

Do Institutional Investors Drive Corporate Social Responsibility? International Evidence

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How should shareholders consider firms' environmental and social performance?

- Today, shareholders can easily track firms' Environmental and Social (E&S) performance, two components of corporate social responsibility.
- Various platforms that offer E&S metrics:

THOMSON REUTERS
ASSET4 Environmental, Social and Corporate Governance Data

Home
Environmental
Social
Corporate Governance
Integration

1. Enter Identifier (e.g. DS mnemonic, DS code or ISIN) and hit GO:

Note: You can view the entire current ASSET4 coverage on the "A4Universe" worksheet.

BP plc

Latest Performance Scores As of 2012 year end

Environmental	92%
Social	78%
Corporate Governance	89%
Economic**	99%
Equal Weighted***	94%
Transparency*	107 / 123

Monsanto Co. SUSTAINALYTICS ESG REPORT

Industry: Chemicals Marketcap.: 57,435 mm. USD Employees: 21,500
Domicile: United States Ticker: NYSE:MON

ESG Summary

Overall Performance

- 54 Overall ESG Score (Industry Leader, Outperformer)
- 106 out of 162 Relative Position (Average Performer)
- 35th Percentile (Average Performer)
- 50 Environment (Average Performer)
- 56 Social (Average Performer)
- 58 Governance (Average Performer)

Relative Performance

106 out of 162 Average Performer

Rank	Company	Score	Peers (Market cap \$46-\$100bn)	Score
1.	Alzo Nobel NV	81	BASF SE	73
2.	Praxair Inc.	80	The Dow Chemical Company	67
3.	Royal DSM N.V.	80	LyondellBasell Industries NV	62
4.	Evonik Industries AG	80	E. I. du Pont de Nemours and Company	80
5.	Novozymes A/S	79	Monsanto Co.	54

BP / LN Gbp XD L 552.10 -0.80 L 552.10 / 552.20 L 11156 x 2279
At 4:43 d Vol 3,238,583 0 555.50 L H 556.10 L 550.80 Val 1.7938

BP / LN Equity 90 Actions 97 Export 90 Settings Financial Analysis

Key Stats	1/S	2/B/S	3/C/F	4/Ratios	5/Segments	6/Addt	7/ESG	8/Custom			
Overview	Environmental	Social	Governance	Exec & Dir Comp	ESG Ratios	CDP					
2006 Y	2007 Y	2008 Y	2009 Y	2010 Y	2011 Y	2012 Y	2013 Y	2014 Y	2015 Y	2016 Y	2017 Y
Environmental Disclosure	48.76	52.89	54.55	54.55	54.55	60.33	60.33	61.98	64.46	64.46	51.24
Direct CO2 Emissions	59,300.0	59,200.0	57,000.0	60,400.0	60,200.0	57,700.0	56,400.0	46,000.0	45,000.0	46,100.0	45,800.0
Indirect CO2 Emissions	10,100.0	10,670.0	9,200.0	9,600.0	10,000.0	9,000.0	8,400.0	6,700.0	6,900.0	6,200.0	-
Total CO2 Emissions	69,400.0	69,870.0	66,200.0	70,000.0	70,200.0	66,700.0	64,800.0	52,700.0	52,300.0	52,300.0	52,300.0
CO2 Intensity per Energy	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.25	-
Total GHG Emissions	74,530.0	74,130.0	70,640.0	74,590.0	74,900.0	70,800.0	68,200.0	55,800.0	55,200.0	55,800.0	56,200.0
NOx Emissions	196.0	204.0	190.0	189.0	194.4	141.0	138.0	130.0	123.0	125.0	122.0
SO2 Emissions	306.0	99.0	64.0	66.0	61.7	53.0	51.0	39.0	36.0	36.0	35.0
Total Energy Consumpti...	286,111.0	286,111.0	269,444.0	288,889.0	295,556.0	267,222.0	265,278.0	227,778.0	221,944.0	210,000.0	210,833.0
Hazardous Waste	270.0	170.0	199.0	184.0	170.3	187.0	197.0	181.0	185.0	157.0	228.0
Total Waste	-	-	-	-	-	717.0	689.0	507.0	538.0	423.0	470.0
Environmental Fines \$	2.5	22.5	1.1	66.6	52.5	77.4	22.4	2.5	1.0	0.6	15.0
Social											
Social Disclosure Score	59.38	59.38	64.06	64.06	64.06	68.75	64.06	73.44	73.44	73.44	73.44
Number of Employees	97,000	97,600	92,000	80,200	70,700	82,400	85,700	83,900	84,500	79,800	74,000
Employee Turnover %	-	-	15.00	15.00	15.00	14.00	13.00	15.00	15.00	16.00	12.00
% Women in Workforce	-	-	-	-	-	29.00	-	30.00	31.00	32.00	33.00
% Women in Mgt	17.00	16.00	14.00	14.00	14.00	15.00	17.00	18.00	19.00	22.00	21.00
% Minorities in Mgt	5.00	5.00	6.00	6.00	7.00	6.00	6.00	8.00	10.00	11.00	11.00
Workforce Accidents	413	355	338	204	208	253	998	802	547	428	385
Lost Time From Accidents	-	-	-	-	-	-	-	1,940	1,160	864	750
Facilities - Contractors	7	4	3	18	14	1	3	2	1	1	3

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2577 6000 Japan 01 3 3201 6900 Singapore 65 6212 1000 U.S. 1 212 210 2000 Copyright 2016 Bloomberg Finance L.P. SN 174793 EDT GMT+4 100 6430-4513-2 05-Sep-2016 04:58:36

- But - whether better Environmental & Social performance is beneficial to the average shareholder remains controversial

We take a different tack to assess the importance of firms' E&S performance to shareholders

- Is better Environmental & Social performance beneficial for shareholders?
 - » Overall evidence is mixed to date.
- Are there other ways to assess the desirability of firms' E&S performance to shareholders?
 - » A different tack: Explore the relation between institutional investor ownership and firms' E&S performance.
- Hard to dismiss the importance of Environmental & Social if driven by institutional investors, since they...
 - » ...own the bulk of the world's equity capital.
 - » ...are sophisticated (relative to small investors).
 - » ...face legal obligations of fiduciary duty to focus on financial performance.

What we do

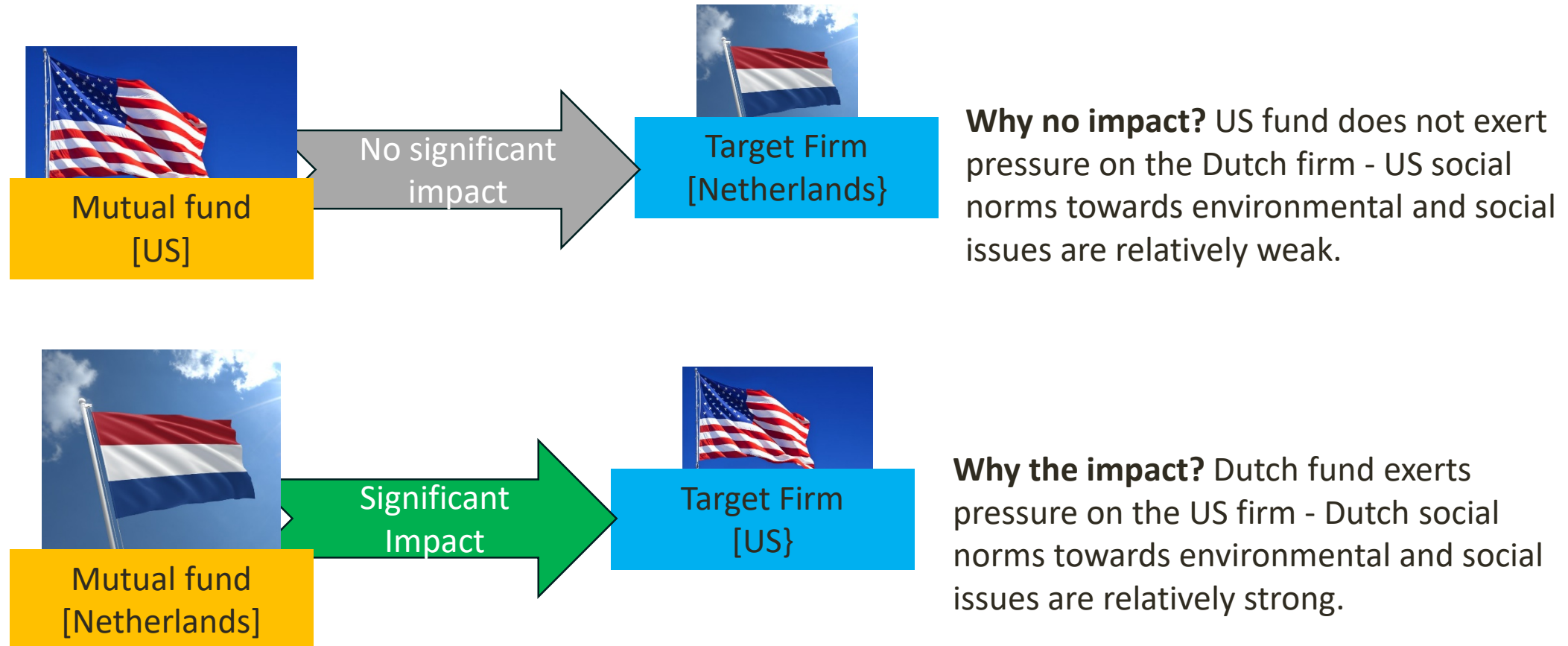
Explore whether institutional investors in aggregate drive firms' Environmental & Social performance worldwide.

- Exploit newly available data looking at firms around the world.
- We find: A systematic positive relation between lagged institutional ownership and firms' E&S performance
 - » This matters because it demonstrates that mainstream institutional investors care about E&S issues, and actively push firms to improve their E&S performance
 - » Multiple tests suggests the relation is causal: We introduce Granger-causality-style tests; use the BP Deepwater Horizon shock as a natural experiment; IV specifications; firm fixed effects.

Explore why institutional investors drive firms' E&S performance.

- We find: Institutions are motivated by both financial and social returns
 - » Why social returns? Investors increase firms E&S performance when they come from countries with a strong community belief in the importance of E&S issues. Cultural origin matters!
 - » No social returns: Investors from other countries (without such beliefs) have no impact
- Interpretation: Institutional investors transplant social norms into firms around the world

How to think about “why do investors push firms towards better E&S”?



Data and sample

- Global firm-level E&S data from Thompson Reuters ASSET4 database, with a decade of data since 2004.
 - » Can be easily accessed by investors.
 - » ASSET4 analysts use firms' public disclosures (e.g., sustainability reports), overall public agency filings, and in-house investigations.
- ASSET4 reports 148 total line items for “E” and “S”.
 - » We transform, aggregate, obtain Aggregate Environmental, Social performance scores
 - » We do the same with alternative sources: Sustainalytics and Bloomberg
- Final sample:
 - » 3,277 non-U.S. firms from 41 countries, 2004-2013
 - » +1,000 U.S. firms, 2004-2013

Other data

- Global institutional ownership data from (e.g., see papers by Ferreira and Matos).
 - » Aggregate institutional ownership data
 - » Country of domicile of investors and several categories of investor type
- Other data
 - » Data about social norms towards E&S issues - World Value Survey, Environmental Performance Index (Yale University), Center for International Earth Science Information Network (Columbia University)
 - » Firm-level data from standard sources: Worldscope, CRSP

First tests

- Is aggregate institutional investor ownership related to firms' E&S performance levels?
- Regression analysis of current E&S performance on lagged total institutional ownership, while controlling for observables.

$$\text{Log}(\text{Score}_{it}) = \alpha + \beta X_{it-1} + \gamma' Y_{it-1} + \Lambda + \varepsilon_{it}$$

- Firm controls, and country, industry, and time fixed effects.
- Standard errors are clustered at the country level.

E&S performance and total institutional ownership (Table 2, Panel A)

	Environmental Scores		Social Scores	
	Overall Score	ASSET4 z-Score	Overall Score	ASSET4 z-Score
	(1)	(2)	(3)	(4)
Total IO _{t-1}	0.268 (0.00)	0.403 (0.00)	0.124 (0.00)	0.491 (0.00)
Log (Total Assets) _{t-1}	0.214 (0.00)	0.255 (0.00)	0.084 (0.00)	0.274 (0.00)
Tangibility _{t-1}	0.194 (0.00)	0.228 (0.00)	0.031 (0.16)	0.116 (0.16)
Leverage _{t-1}	-0.116 (0.13)	-0.141 (0.21)	-0.041 (0.14)	-0.133 (0.22)
Tobin's q _{t-1}	0.033 (0.00)	0.027 (0.00)	0.015 (0.00)	0.032 (0.03)
Profitability _{t-1}	0.082 (0.43)	0.176 (0.18)	0.068 (0.11)	0.350 (0.04)
Cross-list _{t-1}	-0.027 (0.23)	-0.071 (0.06)	0.004 (0.73)	-0.040 (0.38)
Country Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.543	0.446	0.523	0.393
Obs	19,849	19,785	19,849	19,785

Economic significance: An interquartile move in institutional ownership is associated with an increase in the equally weighted (proprietary weighted) **environmental performance** score of **5.7% (8.6%)** and an increase in the **social performance** score of **2.6% (10.5%)**.

Are investors more impactful where stronger effects are expected? (Table 2, Panels B & C)

- Investor commitment E&S activism: Are you a UN PRI signatory?

	Environmental Scores		Social Scores	
	Overall Score	ASSET4 z-Score	Overall Score	ASSET4 z-Score
IO_{t-1}				
UN PRI Sig.	0.773 (0.00)	1.147 (0.00)	0.271 (0.00)	1.013 (0.00)
Non-UN PRI Sig.	0.073 (0.13)	0.091 (0.22)	0.054 (0.04)	0.241 (0.02)
IO, UN PRI vs. Non-UN PRI (p -value)	(0.00)	(0.00)	(0.00)	(0.00)

- Firms with greater scope for E&S improvement: Enter sample with below-median E or S scores.

	Environmental Scores		Social Scores	
	Overall Score	ASSET4 z-Score	Overall Score	ASSET4 z-Score
Weak Initial E&S Performance Subsample				
Total IO_{t-1}	0.259 (0.00)	0.415 (0.00)	0.128 (0.00)	0.487 (0.00)
Strong Initial E&S Performance Subsample				
Total IO_{t-1}	0.137 (0.03)	0.207 (0.01)	0.039 (0.11)	0.093 (0.26)
Total IO, Weak vs. Strong Initial E&S Performance (p -value)	(0.02)	(0.02)	(0.00)	(0.00)

Is the impact causal?

- Do institutions drive E&S performance, or do investors just chase strong E&S firms?
 - » Results could be influenced by reverse causality or unobservable firm characteristics
- Additional tests help us establish the direction of causality.
 - » Quasi-natural experiment: BP Deepwater Horizon oil spill in May 2010.
 - » Statistical causality: Granger-causality-style tests.
 - » IV regressions: Instrument institutional ownership with firms' membership in MSCI World Index (Aggarwal et al., 2011; Bena et al., 2017).
 - » Concerns about time-invariant unobservables: Run firm-fixed-effects regressions and all results hold (attenuated magnitudes)
- All tests suggest: The impact is causal, from investors on E&S performance

Results so far

- Institutional investors matter for firms' E&S performance
 - » Impact is positive and significant.
 - » Direction of causality likely flows from investors to E&S performance.
- Firm's E&S performance is not just the result of agency problems—investors want it.

Why do investors push for greater E&S? Consider investment managers' preferences

- Investment managers care about financial consequences of their E&S choices.
- Managers also care about aligning their choices with the E&S social norms of their community (Akerlof and Kranton 2005).
 - » Investment managers trade off financial returns for social benefits.
- First, we test whether the social norms regarding E&S in the country of domicile of the institutional investors influence the investors' impact on firms' E&S performance?
 - » We focus on foreign institutional investors that account for 2/3 of institutional ownership in our data.
 - » We identify the strength of social norms for the country of domicile for each of a firm's foreign investors, and sort foreign institutional ownership into high- and low-social-norm groups.

Europe a world apart when it comes to social norms regarding E&S (Table 4)

Country	Environmental Performance Index	Employment Laws Index	World Value E&S Index
Top 10			
Sweden	0.67	0.74	0.71
Norway	0.70	0.69	0.67
Netherlands	0.64	0.73	0.58
Germany	0.66	0.70	0.57
Finland	0.62	0.74	0.57
France	0.67	0.74	0.49
Slovenia	0.61	0.74	0.55
Spain	0.57	0.74	0.51
Denmark	0.62	0.57	0.64
Switzerland	0.77	0.45	0.60
Bottom 10			
Israel	0.55	0.29	0.51
Japan	0.63	0.16	0.55
Ireland	0.56	0.34	0.43
U.S.	0.55	0.22	0.53
Singapore	0.56	0.31	0.38
China	0.42	0.43	0.37
Malaysia	0.61	0.19	0.39
India	0.36	0.44	0.34
South Africa	0.35	0.32	0.41
Hong Kong	na	0.17	0.43

Investors' social norms and E&S impact (Table 6)

Measure of Social Norm	Overall Environmental Score		Overall Social Score	
	Environmental Performance Index	World Value E&S Index	Employment Laws Index	World Value E&S Index
Foreign IO _{t-1}				
High-social-norm Group	0.948 (0.00)	0.885 (0.00)	0.556 (0.00)	0.285 (0.00)
Low-social-norm Group	-0.001 (1.00)	0.065 (0.59)	0.063 (0.04)	0.056 (0.29)
Domestic IO _{t-1}	0.442 (0.00)	0.444 (0.00)	0.175 (0.00)	0.186 (0.00)
Control Variables	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R ²	0.544	0.544	0.524	0.524
Obs	19,648	19,661	19,474	19,661
Average Foreign IO				
High-social-norm Group	0.049	0.050	0.029	0.050
Low-social-norm Group	0.078	0.085	0.105	0.085
Foreign IO, Low vs. High (<i>p</i> -value)	(0.00)	(0.01)	(0.00)	(0.07)

Economic significance: If a firm's foreign investors are from countries with strong instead of weak norms towards E&S performance, firms' **environmental (social) performance** levels would improve by **7.4% (2.2%)**.

Social norms and market forces

- The weight investment managers place on financial returns relative to social returns is also important.
 - » What affects the weight on financial returns?
- An investment manager places more weight on financial returns when it's costly to ignore them: a strong fund-flow-performance relation or strong financial performance incentives
- Sort institutions by investor type:
 - » Most interesting investor type: Independent institutional investors (e.g., mutual funds) - fund-flow-performance matters, moderate/high incentives

Market-sensitive investors pay attention to social norms, if strong enough (Table 8)

Panel A: Environmental scores

	Overall score		ASSET4 z-score	
	Environmental Performance Index (1)	World Value E&S Index (2)	Environmental Performance Index (3)	World Value E&S Index (4)
Foreign IO, high social norm group				
Independent institutional investors	0.615 (0.00)	0.563 (0.01)	0.864 (0.00)	0.771 (0.00)
Pension funds	2.668 (0.00)	2.030 (0.00)	3.217 (0.00)	2.418 (0.00)
Hedge funds	-0.501 (0.87)	-2.573 (0.10)	-0.295 (0.95)	-3.428 (0.13)
Foreign IO, low social norm group				
Independent institutional investors	0.005 (0.97)	0.089 (0.42)	0.049 (0.74)	0.152 (0.30)
Pension funds	1.433 (0.07)	3.868 (0.00)	1.638 (0.09)	5.131 (0.01)
Hedge funds	-0.743 (0.26)	-0.856 (0.23)	-0.640 (0.35)	-0.808 (0.29)
Domestic IO	0.416 (0.00)	0.418 (0.00)	0.617 (0.00)	0.619 (0.00)
Control variables	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Adjusted R ²	0.545	0.545	0.446	0.448
Number of observations	19,648	19,661	19,585	19,598

Social norms, if strong enough, can drive independent institutional investors away from preference to focus solely on financial returns.

[Results shown for E performance, they are similar for S, see Table 8, Panel B]

Very different picture for US firms – domestic (US) investors mostly do not push for E&S, while foreign investors from countries with high social norms do (Table 9)

Panel B: Environmental scores

	Overall score		ASSET4 z-score	
	Environmental Performance Index (1)	World Value E&S Index (2)	Environmental Performance Index (3)	World Value E&S Index (4)
Foreign IO				
High social norm group	2.087 (0.00)	1.289 (0.00)	2.913 (0.00)	1.653 (0.00)
Low social norm group	0.082 (0.43)	0.157 (0.16)	0.273 (0.09)	0.396 (0.02)
Domestic IO	-0.019 (0.75)	0.021 (0.73)	0.025 (0.77)	0.084 (0.33)
Control variables	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Adjusted R ²	0.564	0.561	0.452	0.448
Number of observations	7,500	7,500	7,443	7,443
Average Foreign IO				
High social norm group	0.045	0.040	0.045	0.040
Low social norm group	0.034	0.040	0.034	0.040
Foreign IO, low social norm group versus high social norm group (<i>p</i> -value)	(0.00)	(0.01)	(0.00)	(0.04)

US domestic investors do not increase Environmental performance in US firms...

...while Foreign investors increase Environmental performance in US firms

[Results shown for E performance, they are similar for S, see Table 9, Panel B]

What does this mean for CEOs and boards?

- We show: Foreign investors successfully transplant their social norms into the firms they own
 - » Adds an additional dimension to the importance of institutional investors.
- This ‘color of money’ effect is unlikely to be without conflict
 - » Executives of firms from low-social-norm countries would have both social norm and fiduciary duty incentives to push back (recall example of Dutch mutual fund + US firm)
- What happens when investor power is increased, for example, by giving investors enhanced access to the proxy?
 - » If domestic social norms are low on E&S, calls for enhanced investor power are likely to be challenged by management and domestic regulators (e.g. in the US).

Conclusions

- We ask whether institutional investors are a driving force in firms' E&S performance. We find that they are.
- We ask why institutional investors are active by examining the role of investment manager preferences and their social norms.
- We find that the origin of foreign investors matter: We find that institutional investors transplant their social norms.
 - » Investors from high-social-norm countries impact firms' E&S performance. European investors are the drivers.
 - » Social norms override market forces: Largest investor group (independent institutional investors) only matters when domiciled in high-social-norms countries.
- Foreign investors pushing for better E&S performance are a significant force
 - » Even in US firms, where domestic investors have no significant impact