence from the event study analyses for banks that received monetary sanctions between 2009 and 2022. Cumulative average abnormal returns (CAARs) are calculated across different event windows (20 days, 10 days, 5 days, 3 days, and 1 day before and after the event date, that is, Day 0), and their statistical significance is estimated across both parametric and non-parametric tests.

These results, related to all events in the sample, show that statistically significant reputational losses are registered from the day before (−0.23%) to 20 days after the news of fines (−1.19%, −1.37%, −1.48%, −1.54%, and −0.75% in the event windows [0,1], [0,3], [0,5], [0,10], and [0,20], respectively). On the one hand, this means that investors can only slightly forecast sanctions on the day before their announcements. This can be explained by

considering that there may be unintentional information leaks within organizations or regulatory bodies that could give the market an anticipatory signal before the formal announcement (Arnaboldi et al. 2021; Flore et al. 2021). On the other hand, these results show that stock price reaction takes more days, and the market reverses slightly between days +10 and +20. Specifically, the greatest reputational damage, reaching −1.54% of bank stock returns, is displayed in the 10 days following the news.

This evidence demonstrates that the monetary sanctions imposed on listed European banks for detected misconduct between 2009 and 2022 produced significant reputational damage for the affected banks. This confirms the previous results found in the EU (Arnaboldi et al. 2021; Fabrizi et al. 2021) and, especially, the US (Brous and Leggett 1996; Jordan et al. 1999; Zeidan 2013; Pereira et al. 2019; Gowin et al. 2021) banks.

We further conduct a subsample analysis by splitting the sample between banks receiving fines from foreign (US) regulators (303 cases) and domestic (EU) regulators (94 cases)². The related cumulative average abnormal returns (CAARs) are reported in Table 6.

Table 6, Panel A shows that statistically significant reputational losses are registered from the day before (−0.27%) to 20 days after the news of sanctions assigned by US regulators (−1.02%, −1.07%, −1.01%, −1.14%, and −1.30% in the event windows [0,1], [0,3], [0,5], [0,10], and [0,20], respectively). This suggests that the stock market reaction to the announcements is significantly negative and highest between 10 and 20 days following the news. Moreover, this evidence shows that investors can very slightly forecast the assignment of these sanctions the day before their announcements. On the other hand, Table 6, Panel B shows statistically significant reputational losses only in the days following day 0, and specifically in the event windows (0,1), (0,3), (0,5), (0,10), that report average CAARs equal to −1.76%, −2.36%, −3.02%, and −2.86%, respectively. This means that investors cannot forecast the assignment of sanctions to banks by domestic regulators and that the reputational penalties registered on the stock market are highest between 5 and 10 days following the news, showing some reversal between days +5 and +10.

Moreover, Table 6 shows that, in terms of reputational damage, the greatest reputational losses are suffered by European banks when fines are assigned by the EU rather than foreign US regulatory agencies. The two-sample *t*-tests calculated on the average CAARs registered in the event windows (0,1), (0,3), (0,5), and (0,10) in Panels A and B (Table 6) demonstrate that these differences are statistically significant. Furthermore, reputational losses suffered by European banks occur faster when fines are assigned by the EU rather than by foreign US plaintiffs. The evidence shown in Table 6, which leads to the rejection of Hypothesis 1 (H_1), is particularly interesting and new in the literature. Our results demonstrate for the first time that although the direct costs of sanctions imposed on European banks by foreign regulators are significantly higher than those assigned by domestic regulators, the indirect costs related to the reputational impact of detected misconduct are markedly different. European banks' shareholders assign, in fact, greater reputational penalties to banks sanctioned by EU regulators rather than US ones.

TABLE 5 | Event study analysis—Reputational losses consequential to bank misconduct.

Event window	Number of observations	CAAR (%)	<i>t</i> -test (<i>t</i> -value)	BMP test (<i>t</i> -value)	CZ test (<i>Z</i> -score)	Wilcoxon (<i>Z</i> -score)
(−20, −1)	400	−0.402%	−1.267	−2.268	−0.600	−0.641
(−10, −1)	400	−0.153%	−0.620	−0.723	−0.800	−0.745
(−5, −1)	400	−0.099%	−0.658	−0.808	−1.500	−1.528
(−3, −1)	400	−0.015%	−0.130	−0.712	−0.300	−0.284
(−1, 0)	400	−0.231%**	−2.460	−2.230	−3.100	−3.055
(0, 1)	400	−1.192%**	−8.105	−1.994	−4.200	−4.180
(0, 3)	400	−1.368%***	−7.236	−5.496	−5.300	−5.281
(0, 5)	400	−1.479%***	−6.231	−5.456	−4.800	−4.692
(0, 10)	400	−1.540%***	−5.464	−4.663	−4.200	−4.259
(0, 20)	400	−0.745%***	−2.307	−3.350	−1.800	−1.947

Note: This table shows the results of event studies carried out on 400 announcements of sanctions assigned by US and EU regulators to 39 European-listed banks from 2009 to 2022. The statistical significance of CAARs is verified using the *t*-test (T_1), the parametric test statistic (T_2) of Boehmer et al. (1991), the non-parametric Sign test (T_3) of Corrado and Zivney (1992), and the Wilcoxon signed-rank test (T_4). *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively (one-tailed test).

5.2 | ESG Performance and Reputational Losses

Table 7 presents the results from the OLS regression model (Equation 5) investigating the effect of ESG performance on bank reputational losses due to detected misconduct. We regress fine-specific, bank-specific, and country variables on cumulative abnormal returns (CARs) estimated for each sanctioned bank across the event window (0,10), which show the highest reputation losses (Table 5). In the robustness check, we further run Equation (5) using CARs registered in the event window (0,5) as the dependent variable.

Table 7, Model 1, shows that ESG performance reduces bank reputational losses consequential to detected misconduct. Specifically, the positive and statistically significant coefficient on ESG_P in Table 7, Model (1) (0.001) indicates that the higher the ESG performance, the lower the reputational damage following detected misbehavior. This finding is also economically significant³: a one-standard-deviation increase in ESG_P is associated with a 67.08% decrease in reputational losses estimated by the cumulative abnormal stock returns (CARs) in the event window (0, 10) (relative to the sample average CAR of −1.540%) based on the coefficient in Model (1). This evidence leads us to accept Hypothesis 2 (H_2). Our results demonstrate, for the first time in the literature, that ESG activities are useful for banks to protect their reputation when regulatory sanctions compromise it.

Regarding the bank-specific control variables, bank reputational damage is shown to increase as size and risk grow, as suggested by Pereira et al. (2019) and Flore et al. (2021). However, banks' reputational losses rise as profitability, efficiency, and capitalization decrease (Pereira et al. 2019; Flore et al. 2021). This suggests that larger and riskier banks suffer greater reputational penalties, probably because they tend to attract more media attention. On the other hand, high profitability, efficiency, and capitalization seem to protect a bank's reputation when it is

compromised by detected misconduct. Moreover, regarding the fine-specific control variables, the plaintiff's nationality matters in explaining banks' reputational losses. The dummy variable AG is, in fact, positive and statistically significant. This means that European banks' shareholders assign greater reputational penalties to banks sanctioned by domestic rather than foreign regulators, thus confirming the results of our univariate analyses reported in Table 6. However, neither the magnitude nor the type of violation (civil vs. criminal) affects the reputational damage consequential to detected misconduct, as shown by Gowin et al. (2021). On the one hand, this means that the reputational damage due to the bank's detected misconduct is mainly attributed by shareholders based on the imposition of the sanction rather than on its amount. On the other hand, even the type of loss does not matter. This means that civil and criminal sanctions produce similar reputational damage in terms of shareholders' reactions, although the criminal fines are rarer, more severe, and are the result of greater unethical behavior, and were therefore supposed to be more harmful to the banks' shareholders.

Moreover, we disaggregate ESG performance into its “E” (Model 2), “S” (Model 3), and “G” (Model 4) constituents. Our findings, reported in Table 7, show that only bank corporate governance performance (G_P) is useful in mitigating reputational losses caused by detected misbehavior, while environmental performance (E_P) and social performance (S_P) are not. This is quite reasonable given that, as suggested by Arnaboldi et al. (2021), misconduct episodes are often closely linked to governance failures. Specifically, the positive and statistically significant coefficient on G_P in Table 7, Model (4) (0.001) indicates that the higher the governance performance, the lower the reputational damage following detected misbehavior. This finding is also economically significant: a one-standard-deviation increase in G_P is associated with a 70.74% decrease in reputational losses estimated by the cumulative abnormal stock returns (CARs) in the event window (0, 10) (relative to the sample average CAR of −1.540%) based on the coefficient in Model (4).

TABLE 6 | Event study analysis—Reputational losses consequential to bank misconduct: US and EU regulation.

Panel A: Fines issued by foreign (US) regulators							Panel B: Fines issued by domestic (EU) regulators						
Event window	Number of obs.	BMP				Number of obs.	BMP				Difference in means (t-stat)		
		CAAR (%)	t-test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)		CAAR (%)	t-test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)			
(-20, -1)	303	-0.974%	-2.714	-3.181	-1.136	-1.068	94	1.420%	2.036	0.994	1.238	1.157	
(-10, -1)	303	-0.557%	-2.084	-1.599	-1.206	-1.157	94	1.136%	1.902	1.196	0.413	0.571	
(-5, -1)	303	-0.242%	-1.487	-1.092	-2.011	-1.984	94	0.444%	1.217	0.278	0.825	0.684	
(-3, -1)	303	-0.128%	-1.033	-0.534	-0.517	-0.641	94	0.360%	1.248	-0.475	0.413	0.374	
(-1, 0)	303	-0.273%**	-2.645	-2.038	-2.126	-2.084	94	-0.058%	-0.265	-0.746	-2.269	-2.076	
(0, 1)	303	-1.018%*	-6.227	-1.468	-2.815	-2.921	94	-1.759%***	-5.238	-2.341	-3.507	-3.3627	
(0, 3)	303	-1.071%***	-5.240	-3.734	-3.504	-3.476	94	-2.358%***	-5.114	-4.322	-4.538	-4.285	
(0, 5)	303	-1.014%***	-4.434	-3.294	-2.815	-2.736	94	-3.019%***	-4.373	-4.860	-4.745	-4.683	
(0, 10)	303	-1.138%***	-4.170	-3.095	-2.815	-2.682	94	-2.857%***	-3.515	-3.597	-3.507	-3.694	
(0, 20)	303	-1.296%***	-3.589	-4.034	-2.470	-2.574	94	0.991%	1.360	0.253	0.619	0.428	

Note: This table shows the results of event studies carried out on 400 announcements of sanctions assigned by US (Panel A) and EU (Panel B) regulators to 39 European-listed banks from 2009 to 2022. The statistical significance of CAARs is verified using the *t*-test (T_1), the parametric test statistic (T_2) of Boehmer et al. (1991), the non-parametric Sign test (T_3) of Corrado and Zivney (1992), and the Wilcoxon signed-rank test (T_4). The last column reports the two-sample *t*-test used to test the differences between CAARs of Panel A and B. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively (one-tailed test).

TABLE 7 | OLS regression—The effect of ESG performance on bank reputational losses.

	Model (1)	Model (2)	Model (3)	Model (4)
const	0.183* (0.099)	0.143 (0.096)	0.119 (0.098)	0.210** (0.099)
ESG_P _{t-1}	0.001** (0.000)			
E_P _{t-1}		0.001 (0.000)		
S_P _{t-1}			0.000 (0.000)	
G_P _{t-1}				0.001*** (0.000)
ROE _{t-1}	0.079*** (0.023)	0.088*** (0.023)	0.091*** (0.023)	0.092*** (0.022)
SIZE _{t-1}	-0.016*** (0.005)	-0.013** (0.005)	-0.009* (0.005)	-0.015*** (0.005)
INEFF _{t-1}	-0.121*** (0.038)	-0.086** (0.035)	-0.071** (0.034)	-0.067** (0.033)
RISK _{t-1}	-2.395** (1.090)	-2.291** (1.086)	-2.018* (1.078)	-2.265** (1.068)
EQ _{t-1}	0.206*** (0.075)	0.188** (0.074)	0.151** (0.071)	0.142** (0.070)
LIQ _{t-1}	0.053 (0.042)	0.052 (0.042)	0.036 (0.040)	0.015 (0.041)
Ln(SANZ)	0.001 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
AG	0.021** (0.011)	0.017* (0.010)	0.020* (0.010)	0.018* (0.010)
TY	0.016 (0.012)	0.015 (0.011)	0.013 (0.011)	0.018 (0.012)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	378	378	378	378
Adj. R-squared	0.183	0.152	0.145	0.165

Note: This table shows the coefficients and standard errors (in parentheses) obtained through ordinary least squares estimations using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. The sample consists of 39 European-listed banks that received 400 sanctions by US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

6 | Robustness Checks and Additional Analyses

6.1 | Robustness Checks

We run several additional regression models to check the robustness of our multivariate results.

First, we use an alternative measure of the independent variable to proxy the bank's ESG performance. Specifically, we consider the ESG combined score (ESGC_P) instead of the ESG score (ESG_P). The ESG combined score (ESGC_P), extracted from ASSET4-Refinitiv Eikon, ranges from 0 to 100. It combines both the ESG Score (ESG_P) and the ESG controversies score to give a holistic view of a company's ESG practices and controversies. Specifically, the ESG score (ESG_P) used in our main analysis measures ESG performance based on the company's self-reported information on environmental, social, and governance pillars. Instead, the ESG controversies score estimates the company's exposure to ESG-related controversies and negative events reported in the media, considering the frequency, severity, and impact of these controversies on the company's reputation and operations (Refinitiv 2022). Since the ESG combined score is derived by adjusting the base ESG score with the ESG controversies score, banks involved in significant controversies will have a lower ESG combined score, reflecting the negative impact of those events.

Therefore, while the ESG score (ESG_P) focuses purely on a company's sustainable practices, the ESG combined score (ESGC_P) provides a more complete picture by also considering the impact of ESG-related controversies. The results reported in Table 8, Panel A, show that independent of which variable is employed to proxy ESG outcomes, ESG performance is a useful tool for European banks to mitigate reputational damage due to detected misconduct. These findings confirm the results of our main analysis shown in Table 7.

Second, we run Equation (5) using CARs registered in the event window (0,5) as the dependent variable. Our results, reported in Table 7, Panel B, strongly confirm the previous findings of our main analysis related to the mitigating role of both ESG performance (Model 1) and governance performance (Model 4) on banks' reputational penalties consequential to detected misconduct.

Third, we recognize some possible endogeneity problems in our multivariate analysis. As in many ESG analyses, endogeneity could pose an issue when modeling the relationship between banks' self-reported ESG performance and bank reputational losses. The endogeneity of ESG performance could be attributed to European banks' potentially nonrandom adoption of ESG practices, giving rise to the problem of reverse causality. There is consensus that the implementation of ESG initiatives and the related reporting on ESG performance might be a choice that banks endogenously make to suit their own strategic goals and functioning environments (Chiaromonte et al. 2022). Omitted variable bias could be another source of endogeneity due to the challenges of determining all the factors driving bank reputational damages. To address the possible endogeneity concerns

TABLE 8 | OLS regression—Robustness checks.

	<i>Panel A: Alternative ESG measure</i>		<i>Panel B: Alternative event window</i>			
	Model (1)		Model (1)	Model (2)	Model (3)	Model (4)
const	0.105 (0.108)		0.018 (0.083)	0.007 (0.079)	0.003 (0.081)	0.030 (0.083)
ESGC_P _{t-1}	0.001* (0.000)					
ESG_P _{t-1}			0.001** (0.000)			
E_P _{t-1}				0.001 (0.000)		
S_P _{t-1}					0.000 (0.000)	
G_P _{t-1}						0.001** (0.000)
ROE _{t-1}	0.080*** (0.024)		0.096*** (0.020)	0.096*** (0.019)	0.102*** (0.019)	0.099*** (0.019)
SIZE _{t-1}	-0.011** (0.005)		-0.004*** (0.000)	-0.004** (0.001)	-0.001** (0.000)	-0.004*** (0.000)
INEFF _{t-1}	-0.096** (0.038)		-0.036*** (0.003)	-0.027** (0.005)	-0.008** (0.002)	-0.009** (0.002)
RISK _{t-1}	-2.429** (1.095)		-1.849** (0.918)	-2.041** (0.900)	-1.797** (0.894)	-1.896** (0.894)
EQ _{t-1}	0.237*** (0.079)		0.080*** (0.001)	0.088** (0.006)	0.052** (0.007)	0.048** (0.010)
LIQ _{t-1}	0.074 (0.045)		0.035 (0.036)	0.034 (0.035)	0.016 (0.034)	0.008 (0.034)
Ln(SANZ)	0.001 (0.001)		0.002 (0.001)	0.000 (0.001)	0.001 (0.001)	0.001 (0.001)
AG	0.023** (0.011)		0.022** (0.009)	0.018** (0.009)	0.019** (0.009)	0.019** (0.009)
TY	0.012 (0.012)		0.011 (0.010)	0.013 (0.010)	0.012 (0.009)	0.014 (0.009)
GDP _{t-1}	-0.000 (0.000)		-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	378		378	378	378	378
Adj. R-squared	0.177		0.215	0.209	0.201	0.206

Note: This table shows the coefficients and standard errors (in parentheses) obtained through ordinary least squares estimations using the cumulative abnormal stock returns (CARs) in the event window (0, 10) (Panel A) and (0,5) (Panel B) as the dependent variable. The sample consists of 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESGC_P or ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

related to self-reported ESG performance, an instrumental variable (IV) regression analysis 2sls is performed. As suggested by Anginer et al. (2018), we estimate the mean level of banks' annual ESG performance in the country where the bank is headquartered (which is strongly correlated with the endogenous regressor and uncorrelated with the error term) and use it as an instrument for bank ESG performance. Another variable employed as a further instrument of self-reported ESG performance is the ESG controversies score. This variable, extracted from ASSET4-Refinitiv Eikon, ranges from 0 to 100 and proxies the company's exposure to ESG-related controversies and negative events reported in the media. We test that the ESG controversies score is strongly correlated with the endogenous regressor and uncorrelated with the error term, thus confirming the validity of the instrument. The results of the IV 2sls regression analysis are reported in Table 9.

They are largely consistent with the evidence of our main analysis, thus confirming the mitigating role of ESG performance (Model 1) and governance performance (Model 4) on banks' reputational damage due to detected misconduct.

Nevertheless, despite using instrumental variable regressions, potential self-selection bias may persist in our analyses. To address this issue, we apply a Heckman selection model in regression (5). The selection equation classifies banks based on whether their ESG performance is above or below the median, controlling for relevant bank characteristics. A crucial aspect of identification in the Heckman models is the inclusion of a valid exclusion restriction, that is, a variable that influences the selection process but not the outcome equation. The mean level of banks' annual ESG performance in the country where the bank is headquartered serves this purpose effectively (Anginer et al. 2018), as it reflects the regulatory environment and ESG norms at the national level. These factors are likely to shape a bank's ESG performance but should be exogenous to reputational losses due to detected misconduct. Since the mean level of banks' annual ESG performance in the country where the bank is headquartered is correlated with a bank's ESG performance (as national ESG trends influence individual firms) but uncorrelated with reputational losses (which depend on firm-specific misconduct), it meets the conditions for a valid instrument in the selection equation. We employ a two-step Heckman regression model to correct properly for selection bias. In the first step, we estimate the Inverse Mills Ratio (IMR) using a probit regression, where the dependent variable is a dummy that takes the value 1 for banks with ESG performance above the median and zero otherwise. The mean level of banks' annual ESG performance in the country is the exclusion restriction. In the second step, we include the estimated IMR in the main regression to address the endogeneity issue. Table 10 presents the results of the two-step analysis, which remain consistent with our baseline findings.

Finally, as an additional robustness test, we bootstrap the standard error of Equation (5). The bootstrap method estimates regression errors by repeatedly resampling the dataset with replacement, refitting the model each time, and computing the variability of the estimated coefficients. The bootstrap method surpasses traditional approaches in assessing standard errors by eliminating distributional assumptions, remaining effective for small sample sizes, and accommodating complex statistics

that are difficult to estimate conventionally. This method allows us to re-estimate our results and correct for the generated regressor problem (1000 replications). The results obtained with bootstrapped standard errors, shown in Table 11, strongly confirm our main findings.

6.2 | Additional Analyses

We run some additional analyses to explore the reputational penalties following banks' detected misconduct and the role played by ESG performance in mitigating these penalties.

First, we create geographical subsamples and estimate CAARs disaggregating EU (Panel A), UK (Panel B), and Swiss (Panel C) banks. This criterion for sample disaggregation also reflects the difference between civil law (UK) versus common law countries (Swiss and EU) and between market-based (UK) versus bank-based economies (Swiss and EU). Furthermore, this additional analysis allows us to identify possible distinctions between banks under the ECB (EU countries) versus national central banks (UK and Switzerland). The results, shown in Table 12, confirm the existence of significant reputational losses following detected misconduct in all geographical areas covered in the event windows (0,1), (0,3), (0,5), and (0,10). The findings for UK banks (Table 12, Panel B) are consistent with those of Armour et al. (2017). Furthermore, we run Equation (5) on the three geographical subsamples. All these estimations confirm our previous findings⁴. Overall, this additional analysis demonstrates that listed banks from the EU, the UK, and Switzerland suffer reputational losses following detected misconduct, and ESG performance contributes to mitigating these losses.

We recognize that the financial market maturity might also influence reputational penalties. For this reason, we divide our global sample between two subsamples: 271 sanctions received by banks from countries characterized by high stock MC/GDP (i.e., over the median value of the sample) and 129 sanctions assigned to banks from countries characterized by low stock MC/GDP (i.e., under the median value of the sample). The results, reported in Table 13, show significant negative CAARs in both subsamples in the event windows (0,1), (0,3), (0,5), and (0,10). This means that detected misconduct produces significant reputational losses for banks operating in financial markets characterized by both high and low maturity.

Some previous literature shows that the magnitude of fines matters in determining banks' reputational losses (Pereira et al. 2019; Flore et al. 2021). Specifically, as higher sanctions tend to attract more media attention, they are expected to determine higher reputational penalties. Therefore, we divide the global sample into two subsamples according to the median value of the fines, as shown in Table 14. Specifically, we estimate the CAARs of banks receiving fines over (Table 14, Panel A) and under (Table 14, Panel B) the median value of the sanctions of the global sample. Table 14 reports negative and statistically significant CAARs in the event windows (0,1), (0,3), (0,5), and (0,10). Although these results show that higher reputational penalties are registered after sanctions higher than their median value, the two-sample *t*-tests calculated on the average CAARs in Panels A and B demonstrate that these differences are never statistically significant. This

TABLE 9 | IV 2sls regression—Robustness checks.

	Model (1)	Model (2)	Model (3)	Model (4)
const	0.183* (0.099)	0.209** (0.103)	0.129 (0.105)	0.244** (0.105)
ESG_P _{t-1}	0.001** (0.000)			
E_P _{t-1}		0.001 (0.001)		
S_P _{t-1}			0.001 (0.001)	
G_P _{t-1}				0.001** (0.000)
ROE _{t-1}	0.078*** (0.023)	0.082*** (0.023)	0.077*** (0.024)	0.088*** (0.023)
SIZE _{t-1}	-0.016*** (0.005)	-0.017** (0.007)	-0.012** (0.005)	-0.017*** (0.006)
INEFF _{t-1}	-0.125*** (0.038)	-0.137*** (0.044)	-0.127*** (0.039)	-0.104*** (0.038)
RISK _{t-1}	-2.334* (1.090)	-2.597** (1.121)	-2.199** (1.103)	-2.487** (1.094)
EQ _{t-1}	0.213*** (0.075)	0.236*** (0.082)	0.208*** (0.076)	0.191** (0.075)
LIQ _{t-1}	0.055 (0.043)	0.070 (0.045)	0.064 (0.044)	0.037 (0.044)
Ln(SANZ)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
AG	0.021* (0.011)	0.019* (0.011)	0.023** (0.011)	0.020* (0.011)
TY	0.018 (0.000)	0.017 (0.012)	0.013 (0.012)	0.022 (0.014)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	378	378	378	378
Adj. R-squared	0.185	0.181	0.168	0.185
Sargan <i>p</i> value	0.423	0.146	0.270	0.188

Note: This table shows the coefficients and standard errors (in parentheses) obtained through 2sls regressions using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. The sample consists of 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Two variables are used to instrument ESG performance: (i) the mean level of banks' annual ESG performance in the country where the bank is headquartered, and (ii) the ESG controversies score that proxies the bank's exposure to ESG-related controversies and negative events reported in the media. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

TABLE 10 | Heckman method—Robustness checks.

	Model (1)	Model (2)	Model (3)	Model (4)
const	0.304 (0.192)	0.338* (0.178)	0.299 (0.199)	0.331* (0.180)
ESG_P _{t-1}	0.001** (0.000)			
E_P _{t-1}		0.001 (0.001)		
S_P _{t-1}			0.000 (0.001)	
G_P _{t-1}				0.001** (0.000)
ROE _{t-1}	0.123 (0.150)	0.127 (0.148)	0.126 (0.153)	0.104 (0.144)
SIZE _{t-1}	-0.019** (0.009)	-0.021** (0.010)	-0.018** (0.009)	-0.019** (0.009)
INEFF _{t-1}	-0.132** (0.061)	-0.159** (0.073)	-0.134** (0.062)	-0.118* (0.061)
RISK _{t-1}	-3.377** (1.589)	-3.721** (1.660)	-3.338** (1.592)	-3.369** (1.585)
EQ _{t-1}	0.112 (0.120)	0.144 (0.131)	0.113 (0.121)	0.089 (0.120)
LIQ _{t-1}	0.062 (0.063)	0.074 (0.067)	0.066 (0.066)	0.050 (0.064)
Ln(SANZ)	0.001 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
AG	0.024* (0.013)	0.022* (0.013)	0.024* (0.013)	0.024* (0.013)
TY	0.016 (0.016)	0.015 (0.016)	0.015 (0.016)	0.017 (0.016)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
IMR	0.012 (0.029)	0.011 (0.027)	0.012 (0.028)	0.011 (0.027)
Observations	378	378	378	378

Note: This table reports the coefficients and standard errors (in parentheses) obtained through the second step of the Heckman two-step model using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. In the first step, we estimate the Inverse Mills Ratio (IMR) using a probit regression, where the dependent variable is a dummy that takes the value 1 for banks with ESG performance above the median and 0 otherwise. The mean level of banks' annual ESG performance in the country is the exclusion restriction. The sample consists of 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESGC_P or ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

TABLE 11 | OLS regression with bootstrapped standard errors—Robustness checks.

	Model (1)	Model (2)	Model (3)	Model (4)
const	0.183* (0.104)	0.143 (0.103)	0.119 (0.104)	0.210** (0.102)
ESG_P _{t-1}	0.001** (0.000)			
E_P _{t-1}		0.001 (0.000)		
S_P _{t-1}			0.000 (0.000)	
G_P _{t-1}				0.001*** (0.000)
ROE _{t-1}	0.079*** (0.031)	0.088*** (0.032)	0.091*** (0.030)	0.092*** (0.031)
SIZE _{t-1}	-0.016*** (0.007)	-0.013** (0.006)	-0.009* (0.008)	-0.015*** (0.007)
INEFF _{t-1}	-0.121*** (0.044)	-0.086** (0.043)	-0.071** (0.042)	-0.067** (0.044)
RISK _{t-1}	-2.395** (1.098)	-2.291** (1.097)	-2.018* (1.094)	-2.265** (1.096)
EQ _{t-1}	0.206*** (0.081)	0.188** (0.080)	0.151** (0.083)	0.142** (0.087)
LIQ _{t-1}	0.053 (0.046)	0.052 (0.049)	0.036 (0.047)	0.015 (0.045)
Ln(SANZ)	0.001 (0.002)	0.000 (0.001)	0.000 (0.002)	0.000 (0.001)
AG	0.021** (0.013)	0.017* (0.011)	0.020* (0.011)	0.018* (0.011)
TY	0.016 (0.014)	0.015 (0.015)	0.013 (0.013)	0.018 (0.014)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	378	378	378	378
Adj. R-squared	0.183	0.152	0.145	0.165

Note: This table shows the coefficients and bootstrapped standard errors (in parentheses) obtained through ordinary least squares estimations using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. The sample comprises 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

evidence is also confirmed when dividing the global sample into two subsamples according to the median value of the relative fines (RMP), that is, the size of penalties on bank MC⁵. This evidence confirms not only the results of our multivariate analysis (Equation 5) shown in Table 6, where the coefficient of the variable Ln(SANZ) is not statistically significant but also some previous studies (Zeidan 2013; Gowin et al. 2021). Overall, this additional analysis demonstrates that the reputational damage

due to the bank's detected misconduct is mainly attributed by shareholders based on the imposition of the sanction rather than on its amount.

Furthermore, we recognize that being listed in the USA or having an ADR certificate may be relevant for European-listed banks in estimating their reputational losses following sanctions assigned by US and EU plaintiffs. Therefore, we split our global sample

TABLE 12 | Event study analysis—Reputational losses consequential to bank misconduct across countries.

Event window	Number of observations	CAAR (%)	<i>t</i> -test (<i>t</i> -value)	BMP test (<i>t</i> -value)	CZ test (<i>Z</i> -score)	Wilcoxon (<i>Z</i> -score)
<i>Panel A: EU banks</i>						
(−20, −1)	197	0.110%	0.241	−0.449	0.214	0.225
(−10, −1)	197	0.239%	0.646	0.207	0.071	0.041
(−5, −1)	197	−0.009%	−0.036	−0.038	−0.356	−0.481
(−3, −1)	197	0.041%	0.217	−0.656	0.641	0.749
(−1, 0)	197	−0.169%	−1.199	−1.172	−1.496	−1.528
(0, 1)	197	−1.444%***	−6.788	−1.901	−4.346	−4.139
(0, 3)	197	−1.816%***	−6.455	−5.042	−5.344	−5.384
(0, 5)	197	−2.049%***	−5.379	−5.465	−4.774	−4.538
(0, 10)	197	−1.901%***	−4.221	−3.696	−3.634	−3.557
(0, 20)	197	−0.225%	−0.485	−1.234	−0.784	−0.694
<i>Panel B: UK banks</i>						
(−20, −1)	135	−0.911%	−1.756	−1.972	−0.086	−0.068
(−10, −1)	135	−0.370%	−0.889	0.172	−0.430	−0.381
(−5, −1)	135	−0.194%	−0.861	−1.094	−1.291	−1.167
(−3, −1)	135	−0.117%	−0.718	−0.581	−0.430	−0.222
(−1, 0)	135	−0.183%	−1.190	−1.538	−1.463	−1.528
(0, 1)	135	−0.847%*	−3.606	−1.468	−1.463	−1.668
(0, 3)	135	−0.775%*	−2.648	−2.353	−1.463	−1.374
(0, 5)	135	−0.864%*	−2.666	−1.990	−1.291	−1.168
(0, 10)	135	−0.971%**	−2.548	−2.441	−1.980	−1.833
(0, 20)	135	−1.206%	−2.306	−2.647	−1.119	−1.034
<i>Panel C: Swiss bank</i>						
(−20, −1)	68	−0.876%	−1.059	−2.017	−0.970	−0.857
(−10, −1)	68	−0.859%	−1.642	−2.265	−1.213	−1.352
(−5, −1)	68	−0.173%	−0.544	−0.586	−1.213	−1.112
(−3, −1)	68	0.026%	0.102	0.162	0.970	0.841
(−1, 0)	68	−0.504%*	−2.392	−1.368	−2.910	−2.763
(0, 1)	68	−1.148%*	−2.950	−1.285	−1.698	−1.563
(0, 3)	68	−1.246%*	−2.575	−1.428	−1.698	−1.534
(0, 5)	68	−1.051%**	−1.861	−1.748	−1.698	−1.534
(0, 10)	68	−1.624%*	−2.361	−1.496	−1.455	−1.362
(0, 20)	68	−1.332%*	−1.573	−2.384	−1.455	−1.357

Note: This table shows the results of event studies carried out on 400 announcements of sanctions assigned by US and EU regulators to 39 European-listed banks from 2009 to 2022. The global sample is split into three sub-samples: EU banks (Panel A), UK banks (Panel B), and Swiss banks (Panel C). The statistical significance of CAARs is verified using the *t*-test (T_1), the parametric test statistic (T_2) of Boehmer et al. (1991), the non-parametric Sign test (T_3) of Corrado and Zivney (1992), and the Wilcoxon signed-rank test (T_4). The last column reports the two-sample *t*-test used to test the differences between CAARs of Panel A and B. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively (one-tailed test).

into two subsamples: sanctions received by banks cross-listed in the USA and/or having an ADR certificate (248 observations) and sanctions received by banks that are neither cross-listed in the USA nor have an ADR certificate (152 observations). Then, we estimate CAARs for both subsamples. The results, available upon request, confirm the existence of significant reputational losses following detected misconduct for both cross-listed/ADR

and non-cross-listed/ADR banks in the event windows (0,1), (0,3), (0,5), and (0,10).

We also know that the ownership structure may influence reputational losses consequential to detected misconduct. Therefore, we conduct further analysis by dividing our sample into two subsamples: sanctions assigned to publicly traded banks

TABLE 13 | Event study analysis—Reputational losses consequential to bank misconduct: Stock market capitalization/GDP.

Panel A: High stock market capitalization/GDP							Panel B: Low stock market capitalization/GDP						
Event window	Number of obs.	CAAR (%)	t-test (t-value)	BMP test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)	Number of obs.	CAAR (%)	t-test (t-value)	BMP test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)	Difference in means (t-stat)
(−20, −1)	271	−0.851%	−2.263	−2.949	−1.276	−1.135	129	0.541%	0.920	0.244	0.792	0.694	
(−10, −1)	271	−0.476%	−1.673	−1.217	−1.276	−1.142	129	0.525%	1.099	0.521	0.440	0.358	
(−5, −1)	271	−0.091%	−0.531	−0.657	−1.154	−1.247	129	−0.116%	−0.390	−0.475	−0.968	−0.894	
(−3, −1)	271	0.065%	0.495	0.356	0.668	0.684	129	−0.182%	−0.785	−1.656	−1.497	−1.367	
(−1, 0)	271	−0.202%	−1.772	−1.265	−2.734	−2.744	129	−0.289%*	−1.768	−2.056	−1.497	−1.361	
(0, 1)	271	−1.100%*	−5.879	−1.507	−2.126	−2.035	129	−1.386%*	−5.991	−1.388	−4.314	−4.247	0.420
(0, 3)	271	−1.247%***	−5.199	−3.996	−3.584	−3.428	129	−1.621%***	−5.417	−3.802	−4.138	−4.129	0.692
(0, 5)	271	−1.202%***	−4.264	−3.307	−2.855	−2.694	129	−2.062%***	−4.716	−4.647	−4.314	−4.183	1.956**
(0, 10)	271	−1.297%***	−3.977	−3.255	−2.491	−2.514	129	−2.052%***	−3.780	−3.407	−3.786	−3.846	2.483***
(0, 20)	271	−1.236%***	−3.221	−3.873	−2.491	−2.526	129	0.287%	0.484	−0.348	0.440	0.529	

Note: This table shows the results of event studies carried out on 400 announcements of sanctions assigned by US and EU regulators to 39 European-listed banks from 2009 to 2022. The global sample is split into two sub-samples: 271 sanctions received by banks from countries characterized by high stock market capitalization/GDP (i.e., over the median value of the sample) (Panel A) and 129 sanctions assigned to banks from countries characterized by low stock market capitalization/GDP (i.e., under the median value of the sample) (Panel B). The statistical significance of CAARs is verified using the *t*-test (T_1), the parametric test statistic (T_2) of Boehmer et al. (1991), the non-parametric Sign test (T_3) of Corrado and Zivney (1992), and the Wilcoxon signed-rank test (T_4). The last column reports the two-sample *t*-test used to test the differences between CAARs of Panel A and B. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively (one-tailed test).

TABLE 14 | Event study analysis—Reputational losses consequential to bank misconduct: The fine amount.

Panel A: High fines										Panel B: Low fines				
Event window	Number of obs.	CAAR (%)	t-test (t-value)	BMP test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)	Number of obs.	CAAR (%)	t-test (t-value)	BMP test (t-value)	CZ test (Z-score)	Wilcoxon (Z-score)	Difference in means (t-stat)	
(-20, -1)	200	-0.533%	-1.187	-1.808	-0.141	-0.138	200	-0.272%	-0.605	-1.387	-0.707	-0.584		
(-10, -1)	200	-0.126%	-0.346	-0.977	-0.707	-0.684	200	-0.180%	-0.541	-0.005	-0.424	-0.347		
(-5, -1)	200	-0.222%	-1.017	-1.323	-1.131	-1.458	200	0.024%	0.114	0.165	0.990	1.138		
(-3, -1)	200	-0.189%	-1.144	-1.208	-0.566	-0.481	200	0.158%	0.974	0.105	0.141	0.257		
(-1, 0)	200	-0.331%**	-2.444	-2.109	-1.838	-1.683	200	-0.130%	-1.005	-0.934	-2.546	-2.428		
(0, 1)	200	-1.289%*	-6.048	-1.593	-4.101	-4.038	200	-1.096%**	-5.402	-2.187	-1.838	-1.754	0.652	
(0, 3)	200	-1.629%***	-5.553	-3.867	-3.253	-3.249	200	-1.106%***	-4.640	-3.918	-4.243	-4.138	1.387	
(0, 5)	200	-1.782%***	-4.908	-4.446	-3.960	-3.841	200	-1.176%***	-3.846	-3.291	-2.828	-2.647	1.285	
(0, 10)	200	-1.589%***	-3.836	-3.007	-3.394	-3.147	200	-1.491%***	-3.901	-3.588	-2.546	-2.481	0.174	
(0, 20)	200	-0.879%	-1.962	-2.685	-1.273	-1.274	200	-0.610%	-1.313	-2.044	-1.273	-1.359		

Note: This table shows the results of event studies carried out on 400 announcements of sanctions assigned by US and EU regulators to 39 European listed banks from 2009 to 2022. The global sample is split into two sub-samples: banks receiving sanctions over the median value (Panel A) and banks receiving sanctions under the median value (Panel B). The statistical significance of CAARs is verified using the *t*-test (T_1), the parametric test statistic (T_2) of Boehmer et al. (1991), the non-parametric Sign test (T_3) of Corrado and Zivney (1992), and the Wilcoxon signed-rank test (T_4). The last column reports the two-sample *t*-test used to test the differences between CAARs of Panel A and B. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively (one-tailed test).

(324 observations) and government-owned and mutual banks (76 observations). After that, we estimate CAARs for both subsamples. Our findings⁶ confirm the existence of significant reputational losses following detected misconduct for both publicly traded and government-owned/mutual banks in the event windows (0,1), (0,3), (0,5), and (0,10). However, reputational penalties suffered by government-owned and mutual banks are more contained and statistically less significant than those registered by publicly traded banks.

Moreover, our univariate and multivariate analyses reported in Tables 6 and 7, respectively, show that sanctions assigned to European-listed banks by US regulators result in lower reputational losses than those imposed by European regulators. This occurs even though US fines are larger (by mean and median) than the EU ones. Hence, we conduct a further analysis to test the possible moderation effect between sanction severity and regulator nationality. Specifically, we re-run Equation (5) by including an additional variable that interacts the sanction amount (SANC) and the plaintiffs' nationality (AG). The results, available upon request, show the lack of any moderation effect.

Furthermore, some previous literature suggests that certain banks may weigh the potential financial benefits of risky practices against the likelihood and cost of regulatory penalties (Köster and Pelster 2017). This assumption is based on the fact that some major banks repeatedly faced sanctions for issues like money laundering and manipulation of financial benchmarks (Zeidan 2013; Arnaboldi et al. 2021) but, despite these fines, maintained high profitability (Köster and Pelster 2017). Based on this evidence, we further test whether the repetitiveness of violations influences reputational losses consequential to detected misconduct. Specifically, we re-run Equation (5) by adding an ordinal qualitative variable that quantifies the number of sanctions received by the bank in the last 12 months, as suggested by Arnaboldi et al. (2021). Our findings, available on request, show that the number of fines is irrelevant in determining the reputational impact of detected misconduct. This evidence, consistent with previous results by Zeidan (2013), raises questions about whether the sanctions due to detected misconduct are sufficiently dissuasive and whether banks learn lessons from these penalties. The absence of reputational damage associated with recidivism in regulatory violations suggests that the deterrent effect of fines may not always outweigh the financial incentives for high-risk actions.

We also recognize that crisis periods could impact fines imposed on banks for misconduct (Flore et al. 2021; Korzeb et al. 2024) and, consequently, the associated reputational losses. To test this issue, we re-estimate Equation (5) by adding a crisis dummy, which takes the value 1 during crisis periods, and 0 otherwise. Specifically, we consider the following crises during our time horizon: the financial crisis (2009–2011), the sovereign debt crisis (2012–2013), the COVID-19 crisis (2020–2021), and the Russia-Ukraine crisis (2022). The results, not included in the paper due to space limitations but available on request, show that crisis periods do not explain the reputational losses following the detected misconduct of European-listed banks. This evidence is consistent with previous literature (Flore et al. 2021).

Furthermore, previous literature shows that institutional quality may also affect the reputational damage of listed companies (Chiou et al. 2010; Shi et al. 2013). Hence, we re-run regression (5) by adding two additional variables, specifically two sub-indices of the Index of Economic Freedom⁷, extracted for the countries under investigation during the period 2009–2022: Property Rights (PROP_RIGHT) and Government Integrity (GOV_INTEGR). The first (PROP_RIGHT) measures the level of protection of private property and the efficiency of the judicial system in enforcing contracts. The second (GOV_INTEGR) assesses the level of corruption and transparency in the public sector. Unfortunately, we could not collect the Judicial Effectiveness sub-index, which estimates the judicial system's independence, transparency, and ability to resolve disputes fairly and efficiently, as it has only been available since 2017. The results are reported in Table 15.

The findings show that the coefficient of PROP_RIGHT is never significant, whereas the coefficient of GOV_INTEGR is always negative and statistically significant. This indicates that the lower the level of corruption and the higher the transparency of a national public sector, the greater the reputational losses suffered by banks in that country following detected misconduct.

Finally, since among the three determinants of the ESG score (ESG_P), only the governance pillar (G_P) is significant in mitigating banks' reputational risk, we further analyze banks' governance performance. The governance pillar (G_P) is calculated by Asset4-Refinitive Eikon as the sum of three sub-pillars, namely, the Management score, the Shareholders score, and the CSR Strategy score. The Management score (MGT_P) measures a company's commitment and effectiveness toward following best practice corporate governance principles (subjects such as board structure and compensation are considered). The Shareholders score (SH_P) measures a company's effectiveness toward equal treatment of shareholders and the use of anti-takeover devices. The CSR Strategy score (CSR_P) reflects a company's practices to communicate that it integrates ESG dimensions into its day-to-day decision-making processes (themes such as CSR strategy as well as ESG reporting and transparency are considered) (Refinitiv 2022). Therefore, we extracted these data from Asset4-Refinitive Eikon and inserted, respectively, the Management score (Model 5), the Shareholders score (Model 6), and the CSR Strategy score (Model 7) as $X_{i,t-1}$ in Equation (5). We apply both OLS regressions and IV 2sls regressions. The results are reported in Table 16.

They show that, among the three governance items, only the Management score (MGT_P) shows statistically significant coefficients. This means that banks' efforts in aligning with best corporate governance practices are useful to mitigate reputational risk due to detected misconduct, while banks' effectiveness toward equal treatment of shareholders and communication of their ESG strategy is not.

7 | Discussion and Conclusions

The prevention of bank misconduct is a priority for financial regulators, as misbehavior negatively affects not only the economic and financial performance of banks but also their reputation and financial stability.

TABLE 15 | OLS regression—The additional effect of institutional quality on bank reputational losses.

	Model (1)	Model (2)	Model (3)	Model (4)
const	0.079 (0.112)	0.009 (0.101)	0.014 (0.103)	0.087 (0.107)
ESG_P _{t-1}	0.001** (0.000)			
E_P _{t-1}		0.001 (0.000)		
S_P _{t-1}			0.000 (0.000)	
G_P _{t-1}				0.001** (0.000)
ROE _{t-1}	0.079*** (0.024)	0.084*** (0.023)	0.088*** (0.024)	0.088*** (0.023)
SIZE _{t-1}	-0.011** (0.006)	-0.011* (0.006)	-0.008* (0.005)	-0.011* (0.006)
INEFF _{t-1}	-0.087** (0.041)	-0.064* (0.035)	-0.042 (0.035)	-0.044 (0.034)
RISK _{t-1}	-1.636 (1.198)	-1.105 (1.147)	-1.015 (1.158)	-1.286 (1.152)
EQ _{t-1}	0.304*** (0.089)	0.343*** (0.088)	0.294*** (0.086)	0.262*** (0.086)
LIQ _{t-1}	0.121** (0.053)	0.151*** (0.051)	0.127** (0.050)	0.097* (0.052)
Ln(SANZ)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
AG	0.021** (0.011)	0.018* (0.010)	0.021** (0.010)	0.019* (0.010)
TY	0.018 (0.012)	0.015 (0.011)	0.015 (0.011)	0.018 (0.011)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
PROP_RIGHT _{t-1}	0.000 (0.001)	0.001 (0.001)	0.000 (0.001)	0.001 (0.001)
GOV_INTEGR _{t-1}	-0.001* (0.000)	-0.002*** (0.001)	-0.002** (0.001)	-0.001** (0.001)
Observations	378	378	378	378
Adj. R-squared	0.192	0.183	0.170	0.183

Note: This table shows the coefficients and standard errors (in parentheses) obtained through ordinary least squares estimations using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. The sample consists of 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The country controls include the GDP growth rate (GDP), the level of protection of private property and the efficiency of the judicial system in enforcing contracts (PROP_RIGHT), and the level of corruption and transparency in the public sector (GOV_INTEGR). Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

TABLE 16 | OLS regression—The effect of governance performance on bank reputational losses.

	OLS	IV 2sls regression	OLS	IV 2sls regression	OLS	IV 2sls regression
const	0.212** (0.101)	0.230** (0.104)	0.192* (0.101)	0.334* (0.174)	0.148 (0.102)	0.137 (0.327)
MGT_P _{t-1}	0.001** (0.000)	0.001** (0.000)				
SH_P _{t-1}			0.000 (0.000)	0.002 (0.001)		
CSR_P _{t-1}					0.000 (0.000)	0.005 (0.004)
ROE _{t-1}	0.086*** (0.023)	0.083*** (0.023)	0.093*** (0.023)	0.132*** (0.045)	0.090*** (0.023)	0.094*** (0.031)
SIZE _{t-1}	-0.015*** (0.005)	-0.017*** (0.006)	-0.013** (0.005)	-0.026* (0.013)	-0.009* (0.005)	-0.010** (0.007)
INEFF _{t-1}	-0.105*** (0.038)	-0.106*** (0.038)	-0.102*** (0.038)	-0.045*** (0.004)	-0.112*** (0.038)	-0.157** (0.068)
RISK _{t-1}	-2.432** (1.093)	-2.421** (1.098)	-2.376** (1.099)	-2.477* (1.300)	-2.104* (1.108)	-2.034** (1.089)
EQ _{t-1}	0.203*** (0.075)	0.215*** (0.076)	0.178** (0.077)	0.040*** (0.002)	0.230*** (0.079)	0.211** (0.079)
LIQ _{t-1}	0.046 (0.043)	0.043 (0.043)	0.049 (0.043)	0.011 (0.062)	0.083 (0.057)	0.363 (0.297)
Ln(SANZ)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
AG	0.019* (0.011)	0.017* (0.009)	0.023** (0.011)	0.037** (0.018)	0.022** (0.011)	0.030* (0.016)
TY	0.020 (0.012)	0.023 (0.015)	0.016 (0.012)	0.021 (0.015)	0.015 (0.012)	0.009 (0.017)
GDP _{t-1}	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	378	378	378	378	378	378
Adj. R-squared	0.180	0.176	0.170	0.159	0.175	0.145
Sargan <i>p</i> value		0.243		0.183		0.242

Note: This table shows the coefficients and standard errors (in parentheses) obtained through ordinary least squares estimations and IV 2sls regressions using the cumulative abnormal stock returns (CARs) in the event window (0, 10) as the dependent variable. The sample comprises 39 European-listed banks that received 400 sanctions from US and EU regulators from 2009 to 2022. Model I uses the ESG performance (ESG_P), Model II the environmental performance (E_P), Model III the social performance (S_P), and Model IV the governance performance (G_P). The bank-specific variables include profitability (ROE), size (SIZE), inefficiency (INEFF), risk (RISK), capitalization (EQ), and liquidity (LIQ). The fine-specific variables include the sanction amount (SANC), the type (civil or criminal) of sanction (TY), and the plaintiffs' nationality (AG). The GDP growth rate (GDP) is the country control. Two variables are used to instrument ESG performance in the IV 2sls regressions: (i) the mean level of banks' annual ESG performance in the country where the bank is headquartered, and (ii) the ESG controversies score that proxies the bank's exposure to ESG-related controversies and negative events reported in the media. Table 1 shows definitions, calculation methods, and data sources for all the variables considered. *, **, *** denote the statistical significance at 10%, 5%, and 1%, respectively.

Our study, based on a unique dataset containing 400 sanctions of 39 European-listed banks between 2009 and 2022, provides timely evidence of significant bank reputational losses following detected misconduct. Our findings reveal, for the first time, that while the direct costs of sanctions imposed on European banks by foreign (US) regulators are substantially higher than those imposed by domestic (EU) regulators, the indirect costs

associated with the reputational impact of detected misconduct are not. On the contrary, shareholders of European banks impose more severe reputational penalties on banks sanctioned by EU regulators rather than by US ones. Moreover, our evidence shows that a high level of bank ESG performance, and specifically a high level of governance performance, significantly mitigates the reputational losses due to detected misconduct. Further

investigating the role of corporate governance quality, that is, bank alignment with corporate governance best practices, is shown to be crucial in reducing this reputational damage. However, neither the magnitude nor the type (criminal vs. civil) of violation can moderate the reputational penalties following detected misconduct.

We confirm the findings of prior studies on the significance of misconduct as a major driver of reputational risk. This is true not only for the US, on which literature has focused so far but also for European banks. However, contrary to our assumption, we observe a weaker market reaction to fines imposed on EU banks by a foreign authority. In this case, the lower impact on the bank's reputation may be due to several reasons. The first may be the stakeholders' varying awareness of sanctions imposed by a foreign supervisor due to language barriers and limited media coverage, scrutiny, and publicity in the bank's home country. Domestic stakeholders may also perceive foreign regulatory actions as less relevant or less credible than those imposed by their own authorities because of different legal standards and supervisory styles. Thus, they may discount the sanction's significance. Similarly, the wide geographical and jurisdictional distance can create a sense of detachment. Stakeholders may view the misconduct as less significant or less reflective of the company's overall practices if it occurs outside their own regulatory environment. They may also consider that the bank has a limited influence over legal processes and outcomes in a foreign country, which may lead to a perception of diminished responsibility for the imposed penalties.

Our study also contributes to assessing the role of bank ESG performance as a mitigant of potential reputational losses due to misconduct. While, on the one hand, a high ESG performance may be the result of a careful risk management policy and even of an opportunistic strategy aimed at enhancing the corporate image, on the other hand, a stronger focus on sustainability can prevent bank managers from pursuing their own interests at the expense of stakeholders such as employees, shareholders, consumers, government, and society (He et al. 2022). More broadly, bank commitment to sustainability issues leads to a more positive and open relationship with stakeholders, which increases trust and credibility and the perception of proximity to the public. Banks with a clear ESG strategy and disclosure are perceived as more socially responsible and ethical, which can justify the market expectation of a prompt reaction by the bank to the misconduct incident and thus reduce the negative reputational impact.

Within the ESG score framework used in the paper, the most significant mitigating factor of reputational losses stemming from bank misconduct is the governance dimension, specifically its management component, which encompasses compensation practices and the structure of the management body, including independence, diversity, and committees. Allegedly, the financial market assigns great importance to the oversight function of the board, related to its independence and diversity level, as well as to the internal organizational setup. Additionally, the compensation scheme is recognized as a crucial driver of behaviors and, thus, a tool to prevent misconduct. The higher attention to corporate governance is consistent with the root causes of most misconduct events occurring in the period covered by our study, which were linked to weak governance structures, ineffective boards, and incentive schemes encouraging excessive risk-taking.

Our results suggest that EU regulatory bodies have a significant influence on bank operations and stakeholder perceptions. Policymakers should continue strengthening domestic regulatory frameworks to enhance the credibility and impact of enforcement actions. Nevertheless, despite the stronger reputational impact of domestic sanctions, misconduct often has international implications. Regulatory bodies across jurisdictions should collaborate to develop a global compliance framework that strengthens cross-border supervision and enforcement. Additionally, supervisors should enhance communication strategies to ensure that sanctions for misconduct and consequent enforcement actions are well-publicized and understood by stakeholders. This can involve producing accessible reports and updates about sanctions, their root causes, and implications.

The importance of ESG factors and high ESG scores in mitigating reputational risk should lead banks to actively communicate their commitment to addressing and rectifying misconduct through regular disclosures and stakeholder engagements. This includes detailed reporting on ESG initiatives and demonstrating how these efforts align with overall strategic goals and incentive schemes.

Acknowledgment

This research was granted by University of Parma through the action Bando di Ateneo 2024 per la ricerca.

Open access publishing facilitated by Università degli Studi di Parma, as part of the Wiley - CRUI-CARE agreement.

Endnotes

¹ The criminal fines contained in our database are all assigned by US regulators. Most US states recognize two types of offense: crime and civil infraction. The former is a matter of criminal law and is usually punishable by either time in jail, a fine, or both; the latter is generally punishable only by fines or administrative actions.

² Of the 97 sanctions imposed by non-US regulators, we eliminated three sanctions imposed on UK banks by EU regulators, as they could not be considered domestic, given that the UK is not subject to the Single Supervisory Mechanism (SSM).

³ Following the most existing literature in corporate finance, we measure economic significance as a one-standard deviation change in the explanatory variable while measuring the resulting change in the dependent variable as a percentage of its mean (Mittin, 2024).

⁴ Results are available on request. The same findings are confirmed when considering another geographical criterion. Specifically, we divide our global sample between two subsamples: 216 sanctions received by banks from countries characterized by high GDP (i.e., over the median value of the sample) and 184 sanctions assigned to banks from low GDP (i.e., under the median value of the sample) countries.

⁵ Results are available upon request.

⁶ The results are available upon request.

⁷ The Index of Economic Freedom measures the impact of liberty and free markets worldwide. Data are publicly available at the following link: <https://www.heritage.org/index/pages/all-country-scores>.

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Appendix 1: Fines by type

Offence group	Type of sanction	Civil versus criminal
Competition-related offenses	Energy market manipulation	Civil
	Foreign Corrupt Practices Act	Civil and criminal
	Foreign exchange market manipulation	Civil and criminal
	Fraud	Civil and criminal
	Interest rate benchmark manipulation	Civil and criminal
	Price-fixing or anti-competitive practices	Civil and criminal
Consumer-protection-related offenses	Consumer protection violation	Civil
	Discriminatory practices (non-employment)	Civil
	Insurance violation	Civil
	Servicemembers Civil Relief Act	Civil
Employment-related offenses	Benefit plan administrator violation	Civil
	Employment discrimination	Civil
	Labor relations violation	Civil
	Wage and hour violation	Civil
	Workplace whistleblower retaliation	Civil
Environment-related offenses	Environmental violation	Civil
Financial offenses	Accounting fraud or deficiencies	civil
	Anti-money-laundering deficiencies	Civil and criminal
	Banking violation	Civil
	Economic sanction violation	Civil and criminal
	Investor protection violation	Civil
	Mortgage abuses	Civil
	Tax violations	Civil and criminal
	Toxic securities abuses	Civil and criminal
	False Claims Act and related	Civil

Appendix 2: Examples of civil and criminal fines

Examples of civil fines	
Financial offenses (Mortgage abuses)	The Department of Housing and Urban Development, together with the Justice Department and the Office of the Comptroller of the Currency, announced a more than \$41 million settlement against mortgage giant ABN AMRO Mortgage Group for falsifying documents in tens of thousands of loans insured by the Federal Housing Administration.
Financial offenses (Investor protection violation)	UBS agreed to buy back \$11 billion in securities and pay \$150 million in penalties as part of the resolution of multistate litigation alleging it misled customers in the marketing and sale of auction rate securities.
(Continues)	

Employment-related offenses
(Workplace whistleblower retaliation)

The Department of Financial Services fined Barclays Bank PLC and its New York branch \$15 million for violations of New York Banking Law stemming from a DFS investigation into attempts by the bank's CEO to identify the author(s) of two whistleblowing letters in contravention of Barclays' established whistleblowing policies and procedures. The DFS investigation found that shortcomings in governance, controls, and corporate culture relating to Barclays' whistleblowing function permitted a sequence of events that potentially could have had a detrimental impact on the efficacy of the bank's whistleblowing program.

Examples of criminal fines

Financial offenses (Economic sanction violation)

BNP Paribas S.A. was sentenced for conspiring to violate the International Emergency Economic Powers Act and the Trading with the Enemy Act by processing billions of dollars of transactions through the U.S. financial system on behalf of Sudanese, Iranian, and Cuban entities subject to U.S. economic sanctions. BNPP was sentenced to a 5-year term of probation and ordered to forfeit \$8,833,600,000 to the United States and to pay a \$140,000,000 fine. The penalty also covered cases brought by the Office of Foreign Assets Control and the Federal Reserve.

Financial offences
(Anti-money-laundering deficiencies)

HSBC Holdings PLC and HSBC Bank USA N.A. agreed to forfeit \$1.256 billion and enter into a deferred prosecution agreement with the Justice Department for HSBC's alleged violations of the Bank Secrecy Act, the International Emergency Economic Powers Act, and the Trading with the Enemy Act.

Competition-related offenses (Interest rate benchmark manipulation)

DB Group Services (UK) Limited, a wholly owned subsidiary of Deutsche Bank AG, agreed to plead guilty to wire fraud for its role in manipulating the London Interbank Offered Rate, a leading benchmark interest rate used in financial products and transactions around the world. In addition, Deutsche Bank entered into a deferred prosecution agreement to resolve wire fraud and antitrust charges in connection with its alleged role in both manipulating the U.S. Dollar LIBOR and engaging in a price-fixing conspiracy to rig the Yen LIBOR. Together, Deutsche Bank and its subsidiary were to pay \$775 million in criminal penalties.