

# ESG Shareholder Engagement and Downside Risk

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# ESG engagement by institutional investors

- Institutional investors increasingly engage with management to improve firms' environmental, social and governance (ESG) profiles, often through private engagements (see McCahery, Sautner & Starks, 2016).
- A goal is often said to be reduction of downside risks because negative ESG exposures can imply substantial legal, reputational, operational, and financial risks for firms. For example, BP's Deepwater Horizon oil spill reminded many investors of the importance of robust environmental policies (Dyck et al., 2017).
- A number of large institutional investors now engage firms on E&S as well as G (e.g., Dimson, Karakas & Li, 2016).

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<https://blogs.wsj.com/riskandcompliance/2015/03/03/pension-funds-point-man-on-improving-corporate-behavior/>

RISK & COMPLIANCE JOURNAL.

## Pension Funds' Point Man on Improving Corporate Behavior

By Gregory J. Millman

Mar 3, 2015 7:55 am ET



HERMES EOS Colin Melvin, chief executive officer, Hermes EOS

Colin Melvin is chief executive of Hermes Equity Ownership Services, which engages companies on environmental, social and governance issues that its pension fund clients expect will influence long-term shareholder value. Its report for 2014 cites engagements with Rolls Royce Holdings PLC on audit issues, J.P.Morgan Chase & Co. on director issues, and News Corp., where it co-sponsored a shareholder resolution calling for elimination of the dual-class share structure. Mr. Melvin spoke with Risk & Compliance Journal about criteria for such engagement and the ESG issues expected to be the focus of engagement in the coming year.

## Getting to know you: Sharing practical governance viewpoints

By F. William McNabb III

Vanguard Chairman and CEO

Speech at University of Delaware.

John Weinberg Center for Corporate Governance.

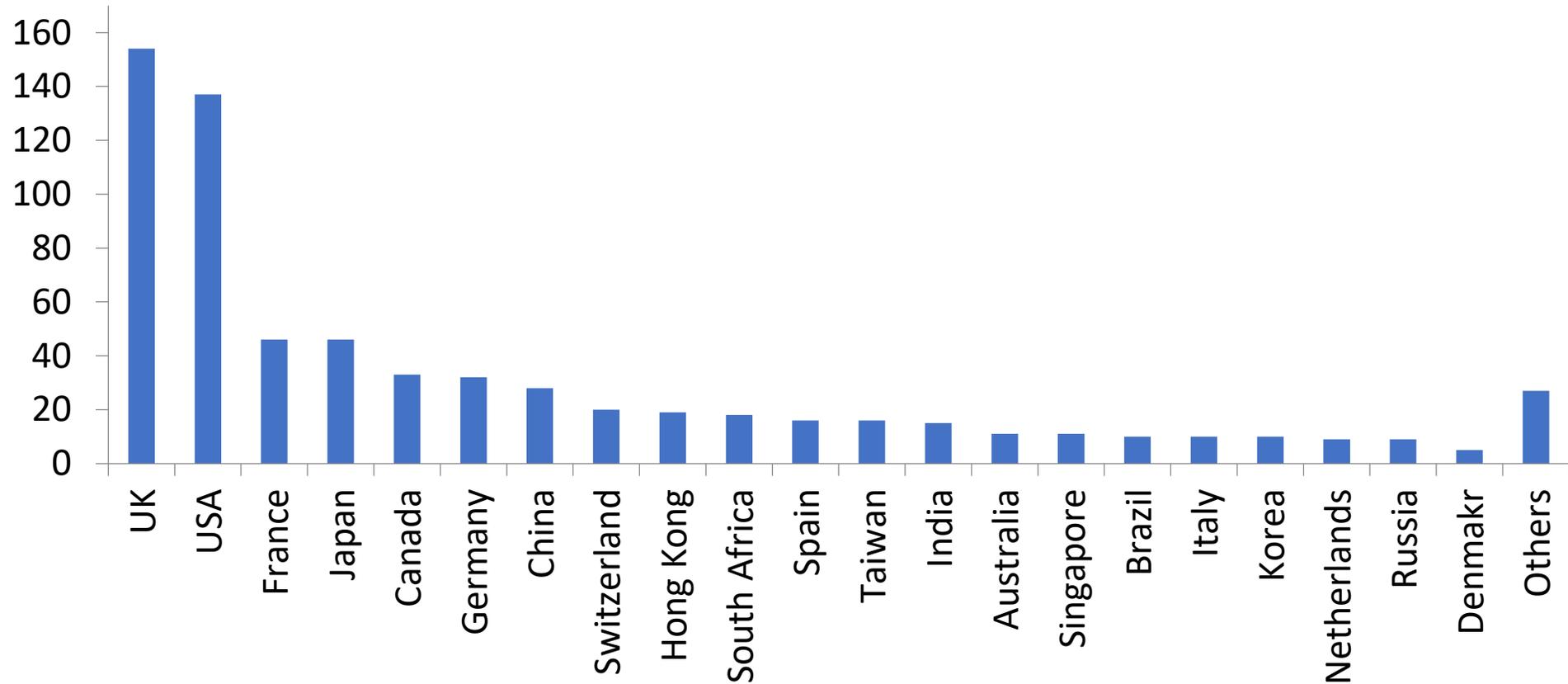


“Vanguard investors collectively own about 5% of every publicly traded company in the United States and about 1% of nearly every public company outside of the U.S... At Vanguard, we’ve been on a journey toward increased engagement over the past decade or so. Our peers in the mutual fund industry have as well.”

# Engagement Data

- ESG engagement sample from one large investor:
  - 682 engagements targeting 296 firms from 2005-2014
  - Top 3 engagement concerns: Board structure, Remuneration & Climate Change
- ESG engagement themes (with example issue)
  - Environmental: Climate Change, Carbon Intensity
  - Governance: Board Structure, Remuneration
  - Social and Ethical: Health and Safety, Human Rights
  - Strategy and Risk: Capital structure, Risk management

# Geographic distribution



# Engagement process

- **Milestone 1:** Concerns raised with target company management
- **Milestone 2:** Issue acknowledged by target company management
- **Milestone 3:** Action/strategy taken by management to solve the issue
- **Milestone 4:** Action/strategy successfully completed

# Engagement process

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- Some of the engagements are works-in-progress in 2014 so the milestone achievements could be substantially higher.

# Engagement actions

- Actions

- 1778 meetings
- 606 conference calls
- 204 emails
- 203 letters

- Contacts

- 1004 contacts with senior executives
- 805 contacts with members of the boards of directors
- 471 contacts with the chairman of the board

# Measures of downside risk

- Lower partial moments (below 0%)
  - second order (square root of semi-variance below 0%)
  - third order (cube root of the semi-variance below 0%)
    - (Bawa, 1975; Fishburn, 1977)
- Value at risk (at 5% percentile)
  - worst historical loss over the post-engagement period
    - (Duffie and Pan, 1997; Jorion, 2002)

# Empirical approaches

- Matched Sample
  - Matching vs. firms in equivalent country, industry and size buckets within FTSE All-World index, excluding heavily regulated utilities firms
- I. Endogenous Treatment-Effects Models (with annual data)
- II. Stock Return Analysis (with weekly data)

# Empirical Approach I

## Endogenous treatment-effects models (using annual data)

- Selection Equation controlling for the following lagged variables: Size, Market to Book Ratio, Profit Margin, Dividend Yield, Leverage, Free Float and Anti-Director Rights index
- Outcome Equation controlling for potential Selection Bias, Size, Market to Book Ratio, Profit Margin, and Dividend Yield (with downside risk measured over post-engagement period)

# Table 5: Effect of ESG Engagement on Downside Risk: Outcome Equation

Dependent Variable:	LPM (0,2)	LPM (0,3)	VaR
	(1)	(2)	(3)
Engagement Target	-0.012*** (-2.68)	-0.014** (-2.45)	-0.028*** (-2.59)
Log(Mkt cap)	-0.005*** (-4.48)	-0.007*** (-4.43)	-0.011*** (-4.14)
Mkt-to-book	-0.0003*** (-4.55)	-0.0005*** (-4.66)	-0.0007*** (-3.96)
Profit margin	-0.0002*** (-5.07)	-0.0002*** (-4.82)	-0.0003*** (-4.37)
Leverage	0.00001*** (5.95)	0.00002*** (6.82)	0.00003*** (4.50)

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# Table 6: Effect of ESG Engagement on Downside Risk: Results by Success Rate

Dependent Variable:	LPM(0,2)	LPM(0,3)	VaR
	(1)	(2)	(3)
Engagement targets that achieved Milestone 2+	-0.013*** (-3.02)	-0.017*** (-2.79)	-0.032*** (-2.83)
Engagement targets that did not achieve Milestone 2	0.025*** (2.95)	0.041*** (4.17)	0.069*** (3.50)

Further analysis shows results appear to be driven by engagements with some success (achieving at least Milestone 2)

# Further analysis also shows results appear to be driven by engagement theme

**Table 7: Effect of ESG Engagement on Downside Risk: Results by Engagement Themes**

This table reports results from endogenous treatment-effects models to estimate the effect of ESG engagement on downside risk across engagement themes. We report results from the outcome equation only. The engagement selection equation has been estimated as in Table 4. The sample in this analysis consists of a total of 1,131 firms, including 269 engagement targets and 862 control firms. *Engagement target* is a dummy variable that equals 1 if a firm is an engagement target, and 0 if it is a control firm. Control firms are matched with engagement targets using country, industry, and size as matching criteria. We use three dependent variables to measure investment risk at firm level in the outcome equations: (i) the lower partial moment of the second order (*LPM (0,2)*); (ii) the lower partial moment of the third order (*LPM (0,3)*); and (iii) the value at risk (*VaR*). *t*-statistics are reported in parentheses. \*, \*\*, and \*\*\* denote statistical significant at the 10%, 5% and 1% levels, respectively.

Dependent Variable:	Governance Engagement			Environmental and Governance Engagement			Social and Governance Engagement			Strategy Engagement		
	LPM (0,2)	LPM (0,3)	VaR	LPM (0,2)	LPM (0,3)	VaR	LPM (0,2)	LPM (0,3)	VaR	LPM (0,2)	LPM (0,3)	VaR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Engagement target	-0.010** (-2.02)	-0.013** (-1.97)	-0.027** (-2.30)	-0.015* (-1.70)	-0.018 (-1.53)	-0.048** (-2.49)	0.008 (0.57)	0.014 (0.55)	-0.018 (-0.66)	-0.013 (-1.63)	-0.021* (-1.92)	-0.039** (-2.08)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matched sample	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Selection bias corrected	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	730	730	730	122	122	122	182	182	182	259	259	259

# Empirical Approach II: Weekly Stock Return Analysis

- To account for the often higher than annual frequency of ESG engagement, we measure the factor loadings of our target firms to DOWN, a Downside Risk Factor (Highest 30% minus Lowest 30%) in a Fama-French (2015) setting
- To measure a Post vs. Pre effect on an equal size period, we interact DOWN with a two-sided dummy (Post), which is '1' in the 2 year period post engagement milestone, '-1' in the 2 years pre engagement milestone and zero otherwise

**Table 8: Effect of ESG Engagement on Downside Risk: Evidence from Weekly Stock Returns**

This table shows regressions of weekly excess stock returns (stock return minus risk-free rate) on the DOWN factor, the Post dummy, and an interaction of the two. We construct the downside-risk factor (DOWN) as the difference between the returns of portfolios of stocks with high minus low downside risk. Stocks with high (low) downside risk are in the highest (lowest) 30% of the respective downside-risk measure. Panel A generates the DOWN factor using LPM (0,2), while Panel B uses VaR instead. LPM (0,2) is the lower partial moment of the second order, while VaR is the value at risk. In Columns (1) and (3) the dummy variable Post equals 1 for stock-return observations from the two-year period after our investor started to engage a target, -1 for stock-return observations from the two-year period before, and zero for all other observations. In Columns (2) and (4) the Post dummy takes the value 1 in the two-year period after Milestone 2 has been achieved, -1 in the two-year period before, and zero otherwise. We further include in all regressions the five factors proposed by Fama and French (2015), which contain the MKT, SMB, and HML factors as well as a profitability (RMW) and investment factor (CMA). The sample includes 269 engagement targets. \*, \*\*, and \*\*\* denote statistical significant at the 10%, 5% and 1% levels, respectively.

Time period used to measure Post dummy:	Panel A: LPM (0,2)		Panel B: VaR	
	Initial Engagement	Milestone 2	Initial Engagement	Milestone 2
	Excess Returns		Excess Returns	
	(1)	(2)	(3)	(4)
Post * DOWN	-0.001 (-0.17)	-0.030*** (-3.43)	0.002 (0.26)	-0.030*** (-4.14)
DOWN	0.039*** (7.46)	0.038*** (7.33)	0.062*** (14.73)	0.060*** (14.15)
Post	-0.000 (-1.11)	-0.001** (-2.58)	-0.000 (-0.84)	-0.001** (-2.42)
MKT	0.971*** (238.49)	0.971*** (238.73)	0.959*** (238.48)	-0.001 (-0.23)
SMB	0.066*** (19.61)	0.066*** (19.63)	0.064*** (19.12)	-0.005 (-1.31)
HML	0.063*** (9.79)	0.063*** (9.85)	0.058*** (9.25)	-0.012 (-1.55)
RMW	-0.095*** (-9.99)	-0.094*** (-9.95)	-0.081*** (-8.60)	0.053*** (4.72)
CMA	-0.001*** (-9.85)	-0.001*** (-9.81)	-0.001*** (-10.13)	-0.000 (-0.01)
Constant	-0.000*** (-3.29)	-0.000*** (-3.40)	-0.000*** (-3.80)	-0.000*** (-3.97)
Obs.	225,295	225,295	225,295	225,295
R-squared	0.288	0.288	0.289	0.287

Time period used to measure Post dummy:	Panel A: LPM (0,2)		Panel B: VaR	
	Initial Engagement	Milestone 2	Initial Engagement	Milestone 2
	Excess Returns		Excess Returns	
	(1)	(2)	(3)	(4)
Post * DOWN	-0.001 (-0.17)	-0.030*** (-3.43)	0.002 (0.26)	-0.030*** (-4.14)
DOWN	0.039*** (7.46)	0.038*** (7.33)	0.062*** (14.73)	0.060*** (14.15)
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# Difference-in-differences analysis

- As a robustness test, we conduct a difference-in-differences analysis in our weekly regression setting by amending the dependent variable to represent the excess return differential between each target firm and its nearest peer.
- The results remain identical in sign and highly statistically significant.

# Conclusion

- We provide new insights into how ESG engagements can create value for investors through reduction in a firm's downside risk.
  - (e.g. 1.2% lower in LPM2, 1.4% lower in LPM3, 2.8% lower in VaR)
- Risk reduction effects are stronger for more successful engagements and for the primary corporate governance and environmental engagement themes of this investor (e.g., board structure, remuneration & climate change).
- Our findings complement literature on ESG engagement and firm value/returns (e.g. Becht et al. 2009; Dimson et al. 2015), on ESG and firm risk {e.g. Oikonomou et al. 2012) and on institutional investors' ability to affect corporate ESG behaviour (Dyck et al., 2017).