

When Doing Good Gets Risky: ESG and Default Risk in Asia-Pacific Firms

Extended abstracts

Problem Statement

The Asia-Pacific region, a critical hub in the global economy, faces mounting pressure to balance rapid economic growth with sustainable practices amid increasing climate and social challenges. Environmental, Social, and Governance (ESG) practices have emerged as a framework for firms to address these challenges while enhancing stakeholder trust and financial stability. However, the financial implications of ESG adoption, particularly its impact on firm default risk, remain underexplored. While ESG practices are often associated with improved firm performance and reputation, their effect on financial stability—specifically the risk of default—varies across economic contexts and may involve trade-offs. Excessive ESG engagement could strain financial resources, potentially increasing default risk, while moderate engagement might mitigate it. Furthermore, the distinct roles of the Environmental (E), Social (S), and Governance (G) pillars, as well as the influence of corporate leadership factors like board size and ESG-linked executive compensation, are not well understood in the Asia-Pacific context. This study addresses these gaps by examining how ESG practices influence firm default risk across 34 Asia-Pacific countries, exploring both collective and individual pillar effects, and assessing variations between advanced and emerging economies.

Theoretical Framework

The study is grounded in two contrasting theoretical perspectives: stakeholder theory and the neo-classical perspective. Stakeholder theory (Freeman, 2010) posits that firms adopting ESG practices can enhance financial stability by fostering positive relationships with stakeholders—such as customers, employees, and investors—leading to stable cash flows, lower borrowing costs, and reduced default risk. This aligns with the risk mitigation view (Goss & Roberts, 2011), which suggests that ESG initiatives reduce operational and reputational risks. Conversely, the neo-classical perspective (Friedman, 1962) and the overinvestment view (Goss & Roberts, 2011) argue that ESG investments may divert resources from core business activities, increasing costs and financial risk, particularly when firms overcommit to resource-intensive ESG initiatives. These competing views suggest a potential non-linear relationship between ESG performance and default risk, where moderate engagement may reduce risk, but excessive investment could increase it. Additionally, the study draws on stakeholder classification theory (Clarkson, 1995) to hypothesize that the E, S, and G pillars have distinct impacts on default risk due to their varying influence on primary and secondary stakeholders. The moderating role of corporate leadership, including board size and ESG-linked executive compensation, is explored through governance theories (Jensen, 1993; Eccles et al., 2014), which emphasize how board structures and incentive alignment shape ESG outcomes and financial stability. We propose the following hypothesis in our study:

Hypothesis 1: E-S-G collective practice has significant impact on firm's default risk in Asia-Pacific region.

Hypothesis 2: E-S-G individual pillars have different impacts on firm's distance to default.

Hypothesis 3: ESG practice has varied impacts on firm's default risk in advanced and non-advanced economies

Hypothesis 4: The relationship between ESG performance and a firm's default risk is moderated by board characteristics.

Methodology

The study utilizes a comprehensive dataset from the Refinitiv Eikon Database, covering 3,377 firms across 34 Asia-Pacific countries from 2008 to 2024, yielding 23,987 firm-year observations. Default risk is measured using the Z-score, where a higher score indicates lower default risk. The main explanatory variables include the ESG combined score and individual E, S, and G pillar scores, with higher scores reflecting greater ESG engagement. Control variables encompass firm characteristics such as size (natural log of total assets), profitability (ROA), leverage (total liabilities to total assets, TLTA), asset tangibility (TANG), sales (total revenues to total assets), and liquidity (current assets to current liabilities, LIQ), as well as market information like Tobin's Q. The sample is divided into advanced (1,073 firms, 10,574 observations) and emerging economies (2,304 firms, 13,413 observations) to capture cross-market asymmetries.

The analysis employs pooled Ordinary Least Squares (OLS) regression to estimate the relationship between ESG scores and default risk, incorporating both linear and quadratic models to test for a U-shaped relationship. The baseline model, following Atif and Ali (2021) and De la Fuente et al. (2022) is as follow:

$$Z - score_{it} = \alpha_0 + \beta_1 ESG\ proxies_{it} + \beta_2 (ESG\ proxies_{it})^2 + \beta_3 (Controls)_{it} + (1)$$

To test for non-linearity, a quadratic term (ESG-squared) is included. The study also examines the moderating effects of firm size, profitability, board size, and ESG-linked executive compensation using interaction terms.

$$Zscore_{it} = \alpha_0 + \beta_1 ESG\ proxies_{it} + \beta_2 ESG\ proxies_{it} * Interaction\ variable_{it} \quad (2)$$

Robustness is ensured through lagged ESG variables (one-, two-, and three-year lags) and endogeneity tests, including two-stage least squares (2SLS) with industry median ESG scores as instruments and the generalized method of moments (GMM) to address unobservable heterogeneity. Country-fixed effects control for macroeconomic variations, and extensive robustness checks validate the findings.

Key Findings

The study reveals a U-shaped relationship between overall ESG performance and default risk across the full sample, supporting Hypothesis 1. Moderate ESG engagement reduces default risk, but excessive engagement increases it, suggesting diminishing returns or financial strain from overinvestment. This pattern holds in both developed and emerging markets, with robustness confirmed across one-, two-, and three-year lagged models.

Analysis of individual ESG pillars (Hypothesis 2) shows that Environmental and Governance scores significantly reduce default risk in the full sample, while the Social score has no significant effect. Cross-market asymmetries (Hypothesis 3) reveal that Governance is significant in developed markets, reflecting strong institutional frameworks, whereas Environmental and Social scores are significant in emerging markets, where stakeholder scrutiny of environmental and social issues is heightened.

Corporate leadership moderates the ESG-default risk relationship (Hypothesis 4). Larger board sizes and ESG-linked executive compensation weaken the risk-reducing effect of ESG, particularly in developed markets, due to potential coordination inefficiencies or misaligned incentives. Firm size and profitability also moderate the relationship, with stronger effects in developed markets, where larger firms face higher implementation costs. Robustness checks, including 2SLS and GMM, confirm that the findings are not driven by endogeneity, with the industry median ESG score proving a valid instrument (F-statistics indicating strong relevance).

Originality and Contributions

This study makes several novel contributions to the ESG and financial stability literature. First, it is the first to comprehensively examine the relationship between ESG practices and firm default risk across the entire Asia-Pacific region, covering 34 countries and a 17-year period. This broad scope addresses a critical gap, as prior studies often focus on specific economies or narrower ESG aspects. Second, the identification of a U-shaped relationship between ESG performance and default risk provides new evidence of non-linear effects, highlighting the risks of overinvestment in ESG initiatives. Third, the study's comparative analysis of advanced and emerging economies reveals asymmetric impacts, with Governance dominating in developed markets and Environmental and Social pillars in emerging markets, offering context-specific insights for stakeholders. Fourth, by disaggregating ESG into its individual pillars, the study clarifies their distinct contributions to financial stability, challenging the assumption of uniform ESG effects. Fifth, the exploration of corporate leadership (board size and ESG-linked compensation) as moderators introduces a governance perspective to ESG research, emphasizing the role of firm-specific characteristics in shaping outcomes.

Practically, the findings offer actionable guidance for firms, policymakers, and investors. Firms should tailor ESG strategies to market contexts—prioritizing governance in developed markets and environmental/social initiatives in emerging markets—while avoiding excessive investment to mitigate rising default risk. Policymakers can promote balanced ESG regulations, emphasizing governance in developed markets and comprehensive adoption in emerging ones. Investors should prioritize firms with moderate ESG performance in developed markets and strong environmental/social performance in emerging markets to balance financial health and sustainability. Limitations include potential omitted variables (e.g., industry effects) and reliance on Z-score as a risk proxy. Future research could explore industry-specific ESG impacts, alternative risk measures, and longer-term dynamics to refine these insights.

Keywords: ESG practices; ESG performance; default risk; emerging countries.

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