Environmental, Social, Governance Performance and Negative Performance Feedback: Firm Moderators in a Cross-country Context

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ABSTRACT

In this study, we have examined two specific research questions. First, whether firms around the world with negative performance feedback would resort to more environmental, social, governance [ESG] performance or otherwise. Second, we examine whether firms' ESG controversies and stakeholder orientation in a cross-country context, with distinctive legal system and ethical behaviour, would motivate them to undertake more ESG performance in such negative performance feedback conditions. Our primary findings show that negative performance feedback of a firm impacts its ESG performance in a strongly negative manner. Furthermore, we prove that both high stakeholder orientation and high ESG controversies significant negatively moderate firms' ESG inclinations. This holds true irrespective of country-specific legal system and ethical behaviour contexts.

INTRODUCTION

Empirical literature (Cyert and March, 1963; Greve, 2003; Posen et al., 2018; Shinkle, 2012) claims distinctive strategic actions for firms performing above or below aspired performance level, commonly referred to as performance feedback. The reason is that firms performing better than aspired level attract and satisfy stakeholders' interests whereas below-performing firms may damage legitimacy and harm competitive advantage to cause future bankruptcy threats. Therefore, we expect the negative performance feedback[1] firms to select new strategies to improve future financial performance (Cyert and March, 1963). These new strategies, such as higher Research & Development [R&D] investments[2] (Chen and Miller, 2007) are generally assumed to involve increased risk (Bromiley, 1991), and also firms only benefit in the long run. Also, the intensity of such strategic actions is dependent on "the extent to which goals are achieved and the amount of organizational slack" (Cyert and March, 1963: 116). Therefore, if the firm does not achieve its primary goal of shareholders' value maximization to satisfy its shareholders through future performance improvement (Jensen, 2001),

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[1] We use this term to indicate a firm whose financial performance has fallen below its aspired performance level.
[2] More R&D investments during negative performance feedback conditions are known as problemistic searches in the empirical literature (Greve, 2003). More specifically, one defines problemistic search as the search undertaken by a firm when its financial performance drops below its aspiration level to identify and resolve problems and raise financial performance levels to (at least) the aspiration level (Cyert and March, 1963).

one would question such long-term strategies. Shareholders' value maximization can only be attained by achieving higher financial performance which would improve market perception of firm's stock in the market.

Furthermore, firms could also shift attention to alternate goals (Cyert and March, 1963). In addition, deciding what specific action needs to be taken by a firm also involves a choice of strategic thrust (Ansoff, 1979: 65). Therefore, firm managers might strive to reduce strategic complexity in negative performance feedback firms by prioritizing organizational legitimacy and survival strategies that fit the existing firm environment, thereby impeding the likelihood that novel alternatives, such as undertaking environmental, social, governance [henceforth ESG][3] performance would receive favorable consideration (Staw et al., 1981).

Therefore, our primary motivation is based on the argument whether a negative performance feedback firm may incorporate environmental sustainability, social correctness, and governance effectiveness in the core strategy of firms (Hart, 2007) by undertaking more ESG performance or resort to traditional R&D when in trouble. Furthermore, such strategic actions can restore organizational legitimacy (Schaltegger and Horisch, 2017) for negative performance feedback firms, and develop the competitive advantage by creating unique skills and competencies within a firm (Hull and Rothenberg, 2008), thereby firms might avoid future bankruptcy threats. ESG strategies have also become essential policies for the firms in this current era to achieve objectives related to the environment and society that meet the needs of all the stakeholders (Bresciani et al., 2016). In a recent study, DasGupta (2022) has found a strong positive influence of financial performance shortfall on firm's ESG performance. Based on these discussions, we want to examine here the impact of negative performance feedback on firms' discretionary ESG strategic actions.

Today most firms are moving from attaining financial performance towards ESG performance. However, empirical studies examining the relationship between ESG and financial performance have produced contradictory results While some studies report that investing in ESG activities improves firm performance (Eccles et al., 2014; Fatemi et al., 2018; and Wang and Sarkis, 2017), few others have found negative effects (Brammer et al., 2006; and Lee et al., 2016). On the contrary, the third group of researchers observes that, in fact, there is no relation between firm's ESG and financial performance (Galema et al., 2008; Orlitzky et al., 2003; etc.). However, the empirical literature is primarily silent under which conditions and why firms might undertake more ESG activities (Mattingly, 2017), if so. There is the need to better understand the moderators at institutional, organizational, and individual firm levels to integrate conceptual streams to understand why and when firms might undertake more ESG activities or not amidst negative performance feedback conditions (Aguinis and Glavas, 2012; Hang et al., 2019; Mattingly, 2017). The first set of antecedents that can drive firms is its own micro strengths and weaknesses especially amidst a negative performance feedback condition. Accordingly, some firm-specific moderators could play a pivotal role in negative performance feedback firms' ESG decisions to impact future financial performance.

Therefore, our secondary motivation here is to examine which of the firm moderators could actually strengthen or weaken firm's intentions to explore more ESG practices when facing negative financial performance feedback condition. In this regard, we have examined the drivers which are strategic in nature (i.e., firm's ESG controversies and stakeholder orientation) and not resourced-based like slack search (Chen and Miller, 2007) or capability drivers (Ansoff, 1979). This is because ESG

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[3] We prefer ESG to 'corporate social responsibility (CSR), as it explicitly outlines firm strategic action areas (environmental, social, and governance) for this study. The unity between CSR and ESG has also been recognized earlier, as Aguinis (2011: 855) defined CSR as 'context-specific organizational actions and policies that consider stakeholders' expectations and the triple bottom line of economic, social, and environmental performance. In addition, there is significant scholarship marking the evolution of CSR and ESG and its associated concepts (see Sheehy, 2015).

is mostly a voluntary strategic action across countries, but might influence actual financial performance in future.

Therefore, we employ 24,390 firm-year observations from 27 countries for 2010-19 to examine whether negative performance feedback firms would undertake lower ESG performance to come out from the below-average financial performance situations. We have used the more advanced regression model like two-stage least square (2SLS) with instrumental variables (IVs) instead of a simple OLS method (Wintoki et al., 2012; Zahid et al., 2020) along with basic panel regression models to make study findings more robust. We report a significant negative impact of performance feedback on firm's ESG performance when firms fall short of aspired financial performance level, i.e., negative performance feedback firms. Furthermore, our both moderating variables i.e., ESG controversies and stakeholder-orientation at firm-level attenuates firm's inclination to undertake ESG performance for negative performance feedback firms.

However, the stakeholder demand for CSR can vary substantially across nations, regions, and lines of business (McWilliams et al., 2006). Also, illegal and irresponsible behaviour of firms globally hurt their financial performance (Johnson, 2003) and inject negativity into the stakeholders' minds. Krüger (2015) reported evidence that investors also show strong negative reactions to negative ESG news. Their responses are particularly strong when the information relates to the employees, the environment or communities (Chollet and Sandwidi, 2016). All these are extremely detrimental for a firm with negative performance feedback, and with obvious reasons, such financial performance shortfall might also be arising out of or deepening into these ESG controversies.

In addition, firm policy-decisions and strategic actions are strongly influenced by country heterogeneities and existing regulatory frameworks. In one of the pioneering studies on CSR, Carrol (1979) first proposed the model for testing CSR investments in firms based on the economic, ethical, and legal domains. He propagated that environmental issues are implanted in the economic and legal environments. More recently, studies applying the *Institutional Theory* and *Institutional Difference Hypothesis* [IDH] also suggested that firm strategic opinions and decisions about ESG could vary according to the level of institutional and economic development prevalent in a country (Julian and Ofori-Dankwa, 2013 [IDH]; and Tilt, 2016).

Therefore, our final motivation here is to examine the moderating role of the legal system (civil law vs. common law), and country-specific ethical behaviour context to influence the ESG decisions and strategic actions of negative performance feedback firms in the presence of firm moderators. Till date, to the best of our knowledge, only the impact of national culture on firms' strategic actions to pursue different responses to performance feedback (Lewellyn and Bao, 2015) has been studied.

Overall, we contribute to the existing performance feedback and *institutional difference hypothesis* literature in two ways. First, our primary findings show that negative performance feedback of a firm impacts its ESG performance in a strongly negative manner, therefore implying that such firms would not resort to more ESG performance amidst performance shortfall conditions. So, more ESG performance as an alternate strategic action to formal R&D investments is not henceforth proved. In addition, we prove that high ESG controversies and high stakeholder orientation discourages firms to resort to more ESG practices when facing a negative performance feedback condition. The country moderators do not alter our primary findings implying that they have minimal role to play in firm strategic behaviour.

The rest of this paper is organized as follows. We first discuss the theoretical background, existing research on the moderation role of our firm-level and then country-level drivers in impacting negative performance feedback firms' ESG performance, and therefore develop our hypotheses in Section 2. Following that, in Section 3, we describe the data, variables, regression models and then present empirical tests results of our investigations under Section 4. We then present results from supplementary analyses, including sample adjustments and robustness tests in Section 4 itself.

We conclude the paper with a brief discussion of our findings and their implications with study limitations in Section 5, followed by references.

LITERATURE REVIEW AND HYPOTHESES DEVELOPED

NEGATIVE PERFORMANCE FEEDBACK AND ESG PERFORMANCE

Performing below an aspiration level i.e., negative performance feedback usually triggers firms to increase the intensity of strategic actions to bring financial performance back at or above aspiration level (Greve, 2003). Cyert and March (1963) suggested that negative performance feedback triggers a problemistic search to address the performance shortfall issue. However, recent studies propagated that different performance feedback conditions may drive firms to undertake other strategic actions.[4] Therefore, firms most often than not, have to prioritize some strategic actions over others, as they cannot possibly engage in all forms of actions to respond to negative performance feedback due to resource or capability constraints and bankruptcy threats (Ansoff, 1979: 113; Kuusela et al., 2017).

The most studied type of problemistic search behaviour (for negative performance feedback firms) is the technological search behaviour, i.e., investments in R&D (Chen and Miller, 2007; Greve, 2003; Vissa et al., 2010). Increased investments in R&D may reduce firm risk as it increases the number of future options for what innovations to launch, given expectations about expected returns and risks associated with these options (Christensen, 2013). In addition, firms globally today are placing more emphasis on R&D investments because of heightened global competition and the need for continuous innovation (Eggers and Kaul, 2018).

However, firms are also under increasing pressure to "do good", i.e., to conduct themselves for more than financial gain (Huang, 2021). It has also been proposed that ESG can affect many types of firm risk, including regulatory risk, product and technology risk, supply chain risk, systematic risk, litigation risk, reputational risk, and physical risk (Starks, 2009) through a variety of different channels. Humphrey et al. (2012) observed that "investors and managers are able to implement a CSP investment or business strategy without incurring any significant financial cost (or benefit) in terms of risk or return".

Additionally, prospect theory and its extensions (Chari et al., 2019; Kahneman and Tversky, 1979) suggest a negative relationship between firms' economic resources and ESG concerns, i.e., a decrease in resources (due to financial performance shortfalls) should increase a firm's appetite for risky actions such as engaging in socially disapproved behaviors (e.g., spending less on product safety, investing less in employee welfare, cutting back on community contributions, etc.). Also, the certainty of economic benefits from traditional R&D investments in the long run makes it a better proposition rather than uncertain outcomes from discretionary ESG investments.

Thus, based on the above discussions, we argue that it is apt for negative performance feedback firms to resort to more conventional strategic actions like R&D investments rather than investing in more discretionary ESG practices to turn around operationally from the performance shortfall situation. Therefore, we hypothesize:

Hypothesis 1: Negative performance feedback condition of a firm impacts ESG performance negatively.

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[4] This is due to the reflection effect implying that decision-makers are risk-averse in the domain of relative gains but become risk-seeking in the domain of relative losses (O'Brien and David, 2014; Vissa et al., 2010).

ESG CONTROVERSIES, NEGATIVE PERFORMANCE FEEDBACK, AND ESG PERFORMANCE

One of the most critical factors that can moderate the ESG performance of a negative performance feedback firm to improve future financial performance is its ESG controversies [henceforth ESGCON]. ESGCON are firm-specific environmental, social, and governance negative news stories such as suspicious social behaviour and product-harm scandals that place a firm under the media spotlight and grab stakeholders' attention (Aouadi and Marsat, 2018; Cai et al., 2012; Carroll, 1979). Greater media attention to corporate controversies also triggers more stakeholder scepticism and perceptions of corporate hypocrisy (Du et al., 2010), therefore leading to lower credibility and loss of reputation for the firm (Godfrey et al., 2009). Negative media coverage also questions the legitimacy of firm operations (Bitektine et al., 2020). When firms are perceived to be lacking acceptable operational legitimacy and also experiencing ESGCON, therefore could find their overall organizational legitimacy at stake (Palazzo and Scherer, 2006). Furthermore, illegal and irresponsible behaviour of firms hurt their financial performance (Johnson, 2003) as firms lose market share by negative ESG news coverage (Kang and Kim, 2014), therefore, might harm firm value (Aouadi and Marsat, 2018). All these are extremely detrimental for a firm with negative performance feedback, and with obvious reasons, such performance shortfall might be arising or deepening out of these ESG controversies.

Therefore, it is important to find how firms cope up with these ESGCON when they are also facing performance shortfall situation. One of the strategic actions could be more ESG performance, however firm managers driven by personal interests' fulfilment would not resort to that. To illuminate firm ESG performance responses against this backdrop, we draw insights from prospect theory (Kahneman and Tversky, 1979). The basic tenet of the *prospect theory* indicates that "losses loom larger than gains," implying that firms would be more sensitive to losses (Chari et al., 2019; Gupta, 2017; and Kahneman and Tversky, 1979). Therefore, firms with negative performance feedback would not increase their ESG performance more readily than firms with performance surplus would decrease theirs. In addition, *prospect theory*'s "certainty effect" suggested that sure losses or gains have stronger behavioural effects than tenuous losses or gains. Therefore, we argue that the effect of ESGCON on undertaking more ESG performance would be strongest when losses or gains are relatively more permanent. This is true for a firm with negative performance feedback.

Thus, based on the above discussions, we argue that firms with negative performance feedback would undertake lower ESG practices when they are also facing high firm-related ESGCON. Therefore, we hypothesize:

Hypothesis 2: High ESGCON impacts ESG performance negatively.

Hypothesis 2.1: High ESGCON negatively moderates ESG performance of a firm with negative performance feedback.

STAKEHOLDER-ORIENTATION, NEGATIVE PERFORMANCE FEEDBACK, AND ESG PERFORMANCE

Stakeholder-orientation[5] For a firm is the magnitude to establish good long-term relationships with divergent stakeholder categories (Sharma and Vredenburg, 1998) such as shareholders, suppliers, customers, employees, and community as a whole. It is supposed to be high when the firm includes a range of stakeholders able to support efficiently and effectively the environmental and social strategy (Delgado-Ceballos et al., 2012), and would be low when the firm deliberately chooses to prioritize a

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[5] This study has developed a stakeholder orientation scale for firms based on items (questions) and firm self-reported answers. We collected these answers from Asset4, provided a score to each, and then calculated the total score individually for different stakeholders and the overall total score (see table 1 and Research Methods Section for details).

small number of stakeholder issues (Porter et al., 2006). Instrumental stakeholder theory predicted that future firm performance would be more significant when a firm listens to and addresses the needs of all stakeholders rather than prioritizing a small number of them (Harrison et al., 2010). However, the stakeholder demand for CSR can vary substantially across nations, regions, and lines of business (McWilliams et al., 2006). Therefore, in a multi-country setting of this study, how stakeholder orientation of a firm is built in the firm strategy to influence its ESG performance could be a matter of essential guidance, especially in the case of financial performance shortfalls.

Allen et al. (2007) illustrated that if firms put positive weights on stakeholder welfare incorporate objectives, they would increase prices to reduce costs imposed on stakeholders in states of negative performance feedback condition or fear of future bankruptcy, leading to an increase in the chance of survival and firm value. In addition, a firm with high stakeholder orientation would be able to attract, motivate, and keep its qualified employees, develop client loyalty, reduce costs (Hart and Ahuja, 1996), and prevent conflicts (Hull and Rothenberg, 2008). Moreover, stakeholders' loyalty to a firm is a barrier to entry for competitors and helps it to keep abreast of upcoming changes (policies, taxes, etc.) so that it can be prepared to adapt (Harrison et al., 2010). All of these are indispensable for a negative performance feedback firm to achieve its financial turnaround.

Thus, we assert that firm strategic behaviours and actions are now built around attaining overall ESG success, including stakeholder relationships and a reputation for environmental and social awareness (Flammer, 2013). Therefore, we argue that a firm with negative performance feedback would resort to improving its ESG performance under high stakeholder orientation. Therefore, we hypothesize:

Hypothesis 3: Stakeholder orientation of a firm impacts ESG performance positively.

Hypothesis 3.1: Stakeholder orientation moderates ESG performance positively for a firm with negative performance feedback.

LEGAL SYSTEM MODERATIONS

The distinct historical backgrounds of the *civil law* and *common law* systems have generated significant differences in investors protection rights, stakeholder-orientation, and firm-managers' discretion in countries that adhere to these specific discrepant legal traditions (see for reference La Porta et al. 1997; 2008). The distinct balance between formal rules and managerial discretion in firm strategic actions in *civil law* vs. *common law* countries is likely to be driven by supply- and demand-side considerations, which in turn might lead to differences in ESG performance across legal regimes. On the supply side, ESG performance might arise as an alternative response to market failures[6] due to inefficient regulations (De Bettignies and Robinson, 2018), such as for a *common law* firm. On the contrary, the demand-side considerations proclaim customers' and general publics' preferences for firms that are altruistic and pro-social (Bénabou and Tirole, 2010). Therefore, ESG performance is likely to be an equilibrium outcome (supply- vs. demand-side considerations) reflecting the demand for sound voluntary behaviour, and, also the availability as well as efficacy of alternative strategic action for this behaviour. Accordingly, the moderating influence of legal origin on ESG performance and financial performance depends on which set of forces dominates. More specifically, firms from civil law countries would engage in mandated ESG performance which may be detrimental to their organic growth investments, and therefore might cause financial performance to weaken. On the contrary,

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[6] In a stricter legal environment (civil law system), intense market competition is prevalent. Given high levels of competition, firms are generally faced with razor-thin profit margins, to the extent that their very survival may be put at risk. Therefore, it is less likely that they would indulge in higher ESG practices (refer Ioannou and Serafeim, 2012 for details).

common law firms would generate superior financial performance by undertaking discretionary ESG performance.

Therefore, we hypothesize:

Hypothesis 4: Civil law system would have a positive moderation impact on negative performance feedback firms' ESG discretions in the base case, amidst high ESGCON and high stakeholder orientation. On the contrary, common law system would have a negative moderation impact.

ETHICAL BEHAVIOUR MODERATIONS

Furthermore, Bews and Rossouw (2002) stated that firm ethical behaviour[7] could play a vital role in facilitating trust among all stakeholders. Weiss (2009) further asserted that implicit costs of unethical behaviour such as deterioration of stakeholder relationships, legitimacy issues, damage to firm reputation, and declining employee creativity, productivity and loyalty could further hinder firm performance. Therefore, firm managers would be extremely concerned when firm performance falls below its aspiration level as the stakeholders can become skeptical about the firm. Keeping in view the essence and importance of ESG, it is the sense of obligation on the part of a firm to build certain social criteria into its strategic actions in line with country-specific ethical behaviour context. Thus, we can assert that in the case of a firm with negative performance feedback, it is especially true that it looks after the stakeholders' expectations ethically through more ESG practices to mitigate future chances of illegitimacy, organizational failure, and bankruptcy.

Therefore, we hypothesize:

Hypothesis 5: High ethical behaviour in a country would have a positive moderation impact on negative performance feedback firms' ESG discretions in the base case, amidst high ESGCON and high stakeholder orientation. On the contrary, low ethical behaviour would have a negative moderation impact.

RESEARCH METHODS

SAMPLE SELECTION AND VARIABLES

SAMPLE SELECTION

We measure firm ESG performance by using a composite score of the environmental [E], social [S], and governance [G] performance pillars collected from Thomson Reuters Asset4 ESG platform in line with many past ESG researchers including DasGupta (2022), Ioannou and Serafeim (2012), and Shi and Veenstra (2021). The Assett4 ESG score are weighted assessments of firm performance based on over 250 key performance indicators (KPIs) calculated from more than 750 data inputs. The overall ESG

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[7] To account for the perceived high ethical behaviour of firms [EBHigh], we have contemplated the answer to the following question from the Executive Opinion Survey of the World Economic Forum (WEF) - "In your country, how do you rate the corporate ethics of companies (Ethical behaviour in interactions with public officials, politicians, and other firms)?" (in line with Papadimitri et al., 2020). The answer to this question may range from 1 to 7, with higher scores indicating higher ethical behaviour and vice versa. WEF then aggregated the individual answers to an overall country indicator by averaging the responses, acting as a typical appraisal of perceptions about a country's ethical firm-behaviour. For our purpose, we have further created a dichotomous dummy variable based on cross-sectional mean country scores where 1 denotes high ethical behaviour of firms in a country, and 0 otherwise.

score is calculated by weighting all relevant data points, z-scoring[8] them, and then comparing them to data points from all other firms to obtain a relative measure of performance post standardization and normalization, and expressed as a percentage ranging from 0% to 100% (see for the definition Asset4 ESG data glossary, 2019; and Shi and Veenstra, 2021). We have obtained these data for the study years 2010-19 (refer Duque-Grisales and Aguilera-Caracuel, 2021). We have also obtained all other variables data from Thompson Reuters Refinitive (World Scope) database.

Accordingly, our final sample consists of 24,390 firm-year observations from 27 countries for 2010-19, 17,623, which relate to 17 developed economies, and the remaining 6,767 such observations are from 10 emerging economies firms (see table 1 for details). In addition, out of our total 24,390 firm-year observations, 4,877 represent vulnerable firms, and the remaining 19,513 observations represent their non-vulnerable counterparts.[9] Overall, we can argue that our sample observations are well-represented in regard to country-heterogeneities, and there would be no sample composition bias (Kim et al., 2017).

VARIABLES

DEPENDENT VARIABLE

We use the ESG score to proxy ESG performance as our main dependent variable across models. The total ESG score is the added value of environmental [E] and social [S] performance) and governance [G] performance incorporating criteria such as emissions, environmental product innovation, human rights, employment quality, health and safety, training and development, community, shareholders, etc. (refer Shi and Veenstra, 2021; and Velte, 2020 for details).

The E aspect includes 57 parameters focused on pollution reduction, product creativity, and resource use reduction that represent how well a firm uses the best management practices to reduce environmental risks and maximize environmental opportunities. The S aspect includes 60 parameters representing the firm's credibility, which is a critical factor in evaluating its ability to produce long-term value for all stakeholders. Further, the G aspect includes 48 parameters focused on management (board structures and positions) and CSR techniques to represent the firm ability to guide and monitor its rights and obligations through the development of incentives (also through the use of best management practices).

INDEPENDENT VARIABLES

We measure firm financial performance relative to aspiration levels following earlier empirical works (DasGupta and Dhochak, 2021; Deb et al., 2019; Greve, 2003; etc.). This study uses return on assets (ROA) as the measure of current year's financial performance, whereas, ROA is measured by using income before extraordinary items divided by average total assets. It reflects on how different management policies (including ESG practices) affect the firm earnings, and also the relative efficiency of asset usage (Lee and Faff, 2009).[10] To construct our performance feedback variable, we first develop a proxy for the aspiration level of a firm. Recent studies (Bromiley and Harris, 2014; and Lucas et al., 2018) argued that historical and social aspiration differs fundamentally in regard to nature and impact, and that the two measures should not be combined. Furthermore, recent studies also argued

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[8] A z-score is a relative measure indicating the value in numbers of standard deviation of a given observatory.

[9] We don't provide detailed country-specific information here for the sake of brevity.

[10] We also use return on equity (ROE) -based performance feedback calculations under our robustness test. ROE is measured by using net income divided by average shareholders' equity.

that social aspiration, rather than historical aspiration, provides the central baseline performance feedback that firm-managers are most likely to respond to. We follow Kacperczyk et al. (2015: 233) assertion that it is "... well established that social referents external to the firm are the central source of feedback about organizational problems". This is more so as because we are assessing negative performance feedback condition of a firm in the context of ESG performance where firm legitimacy, reputation, and competitive position might be at stake.

We measure firm social aspiration level by calculating cross-sectional mean performance (excluding the focal firm performance) from the preceding year of 5-firms cluster within an industry (DasGupta, 2022; Greve, 2003; Fiegenbaum et al., 1996), where industry is being defined based on the MSCI industry classifications (DasGupta, 2022).[11] On the contrary, we measure firm historical aspiration based on preceding year's actual financial performance of the firm (DasGupta and Dhochak, 2021; Shinkle, 2012). Then we deduct firm social or historical aspiration from current year's ROA to construct the variable of performance feedback. Therefore, if current year's ROA is lower than the aspiration level, we obtain a negative performance feedback and vice versa. Next, we provide a value of 1 to firms with negative performance feedback and 0 otherwise to construct a spline variable that ascertains if the slope of the relationship is different depending on whether ROA is above or below of firm aspiration level.

MODERATING VARIABLES

We have used the Thomson Reuters ESGCON score measuring the amount of ESG-based controversies a firm encounter during a fiscal year (DasGupta, 2022). Therefore, it adds a new dimension to previous approaches by capturing negative media stories from global media sources. This score is a percentile ranking that takes ESG-based scandals into account concerning and infringing on any of the 23 ESG controversy topics such as "controversies privacy" or "business ethics controversies" (see Thomson Reuters 2019 for details) and that occur during a firm fiscal year. This score is also benchmarked on the respective industry groups. Based on such ESGCON score we create a dichotomous dummy variable by providing a score of 1 to firms with high ESGCON (based on cross-sectional mean value), and otherwise 0.

For measuring stakeholder-orientation [henceforth STAKORI], the existing literature mainly focused on corporate social performance, as assessed by social rating agencies (Hull and Rothenberg, 2008) or the perceptions of employees (El Akremi et al., 2018). However, our objective was to focus on measuring the firm attitude (i.e., its strategic position) in terms of stakeholder-orientation. Thus, we have sought to assess the explicit strategies for building strong relationships with a wide range of stakeholder categories.[12] Therefore, a specific scale is needed that would be in line with our formation of stakeholder-orientation. In line with the process as developed by Brulhart et al. (2019) we have developed a 20-item scale (see table 1 for details) to represent our stakeholder-orientation for a firm based on firm self-reported answers on six stakeholder categories i.e., shareholder(s), employee(s), supplier(s), customer(s), competitor(s), and community. Then, we have created a dichotomous dummy variable by providing 1 to firms with a higher stakeholder-orientation based on cross-sectional mean value, and otherwise 0.

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[11] The MSCI and S&P Dow Jones Indices in 1999 developed the Global Industry Classification Standard (GICS), seeking to offer a coherent investment tool to capture the evolution, breadth, and depth of industry sectors. Based on their classifications, we have categorised all firms into 12 industry-sectors (Industrials and Industrials/ Transportation are treated separately) (in line with DasGupta, 2022).

[12] Stakeholder-orientation is assumed to be high when the firm integrates a wide range of stakeholders (Delgado-Ceballos et al., 2012).

Table 1. Description of Countries

Name of the Country	Number of Firms
Australia	*291*
Austria	*5*
Belgium	*6*
Brazil	*60*
Canada	*225*
China	*212*
Finland	*26*
France	*154*
Germany	*10*
Hong Kong	*26*
India	*109*
Indonesia	*24*
Japan	*209*
Korea	*103*
Malayasia	*12*
Mexico	*23*
Netherlands	*12*
New Zealand	*33*
Philippines	*13*
Russia	*25*
Singapore	*11*
South Africa	*110*
Spain	*7*
Switzerland	*33*
Taiwan	*115*
UK	*86*
USA	*499*

CONTROL VARIABLES

We have used multiple control variables as defined in the empirical literature affecting ESG performance and performance feedback to complete our models (DasGupta, 2022; Duque-Grisales and Augilera-Caracuel, 2019; Deb et al., 2019; Shi and Veenstra, 2021). We have incorporated lagged ESG performance to ameliorate the impact of endogeneity (DasGupta, 2022; and Deb et al., 2019). This is because our explanatory variable i.e. negative performance feedback is potentially endogenous because firm-specific omitted factors such as prior strategic actions in regard to firm investments including ESG practices might be correlated with current and future performance feedback through financial performance. We have also used research & development (R&D) intensity (computed by dividing R&D expenditures by net sales [Greve, 2003]) as a control to capture the impact of problemistic search on ESG performance for firms with negative performance feedback. Following

Deb et al. (2019), we have measured firm growth as the compounded annual growth rate in sales, calculated as the natural logarithm of Sales$_{J,T}$ divided by Sales$_{J,T-1}$ for firm J in year T. We have also controlled for firm profitability by including ROE in our models.[13] Furthermore, we have conceptualized and incorporated firm-slack following prior relevant literature on slack (Bromiley, 1991; Deb et al., 2019; and Tyler and Caner, 2016). This study has classified slack into three categories – unabsorbed/available slack, absorbed/recoverable slack, and potential slack. Unabsorbed slack is defined as the cash and marketable securities to current liabilities. Absorbed slack is the ratio of selling, general, and administrative expenses (SG&A) to sales. Potential slack is the long-term debt to total assets. To ensure that increasing values denote high potential slack (Deb et al., 2019), and also to use leverage ratio as a financial risk measure, the leverage ratio is then subtracted from one.

Furthermore, we have controlled for firm size using firm's net sales. To reduce the impact of the deviation of firms with extreme sizes [especially regarding economies of scale inherent to environmentally and socially oriented investments], we follow previous studies (e.g., Duque-Grisales and Augilera-Caracuel, 2019) to use the natural logarithm of net sales (LnSales) to control for firm size. We have also used the leverage ratio (debt to asset) (Shi and Veenstra, 2021) to control for firm financial risk as because previous studies (Opler and Titman, 1994) suggested that a higher leverage ratio might imply higher financial risk, and therefore would worsen firm performance further to cause negative performance feedback. In addition, firms with higher ESG performance are considered less volatile in terms of 'insurance impact,' hence having lower debt capital costs (Godfrey et al., 2009). This could further strengthen the firm financial performance. Our next control variable is the firm liquidity because the level of liquidity might influence business risk and generate earnings raised by firm ability to pay off short-term debt. Liquidity might also influence corporate governance practices, which would affect firm profitability (Li et al., 2012). This study has computed the firm liquidity by natural logarithm of cash and cash equivalents (LnCCE). We have also obtained firm-control information from Thompson Reuters World Scope database. Finally, we have also controlled for firm and year fixed effects to account for unobserved heterogeneity across firms and time.

RESEARCH MODEL SPECIFICATION

Our primary regression models have analysed whether firms with negative performance feedback would resort to higher ESG performance possibly to sustain their legitimacy and reputation and avoid future bankruptcy threats. Therefore, we have employed the following model to run the panel data regression analysis:

$$ESG_{it} = \beta_0 + \beta_1 \text{SASP5NPF/FASPNPF}_{it} + \beta' X_{it} + \varepsilon_{it} \qquad (1)$$

where SASP5NPF/ FASPNPF$_{it}$ denotes firm i's performance shortfall in year t, *ESG*$_{it}$ denotes firm i's ESG in year t, $X_{it} = (x_1, ..., x_k)$ denotes the set of control variables, and ε_{it} denotes the error term.

We have further evaluated the regression assumptions (linearity, normal distribution of error term, homoscedasticity of residue, and multicollinearity) using Hair et al. (2009) and Velte's methods (2020). We have used fixed effect [FE] panel data regressions with firm and year fixed-effects as required, based on significant Lagrange multiplier tests, F-tests for overall significance, and Hausman (1978) Tests results.[14] We have conducted the most commonly used Durbin–Wu–Hausman test to check for

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[13] In our robustness test, ROE is replaced by ROA to capture firm profitability impact.

[14] Fixed-effects or random-effects models are commonly used in panel data analysis, since "panel data models estimated with ordinary least squares (OLS) often experience problems with heteroscedastic error terms and autocorrelation, which can lead to biased and inconsistent results" (Martin et al., 2013: 460).

endogeneity and select between the relevant random-effects or fixed-effects regression models[15]. For all our regression models, Hausman (1978) tests results to validate the selection of the FE models at a 5 percent level of significance. Furthermore, the lagged dependent variable is included as a control variable in all models to account for potential first-order autocorrelation in our panel datasets (in line with Greene, 2003). Regression analysis with FE would minimize the risks of omitted variable bias, therefore superior to simple panel OLS results. In addition, we have performed a reverse causality test and find that ESG performance doesn't affect firm performance shortfall. To test for heteroskedasticity in our data set, we have employed the Breusch-Pagan and White tests (Breusch and Pagan, 1979; and White, 1980). Given the p-values are less than 0.05, we have rejected the null hypothesis that the error term is normally distributed after performing the heteroskedasticity tests. Furthermore, our significant chi-square values of 15.99 and 20.02 (p<0.05) suggested of having a heteroskedasticity problem in the data set. Therefore, to deal with the heteroskedasticity issues, we have employed Wooldridge's (2015) suggestion by using robust standard errors in our panel fixed effects regressions. To test for multicollinearity, we have quantified the variance inflation factors (VIF). If the VIF is more than 10, serious multicollinearity issues might arise (Hair et al., 2009). However, no VIF exceeds 3 in our records, implying that multicollinearity does not affect our results.

We have further extended our primary regression models by incorporating the distinctive firm- and country-specific mediators as interaction terms with our main independent variable (performance feedback) in models 2,6,9 and 11.

$$ESG_{it} = \beta_0 + \beta_1 \text{SASP5NPF/FASPNPF}_{it} + \beta'X_{it} + \beta''Z_{it} + \varepsilon_{it} \tag{2}$$

$Z_{it} = (z_1, ..., z_k)$ denotes the set of interaction terms.

This study has repeated all these analyses under its ROE-based negative performance feedback calculations under robustness tests. This would make our study findings more substantive and reliable. In addition, we have also repeated all these analyses for developed economies, emerging economies, non-vulnerable, and vulnerable firms under our split sample analyses.

2SLS ESTIMATION

Previous literature proposed applying a more advanced regression model like two-stage least square (2SLS) with instrumental variables (IVs) instead of a simple OLS method (Wintoki et al., 2012; Zahid et al., 2020). Although, our models have ameliorated the impact of endogeneity by including the lagged dependent variable (DasGupta, 2022; and Deb et al., 2019) and firm FE, however, while the firm FE approach would account for time-invariant omitted variables, it can't control for omitted variables' unobservable impact[16] that vary over time and also the intertemporal effect of endogeneity difficulties, as shown in this work. Thus, we have used the 2SLS here as an additional approach to handle the potential endogenous problems arising out of simultaneity (Boubakri et al., 2016), unobserved heterogeneity because of omission of critical variables (McWilliams and Siegel, 2000), and insufficient measuring tools (Wooldridge, 2002). Therefore, we have employed 2SLS estimations with IVs applicable to fixed effects, panel data models (specifically, the 'xtivreg2' command in STATA) as our baseline model.

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[15] The null hypothesis of the Hausman (1978) test implies that the difference in coefficients is not systematic and accordingly preferred model is random-effects. Further, this study selects 5 per cent as the level of significance for each studied regression models. The Hausman test results have showed that fixed-effects are present for all our regression equations.

[16] For example, Garcia-Castro et al. (2010) observed that firms with excellent management quality, particular values, and culture are more likely to implement sustainable (ESG) practices, and these unobserved company factors influence financial performance.

However, when using 2SLS method, accurate instrumental variables are needed. In other words, we need valid instruments with a substantial link with the independent variable, but, uncorrelated with the error term as 2SLS estimator. In addition, for the assessment of the joint statistical significance of the IVs, the F statistics is calculated in a 2SLS regression. If this value is higher than 10, the instruments are not weak (Staiger et al., 1997). Furthermore, a Sargan test was done to assess for testing overidentifying restrictions i.e., whether the instrumental variables are valid in our 2SLS regression or not. Our F values and Sargan test results ($p > 0.05$) have validated instruments' relevance and founds all instruments to be valid.

We have also adopted Larcker and Rusticus (2010) proposals in our 2SLS method to ensure more openness of 2SLS models because some existing work on accounting does not give sufficient information for assessing the accuracy of IV estimations. Therefore, we need to select IVs so that they are highly associated with firm financial performance, and therefore SASP5NPF/FASPNPF, but uncorrelated with the error term. Many control variables are also likely to be correlated with firm financial performance and SASP5NPF/FASPNPF. However, the only variables deemed external to the firm or invariant in time may be unrelated to the error term.

We have chosen four instruments (industry ESG intensity, industry growth, Herfindahl index proxying product market competition and country-specific MC/GDP [market capitalization/gross domestic product] ratio) based on theoretical and statistical considerations. Theoretically, choosing industry- and country-level variables as instruments ensures instrument exogeneity, implying that the instruments are less likely to be correlated with the typically firm-level omitted variables in the error term. All instruments also have to be relevant, implying that there should be a strong fit between the endogenous regressor (SASP5NPF/FASPNPF) and the instruments. Thus, all our instruments are typically highly correlated (at < 5% level of significance) with the SASP5NPF/FASPNPF of individual firms. These further substantiate our earlier F values and Sargan tests results that all IVs are relevant and valid for our study.

Therefore, in our 2SLS models, we have used industry ESG intensity as the mean ESG intensity of all firms in the focal industry (DasGupta, 2022; and Deb et al., 2019). We have also used industry growth as the mean growth rate of firms in the industry ('firm-growth' as defined above) and Herfindahl Index to proxy product market competition which is the sum of squared market shares (based on sales) of firms in an industry (DasGupta, 2022; Deb et al., 2019; Giroud and Mueller, 2011). Finally, we have used MC/GDP ratio of each country as one of our instrumental variables to capture the endogeneity arising out of potential country heterogeneities on firm performance shortfall (Huang et al., 2018).[17]

RESULTS

PRIMARY RESULTS

Table 2 presents the descriptive statistics and correlations results for our sample. The average ESG performance is 36.70% for our sample firms. The 25th and 75th percentile value of 1.80% and 60.40% suggests enough diversity in ESG performance levels across firms to investigate the impact of negative performance feedback on firm ESG performance initially. The correlations for all the independent variables are below 0.5 (Su and Tsang, 2015). In the ROA-based model where ESG performance is the dependent variable, we include all the variables to calculate the variance inflation factors (VIFs). The VIFs are between 1.03 and 2.53, with a mean of 1.31 (appx.). Therefore, we conclude that multicollinearity is not a serious threat in our regression models (Kang, 2013).

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[17] Appendix has provided a detailed descriptions of our 2SLS models as applied here.

To control for unobserved firm heterogeneity and time bias in the panel data, we have applied the dynamic fixed-effects 2SLS-IV regression method to estimate the parameters. Table 3 reports the results regarding the impact of firm historical- and social aspiration- based negative performance feedback [i.e. FASPNPF and SASP5NPF] on its ESG performance, and also the impact of each firm moderators on ESG performance to test our basic hypotheses. We find that firm negative performance feedback impacts ESG performance significant negatively under both SASP5NPF and FASPNPF (β = -0.993, p = 0.000 and β = -1.761, p = 0.000). This implies that firms with performance shortfalls undertakes lower ESG practices. This accepts our hypothesis 1.[18] We observe that high ESG controversies in a firm also impacts its ESG performance significant negatively (β = -0.016, p = 0.000). This indicates that ESG controversies discourages firms to pursue ESG practices. This result supports our hypothesis 2. In addition, high stakeholder-orientation (β = 0.031, p = 0.000) has a strong positive impact on firm ESG performance. This implies that stakeholder-oriented approach drive firm's ESG practices. These results validate our hypothesis 3.

Table 4 reports the moderation impacts of firm moderators in our main studied association of firm negative performance feedback and ESG performance. We find a significant negative moderation impact of ESG controversies in motivating performance shortfall firms to undertake more ESG performance (β = -12.035, p = 0.001 [SASP5NPF]; and β = -3.133, p = 0.012 [FASPNPF]). This indicates that a firm with high ESG controversies has a negative inclination to undertake more ESG performance to resolve its performance shortfall problem. This thereby accepts our hypothesis 2.1. However, surprisingly, high stakeholder-orientation of a firm demotivates it to resort to more ESG practices (β = -4.083, p = 0.000 [SASP5NPF]; and β = -3.448, p = 0.000 [FASPNPF]) to counter the performance shortfall problem. This rejects hypothesis 3.1.

Table 2. Descriptive Statistics and Correlations Results
Panel A. Descriptive Statistics

Variables	N	Mean	Median	Std. Dev.	p25	p75
ESGSCORE	24384	0.367	0.383	0.28	0.018	0.604
LaggedESGSCORE	23771	0.376	0.393	0.275	0.104	0.606
ROE	23523	0.121	0.102	0.219	0.026	0.18
ROA	24390	0.053	0.045	0.106	0.011	0.087
SASP5NPF(ROA)	23572	0.531	1	0.499	0	1
FASPNPF(ROA)	23572	0.526	1	0.499	0	1
RDIntensity	24390	0.013	0	0.113	0	0
FirmGrowth	23572	0.932	1.003	0.281	0.999	1.009
ASLACK	24390	0.534	0.809	0.45	0	0.904
UNASLACK	24390	0.419	0.094	0.898	0	0.464
PSLACK	24390	0.146	0.087	0.228	0	0.239
Age	19294	1.393	1.415	0.401	1.146	1.699
Size	23553	6.735	6.985	2.184	6.163	7.872
Leverage	24388	0.866	0.505	1.332	0.12	1.122
Liquidity	23517	3.961	5.116	3.076	0	6.333

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[18] We test an alternate model under which R&D intensity is the dependent variable. We find that firm's negative performance feedback impacts R&D intensity significant positively. However, we don't report the results for the sake of brevity, and as not under the direct scope of this study.

Table 2. Continued
Panel B. Correlations

	ESG SCORE	Lagged ESG SCORE	ROE	ROA	SASP5NPF (ROA)	FASPNPF (ROA)	RD Intensity	Firm Growth	ASLACK	UNASLACK	PSLACK	Age	Size	Leverage	Liquidity
ESGSCORE	1.000														
Lagged ESGSCORE	0.849**	1.000													
ROE	0.096**	0.097**	1.000												
ROA	0.075**	0.072**	0.673**	1.000											
SASP5NPF (ROA)	-0.012	0.000	-0.317**	-0.359**	1.000										
FASPNPF (ROA)	-0.052**	-0.042**	-0.175**	-0.175**	0.223**	1.000									
RD Intensity	-0.018**	-0.021**	-0.055**	-0.126**	-0.003	-0.003	1.000								
Firm Growth	0.134**	0.149**	0.086**	0.103**	-0.128**	-0.164**	0.012	1.000							
ASLACK	0.138**	0.163**	0.096**	0.096**	-0.066**	-0.082**	0.038**	0.233**	1.000						
UNASLACK	0.011	0.011	0.007	0.046**	-0.061**	-0.016*	0.050**	0.076**	0.251**	1.000					
PSLACK	0.069**	0.092**	0.069**	0.048**	-0.020**	-0.043**	-0.011	0.124**	0.286**	0.043**	1.000				
Age	0.252**	0.299**	0.020**	0.023**	-0.009	-0.016*	-0.020**	0.089**	-0.010	-0.048**	-0.024**	1.000			
Size	0.282**	0.304**	0.140**	0.164**	-0.112**	-0.187**	-0.042**	0.520**	0.210**	0.000	0.038**	0.299**	1.000		
Leverage	0.119**	0.134**	0.094**	-0.073**	0.071**	-0.018**	-0.044**	0.123**	-0.014*	-0.099**	0.154**	0.011	0.211**	1.000	
Liquidity	0.089**	0.098**	0.072**	0.130**	-0.086**	-0.075**	0.022**	0.199**	0.282**	0.174**	0.142**	-0.005	0.228**	-0.022**	1.000
VIF	1.11	1.16	2.39	2.53	1.20	1.05	1.03	1.04	1.18	1.10	1.14	1.15	1.24	1.21	1.09

Table 3. 2SLS Regression Results for Negative Performance Feedback (ROA-Based) and Firm Moderators on ESG Performance

Variables	SASP5NPF	FASPNPF	ESGCONHigh	STAKORIHigh
Controls				
Lagged ESGSCORE	0.595 (0.000) [0.040]	0.796 (0.000) [0.086]	0.441 (0.000) [0.012]	0.415 (0.000) [0.012]
ROE	-0.703 (0.000) [0.090]	-1.251 (0.000) [0.159]	0.004 (0.591) [0.008]	0.003 (0.621) [0.007]
RD Intensity	0.029 (0.599) [0.055]	-0.114 (0.333) [0.118]	0.005 (0.778) [0.019]	0.003 (0.864) [0.019]
Firm Growth	0.025 (0.451) [0.034]	-0.046 (0.522) [0.072]	0.026 (0.028) [0.012]	0.023 (0.051) [0.011]
ASLACK	0.009 (0.725) [0.025]	0.079 (0.148) [0.054]	0.012 (0.180) [0.009]	0.008 (0.335) [0.009]
UNASLACK	-0.003 (0.722) [0.008]	0.026 (0.132) [0.017]	0.003 (0.231) [0.003]	0.003 (0.259) [0.003]
PSLACK	-0.013 (0.715) [0.037]	-0.199 (0.013) [0.081]	-0.028 (0.030) [0.013]	-0.028 (0.029) [0.013]
Age	-0.020 (0.653) [0.045]	0.100 (0.303) [0.097]	-0.089 (0.000) [0.016]	-0.124 (0.000) [0.016]
Size	-0.011 (0.491) [0.016]	0.017 (0.607) [0.033]	0.010 (0.074) [0.006]	0.008 (0.150) [0.006]
Leverage	0.047 (0.000) [0.009]	0.074 (0.000) [0.016]	-0.008 (0.000) [0.002]	-0.007 (0.000) [0.002]
Liquidity	0.011 (0.327) [0.012]	-0.027 (0.281) [0.025]	0.008 (0.062) [0.004]	0.007 (0.088) [0.004]
Explanatory				
SASP5NPF/ FASPNPF	-0.993 (0.000) [0.123]	-1.761 (0.000) [0.214]		
ESGCONHigh			-0.016 (0.000) [0.005]	
STAKORIHigh				0.031 (0.000) [0.004]
Number of Observations	15,456	15,456	15,456	15,456
Number of Instruments	4	4	4	4
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
F-value	20.3	8.914	120.6	123.5
(p-value)	0	0	0	0

Notes: The main independent variable is firm's 5-firms cluster-based and own preceding year's ROA-based negative performance feedback [i.e., SASP5NPF and FASPNPF]. The firm moderators are firm's high ESG controversies [ESGCONHigh] and high stakeholder-orientation scores [STAKORIHigh]. All control variables are either natural log transformed or proportions-based. Standardized coefficients and two-tailed tests are used. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

Table 5 reports the firm moderators result under country moderators sub-sample analyses. We observe that across country heterogeneities in regard to legal code (β = -0.732, p = 0.000 [civil law]; β = -1.058, p = 0.000 [common law]), and ethical behavior (β = -1.129, p = 0.000 [EB high]; β = -1.295, p = 0.000 [EB low]) firm negative performance feedback has a significant negative impact on ESG performance. This augments the support of hypothesis 1 across country contexts. More specifically, we find that the negative influence is higher in common law, and low EB countries which are less stakeholder-oriented than their reverse counterparts. The direct influence of all firm moderators on exploring ESG practices for performance shortfall firms are exactly in line with our primary findings. All these results further support all our basic hypotheses (i.e., hypothesis 2 and 3).

As seen in Fig. 1. (A), the nature of the interaction is consistent with the hypothesis. The firm's ESG performance is negatively affected by the firm's low negative performance feedback when the firm's ESG controversies are high (b = 0.073, p < 0.05). As Fig. 1. (B) reveals, when stakeholder orientation is high, the effect of low negative performance feedback on firm ESG performance appears to be negative and significant (b = -0.28, p < 0.01).
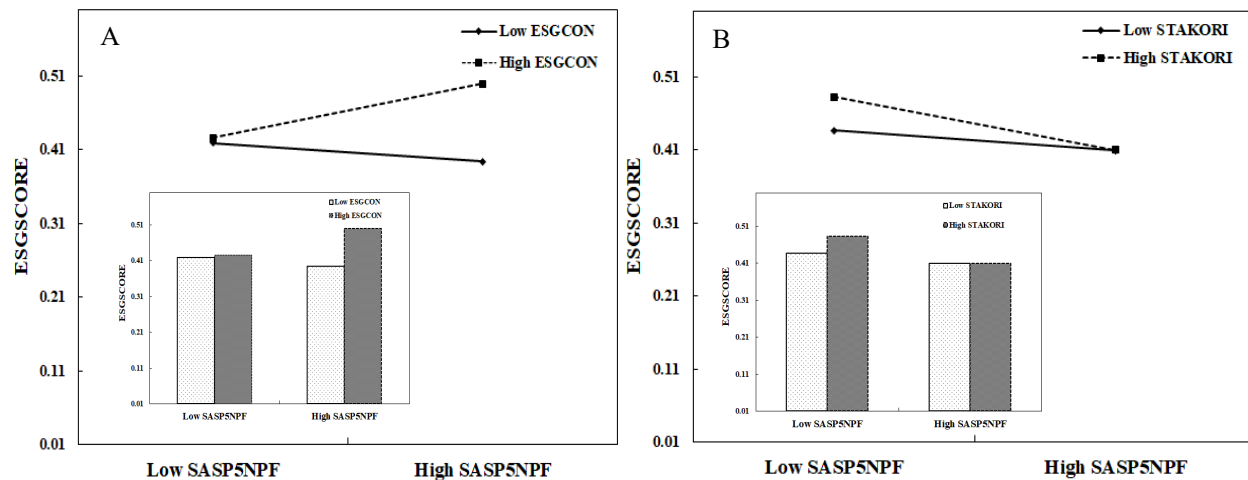

Figure 1. Interaction Plot of Moderation Effect of ESGCON [A] and STAKEPROT [B] on the Relationship Between SASP5NPF and Firm's ESGSCORE or ESG Performance.

ADDITIONAL RESULTS

Table 6 reports the interactions results of firm moderators with SASP5NPF under country moderators sub-sample analyses. We report that like our primary findings ESGCON has a strong negative moderation impact in motivating performance shortfall firms to undertake more ESG performance across legal system (β = -5.391, p = 0.001 [civil law]; and β = -8.361, p = 0.006 [common law]), and ethical behavior context (β = -6.346, p = 0.000 [EB high]; and β = -9.938, p = 0.002 [EB low]). In addition, firm's high stakeholder orientation strongly negatively moderates its inclination to undertake more ESG practices when facing performance shortfall situations across country heterogeneities – legal system (β = -6.814, p = 0.008 [civil law]; and β = -3.129, p = 0.000 [common law]), and ethical behavior context (β = -2.869, p = 0.000 [EB high]). Furthermore, in a low ethical behavior environment, we don't report any significant moderation impact. All these does not fully support our hypotheses 4 and 5.

Furthermore, we find that potential slack i.e., future debt repayments obligations have a strong negative impact on such discretionary ESG decisions of the firms. In addition, old firms don't resort to more ESG practices in case of performance shortfalls. This may be due to their long-standing image among stakeholders and market power. On the contrary, firm's growth and liquidity has a significant

Table 4. 2SLS Regression Results for Negative Performance Feedback (ROA-based) and Firm Moderators' Interactions on ESG Performance

Variables	SASP5NPF		FASPNPF	
	ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Controls				
Lagged ESGSCORE	0.388 [0.221] -0.079	0.461 [0.102] 0	0.667 [0.124] 0	0.425 [0.128] 0
ROE	-0.456 [0.490] -0.352	-0.970 [0.248] 0	-1.320 [0.216] 0	-0.811 [0.206] 0
RD Intensity	-0.496 (0.135) [0.331]	-0.0755 (0.582) [0.137]	-0.008 (0.961) [0.159]	0.0377 (0.782) [0.136]
Firm Growth	0.218 (0.247) [0.188]	-0.001 (0.991) [0.083]	0.031 (0.753) [0.099]	-0.029 (0.716) [0.081]
ASLACK	-0.242 (0.114) [0.153]	-0.067 (0.286) [0.063]	0.062 (0.371) [0.069]	0.032 (0.605) [0.062]
UNASLACK	0.040 (0.369) [0.045]	0.042 (0.063) [0.023]	0.050 (0.036) [0.024]	0.032 (0.095) [0.019]
PSLACK	0.327 (0.135) [0.219]	0.204 (0.044) [0.101]	-0.083 (0.479) [0.117]	-0.072 (0.444) [0.093]
Age	0.336 (0.209) [0.267]	-0.228 (0.053) [0.118]	-0.028 (0.827) [0.130]	0.007 (0.950) [0.112]
Size	-0.056 (0.510) [0.086]	-0.055 (0.171) [0.039]	0.044 (0.314) [0.044]	-0.003 (0.938) [0.038]
Leverage	0.103 (0.042) [0.051]	0.054 (0.024) [0.024]	0.061 (0.006) [0.022]	0.042 (0.029) [0.019]
Liquidity	-0.114 (0.115) [0.072]	-0.018 (0.540) [0.029]	-0.038 (0.235) [0.032]	-0.029 (0.294) [0.028]
Explanatory				
SASP5NPF / FASPNPF	8.633 (0.003) [2.923]	1.050 (0.110) [0.657]	0.682 (0.528) [1.081]	0.960 (0.158) [0.680]
ESGCONHigh	6.238 (0.001) [1.845]		1.504 (0.008) [0.570]	
STAKORIHigh		2.196 (0.000) [0.471]		1.721 (0.000) [0.395]
Interactions				
SASP5NPF/ FASPNPF*ESGCONHigh	-12.035 (0.001) [3.559]		-3.133 (0.012) [1.243]	
SASP5NPF/ FASPNPF *STAKORIHigh		-4.083 (0.000) [0.917]		-3.448 (0.000) [0.805]
Number of observations	15,456	15,456	15,456	15,456
Number of instruments	4	4	4	4
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
F-value (p-value)	1.431 (0.005)	4.905 (0.000)	5.419 (0.000)	7.520 (0.000)

Notes: The dependent variable is ESG performance measured using ESG score. The main independent variable is firm's 5-firms cluster-based and own preceding year's ROA-based negative performance feedback [i.e., SASP5NPF and FASPNPF]. The interaction variables are SASP5NPF and FASPNPF multiplied by firm's high ESG controversies [ESGCONHigh] and high stakeholder orientation scores [STAKORIHigh], respectively. The control variables firm age, size, liquidity and firm growth are natural log transformed, and others are proportion-based. Standardized coefficients and two-tailed tests are used. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

Table 5. 2SLS Regression Results for Negative Performance Feedback (ROA-based) and Firm Moderators on ESG Performance Under Country Moderators Sub-Sample Analyses

Panel A. Legal System/Code

Variables	Civil law			Common law		
	Basic	ESGCONHigh	STAKORIHigh	Basic	ESGCONHigh	STAKORIHigh
Explanatory						
SASP5NPF	-0.732 (0.000) [0.114]			-1.058 (0.000) [0.190]		
ESGCONHigh		-0.021 (0.013) [0.008]			-0.016 (0.002) [0.005]	
STAKORIHigh			0.029 (0.000) [0.007]			0.031 (0.000) [0.006]
Number of observations	6,336	6,336	6,336	9,120	9,120	9,120
Number of instruments	4	4	4	4	4	4
F-value (p-value)	12.53 0	41.96 0	42.98 0	11.39 0	83.9 0	85.4 0

Panel B. Ethical Behaviour [EB]

	EB High			EB Low		
SASP5NPF	-1.129 (0.000) [0.156]			-1.295 (0.000) [0.261]		
ESGCONHigh		-0.052 (0.000) [0.006]			-0.024 (0.011) [0.010]	
STAKORIHigh			0.018 (0.008) [0.007]			0.041 (0.000) [0.009]
Number of observations	8,422	8,422	8,422	7,464	7,464	7,464
Number of instruments	4	4	4	4	4	4
F-value (p-value)	8.585 0	47.35 0	41.49 0	6.534 0	40.27 0	41.69 0

Notes: The main independent variable is firm's 5-firms cluster ROA-based negative performance feedback [i.e., SASP5NPF]. The firm moderators are firm's high ESG controversies [ESGCONHigh] and high stakeholder-orientation scores [STAKORIHigh] for all country moderators which are used here as sub-sample analyses. All control variables are either natural log transformed or proportions-based, however, not reported for the sake of brevity. Standardized coefficients and two-tailed tests are used. Firm and year fixed effects are included in all models. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

positive impact on ESG performance for firms with negative *performance feedback* whereas leverage has mixed evidence. So, growth firms, firms with higher slack resources, and risky firms might explore ESG route when in trouble.

SPLIT SAMPLE ANALYSES RESULTS

More recently, studies based on the *Institutional Difference Hypothesis* [IDH] have shown that strategic views and decisions on ESG (CSR) can differ depending on the level of economic and institutional growth (Julian and Ofori-Dankwa, 2013; and Robertson, 2009). Dobers and Halme (2009) also pointed out that both economic and institutional factors influence the existence and extent of ESG adoption in each country. Due to political instability, corruption, labor conditions, and climate change, emerging market firms face greater risk in pursuing better ESG performance than developed market firms (Clark et al., 2015). Furthermore, since the average resident in emerging economies is arguably less concerned with environmental security, these countries might pose more significant risks than developed economies (De Villiers and Van Staden, 2006). Therefore, we investigate whether the economic status of a country acts as a further moderator in the impact of firm historical and social aspiration- based (ROA) negative *performance feedback* [i.e. FASPNPF and SASP5NPF][19] on its ESG performance, and also in the influence of each firm moderators on such ESG performance to test our case.

Overall, we find no distinctive role of economic development in our studied relationship as across developed and emerging economies sub-samples firms' negative *performance feedback* has a significant negative influence on its ESG performance (β = -1.019, p = 0.000; β = -0.493, p = 0.000) (see table 7). As we observe it is more pronounced in developed countries. However, we don't find any direct impact of firm's ESGCON on its ESG performance under performance shortfall condition in emerging countries. Furthermore, we don't observe any significant moderation impact of stakeholder-orientation in driving performance shortfall firm's ESG practices. But we find a strong negative moderation impact of ESG controversies in attenuating our studied association.

Empirical literature also highlighted that the environmental legitimacy (Ioannou and Serafeim, 2017) might impact the results of academic research among countries. In addition, associations between the financial and ESG performances of firms belonging to sensitive industrial sectors, such as oil, gas chemicals, mining, steel-making and paper and pulp, are also inconclusive (Garcia et al., 2017). Therefore, it is extremely important to incorporate a sub-sample study here to show whether vulnerable (sensitive) and non-vulnerable firms behave differently amidst performance shortfall condition to explore more ESG practices as the most probable strategic action.

We report the findings of non-vulnerable and vulnerable firms sub-sample analyses in table 8. In case of non-vulnerable firms, all results are exactly in line with our overall earlier primary results. However, in case of vulnerable firms most of the interaction results are not significant except the moderation effect of ESG controversies.

ROBUSTNESS TEST RESULTS

We report robustness test results in table 9. Here, we have employed the same computation process as in the ROA case to calculate ROE-based FASPNPF and SASP5NPF. Our findings show that negative performance feedback has a significant negative impact on firm ESG performance (β = -0.564, p = 0.000), therefore implying that firms with performance shortfalls undertakes less ESG practices. The direct influence of firm moderators is exactly on similar lines with that of our ROA-based results. Furthermore, all our interaction results are also exactly similar with that of primary results (ROA-based SASP5NPF). These substantiate and make our primary results more robust and reliable.

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[19] We only report the SASP5NPF results under table 7 for the sake of brevity.

Table 6. 2SLS Regression Results for Negative Performance Feedback (ROA-based) and Firm Moderators' Interactions on ESG Performance Under Country Moderators Sub-Sample Analyses

Panel A. Legal System/Code

Variables	Civil Law		Common Law	
	ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Explanatory				
SASP5NPF	3.795 (0.007) [1.419]	2.777 (0.075) [1.562]	5.456 (0.028) [2.475]	0.679 (0.346) [0.720]
ESGCONHigh	2.682 (0.000) [0.763]		4.387 (0.006) [1.604]	
STAKORIHigh		3.765 (0.006) [1.383]		1.620 (0.000) [0.430]
Interactions				
SASP5NPF * ESGCONHigh	-5.391 (0.001) [1.559]		-8.361 (0.006) [3.038]	
SASP5NPF * STAKORIHigh		-6.814 (0.008) [2.563]		-3.129 (0.000) [0.876]
Number of Observations	6,336	6,336	9,120	9,120
Number of Instruments	4	4	4	4
F-value (p-value)	2.054 (0.005)	1.124 (0.049)	1.276 (0.045)	3.816 (0.001)

Panel B. Ethical behaviour [EB]

Variables	EB High		EB Low	
Explanatory				
SASP5NPF	4.296 (0.006) [1.551]	0.302 (0.587) [0.555]	5.652 (0.023) [2.478]	11.010 (0.156) [7.756]
ESGCONHigh	3.044 (0.000) [0.850]		5.611 (0.002) [1.834]	
STAKORIHigh		1.504 (0.000) [0.353]		8.180 (0.083) [4.723]
Interactions				
SASP5NPF * ESGCONHigh	-6.346 (0.000) [1.760]		-9.938 (0.002) [3.212]	
SASP5NPF * STAKORIHigh		-2.869 (0.000) [0.722]		-15.280 (0.088) [8.946]
Number of Observations	8,422	8,422	7,464	7,464
Number of Instruments	4	4	4	4
F-value (p-value)	2.074 (0.033)	4.040 (0.000)	1.409 (0.049)	2.362 (0.026)

Notes: The main independent variable is firm's 5-firms cluster ROA-based negative performance feedback [i.e., SASP5NPF]. The interaction terms (variables) are firm's high ESG controversies [ESGCONHigh] and high stakeholder-orientation scores [STAKORIHigh] with SASP5NPF under all country moderators which are used here as sub-sample analyses. All control variables are either natural log transformed or proportions-based, however, not reported for the sake of brevity. Standardized coefficients and two-tailed tests are used. Firm and year fixed effects are included in all models. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

Table 7. 2SLS Regression Results for Negative Performance Feedback (ROA-based), Firm Moderators and their Interaction Terms (Variables) on ESG Performance for Country's Economic Status Based Sub-Sample Analyses (i.e., Developed vs. Emerging)
Part A. Developed

Variables	Basic Models			Moderation Models	
	Basic	ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Explanatory					
SASP5NPF	-1.019 (0.000) [0.138]			7.120 (0.003) [2.414]	1.374 (0.066) [0.747]
ESGCONHigh		-0.020 (0.000) [0.005]		5.273 (0.000) [1.513]	
STAKORIHigh			0.023 (0.000) [0.005]		2.043 (0.000) [0.445]
Interactions					
SASP5NPF * ESGCONHigh				-10.283 (0.000) [2.948]	
SASP5NPF * STAKORIHigh					-3.907 (0.000) [0.896]
Number of Observations	12,164	12,164	12,164	12,164	12,164
Number of Instruments	4	4	4	4	4
F-value (p-value)	14.730 (0.000)	84.940 (0.000)	85.170 (0.000)	1.518 (0.049)	4.594 (0.000)
Part B. Emerging					
Explanatory					
SASP5NPF	-0.493 (0.000) [0.122]			0.944 (0.118) [0.604]	-0.238 (0.563) [0.411]
ESGCONHigh		0.001 (0.894) [0.010]		1.093 (0.009) [0.420]	
STAKORIHigh			0.049 (0.000) [0.009]		0.594 (0.263) [0.530]
Interactions					
SASP5NPF * ESGCONHigh				-1.961 (0.009) [0.756]	
SASP5NPF * STAKORIHigh					-0.944 (0.319) [0.947]
Number of Observations	3,292	3,292	3,292	3,292	3,292
Number of Instruments	4	4	4	4	4
F-value (p-value)	15.64 (0.000)	43.150 (0.000)	46.610 (0.000)	4.079 (0.000)	7.442 (0.000)

Notes: The main independent variable is firm's 5-firms cluster ROA-based negative performance feedback [i.e. SASP5NPF]. The interaction terms (variables) are firm's high ESG controversies [ESGCONHigh] and high stakeholder-orientation scores [STAKORIHigh] with SASP5NPF which are used here underdeveloped vs. emerging sub-sample analyses. All control variables are either natural log transformed or proportions-based, however, not reported for the sake of brevity. Standardized coefficients and two-tailed tests are used. Firm and year fixed effects are included in all models. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

Table 8. 2SLS Regression Results for Negative Performance Feedback (ROA-based), Firm Moderators and their Interaction Terms (Variables) on ESG Performance for Industry's Sensitivity Towards ESG Sub-Sample Analyses (Non-Vulnerable vs. Vulnerable)

Panel A. Non-vulnerable

Variables	Basic	Basic Models		Moderation Models	
	Basic	ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Explanatory					
SASP5NPF	-0.319 (0.000) [0.069]			8.252 (0.011) [3.228]	0.287 (0.351) [0.308]
ESGCONHigh		-0.017 (0.001) [0.005]		5.967 (0.007) [2.198]	
STAKORIHigh			0.033 (0.000) [0.005]		1.028 (0.000) [0.226]
Interactions					
SASP5NPF * ESGCONHigh				-11.345 (0.006) [4.168]	
SASP5NPF * STAKORIHigh					-1.850 (0.000) [0.433]
Number of Observations	12,115	12,115	12,115	12,115	12,115
Number of Instruments	4	4	4	4	4
F-value (p-value)	55.800 (0.000)	93.750 (0.000)	96.410 (0.000)	1.955 (0.045)	8.843 (0.000)

Panel B. Vulnerable

Variables	Basic	ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Explanatory					
SASP5NPF	-1.562 (0.000) [0.256]			0.718 (0.431) [0.911]	-2.281 (0.086) [1.329]
ESGCONHigh		-0.016 (0.083) [0.009]		1.358 (0.008) [0.510]	
STAKORIHigh			0.020 (0.056) [0.010]		-0.103 (0.880) [0.677]
Interactions					
SASP5NPF * ESGCONHigh				-2.705 (0.008) [1.016]	
SASP5NPF * STAKORIHigh					0.490 (0.724) [1.389]
Number of Observations	3,341	3,341	3,341	3,341	3,341
Number of Instruments	4	4	4	4	4
F-value (p-value)	4.467 (0.000)	27.850 (0.000)	27.920 (0.000)	3.192 (0.000)	2.630 (0.003)

Notes: The main independent variable is firm's 5-firms cluster ROA-based negative performance feedback [i.e. SASP5NPF]. The interaction terms (variables) are firm's high ESG controversies [ESGCONHigh] and high stakeholder-orientation scores [STAKORIHigh] with SASP5NPF which are used here under non-vulnerable vs. vulnerable sub-sample analyses. All control variables are either natural log transformed or proportions-based, however, not reported for the sake of brevity. Standardized coefficients and two-tailed tests are used. Firm and year fixed effects are included in all models. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

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Table 9. 2SLS Regression Results for Negative Performance Feedback (ROE-based), Firm Moderators and their Interactions (Variables) on ESG Performance

Variables	Basic	Basic models ESGCONHigh	STAKORIHigh	Moderation models ESGCONHigh	STAKORIHigh
Controls					
Lagged ESGSCORE	0.505 (0.000) [0.022]	0.445 (0.000) [0.012]	0.419 (0.000) [0.012]	0.515 (0.000) [0.026]	0.431 (0.000) [0.024]
ROA	-0.039 (0.339) [0.040]	0.018 (0.417) [0.022]	0.018 (0.419) [0.022]	0.019 (0.699) [0.048]	-0.021 (0.624) [0.043]
RD Intensity	0.072 (0.047) [0.036]	0.004 (0.838) [0.019]	0.002 (0.920) [0.019]	0.019 (0.660) [0.043]	0.003 (0.944) [0.042]
Firm Growth	-0.036 (0.256) [0.032]	0.026 (0.017) [0.011]	0.024 (0.031) [0.012]	-0.028 (0.445) [0.037]	-0.048 (0.157) [0.034]
ASLACK	0.015 (0.366) [0.016]	0.011 (0.196) [0.009]	0.008 (0.347) [0.009]	0.010 (0.610) [0.019]	-0.004 (0.820) [0.017]
UNASLACK	0.012 (0.020) [0.005]	0.004 (0.193) [0.003]	0.004 (0.193) [0.003]	0.011 (0.078) [0.006]	0.009 (0.111) [0.006]
PSLACK	-0.028 (0.206) [0.022]	-0.030 (0.014) [0.012]	-0.031 (0.011) [0.012]	-0.041 (0.110) [0.026]	-0.030 (0.199) [0.023]
Age	0.522 (0.000) [0.037]	-0.078 (0.000) [0.015]	-0.114 (0.000) [0.015]	0.374 (0.000) [0.053]	0.287 (0.000) [0.068]
Size	0.026 (0.001) [0.008]	0.003 (0.387) [0.003]	0.003 (0.417) [0.003]	0.024 (0.006) [0.009]	0.021 (0.009) [0.008]
Leverage	0.003 (0.376) [0.003]	-0.003 (0.054) [0.002]	-0.003 (0.068) [0.002]	0.001 (0.868) [0.004]	0.001 (0.859) [0.003]
Liquidity	0.022 (0.001) [0.007]	0.007 (0.055) [0.003]	0.006 (0.070) [0.003]	0.010 (0.214) [0.008]	0.005 (0.498) [0.008]
Explanatory					
SASP5NPF	-0.564 (0.000) [0.022]			0.374 (0.044) [0.186]	0.157 (0.394) [0.184]
ESGCONHigh		-0.017 (0.000) [0.004]		0.532 (0.000) [0.085]	
STAKORIHigh			0.0306 (0.000) [0.005]		0.527 (0.000) [0.101]
Interactions					
SASP5NPF * ESGCONHigh				-1.072 (0.000) [0.195]	
SASP5NPF * STAKORIHigh					-0.909 (0.000) [0.211]
Number of Observations	14,675	15,805	15,805	14,675	14,675
Number of Instruments	4	4	4	4	4
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes

Table 9. Continued

Variables	Basic	Basic models		Moderation models	
		ESGCONHigh	STAKORIHigh	ESGCONHigh	STAKORIHigh
Year Fixed Effects	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
F-value (p-value)	*91.600 (0.000)*	*125.000 (0.000)*	*127.700 (0.000)*	*63.620 (0.000)*	*80.440 (0.000)*

Notes: The dependent variable is ESG performance measured using ESG score. The main independent variable is firm's 5-firms cluster ROE-based negative *performance feedback* [i.e. SASP5NPF]. The interaction variables are ROE-based SASP5NPF multiplied by firm's high ESG controversies [ESGCONHigh] and high stakeholder orientation scores [STAKORIHigh], respectively. The control variables firm age, size, liquidity and firm growth are natural log transformed, and others are proportion-based. Standardized coefficients and two-tailed tests are used. The first-stage F statistics in 2SLS models denote the joint significance of the instruments and all are significant at 1% level. p-values are reported in parentheses and heteroskedasticity robust standard errors are presented in third brackets.

DISCUSSIONS AND CONCLUSION

Our primary findings show that negative performance feedback of a firm impacts its ESG performance in a strongly negative manner. This result implies that such firms don't resort to more ESG performance to seek legitimacy and improve stakeholder satisfaction in financial performance shortfall situations. Therefore, we can emphasize that firms are not looking for "do good", i.e., to conduct themselves for more than financial gain (Huang, 2021); instead, "do well" by strategizing other actions (R&D may be as suggested by Chen and Miller, 2007; Eggers and Kaul, 2018; Greve, 2003; Vissa et al., 2010; etc.). However, this would raise their future operating performance from such performance shortfall situations only in the long run. We also support Di Giuli and Kostovetsky (2014) and Masulis and Reza (2015) in stating that shareholders' value maximization is the priority for firms worldwide instead of seeking legitimacy amidst critical negative performance feedback conditions.

Our moderation results show that a firm with high ESGCON has a negative inclination to undertake more ESG performance to resolve its performance shortfall problem. This finding is surprising as high ESGCON grab stakeholders' attention (Aouadi and Marsat, 2018; Cai et al., 2012; Carroll 1979), therefore triggering higher stakeholder skepticism and perceptions of corporate hypocrisy (Du et al. 2010), which leads to lower credibility and loss of reputation for the firm (Godfrey et al., 2009). In addition, negative performance feedback for a firm can further hurt its reputation and bankruptcy threats loom large on it. All these would be detrimental to overall organizational legitimacy and firm value. Furthermore, we don't find any influence of prospect theory implications in firms' ESG practices in performance shortfall situations (Chari et al., 2019; Kahneman and Tversky, 1979).

However, the high stakeholder orientation of a firm surprisingly doesn't motivate it to resort to more ESG performance to counter the performance shortfall problem. This action contradicts the fact that negative performance feedback would dissatisfy shareholders. Therefore, firms might not listen to and address the needs of all stakeholders rather than prioritizing a small number of them (Harrison et al., 2010) to maintain legitimacy in the eyes of all stakeholders other than shareholders. Therefore, our findings contradict the Instrumental stakeholder theory, which has predicted that future firm performance would be more excellent and survival threats lower if firms look after overall stakeholder interests.

Although the strengthening or weakening impact of the moderating role of the legal system (civil law vs. common law), and country-specific ethical behaviour context to influence the ESG decisions and strategic actions of negative performance feedback firms in the presence of firm moderators is visible in regard to size of the coefficients, but the nature of the association remains unchanged in all cases. Therefore, we can augment that firm moderators are more influential for negative performance

feedback firms to explore more ESG performance than cross-country heterogeneities. Specifically, we find that firms undertake more ESG performance to mitigate performance shortfall problems in a country with high ethical behaviour. This is because, they want to avoid deterioration of stakeholder relationships, legitimacy issues, damage to firm reputation, etc. (Weiss, 2009) when they face negative performance feedback conditions.

Our split sample results also highlight a few interesting insights. For instance, we observe that developed economies firms with ESG controversies are undertaking lower ESG practices when facing a performance shortfall situation. Other results are qualitatively consistent with our main results.

Overall, we conclude that more ESG performance is not the alternative strategic action for firms around the world when they face negative performance feedback conditions. Specifically, firms with high stakeholder orientation or with ESG controversies would negatively moderate negative performance feedback firms' ESG practices endeavours. Furthermore, we observe that firms facing performance shortfall situations in an ethical environment would pursue more ESG performance.

POLICY IMPLICATIONS, LIMITATIONS AND FUTURE SCOPE OF RESEARCH

Our results have important policy implications for regulators, policy-makers, and firm managers around the world. The regulators and policy-makers can emphasize institutionalizing reforms in investors protection rights regime so that firms are encouraged to look into more in stakeholders' value maximization along with shareholders. The firm managers need to capture stakeholder orientation in all their strategic behaviours and actions along with no ESG misconduct to achieve overall legitimacy and more competitive advantage.

However, there are a few limitations to our study. First, the information used in this study to proxy for ESG performance, i.e., ESG score, comes from Asset4, a division of Thomson Reuters. While Thomson Reuters follows a rigorous process in collecting and coding the data, they only use information that is publicly available. Because ESG reports, by and large, are not subject to regulatory audit, these reports might not accurately depict what is actually happening at the firm. Second, our country samples have differed in size, average company size, and industry-sectors composition. In cross-national research, it is preferable to have similar sample composition in each country surveyed in order to achieve data comparability.

There are also many possibilities for future research extensions of our results. First, the antecedents of a firm's negative performance feedback can provide a clearer picture in regard to the pursuance of overall ESG performance. Furthermore, future researchers can go in-depth and examine the environmental, social, and governance parameters individually to observe whether results show any variations or not. Second, future research should be attuned to other dimensions of institutional factors such as political uncertainty, national culture, and macroeconomic factors and new models and methods. In addition, individual firm-level corporate governance mediators such as board independence, CEO duality, etc., could be interacted with institutional factors to provide new insights into the ESG performance and financial performance relationship in a negative *performance feedback* condition.

REFERENCES

Aguinis, H. (2011). *Organizational responsibility: Doing good and doing well.*

Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management*, 38(4), 932-968.

Allen, F., Carletti, E., & Marquez, R. (2007). Stakeholder capitalism, corporate governance and firm value. Corporate Governance and Firm Value (September 16, 2009). *EFA*, 09-28.

Ansoff, H. I. (1979). The changing shape of the strategic problem. In D. E. Schendel & C. W. Hofer (Eds.), *Strategic management: A new view of business policy and planning*. Boston: Little, Brown and Company.

Aouadi, A., & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics*, 151(4), 1027-1047.

Bénabou, R., & Tirole, J. (2010). Individual and corporate social responsibility. *Economica*, 77(305), 1-19.

Bews, N. F., & Rossouw, G. J. (2002). A role for business ethics in facilitating trustworthiness. *Journal of Business Ethics*, 39(4), 377-390.

Bitektine, A., Hill, K., Song, F., & Vandenberghe, C. (2020). Organizational legitimacy, reputation, and status: Insights from micro-level measurement. *Academy of Management Discoveries*, 6(1), 107-136.

Boubakri, N., El Ghoul, S., Wang, H., Guedhami, O., & Kwok, C. C. (2016). Cross-listing and corporate social responsibility. *Journal of Corporate Finance*, 41, 123-138.

Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, 35(3), 97-116.

Bresciani, S., Ferraris, A., Santoro, G., & Nilsen, H. R. (2016). Wine sector: companies' performance and green economy as a means of societal marketing. *Journal of Promotion Management*, 22(2), 251-267.

Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient variation. *Econometrica: Journal of the Econometric Society*, 1287-1294.

Bromiley, P. (1991). Testing a causal model of corporate risk taking and performance. *Academy of Management Journal*, 34(1), 37-59.

Bromiley, P., & Harris, J. D. (2014). A comparison of alternative measures of organizational aspirations. *Strategic Management Journal*, 35(3), 338-357.

Brulhart, F., Gherra, S., & Quelin, B. V. (2019). Do stakeholder orientation and environmental proactivity impact firm profitability? *Journal of Business Ethics*, 158(1), 25-46.

Cai, Y., Jo, H., & Pan, C. (2012). Doing well while doing bad? CSR in controversial industry sectors. *Journal of Business Ethics*, 108(4), 467-480.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497-505.

Chari, M. D., David, P., Duru, A., & Zhao, Y. (2019). Bowman's risk-return paradox: An agency theory perspective. *Journal of Business Research*, 95, 357-375.

Chen, W. R., & Miller, K. D. (2007). Situational and institutional determinants of firms' R&D search intensity. *Strategic Management Journal*, 28(4), 369-381.

Chollet, P., & Sandwidi, B. W. (2016). L'impact sur les marchés financiers européens de la diffusion d'alertes sociétales et de leurs évènements déclencheurs. *Finance Contrôle Stratégie*, (19-2).

Christensen, C. M. (2013). *The innovator's dilemma: when new technologies cause great firms to fail.* Harvard Business Review Press.

Clark, G. L., Feiner, A., & Viehs, M. (2015). *From the stockholder to the stakeholder: How sustainability can drive financial outperformance*. Available at SSRN, 2508281.

Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm.* Prentice Hall/Pearson Education.

DasGupta, R. (2022). Financial performance shortfall, ESG controversies, and ESG performance: Evidence from firms around the world. *Finance Research Letters*, 46, 102487.

DasGupta, R., & Dhochak, M. (2021). Risk-Antecedents of Firms and Strategic Mediators–New Evidence from a Cross-Country Analysis. *American Business Review*, 24(1), 2.

Di Giuli, A., & Kostovetsky, L. (2014). Are red or blue companies more likely to go green? Politics and corporate social responsibility. *Journal of Financial Economics*, 111(1), 158-180.

De Bettignies, J. E., & Robinson, D. T. (2018). When is social responsibility socially desirable? *Journal of Labor Economics*, 36(4), 1023-1072.

De Villiers, C., & Van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations and Society*, 31(8), 763-781.

Deb, P., David, P., O'Brien, J. P., & Duru, A. (2019). Attainment discrepancy and investment: Effects on firm performance. *Journal of Business Research*, 99, 186-196.

Delgado-Ceballos, J., Aragón-Correa, J. A., Ortiz-de-Mandojana, N., & Rueda-Manzanares, A. (2012). The effect of internal barriers on the connection between stakeholder integration and proactive environmental strategies. *Journal of Business Ethics*, 107(3), 281-293.

Dobers, P., & Halme, M. (2009). Corporate social responsibility and developing countries. *Corporate Social Responsibility and Environmental Management*, 16(5), 237-249.

Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International Journal of Management Reviews*, 12(1), 8-19.

Duque-Grisales, E., & Aguilera-Caracuel, J. (2019). Environmental, social and governance (ESG) scores and financial performance of multilatinas: Moderating effects of geographic international diversification and financial slack. *Journal of Business Ethics*, 168(2), 315-334.

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835-2857.

Eggers, J. P., & Kaul, A. (2018). Motivation and ability? A behavioral perspective on the pursuit of radical invention in multi-technology incumbents. *Academy of Management Journal*, 61(1), 67-93.

El Akremi, A., Gond, J. P., Swaen, V., De Roeck, K., & Igalens, J. (2018). How do employees perceive corporate responsibility? Development and validation of a multidimensional corporate stakeholder responsibility scale. *Journal of Management*.

Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, 38, 45-64.

Fiegenbaum, A., Hart, S., & Schendel, D. (1996). Strategic reference point theory. *Strategic Management Journal*, 17(3), 219-235.

Flammer, C. (2013). Corporate social responsibility and shareholder reaction: The environmental awareness of investors. *Academy of Management Journal*, 56(3), 758-781.

Galema, R., Plantinga, A., & Scholtens, B. (2008). The stocks at stake: Return and risk in socially responsible investment. *Journal of Banking & Finance*, 32(12), 2646-2654.

Garcia-Castro, R., Arino, M. A., & Canela, M. A. (2010). Does social performance really lead to financial performance? Accounting for endogeneity. *Journal of Business Ethics*, 92(1), 107-126.

Garcia, A. S., Mendes-Da-Silva, W., & Orsato, R. J. (2017). Sensitive industries produce better ESG performance: Evidence from emerging markets. *Journal of Cleaner Production*, 150, 135-147.

Giroud, X., & Mueller, H. M. (2011). Corporate governance, product market competition, and equity prices. *Journal of Finance*, 66(2), 563-600.

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, 30(4), 425-445.

Greene, W. H. (2003). *Econometric analysis*. Pearson Education India.

_____

Greve, H. R. (2003). A behavioral theory of R&D expenditures and innovations: Evidence from shipbuilding. *Academy of Management Journal*, 46(6), 685-702.

Gupta, R. D. (2017). Risk-attitudes of the NSE 500 firms—Bowman's paradox and prospect theory perspectives. *IIMB Management Review*, 29(2), 76-89.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R.E. (2009). *Multivariate data analysis: A global perspective.* Pearson.

Hang, M., Geyer-Klingeberg, J., & Rathgeber, A. W. (2019). It is merely a matter of time: A meta-analysis of the causality between environmental performance and financial performance. *Business Strategy and the Environment*, 28(2), 257-273.

Harrison, J. S., Bosse, D. A., & Phillips, R. A. (2010). Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Management Journal*, 31(1), 58-74.

Hart, S. L. (2007). *Capitalism at the crossoads: Aligning business, earth, and humanity*. Pearson Prentice Hall.

Hart, S. L., & Ahuja, G. (1996). Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance. *Business Strategy and the Environment,* 5(1), 30-37.

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 1251-1271.

Huang, D. Z. (2021). Environmental, social and governance (ESG) activity and firm performance: a review and consolidation. *Accounting & Finance*, 61(1), 335-360.

Huang, H. H., Kerstein, J., & Wang, C. (2018). The impact of climate risk on firm performance and financing choices: An international comparison. *Journal of International Business Studies,* 49(5), 633-656.

Hull, C. E., & Rothenberg, S. (2008). Firm performance: The interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29(7), 781-789.

Humphrey, J. E., Lee, D. D., & Shen, Y. (2012). Does it cost to be sustainable? *Journal of Corporate Finance,* 18(3), 626-639.

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, 43(9), 834-864.

Ioannou, I., & Serafeim, G. (2017). The consequences of mandatory corporate sustainability reporting. Harvard Business School Research Working Paper, (11-100).

Jensen, M. (2001). Value maximisation, stakeholder theory, and the corporate objective function. *European Financial Management*, 7(3), 297-317.

Johnson, C. E. (2003). Enron's ethical collapse: Lessons for leadership educators. *Journal of Leadership Education*, 2(1).

Julian, S. D., & Ofori-dankwa, J. C. (2013). Financial resource availability and corporate social responsibility expenditures in a sub-Saharan economy: The institutional difference hypothesis. *Strategic Management Journal*, 34(11), 1314-1330.

Kacperczyk, A., Beckman, C. M., & Moliterno, T. P. (2015). Disentangling risk and change: Internal and external social comparison in the mutual fund industry. *Administrative Science Quarterly*, 60(2), 228-262.

Kahneman, Daniel, & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263-291.

Kang, J. (2013). The relationship between corporate diversification and corporate social performance. *Strategic Management Journal*, 34(1), 94-109.

Kang, J., & Kim, Y. H. (2014). The impact of media on corporate social responsibility. Available at SSRN 2287002.

Kim, H., Park, K., & Ryu, D. (2017). Corporate environmental responsibility: A legal origins perspective. *Journal of Business Ethics*, 140(3), 381-402.

Krüger, P. (2015). Corporate goodness and shareholder wealth. *Journal of Financial Economics*, 115(2), 304-329.

Kuusela, P., Keil, T., & Maula, M. (2017). Driven by aspirations, but in what direction? Performance shortfalls, slack resources, and resource-consuming vs. resource-freeing organizational change. *Strategic Management Journal*, 38(5), 1101-1120.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. *The Journal of Finance*, 52(3), 1131-1150.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The economic consequences of legal origins. *Journal of Economic Literature*, 46(2), 285-332.

Larcker, D. F., & Rusticus, T. O. (2010). On the use of instrumental variables in accounting research. *Journal of Accounting and Economics*, 49(3), 186-205.

Lee, D. D., & Faff, R. W. (2009). Corporate sustainability performance and idiosyncratic risk: A global perspective. *Financial Review*, 44(2), 213-237.

Lee, K. H., Cin, B. C., & Lee, E. Y. (2016). Environmental responsibility and firm performance: The application of an environmental, social and governance model. *Business Strategy and the Environment*, 25(1), 40-53.

Lewellyn, K. B. & Bao, S. R. (2015). R&D investment in the global paper products industry: A behavioral theory of the firm and national culture perspective. *Journal of International Management*, 21(1), 1-17.

Li, W. X., Chen, C. C. S., & French, J. J. (2012). The relationship between liquidity, corporate governance, and firm valuation: Evidence from Russia. *Emerging Markets Review*, 13(4), 465-477.

Lucas, G. J., Knoben, J., & Meeus, M. T. (2018). Contradictory yet coherent? Inconsistency in performance feedback and R&D investment change. *Journal of Management*, 44(2), 658-681.

Martin, V., Hurn, S., & Harris, D. (2013). *Econometric modelling with time series: specification, estimation and testing*. Cambridge University Press.

Masulis, R. W., & Reza, S. W. (2015). Agency problems of corporate philanthropy. *The Review of Financial Studies*, 28(2), 592-636.

Mattingly, J. E. (2017). Corporate social performance: A review of empirical research examining the corporation–society relationship using Kinder, Lydenberg, Domini social ratings data. *Business & Society*, 56(6), 796-839.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 21(5), 603-609.

McWilliams, A., Siegel, D. S., & Wright, P. M. (2006). Corporate social responsibility: Strategic implications. *Journal of Management Studies*, 43(1), 1-18.

O'Brien, J. P., & David, P. (2014). Reciprocity and R&D search: Applying the behavioral theory of the firm to a communitarian context. *Strategic Management Journal*, 35(4), 550-565.

Opler, T. C., & Titman, S. (1994). Financial distress and corporate performance. *The Journal of Finance*, 49(3), 1015-1040.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403-441.

Palazzo, G., & Scherer, A. G. (2006). Corporate legitimacy as deliberation: A communicative framework. *Journal of Business Ethics*, 66(1), 71-88.

Papadimitri, P., Pasiouras, F., Tasiou, M., & Ventouri, A. (2020). The effects of board of directors' education on firms' credit ratings. *Journal of Business Research*, 116, 294-313.

Porter, M., Kramer, M., & Randall-Raconteur, J. (2006). So what now? *Harvard Business Review*.

Posen, H. E., Keil, T., Kim, S., & Meissner, F. D. (2018). Renewing research on problemistic search—A review and research agenda. *Academy of Management Annals*, 12(1), 208-251.

Robertson, D. C. (2009). Corporate social responsibility and different stages of economic development: Singapore, Turkey, and Ethiopia. *Journal of Business Ethics*, 88(4), 617-633.

Schaltegger, S., & Hörisch, J. (2017). In search of the dominant rationale in sustainability management: legitimacy-or profit-seeking? *Journal of Business Ethics,* 145(2), 259-276.

Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*, 19(8), 729-753.

Sheehy, B. (2015). Defining CSR: Problems and solutions. *Journal of Business Ethics*, 131(3), 625-648.

Shi, W., & Veenstra, K. (2021). The moderating effect of cultural values on the relationship between corporate social performance and firm performance. *Journal of Business Ethics*, 174(1), 89-107.

Shinkle, G. A. (2012). Organizational aspirations, reference points, and goals: Building on the past and aiming for the future. *Journal of Management*, 38(1), 415-455.

Staiger, D., Stock, J. H., & Watson, M. W. (1997). The NAIRU, unemployment and monetary policy. *Journal of Economic Perspectives*, 11(1), 33-49.

Starks, L. T. (2009). EFA keynote speech: Corporate governance and corporate social responsibility: What do investors care about? What should investors care about? *Financial Review*, 44(4), 461-468.

Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 501-524.

Su, W., & Tsang, E. W. (2015). Product diversification and financial performance: The moderating role of secondary stakeholders. *Academy of Management Journal*, 58(4), 1128-1148.

Tilt, C. A. (2016). Corporate social responsibility research: the importance of context. *International Journal of Corporate Social Responsibility*, 1(1), 1-9.

Tyler, B. B., & Caner, T. (2016). New product introductions below aspirations, slack and R&D alliances: A behavioral perspective. *Strategic Management Journal*, 37(5), 896-910.

Velte, P. (2020). Institutional ownership, environmental, social, and governance performance and disclosure–a review on empirical quantitative research. *Problems and Perspectives in Management*, 18(3), 282.

Vissa, B., Greve, H. R., & Chen, W. R. (2010). Business group affiliation and firm search behavior in India: Responsiveness and focus of attention. *Organization Science*, 21(3), 696-712.

Wang, Z., & Sarkis, J. (2017). Corporate social responsibility governance, outcomes, and financial performance. *Journal of Cleaner Production*, 162, 1607-1616.

Weiss J. W., (2009). *Business Ethics: A Stakeholder & Issues Management Approach with Cases*, 5th Edition, South-Western Cengage Learning.

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica: Journal of the Econometric Society*, 817-838.

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581-606.

Wooldridge, J. M. (2002). *Econometric Analysis of Cross Section and Panel Data.* MIT press. Cambridge, MA, 108(2), 245-254.

Wooldridge, J. M. (2015). *Introductory econometrics: A modern approach*. Cengage learning.

Zahid, M., Rahman, H. U., Khan, M., Ali, W., & Shad, F. (2020). Addressing endogeneity by proposing novel instrumental variables in the nexus of sustainability reporting and firm financial performance: A step-by-step procedure for non-experts. *Business Strategy and the Environment*, 29(8), 3086-3103.

APPENDIX

ADDITIONAL REFERENCE

2SLS MODELS

Basic Model
$$ESG_{it} = \beta_0 + \beta_1 ESG_{it-1} + \beta_2 SASP5NPF/FASPNPF_{it} + \beta_3 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (1)$$

X_{it} is the vector of control variables including "". μ_i is an unobserved country-specific effect and γ_t is time specific effect ε_{it} is the error term.

$$ESG_{it} = \beta_0 + \beta_1 ESG_{it-1} + \beta_2 SASP5NPF_{it} + \beta_3 ESGCONHigh_{it} + \beta_4 (SASP5NPF_{it} * ESGCONHigh_{it}) + \beta_5 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (2)$$

$$ESG_{it} = \beta_0 + \beta_1 ESG_{it-1} + \beta_2 SASP5NPF_{it} + \beta_3 STAKORIHigh_{it} + \beta_4 (SASP5NPF_{it} * STAKORIHigh_{it}) + \beta_5 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (3)$$

Our two-stage model is as follows,

List of Instruments are used in this study [industry ESG intensity (IESGI), industry growth (IG), Herfindahl index proxying product market competition (HIPPMC), country-specific MC/GDP [market capitalization/gross domestic product] ratio (MCGDP)]

Basic Model
First stage
$$SASP5NPF/FASPNPF_{it} = \alpha_0 + \alpha_1 IESGI_{it} + \alpha_2 IG_{it} + \alpha_3 HIPPMC_{it} + \alpha_4 MCGDP_{it} + \alpha_5 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (4)$$

Second stage
$$ESG_{it} = \beta_0 + \beta_1 ESG_{it-1} + \beta_2 SASP5NPF/FASPNPF_{it} + \beta_3 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (5)$$

Interaction Model
First stage
$$SASP5NPF_{it} = \alpha_0 + \alpha_1 IESGI_{it} + \alpha_2 IG_{it} + \alpha_3 HIPPMC_{it} + \alpha_4 MCGDP_{it} + \alpha_5 ESGCONHigh_{it} + \alpha_6 STAKORIHigh_{it} + \alpha_7 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (6)$$

$$(SASP5NPF * ESGCONHigh)_{it} = \alpha_0 + \alpha_1 (ESGCONHigh * IESGI)_{it} + \alpha_2 (ESGCONHigh * IG)_{it} + \alpha_3 (ESGCONHigh * HIPPMC)_{it} + \alpha_4 (ESGCONHigh * MCGDP)_{it} + \alpha_5 ESGCONHigh_{it} + \alpha_6 STAKORIHigh_{it} + \alpha_7 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (7)$$

$$(SASP5NPF * STAKORIHigh)_{it} = \alpha_0 + \alpha_1 (STAKORIHigh * IESGI)_{it} + \alpha_2 (STAKORIHigh * IG)_{it} + \alpha_3 (STAKORIHigh * HIPPMC)_{it} + \alpha_4 (STAKORIHigh * MCGDP)_{it} + \alpha_5 ESGCONHigh_{it} + \alpha_6 STAKORIHigh_{it} + \alpha_7 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (8)$$

Second stage
$$ESG_{it} = \beta_0 + \beta_1 ESG_{it-1} + \beta_2 SASP5NPF_{it} + ESGCONHigh_{it} + (ESGCONHigh * SASP5NPF)_{it} + STAKORIHigh_{it} + (STAKORIHigh * SASP5NPF)_{it} + \beta_3 X_{it} + \mu_i + \gamma_t + \varepsilon_{it} \qquad (9)$$