Journal of Business Finance & Accounting

WILEY
JBFA

ARTICLE OPEN ACCESS

Corruption and Default Risk: Global Evidence

Sivathaasan Nadarajah[1] | Muhammad Atif[2] | Vincent Tawiah[3] | Jia Liu[4] | Geoffrey Wood[5,6,7]

[1]Department of Accounting, Finance and Economics, Griffith Business School, Griffith University, Brisbane, Australia | [2]College of Business and Law, RMIT University, Melbourne, Australia | [3]DCU Business School, Dublin City University, Dublin, Ireland | [4]School of Accounting, Economics and Finance, University of Portsmouth, Portsmouth, UK | [5]DAN Department of Management and Organizational Studies, Western University, London, Canada | [6]Management School, Cranfield University, Cranfield, UK | [7]Management School, University of Bath, Bath, UK

Correspondence: Muhammad Atif (muhammad.atif@rmit.edu.au)

Received: 9 May 2023 | **Revised:** 30 September 2024 | **Accepted:** 22 January 2025

Funding: The authors received no specific funding for this work.

Keywords: corruption | default risk | external monitoring | governance frameworks | information asymmetry | risk-taking

ABSTRACT

The extant literature explores the consequences of corruption on firms' growth and survival. However, its impact on default risk remains unexplored. On the basis of a sample of 189,109 firm-years from 2004 to 2021 across 47 countries, our study reveals that a one standard deviation increase in corruption is associated with an 11.3% increase in default risk. Our channel analysis identifies information asymmetry and managerial risk-taking as key mechanisms through which corruption influences default risk. This adverse effect is particularly pronounced in countries with opaque information environments, weak governance frameworks and inadequate external monitoring of firms. We further highlight the detrimental impact of corruption on firms' borrowing costs and banks' loan performance. Our study emphasizes the importance of enhancing information transparency and implementing stringent control mechanisms as a basis of mitigating corruption's detrimental effects across a range of different socio-political contexts.

> *Corruption also represents a significant additional cost of doing business in many developing countries. It undermines development by distorting the rule of law and weakening the institutional foundation upon which economic growth depends.*
>
> *– International Finance Corporation (IFC-World Bank Group).*[1]

1 | Introduction

Corruption, which seemingly transcends ages and cultures, continues to exert a profound influence in the 21st century, contaminating organizations and corporations ostensibly of the highest probity and esteem. Over the last 25 years, outrageous scandals have marred the reputations of some of the most prestigious global entities, prompting governments to institute anti-corruption legislation to protect stakeholders.[2] Despite these effects, egregious corporate misconduct remains frequently exposed, arguably engendered by the prevailing social and political ethos, which conditions the behaviours of individuals and organizations in their business dealings.[3] In less developed countries, governments may be generally mistrusted by the public (Blair et al. 2017), and such attitudes can pervade individual, bureaucratic and corporate interactions. In some countries, for example, it is normal for managers to accept bribes to facilitate business arrangements (Zheng and Xiao 2020). Moreover, these countries often experience institutional voids (Palepu and Khanna 1998; Webb et al. 2010), characterized by weak legal systems that undermine corporate governance and a lack of

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Journal of Business Finance & Accounting* published by John Wiley & Sons Ltd.

established media services, which hampers information transparency (Liu et al. 2022). Inevitably, an ethos of corruption in such countries will permeate the corporate sector, as management may rationalize dishonest practices as necessary to 'grease the wheel' for successful operations in such environments (e.g., Méon and Weill 2010; Dreher and Gassebner 2013). However, once such a cynical approach is condoned, it sets a precedent that can justify similar immoral actions in the future (Wu 2005). Moreover, in an era of globalization, dishonest practices in one country can have deleterious consequences for the corporate sector worldwide.

Against this backdrop, our study investigates whether corruption impacts corporate default risk on a global scale. We seek to address the principal research question: does reduced transparency of information, in combination with increased financial, legal and organizational complexity, open a conduit to corruption? Prior research investigating the effect of corruption on business and market performance concurs that corruption increases the opacity of information disclosure (Riahi-Belkaoui and Al-Najjar 2006), induces excessive risk-taking (Ali et al. 2020), reduces growth (Mauro 1995; Mo 2001), decreases the market value of a firm (Lee and Ng 2009), increases corporate fraud (Smith 2016) and raises the costs of borrowing (Stulz 2005; Tee and Teoh 2022). These consequences can severely affect firms' growth and survival, potentially jeopardizing their financial stability and increasing the likelihood of default (Rego et al. 2009; Nadarajah et al. 2024). However, despite the clear logic of such causes and effects, to date, the connection between corruption and corporate default risk has attracted scant attention from scholars. Hence, our study endeavours to fill this lacuna by investigating the impact of corruption on a firm's default risk and the channels through which its influence might be exerted.

Primarily, we evaluate the impact of a country's level of corruption on a firm's default risk for two reasons. First, those operating in a corrupt environment are more likely to confront information opacity and agency-related challenges (Boubakri et al. 2012; Bhattacharya et al. 2013), as self-interested managerial behaviours are often facilitated in firms where information asymmetry is prevalent (Ashbaugh-Skaife et al. 2006; Alam et al. 2024). A lack of transparency enables the concealment of illegal rent-seeking and undermines the accountability and monitoring of managers (Al-Najjar and Abed 2014). Consequently, in firms with opaque information environments, the agency risk faced by external stakeholders tends to be significant, leading to increased default risk as the expected value of cash flows declines (Ashbaugh-Skaife et al. 2006). Second, operating in a corrupt milieu increases the likelihood of firms defaulting because managers have the freedom to indulge their predilections for taking on risky investments (Chen et al. 2015). Bribery may induce managers to make suboptimal decisions (Shleifer and Vishny 1993; Bardhan 1997), fostering risk-taking behaviours that lead to wasteful and non-productive investments in corrupt societies (Habib and Zurawicki 2002). Moreover, government officials seek to extort payments from firms willing to take on investment risks in such settings (Lien et al. 2016). Therefore, management is more inclined to engage in empire-building and rent-seeking investments (Lasantha et al. 2024) even when expected returns are negative, which can further escalate the risk of default. Overall, corruption heightens the risk of a firm's liquidation through a pernicious combination of information asymmetry and ineffectually moderated risk-taking behaviours.

However, empirical evidence regarding the financial consequences of corruption remains conflicting. In support of the concept to 'sand the wheel', which serves to retard progress by corrupt means, Mauro (1995) and Shleifer and Vishny (1993) argue that corporate venality increases the operational costs of business, creates uncertainty and dissuades investment. In a similar vein, Dass et al. (2018) document that firms in corrupt environments engage in earnings management and are more susceptible to face security fraud. Ex post rent-seeking by corrupt officials adversely affects long-term innovation success, as evidenced by the generation of fewer and lower-quality patents compared to their peers (Ellis et al. 2020; Huang and Yuan 2021). Conversely, in line with the concept of 'grease the wheel', which posits that corruption can enhance progress, Chen et al. (2013) report that bribery can help firms secure essential borrowing. More productive and efficient firms may outbid competitors through bribery, making them more likely to obtain increased loans (Cho et al. 2014; Liu 2016). Lui (1985) also contends that corruption can expedite the processes of a sluggish government. These conflicting and indeterminate analyses warrant our investigation of the practice of corruption, which is becoming global in character and may translate into huge problems for economies worldwide.

Accordingly, our study aims to enhance understanding of the factors influencing default risk, which entails disruptions in productivity, loss of shareholders' wealth, increased costs,[4] and attrition of customers and employees (Xu and Zhang 2009; Brogaard et al. 2017). Extant literature examines the diverse consequences of corruption, such as impacts on uncertainty, foreign and domestic investment (Hanousek et al. 2021), the role of information and communication (DiRienzo et al. 2007), corporate social responsibility and political behaviour (Luo 2006). It also covers corporate bonds (Ciocchini et al. 2003; Alonso et al. 2022) and cross-border takeovers (Weitzel and Burns 2006), yet largely overlooks corporate default risk. Our investigation expands on existing research by analysing 189,109 firm-year observations from 18,641 non-financial firms across 47 countries during 2004–2021. We establish a significantly positive relationship between corruption and default risk globally, indicating that higher levels of corruption correspond to increased probabilities of corporate default.[5] Our results are both statistically significant and economically meaningful. For instance, a one standard deviation increase in corruption is associated with an increase of 11.3% over the sample mean of the risk of company failure.

To mitigate concerns regarding endogeneity due to omitted variables bias, we validate the relationship using an instrumental variable (IV) approach, utilizing religion (Djankov et al. 2007) and delay in resolving a commercial dispute (Doing Business) as instruments for corruption levels. Moreover, we employ the entropy balancing (EB) method, which further confirms a significantly positive effect of a country's level of corruption on default risk. Our key findings remain robust across alternative measures, specifications, samples and additional firm-level controls.

Having established a positive relationship, we further explore how corruption influences default risk by exacerbating information asymmetry and encouraging risk-taking behaviour. Corrup-

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

tion fosters information opacity and agency-related tunnelling (Riahi-Belkaoui 2004; Boubakri et al. 2012), leading to increased risk-taking and suboptimal decision-making fuelled by bribery. Consequently, the detrimental effect of a country's corruption level on default risk should be stronger in firms where information asymmetry is more intense and risk-taking behaviour predominates, which is confirmed by the evidence we adduce.

In cross-sectional analyses, we observe a weaker effect of corruption on default risk in countries characterized by transparent information environments and stronger governance frameworks. These settings typically experience lower agency-related costs, more effective investor protection and well-established informational structures (Nadarajah et al. 2021). Additionally, we show that effective external governance monitoring mitigates the adverse effects of corruption on default risk, as it promotes greater managerial independence and benefits all stakeholders (Ashbaugh-Skaife et al. 2006). These results underscore the importance of fostering transparent information environments and implementing rigorous governance and legal frameworks at the national level to alleviate the negative consequences of corruption. Finally, we offer insights into the financial implications of increased default risk for firms operating in corrupt environments, specifically concerning the cost of borrowing and bank loan performance.

Our study contributes significantly to the literature on the nexus of corruption and default risk in two keyways. First, we extend research investigating corruption by deepening our understanding of how corruption influences corporate decision-making and its consequential outcomes. In the global context, corruption varies widely across countries and localities, presenting a substantial challenge (Hanousek et al. 2021). For instance, corruption affects the entry strategies of foreign direct investment (FDI) and resource allocation by multinational enterprises (MNEs) (Rodriguez et al. 2005; Sartor and Beamish 2018; Uhlenbruck et al. 2006). Moreover, corruption negatively impacts market reactions to firms' announcements of international strategic alliances (Li and Reuer 2021),[6] and countries with higher corruption levels tend to have more non-performing loans and slower lending growth, restricting firms' access to capital (Park 2012; Qi and Nguyen 2021). Despite these effects, scant attention has been paid to how a country's corruption level influences corporate default risk. Building on this gap, our research shows that firms in corrupt environments face heightened default risk due to increased information asymmetry and a greater propensity for risky managerial behaviours. These results hold significant implications for policymakers committed to combating corruption to foster international trade growth. Moreover, they serve as a crucial alert to companies and the financial sector about the elevated risks associated with extending credit to potentially corrupt entities. As globalization continues, understanding and addressing this pervasive issue becomes increasingly vital. Sustainable business requires governance systems that safeguard investors and stakeholders against the corrosive effects of corruption, preserving trust in the corporate sector.

Second, our study complements research exploring the determinants of firms' default risk in a global context. The recent literature on default risk predominantly focuses on country-specific evidence (e.g., in the United States and Japan), examining factors such as debt maturity choice (Goyal and Wang 2013), incentive structures (Bennett et al. 2015), innovation performance (Hsu et al. 2015), stock market liquidity (Brogaard et al. 2017), co-opted boards (Baghdadi et al. 2020), institutional ownership (e.g., Kabir et al. 2020), foreign competition (Atawnah et al. 2022), ESG disclosure (Atif and Ali 2021) and takeover threats (Balachandran et al. 2022). Extending this strand of literature, our study uses a cross-country setting to demonstrate that a country's level of corruption significantly influences corporate default risk, identifying weaker positive causality in countries with a better information environment and establishing that sound governance structures, buttressed by greater external monitoring, reduce the incidence of dishonest practices. Our study also delineates the negative effects of corruption on borrowing costs and bank loan performance. These insights are of special relevance to multinational corporations (MNCs), which operate across many international boundaries, influencing both their own practices and those of their foreign counterparts. By addressing the asymmetry of information underlying default risk, our research provides valuable insights for countries and companies pursuing international expansion.

The remainder of the article is as follows. Section 2 reviews the relevant literature and develops the hypotheses. Section 3 outlines the research design, including details on the data, sample and variables, and presents summary statistics. Section 4 presents and discusses the results of the baseline analysis, endogeneity approaches and robustness tests. Section 5 discusses channel and cross-sectional analyses, as well as implications for financial outcomes. Section 6 concludes the study.

2 | Literature Review and Hypotheses

2.1 | Theoretical Framework for Corruption

Research contends that corruption, defined as the misuse of power for self-aggrandizement (Blackburn et al. 2006; Everett et al. 2007), contributes to an opaque business environment and is influenced by cultural and socio-demographic factors (La Porta et al. 1999; Treisman 2000). There are conflicting views on the role of corruption in organizational decision-making and contingent outcomes. From one perspective, corruption can play a positive role when used to bypass lengthy bureaucratic processes to facilitate transactions, a practice referred to as 'greasing the wheels' (Acemoglu and Verdier 2000; Dreher and Gassebner 2013; Jiang and Nie 2014). Specifically, corruption allows private sector firms to navigate government regulations to achieve strategic objectives (Jiang and Nie 2014), such as avoiding fines or securing lucrative contracts through financial inducements to regulators or officials. Corruption can streamline processes in cumbersome governmental systems, potentially aiding firms in accessing essential resources and loans (Lui 1985; Chen et al. 2015).

However, corruption has clear negative consequences for firms (Smith 2016; Xu et al. 2019) and a country's growth prospects (Mauro 1995; Everett et al. 2007). It fosters an environment where officials may hinder business transactions with excessive demands, weak policies (referred to as 'sand the wheel') and

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

capriciousness in regulatory enforcement. When firms resort to bribery to secure contracts, they perpetuate corruption (Wu 2005).

Shleifer and Vishny (1993) describe corruption as a pervasive and insidious form of taxation that escalates costs, exposes firms to fines and reputational damage (Sahakyan and Stiegert 2012) and inflates production overheads (IMF 2016). Moreover, corruption hampers financial transparency (Murphy et al. 1993; Shleifer and Vishny 1993, 1994), distorts capital allocation (Xu et al. 2019), heightens fraud risks (Dass et al. 2018) and reduces investment (Habib and Zurawicki 2002; Wei 2000) and market activity (Mauro 1995). These repercussions not only impede firm growth and survival but also increase cash flow volatility, weakening financial stability and raising default risks.

2.2 | Hypotheses Development

2.2.1 | Corruption and Default Risk

Earlier research argues that information asymmetry caused by corruption diminishes a firm's incentives to develop sustainable competitive advantages and growth strategies due to the uncertainty and opacity typical of corrupt markets (Wu 2005). Managers, lacking reliable information, struggle to foresee future developments and their long-term implications. Moreover, reduced transparency in corporate reporting from companies operating in corrupt regions exacerbates agency costs (Chaney et al. 2011). To mitigate the effects of managerial self-interest and funding shortfalls caused by high rent-seeking, firms in corrupt environments adopt financial strategies characterized by high leverage and minimal cash reserves (Smith 2016). Although these policies may help limit bribery expenditures, they also expose firms to high-interest payments and default risks when debts mature and repayment becomes due. Furthermore, by relying on debt to avoid bribery payments, firms risk undermining their competitive standing in corrupt environments. The positive correlation between corruption and information asymmetry amplifies default risks as managers struggle to forecast cash flows accurately amidst a dearth of reliable information, compounded by agency costs (Bhattacharya et al. 2013) and loss of competitive edge (Boubakri et al. 2012).

As noted, countries with weak governance structures suffer from institutional voids (Palepu and Khanna 1998), characterized by ineffective legal and regulatory frameworks that contribute to poor corporate governance. Additionally, inadequate media infrastructure in these regions exacerbates informational opacity (Liu et al. 2022). Firms operating in corrupt countries face heightened default risks due to a greater propensity among managers for risk-taking (Shleifer and Vishny 1993). Consequently, poor decision-making stemming from excessive risk-taking leads to inefficient resource allocation and perpetuates a cycle of borrowing. Moreover, firms operating in corrupt environments find themselves less attractive to potential lenders (Li et al. 2021), resulting in higher borrowing costs and increased servicing expenses. This exacerbates liquidity challenges and further elevates the risk of default for these firms.

Again, bribery can incentivize managers to make suboptimal decisions (Bardhan 1997): An increased appetite or tolerance for risk in corrupt environments may cause wasteful and unproductive investments driven by the lure of bribe payments (Shleifer and Vishny 1997). Entrenched managers in corrupt settings may engage in rent-seeking behaviours, taking advantage of weakened corporate governance systems that diminish executive accountability and compromise project evaluations (Stulz 2005; Ng 2006). For example, venal bureaucrats might structure inefficient contracts and tenders to which managers commit substantial resources, yielding minimal returns (Piga 2011). Moreover, corruption weakens policies and regulations, enabling government officials to solicit bribes from firms in exchange for permits and approvals (Xu et al. 2019; Zheng and Xiao 2020). In some cases, to attract businesses, officials may even offer investment subsidies, creating incentives for managers to engage in bribery. In such corrupt environments, even well-intentioned management teams can be coerced into compromising their integrity due to extortionate behaviour from officials. Consequently, these investments often lead to misallocation of capital, weakening future cash flows and reducing firm valuations (Zheng and Xiao 2020).

As corruption thrives on information asymmetry, exposes firms to capricious government officials and may be associated with other risky behaviours that can threaten future cash flows, we predict a greater probability of default risk. Therefore, we propose the following hypothesis:

Hypothesis 1. All else being equal, there is a positive relationship between corruption and corporate default risk.

2.2.2 | The Role of a Country's Information Environment, Legal and Governance Structure

As in Hypothesis 1, corruption increases default risk. However, the degree of this relationship varies based on a country's information environment, institutional quality and governance, reflecting the cross-country differences in these factors.

The information setting encompasses information availability, accuracy and timeliness of data on a firm's operations, governance and financial health. In countries with transparent information environments, the information asymmetry between insiders and outsiders is reduced (Nadarajah et al. 2021). So, stakeholders—including lenders, investors, creditors, regulators and civil society—are better informed about borrowers, including their credit history, viable projects and default risks. This improvement enhances the overall quality of the borrower pool and lowers the probability of default (Pagano and Jappelli 1993). Moreover, in such transparent contexts, assessments of the firm's true financial health and governance practices become more accurate. This enables investors and creditors to respond swiftly by adjusting the risk perceptions and implementing effective risk management strategies, helping to prevent a sudden loss of confidence and a subsequent increase in default risk.

Countries with higher levels of transparency reduce information risk in capital markets (Eleswarapu and Venkataraman 2006). In contrast, firms operating in countries with opaque information environments are likely to face higher information risk, undermining the firm's financial health and increasing

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

the likelihood of default. Prior evidence finds a lower level of information asymmetry in countries where the disclosure of voluntary financial reporting is more prevalent, alongside regulated financial statements (e.g., Healy and Palepu 2001; Eleswarapu and Venkataraman 2006). Given that firms in countries with opaque information environments face higher information risk, we expect the detrimental effect of corruption on default risk to be more pronounced in these countries because firms are likely to derive fewer benefits from their limited transparency. Conversely, in economies with transparent information environments, we observe a weaker effect. Therefore, our Hypothesis 2 is as follows:

Hypothesis 2. All else being equal, the impact of corruption on default risk is stronger (weaker) in countries with poor (transparent) information transparency.

Legal and governance frameworks vary significantly across countries (La Porta et al. 1997). For instance, legal systems based on common law typically provide stronger protections against insider expropriation than civil law systems (La Porta et al. 1997; La Porta et al. 1998). In jurisdictions with strong legal protections, the risk of insider expropriation is minimized, fostering greater confidence among external investors and creditors (Burkart et al. 2003; John et al. 2008). Conversely, in countries with weaker investor protections, insiders often dominate management, potentially prioritizing their interests over those of external shareholders. This misallocation of resources can heighten default risk as insiders may engage in decisions detrimental to the firm's financial health (John et al. 2008). Building on these insights, we argue that firms in countries with improved legal and governance are better positioned to mitigate the default by enhancing investor confidence and curbing insider expropriation of shareholder wealth. Consequently, the negative consequences of corruption on default risk are less pronounced in these environments. In contrast, firms in countries with weak legal and governance settings are likely to experience greater negative impacts from corruption, as the lack of protections exacerbates default risk. Therefore, our Hypothesis 3 is as follows:

Hypothesis 3. All else being equal, the impact of corruption on default risk is more (less) pronounced in countries with weaker (stronger) legal and governance protections.

2.2.3 | The Role of Firm Corporate Governance Monitoring

Effective corporate governance structures serve as a discipline for managers, ensuring that they engage in value-enhancing investments and protecting against opportunistic behaviour that could increase the risk of default (Brogaard et al. 2017). Good governance practices typically include independent management oversight, which benefits all stakeholders by ensuring that managerial decisions align with the best interests of the firm and its shareholders (Ashbaugh-Skaife et al. 2006). Corruption often leads to inefficient allocation of resources, increased costs and heightened financial instability, all of which can elevate the likelihood of default. However, firms with strong governance structures are better equipped to resist such pressures. Independent boards and external oversight mechanisms play a critical role in monitoring and controlling managerial actions, thus reducing the opportunities for corrupt practices to take root (Baghdadi et al. 2020; Atif et al. 2019). For instance, firms with higher levels of board independence and effective audit committees are more likely to implement rigorous internal controls and compliance programs that deter corrupt activities (Gorshunov et al. 2021). These governance features can enhance transparency and accountability within the firm, making it more difficult for corrupt practices to go undetected. This increased scrutiny and accountability help protect the firm's assets and ensure that resources are used efficiently, thereby reducing the risk of financial distress and default.

Moreover, the presence of strong corporate governance influences the firm's external relationships, including its interactions with creditors and investors (Chen et al. 2015). Firms with reputable governance practices are often viewed more favourably by financial institutions and investors, who are more willing to extend credit and invest in these firms, despite the surrounding corrupt environment (Ashbaugh-Skaife et al. 2006). This improved access to capital can provide a financial buffer that helps firms manage risks and avoid default. Although corruption poses significant risks to firms, especially in terms of increasing the likelihood of default, robust corporate governance can significantly mitigate these risks. Therefore, we anticipate that the impact of corruption on default risk will be less (more) pronounced in firms with strong (weak) corporate governance. Hence, our Hypothesis 4 is as follows:

Hypothesis 4. All else being equal, the impact of corruption on default risk is stronger (weaker) in firms with weaker (stronger) governance monitoring.

3 | Research Design

3.1 | Data and Sample

To examine the impact of corruption on default risk, we collect data from five sources for the period from 2004 to 2021: the Credit Research Initiative under the Asian Institute of Digital Finance (AIDF) of the National University of Singapore (NUS-CRI) for measures of default risk; World Governance Indicators (WGI) and Transparency International for measures of corruption and governance; the Osiris database provided by Bureau van Dijk for measures of firm-level controls; and World Development Indicators (WDI) for measures of economic conditions. Following previous studies (El Ghoul et al. 2017; An et al. 2018; Nadarajah et al. 2021),[7] we remove financial firms based on the two-digit codes of the Global Industry Classification Standard (GICS) from our sample. Moreover, we require the sample countries to have at least 200 valid firm-year observations.[8] Finally, all variables must have no missing values, excluding variables from firm years, country years and industry classifications. To mitigate the effect of outliers, we winsorize all continuous firm-level variables at the first and 99th percentiles of the sample. Consequently, we derive 189,109 firm-year observations of 18,641 non-financial firms from 47 countries for our empirical analyses.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

3.2 | Measure of Default Risk

To measure a firm's likelihood of default, we use Merton's (1974) distance to default (*DTD*) as our primary measure. For the estimation of default risk, we adopt a market-based credit risk metric because it outperforms accounting-based techniques (Hillegeist et al. 2004; Bharath and Shumway 2008; Das et al. 2009). As in the following equation, we derive *DTD*:

$$DTD_{ijct} = \frac{\left[\ln\left(\frac{V_{ijct}}{F_{ijct}}\right) + \left(\mu_{ijct} - 0.5\,\sigma^2_{Vijct}\right)T_{ijct}\right]}{\sigma_{Vijct} \times \sqrt{T_{ijct}}} \quad (1)$$

where i, j, c and t represent firm, industry, country and year, respectively; V_{ijct} is the value of assets; F_{ijct} is the face value of debt; μ_{ijct} is an estimate of the expected annual return of the firm's assets; σ_{Vijct} is the volatility of asset values; and T_{ijct} is set to 1 year. We hypothesize that the DTD is inversely related to a firm's default risk, that is, the greater the value of the DTD, the lower the default risk.

3.3 | Measure of Corruption

We adopt the control of corruption index as the main measure of corruption (Kaufmann et al. 2012; Kaufmann and Kraay 2023).[9] The control of corruption index measures the respect citizens and states for the institutions that govern their economic and social interactions. This summary indicator reflects the perceived extent to which public power (executive, judicial, legislative and the public service sector) is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests. The measure 'control of corruption' ranges from −2.5 (low control) to 2.5 (high control), with a higher value indicating better control of corruption (Lewellyn and Bao 2017). To reflect the inverse relationship between the degree of pervasiveness of corruption in a country and the measure, we reverse this score by multiplying it by −1. Therefore, our measure of corruption is the inverse of the yearly index of control of corruption in year $t-1$ (*INVCOC*). A higher value of this inverse index indicates higher levels of corruption in a country.

3.4 | Measures of Control Variables

To eliminate potential firm-level omitted-variable issues, we incorporate several firm-level controls that could affect default risk. First, we include firm size (*SIZE*), defined as the natural logarithm of the market value of equity in year $t-1$, because larger firms are more diverse, implying a lower likelihood of default (Goyal and Wang 2013; Atif and Ali 2021; Nadarajah et al. 2021). Second, we control for financial leverage (*LEV*), defined as the ratio of long-term debt to total assets in year $t-1$, as it directly influences default risk (Atif and Ali 2021; Nadarajah et al. 2021). Third, we consider the return on assets (*ROA*), defined as the ratio of net income to total assets in year $t-1$, as profitable firms are generally less risky (Brogaard et al. 2017), with higher margins aiding in the accumulation of internal equity and reducing the default probability. Fourth, we account for asset tangibility (*PPETA*), defined as the ratio of net property, plant and equipment to total assets in year $t-1$, because tangible assets are easier for outsiders to value, and management's control over these assets for personal gains heightens firm risk (Nadarajah et al. 2021). Fifth, we include operating income variability as a control in year $t-1$ (*CV*), defined as the coefficient of variation of operating income over a 3-year period, as higher income variability typically increases default risk (Goyal and Wang 2013). Finally, we incorporate market-to-book (*MTB*), defined as the ratio of the market value of equity to the book value of equity in year $t-1$, as firms experiencing greater market growth are less likely to default on debt obligations (Goyal and Wang 2013; Nadarajah et al. 2021).

To address omitted variables at the country level, we consider time-variant (observed at the country-year level) and time-invariant (observed at the country-level) variables. First, to capture economic growth development (*GDPPC*), we use GDP per capita growth, measured as the annual percentage growth rate of GDP per capita based on constant local currency in year $t-1$ (An et al. 2018). Second, as a proxy for credit market development (*CREMKT*), we incorporate domestic credit to the private sector (% of GDP) in year $t-1$ (e.g., Shao et al. 2013). Third, to assess a country's institutional quality, which includes public and civil service quality, political stability, regulatory quality, rule of law and voice and accountability (e.g., Houston et al. 2010), we utilize the first principal factor (*GOVQLTY*) derived from five governance indicators measured in year $t-1$: the yearly index of government effectiveness, the yearly index of political stability and absence of violence, the yearly index of regulatory quality, the yearly index of rule of law and the yearly index of voice and accountability. Lastly, to isolate the effect of legal institutions on default risk (e.g., Shao et al. 2013; An et al. 2018), we include the index of a country's creditors' rights (*CRRIGHTS*). For a definition of variables, see Table 1.

3.5 | Summary Statistics

Panel A of Table 2 provides a within-country summary of the mean values of our primary variables (*DTD* and *INVCOC*) and firm-year observations. In contrast, Panel B presents the summary statistics (mean, standard deviation and the three quartiles: p25, median, and p75) for the overall base sample. The sample comprises a total of 189,109 firm-year observations from 2004 to 2021. The average value of default risk (*DTD*) across the entire sample is 4.32, with significant variation among countries. For instance, the average DTD by country ranges from 2.05 to 6.49, with some countries, such as Russian Federation, Greece, Nigeria, Pakistan, Vietnam, Egypt and Argentina, reporting lower DTD values (indicating higher default risk) than the sample mean. These statistics are comparable with prior studies (e.g., Nadarajah et al. 2021). Similarly, the extent of corruption in a country varies significantly, ranging from −2.31 to 1.11. The control variables also exhibit a reasonable degree of variation and align with standard expectations. For example, the average values of firm size, financial leverage, *ROA*s, asset tangibility and *MTB* are 12.74, 0.14, 0.05, 0.30 and 2.05, respectively, which are consistent with findings in prior literature (e.g., An et al. 2018; Nadarajah et al. 2021).[10]

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | Variable definition.

Acronym	Definition	Source
Dependent variable: Default risk		
DTD	Distance to default in year *t* is defined as the annual average measure used to assess the proximity of a limited-liability firm to default	NUS-CRI
EDF	Expected default frequency in year *t* is defined as the substitution of *DTD* into a cumulative standard normal distribution	NUS-CRI
Key independent variable: Corruption		
INVCOC	The annual control of corruption in year $t-1$, multiplied by –1. A higher value of this inverse index indicates greater levels of corruption in that country	WGI
INVCPI	The annual corruption perception in year $t-1$, multiplied by –1. A higher value of this inverse index indicates greater levels of corruption in that country	Transparency International
FID_INVCOC	The predicted inverse of the annual corruption index in year $t-1$	Authors' calculation
Base controls		
SIZE	Firm size is defined as the natural logarithm of the market value of equity in year $t-1$	Osiris by Bureau van Dijk
LEV	Financial leverage is defined as the ratio of long-term debt to total assets in year $t-1$	Osiris by Bureau van Dijk
ROA	Return on assets is defined as the ratio of net income to total assets in year $t-1$	Osiris by Bureau van Dijk
PPETA	Asset tangibility is defined as the ratio of net property, plant and equipment to total assets in year $t-1$	Osiris by Bureau van Dijk
CV	The operating income variability in year $t-1$ is defined as the coefficient of variation of operating income over a 3-year period	Osiris by Bureau van Dijk
MTB	The market-to-book is defined as the ratio of the market value of equity to the book value of equity in year $t-1$	Osiris by Bureau van Dijk
GDPPC	GDP per capita growth (annual %) is defined as the annual percentage growth rate of GDP per capita based on constant local currency in year $t-1$	WDI
CREMKT	Domestic credit to the private sector (% of GDP) is defined as a country's domestic credit to private sectors as a percentage of GDP in year $t-1$	WDI
GOVQLTY	The first principal factor from the five world governance indicators is the yearly index of government effectiveness, the yearly index of political stability and absence of violence, the yearly index of regulatory quality, the yearly index of rule of law and the yearly index of voice and accountability. All indicators are measured in year $t-1$	Authors' calculation
CRRIGHTS	A country's credit rights index is defined as the sum of four distinct creditor rights: no automatic stay, secured creditor paid first, restrictions on reorganization and no management stay. This index ranges from zero (indicating weak creditor rights) to four (indicating strong creditor rights)	La Porta et al. (1998); Djankov, McLiesh, and Shleifer (2007)
Others		
RELIGION	An indicator variable identifies the religion practiced by the largest proportion of a country's population (Atheist, Buddhist, Catholic, Hindu, Indigenous, Judaism, Muslim, Orthodox Christian and Protestant)	Djankov, McLiesh, and Shleifer (2007)
INVTIME	The delay in resolving a commercial dispute is defined as the inverse of the number of days in a year required to resolve the commercial dispute from filing to implementation by a court. This measure indicates a slower process of resolving commercial disputes in a court	Doing Business
RDTA	R&D expenses is defined as the ratio of *R&D* expense to total assets in year *t*	Osiris by Bureau van Dijk

(Continues)

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | (Continued)

Acronym	Definition	Source
AMIHUD	Amihud's (2002) illiquidity estimate is defined as the natural logarithm of the annual Amihud's (2002) illiquidity estimate in year *t*	Bloomberg
OPSVOL	Earnings volatility is defined as a firm's three-year volatility of operating revenue in year *t*	Osiris by Bureau van Dijk
HighPFRINDEX	An indicator variable takes a value of one if a country's yearly index of world press freedom in year $t-1$ is above the sample median and zero otherwise. This index comprises pluralism, media independence, environment and self-censorship, legislative framework, transparency, as well as infrastructure	Reporters without Borders
HighANALYST	An indicator variable takes a value of one if a country's number of analysts following the largest 30 companies in each country in 1996 is above the sample median and zero otherwise	Chang, Khanna, and Palepu (2000)
HighDISCL	An indicator variable takes a value of one if a country's disclosure score is above the sample median and zero otherwise. This score is the average of six proxies: prospect, compensation, shareholders, inside ownership, irregular contracts and transactions	La Porta, Lopez-de-Silanes, and Shleifer (2006)
LEGORIG	An indicator variable considers the legal origin of the company law or commercial code of each country (Socialist, Scandinavian, German, French and English)	La Porta et al. (1998), Djankov, McLiesh, and Shleifer (2007)
HighANTIDIR	An indicator variable takes a value of one if a country's anti-director rights are above the sample median and zero otherwise	Djankov et al. (2008)
HighGOV	An indicator variable takes a value of one if the first principal factor from five world governance indicators is above the sample median and zero otherwise	Authors' calculation
HighPMC	An indicator variable takes a value of one if a firm's product market competition in year $t-1$ is above the median, and zero otherwise is above the sample median, and zero otherwise	Osiris by Bureau van Dijk
TECHIND	An indicator variable takes a value of one for technology firms based on four-digit standard industrial classification codes	Osiris by Bureau van Dijk
INSOWN	Institutional ownership is defined as the percentage of shares outstanding held by institutional investors in year $t-1$	Bloomberg
STKRETVOL	The annualized stock return volatility is defined as the standard deviation of the daily stock return in year $t-1$	Bloomberg
COVERAGE	Firm-level analyst coverage is defined as the natural logarithm of the total number of analysts following the firm in year $t-1$	Bloomberg
COD	Cost of debt, defined as the after-tax weighted average cost of debt for the security calculated using government bond rates, a debt adjustment factor, the proportion of short and long-term debt to total debt and stock's effective tax rate in year *t*	Bloomberg
NPL	Bank non-performing loans to gross loans (%), defined as the ratio of defaulting loans (payments of interest and principal past due by 90 days or more) to total gross loans (total value of loan portfolio) in year *t*	GFDD

Abbreviations: GFDD, Global Financial Development Database; WDI, World Development Indicator; WGI, World Governance Indicator.

4 | Empirical Results: The Impact of Corruption on Default Risk

4.1 | Main Results

To test Hypothesis 1, which posits that a country's level of corruption positively affects default risk across countries, we use the following model specification:

$$DTD_{ijct} = \beta_0 + \beta_1 INVCOC_{ct-1} + \beta_2 SIZE_{ijct-1} + \beta_3 LEV_{ijct-1} + \beta_4 ROA_{ijct-1} + \beta_5 PPETA_{ijct-1} + \beta_6 CV_{ijct-1} + \beta_7 MTB_{ijct-1} + \beta_8 GDPPC_{ct-1} + \beta_9 CREMKT_{ct-1} + \beta_{10} GOVQLTY_{ct-1} + \beta_{11} CRRIGHTS_c + \psi_j + \omega_t + \varepsilon_{ijct} \quad (2)$$

where *i*, *j*, *c* and t represent firm, industry, country and year, respectively. The dependent variable is the *DTD*, with corruption (*INVCOC*) as the main independent variable. Controls are *SIZE*, *LEV*, *ROA*, *PPETA*, *CV*, *MTB*, *GDPPC*, *CREMKT*, *GOVQLTY* and

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 2 | Summary statistics.

Panel A: Average sample across countries

Country	*DTD*	*INVCOC*	#Obs.	Country	*DTD*	*INVCOC*	#Obs.
Argentina	2.91	0.38	421	Mexico	5.75	0.56	672
Australia	3.85	−1.89	5299	The Netherlands	4.94	−2.00	1021
Austria	4.46	−1.61	588	New Zealand	6.43	−2.23	226
Brazil	3.34	0.21	1459	Nigeria	2.47	1.11	479
Bulgaria	4.44	0.20	218	Oman	6.49	−0.26	243
Canada	4.62	−1.91	3790	Pakistan	2.51	0.93	1559
Chile	6.20	−1.36	768	Peru	5.34	0.39	219
China	4.13	0.36	21,179	Poland	3.14	−0.62	2622
Croatia	3.93	−0.14	455	Romania	3.50	0.11	342
Denmark	4.71	−2.31	1016	Russia Federation	2.05	0.94	1231
Egypt	2.78	0.63	1066	Saudi Arabia	6.18	−0.10	1095
Finland	4.83	−2.25	1030	Singapore	3.30	−2.15	4719
France	4.49	−1.37	6034	South Africa	4.24	−0.07	1850
Germany	4.16	−1.82	4581	South Korea	3.27	−0.53	12,443
Greece	2.09	0.01	1739	Sweden	4.44	−2.19	2675
Indonesia	3.16	0.54	3648	Switzerland	6.45	−2.07	1915
Ireland	5.45	−1.58	414	Taiwan	5.04	−0.80	8133
Israel	3.53	−0.86	3220	Thailand	4.93	0.43	2492
Italy	3.91	−0.19	2109	Turkey	3.23	0.07	1623
Japan	4.79	−1.46	30,897	The UAE	3.78	−1.11	342
Kenya	3.34	0.94	224	The United Kingdom	4.75	−1.75	7255
Kuwait	3.54	0.05	826	The United States	5.12	−1.37	32,149
Luxembourg	4.56	−1.97	265	Vietnam	2.61	0.51	3740
Malaysia	3.70	−0.18	8818	Total/Mean	4.32	−0.89	189,109

Panel B: Statistics summarizing the base sample

Variable	#Obs.	Mean	Std. Dev.	P25	Median	P75
DTD	189,109	4.32	2.78	2.38	3.82	5.71
INVCOC	189,109	−0.89	0.88	−1.56	−1.27	−0.09
SIZE	189,109	12.74	2.06	11.42	12.70	14.07
LEV	189,109	0.14	0.18	0.02	0.09	0.21
ROA	189,109	0.05	2.29	0.02	0.24	0.57
PPETA	189,109	0.30	0.23	0.10	0.25	0.44
CV	189,109	0.21	0.24	0.07	0.13	0.24
MTB	189,109	2.05	3.38	0.72	1.28	2.37
GDPPC	189,109	2.57	3.69	0.68	3.03	4.48
CREMKT	189,109	79.84	53.99	42.38	59.77	131.98
GOVQLTY	189,109	1.77	1.09	1.10	1.42	2.46
CRRIGHTS	189,109	1.92	0.72	1.00	2.00	2.00

Note: This table reports the summary statistics. Panel A presents a within-country summary of mean values for our sample's key variables, representing 47 countries for the 2004–2021 period. The measures are firm-level default risk (*DTD*) and country-level corruption (*INVCOC*). #Obs. is the number of firm-year observations. Panel B presents the summary statistics (mean; Std. Dev. and the three quartiles: p25, median, and p75) for our base sample. For the definition of variables, see Table 1.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 | The impact of corruption on default risk: main results.

	(1) OLS	(2) OLS	(3) WLS	(4) WLS	(5) FMB	(6) FMB
INVCOC	−0.537***	−0.553***	−0.479***	−0.497***	−0.535***	−0.541***
	(−30.32)	(−28.95)	(−7.68)	(−8.95)	(−9.63)	(−11.62)
SIZE		0.246***		0.272***		0.286***
		(27.49)		(9.77)		(7.79)
LEV		−2.012***		−2.233***		−2.809***
		(−5.76)		(−6.99)		(−8.76)
ROA		0.163***		0.232***		0.133***
		(12.10)		(6.55)		(6.15)
PPETA		0.440***		0.779***		0.534***
		(5.20)		(2.86)		(4.69)
CV		−1.160***		−1.077***		−1.039***
		(−26.66)		(−6.24)		(−7.10)
MTB		0.102***		0.122***		0.127***
		(27.68)		(5.86)		(8.64)
GDPPC		0.010***		0.007		0.016**
		(4.17)		(0.62)		(3.20)
CREMKT		0.002***		−0.002**		0.003***
		(7.64)		(−2.43)		(4.68)
GOVQLTY		0.047***		−0.050		0.071**
		(3.94)		(−1.14)		(2.48)
CRRIGHTS		−0.069***		−0.156***		−0.050*
		(−3.37)		(−2.71)		(−2.06)
Constant	Included	Included	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes	No	No
Year fixed effects	Yes	Yes	Yes	Yes	No	No
#Obs.	189,109	189,109	189,109	189,109	189,109	189,109
Adj. *R*-squared	0.098	0.207	0.100	0.232	0.032	0.177

Note: The table reports regression results showing the effect of corruption on default risk using the following equation: $DTD_{ijct} = \beta_0 + \beta_1 INVCOC_{ct-1} + \beta_2 SIZE_{ijct-1} + \beta_3 LEV_{ijct-1} + \beta_4 ROA_{ijct-1} + \beta_5 PPETA_{ijct-1} + \beta_6 CV_{ijct-1} + \beta_7 MTB_{ijct-1} + \beta_8 GDPPC_{ct-1} + \beta_9 CREMKT_{ct-1} + \beta_{10} GOVQLTY_{ct-1} + \beta_{11} CRRIGHTS_c + \psi_j + \omega_t + \varepsilon_{ijct}$.
The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. The results in specifications 1–2, 3–4 and 5–6 correspond to models estimated using ordinary least squares (OLS), weighted least squares (WLS) and the Fama–MacBeth (1973) two-step procedure (FMB), respectively. Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

CRRIGHTS. Unless otherwise stated, we classify industries based on the GICS and include industry and year-fixed effects in all specifications. To reduce potential bias in the regression results, as residuals may be correlated across firms (Petersen 2009), we cluster standard errors at the firm level.

Table 3 provides the regressions of default risk for various specifications, incorporating industry and year-fixed effects. In Columns 1–2, we begin with an ordinary least square (OLS) specification. Column 1 regresses *DTD* on our main independent variable (*INVCOC*) with industry and year-fixed effects. In Column 2, we use a full model specification for the OLS. The coefficients of *INVCOC* in these two models are −0.537 ($p < 0.01$) and −0.553 ($p < 0.01$), respectively. As noted, *DTD* is inversely related to a firm's default, and the results demonstrate a positive and significant effect of corruption on default risk. Economically, this relationship is substantial: An increase of one standard deviation in corruption leads to an 11.3% increase in default risk (Column 2). These results provide both statistical and economic support for our Hypothesis 1.

The coefficients of firm-level controls are significant at the 1% level (Column 2) and align well with previous studies on default risk (Goyal and Wang 2013; Nadarajah et al. 2021). Specifically,

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 4 | Instrumental variable analysis.

	(1) First stage *INVCOC*	(2) First stage *INVCOC*	(3) Second stage *DTD*	(4) Second stage *DTD*
RELIGION	−0.094***			
	(−40.35)			
INVTIME		0.001***		
		(49.05)		
FID_INVCOC			−0.567***	−0.211***
			(−7.82)	(−3.27)
SIZE	−0.039***	−0.039***	0.246***	0.364***
	(−15.50)	(−10.88)	(28.35)	(36.08)
LEV	−0.224***	−0.828***	−2.018***	−2.858***
	(−5.37)	(−23.06)	(−5.59)	(−23.25)
ROA	0.019***	0.021***	0.164***	0.120***
	(13.63)	(11.59)	(12.10)	(8.71)
PPETA	0.286***	0.578***	0.446***	0.408***
	(12.83)	(19.21)	(4.71)	(4.67)
CV	0.141***	0.045**	−1.158***	−1.580***
	(10.06)	(2.16)	(−25.90)	(−27.98)
MTB	−0.000	−0.012***	0.102***	0.156***
	(−0.04)	(−9.54)	(27.65)	(28.75)
GDPPC	0.026***	0.022***	0.010***	0.003
	(28.12)	(18.01)	(3.29)	(0.98)
CREMKT	−0.001***	−0.001***	0.002***	0.004***
	(−4.65)	(−4.68)	(7.67)	(10.43)
GOVQLTY	0.263***	0.165***	0.050**	−0.035**
	(51.93)	(26.14)	(2.34)	(−1.97)
CRRIGHTS	−0.077***	0.017*	−0.072***	0.058***
	(−8.27)	(1.95)	(−3.07)	(2.62)
Constant	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
#Obs.	189.109	128,434	189.109	128,434
Adj. *R*-squared	0.286	0.221	0.148	0.185
Excluded IV test				
F-statistics	1627.85***	2406.19***	—	—
Probability	0.0000	0.0000	—	—
Diagnostic tests				
Under-identification test: Kleibergen–Paap rk LM statistic	1130.699***	880.45***		
Weak-identification test: Cragg–Donald Wald *F*-statistic	17,744.55	12,033.30		
Stock–Yogo weak ID test critical values: 10% maximal IV size	16.38	16.38		

(Continues)

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Note: This table reports the estimates of default risk on corruption using two-stage least squares (2SLS). In the first stage, we regress *INVCOC* on the instruments (*RELIGION* and *INVTIME*) and controls (Columns 1–2). In the second stage, we regress *DTD* on *FID_INVCOC* (fitted value of *INVCOC*) and controls (Columns 3–4). Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

default risk is lower for firms that are larger, more profitable, have higher asset tangibility and possess greater growth opportunities. Conversely, higher leverage and greater income variability are associated with increased default risk. For country-level controls, firms in countries with well-structured economic and credit market systems, as well as higher institutional quality, exhibit lower default risk. However, countries with stronger creditor rights tend to exhibit higher default risk due to increased transaction costs and limited diversification opportunities (Acharya et al. 2011).

In addition to our baseline specification, we employ weighted least squares (WLS) and the Fama–MacBeth (1973) two-step method (FMB) as alternative approaches. In Columns 3–4, we re-estimate Equation (2) using WLS, where each observation is weighted by the inverse of the number of observations from each country (Jaggi and Low 2011). This method ensures unbiased results despite uneven sample distributions (Hope et al. 2009; Jaggi and Low 2011). In Columns 5–6, we apply the FMB method to re-estimate Equation (2), which controls for within-firm autocorrelation that could bias standard errors (Cornett et al. 2008). The coefficients of *INVCOC* are −0.479 ($p < 0.01$) and −0.497 ($p < 0.01$) for the WLS method, as well as −0.535 ($p < 0.01$) and −0.541 ($p < 0.01$) for the FMB method. These results consistently support our main findings in Columns 1 and 2.

Overall, higher levels of corruption within a country are associated with increased default risk for firms. This finding supports Hypothesis 1, suggesting that firms in more corrupt countries face heightened default risk. Our results are consistent with the concept of 'sand the wheel', which highlights the detrimental impact of corruption on firms (Shleifer and Vishny 1993; Dass et al. 2018; Ellis et al. 2020).[11]

4.2 | Addressing Endogeneity

Although our baseline results indicate a significant positive effect of corruption on default risk, they may suffer from endogeneity issues due to omitted variables. A firm-level event like default risk directly influencing a country's level of corruption is unlikely; instead, both may be influenced by omitted variables. To address these concerns, we employ IV and EB analyses.[12]

4.2.1 | IV Analysis

To further mitigate endogeneity concerns, we employ an IV approach as a way of dealing with unobserved institutional characteristics of a country (Shao et al. 2013). As a commonly accepted principle, a strong correlation between a valid instrument (IV) and corruption (relevance condition) is essential to ensure that the instrument affects default risk exclusively through corruption (exclusion condition). To that end, we consider two instruments linked to the prevalence of corruption in a country: the predominant religion (*RELIGION*) and the delay in resolving a commercial dispute (*INVTIME*).

Our first instrument, *RELIGION*, is an indicator variable identifying the religion practiced by the largest proportion of a country's population (Djankov et al. 2007). Religion, encompassing social attributes such as work ethic, tolerance and trust, significantly influences governmental practices and behaviours (La Porta et al. 1999). Higher religious participation is generally associated with lower levels of corruption, as adherents in more religious societies tend to have greater trust in societal institutions and government, thereby reducing the likelihood of unlawful conduct (Guiso et al. 2003).[13]

Our second instrument, *INVTIME*, is the delay in resolving a commercial dispute, defined as the inverse of the number of days in a year *t* required to resolve the commercial dispute from filing to implementation by a court (Doing Business, World Bank).[14] The efficiency of judicial proceedings varies based on the prevailing level of corruption within a country's political and social framework. Efficient and quick resolution of disputes enhances public trust and confidence, aligning with goals of cost-efficiency.[15] Our inverse measure indicates a slower process of resolving commercial disputes in a court, which suggests systemic inefficiencies. This contributes to diminished trust and heightened perceptions of corruption within the country.

In the first stage, we regress INVCOC as a function of RELIGION (*INVTIME*) with controls and fixed effects (see Columns 1–2 of Table 4). Similarly, in the second stage, we regress DTD on FID_INVCOC (fitted value of *INVCOC* obtained from the first stage), controls and fixed effects (see Columns 3–4 of Table 4). As in Columns 1–2, the coefficients of both RELIGION and *INVTIME* are statistically significant (negative and positive, respectively) at the 1% level. The *F*-statistic testing the null hypothesis that the excluded instruments jointly have coefficients of 0 is significant at the 1% level, indicating the relevance of our IVs. The positive relationship between our IV (FID_INVCOC) and default risk remains significant, as in Columns 3–4.

To validate and assess the strength of our IVs, we conduct two additional second-stage diagnostic tests. The Kleibergen–Paap LM statistic yields highly significant results, suggesting that our model is not under-identified. The Cragg–Donald Wald *F*-statistic confirms the validity of the instruments used in the first stage, aligning with critical values from Stock and Yogo (2005). Overall, our findings remain robust, confirming our initial evidence that corruption in a country undermines a company's ability to repay debt leading to higher default risk.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 5 | Entropy balancing.

Panel A: Before entropy balancing						
	Treatment group *HighCORRUPT*			**Control group *LowCORRUPT***		
	Mean	**Variance**	**Skewness**	**Mean**	**Variance**	**Skewness**
SIZE	11.890	3.909	0.076	12.780	4.257	−0.030
LEV	0.134	0.074	−37.130	0.142	0.032	−7.761
ROA	−0.327	14.080	−13.780	0.064	5.019	−22.390
PPETA	0.263	0.059	0.924	0.293	0.054	0.817
CV	0.327	0.140	2.508	0.203	0.055	3.262
MTB	2.522	17.270	2.612	2.027	11.120	3.612
GDPPC	2.805	11.490	−0.545	2.559	13.680	−0.425
CREMKT	77.210	2993.000	1.024	80.150	2917.000	0.936
GOVQLTY	1.870	1.209	0.625	1.762	1.189	0.858
CRRIGHTS	1.956	0.721	−0.062	1.911	0.516	−0.008
Panel B: After entropy balancing						
	Treatment group *HighCORRUPT*			**Control group *LowCORRUPT***		
	Mean	**Variance**	**Skewness**	**Mean**	**Variance**	**Skewness**
SIZE	11.890	3.909	0.076	11.890	4.540	−0.150
LEV	0.134	0.074	−37.130	0.134	0.035	2.515
ROA	−0.327	14.080	−13.780	−0.327	15.410	−15.280
PPETA	0.263	0.059	0.924	0.263	0.053	0.863
CV	0.327	0.140	2.508	0.327	0.325	7.562
MTB	2.522	17.270	2.612	2.522	20.950	3.502
GDPPC	2.805	11.490	−0.545	2.805	14.210	−0.089
CREMKT	77.210	2993.000	1.024	77.210	2767.000	1.016
GOVQLTY	1.870	1.209	0.625	1.870	1.302	0.795
CRRIGHTS	1.956	0.721	−0.062	1.956	0.577	0.031

Panel C: Regressions with entropy balancing framework			
	(1)	**(2)**	**(3)**
INVCOC	−0.261***	−0.334***	−0.364***
	(−14.99)	(−16.24)	(−16.45)
SIZE		0.262***	0.254***
		(24.97)	(24.27)
LEV		−1.062*	−1.069*
		(−1.94)	(−1.93)
ROA		0.086***	0.087***
		(8.64)	(8.66)
PPETA		0.179	0.183
		(1.56)	(1.58)
CV		−0.649***	−0.640***
		(−8.80)	(−8.39)
MTB		0.075***	0.074***
		(19.21)	(18.73)

(Continues)

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 5 | (Continued)

Panel C: Regressions with entropy balancing framework			
	(1)	(2)	(3)
GDPPC			0.005
			(1.21)
CREMKT			0.001*
			(1.77)
GOVQLTY			0.030**
			(2.11)
CRRIGHTS			−0.148***
			(−7.04)
Constant	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
#Obs.	189,109	189,109	189,109
R-squared	0.069	0.167	0.169

Note: This table reports the estimates of default risk on corruption using an entropy balancing method. The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. Panels A and B present the values of mean, variance and skewness for the covariates for the treatment (i.e., *HighCORRUPT*) and control groups (i.e., *LowCORRUPT*) before and after balancing, respectively. Panel C presents the regression results based on the entropy balancing method. Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

4.2.2 | Entropy Balancing

In addressing endogeneity stemming from potential covariate imbalance, we use EB (Hainmueller 2012). This method helps to equalize the distribution moments of all covariates across treatment and control groups by assigning continuous weights (Ali et al. 2022). For our analysis, we categorize firms into treatment (*HighCORRUPT*) and control (*LowCORRUPT*) groups based on the country-year-median of *INVCOC*. *HighCORRUPT* (*LowCORRUPT*) is defined as firms with above (below) median of *INVCOC*. In Table 5, Panels A–B present the mean, variance and skewness of all covariates for *HighCORRUPT* and *LowCORRUPT* before (see Panel A) and after (see Panel B) matching. In post-matching, the means in the reweighted control group (*LowCORRUPT*) align with those in the treatment group (*HighCORRUPT*), confirming the effectiveness of the matching process, as per the guidelines of Hainmueller (2012).[16] Next, based on the treated balance, we re-estimate Equation (2) utilizing the EB framework. As shown in Panel C of Table 5, the coefficients associated with *INVCOC* show strong positive significance at the 1% level (across three specifications), reinforcing our initial findings that corruption distinctly increases default risk.

4.3 | Other Robustness Tests

To ensure the robustness of our baseline results regarding the relationship between corruption and default risk, we undertake five sensitivity analyses. The results are presented in Table 6, in which Panel A presents robustness results based on the full sample, and Panel B shows equivalent regressions based on a matched sample as per the EB framework (criteria of EB are detailed in Section 4.2.2). First, we substitute our main measure of a country's level of corruption (*INVCOC*) with an alternative measure: the inverse of the corruption perception index in year $t-1$ from Transparency International (*INVCPI*). As in Column 1 both Panels A–B, we continue to observe a statistically significant effect of corruption on default risk, thereby confirming our baseline finding. Second, we replace Merton's (1974) *DTD* with the expected default frequency (*EDF*), consistent with prior research (Baghdadi et al. 2020; Nadarajah et al. 2021). This measure substitutes *DTD* with the cumulative standard normal distribution and demonstrates efficacy in bankruptcy forecasting (Bharath and Shumway 2008). Higher values of *EDF* indicate higher default risk. Consistent with our main finding, we observe that the relationship between corruption and default risk remains significantly negative (Column 2 of Panels A–B). Third, we re-estimate our analysis by excluding firms from the United States and Japan, as well as those operating in dominant industries such as Industrials. This is because Japan and the United States contribute the highest number of observations to our study sample. Analysing alternative samples ensures that our baseline findings are not unduly influenced by the disproportionate representation of observations from these larger economies and industries. As shown in Columns 3–4 of Panels A–B, the results remain qualitatively similar, indicating that the relationship between corruption and default risk is unlikely to be driven solely by a large fraction of observations from specific countries or industries. Finally, we include three additional controls measured in year $t-1$: institutional ownership (*INSOWN*), stock return volatility (*STKRETVOL*) and analyst coverage (*COVERAGE*). Institutional ownership serves as a key external governance mechanism (Gillan and Starks 2000; Baghdadi et al. 2020), whereas stock return volatility typically correlates with increased

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 6 | Robustness tests.

Panel A: Testing robustness based on full sample					
	DTD	***EDF***	***DTD***	***DTD***	***DTD***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
INVCPI	−0.028***				
	(−29.71)				
INVCOC		0.011***	−0.459***	−0.548***	−0.716***
		(14.07)	(−21.60)	(−24.02)	(−12.44)
INSOWN					0.005***
					(4.14)
STKRETVOL					−1.320***
					(−16.91)
COVERAGE					0.026***
					(6.54)
Controls	Included	Included	Included	Included	Included
Constant	Included	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
#Obs.	188,943	189,109	126,063	142,765	58,839
Adj. *R*-squared	0.208	0.096	0.175	0.209	0.295

Panel B: Testing robustness based on matched sample					
	DTD	***EDF***	***DTD***	***DTD***	***DTD***
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
INVCPI	−0.019***				
	(−17.61)				
INVCOC		0.009***	−0.297***	−0.356***	−0.383***
		(5.79)	(−13.35)	(−13.55)	(−4.46)
INSOWN					−0.002
					(−0.90)
STKRETVOL					−0.285*
					(−1.82)
COVERAGE					0.013**
					(2.03)
Controls	Included	Included	Included	Included	Included
Constant	Included	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
#Obs.	188,943	189,109	126,063	142,765	58,839
R-squared	0.170	0.102	0.159	0.170	0.252

Note: This table reports regressions of default risk on corruption across various robustness checks. The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. Column 1 presents regression results using an alternative measure of corruption (*INVCPI*-the inverse measure of the yearly index of corruption perception in year $t-1$). Column 2 presents the result of estimating the regression using an alternative measure of default risk (*EDF*—expected default frequency). Columns 3–4 present the results of estimating the regressions using alternative samples (samples excluding the United States and Japan and a dominant industry, respectively). Column 5 presents the result of estimating the regression with additional firm-level controls (*INSOWN*—institutional ownership in year $t-1$, *STKRETVOL*—annualized stock return volatility in year $t-1$ and *COVERAGE*—analyst coverage in year $t-1$). Unless otherwise stated, all specifications include industry and year-fixed effects. t-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 7 | Possible channels: information asymmetry and risk-taking.

Panel A: Testing channels based on full sample				
	RDTA	***AMIHUD***	***OPSVOL***	***LEV***
	(1)	**(2)**	**(3)**	**(4)**
INVCOC	−0.069***	0.896***	0.009***	−0.019***
	(−2.86)	(12.64)	(7.49)	(−18.70)
Controls	Included	Included	Included	Included
Constant	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
#Obs.	84,344	60,543	189,109	189,109
Adj. *R*-squared	0.175	0.404	0.110	0.192
Panel B: Testing channels based on matched sample				
	RDTA	***AMIHUD***	***OPSVOL***	***LEV***
	(1)	**(2)**	**(3)**	**(4)**
INVCOC	−0.104***	0.589***	−0.008	−0.021***
	(−4.29)	(6.38)	(−0.58)	(−17.27)
Controls	Included	Included	Included	Included
Constant	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
#Obs.	84,344	60,543	189,109	189,109
R-squared	0.156	0.186	0.125	0.142

Note: This table reports the effect of corruption (i.e., the main independent variable—*INVCOC*) on information asymmetry and risk-taking measures (i.e., the dependent variables—*RDTA*, *AMIHUD*, *OPSVOL* and *LEV*). *RDTA* is the ratio of corporate R&D expenses to total assets in year *t*. *AMIHUD* is the natural logarithm of the annual Amihud's (2002) illiquidity estimate in year *t*. *OPSVOL* represents a firm's volatility of operating revenue in year *t*. *LEV* denotes leverage in year *t*. Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

default risk (Brogaard et al. 2017). Analyst coverage, inversely related to a firm's information asymmetry (Chang et al. 2000), reduces default risk. Consistent with our expectation, the results align with our key findings, suggesting that the inclusion of these additional control variables (see Column 5 of Panels A–B) does not alter our main conclusions. Overall, our results are robust.[17]

5 | Further Analyses

5.1 | Channel Analysis

In this section, we examine the underlying channel through which a country's level of corruption influences corporate default risk. Hypothesis 1 posits a significant impact of corruption on default risk via information asymmetry and risk-taking channels. We will empirically validate our assertion through channel testing.

It is well-observed that information opacity and agency-related concerns are more prevalent in corrupt environments (Riahi-Belkaoui 2004; Boubakri et al. 2012; Bhattacharya et al. 2013). Managerial accountability and monitoring in such an environment are scant and steer self-interested and entrenched decisions (Gull et al. 2024; Xu et al. 2019; Al-Najjar and Abed 2014), leading to higher default risk. To examine the information asymmetry channel, we consider two measures. The first measure, used in other studies (e.g., Aboody and Lev 2000; Kale and Loon 2011), is R&D expenses, calculated as the ratio of corporate R&D expenses to total assets in year *t* (*RDTA*). We use this measure for two reasons. First, R&D projects undertaken by developing firms are unique, whereas capital investments (e.g., commercial property and patents) are well known to the market. Second, most physical and financial assets are traded in open markets, where their value, performance and productivity are determined based on objective information. In contrast, R&D has no asset price from which to derive information, giving corporate insiders a greater informational advantage over external investors. Therefore, R&D significantly contributes to information asymmetry (Aboody and Lev 2000). The second measure is Amihud's (2002) illiquidity estimate, measured as the natural logarithm of the annual Amihud's illiquidity ratio in year *t* (*AMIHUD*) (Goyenko et al. 2009;

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 8 | Corruption and default risk: the role of a country's information environment.

Panel A: Testing conditional effects based on full sample			
	(1)	**(2)**	**(3)**
INVCOC	−0.615***	−0.680***	−0.636***
	(−31.58)	(−23.58)	(−20.19)
INVCOC × *HighPFRINDEX*	0.238***		
	(8.95)		
HighPFRINDEX	0.306***		
	(9.35)		
INVCOC × *HighANALYST*		0.497***	
		(9.43)	
HighANALYST		0.664***	
		(9.41)	
INVCOC × *HighDISCL*			0.592***
			(11.50)
HighDISCL			1.122***
			(14.78)
Controls	Included	Included	Included
Constant	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
#Obs.	147,405	178,583	91,745
Adj. R-squared	0.205	0.209	0.269

Panel B: Testing conditional effects based on matched sample			
	(1)	**(2)**	**(3)**
INVCOC	−0.375***	−0.592***	−0.526***
	(−15.62)	(−17.68)	(−15.45)
INVCOC × *HighFRPINDEX*	0.001		
	(0.03)		
HighFRPINDEX	0.107*		
	(1.93)		
INVCOC × *HighANALYST*		0.609***	
		(11.04)	
HighANALYST		0.678***	
		(8.77)	
INVCOC × *HighDISCL*			0.657***
			(12.70)
HighDISCL			1.073***
			(12.59)
Controls	Included	Included	Included
Constant	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes

(Continues)

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Panel B: Testing conditional effects based on matched sample			
	(1)	(2)	(3)
Year fixed effects	Yes	Yes	Yes
#Obs.	147,405	178,583	91,745
R-squared	0.168	0.173	0.202

Note: This table reports regressions of default risk based on the country's information environment. The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. The variables measuring a country's information environment take a value of one if a country's yearly index of world press freedom in year $t-1$ (*HighPFRINDEX*), number of analysts following the largest 30 companies in each country in 1996 (*HighANALYST*) and disclosure score (*HighDISCL*) are above the median, and zero otherwise (see Panels A–B). Unless otherwise stated, all specifications include industry and year fixed effects. t-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

Hasbrouck 2009). Information asymmetry costs are a key factor in determining the bid-ask spread (e.g., Stoll 2000; Attig et al. 2006). This measure has a positive relationship with information asymmetry. Firms where stocks reflect the largest improvement in information efficiency experience the greatest reduction in default risk (Brogaard et al. 2017).[18]

Risk-taking behaviour is more prevalent in corrupt societies because managers have greater latitude to undertake risky investments, enjoying more freedom (Chen et al. 2015). This can lead to suboptimal decisions motivated by bribery (Shleifer and Vishny 1993; Bardhan 1997). To examine the risk-taking channel, we use earnings volatility and leverage (Li et al. 2013; Mihet 2013; Callen and Fang 2015). We measure earnings volatility using the 3-year standard deviation of operating revenue in year t (*OPSVOL*), and leverage using the ratio of long-term debt to total assets in year t (*LEV*), respectively.

To test the channel effects, we separately regress each of these measures on corruption, along with the controls, as outlined in the baseline Equation (2). The results are presented in Table 7 (see Panel A for the full sample and Panel B for a matched sample as per the EB framework). The coefficients of *INVCOC* are negative and positive for information asymmetry measures (*RDTA* and *AMIHUD*), both significant at the 1% level. This evidence implies that an unpredictable business environment due to corruption makes it challenging for stakeholders to accurately assess the risks and opportunities linked to R&D investments. Thus, this uncertainty is likely to heighten information asymmetry, as investors find it difficult to gauge the reliability and intentions of firms. Additionally, the coefficients of *INVCOC* are positive and negative for risk-taking measures (*OPSVOL* and *LEV*), both significant at the 1% level. This evidence suggests that corruption can restrict companies' access to funding, forcing them to depend more on their own money or riskier financing options. This limited access to regular funding can lead firms to engage in riskier projects. Our matched sample (based on equivalent regressions as in Panel A) further reinforces our main findings as expected. These results clearly indicate how a country's level of corruption increases default risk through these channels. Overall, our results demonstrate that the detrimental effect of corruption on default risk is more pronounced for firms with higher information asymmetry and a greater propensity for risk-taking, supporting our main analysis.

5.2 | Cross-Sectional Analysis

Having established a link between corruption and default risk, we next investigate whether this detrimental effect on default risk can be mitigated across different levels of a country's information environment, governance structures and external monitoring of firms.

5.2.1 | The Role of a Country's Information Environment

In this subsection, we examine the extent to which corruption affects default risk conditional on the country-level information environment (i.e., information transparency). In line with Hypothesis 2, we expect that the influence of corruption on default risk will be stronger in countries characterized by lower transparency levels and weaker in those with higher levels of information transparency.

To gauge the level of information transparency in a country, we employ three proxies: the annual index of world press freedom (*PFRINDEX*) in year $t-1$ (reporters without borders); a country-specific measure indicating the number of analysts tracking the largest 30 companies per country in 1996 (*ANALYST*) (Chang et al. 2000; Qi et al. 2010); and a country-specific index of disclosure requirements (*DISCL*), representing the average of six proxies (prospect, compensation, shareholders, insider ownership, irregular contracts and transactions) (La Port et al. 2006). Higher values across these proxies indicate a more transparent information environment within the country. Using these proxies based on whether they are above or below the median values, we construct three indicator variables: *HighPFRINDEX*, *HighANALYST* and *HighDISCL*, assigning a value of one (zero) to each.

To test Hypothesis 2, we interact each of these indicator variables with corruption and add each interaction term in the baseline Equation (2) as a separate explanatory variable. The results are presented in Table 8 (see Panel A for the full sample and Panel B for a matched sample as per the EB framework). Across all models, the positive relationship between corruption and default risk (negative coefficients) remains consistent. However, for our full sample, the coefficients on the interaction terms between corruption (*INVCOC*) and information transparency

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 9 | Corruption and default risk: the role of a country's legal and governance protections.

Panel A: Testing conditional effects based on full sample			
	(1)	**(2)**	**(3)**
INVCOC	−0.448***	−1.004***	−0.813***
	(−12.53)	(−23.48)	(−23.40)
INVCOC × *LEGORIG*	0.029**		
	(2.54)		
LEGORIG	0.091***		
	(6.40)		
INVCOC × *HighANTIDIR*		0.682***	
		(13.72)	
HighANTIDIR		0.477***	
		(8.25)	
INVCOC × *HighGOV*			0.339***
			(8.84)
HighGOV			0.243***
			(4.23)
Controls	Included	Included	Included
Constant	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
#Obs.	189,109	129,691	189,109
Adj. R-squared	0.208	0.194	0.209
Panel B: Testing conditional effects based on matched sample			
	(1)	**(2)**	**(3)**
INVCOC	−0.248***	−0.736***	−0.729***
	(−6.97)	(−17.25)	(−14.97)
INVCOC × *LEGORIG*	0.048***		
	(4.19)		
LEGORIG	0.034**		
	(2.15)		
INVCOC × *HighANTIDIR*		0.563***	
		(11.29)	
HighANTIDIR		0.234***	
		(3.82)	
INVCOC × *HighGOV*			0.454***
			(8.40)
HighGOV			0.345***
			(3.94)
Controls	Included	Included	Included
Constant	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes

(Continues)

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 9 | (Continued)

Panel B: Testing conditional effects based on matched sample			
	(1)	(2)	(3)
Year fixed effects	Yes	Yes	Yes
#Obs.	189,109	129,691	189,109
R-squared	0.169	0.177	0.172

Note: This table reports regressions of default risk based on the country's legal and governance protections. The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. The variable measuring a country's legal protection considers the legal origin of the company law or commercial code of each country (*LEGORIG*). Other variables take a value of one if a country's anti-director rights (*HighANTIDIR*) and the first principal factor from five world governance indicators (*HighGOV*) are above the median and zero otherwise (see Panels A–B). Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

proxies (*HighPFRINDEX, HighANALYST* and *HighDISCL*) are positive and significant at the 1% level. These results indicate that the adverse impact of corruption on default risk is attenuated for firms in countries with stronger information environments. This finding supports previous literature suggesting that a country's information environment moderates various corporate outcomes (e.g., Balachandran et al. 2020; Nadarajah et al. 2021), highlighting how robust information environments weaken the detrimental impact of corruption. Our matched sample further reinforces our main findings as expected.

5.2.2 | The Role of a Country's Legal and Governance Protection

In this subsection, we explore the extent to which the relationship between corruption and default risk depends on a country's legal and governance structures, reflecting differences in institutional and legal frameworks across countries. As in Hypothesis 3, we anticipate that the impact of corruption on default risk will be less pronounced (more pronounced) in countries with stronger (weaker) legal enforcement and governance structures.

To assess a country's legal and governance structures, we use three proxies: the legal origin of the company law specific to each country, categorized into Socialist, Scandinavian, German, French and English systems (La Porta et al. 1998; Djankov et al. 2007), represented by an indicator variable ranging from one to five (*LEGORIG*); a country-specific index of anti-director rights (*ANTIDIR*) from Djankov et al. (2008), measuring shareholders' ability to challenge incumbent boards via proxy rights, extraordinary general meetings and pre-emptive rights (La Porta et al. 1998); and the first principal factor derived from five governance indicators (*GOVQLTY*). Based on whether these proxies are above or below the median values, we construct three indicator variables: *LEGORIG* (already), *HighANTIDIR* and *HighGOV*, assigning a value of one (zero) to each.

To test Hypothesis 3, we interact each of these variables with corruption and add each interaction term to the baseline Equation (2). The results are presented in Table 9 (see Panel A for the full sample and Panel B for a matched sample as per the EB framework). Across all models, the positive relationship between corruption and default risk (negative coefficients) remains consistent. However, in our full sample, the coefficients on the interaction terms between corruption (*INVCOC*) and legal and governance structures (*LEGORIG, HighANTIDIR* and *HighGOV*) are positive and significant at the 5% and 1% levels. These results indicate that the positive effect of corruption on default risk becomes weaker in countries with stronger legal and governance structures. Overall, our results demonstrate how a country's legal and governance quality mitigates the adverse effects of corruption on default risk. The results from our matched sample further support these conclusions as expected.

5.2.3 | The Role of Firm-Level Governance Monitoring

In this subsection, we examine the role of firm-level monitoring in elucidating the adverse impact of corruption on default risk. In accordance with Hypothesis 4, we anticipate that the effect of corruption on default risk will be mitigated in firms that undergo rigorous firm-level monitoring.

To assess firm-level monitoring, we use two measures. Our first proxy is product market competition (*PMC*), represented by the inverse of the Herfindahl–Hirschman index (*HHI*). This measure disciplines managers, reduces agency costs and aligns the interests of insiders and shareholders (Giroud and Mueller 2011; Balachandran et al. 2020). We construct an indicator variable (*HighPMC*) where a value of one (zero) indicates PMC above (below) the median level in year $t-1$. Our second proxy distinguishes between firms operating in technology or non-technology industries. In non-technology firms, insiders tend to be more entrenched than those in technology firms (Anderson et al. 2000; Ittner et al. 2003). For instance, Chen et al. (2017) document a stronger impact of female directors on dividend payout in non-technology firms compared to technology firms, signifying weaker monitoring mechanisms in the former. We follow prior studies (Murphy 2003; Chemmanur et al. 2013; Chen et al. 2017) and categorize firms based on whether they belong to the technology or non-technology industries (*TECHIND*), a value of one (zero) assigned to each.[19]

To test Hypothesis 4, we interact each of these indicator variables with corruption and add the interaction terms in the baseline Equation (2) as separate explanatory variables. The results are presented in Table 10 (see Panel A for the full sample and Panel

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 10 | Corruption and default risk: the role of firm governance monitoring.

Panel A: Testing conditional effects based on full sample		
	(1)	**(2)**
INVCOC	−0.586***	−0.559***
	(−23.84)	(−28.69)
INVCOC × *HighPMC*	0.067**	
	(2.36)	
HighPMC	0.028	
	(0.78)	
INVCOC × *TECHIND*		0.147**
		(2.07)
TECHIND		0.304***
		(3.18)
Controls	Included	Included
Constant	Included	Included
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
#Obs.	185,859	189,109
Adj. R-squared	0.206	0.207
Panel B: Testing conditional effects based on matched sample		
	(1)	**(2)**
INVCOC	−0.390***	−0.366***
	(−13.55)	(−16.25)
INVCOC × *HighPMC*	0.053*	
	(1.65)	
HighPMC	0.028	
	(0.40)	
INVCOC × *TECHIND*		0.052
		(0.75)
TECHIND		0.192**
		(2.13)
Controls	Included	Included
Constant	Included	Included
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
#Obs.	185,859	189,109
R-squared	0.168	0.169

Note: This table reports regressions of default risk, based on the firm-level external governance monitoring. The dependent variable is the distance to default (*DTD*), with corruption (*INVCOC*) as the main independent variable. The variable *HighPMC* takes a value of one if a firm's product market competition in year $t-1$ is above the median and zero otherwise. The variable *TECHIND* takes a value of one for technology firms based on four-digit

(Continues)

TABLE 10 | (Continued)

standard industrial classification codes (see Panels A–B). Unless otherwise stated, all specifications include industry and year-fixed effects. t-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

B for a matched sample as per the EB framework). Across all models, we consistently observe a positive relationship between corruption and default risk (indicated by negative coefficients). However, in our full sample, the coefficients on the interaction terms between corruption (*INVCOC*) and firm-level governance (*HighPMC* and *TECHIND*) are positive and significant at the 5% level. These results show that enhanced monitoring, such as firms with high PMC and technology firms, reduces the detrimental effect of corruption on default risk. The results from our matched sample partially corroborate these conclusions.

5.3 | Implications for Financial Outcomes

Corruption and default risk exacerbate financial instability and restrict access to capital. This subsection presents compelling evidence illustrating how increased default risk resulting from corruption inflates borrowing costs at the firm level and escalates the prevalence of non-performing loans at the country level.

In corrupt environments, lenders and investors incur greater expenses for due diligence to gauge default risk accurately, given the higher likelihood that the borrower may not repay their debt obligations. This demands borrowers to pay significantly higher costs for accessing capital (Jensen and Meckling 1976). Corruption-induced default risk leads lenders to impose elevated interest rates as a risk-mitigation strategy (Levine 2005). Moreover, firms encounter difficulties accessing international capital markets in highly corrupt settings. Such firms may be compelled to rely on domestic lenders who charge even higher interest rates (Stiglitz and Weiss 1981), reflecting risks associated with both default and corruption.

The association between default and non-performing loans in corrupt environments significantly impacts the performance of bank loans. In these contexts, the credit assessment process in such environments is often compromised, leading to loans being granted based on favouritism or bribery rather than genuine creditworthiness (Kebede et al. 2023). This compromised process increases the likelihood of extending credit to borrowers prone to default (Wei 2000), thereby contributing to a higher incidence of non-performing loans (Hakimi et al. 2022). These factors collectively worsen bank loan performance.

To assess the impact of corruption on borrowing costs and loan performance, we use the firm-level measure of cost of debt (*COD*: the after-tax weighted average cost of debt in year t) from the Bloomberg database and country-level measure of non-performing loans to gross loans (*NPL*: the ratio of defaulting loans to total gross loans in year t) from the Global Financial Development Database (GFDD), respectively.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 11 | Corruption, default risk and financial outcomes.

Panel A: Firm-level regressions of cost of debt (*COD*)

	Full sample			Matched sample		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
INVCOC	0.511***	0.502***	0.365***	0.451***	0.441***	0.308***
	(21.45)	(20.89)	(8.71)	(14.58)	(14.04)	(5.01)
INVDTD		0.014**	−0.019		0.022*	−0.009
		(2.32)	(−1.51)		(1.95)	(−0.41)
INVCOC × *INVDTD*			0.033***			0.033**
			(4.11)			(2.50)
Controls	Included	Included	Included	Included	Included	Included
Constant	Included	Included	Included	Included	Included	Included
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
#Obs.	71,242	71,242	71,242	71,242	71,242	71,242
(Adj). *R*-squared	0.225	0.225	0.226	0.204	0.204	0.205

Panel B: Country-level regressions of bank non-performing loans to gross loans (*NPL*)

	Full sample			Matched sample		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
INVCOC	2.882***	1.828***	5.040***	3.602***	1.954***	9.264***
	(7.90)	(4.88)	(4.67)	(5.87)	(3.61)	(4.58)
INVDTD		1.450***	1.795***		2.098***	2.778***
		(3.98)	(4.37)		(3.05)	(3.70)
INVCOC × *INVDTD*			0.710***			1.639***
			(3.18)			(3.65)
Controls	Included	Included	Included	Included	Included	Included
Constant	Included	Included	Included	Included	Included	Included
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
#Obs.	304	304	304	304	304	304
(Adj). *R*-squared	0.323	0.361	0.376	0.540	0.574	0.614

Note: This table reports regressions of the cost of debt and bank non-performing loans on corruption. In Panel A, the dependent variable is the cost of debt (COD) at the firm level, representing the after-tax weighted average cost of debt in year *t*. In Panel B, the dependent variable is bank non-performing loans to gross loans (NPL) at the country level, indicating the ratio of defaulting loans to total gross loans in year *t*. In both Panels A and B, the main independent variable is corruption (*INVCOC*). *INVDTD* in Panel A is the inverse measure of lagged distance-to-default at the firm-year level, suggesting a higher level of default risk. In Panel B, *INVDTD* is the average inverse measure of lagged distance-to-default at the country-year level. Unless otherwise stated, all specifications include industry and year-fixed effects. *t*-Statistics in parentheses are based on standard errors clustered at the firm level. For brevity, we omit reporting the coefficients for the intercept and controls in our regressions. Coefficients significant at the 1%, 5% and 10% levels are denoted by ***, ** and *, respectively. For the definition of variables, see Table 1.

In Panel A of Table 11, for both full and matched samples, Columns 1 and 4 present the results from regressing *COD* on corruption (*INVCOC*) and other controls. We find a significant positive impact of corruption on the cost of debt at the 1% significance level. Columns 2 and 5 include the inverse measure of lagged distance-to-default at the firm-year level (*INVDTD*) as an additional control, confirming a persistent increase in borrowing costs. Columns 3 and 6 introduce an interaction term between *INVDTD* and *INVCOC*, showing a positive effect on borrowing costs at the 1% and 5% significance levels, respectively. This suggests that heightened default risk due to corruption amplifies borrowing costs.

Similarly, in Panel B of Table 11, for both full and matched samples, Columns 1 and 4 show the results from regressing *NPL* on corruption (*INVCOC*) and other controls.[20] We find a significant positive impact of corruption on *NPL* at the 1% level. Columns 2 and 5 include the average inverse measure of lagged distance-to-default at the country-year level (*INVDTD*) as an additional control, revealing a continued increase in non-

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

performing loans. Columns 3 and 6 introduce an interaction term between *INVDTD* and *INVCOC*, demonstrating a positive effect on non-performing loans at the 1% level. This indicates that higher default risk due to corruption leads to worse loan performance. Our findings contribute insights into the financial implications of increased default risk for firms operating in corrupt environments.

6 | Conclusion

Many countries grapple with the pervasive and insidious problem of corruption, which weakens the rule of law and adversely affects business and market performance through increased borrowing costs (Stulz 2005; Ng 2006), and this is bound up with a lack of information transparency (Riahi-Belkaoui 2004). The consequences of a country's level of corruption can significantly destabilize firm operations, impacting cash flow generation and jeopardizing survival. This study supplements the literature by examining the influence of corruption on default risk using data from 189,109 firm-year observations of 18,641 non-financial firms across 47 countries from 2004 to 2021. Our findings consistently reveal a significant positive effect of a country's corruption level on default risk. These results remain robust across various measures of corruption and default risk, different specifications, alternative samples, additional controls and checks using IV approaches and EB to mitigate endogeneity.

We also examine the mechanisms through which corruption affects default risk and hence delineate the boundary conditions of this phenomenon. Our analysis shows that corruption exerts a considerable influence on default risk through information asymmetry and risk-taking channels. In cross-sectional analyses, we observe that more transparent information environments, legal and governance frameworks and greater external monitoring of firms moderate the negative consequences of corruption on corporate default risk. Finally, our study highlights the financial repercussions in the form of borrowing cost for firms operating in corrupt environments that are prone to increased default risk. Corruption poses a major hindrance to efficient resource allocation, thereby increasing the likelihood of corporate defaults and undermining shareholder investments and productivity (e.g., Brogaard et al. 2017). Our findings contribute to the extant literature by assessing the impact of corruption on cross-country differences in corporate default risk and provide novel insights for various stakeholders and, at a theoretical level, extend understanding around the causal processes associated with it.

Our study offers important implications for firms, investors and regulators. It underscores the global ramifications of corruption, urging international investors and MNCs to integrate these insights into their investment frameworks to enhance decision-making resilience. Moreover, our insights advocate for regulators to establish robust and standardized governance frameworks to combat corruption, especially in the context of accelerating globalization and heightened international scrutiny, highlighting areas where interventions may make a difference. Future research could build on our evidence by exploring the potential impact of other country-specific factors, such as beliefs and value systems, on firm default risk.

Acknowledgments

Open access publishing facilitated by RMIT University, as part of the Wiley - RMIT University agreement via the Council of Australian University Librarians.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have no permission to share the data as it is available through subscribed sources.

Endnotes

[1] https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/AC_Home/ [Accessed 20-02-2022].

[2] Corrupt practices having been exposed at Siemens, 1MDB, and even FIFA during this period. See Transparency International: https://www.transparency.org/en/news/25-corruption-scandals [Accessed 12-02-2023].

[3] As per CRI Group, in February 2020, Airbus was fined $4 billion for corruption and bribery to boost sales throughout the previous 15 years, whereas Novartis was fined $1.3 billion in 2020 for illegal price-fixing.

[4] These costs encompass expenses related to filing for bankruptcy, including legal and professional fees.

[5] Our baseline model employs ordinary least squares. Further, we explore alternative specifications using weighted least squares and the Fama–MacBeth (1973) two-step method.

[6] However, some studies report a positive effect of corruption on cash holdings (Tran, 2020) and foreign direct investment (e.g., Barassi and Zhou 2012; Egger and Winner, 2005). According to Tran (2020), corruption reduces the value of cash.

[7] National University of Singapore, CRI database. Available at: http://nuscri.org [Accessed 11-01-2024].

[8] We thank the Reviewer for suggesting this selection criterion.

[9] The WGI features six aggregate governance indicators for over 200 countries and territories over the period 1996–2022.

[10] To assess the issue of collinearity among the explanatory variables, we compute a correlation matrix (not tabulated). The results indicate that collinearity is below the tolerance limit of 0.70.

[11] A recent study (Chen et al., 2022) confirms that perceived corruption at the board-level results in higher loan spreads.

[12] We sincerely thank the Editor and the Reviewer for recommending the use of entropy balancing.

[13] Previous research identifies a negative relationship between Protestantism and corruption (Gerring & Thacker, 2005; Treisman, 2000). North et al. (2013) observe that corruption peaked in 2004 in countries that adhered to Orthodox Christianity in 1900. Moreover, a recent study by Niu et al. (2022) documents higher levels of bank lending corruption in firms located in more religious countries.

[14] As our second instrument remains relatively stable within a country over time, ensuring consistency across country-year observations, we measure it in year *t*.

[15] https://subnational.doingbusiness.org/en/data/exploretopics/enforcing-contracts/good-practices [Accessed 12-02-2024].

[16] For more details on the EB framework, visit to: ebalance: A Stata Package for Entropy Balancing (stanford.edu) [Accessed 11-03-2024].

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

[17] In an untabluated result, we check the robustness of our findings using two-way cluster-robust standard errors, clustered by firm and year. This approach ensures our results remain unchanged, addressing issues of cross-sectional and time-series dependence (Petersen, 2009; Gow et al., 2010; Pham, 2020).

[18] Prior research shows a negative relationship bewteen information asymmetry and stock liquidity, as higher transaction costs arise from increased information asymmetry among market participants (Diamond and Verrecchia, 1991; Bartov and Bodnar, 1996).

[19] An indicator variable equals one for firms (*TECHIND*) with primary SIC codes 3570 (Computer and Office Equipment), 3571 (Electronic Computers), 3572 (Computer Storage Devices), 3576 (Computer Communication Equipment), 3577 (Computer Peripheral Equipment), 3661 (Telephone & Telegraph Apparatus), 3674 (Semiconductor and Related Devices), 4812 (Wireless Telecommunication), 4813 (Telecommunication), 5045 (Computers and Software Wholesalers), 5961 (Electronic Mail-Order Houses), 7370 (Computer Programming, Data Processing), 7371 (Computer Programming Service), 7372 (Pre-packaged Software) and 7373 (Computer Integrated Systems Design). Non-technology firms are defined as firms with SIC codes below 4000, not otherwise categorized as technology firms (*NON-TECHIND*).

[20] As our dependent variable of interest operates at the country-year level, we aggregate all firm-level controls to this by computing their average. This approach effectively consolidates observations, ensuring availability of NPL data at the country-year level.

References

Aboody, D., and B. Lev. 2000. "Information Asymmetry, R&D, and Insider Gains." *Journal of Finance* 55, no. 6: 2747–2766.

Acemoglu, D., and T. Verdier. 2000. "The Choice Between Market Failures and Corruption." *American Economic Review* 90, no. 1: 194–211.

Acharya, V. V., Y. Amihud, and L. Litov. 2011. "Creditor Rights and Corporate Risk-Taking." *Journal of Financial Economics* 102, no. 1: 150–166.

Alam, M. S., M. Atif, D. Cumming, and M. S. Islam. 2024. "The Impact of Board Gender Composition on Loan Covenant Violations." *Corporate Governance: An International Review* 32, no. 4: 703–731.

Ali, M. S. B., F. Fhima, and R. Nouira. 2020. "How Does Corruption Undermine Banking Stability? A Threshold Nonlinear Framework." *Journal of Behavioral and Experimental Finance* 27: 100365.

Ali, S., B. Liu, and J. J. Su. 2022. "Does Corporate Governance Have a Differential Effect on Downside and Upside Risk?." *Journal of Business Finance & Accounting* 49, no. 9–10: 1642–1695.

Al-Najjar, B., and S. Abed. 2014. "The Association Between Disclosure of Forward-Looking Information and Corporate Governance Mechanisms: Evidence From the UK Before the Financial Crisis Period." *Managerial Auditing Journal* 29, no. 7: 578–595.

Alonso, M., J. Arnal, A. Mesa-Toro, and A. Moreno. 2022. "Do Corruption Perceptions Impact the Pricing and Access of euro area Corporations to Bond Markets?," *European Journal of Finance* 30, no. 4: 370–384.

Amihud, Y. 2002. "Illiquidity and Stock Returns: Cross-Section and Time-Series Effects." *Journal of Financial Markets* 5, no. 1: 31–56.

An, Z., Z. Chen, D. Li, and L. Xing. 2018. "Individualism and Stock Price Crash Risk." *Journal of International Business Studies* 49, no. 9: 1208–1236.

Anderson, M. C., R. D. Banker, and S. Ravindran. 2000. "Executive Compensation in the Information Technology Industry." *Management Science* 46, no. 4: 530–547.

Ashbaugh-Skaife, H., D. W. Collins, and R. LaFond. 2006. "The Effects of Corporate Governance on Firms' Credit Ratings." *Journal of Accounting and Economics* 42, no. 1: 203–243.

Atawnah, N., G. Baghdadi, H. N. Duong, and E. Podolski. 2022. "The Bright Side of Foreign Competition: Import Penetration and Default Risk." *Critical Finance Review* Forthcoming.

Atif, M., B. Liu, and A. Huang. 2019. "Does Board Gender Diversity Affect Corporate Cash Holdings?." *Journal of Business Finance & Accounting* 46, no. 7–8: 1003–1029.

Atif, M., and S. Ali. 2021. "Environmental, Social and Governance Disclosure and Default Risk." *Business Strategy and the Environment* 30, no. 8: 3937–3959.

Attig, N., W.-M. Fong, Y. Gadhoum, and L. H. Lang. 2006. "Effects of Large Shareholding on Information Asymmetry and Stock Liquidity." *Journal of Banking & Finance* 30, no. 10: 2875–2892.

Baghdadi, G. A., L. H. Nguyen, and E. J. Podolski. 2020. "Board Co-Option and Default Risk." *Journal of Corporate Finance* 64: 101703.

Balachandran, B., H. N. Duong, H. Luong, and L. Nguyen. 2020. "Does Takeover Activity Affect Stock Price Crash Risk? Evidence From International M&A Laws." *Journal of Corporate Finance* 64: 101697.

Balachandran, B., H. N. Duong, T. van Zijl, and A. E. Zudana. 2022. "Does the Threat of Takeover Affect Default Risk?," *Journal of Business Finance & Accounting* 40, no. 9–10: 1572–1611.

Barassi, M. R., and Y. Zhou. 2012. "The Effect of Corruption on FDI: A Parametric and Non-Parametric Analysis." *European Journal of Political Economy* 28, no. 3: 302–312.

Bardhan, P. 1997. "Corruption and Development: A Review of Issues." *Journal of Economic Literature* 35, no. 3: 1320–1346.

Bartov, E., and G. M. Bodnar. 1996. "Alternative Accounting Methods, Information Asymmetry and Liquidity: Theory and Evidence." *Accounting Review* 71, no. 3: 397–418.

Bennett, R. L., L. Güntay, and H. Unal. 2015. "Inside Debt, Bank Default Risk, and Performance During the Crisis." *Journal of Financial Intermediation* 24, no. 4: 487–513.

Bharath, S. T., and T. Shumway. 2008. "Forecasting Default With the Merton Distance to Default Model." *Review of Financial Studies* 21, no. 3: 1339–1369.

Bhattacharya, N., H. Desai, and K. Venkataraman. 2013. "Does Earnings Quality Affect Information Asymmetry? Evidence From Trading Costs." *Contemporary Accounting Research* 30, no. 2: 482–516.

Blackburn, K., N. Bose, and M. E. Haque. 2006. "The Incidence and Persistence of Corruption in Economic Development." *Journal of Economic Dynamics and Control* 30, no. 12: 2447–2467.

Blair, R. A., B. S. Morse, and L. L. Tsai. 2017. "Public Health and Public Trust: Survey Evidence From the Ebola Virus Disease Epidemic in Liberia." *Social Science & Medicine* 172: 89–97.

Boubakri, N., O. Guedhami, D. Mishra, and W. Saffar. 2012. "Political Connections and the Cost of Equity Capital." *Journal of Corporate Finance* 18, no. 3: 541–559.

Brogaard, J., D. Li, and Y. Xia. 2017. "Stock Liquidity and Default Risk." *Journal of Financial Economics* 124, no. 3: 486–502.

Burkart, M., F. Panunzi, and A. Shleifer. 2003. "Family Firms." *Journal of Finance* 58, no. 5: 2167–2201.

Callen, J. L., and X. Fang. 2015. "Religion and Stock Price Crash Risk." *Journal of Financial and Quantitative Analysis* 50, no. 1–2: 169–195.

Chaney, P. K., M. Faccio, and D. Parsley. 2011. "The Quality of Accounting Information in Politically Connected Firms." *Journal of Accounting and Economics* 51, no. 1–2: 58–76.

Chang, J. J., T. Khanna, and K. Palepu. 2000. "Analyst Activity Around the World." Working Paper No. 01-061. Harvard Business School.

Chemmanur, T. J., Y. Cheng, and T. Zhang. 2013. "Human Capital, Capital Structure, and Employee Pay: An Empirical Analysis." *Journal of Financial Economics* 110, no. 2: 478–502.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Chen, J., W. S. Leung, and M. Goergen. 2017. "The Impact of Board Gender Composition on Dividend Payouts." *Journal of Corporate Finance* 43: 86–105.

Chen, M., B. N. Jeon, R. Wang, and J. Wu. 2015. "Corruption and Bank Risk-Taking: Evidence From Emerging Economies." *Emerging Markets Review* 24: 122–148.

Chen, R., C. W. Huang, and C. Y. Lin. 2022. "Board Corruption and Loan Contracts." *Journal of Business Finance & Accounting* 49, no. 9–10: 1929–1956.

Chen, Y., M. Liu, and J. Su. 2013. "Greasing the Wheels of Bank Lending: Evidence From Private Firms in China." *Journal of Banking & Finance* 37, no. 7: 2533–2545.

Cho, S. S., S. El Ghoul, O. Guedhami, and J. Suh. 2014. "Creditor Rights and Capital Structure: Evidence From International Data." *Journal of Corporate Finance* 25: 40–60.

Ciocchini, F., E. Durbin, and D. T. Ng. 2003. "Does Corruption Increase Emerging Market Bond Spreads?" *Journal of Economics and Business* 55, no. 5–6: 503–528.

Cornett, M. M., A. J. Marcus, and H. Tehranian. 2008. "Corporate Governance and Pay-For-Performance: The Impact of Earnings Management." *Journal of Financial Economics* 87, no. 2: 357–373.

Das, S. R., P. Hanouna, and A. Sarin. 2009. "Accounting-Based Versus Market-Based Cross-Sectional Models of CDS Spreads." *Journal of Banking & Finance* 33, no. 4: 719–730.

Dass, N., V. K. Nanda, and S. C. Xiao. 2018, April. "Geographic Clustering of Corruption in the US." In Paris December 2017 Finance Meeting. EUROFIDAI-AFFI.

Diamond, D. W., and R. E. Verrecchia. 1991. "Disclosure, Liquidity, and the Cost of Capital." *Journal of Finance* 46, no. 4: 1325–1359.

DiRienzo, C. E., J. Das, K. T. Cort, and J. Burbridge. 2007. "Corruption and the Role of Information." *Journal of International Business Studies* 38, no. 2: 320–332.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer. 2008. "The Law and Economics of Self-Dealing." *Journal of Financial Economics* 88, no. 3: 430–465.

Djankov, S., C. McLiesh, and A. Shleifer. 2007. "Private Credit in 129 Countries." *Journal of Financial Economics* 84, no. 2: 299–329.

Dreher, A., and M. Gassebner. 2013. "Greasing the Wheels? The Impact of Regulations and Corruption on Firm Entry." *Public Choice* 155, no. 3: 413–432.

Egger, P., and H. Winner. 2005. "Evidence on Corruption as an Incentive for Foreign Direct Investment." *European Journal of Political Economy* 21, no. 4: 932–952.

El Ghoul, S., O. Guedhami, C. Kwok, and X. Zheng. 2017. "Zero-Leverage Puzzle: An International Comparison." *Review of Finance* 22, no. 3: 1063–1120.

Eleswarapu, V. R., and K. Venkataraman. 2006. "The Impact of Legal and Political Institutions on Equity Trading Costs: A Cross-Country Analysis." *Review of Financial Studies* 19, no. 3: 1081–1111.

Ellis, J., J. Smith, and R. White. 2020. "Corruption and Corporate Innovation." *Journal of Financial and Quantitative Analysis* 55, no. 7: 2124–2149.

Everett, J., D. Neu, and A. S. Rahaman. 2007. "Accounting and the Global Fight Against Corruption." *Accounting, Organizations and Society* 32, no. 6: 513–542.

Fama, E. F., and J. D. MacBeth. 1973. "Risk, Return, and Equilibrium Empirical Tests." *Journal of Political Economy* 81, no. 3: 607–636.

Gerring, J., and S. C. Thacker. 2005. "Do Neoliberal Policies Deter Political Corruption?," *International Organization* 59, no. 1: 233–254.

Gillan, S. L., and L. T. Starks. 2000. "Corporate Governance Proposals and Shareholder Activism: The Role of Institutional Investors." *Journal of Financial Economics* 57, no. 2: 275–305.

Giroud, X., and H. M. Mueller. 2011. "Corporate Governance, Product Market Competition, and Equity Prices." *Journal of Finance* 66, no. 2: 563–600.

Gorshunov, M. A., A. A. Armenakis, S. G. Harris, and H. J. Walker. 2021. "Quad-Qualified Audit Committee Director: Implications for Monitoring and Reducing Financial Corruption." *Journal of Corporate Finance* 66: 101854.

Gow, I. D., G. Ormazabal, and D. J. Taylor. 2010. "Correcting for Cross-Sectional and Time-Series Dependence in Accounting Research." *Accounting Review* 85, no. 2: 483–512.

Goyal, V. K., and W. Wang. 2013. "Debt Maturity and Asymmetric Information: Evidence From Default Risk Changes." *Journal of Financial and Quantitative Analysis* 48, no. 3: 789–817.

Goyenko, R. Y., C. W. Holden, and C. A. Trzcinka. 2009. "Do Liquidity Measures Measure Liquidity?," *Journal of Financial Economics* 92, no. 2: 153–181.

Guiso, L., P. Sapienza, and L. Zingales. 2003. "People's Opium? Religion and Economic Attitudes." *Journal of Monetary Economics* 50, no. 1: 225–282.

Gull, A. A., M. Carvajal, M. Atif, and M. Nadeem. 2024. "The Presence and Composition of Sustainability Committee and Waste Management Practices." *International Review of Financial Analysis* 93: 103111.

Habib, M., and L. Zurawicki. 2002. "Corruption and Foreign Direct Investment." *Journal of International Business Studies* 33, no. 2: 291–307.

Hainmueller, J. 2012. "Entropy Balancing for Causal Effects: a Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies." *Political Analysis* 20, no. 1: 25–46.

Hakimi, A., R. Boussaada, and M. Karmani. 2022. "Is the Relationship Between Corruption, Government Stability and Non-Performing Loans Non-Linear? A Threshold Analysis for the MENA Region." *International Journal of Finance & Economics* 27, no. 4: 4383–4398.

Hanousek, J., A. Shamshur, J. Svejnar, and J. Tresl. 2021. "Corruption Level and Uncertainty, FDI and Domestic Investment." *Journal of International Business Studies* 52, no. 9: 1750–1774.

Hasbrouck, J. 2009. "Trading Costs and Returns for US Equities: Estimating Effective Costs From Daily Data." *Journal of Finance* 64, no. 3: 1445–1477.

Healy, P. M., and K. G. Palepu. 2001. "Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature." *Journal of Accounting and Economics* 31, no. 1–3: 405–440.

Hillegeist, S. A., E. K. Keating, D. P. Cram, and K. G. Lundstedt. 2004. "Assessing the Probability of Bankruptcy." *Review of Accounting Studies* 9, no. 1: 5–34.

Hope, O.-K., T. Kang, W. B. Thomas, and Y. K. Yoo. 2009. "Impact of Excess Auditor Remuneration on the Cost of Equity Capital Around the World." *Journal of Accounting, Auditing & Finance* 24, no. 2: 177–210.

Houston, J. F., C. Lin, P. Lin, and Y. Ma. 2010. "Creditor Rights, Information Sharing, and Bank Risk Taking." *Journal of Financial Economics* 96, no. 3: 485–512.

Hsu, P. H., H.-H. Lee, A. Z. Liu, and Z. Zhang. 2015. "Corporate Innovation, Default Risk, and Bond Pricing." *Journal of Corporate Finance* 35: 329–344.

Huang, Q., and T. Yuan. 2021. "Does Political Corruption Impede Firm Innovation? Evidence From the United States." *Journal of Financial and Quantitative Analysis* 56, no. 1: 213–248.

International Monetary Fund. 2016. IMF Survey: Fighting Corruption Critical for Growth and Macroeconomic Stability-IMF Paper. International Monetary Fund. http://www.imf.org/external/pubs/ft/survey/so/2016/RES05_1116.htm.

Ittner, C. D., R. A. Lambert, and D. F. Larcker. 2003. "The Structure and Performance Consequences of Equity Grants to Employees of New Economy Firms." *Journal of Accounting and Economics* 34, no. 1–3: 89–127.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Jaggi, B., and P. Y. Low. 2011. “Joint Effect of Investor Protection and Securities Regulations on Audit Fees.” *International Journal of Accounting* 46, no. 3: 241–270.

Jensen, M. C., and W. H. Meckling. 1976. “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure.” *Journal of Financial Economics* 3, no. 4: 305–360.

Jiang, T., and H. Nie. 2014. “The Stained China Miracle: Corruption, Regulation, and Firm Performance.” *Economics Letters* 123, no. 3: 366–369.

John, K., L. Litov, and B. Yeung. 2008. “Corporate Governance and Risk-Taking.” *Journal of Finance* 63, no. 4: 1679–1728.

Kabir, M. N., M. D. Miah, S. Ali, and P. Sharma. 2020. “Institutional and Foreign Ownership Vis-à-Vis Default Risk: Evidence From Japanese Firms.” *International Review of Economics & Finance* 69: 469–493.

Kale, J. R., and Y. C. Loon. 2011. “Product Market Power and Stock Market Liquidity.” *Journal of Financial Markets* 14, no. 2: 376–410.

Kaufmann, D., and A. Kraay. 2023. “Worldwide Governance Indicators, 2023 Update.” Accessed January 29, 2024.

Kaufmann, D., A. Kraay, and M. Mastruzzi. 2012. “Governance Matters VIII: Aggregate and Individual Governance Indicators, 1996–2012.” Policy ResearchWorking Paper No. 4978. World Bank.

Kebede, J., V. Tawiah, and E. Gyapong. 2023. “The Effect of Corruption on Microfinance Loan Portfolio: A Semiparametric Analysis.” *Economics of Transition and Institutional Change* 31, no. 1: 241–268.

La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 2006. “What Works in Securities Laws?.” *Journal of Finance* 61, no. 1: 1–32.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1998. “Law and Finance.” *Journal of Political Economy* 106, no. 6: 1113–1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny. 1999. “The Quality of Government.” *Journal of Law, Economics, and Organization* 15, no. 1: 222–279.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. 1997. “Legal Determinants of External Finance.” *Journal of Finance* 52, no. 3: 1131–1150.

Lasantha, R., V. Tawiah, M. Atif, P. Puwanenthiren, and S. Nadarajah. 2024. “Unveiling the Impact of Foreign Competition on the Bond Market: Insights From S&P Debt Ratings.” *Economics Letters* 241, no. 3: 111797.

Lee, C. M., and D. Ng. 2009. “Corruption and International Valuation: Does Virtue Pay?.” *Journal of Investing* 18, no. 4: 23–41.

Levine, R. 2005. “Law, Endowments, and Property Rights.” *Journal of Economic Perspectives* 19, no. 3: 61–88.

Lewellyn, K. B., and S. R. Bao. 2017. “The Role of National Culture and Corruption on Managing Earnings Around the World.” *Journal of World Business* 52, no. 6: 798–808.

Li, C., and J. J. Reuer. 2021. “The Impact of Corruption on Market Reactions to International Strategic Alliances.” *Journal of International Business Studies* 53: 187–202.

Li, H., J. Refalo, and O. Maisondieu-Laforge. 2021. “National Corruption and International Banking.” *Global Finance Journal* 47: 100521.

Li, K., D. Griffin, H. Yue, and L. Zhao. 2013. “How Does Culture Influence Corporate Risk-Taking?.” *Journal of Corporate Finance* 23: 1–22.

Lien, Y. C., C. C. Teng, and S. Li. 2016. “Institutional Reforms and the Effects of Family Control on Corporate Governance.” *Family Business Review* 29, no. 2: 174–188.

Liu, J., Y. Shahab, and H. Hoque. 2022. “Government Response Measures and Public Trust During the COVID-19 Pandemic: Evidence From Around the World.” *British Journal of Management* 33, no. 2: 571–602. https://doi.org/10.1111/1467-8551.12577.

Liu, X. 2016. “Corruption Culture and Corporate Misconduct.” *Journal of Financial Economics* 122, no. 2: 307–327.

Lui, F. T. 1985. “An Equilibrium Queuing Model of Bribery.” *Journal of Political Economy* 93, no. 4: 760–781.

Luo, Y. 2006. “Political Behavior, Social Responsibility, and Perceived Corruption: A Structuration Perspective.” *Journal of International Business Studies* 37, no. 6: 747–766.

Mauro, P. 1995. “Corruption and Growth.” *Quarterly Journal of Economics* 110, no. 3: 681–712.

Méon, P. G., and L. Weill. 2010. “Is Corruption an Efficient Grease?.” *World Development* 38, no. 3: 244–259.

Merton, R. C. 1974. “On the Pricing of Corporate Debt: the Risk Structure of Interest Rates.” *Journal of Finance* 29, no. 2: 449–470.

Mihet, R. 2013. “Effects of Culture on Firm Risk-Taking: A Cross-Country and Cross-Industry Analysis.” *Journal of Cultural Economics* 37, no. 1: 109–151.

Mo, P. H. 2001. “Corruption and Economic Growth.” *Journal of Comparative Economics* 29, no. 1: 66–79.

Murphy, K. J. 2003. “Stock-Based Pay in New Economy Firms.” *Journal of Accounting and Economics* 34, no. 1–3: 129–147.

Murphy, K. M., A. Shleifer, and R. W. Vishny. 1993. “Why Is Rent-Seeking So Costly to Growth?.” *American Economic Review* 83, no. 2: 409–414.

Nadarajah, S., B. Liu, M. Atif, and G. Richardson. 2024. “Individualistic Culture and Firm Default Risk: Cross-Country Evidence.” *International Review of Finance* 24, no. 2: 166–194.

Nadarajah, S., H. N. Duong, S. Ali, B. Liu, and A. Huang. 2021. “Stock Liquidity and Default Risk Around the World.” *Journal of Financial Markets* 55: 100597.

Ng, D. 2006. “The Impact of Corruption on Financial Markets.” *Managerial Finance* 32, no. 10: 822–836.

Niu, G., Y. Zhou, W. Lu, and H. Gan. 2022. “Religiosity and Corruption in Bank Lending.” *Journal of Business Finance & Accounting* 49, no. 9–10: 1957–1983.

North, C. M., W. H. Orman, and C. R. Gwin. 2013. “Religion, Corruption, and the Rule of Law.” *Journal of Money, Credit and Banking* 45, no. 5: 757–779.

Pagano, M., and T. Jappelli. 1993. “Information Sharing in Credit Markets.” *Journal of Finance* 48, no. 5: 1693–1718.

Palepu, K., and T. Khanna. 1998. “Institutional Voids and Policy Challenges in Emerging Markets.” *Brown Journal of World Affairs* 5: 71–78.

Park, J. 2012. “Corruption, Soundness of the Banking Sector, and Economic Growth: A Cross-Country Study.” *Journal of International Money and Finance* 31, no. 5: 907–929.

Petersen, M. A. 2009. “Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches.” *Review of Financial Studies* 22, no. 1: 435–480.

Pham, M. H. 2020. “In Law We Trust: Lawyer CEOs and Stock Liquidity.” *Journal of Financial Markets* 50: 100548.

Piga, G. 2011. “A Fighting Chance Against Corruption in Public Procurement.” *International Handbook on the Economics of Corruption* 2: 141–181.

Qi, S., and D. D. Nguyen. 2021. “Government Connections and Credit Access Around the World: Evidence From Discouraged Borrowers.” *Journal of International Business Studies* 52, no. 2: 321–333.

Qi, Y., L. Roth, and J. K. Wald. 2010. “Political Rights and the Cost of Debt.” *Journal of Financial Economics* 95, no. 2: 202–226.

Rego, L. L., M. T. Billett, and N. A. Morgan. 2009. “Consumer-Based Brand Equity and Firm Risk.” *Journal of Marketing* 73, no. 6: 47–60.

Riahi-Belkaoui, A. 2004. “Effects of Corruption on Earnings Opacity Internationally.” *Advances in International Accounting* 17: 73–84.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Riahi-Belkaoui, A., and F. K. AlNajjar. 2006. "Earnings Opacity Internationally and Elements of Social, Economic and Accounting Order." *Review of Accounting and Finance* 5, no. 3: 189–203.

Rodriguez, P., K. Uhlenbruck, and L. Eden. 2005. "Government Corruption and the Entry Strategies of Multinationals." *Academy of Management Review* 30, no. 2: 383–396.

Sahakyan, N., and K. W. Stiegert. 2012. "Corruption and Firm Performance." *Eastern European Economics* 50, no. 6: 5–27.

Sartor, M. A., and P. W. Beamish. 2018. "Host Market Government Corruption and the Equity-Based Foreign Entry Strategies of Multinational Enterprises." *Journal of International Business Studies* 49, no. 3: 346–370.

Shao, L., C. C. Kwok, and R. Zhang. 2013. "National Culture and Corporate Investment." *Journal of International Business Studies* 44, no. 7: 745–763.

Shleifer, A., and R. W. Vishny. 1993. "Corruption." *Quarterly Journal of Economics* 108, no. 3: 599–617.

Shleifer, A., and R. W. Vishny. 1994. "Politicians and Firms." *Quarterly Journal of Economics* 109, no. 4: 995–1025.

Shleifer, A., and R. W. Vishny. 1997. "A Survey of Corporate Governance." *Journal of Finance* 52, no. 2: 737–783.

Smith, J. D. 2016. "US Political Corruption and Firm Financial Policies." *Journal of Financial Economics* 121, no. 2: 350–367.

Stiglitz, J. E., and A. Weiss. 1981. "Credit Rationing in Markets With Imperfect Information." *American Economic Review* 71, no. 3: 393–410.

Stock, J. H., and M. Yogo. 2005. "Testing for Weak Instruments in Linear IV Regression." In *Identification and Inference for Econometric Models: Essays in Honour of Thomas J. Rothenberg*, 80–108. Cambridge University Press.

Stoll, H. R. 2000. "Presidential Address: Friction." *The Journal of Finance* 55, no. 4: 1479–1514.

Stulz, R. M. 2005. "The Limits of Financial Globalization." *Journal of Finance* 60, no. 4: 1595–1638.

Tee, C. M., and T. T. M. Teoh. 2022. "The Cost of Debt and Political Institutions: The Influence of Corruption." *Journal of Financial Crime* 31, no. 1: 44–62.

Tran, Q. T. 2020. "Corruption and Corporate Cash Holdings: International Evidence." *Journal of Multinational Financial Management* 54: 100611.

Treisman, D. 2000. "The Causes of Corruption: A Cross-National Study." *Journal of Public Economics* 76, no. 3: 399–457.

Uhlenbruck, K., P. Rodriguez, J. Doh, and L. Eden. 2006. "The Impact of Corruption on Entry Strategy: Evidence From Telecommunication Projects in Emerging Economies." *Organization Science* 17, no. 3: 402–414.

Webb, J. W., G. M. Kistruck, R. D. Ireland, and D. J. Ketchen. 2010. "The Entrepreneurship Process in Base of the Pyramid Markets: The Case of Multinational Enterprise/Nongovernment Organization Alliances." *Entrepreneurship Theory and Practice* 34: 555–581.

Wei, S. J. 2000. "How Taxing Is Corruption on International Investors?." *Review of Economics and Statistics* 82, no. 1: 1–11.

Weitzel, U., and S. Berns. 2006. "Cross-Border Takeovers, Corruption, and Related Aspects of Governance." *Journal of International Business Studies* 37, no. 6: 786–806.

Wu, X. 2005. "Corporate Governance and Corruption: a Cross-Country Analysis." *Governance* 18, no. 2: 151–170.

Xu, H., M. Dao, and A. Petkevich. 2019. "Political Corruption and Auditor Behavior: Evidence From US Firms." *European Accounting Review* 28, no. 3: 513–540.

Xu, M., and C. Zhang. 2009. "Bankruptcy Prediction: The Case of Japanese Listed Companies." *Review of Accounting Studies* 14, no. 4: 534–558.

Zheng, B., and J. Xiao. 2020. "Corruption and Investment: Theory and Evidence From China." *Journal of Economic Behavior & Organization* 175: 40–54.

14685957, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/jbfa.12860 by Dublin City University, Wiley Online Library on [06/05/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License