The Valuation Channel of Corporate Social Responsibility in Emerging Markets: Evidence from the Cost of Equity

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Abstract

I examine the effects of ESG policies on the cost of equity for emerging markets controlling for Political Risk and data reliability. I find that firms in emerging market countries with relatively high political risk do not benefit from social and governance ESG activities as they lead to a higher cost of equity. This is presumably due to potential or actual political conflicts with the host government. On the other hand, environmental activities do lower the cost of equity as the measured environmental activities are internal to the firms. For emerging market firms in countries with low political risk, all ESG activities are associated with a lower cost of equity.

Keywords: ESG, Sustainability, Corporate Social Responsibility

1. Introduction

1.1 The Effect of ESG on Valuation

Extensive research has been conducted on the correlation between corporate social responsibility (CSR) and corporate financial performance (CFP). Numerous studies have found a positive relationship between the two. This study focuses on emerging market firms under political risk and examines the drivers of environmental, social, and governance (ESG) activities on the cost of equity. It addresses the issues of data reliability and political risk that have been overlooked in previous studies. The findings show that in countries with high political risk, ESG activities do not benefit firms and actually lead to a higher cost of equity. However, environmental activities do lower the cost of equity. In countries with low political risk, all ESG activities are associated with a lower cost of equity, regardless of investor protection provisions.

The correlation between corporate social responsibility (CSR) and corporate financial performance (CFP) has been the subject of extensive research, dating back many years. In fact, Friede et al. (2015) have meticulously documented over 2200 empirical studies that have delved into the intricate connection between CFP and CSR, ultimately discovering a compelling and affirmative relationship. Within the conventional cash-flow framework of the organization, Giese et al (2019) have astutely discerned three distinct avenues through which Corporate Social Responsibility (CSR) endeavors can bestow advantages upon the firm. These encompass the augmentation of revenues or diminishment of expenditures, the enhancement of profitability and mitigation of risk, and the reduction of capital expenses alongside the amplification of the firm's overall worth.

This work focuses on the valuation channel for emerging market firms under political risk. Using emerging market firms is essential because ESG can have greater value in emerging markets, where regulations, corporate governance, and transparency are viewed to be the weakest (Khanna & Palepu, 2000). This work contributes to a growing literature by examining the ESG drivers of the cost of equity in detail while controlling for endogeneity, data reliability, size effects on ESG data, and political risk.

The problem being adderessed here is that previous estimates of the effect of ESG activities in emerging markets have ignpored the substantial data reliability issues associated with ESG scores in Emerging markets and have also ignored the possible effects of the political risk in emerging market countries that could influence the adoption of ESG policies in emerging market countries. Misestimation of the effect of ESG on cost of equity may lead to mistaken decisions on ESG policy that may not increase firm value.

I find that firms in emerging market countries with relatively high political risk do not benefit from social and

governance ESG activities as they lead to a higher cost of equity. This is presumably due to potential or actual political conflicts with the host government. On the other hand, environmental activities do lower the cost of equity as the measured environmental activities are internal to the firms. For emerging market firms in countries with low political risk, all ESG activities are associated with a lower cost of equity. I check to see if this effect is due to investor protection provisions within the country. I do not find this effect. The body of a manuscript opens with an introduction that presents the specific problem under study and describes the research strategy. Because the introduction is clearly identified by its position in the manuscript, it does not carry a heading labeling it the introduction. Before writing the introduction, consider the following questions (Beck & Sales, 2001):

1.2 Relevant Scholarship

Spicer (1978) is the first known to have provided evidence that there is a moderate to a strong association between a company's returns and its social performance concerning environmental risk. Richardson and Welker (2001) examined the relationship between social disclosure on the cost of equity capital for a sample of Canadian firms and found that there was a negative relationship between disclosure and the cost of equity. Mackey et al. (2007) report that involvement in socially responsible activities maximizes the market value of the firm. Dhaliwal et al. (2011) find that corporations that initiate CSR disclosure programs exhibit reductions in their cost of equity capital, similar to El Ghoul et al. (2011), who detects that firms with high CSR scores have low costs of equity capital.

Many studies have found that firms with strong corporate governance mechanisms find that firms with strong corporate governance mechanisms and are associated with a reduction in perceived risk and asymmetry of information of the firm, thereby decreasing the cost of equity capital, as would be true for firms with high ESG scores (Ashbaugh et al., 2004; Chen et al., 2009; Pham et al., 2012). Chen et al. (2009) research the effect of firm-level corporate governance on the cost of equity in emerging markets, documenting that cost of equity and firm-level corporate governance are inversely related. Cheng et al. (2006) found that strong governance and greater financial transparency reduced the cost of equity.

Sharfman and Fernando (2008) provide evidence that improved environmental risk management has been associated with a lower cost of equity. Connors and Silva-Gao (2008) measure the impact of chemical emissions on the cost of equity and find that firms with a high level of chemical emissions have a higher cost of equity. Kim et al (2015) find that greater greenhouse gas emissions are associated with a higher cost of equity, with the effect not being affected by voluntary disclosure. Garzón-Jiménez and Zorio-Grima (2021) find similar results using CO2 emissions and whether a firm made sustainability reports for a sample of 929 emerging market firms in 30 countries from 2014 to 2019. Li and Liu (2018) find for a sample of Chinese firms that CSR disclosure is negatively related to the cost of capital.

In contrast, Dahiya and Singh (2021) for a panel of 68 Indian manufacturing firms finds that corporate social responsibility disclosure raises the cost of equity. Wang et al (2021) also find that corporate social responsibility (CSR) activities increase the cost of equity in East Asia for a panel of 917 firms and the effect is driven by economies with weak investor protection, using the anti-self-dealing index developed by Djankov et al. (2008) as a measure of investor protection. They attribute this result to high agency conflicts in these countries.

1.4 State Hypotheses and Their Correspondence to Research Design

After you have introduced 'the problem and have developed the background material, explain your approach to solving the problem. In empirical studies, this usually involves stating your hypotheses or specific question and describing how these were derived from theory or are logically connected to previous data and argumentation. Clearly develop the rationale for each. Also, if you have some hypotheses or questions that are central to your purpose and others that are secondary or exploratory, state this prioritization. Explain how the research design permits the inferences needed to examine the hypothesis or provide estimates in answer to the question.

2. Method

2.1 Data

The variables used consist of political risk scores, financial data, and ESG scores on 1,399 firms in emerging markets. Table 1 gives a breakdown of the firms by country. The sample is limited by the availability of the ESG data.

Table 1. Firm Count by Country

The table consists of firm count by country in the sample.

Country	Count	Country	Count
Argentina	56	Morocco	2
Bahrain	3	Oman	13
Bangladesh	3	Pakistan	12
Brazil	81	Peru	25
China	410	Philippines	24
Colombia	26	Poland	34
Cyprus	2	Qatar	20
Dominican Republic	1	Romania	2
Estonia	1	Saudi Arabia	29
India	129	Senegal	1
Indonesia	6	Singapore	63
Israel	32	Slovenia	2
Jordan	3	South Africa	99
Kazakhstan	1	Sri Lanka	7
Kenya	2	Thailand	52
Kuwait	12	Tunisia	1
Latvia	1	Turkey	76
Lithuania	1	Uganda	1
Malaysia	87	United Arab Emirates	20
Mexico	57	Uruguay	1
Mongolia	1	Total	1399

The financial data are from Bloomberg, Inc. The political risk data come from ICRG. The ESG scores used are the ASSET 4 scores from Thompson Reuters. The sample period is yearly from 2012 to 2021. Table 2 gives descriptive statistics on the data used in this study.

Table 2. Descriptive Statistics

The table consists of descriptive statistics of variables used in the study. COE = Beta (Risk Premium) + Riskfree Rate. The average sector beta is used. The sector average effective tax rateis used. BETA is estimated by regressing weekly returns on stock against the local index using 5 years of data. ERP is the Exchange rate premium for the country. PRS is the political risk score from ICRG for the country. Market Cap is the capitalization of the firm's shares in USD millions. MTB is the market-to-book ratio in of the market value of shares to the book value. Debt to Captial is standard deviationh in firm value measured daily over the previous year. Institution represents the proportion of shares that are owned by institutional investors. ESG is the Thompson Reuters ASSET 4 ESG score. CSRStrategy, Management, Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG score.

Variable	COE	BETA	ERP	PRS	Market Cap	MTB
Mean	0.126849	1.333899	0.076060	3.405074	6525.949	3.307201
Std. Dev.	0.351388	0.990488	0.020796	0.592418	14912.70	11.78650
Skew.	43.43921	1.403814	2.358293	0.977299	8.715142	31.17620
Kurt.	2329.776	9.527079	10.14553	3.262765	117.4077	1270.501

Variable	Debt to Capital	Liquidity	SD	Institution	ESG	Community	Controversies
Mean	0.278922	0.834800	0.374497	0.222604	48.45569	45.62143	50.62272
Std. Dev.	0.249781	1.748234	0.231411	0.198688	17.31421	30.01617	19.16108
Skew.	0.708967	5.450446	2.351361	1.437852	0.027523	0.205836	-1.576004
Kurt.	2.533047	51.59240	11.68643	5.019592	2.309642	1.744221	3.882137

Variable	CSRStrategy	Emission	EnvInnov	Human Rights	Management	Product Resp.	Resource Use
Mean	49.61202	49.49734	49.71363	49.69729	48.37462	49.37468	50.08052
Std. Dev.	27.67337	29.11364	25.16239	25.79791	28.59236	28.15842	27.75659
Skew.	0.114765	-0.00811	0.366325	0.486996	0.077849	0.100739	0.084742
Kurt.	1.782089	1.808732	1.971836	1.834754	1.818232	1.875220	1.764773

Variable	Shareholders	Workforce
Mean	49.91061	51.46492
Std. Dev.	28.76876	28.50524
Skew.	0.004889	-0.055289
Kurt.	1.813534	1.837703

Explanation of the ESG variables is called for. Oftentimes in the literature, it is assumed that these variables measure" sustainability". Rather than make this assumption, it is chosen here to let the provider speak for itself. ESG measures a company's ESG performance based on reported data in the public domain. Community measures how dedicated the company is to being a responsible member of society, ensuring public health, and upholding ethical business practices. Controversies are a discount factor for ESG controversies that materially impact corporations.

CSRStrategy reflects a company's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes. Emission measures a company's commitment and effectiveness towards reducing environmental emissions in the production and operational processes. ENVInnovation reflects a company's capacity to reduce the environmental costs and burdens for its customers, and thereby creating new market opportunities through new environmental technologies and processes or eco-designed products. Human Rights measures a company's effectiveness towards respecting the fundamental human rights conventions. Management measures a company's commitment and effectiveness towards following best practice corporate governance principles. Product Resp reflects a company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy. Resource Use reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management. Shareholders measures a company's effectiveness towards equal treatment of shareholders and the use of anti-takeover devices. Workforce of a company in terms of job satisfaction is measured by factors such as a safe and positive work environment, promoting diversity and equal opportunities, and providing growth opportunities for employees. All of these definitions come from Thompson Reuters EIKON (2017).

2.2 The Problem with ESG Variables

There are three problems with the ESG data that must be addressed. The first is endogeneity. The data underlying the ESG data are produced within the firm and are thus endogenous to it and thus we have to treat the associated ESG scores as endogenous variables also. Fortunately, this problem can be overcome with GMM estimation using instrumental variables.

The second problem is that Drempetic et al (2019) find strong evidence that ESG scores are influenced by firm size, particularly the Thompson Reuters scores. To see if that is the case in the current sample, the ESG scores are regressed separately on Market Cap. The results are reported in Table 3.

Table 3. Regressions of ESG variables on Market Capitalization

The table consists of the regression results of $Y_{i,t} = \beta_0 + \beta_1 Market\ Cap_{i,t}$ where $Y_{i,t}$ is alternatively ESG the Thompson Reuters ASSET 4 ESG score and CSRStrategy, Management , Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG score. Market Cap is the market capitalization in millions of USD. Standard errors are in parentheses. *, ** and *** signify significance at the 10%, 5% and 1% level respectively.

Variable	ESG	Community	Controversies	CSRStrategy	Emission
β_0	47.41266***	45.78296***	50.87984***	47.37714***	49.15158***
	(0.289342)	(0.509118)	(0.324861)	(0.459094)	(0.493653)
β_1	0.000134***	-2.32E-05	-3.69E-05**	0.000288***	4.96E-05*
	(1.53E-05)	(2.83E-05)	(1.81E-05)	(2.43E-05)	(2.75E-05)
Adj.R^2	0.017620	-0.000081	0.000774	0.031855	0.000553

Variable	EnvInnovation	Human Rights	Management	Product Resp.	Resource Use
β_0	49.35682***	50.47502***	47.92967***	49.96033***	49.81433***
	(0.426583)	(0.448116)	(0.481849)	(0.477062)	(0.470708)
β_1	5.12E-05**	-0.00012***	5.73E-05** (2.55E-05)	-8.40E-05***	3.82E-05
	(2.37E-05)	(2.96E-05)		(2.65E-05	(2.62E-05)
Adj.R^2	0.000893	0.003592	0.000955	0.002203	0.000276

Variable		Shareholders	Workforce
	β_0	50.35319***	51.68193***
		(0.484829(	(0.483450)
	β_1	-5.70E-05**	-3.11E-05
		(2.57E-05)	(2.69E-05)
Adj.R^2		0.000928	0.000083

As can be seen, the overall ESG score, Community, CSRStrategy, Emission, EnvInnovation, and Management all show a significant positive coefficient on Market Cap, meaning that size might have affected the scoring to the benefit of the firms. To eliminate this effect, for these variables, the variables are adjusted by subtracting β_1times the Market Cap.

The third problem, as Kotsantonis and Serafeim (2019) document, there are often vast data gaps in the data that go into ESG scores especially in emerging markets, and thus the data has to be imputed which leads to a reliability issue. Though, as pointed out by Ioannou and Serafeim (2017), there has been an increase in reporting regulations aiming to incentivize companies to improve their ECG disclosure, it has not been universal, and as a result, ESG scores are

noisy variables. They have a noise component that is not traditionally dealt with in the literature. In applying GMM to the observed variables, the estimates are likely to be biased by the correlation of the ESG variables with the left-out individual effects and because of the negative correlation between the observed ESG variables and the disturbance term (Griliches and Hausman 1986). To overcome this, we use an EIV estimator proposed by Grilliches and Hausman (1986). In both instances, we control for industry, year, and country effects.

To illustrate the EIV estimator employed, consider a simple model where ESG score = x and the cost of equity = y. Ideally, we would like to measure the true ESG score z, but we can't because some of the information has been imputed, so we are left with x. Ideally, we would like to regress:

$$y_{it} = \alpha_i + \beta z_{it} + \eta_{it} \tag{1}$$

But due to imputation of data we observe:

$$x_{it} = z_{it} + v_{it} \tag{2}$$

where v_{it} is a noise term i.i.d. with variance σ_v^2 . If we apply unadjusted estimators to y on x we get:

$$y_{it} = \bar{\alpha} + \beta x_{it} - \beta v_{it} + \eta_{it} + (\alpha_i - \bar{\alpha}) \tag{3}$$

Panel data estimation can help eliminate some of the bias by differencing and going within by looking at the plims of the two estimators:

$$plimb_d = \beta\left(1 - \frac{2\sigma_v^2}{var(dx)}\right) \tag{4}$$

$$plimb_w = \beta\left(1 - \frac{T-1}{T}\frac{\sigma_v^2}{var(\tilde{x})}\right) \tag{5}$$

where $dx = x_{it} - x_{it-1}$ and$\tilde{x} = x_{it} - \bar{x}$ and similarly for other variables. Griliches and Hausman (1986) then note with computation of (4) and (5) the investigator has the necessary ingredients to solve for the unknown σ_v^2 and β:

$$\beta = \left[\frac{2b_w}{var(dx)} - (T-1)b_d/Tvar(\tilde{x})\right] / \left[\frac{2}{var(dx)} - (T-1)/Tvar(\tilde{x})\right] \tag{6}$$

$$\sigma_v^2 = \frac{(\beta - b_d)var(dx)}{2\beta} \tag{7}$$

2.3 Main Methodology

The main relationships to be estimated are as follows, first is:

$$\begin{aligned} COE_{i,t} = \beta_0 &+ \beta_1 BETA_{i,t} + \beta_2 ERP_{i,t} + \beta_3 PRS_{i,t} + \beta_4 Market\ Cap_{i,t} + \beta_5 Debt\ to\ Capital_{i,t} + \beta_6 Liquidity_{i,t} \\ &+ \beta_7 SD_{i,t} + \beta_8 MTB_{i,t} + \beta_9 Institution_{i,t} + \beta_{10} ESG_{i,t} + \beta_{11} COE_{i,t-1} + \varepsilon_{i,t} \end{aligned} \tag{8}$$

And second as:

$$\begin{aligned} COE_{i,t} = \beta_0 &+ \beta_1 BETA_{i,t} + \beta_2 ERP_{i,t} + \beta_3 PRS_{i,t} + \beta_4 Market\ Cap_{i,t} + \beta_5 Debt\ to\ Capital_{i,t} + \beta_6 Liquidity_{i,t} \\ &+ \beta_7 SD_{i,t} + \beta_8 MTB_{i,t} + \beta_9 Institution_{i,t} + \beta_{10}\text{Community}_{i,t} + \beta_{11}\text{Controversies}_{i,t} \\ &+ \beta_{12}\text{CSRStrategy}_{i,t} \\ &+ \beta_{13}\text{Emissions}_{i,t} + \beta_{14}\text{EnvInnovation}_{i,t} + \beta_{15}\text{Human Rights}_{i,t} + \beta_{16}\text{Management}_{i,t} \\ &+ \beta_{17}\text{ProductResp}_{i,t} + \beta_{18}\text{ResourceUse}_{i,t} + \beta_{19}\text{Shareholders}_{i,t} + \beta_{20}\text{Workforce}_{i,t} \\ &+ \beta_{21} COE_{i,t-1} + \varepsilon_{i,t} \end{aligned} \tag{9}$$

I use a arellano-bover/blundell-bond estimation process with one lag and the information matrix is collapsing. The instruments used are the lagged independent variables.

As can be seen, I follow the existing literature, using BETA, Market Cap, Debt to Capital, and MTB as financial control variables on the cost of equity. (Hail and Leuz, 2006; Gebhardt et al., 2001; Dhaliwal et al., 2006; El Ghoul et al., 2011). Based on previous results, BETA, Debt to Capital, and MTB are expected to have positive coefficients as they add to firm risk. Market Cap on the other hand is expected to have a negative coefficient. To this, I add Liquidity as Saad and Samet (2017) find that liquidity risks affect the cost of capital, with more liquid stocks having a lower cost of capital. Intuitional ownership is included as Collins and Huang (2011) find that management entrenchment is associated with increases in the costs of equity capital, so I would expect the coefficient to be

negative. The SD variable is included as a measure of unsystematic risk, so its coefficient is expected to be positive, and if markets are efficient, insignificant.

The signs on the ESG variables are not specified, as they are inconsistent in the prior literature, found to be both positive and negative, raising and lowering the cost of equity in emerging markets. That is part of what this research is about.

3. Results

3.1 First Results

Table 4 reports the estimation results estimating with the ESG variable.

Table 4. Panel Regressions for Cost of Equity

The table reports the regression results for the dependent variable the cost of equity from panel data regressions GMM and EIV. . COE = Beta (Risk Premium) + Riskfree Rate. The average sector beta is used. The sector average effective tax rateis used. BETA is estimated by regressing weekly returns on stock against the local index using 5 years of data. ERP is the Exchange rate premium for the country. PRS is the political risk score from ICRG for the country. Market Cap is the capitalization of the firm's shares in USD millions. MTB is the market-to-book ratio in of the market value of shares to the book value. Debt to Captial is standard deviationh in firm value measured daily over the previous year. Institution represents the proportion of shares that are owned by institutional investors.. ESG is the Thompson Reuters ASSET 4 ESG score. CSRStrategy, Management , Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG score. Standard errors are in parentheses. *, ** and *** signify significance at the 10%, 5% and 1% level respectively. Industry, Country, and Year effects are controlled for , but not reported. J-stat test and the Sargan test are for over-identifying restriction in the instruments. The Woolridge test if for autocorrelation in the panel residuals.

	GMM	EIV
Constant	-0.001484	-0.093481***
	(0.157710)	(0.028093)
BETA	-0.00314	0.00302***
	(0.009098)	(4.56015E-06)
ERP	1.158874	0.708998***
	(0.93649)	(0.183928)
PRS	0.016730	-0.046513***
	(0.039894)	(0.001091)
Market Cap	-8.49e-08	-1.04716***
	(6.48e-07)	(5.48274E-15)
Debt to Capital	0.317956	0.312546***
	(0.040524)	(3.2833E-05)
Liquidity	-0.014046**	-0.004401***
	(0.005535)	(9.68489E-06)
SD	0.061023*	0.068516***
	(0.033867)	(0.002346)
MTB	3.51E-05	0.000033
	(0.000194)	(0.00011)
Institution	-0.124068***	-0.025539***
	(0.043012)	(0.000326)

ESG	-0.001718**	-0.000308***
	(0.000676)	(4.72924E-08)
COE_{t-1}	0.231758***	0.420129***
	(0.004752)	(0.0087814)
Adj. R^2	0.242714	0.4111
J-stat	82.01	63.06
Sargan	16.02*	11.57
Woolridge	2.03	2.01

The results between the GMM and the EIV differ substantially. While both find that ESG scores are associated with lower costs of equity as similar to previous results, controlling for data reliability vis the EIV estimator leads to a lower effect from ESG activities on Coe the difference for the average firm in the sample with an ESG score of 48.45569 would be a lowering of the cost of equity of a -8.32% versus a -1.49% under the EIV estimation. Given parsimony and an average cost of equity in the sample of 12.68%, the EIV estimation sounds more plausible. As would be expected, BETA, ERP, and PRS all have positive and significant coefficients as they would indicate increased risk for the firm under the EIV estimation that they do not have under GMM. Debt-to-capital, Liquidity, and SD also have positive and significant coefficients for the same reasons. Market Capitalization and Institutional ownership are seen as lowering risk under EIV.

In Table 5 the sub-categories are used instead of the overall ESG score to give a more nuanced picture of what in ESG is driving the lower cost of equity.

Table 5. Panel Regressions for Cost of Equity

The table reports the regression results for the dependent variable the cost of equity from panel data regressions GMM and EIV. COE = Beta (Risk Premium) + Riskfree Rate. The average sector beta is used. The sector average effective tax rateis used. BETA is estimated by regressing weekly returns on stock against the local index using 5 years of data. ERP is the Exchange rate premium for the country. PRS is the political risk score from ICRG for the country. Market Cap is the capitalization of the firm's shares in USD millions. MTB is the market-to-book ratio in of the market value of shares to the book value. Debt to Captial is standard deviationh in firm value measured daily over the previous year. Institution represents the proportion of shares that are owned by institutional investors. ESG is the Thompson Reuters ASSET 4 ESG score. CSRStrategy, Management, Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG scoreStandard errors are in parentheses. *, ** and *** signify significance at the 10%, 5% and 1% level respectively. Industry, Country, and Year effects are controlled for, but not reported. J-stat test and the Sargan test are for over-identifying restriction in the instruments. The Woolridge test if for autocorrelation in the panel residuals.

	GMM	EIV
Constant	0.138246***	-0.122923***
	(0.033290)	(0.042278)
BETA	0.012368*	0.040156***
	(0.007054)	(0.000806)
ERP	-0.340877	0.935443
	(0.832265)	(0.679612)
PRS	0.012152	-0.151019***
	(0.030947)	(0.011446)
Market Cap	-4.55e-07	-3.56887E-07***
	(5.15e-07)	(6.36842E-14)

Debt to Capital	0.213111***	0.0006744***
	(0.030282)	(2.0552E-07)
Liquidity	-0.012474***	-0.016616***
	(0.003606)	(0.000138)
SD	-0.021441	0.029505***
	(0.025981)	(0.000434)
MTB	0.001160	0.000785**
	(0.000827)	(0.000392)
Institution	-0.069043**	-0.043866***
	(0.030353)	(0.000963)
Community	-0.000399	-5.53248E-05***
	(0.000292)	(1.53042E-09)
Controversies	0.000092	-0.000254***
	(0.000164)	(3.2155E-06)
CSRStrategy	-0.000384	-0.000179***
	(0.000234)	(1.59595E-08)
Emission	-0.000272	-0.000286***
	(0.00029)	(4.08892E-08)
EnvInnovation	-0.000357	-7.79777E-05***
	(0.000326)	(3.04026E-09)
Human Rights	0.000363	0.000377***
	(0.000265)	(7.11658E-08)
Management	0.000381*	0.000563***
	(0.000206)	(1.58309E-07)
Product Resp	-0.000539**	-0.000474***
	(0.000251)	(1.12214E-07)
Resource Use	-0.00009	-0.000053***
	(0.000318)	(1.44326E-07)
Shareholders	0.000188	-5.77947E-05***
	(0.000174)	(1.67012E-09)
Workforce	-0.00031	-0.000579***
	(0.000234)	(1.67744E-07)
COE_{t-1}	0.328261***	0.314112***
	(0.059217)	(0.078143)
Adj. R^2	0.330877	0.353714
J-stat	79.62	56.23
Sargan	15.9	14.92
Woolridge	2.01	1.98

The resulting differences in estimation between the GMM and EIV estimators is striking. Under GMM, only the Management and Product Resp variables are significant at conventional levels, while under EIV, all of the ESG variables are significant. Under EIV, all of the ESG variables except two are associated with lowering the cost of

equity. The two exceptions are Management and Human Rights. The Management variable scores a firms' commitment and effectiveness in following corporate governance principles best practices. The Human Rights variable measures a firms' effectiveness towards respecting fundamental human rights conventions. Both of these would have serious legal and political ramifications in countries and thus committal to both of these in countries with less legal protections could lead to higher risk for firms and thus a higher cost of equity capital.

In terms of the EIV results, the control variables largely align with what would be expected theoretically. BETA is positive and significant as is Debt to Capital, SD, and Liquidity as they are all tied to greater risk to the firm. Market Capitalization and Institution lower risk and thus have negative coefficients. The political risk variable, PRS, is negative and significant, meaning that less political risk lowers the cost of equity, as would be expected theoretically.

On the other hand, these results, with the exceptions of BETA, Debt to Capital, Institution, and Liquidity are not significant under GMM, illustrating the estimation problems resulting from the data reliability issues.

3.2 Results between Low and High Political Risk Countries

Table 6 shows the EIV regression results diving the sample into Low Political Risk and High Political Risk groups based on the mean of the Political Risk variable (PRS).

Table 6. Panel Regressions for Cost of Equity Divided between High and Low Political Risk

The table reports the regression results for the dependent variable the cost of equity from panel data regressions in EIV. COE = Beta (Risk Premium) + Riskfree Rate. The average sector beta is used. The sector average effective tax rateis used. BETA is estimated by regressing weekly returns on stock against the local index using 5 years of data. ERP is the Exchange rate premium for the country. PRS is the political risk score from ICRG for the country. Market Cap is the capitalization of the firm's shares in USD millions. MTB is the market-to-book ratio in of the market value of shares to the book value. Debt to Captial is standard deviationh in firm value measured daily over the previous year. Institution represents the proportion of shares that are owned by institutional investors.. ESG is the Thompson Reuters ASSET 4 ESG score CSRStrategy, Management , Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG score.Standard errors are in parentheses. *, ** and *** signify significance at the 10%, 5% and 1% level respectively. Industry, Country, and Year effects are controlled for, but not reported. J-stat test and the Sargan test are for over-identifying restriction in the instruments. The Woolridge test if for autocorrelation in the panel residuals.

	EIV Low Political Risk Countries	EIV High Political Risk Countries
Constant	-0.170947***	0.139126***
	(0.015253)	(0.012136)
BETA	0.008452***	0.038477***
	(3.57306E-05)	(0.00074)
ERP	3.011662	31.291921
	(-10.569213)	(488.10008)
PRS	-0.031089***	-0.016613***
	(0.000455)	(0.000144)
Market Cap	-5.2286E-06***	-9.8989E-08***
	(1.36691E-11)	(4.89942E-15)
Debt to Capital	0.529993***	0.003001***
	(0.14071)	(4.13509E-06)
Liquidity	-0.072141***	-0.019553***
	(0.002602)	(0.000191)
SD	0.115293***	0.529305***
	(0.006473)	(0.140036)

MTB	0.013639***	0.000126***
	(9.30141E-05)	(7.95077E-09)
Institution	-0.052699***	-0.047996***
	(0.001387)	(0.001151)
Community	-0.001956***	0.000286***
	(1.91298E-06)	(4.10188E-08)
Controversies	-0.000757***	-0.003161***
	(2.86366E-07)	(4.99627E-06)
CSRStrategy	-0.00107***	0.0001008***
	(5.72301E-07)	(5.08338E-09)
Emission	-0.000342***	-0.000573***
	(5.83754E-08)	(1.63966E-07)
EnvInnovation	-0.000354***	-0.000707***
	(6.25652E-08)	(2.49918E-07)
Human Rights	-0.000443***	0.000105***
	(9.81861E-08)	(5.55768E-09)
Management	-0.00029***	0.00051***
	(4.19759E-08)	(1.30104E-07)
Product Resp	-0.00073***	0.000167***
	(2.66445E-07)	(1.39106E-08)
Resource Use	-0.00083***	-0.000222***
	(3.44277E-07)	(2.4721E-08)
Shareholders	-0.000675***	0.0002***
	(2.2761E-07)	(2.00059E-08)
Workforce	-0.000103***	0.000116***
	(5.35454E-09)	(6.74341E-09)
COE_{t-1}	0.110826***	0.466166***
	(0.03777)	(0.073221)
Adj. R^2	0.2615	0.2940
J-stat	79.61	56.44
Sargan	15.88	14.85
Woolridge	2.002	1.97

The difference amongst the ESG variables is striking. Or the low Political Risk countries, the ESG variables are uniformly negative and significant, while amongst the High Political Risk countries, only the environmental ESG variables are associated with a lower cost of equity, the social and governance ESG variables are associated with significantly higher costs of equity capital, much stronger than the previous results. It would seem that social and governance activities associated with ESG have political ramifications in High Political Risk countries that are associated with higher business risks and thus higher costs of equity for firms in those countries.

This would make sense in that governance standards could conflict with laws and regulations in a country, thus leading to conflicts with civil authorities. Resolutions of such conflicts may be difficult and prolonged and lead to sanctions, fines, and delays in permissions and paperwork, increasing business risk. Firm social policies may also come into conflict with government social policies, leading to more conflicts with civil authorities and retaliation by

those authorities in business regulation, thus increasing business risk. All of this could lead to a greater cost of capital by doing better in terms of governance and social matters by the firm in countries with poor governmental institutions.

The differences in the effects of some of the financial variables between high- and low-political risk countries are noteworthy. Firms in high political risk countries are more reactive to systemic risk than firms in low risk countries as seen by the comparative BETA coefficients. Further, firms in low risk countries are much more likely to see higher cost of equity due to leverage ratios than firms in high political risk countries, probably due to more advanced bankruptcy rights and legal systems. Further, lower political risk benefits firms more in low political risk countries than it does in high risk countries.

3.3 Results between High and Low Investor Protection Countries

Following Wang et al (2021) I divide the data set into groups of high investor protection countries and low investor protection countries based on the anti-self-dealing index developed by Djankov et al. (2008). There are some caveats with using this data. First, the data, which was developed as of 2008, has not been updated, and thus does not reflect any legislative changes that have taken place and is thus dated and is only broadly suggestive. Second, it does not cover all the countries in the data set, so the number of firms covered is reduced to 1,137 firms in 39 countries.

The estimation results are shown in Table 7.

Table 7. Panel Regressions for Cost of Equity Divided between High and Low Investor Protection Countries

The table reports the regression results for the dependent variable the cost of equity from panel data regressions in EIV. COE = Beta (Risk Premium) + Riskfree Rate. The average sector beta is used. The sector average effective tax rateis used. BETA is estimated by regressing weekly returns on stock against the local index using 5 years of data. ERP is the Exchange rate premium for the country. PRS is the political risk score from ICRG for the country. Market Cap is the capitalization of the firm's shares in USD millions. MTB is the market-to-book ratio in of the market value of shares to the book value. Debt to Captial is standard deviationh in firm value measured daily over the previous year. Institution represents the proportion of shares that are owned by institutional investors.. ESG is the Thompson Reuters ASSET 4 ESG score CSRStrategy, Management, Product Resp., Resource Use, Shareholder, Emission, EnvInnovation, Human Rights, Workforce, Community, and Controversies are the category scores that go into determining the overall ESG score.. Standard errors are in parentheses. *, ** and *** signify significance at the 10%, 5% and 1% level respectively. Industry, Country, and Year effects are controlled for, but not reported.. J-stat test and the Sargan test are for over-identifying restriction in the instruments. The Woolridge test if for autocorrelation in the panel residuals.

	EIV Low Investor Protection Countries	EIV High Investor Protection Countries
Constant	-0.598797***	0.357183***
	(0.039029)	(0.065244951)
BETA	0.178845***	0.01369***
	(0.015993)	(9.37122E-05)
ERP	0.533058	-2.320106
	(0.35989)	(3.848888)
PRS	-0.025914***	-0.085182***
	(0.000233)	(0.003619)
Market Cap	-8.47476E-07***	-3.78129E-07***
	(3.59108E-13)	(7.14907E-14)
Debt to Capital	0.0181743***	0.283055***
	(0.000156)	(0.040056)
Liquidity	-0.062191***	-0.010074***
	(0.001934)	(5.07458E-05)

SD	0.72422***	0.086862**
	(0.261257)	(0.003773)
MTB	0.009093***	0.004492***
	(4.13422E-05)	(1.00876E-05)
Institution	-0.020686***	-1.133696*
	(0.000213)	(0.642629)
Community	-0.000851***	-0.000511***
	(3.61814E-07)	(1.30555E-07)
Controversies	-0.001122***	-0.00027***
	(6.29533E-07)	(3.6473E-08)
CSRStrategy	-0.001076***	-9.78527E-06***
	(5.7924E-07)	(4.78758E-11)
Emission	-0.001472***	-0.001375***
	(1.08407E-06)	(9.45984E-07)
EnvInnovation	-0.001278***	-0.00011***
	(8.16124E-07)	(6.10487E-09)
Human Rights	0.001127***	0.000808***
	(6.35097E-07)	(3.26785E-07)
Management	0.003526***	6.57185E-05***
	(6.21699E-06)	(2.15946E-09)
Product Resp	-0.00339***	0.001539***
	(5.74545E-06)	(1.1844E-06)
Resource Use	-0.000314***	-0.001899***
	(4.92411E-08)	(1.80351E-06)
Shareholders	-0.019494***	-0.000485***
	(0.00019)	(1.17421E-07)
Workforce	0.001222***	0.077233***
	(7.46704E-07)	(0.002982)
COE_{t-1}	0.161679***	0.325784***
	(0.033622)	(0.060841)
Adj. R^2	0.2837	0.3967
J-stat	78.65	54.63
Sargan	14.28	14.13
Woolridge	1.94	1.96

The differences between firms in low investor protection countries and high investor protection countries is minimal. Overall the results mirror the results in Table 5 before dividing countries by political risk. The only difference is now the Workforce variable is positive and significant in both subsamples. Generally, unlike Wang et al (2021), I do not find that investor protection provisions make a difference in the effect of ESG activities on the cost of equity. There are a number of explanations for this. First, the wider sample I employ that includes firms outside of the East Asia region that Wang et al restricted themselves to; second, the estimation technique I employ to adjust for the ESG data problems; third, the difference i ndata sets, and that I control for political risk and and differing sources of ESG activities.

There are differences amongst the financial control variables. Firms in low investor protection countries have cost of equities that are more reactive to BETA, SD, Liquidity, and MTB than high investor protection country firms, raising the relative cost of equity for the firms in lower investor protection countries. On the other hand, firms in higher investor protection countries are more reactive to political risk, benefiting from better political institutions that lower the cost of equity capital.

4. Discussion

In contrast to previous research, the present work explicitly addresses the measurement problems inherent in ESG scores: 1) endogeneity; 2) the effect of firm size on ESG scores; 3) gaps in the data used in constructing ESG scores, and; 4) the noise inherent in ESG scores due to the correlation of the ESG variables with the left-out individual effects and because of the negative correlation between the observed ESG variables and the disturbance term. This results in some startlign revelations about the effect of ESG scores in association with the cost of equity of firms.

When accounting for these effects, I find that improved ESG scores are significantly associated with a lower cost of equity for firms in emerging market countries, though the size of the measured effect of ESG scores on the cost of equity is smaller than when not accounting for all of these effects. This is in strong contrast to the recent results of Dahiya and Singh (2021) and Wang et al (2021), who found that greater corporate social responsibility activity was related to a higher cost of equity in India and East Asia.

Some of the conflicting results on the previosu estimates of the sign of ESG variablesis explained by the results from the resulkts of Tables 6 & 7. Using different ESG scores that emphasize different aspects of ESG can result in different signs of the effects of ESG with the cost of equity. If an ESG score emphasizes community involvement, workers rights, shareholders rights, Product Resposibility, Management control and Human Rights, then it is quite possible that two different researchers, if not controlling for political risk, could end up with different signs.

In contrast to the findings of Wang et al (2021), I am of the opinion that the inclusion of investor protection provisions does not significantly impact the influence of ESG activities on the cost of equity. There are several compelling reasons to support this viewpoint. Firstly, my research extends beyond the confines of the East Asia region, allowing for a broader and more comprehensive sample. Secondly, I employ a sophisticated estimation technique to mitigate any data-related issues pertaining to ESG. Moreover, my analysis incorporates a more varied data set and diligently accounts for political risk as well as disparate sources of ESG activities.

Altogether, the results point out that the effect of ESG activities on the cost of equity can vary by type and by the level of poltical risk a company faces in its home country. For companies based in countries with high political risk, the social component activities of ESG, measured here as Community, Human Rights, and Workforce, can actually increase the cost of equity. This woudl be cognbisant with the finbdings of Tuman and Emmert (2004) wh ofound that countries with more human rights violations had reductions in US foreign direct investment. Countries that have governments that are willing to violate the rights of its citizens may have little problem with violating the rights of companies, enforcing regulations or policing corruption. A company that pursued policies that didn't align with the policies with government would be at risk of being targeted for retaliation.

5. Conclusion

This study examines the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP) in emerging markets. It considers the impact of political risk and the reliability of ESG data. The findings suggest that in high-risk emerging markets, companies involved in social and governance initiatives experience higher equity costs, while environmental efforts lead to lower equity costs. In low-risk countries, all ESG activities are associated with decreased equity costs. The study addresses the credibility of ESG data and political uncertainty, using advanced techniques to minimize biases. It emphasizes the importance of understanding the relationship between CSR and CFP in emerging markets.

The study points out areas for improvement and vulnerabilities, but it is limited by the use of a specific ESG score system and a small sample size. The study's ability to establish cause and effect relationships is also limited.

The suggestions for future work aim to improve the organization's performance, create a positive work environment, and establish it as a leader in the industry. By implementing these strategies, the organization can not only meet but surpass its goals, ensuring a successful future. Examining specific political risk factors would give us a better understanding of how political risk affects the relationship between corporate social responsibility (CSR) and corporate financial performance (CFP). Using data over a long period of time would allow us to analyze the cause-and-effect relationship between CSR and CFP, giving us deeper insights into their connection and potential long-term effects. Investigating differences across industries, company sizes, and levels of institutional development

would provide valuable insights into how CSR affects CFP in different contexts, allowing for more customized strategies. Conducting the study with a larger dataset would increase the reliability and validity of the findings, making the generalizations more accurate and meaningful. Comparing different environmental, social, and governance (ESG) scoring methods would help us understand how the results may vary depending on the chosen ESG data source, giving us a more comprehensive understanding of the relationship.

Overall, this study contributes valuable insights into the complex relationship between CSR and corporate financial performance and risks in emerging markets. With further research addressing the potential weaknesses and exploring additional research avenues, we can gain a deeper understanding of how CSR can be used to create both social and financial value in emerging markets.

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