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The Value of Corporate Social Responsibility: Decomposing Positive and Negative Deviations from the Norm

Introduction

Classical finance theory suggests that the primary purpose of companies is to maximise shareholders' value (Berle and Means, 1932; Friedman, 1970). However, there is a growing counter-argument that firms should also be more socially conscious, consider wider stakeholder opinions and follow a more balanced business model that can benefit both the bottom line and society (Freeman, 1984).

What is the voice from corporates? A joint study by the United Nations Global Compact and Accenture in 2018 found that 95% of 1,000 surveyed chief executive officers (CEOs) in 108 countries across 26 industries as participants around the globe feel a personal responsibility to ensure their company has a core purpose in society, and 80% believe that demonstrating a commitment to societal purpose is a differentiator in their industry. Lacy et al. (2010) also found that 93% of the 766 surveyed CEOs believe that Corporate Social Responsibility (CSR) will be an "important" or "very

important" factor for their organization's future success.

Investors are also demanding more corporates to take up their social responsibility. The Forum for Socially Responsible Investing in the United States (USSIF) showed that socially responsible investing (SRI) currently expanded to US\$12 trillion at the start of 2018, representing 26% of all assets under management in the United States (USSIF, 2018). Moreover, there are 2,372 organizations such as asset owners, investment managers or their service providers around the world have become the signatories of the Principles for Responsible Investment (PRI) agreement with US\$86.3 trillion assets under management as of March 2019 (PRI, 2019).

Various governments have also started to roll out concrete rules and regulations related to CSR. For example, since 2014, the Indian government has required each firm to set aside 2 per cent of its net profits for social development. Starting from 2019, the Singapore government would impose a green tax of SG\$5 per tonne of greenhouse gas emissions by the corporates. Starting from the financial year ending December 31, 2017 onwards, the Singapore Exchange (SGX) has made it mandatory for all listed companies to report their environment, social and governance practices. Ioannou and Serafeim (2017) found supporting evidence that the increased transparency in sustainability reporting is effective at improving corporate value using data

from China, Denmark, Malaysia and South Africa.

Despite the enthusiasm from managers, investors and regulators, companies still need to understand the specific costs and benefits of engaging in various CSR activities. Jensen (2001) suggested that the main challenge for firms to take on a stakeholder's approach is to produce a single-valued score to capture superior performance if the firm deviates from the shareholder's value maximization mentality. Campbell (2007) also emphasized that institutional conditions such as public and private regulations, independent monitors for corporate behaviors, institutional norms and firm characteristics play an important role in shaping firms' socially responsible decisions.

In order to understand what the right approach is, we will conduct a reduced form analysis in this study. Specifically, we explore whether a firm's valuation can be positively or negatively affected if its CSR activities deviate from its historical norm around the world. This deviation from the norm measure is constructed based on country, industry and time series averages for each firm. Given that most of the firms around the world have already engaged in some level of CSR activities, we study the consequence on a firm's valuation if it chooses to systematically deviate in either the positive or negative direction, being a positive or negative trend.

Literature Review

Growth of research interest in corporate social performance

Figure 1 shows the time trend of the usage of the term “business and society” versus the term “corporate social performance” following the approach by Kemper and Martin (2010). We used the scholar.google.com search engine to find the number of articles after keying in the two terms respectively. It is obvious that both were on a rising trend (except in the current decade which is incomplete), but exponential growth of the term “corporate social performance” began at the turn of the century and it overtook “business and society” in the current decade, after the global financial crisis.

Benefits and costs of CSR in the U.S.

Historically, the main research focus is about whether a firm can benefit from better CSR performance. More recent empirical evidence seemed to suggest more value creation for individual companies from CSR activities. Ferrell, Liang and Renneboog (2016) found a positive relation existed between CSR and firm value. The economic channel seems to be related to the reduction in agency costs measured in terms of cash abundance, pay-for-performance, control wedge and minority protection as well as CEO turnover. Other

benefits of CSR include building social capital and trust with stakeholders. Lins, Servaes, and Tamayo (2017) documented that the firms with higher CSR intensity had 4% to 7% higher return than others during the global financial crisis. These firms also experienced higher profitability, growth, and sales per employee and raised more debt. Such positive impact is more manifested when the overall environment for trust is low such as in crisis times. Edmans (2011) also found that firms with higher employee satisfaction generated an abnormal return of 3.5% from 1984 to 2009. In the traditional measure of CSR activities, employee welfare is one of the key components.

What are the costs of not doing enough CSR? Cao, Liang, and Zhan (2019) found that the passage of a close-call CSR proposal and its implementation are followed by the adoption of similar CSR practices by peer firms. Negative stock returns would incur for peers who had more difficulty to catch up. Lam, Zhang and Jacob (2015) also found that the U.S. firms which had worse CSR performance had more negative abnormal returns compared to other firms. One comforting result, however, is that these firms could still redeem themselves by engaging in more positive CSR activities as the market is very forgiving. Another recent study by Sulaeman and Varma (2018) also found that geographical norms seem to shape institutional investors’ preference for firms with negative environmental practices: firms located in “green” cities receive substantially lower market valuations if they are identified as having environmental concerns.

International evidence

International evidence on the relation between firm value and CSR activities is much more recent as past data limita-

tions have been overcome. Liang and Renneboog (2017) found that a firm’s CSR rating and its country’s legal origin are strongly correlated: firms from common law countries have lower CSR than companies from civil law countries. Firms in countries with Scandinavian civil law have the highest CSR ratings. Moreover, firms operating under civil law are more responsive to CSR shocks than those operating under common law.

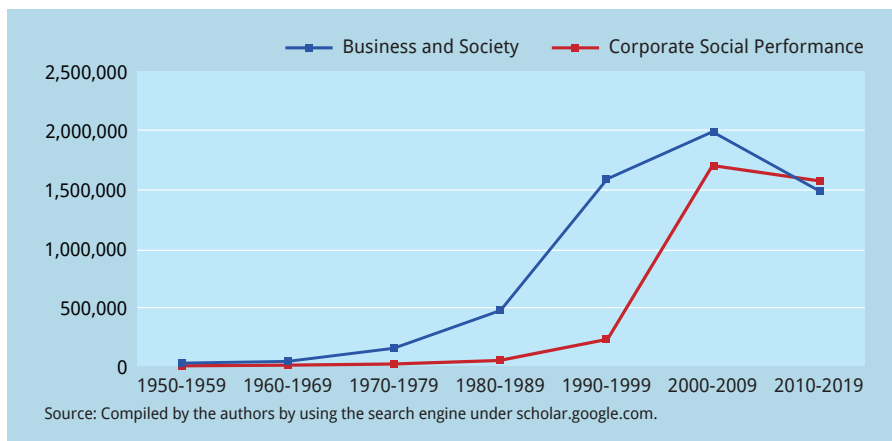
Other stakeholders in a firm can also be affected significantly by its CSR practices. Dai, Liang and Ng (2018) used CSR ratings from 50 countries and found that customers’ CSR ratings are associated with suppliers’ subsequent CSR performance, but not vice versa and that their locations matter. The economic channel is through the bargaining power of firms and their network connectedness. Moreover, they also found that increasing collaborative CSR efforts between customers and suppliers help improve their operational efficiency and firm valuations.

Given that firms varied significantly from country to country, Lam, Zhang and Chieh (2018) further documented that the positive CSR-firm value relationship is enhanced by the quality of a country’s economic, financial and government institutions.

There are plenty of country-specific studies that found a positive relationship between firm performance and CSR activities in Asian emerging markets including Thailand and Indonesia (Cheung et al, 2010). As for China, the main focus is still on the regulations and monitoring by the state on many firms’ CSR decisions (Marquis and Qian, 2014). In more developed Asian economies such as Hong Kong and Singapore, studies showed that local market players largely ignored the sustainability reporting enforced by regulators as they perceived it mainly as tick box compliance (Liu, Demeritt and Tang, 2019). India, on the other hand, after the enforcement of the corporate donations since 2014, CSR activities failed in translation of national CSR policy goals to firm-level strategies and lacked clear assessment of stakeholders needs and clear communication (Subramaniam, Kansal and Babu, 2017).

Taken altogether, the literature generally found that the CSR-firm value relation varied significantly across firms, industries, countries, and geographical regions. Hence, in this study we would explore the cross-country variation by taking into account the different levels of CSR activities in each firm by benchmarking them with the industry average within their home countries.

Figure 1: Time Trend of Research Articles



Data and Key Variables

In this study, we employ the MSCI ESG data from 1,444 unique companies from 35 countries during the period 2009 to 2014. Firm characteristics variables are extracted from FactSet Research Systems (hereafter, FactSet) and merged with MSCI's ESG database. To be included in our dataset, we require firms to have non-missing ESG scores.

We construct the key independent variables by computing the standard deviation of the positive (*PSTD*) and negative difference (*NSTD*) of each company's ESG score scaled by the industry average in its country over the previous 36 months. Specifically, we follow Segal, Shaliastovich and Yaron (2015) to define *PSTD* and *NSTD* as follows:

$$PSTD_{i,j,t-1} = \sqrt{\frac{\sum_{n=1}^{36} \mathbb{1}((ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}}) \geq 0) (ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}})^2}{N \mathbb{1}((ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}}) \geq 0)}}} \dots (1a)$$

$$NSTD_{i,j,t-1} = \sqrt{\frac{\sum_{n=1}^{36} \mathbb{1}((ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}}) < 0) (ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}})^2}{N \mathbb{1}((ESG^*_{i,j,t-n} - \overline{ESG^*_{i,j}}) < 0)}}} \dots (1b)$$

where $\mathbb{1}(\cdot)$ is the indicator function, $ESG^*_{i,j,t}$ is firm i in country j 's ESG score that is scaled by its industry average ESG score, in month t , and $\overline{ESG^*_{i,j}}$ is the average of $ESG^*_{i,j,t}$ over the 36-month period from $t-36$ to $t-1$. We require $N \geq 6$ during the 36-month period. Figures 2A to 2D show the average of our key constructs *PSTD* and *NSTD* for the overall ESG score, Environment score (E), Social score (S), and Governance score (G) for different subsamples of firms.

The economic rationale for these two variables is to capture the positive or negative deviation of a firm's CSR performance from its historical norm. The norm is adjusted for country and industry trends given the scaling factor as the denominator. Given that the decomposition takes into account the various intuitional norms at

country-, industry- and firm-specific levels, the deviation would then capture the significant deviation in either direction that makes our research approach clean and sharp.

Figure 2A shows that both the positive and negative deviations in the overall scores are greater for Asian firms compared to the average of firms in all countries. However, the deviations of firms domiciled in developed countries in general are smaller than those in developing countries, while the opposite is true for firms in developed countries in Asia compared to those in Asian developing coun-

tries. We also reported the numbers for firms located in China, India, Japan, Korea and the U.S.. Among the five countries, the biggest positive and negative deviations come from the U.S. firms followed by Chinese firms. The deviations of firms located in the other three countries are largely the same.

The deviations for the three subcomponents of the ESG scores are reported in Figure 2B (Environment), 2C (Social) and 2D (Governance) respectively. There are significant variations in *PSTD* and *NSTD* across regions and individual countries. For the Environment score, the U.S. firms displayed

Figure 2A: Positive and Negative STD of Overall Score

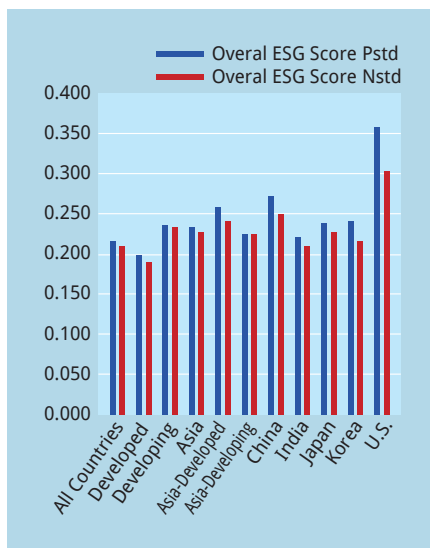


Figure 2B: Positive and Negative STD of Environment Score

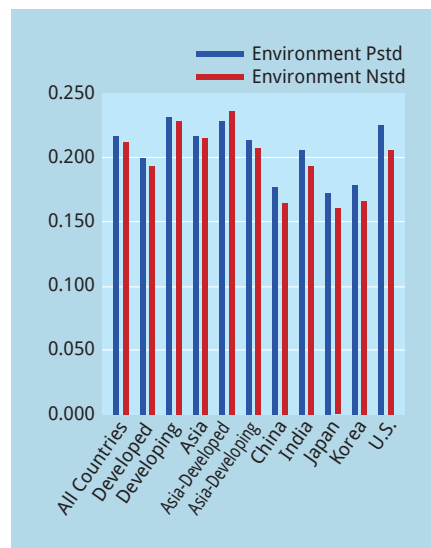


Figure 2C: Positive and Negative STD of Social Score

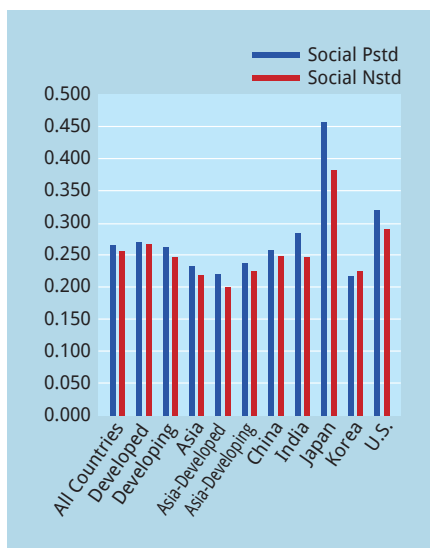
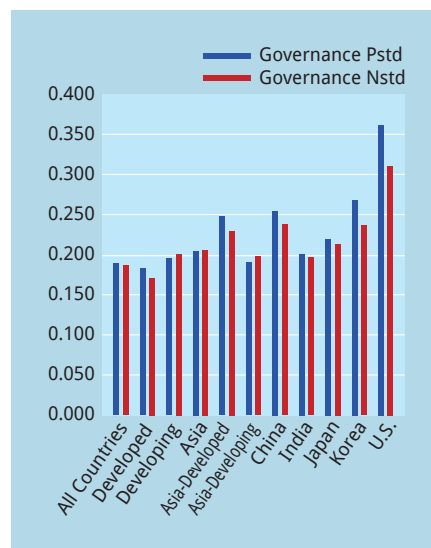


Figure 2D: Positive and Negative STD of Governance Score



Source: Authors' calculation following equation 1a and 1b based on the raw ESG scores from MSCI.

the largest deviations followed by Indian firms (Figure 2B). For the Social score, Japanese firms displayed the largest deviations followed by the U.S. firms (Figure 2C). As for the Governance score, the U.S. firms have the largest deviations followed by Korean and Chinese firms (Figure 2D). These significant variations justify our research approach to examine the impact of the deviation on firm valuation across geographical locations. The *PSTD* and *NSTD* variables are not highly correlated, with correlation coefficients of 0.172, 0.229, 0.189 and 0.185 for the four sets of ESG scores (Overall, Environment, Social and Governance scores) respectively.

The key dependent variable is Tobin's Q, which is defined as the market value of equity minus the book value of equity plus the book value of total assets divided by total assets. To mitigate the effect of outliers, we winsorize Tobin's Q at the 2.5 and 97.5 percentiles. Empirically, we estimate the following equation

$$Tobin's Q_{i,j,t} = \beta_0 + \beta_1 PSTD_{i,j,t-1} + \beta_2 NSTD_{i,j,t-1} + control\ variables_{i,j,t-1} + \varepsilon_{i,t} \quad (2)$$

for firm *i* in country *j* in month *t*, and where the control variables include return on assets, leverage to equity ratio, capital expenditure to assets ratio, cash to assets ratio, year on year sales growth, advertising expenditure to total assets ratio, log of total assets, and a dummy variable if the firm paid out dividends. For all the regressions, we control for year-fixed effects, country-fixed effects and industry-fixed effects.

In the null hypothesis, we would expect the coefficient $\beta_1 > 0$ and the coefficient $\beta_2 < 0$, suggesting that the firm value will increase when the firm has deviated from its historical norm in the positive direction, and vice versa if the firm deviated from the historical norm in the negative direction.

the results for different geographical locations and Table 2 shows the results for five individual countries. The green cells represent statistically significant results at the 10% significance level consistent with value-creation/destroying interpretations. That is, positive deviation in CSR performance from the past norm increases firm value and negative deviation from the norm destroys value. The grey cells represent statistically significant results at the 10% significance level with the opposite interpretation: positive deviation destroys firm value and negative deviation enhances firm value.

Geographic differences

We find that overall, *PSTD* increases firm valuations while *NSTD* reduces firm valuations. The economic magnitude for *PSTD* (which is computed by multiplying the coefficient with the standard deviation of *PSTD*) on firm value is about 0.25% of the average level of Tobin's Q if *PSTD* increases by one standard deviation, shown as Mod-

el 1 in the table. The magnitude is slightly higher for developed countries at 0.27% as shown in Model 2. For Asian firms, we find that both *PSTD* and *NSTD* have significant impacts on firm valuation at the 10% significance level. The economic magnitude is the greatest for Asian developed countries at 0.74% and -0.57% respectively when *PSTD* and *NSTD* increase by one standard deviation as shown in Model 5.

Results for the Environment sub-component of the ESG score in Models 9, 10 and 12 show that positive deviations (*PSTD*) create value and negative deviations (*NSTD*) destroy value for firms in developing countries as a whole and in all Asian, and Asian developing countries.

In terms of the Social score, we also consistently find that *PSTD* and *NSTD* are statistically and economically significantly related to firm valuations. The results are largely similar across all categories of firms including those in developing and developed countries as shown in Models 13 to 16 in Table 1.

Table 1: Results for Firm Value and Deviations in CSR Scores

Dependent Variable: Tobin's Q						
	All Countries	Developed	Developing	All Asia	Asia-Developed	Asia-Developing
Overall ESG Score						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
PSTD	0.0699 (3.59)	0.0935 (4.26)	-0.0242 (-0.61)	0.0478 (1.69)	0.1165 (4.01)	0.0271 (0.55)
NSTD	-0.0276 (-1.29)	-0.0374 (-1.53)	-0.0160 (-0.36)	-0.0788 (-2.64)	-0.1192 (-3.73)	-0.1118 (-2.27)
N	48,498	36,795	11,703	20,346	11,793	8,553
Adj. R ²	0.63	0.62	0.74	0.67	0.58	0.74
Environment Score						
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
PSTD	-0.0179 (-1.07)	-0.0973 (-5.12)	0.1943 (5.74)	0.1567 (6.80)	0.0253 (1.32)	0.2317 (5.24)
NSTD	0.0121 (0.64)	0.0290 (1.31)	-0.1641 (-4.81)	-0.0740 (-3.00)	-0.0500 (-2.34)	-0.2239 (-4.89)
N	47,558	36,037	11,521	20,045	11,580	8,465
Adj. R ²	0.64	0.63	0.74	0.69	0.67	0.76
Social Score						
	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
PSTD	0.0806 (5.54)	0.0703 (4.24)	0.0735 (2.59)	0.0835 (4.28)	-0.0285 (-1.33)	0.0367 (1.11)
NSTD	-0.0531 (-3.94)	-0.0679 (-4.31)	-0.0584 (-2.44)	-0.0511 (-2.84)	-0.1025 (-4.79)	-0.0306 (-1.10)
N	46,056	34,798	11,258	19,818	11,483	8335
Adj. R ²	0.63	0.62	0.74	0.66	0.59	0.75
Governance Score						
	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24
PSTD	-0.0189 (-0.96)	-0.0068 (-0.31)	0.0384 (0.88)	-0.0248 (-0.99)	-0.0183 (-0.79)	0.0158 (0.31)
NSTD	0.1429 (6.41)	0.1317 (5.31)	0.2687 (0.64)	0.0701 (2.47)	0.0648 (2.43)	0.2043 (3.56)
N	48,419	36,656	11,763	20,276	11,724	8,552
Adj. R ²	0.63	0.62	0.74	0.67	0.58	0.76

Note: t-statistics are shown in parentheses.
Source: Authors' calculation.

Empirical Findings

In this section, we report two sets of results after performing the regression analysis specified in equation (2). Table 1 presents

In the estimates for the Governance score with the exception of Model 21 (All Developing Countries), negative deviations (NSTD) from the past increase firm valuation at the 10% significance level for firms in general and in Asia. These results indicated that most firms around the world have achieved decent compliance in corporate governance.

In sum, our results reveal that it is important to understand what aspects of improvement in CSR activities compared to the historical norms would increase firm valuation, and what aspects of deterioration will lead to most value losses, for firms in Asia or in the world in general and for firms in both developed and developing countries.

Individual countries

We also analyzed the relationship between firm value and deviations in CSR scores for firms located in the five individual countries mentioned before, and the results are shown in Table 2.

When we examined the Overall ESG score, we find that valuations of Indian and the U.S. firms were higher the more positively they deviated from their past performance (Models 2 and 5) while Chinese firms experienced lower valuations the more negatively they deviated from the past (Model 1).

In terms of the Environment score, valuations of Korean firms were higher when they deviated positively from the past (Model 9) and valuations of Chinese firms were lower when they deviated negatively (Model 6). On the Social score, valuations of Chinese and Korean firms were higher if they deviated positively (Models 11 and 14). Also, on the Social score, negative deviations from the past were associated with lower firm valuations in four out of the five countries except China (Models 11 to 15). Lastly, in terms of the Governance score, the only country for which positive deviations from the past resulted in higher firm valuations was In-

dia (Model 17).

In sum, our results showed that performing better than the past norm can enhance firm value and performing worse than the past norm can destroy firm value. However, geographical location and country-specific factors also matter significantly for the relationship between deviations from the norm and firm valuation. Hence, managers should take into consideration these factors when they choose to improve their CSR activities or when they fall below their past norm.

Conclusions

In this study, we demonstrate that the deviation from the historical norms in CSR practices affect the firm valuations. However, there are significant differences in responsiveness to these deviations among economic regions and countries. Hence, it is important to understand what would be the right value driver when adopting certain CSR practices rather than blindly generalizing the results across all countries. For Asian countries, putting more effort toward better environmental and social practices would pay off with higher firm valuations. Firms in developed Asian countries should be careful not to fall below their past norms in environmentally and socially responsible activities to avoid value losses.

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Table 2: Results for Firm Value and Deviations in CSR Scores in Selected Countries

Dependent Variable: Tobin's Q					
Countries	China	India	Japan	Korea	U.S.
Overall ESG score					
	Model 1	Model 2	Model 3	Model 4	Model 5
PSTD	0.0207 (0.90)	0.4993 (2.48)	0.0094 (0.30)	-0.0758 (-0.99)	0.0884 (2.75)
NSTD	-0.1248 (-4.57)	0.0475 (0.28)	0.0889 (2.56)	0.2010 (2.51)	-0.0419 (-1.17)
N	1,751	1,389	10,727	1,902	16,608
Adj. R ²	0.66	0.83	0.55	0.80	0.62
Environment Score					
	Model 6	Model 7	Model 8	Model 9	Model 10
PSTD	-0.0762 (-2.92)	0.1331 (0.87)	-0.0363 (-1.84)	0.2414 (3.00)	-0.1947 (-6.18)
NSTD	-0.1673 (-4.91)	-0.1941 (-1.31)	-0.0282 (-1.25)	-0.0462 (-1.25)	0.1209 (3.08)
N	1,754	1,350	10,538	1,845	16,327
Adj. R ²	0.65	0.83	0.64	0.80	0.62
Social Score					
	Model 11	Model 12	Model 13	Model 14	Model 15
PSTD	0.1440 (5.97)	-0.1961 (-1.74)	0.0089 (0.41)	0.1057 (2.82)	0.0195 (0.73)
NSTD	0.0843 (4.36)	-0.3859 (-4.34)	-0.0536 (-2.15)	-0.0664 (-2.43)	-0.1191 (-4.69)
N	1,725	1,350	10,461	1,814	15,648
Adj. R ²	0.67	0.80	0.55	0.81	0.61
Governance Score					
	Model 16	Model 17	Model 18	Model 19	Model 20
PSTD	-0.0896 (-3.78)	0.5931 (3.08)	0.0158 (0.67)	-0.1561 (-2.11)	-0.0685 (-2.07)
NSTD	-0.0340 (-0.97)	0.2716 (1.56)	0.0895 (3.30)	0.0186 (0.22)	0.1500 (3.94)
N	1,769	1,410	10,659	1,868	16,632
Adj. R ²	0.66	0.84	0.56	0.81	0.61

Note: t-statistics are shown in parentheses.

Source: Authors' calculation.

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