Impact of Governance Quality on Default Risk of Socially Responsible Firms: International Evidence

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Abstract: Research Question: Default risk problem is more prevalent during the recent covid-19 pandemic era, stopping economic activity, hurting firms, and exposing them to default risk but governance and CSR may lower this default risk problem. **Motivation:** As a result of the research work of Altman (1968), researchers have given great attention to the determinants of firms' default risk. Previous studies (Asis *et al.*, 2021; McGuinness *et al.*, 2018) mostly focus on the link between leverage and default risk, our study introduces governance quality and CSR into the debate as new factors that may mitigate default risk of firms. **Idea:** This paper investigates the impact of governance quality on default risk of socially responsible firms from developing countries. **Data:** Governance quality data are obtained from the World Governance Indicators. The firm-level data are obtained from the DataStream databases. We use a total of 466 listed firms from 15 developing countries and cover 2010 to 2017 periods. **Method/Tools:** The two-step system generalized method of moments is applied to mitigate endogeneity problem. **Findings:** Governance quality (i.e., rule of law) has a significant negative impact on firms' default risk in the full sample and three regional sub-samples (i.e., Asia, Africa and Middle-East, and Latin American Countries). The results suggest that strong governance quality appears to minimize bankruptcy costs which lower default risk of socially responsible firms in developing countries. **Contributions:** Unlike prior studies that focus more on the relationship between leverage and default risk and use single country dataset, this study focuses on the impact of governance quality on default risk of socially responsible firms, and thus contributes to an extensive body of theoretical and empirical work that focuses on firms' default risk. Secondly. this paper covers three regions (i.e. Asia, Middle East and Africa, and Latin America regions) to improve the validity and robustness of our conclusion.

Keywords: Default risk, governance quality, international evidence, socially responsible firms, GMM estimation.
JEL Classification: G32, G33

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1. Introduction

Firms going into default are inevitable outcome of an emerging economy (Cathcart *et al.*, 2020). An economy that can channel financial resources to better uses after facing adverse economic shocks has major implications for speady recovery and efficient performance (Bernstein *et al.*, 2019). As countries rely on courts to address default problem, strong country-level governance (hence forth governance quality) could play a major role in allocating resources of defaulting firms. This default risk problem is more prevalent during the recent covid-19 pandemic era, stopping economic activity, hurting firms, and exposing them to default risk (Didier *et al*., 2021). From Latin America to Asia to Africa, the covid-19 pandemic is causing threat of economic crisis leading to default risk.

Moreover, over the years, some developing countries have made efforts to improve governance. But, the problem of weak governance persist in some developing countries (i.e. Asia, Africa & Middle East, and Latin American countries). This problem of weak governance explains why rule of law for example remain ineffective (World Bank Report, 2020). Conversely, strong governance may reduce default risk, especially in this period of coronavirus pandemic which is exposing firms to default risk.

Our focus is also on socially responsible firms because corporate social responsibility is becoming an increasingly important metric for capital markets globally. As firms with high corporate social responsibility (henceforth CSR) performance may potentially lower default risk. CSR includes actions that further some social good beyond the interest of the firms and which is required by law (McWilliams and Siegel, 2001). Although, there are growing theoretical and empirical research that focus on the impact of CSR on firm performance (e.g., Benlemlih *et al*., 2018) and the impact of CSR on debt maturity (Benlemlih, 2017); research on the impact of CSR on default risk is limited.

Despite the importance of the governance quality and CSR, empirical evidence focusing on the following main questions are scarce. For example, how does the governance quality affect firms' default risk? How does CSR affect default risk? Are there different effects of governance quality and CSR on default risk in Asian, Latin American, and African and Middle East countries? To answer these research questions, we must address the issue of weak governance quality that is one of the factors that encourages firms to missallocate financial resources which in turn may increase default risk. Likewise, we must address the issue of investment in CSR whether such investment may lower default risk of firms.

We find that governance quality (i.e. rule of law) has a significant negative impact on default risk. Specifically, governance quality negatively impact firms' default risk in the full sample and the three regional subsamples (i.e. the Asian, Latin American, and Africa & Middle East countries). Moreover, CSR has significant negative effect on default risk in the full sample and the Latin American and Asian sub-samples. But, CSR has insignificant impact on default risk in the Africa and Middle East sub-sample. Additionally, the lagged default probability is statistically significant indicating that previous year default risk affects the current year default risk; this confirms the relevance of dynamic model to conduct this study. The results suggest that strong governance quality minimizes inefficient utilization of financial resources and bankruptcy risk which in turn lower firms' default risk.

This paper makes incremental contribution to the finance literature. Our study is related to Cathcart *et al.* (2020), who investigate the impact of leverage and different sources of funding on default risk and Cui and Kaas (2021), who develop a tractable model in which the credit risk reflects the fundamental default risk and excess premium that captures investors' self-beliefs about credit condition. Our study is also related to Matemilola *et al.* (2019), who investigate the effect of institutional quality on corporate debt ratios. Unlike prior studies above, firstly, this paper focuses on the impact of governance quality on default risk, and thus contributes to an extensive body of theoretical and empirical work that focuses

on firms' default risk. Secondly. this paper covers three regions (i.e. Asia, Middle East and Africa, and Latin America regions) to improve the validity and robustness of our conclusion.

The remainder of the paper is structured as follows. Section 2 develops the theoretical framework, section 3 discribes the data and methodology. Section 4 presents the empirical results. Section 5 gives concluding remarks.

2. Literature Review and Hypothesis Development
2.1 Theoretical Review
Weak governance quality in some developing countries encourages misallocation of firms' financial resources (Ağca *et al.*, 2013) which may increase their default risk. Governance shapes financial contracts with respect to banks. Strong governance that protect the rights of creditors improve loan availability, encourage lenders to provide reasonable debt capital to firms (Qian and Strahan, 2007), and strong governance could lower default risk.

Theoretically, in a perfect market, governance quality should not affect economic outcomes such as default risk. However, in the presence of market imperfections such as bankruptcy risk, asymmetric information, and agency conflict, financial resources may be used inefficiently; thus, governance quality become important. For instance, conflicts of interests between managers and shareholders, bondholders and shareholders, and information asymmetry may lead to inefficient allocation and utilization of firms' financial resources (Ivashina *et al.*, 2016; Aghion *et al.*, 1992).

Moreover, in the event of market imperfection, financial resources may be missallocated, especially if they are specific to the firms (Gavazza, 2011). In this paper, we argue that all else constant, strong governance quality minimizes inefficient utilization of financial resources and bankruptcy costs which in turn lower firms default risk in developing countries. Therefore, we hypothesized (H_1) that governance quality would reduce default risk of firms in developing countries.

2.2 Leverage and Default Risk
As a result of the research work of Altman (1968), researchers have given great attention to the determinants of firms' default risk. Tradeoff theory argues that firms' optimal leverage ratio depends on the trade-off between the benefits and costs of debt financing (Myers, 1984). Attaoui and Poncet (2013) contend that a small increase in the proportion of the firms' debt could increase their default. Motivated by defaut risk problem caused by recession or economic down turn, Cui and Kaas (2021) develop a tractable model in which the credit risk reflects default risk, and excess premium that captures investors' self-beliefs about credit condition of the United States for the 1982 to 2016 periods. Their findings reveal that credit risk and leverage increase default risk.

Likewise, Asis *et al.* (2021) research is also motivated by rising default risk in emerging markets. They use a cross-country data of firms' default to develop distress risk model specific to emerging markets. Asis *et al*. (2021) findings indicate that global financial variables predict firms' default risk in 26 emerging markets over the 1990 to 2016 periods. Motivated by the incomplete knowledge of the true model behind firm default risk, Traczynski (2017) develop a prdictive model of default risk. Traczynski (2017) research work reveals that leverage is one of the most important risk factors that increase default risk across all industry sectors in the United States from 1987 to 2008. He concludes that leverage plays a central role in standard credit risk models used in academia and in industry.

McGuinness *et al.* (2018) research is motivated by the 2008 financial crisis, and the subsequent economic downturn, which led to an increase in firm exits due to bankruptcy problem. McGuinness *et al*. (2018) research findings show that leverage increase default risk of small and midium enterprises firms in 13 European countries over the 2003 to 2012

periods. Unlike previous studies discussed above that mostly focus on the link between leverage and default risk, our study introduces governance quality as new factor that impacts default risk. In this study, we argue that holding other factors constant, strong governance quality minimizes inefficient utilization of firms' financial resources and bankruptcy costs which in turn lower their default risk.

2.3 CSR and Default Risk
The literature on the default risk notes that firms' probability of default is linked with its future cash flows (Sun and Cui, 2014). If firms' future cash flow decreases due to decrease in sales, there may be a shortfall in their cash flows; hence an increase in the firms default risk (Chava and Purnanandam, 2008). Based on the stakeholder theory, firms active CSR participation maximizes the shareholders' wealth in the long-term (Jiraporn *et al*., 2014). Socially responsible firms that cater for various stakeholders' needs usually enjoy high stock performance (Jiao, 2010) and lower costs of financing (El Ghoul *et al*., 2011). This good relationship with various stakeholders helps firms to enjoy high customer loyalty and employee support which increase financial performance and lower default risk (Du *et al.,* 2017; McGuire *et al.*, 1988).

3. Model and Data
3.1 Empirical Model and Estimation Strategy
We specify a dynamic panel model as shown below because previous year default may affect current year default (Khan and Ahmad, 2021). Moreover, causality can go from default risk to governance quality, not vice versa.

$$DR*_{ij,t} = (1-\lambda)DR_{ij,t-1} + \lambda(\beta_1 + \beta_2 RULAW_{j_t} + \beta_3 LEV_{ij,_t} + \beta_4 CSR_{ij,t} + \beta_5 Size_{ij,t}$$
$$+\beta_6 FIA_{ij,t} + \beta_7 PRF_{ij,t} + \beta_8 MB_{ij,t} + \beta_9 NoDTS_{ij,t} + \eta_i + \alpha_t + \varepsilon_{ij,t} \tag{1}$$

Where $DR_{ij,t}$ is the default risk in current year, $DR_{ij,t-1}$ is the default risk in the previous year, λ is the adjustment parameter, α_t is the year fixed effects that captures time varying macroeconomic variables such as interest rate and gross domestic product growth rate, β is the parameter to be estimated, η_i is the unobserved firm-specific effects, and ε is the residual term. Subscript ij,t represents the firm, country, and year, respectively.

In the analysis, our empirical strategy addresses potential endogeneity of the default risk and governance quality by employing the Blundell and Bond (1998) and Arellano and Bond (1991) generalized method of moment's (GMM) instrumental variables strategy that uses internal instruments such as higher order lags of the default risk variable and the independent variables. The paper specifies a dynamic panel model to capture the dynamic relationship between default risk and governance quality because previous year default risk may affect the current year default risk and causality can go from default risk to governance quality, not vice versa. We rely on the two-step estimates because this method uses the first-step errors to construct heteroskedasticity-consistent standard errors or optimal weighting matrices (Blundell and Bond, 1998). Our empirical strategy follows a growing thread of literature that takes advantage of the GMM internal instrumental variable estimation technique to mitigate endogeneity (Khan and Ahmad, 2021; Matemilola *et al.*, 2019; McGuinness *et al*., 2018; Awartani *et al*., 2016).

3.2 Sample and Data
In this section, we describe our data set of default risk and governance quality which is the major variable of interest in the dynamic panel model estimation.

The dependent variable for the study is the default risk. Assessing the probability that a debtor may default his obligations at maturity is of paramount importance to creditors (Galil and Gilat, 2019; Irwin and Irwin, 2013), therefore default risk is an issue of much concern. This study uses the Altman (1968) z-score model as a proxy for the probability of default. In the first stage, the Altman (1968) z-score model is adopted to calculate the firm default risk.

We follow previous studies (e.g. Awartani *et al.*, 2016; Charalambakis and Garret, 2016) that used z-score model. The lower the calculated z-score the higher the probability that the firm will default. In the second stage, the paper uses the calculated z-score from the first stage as dependent variable, and investigate the impact of governance quality on default risk. Governance quality is the main independent variable and it is obtained from the World Governance Indicators database of the World Bank. This governance quality data set is based on information gathered through cross-country surveys and expert polls. Kaufmann *et al.* (2009) apply unobserved components model, which allow them to measure governance quality for many countries. As a measure of governance quality, we use rule of law because it appropriately captures the legal aspect of governance which is the focus of this study. Other firm-specific data used as control variables are obtained from the Thomson Reuters Datastream database.

Our sample selection was mainly based on those firms that engage in corporate social responsibiliy (CSR) and with complete data for the study period (i.e. 2010-2017). CSR is becoming an increasingly important metric for capital markets. As firms with high CSR performance could have the potential to lower default risk and resilient in period of economic uncertainty, as we are currently experiencing now. Additionally, the study excludes firms in the financial industry because they are heavily regulated and they have different financial statements. Also, we exclude firms with incomplete data to calculate the default risk. After all these exclusion, the final sample comprise of 466 firms engaging in CSR activities from 15 developing countries. The study utilizes firm-level variables that are commonly used by researchers in capital structure based on the trade-off theory.

Table 1: Defination of variables

Variables	Unit of Measurement
DR	Altman (1968) z-score model $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.64X_4 + 1.05X_5$
	Z = overall index; X_1 = working capital/total assets;
	X_2 = retained earnings/total assets; X_3 = earnings before interest and taxes/total assets; X_4 = market value of equity/market value of total liabilities; X_5 = sales/total assets.
CSR	ESG score calculated from Thomson Reuters DataStream
RULAW	Perceptions of the extent to which agents have confidence and abide by society rules (ranges from 0 to 100
LEV	The ratio of total book debt of the firm to total book value of assets.
SIZE	The natural logarithm of total assets.
FIA	The ratio of property, plant and equipment (net) to total assets.
PRF	The ratio of earnings before interest, taxes, depreciation and amortization to total assets.
MB	The ratio of market value of equities + total debts to total assets
NoDTS	The ratio of depreciation to total assets

4. Results

Table 2 contains the descriptive statistics data of the study.The descriptive statistics reveal that the RULAW variable has the highest mean (52.65) followed by CSR with the second highest mean (48.85) which indicate the average values of the mean for the developing countries in the study sample. Moreover, the mean value of the RULAW falls between the minimum value (29.33) and maximum value (88.73). Conversely, fixed assets (FIA) has the lowest standard deviation with value of 0.25 followed by market-t0-book ratio - MB (0.32) which suggest that they are the least volatile variable. Table 3 presents the correlation

results. The correlation coefficients among the independent variables are generally lower. Thus, there is less risk of multicollenearity among the independent variables. Moreover, rule of law (RULAW) is negatively correlated with default risk (-0.10) and statistically significant at 0.01significance level indicating that as rule of law increases, default risk decreases. Conversely, leverage is positively correlated with default risk (0.09) and statistically significant at 0.05 significance level indicating that as leverage increases, default risk increases.

Table 2: Descriptive statistics results

	DR	CSR	RULAW	LEV	SIZE	FIA	PRF	MB	NoDTS
MEAN	1.65	48.85	52.65	0.27	18.09	0.37	0.16	0.31	0.42
MAX.	9.79	333.76	88.73	1.00	26.39	0.99	76.91	8.58	0.47
MIN.	-9.33	0.01	29.33	0.00	9.33	0.05	-15.84	0.01	0.00
SD	1.28	17.83	11.85	0.26	2.49	0.25	1.60	0.32	0.37
OBSERV.	3,968	3,968	3968	3,968	3,968	3,968	3,968	3,968	3,968

Table 3: Correlation results

	DR	LEV	Rulaw	CSR	SIZE	FIA	PRF	MB	Nodts
DR	1.00								
Lev	0.09**	1.00							
Rulaw	-0.10***	0.05**	1.00						
CSR	0.04**	0.04**	0.08***	1.00					
SIZE	0.07***	0.05	0.12***	0.12***	1.00				
FIA	0.03*	0.01	-0.05**	0.10***	0.20***	1.00			
PRF	0.11***	-0.02	0.15***	0.09***	0.02	-0.01	1.00		
MB	-0.40***	-0.06***	0.02	-0.03*	0.02	0.07***	-0.11***	1.00	
Nodts	-0.98***	-0.02	0.01	-0.02	-0.07***	0.01	-0.13***	0.40***	1.00

Notes: ***, **, and * signifies the significance levels at 1%, 5% and 10%, respectively.

The two-step system GMM is the main estimation results while the difference GMM is used as a robustness tests. The findings reveal that governance quality (i.e. rule of law) is significantly and negatively related to default risk in the full sample (see Table 4) and the three regional sub-samples (see Tables 5, 6, and 7). The significant negative impact of the governance quality on default risk is in line with Cathcart *et al.*, 2020), who investigate the impact of leverage and different sources of funding on default risk and find evidence that leverage increases default risk. As control variable, CSR is significantly and negatively related to default risk in the full sample (see Table 4) and the Latin American and Asian sub-samples (see Tables 5 and 6). But, CSR has insignificant impact on default risk in the Africa and Middle East sub-sample (see Table 7). Tthe significant negative impact of CSR on default risk is in accordance with prior research (e.g. Hannah *et al*., 2021; Ting, 2021; Fatemi *et al.*, 2018) findings that CSR has the ability to help build strong corporate image and reputation; thus it effectively enhance firms' performance. Additionally, the lagged default probabiity is statistically significant indicating that previous year default risk affects the current year default risk; this confirms the relevance of dynamic model to conduct this study.

Overall, the results suggest that all else constant, strong governance quality minimizes inefficient utilization of financial resources and bankruptcy costs which in turn lower default risk. Moreover, engaging in CSR activities enhace firms reputation and ease access to alternaive sources of capital which lower debt usage, thereby lowering default risk. High CSR participation by firms is also found to create intangible assets such as good relationship with employees and customer loyalty (Bouslah *et al.*, 2016). These intangible assets would

reduce firms' default risk through decreasing penalties and fines, thereby lowering default risk.

Table 4: Results for the full sample

Variables	(1) DGMM One step (Robust)	(2) DGMM Two step (Robust)	(3) SGMM One step (Robust)	(4) SGMM Two step (Main)
L.DR	0.205***	0.178***	0.811***	0.806***
	(0.0480)	(0.0295)	(0.0267)	(0.0083)
RULAW	-0.029**	-0.016***	-0.033***	-0.036***
	(0.0131)	(0.0050)	(0.0021)	(0.0080)
CSR	-0.009**	-0.007**	-0.010**	-0.008**
	(0.0038)	(0.0028)	(0.005)	(0.0016)
LEV	2.715***	2.654***	1.472***	1.454***
	(0.4820)	(0.3450)	(0.3740)	(0.0692)
FIA	0.518***	0.525***	-0.085**	-0.111***
	(0.113)	(0.0651)	(0.0432)	(0.0115)
PRF	3.101***	3.002***	0.012	-0.002
	(0.4220)	(0.1950)	(0.0355)	(0.0149)
NoDTS	6.694***	8.277***	3.056**	3.721***
	(1.9910)	(1.7780)	(1.3730)	(0.4220)
MB	0.660***	0.664***	0.263	0.255***
	(0.1580)	(0.0311)	(0.2350)	(0.0057)
SIZE	-0.455***	-0.385***	0.0189*	0.016***
	(0.0840)	(0.0742)	(0.0099)	(0.0027)
Year effects	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes
Observations	3,744	3,744	3,744	3,744
Number of firms	468	468	468	468
Number of instruments	69	69	123	123
AR2	0.530	0.296	-	0.886
Hansen / Difference Hansen Tests	0.413	0.282	0.379	0.256

Notes: DR = Altman (1968) z-score mode where $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.64X_4 + 1.05X_5$. CSR = ESG score calculated from Thomson Reuters DataStream database. Rule of Law (RULAW): reflects perceptions of the extent to which agents have confidence and abide by society rules (ranges from 0 to 100). The numbers in parenthesis are standard errors, except AR2 which are p-values. AR2 tests for the second order serial correlation. If the p-value >0.05, it indicates absence of no serial correlation signifying that the model is correctly specified. ***, **, and * signifies the significance levels at 1%, 5%, and 10%, respectively.

Table 5: Results for Latin America

Variables	(1) DGMM One step (Robust)	(2) DGMM Two step (Robust)	(3) SGMM One step (Robust)	(4) SGMM Two step (Main)
L.DR	-0.197***	-0.165***	0.448***	0.443***
	(0.0691)	(0.0119)	(0.0432)	(0.0051)
LEV	0.764***	0.606***	0.056**	0.066***
	(0.1980)	(0.0874)	(0.0280)	(0.0131)
RULAW	-0.271**	-0.395***	-0.976***	-0.976***
	(0.1290)	(0.1310)	(0.2700)	(0.0341)
CSR	-0.030**	-0.014**	-0.053***	-0.053***
	(0.0132)	(0.0066)	(0.0071)	(0.0014)
FIA	2.144	1.397**	3.197***	3.137***
	(2.2650)	(0.5660)	(0.5960)	(0.1090)
NoDTS	0.367**	0.369***	0.137	0.143***
	(0.1630)	(0.0410)	(0.0870)	(0.0089)
MB	-1.051**	-1.115***	-0.285	-0.299***
	(0.4750)	(0.1340)	(0.2080)	(0.0236)
SIZE	0.368**	0.303***	-0.183***	-0.182***
	(0.1480)	(0.0502)	(0.0228)	(0.0035)
PRF	-0.015	-0.0133***	0.009	0.0089***
	(0.0143)	(0.0018)	(0.0120)	(0.0003)
Year effects	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Observations	856	856	856	856
Number of firms	107	107	107	107
Number of instruments	59	59	101	101
AR2	0.251	0.328	-	0.692
Hansen / Difference Hansen Test	0.325	0.240	0.351	0.465

Notes: DR = Altman (1968) z-score mode where $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.64X_4 + 1.05X_5$. CSR = ESG score calculated from Thomson Reuters DataStream database. Rule of Law (RULAW): reflects perceptions of the extent to which agents have confidence and abide by society rules (ranges from 0 to 100). The numbers in parenthesis are standard errors, except AR2 which are p-values. AR2 tests for the second order serial correlation. If the p-value >0.05, it indicates absence of no serial correlation signifying that the model is correctly specified. ***, **, and * signifies the significance levels at 1%, 5% and 10%, respectively.

Table 6: Results for Asian Region

Variables	(1) DGMM One step (Robust)	(2) DGMM Two step (Robust)	(3 SGMM One step (Robust)	(4) SGMM Two step (Main)
L.DR	0.362***	0.361***	0.962***	0.973***
	(0.0809)	(0.0208)	(0.0236)	(0.0098)
RULAW	-0.134***	-0.125***	-0.050***	-0.044***
	(0.0321)	(0.0331)	(0.0195)	(0.0102)
CSR	-0.003***	-0.003***	-0.002**	-0.002**
	(0.0010)	(0.0009)	(0.0008)	(0.0009)
LEV	0.066**	0.064***	0.017	0.017***
	(0.0297)	(0.0058)	(0.0212)	(0.0038)
FIA	0.196***	0.189***	0.108***	0.117***
	(0.0652)	(0.0153)	(0.0370)	(0.0151)
PRF	0.190***	0.174***	0.053***	0.050***
	(0.0295)	(0.0003)	(0.0071)	(0.0039)
NoDTS	4.124**	4.404***	2.387**	1.703**
	(1.7270)	(1.3770)	(0.9450)	(0.7430)
MB	0.388***	0.335***	0.262	0.260***
	(0.1440)	(0.0512)	(0.1600)	(0.0842)
SIZE	-0.384***	-0.406***	-0.005	-0.006**
	(0.1050)	(0.0370)	(0.0077)	(0.0028)
Year effects	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes
Observations	1,984	1,984	1,984	1,984
Number of firms	248	248	248	248
Number of instruments	64	64	112	112
AR2	0.101	0.123	-	0.258
Hansen/ Difference Hansen Tests	0.299	0.682	0.310	0.690

Notes: DR = Altman (1968) z-score mode where $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.64X_4 + 1.05X_5$. CSR = ESG score calculated from Thomson Reuters DataStream database. Rule of Law (RULAW): reflects perceptions of the extent to which agents have confidence and abide by society rules (ranges from 0 to 100). The numbers in parenthesis are standard errors, except AR2 which are p-values. AR2 tests for the second order serial correlation. If the p-value >0.05, it indicates absence of no serial correlation signifying that the model is correctly specified. *** and **, signifies the significance levels at 1%, and 5%, respectively.

Table 7: Results for Africa and Middle East Region

Variables	(1) DGMM One step (Robust)	(2) DGMM Two step (Robust)	(3) SGMM One step (Robust)	(4) SGMM Two step (Main)
L.DR	0.288***	0.229***	0.724***	0.738***
	(0.0806)	(0.0594)	(0.0465)	(0.0290)
RULAW	-0.046**	-0.041***	-0.0627*	-0.049***
	(0.0214)	(0.0094)	(0.0347)	(0.0125)
CSR	0.022	0.031	0.015	0.001
	(0.0920)	(0.0454)	(0.0955)	(0.0309)
LEV	0.019***	0.454**	1.377***	1.480***
	(0.0214)	(0.0094)	(0.0347)	(0.0125)
FIA	0.683***	0.738***	0.016	0.006
	(0.2210)	(0.0878)	(0.0640)	(0.0294)
PRF	-0.077	-0.139***	0.180***	0.178***
	(0.0788)	(0.0476)	(0.0543)	(0.0216)
NoDTS	0.361**	0.359***	0.131	0.139***
	(0.1629)	(0.0408)	(0.0855)	(0.0080)
MB	-0.288	-0.790	-1.688***	-1.809***
	(0.6210)	(0.5860)	(0.3650)	(0.1370)
SIZE	-0.570***	-0.575***	0.031	0.032***
	(0.0891)	(0.0901)	(0.0268)	(0.0093)
Year effects	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes
Observations	904	904	904	904
Number of firm	113	113	113	113
Number of instruments	36	36	54	54
AR2	0.859	0.849	-	0.558
Hansen / Difference Hansen Tests	0.201	0.253	0.258	0.242

Notes: DR = Altman (1968) z-score mode where $Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.64X_4 + 1.05X_5$. CSR = ESG score calculated from Thomson Reuters DataStream database. Rule of Law (RULAW): reflects perceptions of the extent to which agents have confidence and abide by society rules (ranges from 0 to 100). The numbers in parenthesis are standard errors, except AR2 which are p-values. AR2 tests for the second order serial correlation. If the p-value >0.05, it indicates absence of no serial correlation signifying that the model is correctly specified. ***, **, and * signifies the significance levels at 1%, 5% and 10%, respectively.

4. Conclusion

Over the years countries have embraced good governance but little is known whether good governance impacts default risk. The findings from the full sample show that governance quality reduces default risk of socially responsible firms in developing countries. Moreover, governance quality reduces default risk of socially responsible firms in the three regional sub-samples (i.e. Asian, Latin American, and Africa and Middle-East regions). Moreover, CSR has significant negative effect on default risk in the full sample and the Latin American and Asian sub-samples. But, CSR has insignificant impact on default risk in the Africa and Middle East sub-sample.

The finding of this research has some significant implications for managers, investors, and policymakers. Firstly, the results inform firm-managers that strong governance quality would minimize bankruptcy risk, thereby lowering default risk. Secondly, investors are informed to take governance quality into consideration when taking the decision to invest their hard-earned money as it lowers default risk. As default risk becomes lower, investors' investment would be secured. Third, the results inform policymakers to continue to strenghten governance quality. A strong governance quality minimizes inefficient utilization of financial resources. Moreover, the fear that courts would uphold rule of law make firms more prudent in managing their financial resources which in turn help lower default risk.

Additionally, managers are informed that investments in CSR may lower default risk of firms. Investors are also informed that investments in CSR lowers default risk and enhance the value of their investment in firms, especially in Asian and Latin American regions.

This research has shed light on how good governance quality at the country-level can help reduce default risk in developing countries. An avenue for future research is to disentangle the impact of legal enforcement on default risk as data becomes available. Another avenue for future research is to examine the impact of different dimension of governance quality on cost of capital and other financial performance variables.

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Appendix

Appendix A: Sample breakdown by country and firm

No.	Country	Number of firms	Cumulative Number of Firms
1.	Brazil	56	56
2.	Chile	14	70
3.	China	54	124
4.	Colombia	10	134
5.	Egypt	14	148
6.	India	70	218
7.	Indonesia	29	247
8.	Malaysia	40	287
9.	Mexico	24	311
10.	Philippines	19	330
11.	Kuwait	11	341
12.	Qatar	12	353
13.	Saudi Arabia	12	365
14.	South Africa	77	442
15.	Thailand	24	466

Notes: This table presents the sample distribution by country and the number of firms for each country. Firms in the finance sectors (e.g. banks and insurance) are not included because their financial statements are different and they are regulated by the government.