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Shareholder Activism and Equity Price Reactions

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Abstract

Using a large dataset of 8,870 shareholder corporate social responsibility (CSR) proposals for US firms, we employ a novel methodological approach that allows for the estimation of dynamic share price and risk reactions. We show that formal activist shareholder recommendations can affect stock returns and risk. However, the direction and magnitude of these effects are conditional upon the nature of the proposal and the identity of the sponsor.

JEL classification

M14, G12, G14, C32

Keywords

Corporate Social Responsibility; shareholder activism; time-varying betas; risk-return trade-off

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1. Introduction

The 2007-09 financial crisis has fuelled a debate over how active or passive shareholders should be in monitoring the companies for which they hold stocks in. This has created a market for socially responsible investing (SRI) - a passive and low-cost method of shareholder engagement that can align with investors' altruistic intentions. Despite the growing interest in SRI and CSR activities, it is unclear whether they create value for the firm and, if so, in which direction. From a theoretical perspective, several theories (stakeholder theory, the resource-based view and the neo-classical view) argue that such activities should influence firm risk (Becchetti *et al.*, 2015; Jo and Na, 2012). Unfortunately, empirical literature offers ambiguous predictions, typically failing to attribute gains (or losses) to firms and investors (Flammer, 2015).

In this note, we focus our attention on shareholder proposals, which represent an important governance mechanism for outside owners to induce desirable changes by firms' management (Cuñat *et al.,* 2012; Iliev *et al.,* 2015). Research in this area typically employs event study methodologies and, more recently, regression discontinuity designs (RDD), in order to examine price reactions to small subsets of proposals garnering high levels of voting support. These approaches, however, largely ignore shifts in risk around proposal votes (e.g. Flammer, 2015). Thus, standard event-study approaches have been subject to criticism in the asset pricing literature; while news may often not influence future cash flows, it may convey price-relevant information about discount rates (Grullon *et al.*, 2002). Particularly for CSR activities, which can impact firm cash flows in unknown ways, it is important to account for shifts in time-varying equity risk when examining stock price changes. Failing to do so can lead to misleading conclusions and an inability to draw reliable inferences as to whether CSR activities create value. Since CSR proposals are non-binding, there is no specific pass/fail threshold; the choice of 50%, commonly employed in RDD designs has been undermined by proxy support firms and recent research (e.g. Ferri and Maber, 2013) which suggests that even low levels of voting support are suggestive of 'significant' activism that can induce management to initiate changes within the firm.

We contribute to the literature by offering novel evidence that CSR proposals generate economically meaningful changes in firms' equity risk and returns. In constrast to prior studies, which implicitly assume risk is time-invariant, our novel empirical design allows us to examine dynamic risk-price reactions. We utilise a bivariate EGARCH framework, which captures the time-varying nature of volatility and accounts for asymmetric market responses arising from 'positive' and 'negative' innovations. Finally, and in contrast to prior work, we consider all relevant shareholder proposals.

2. Data and Empirical Methodology

2.1. Data

We analyse a rich dataset of U.S. shareholder-sponsored, non-binding SRI proposals between 1997 and 2011, distinguishing between those subjected to shareholder vote at annual general meetings (AGM) and those that are omitted/withdrawn. Data is sourced from the ISS/RiskMetrics dataset, which provides full details of all shareholder proposals in S&P 1500 firms, plus '500 widely held firms'. We reclassify each proposal by sponsor (7 categories) and proposal type (9 categories) and exclude observations where multiple proposals were voted on at the same AGM. This results in the construction of a final dataset with single proposal 'events'. The final distribution of proposals is described in table 1. To mitigate the possibility that other 'news' surrounding an AGM and proposal vote may confound changes in price and/or risk, we 'calibrate' all empirical models using estimates for similar withdrawn/omitted proposals.

[Insert table 1 here]

2.2. Methods

For each proposal we estimate time-varying betas using a bivariate EGARCH (Braun *et al.*, 1995; Nelson, 1991):

$$R_{i,t} = \omega_{i,t} + \beta_{i,t}R_{m,t} + \varepsilon_{i,t}$$
$$R_{m,t} = \omega_{m,t} + \varepsilon_{m,t} \qquad (1)$$

where R_i identifies individual stock returns, and R_m market portfolio returns. Time-varying betas are denoted by β_i for individual stocks while constants are denoted as ω_i and ω_m. The error terms are ε_i for each stock and ε_m for the market. The variance and covariance matrix for the two error terms are given as:

$$\sigma^2[\varepsilon_{i,t}] = \exp\left(\alpha_{i,0} + a_{i,1}\left(|z_{i,t-1}| - E|z_{i,t-1}| + \gamma_i z_{i,t-1}\right) + \theta_i \ln\left(\sigma^2[\varepsilon_{i,t-1}]\right)\right)$$
$$\sigma^2[\varepsilon_{m,t}] = \exp\left(\alpha_{m,0} + a_{m,1}\left(|z_{m,t-1}| - E|z_{m,t-1}| + \gamma_m z_{m,t-1}\right) + \theta_m \ln\left(\sigma^2[\varepsilon_{m,t-1}]\right)\right)$$
$$\sigma_{i,m,t} = \rho_{i,m}\left(\sigma^2[\varepsilon_{i,t}]\sigma^2[\varepsilon_{m,t}]\right)^{1/2} \qquad (2)$$

whereby normalized innovations for stock, z_i, and the market portfolio, z_m, are $z_{i,t} = \varepsilon_{i,t}/\sigma[\varepsilon_{i,t}]$ and $z_{m,t} = \varepsilon_{m,t}/\sigma[\varepsilon_{m,t}]$. The conditional covariance is denoted by $\sigma_{i,m,t}$ and the conditional correlation coefficient is $\rho_{i,m}$. The remaining terms, $\alpha_{i,0}$, $\alpha_{m,0}$, $a_{i,1}$, $a_{m,1}$, γ_i, γ_m, θ_i and θ_m, are to be estimated. The error term in (2) is drawn from a normal density distribution and maximising the likelihood function:

$$L(\Theta) = -(T/2)\log(2\pi) - (1/2)\sum_{t=1}^{T}(\log|H_t| + E_t H^{-1} E') \quad (3)$$

in which T denotes the number of observations, Θ the vector parameter for estimation, $E_t = [\varepsilon_{i,t}, \varepsilon_{m,t}]$ and is the vector of innovations at sample time t and $H_t = Cov_{t-1}(E_t)$. Time-varying betas, $\beta_{i,t}$ are extracted from (1) and (2):

$$\beta_{i,t} = (\sigma_{i,m,t})/(\sigma^2[\varepsilon_{m,t}]) \qquad (4)$$

Using the estimated $\beta_{i,t}$, we also model time-varying abnormal returns $AR_{i,t}$ as:

$$AR_{i,t} = e_{i,t} = R_{i,t} + \beta_{i,t}R_{m,t} \qquad (5)$$

and construct 'time-varying Treynor ratios' as a means to gauge firms' cumulative excess returns per unit of time-varying market risk:

$$TR_{i,t} = \frac{\sum_{-10}^{t} AR_{i,t}}{\beta_{i,t}} \quad (6)$$

Finally, for each sponsor and proposal type we estimate the following time-dummy OLS regression:

$$\overline{TR}_{t,Voted} - \overline{TR}_{t,NotVoted} = \alpha + b_1(T_0, T_{30}) + b_2(T_{31}, T_{60}) + b_3(T_{61}, T_{90}) + b_4(T_{91}, T_{120}) + \epsilon \qquad (7)$$

where the intercept (α) accounts for the difference in $\overline{TR}_{t,Voted} - \overline{TR}_{t,Not\,Voted}$ during the pre-AGM period, while the four 30-day time-dummies allow us to test if these calibrated risk-adjusted returns are significant across short and medium–term horizons.

3. Empirical Results

In table 1 we present, in columns (1) and (2), mean time varying betas ($\overline{\beta_{i,t}}$) estimated across not voted (NV) and voted (V) proposals during a period up to 120 days prior to the AGM (T_{-120},T_0). Similarly, in columns (3) and (4) we present mean estimates during the post-AGM period (T_0,T_{120}). In columns (5) and (6) we 'calibrate' time-varying betas across the two periods, by subtracting the not voted estimates from the voted ones. This allows the calculation

of a 'true' change in beta ($\overline{\beta_{i,t}}$) across the two periods in column (7) and the application of a series of two sample t-tests. The results in panel A support the notion that systematic risk is not static but instead rises significantly following the voting of proposals by special interest, investment, pension and union funds and drops for proposals by social funds and undisclosed sponsors. Also, $\overline{\beta_{i,t}}$ increases significantly in panel B for equality, ethical, sustainability and health and safety proposals, but declines for environmental and human rights-related proposals.

In table 2 we present coefficients from the estimation of model (7) by sponsor (panel A) and proposal type (panel B). Unsurprisingly, valuation effects range from positive (for special interest, undisclosed and religious sponsors and for proposals on equality, ethical and human rights issues) to negative (for social, pension and union funds, and for proposals on sustainability, environmental, animal and other CSR reporting concerns). Separately, proposals sponsored by investment funds and by lobbying disclosures appear to have an overall neutral impact across the four time windows.

[Insert table 2 here]

Interestingly, the above effects do not always manifest instantaneously (i.e. in window T_0, T_{30}), but instead build up in magnitude and significance over longer horizons. This is also evident in figures 1 and 2 which illustrate daily plots of $\overline{TR}_{t,Voted}$ and $\overline{TR}_{t,Not\ Voted}$, in addition to cross-sectional heterogeneity by sponsor and proposal type.

[Insert figures 1 and 2 here]

4. Conclusions

We demonstrate that CSR proposals by activist shareholders generate economically meaningful changes in risk and returns. These changes vary according to the proposal category and the identity of the activist sponsor. Therefore, the market understands - at least partially - the implications of CSR shareholder activism for the subsequent change in a firm's riskiness and prices these events accordingly. In general, activist proposals concentrated around human issues or sponsored by elite groups are rewarded. Conversely, environmental proposals, or actions supported by narrower internal interests are penalized. This suggests that the market may believe that elite groups are more knowledgeable about what is 'best' for the firm while narrower internal groups may lack such knowledge. The market's (over-)confidence in elite groups over narrower groups may or may not be rational - a novel finding that we discover in this note and which merits further empirical investigation. In sum, we show that future research should develop frameworks to accomodate the time-varying characteristics of equity prices and the heterogeneity of CSR activities when attempting to explain the impact of shareholder activism on the underlying firm's stock price.

Tables and Figures

Table 1: CSR Shareholder Proposals and Time-Varying Betas

Panel A: Classification by Sponsor Type											
				(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				(T_{-120},T_0)		(T_0,T_{120})		(2-1)	(4-3)	(6-5)	
	N	Not Voted (NV)	Voted (V)	$\overline{\beta_{i,t}}$ (NV)	$\overline{\beta_{i,t}}$ (V)	$\overline{\beta_{i,t}}$ (NV)	$\overline{\beta_{i,t}}$ (V)	$\overline{D\beta_{i,t}}$ in (T_{-120},T_0)	$\overline{D\beta_{i,t}}$ in (T_0,T_{120})	$\overline{D\beta_{i,t}}$ Change	T-Test
1.Special Interest	390	180	210	1.027	1.018	0.962	1.008	-0.009	0.046	0.055***	(4.454)
2.Undisclosed	2,312	1,184	1,128	0.998	0.891	0.982	0.852	-0.107	-0.13	-0.024***	(-6.491)
3.Religious	2,292	1,109	1,183	0.875	0.816	0.842	0.784	-0.059	-0.058	0.001	(0.408)
4.Investment Fund	1,098	738	360	0.833	0.779	0.805	0.772	-0.054	-0.033	0.021***	(4.048)
5.Social Fund	1,422	846	576	1.091	0.973	1.046	0.917	-0.118	-0.129	-0.010*	(-2.072)
6.Pension Fund	1,098	528	570	1.381	1.132	1.287	1.089	-0.25	-0.199	0.051***	(7.181)
7.Union Fund	258	108	150	1.037	1.139	0.904	1.139	0.103	0.234	0.132***	(11.484)
	8,870	4,692	4,178								
Panel B: Classification by Proposal Type											
				(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				(T_{-120},T_0)		(T_0,T_{120})		(2-1)	(4-3)	(6-5)	
	N	Not Voted (NV)	Voted (V)	$\overline{\beta_{i,t}}$ NV	$\overline{\beta_{i,t}}$ V	$\overline{\beta_{i,t}}$ NV	$\overline{\beta_{i,t}}$ V	$\overline{D\beta_{i,t}}$ in (T_{-120},T_0)	$\overline{D\beta_{i,t}}$ in (T_0,T_{120})	$\overline{D\beta_{i,t}}$ Change	T-Test
1.Equality and Diversity	1,320	678	642	1.096	1.063	1.051	1.044	-0.033	-0.007	0.026***	(4.955)
2.Ethical Concerns	1,536	780	756	0.93	0.771	0.893	0.756	-0.159	-0.137	0.022***	(4.054)
3.Human Rights	1,971	1,196	775	1.005	1.063	0.981	1.019	0.057	0.038	-0.019***	(-3.942)
4.Lobbying-Disclosures	630	282	348	0.98	1.009	0.941	0.98	0.029	0.039	0.010	(1.506)
5.Sustainability	546	282	264	1.187	0.789	1.077	0.727	-0.397	-0.35	0.047***	(5.081)
6.Environmental	1,758	972	786	0.996	0.895	0.984	0.86	-0.101	-0.124	-0.023***	(-5.289)
7.AnimalWelfare	323	149	174	1.144	0.953	1.065	0.939	-0.191	-0.126	0.065***	(5.814)
8.Health and Safety	540	282	258	0.800	0.765	0.744	0.753	-0.036	0.009	0.044***	(7.334)
9.Other-CSR-Reporting	246	72	174	0.865	0.734	0.814	0.702	-0.131	-0.113	0.019	(1.634)
	8,870	4,692	4,178								

***, **, * denote significance at 0.01, 0.05 and 0.10

Table 2. Time Dummy Regressions of Differences in Treynor Ratios

Panel A: Classification by Sponsor Type							
DV: $\overline{TR}_{t,Voted} - \overline{TR}_{t,NotVoted}$	Intercept	(T_0,T_{30})	(T_{31},T_{60})	(T_{61},T_{90})	(T_{91},T_{120})	F	R^2 Adj.
1.Special Interest	-0.008	0.000	0.047***	0.066***	0.072***	178.208	0.845
2.Undisclosed	0.003**	0.017***	0.025***	0.032***	0.036***	352.614	0.915
3.Religious	0.008***	0.007***	0.028***	0.027***	0.021***	133.102	0.803
4.Investment Fund	0.014***	0.000	-0.003	-0.024***	0.010**	51.456	0.608
5.Social Fund	0.003	-0.008***	-0.005*	-0.001	-0.009***	14.059	0.287
6.Pension Fund	0.007***	-0.004	-0.012***	-0.023***	-0.023***	66.994	0.670
7.Union Fund	0.000	-0.012*	-0.078***	-0.099***	-0.064***	181.763	0.848
Panel B: Classification by Proposal Type							
DV: : $\overline{TR}_{t,Voted} - \overline{TR}_{t,NotVoted}$	Intercept	(T_0,T_{30})	(T_{31},T_{60})	(T_{61},T_{90})	(T_{91},T_{120})	F	R^2 Adj.
1.Equality and Diversity	0.010***	0.020***	0.031***	0.041***	0.056***	228.076	0.875
2.Ethical Concerns	0.013***	0.021***	0.025***	0.043***	0.049***	187.986	0.852
3.Human Rights	0.000	-0.002	0.006***	0.002	0.008***	35.406	0.514
4.Lobbying-Disclosures	0.012***	-0.011**	0.011**	-0.005	0.011**	27.643	0.450
5.Sustainability	0.011***	-0.010***	-0.026***	-0.037***	-0.028***	89.633	0.732
6.Environmental	-0.001	-0.001	-0.001	-0.007***	-0.016***	71.468	0.684
7.AnimalWelfare	-0.012*	-0.007	0.024***	-0.002	-0.040***	64.160	0.660
8.Health and Safety	0.004	-0.007**	-0.012***	-0.016***	-0.027***	44.711	0.574
9.Other-CSR-Reporting	0.004	-0.017*	-0.022**	-0.073***	-0.058***	60.447	0.647

***, **, * denote significance at 0.01, 0.05 and 0.10

Figure 1. Mean Time-Varying Treynor Ratios by Sponsor Type

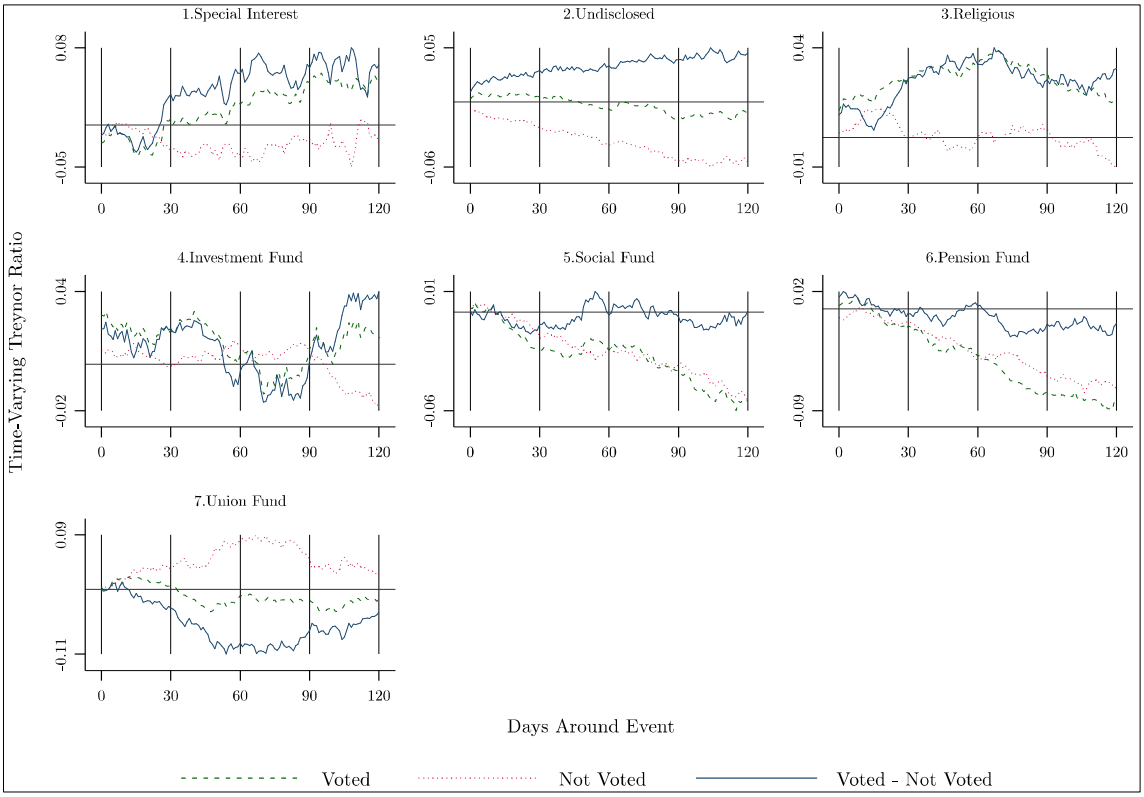
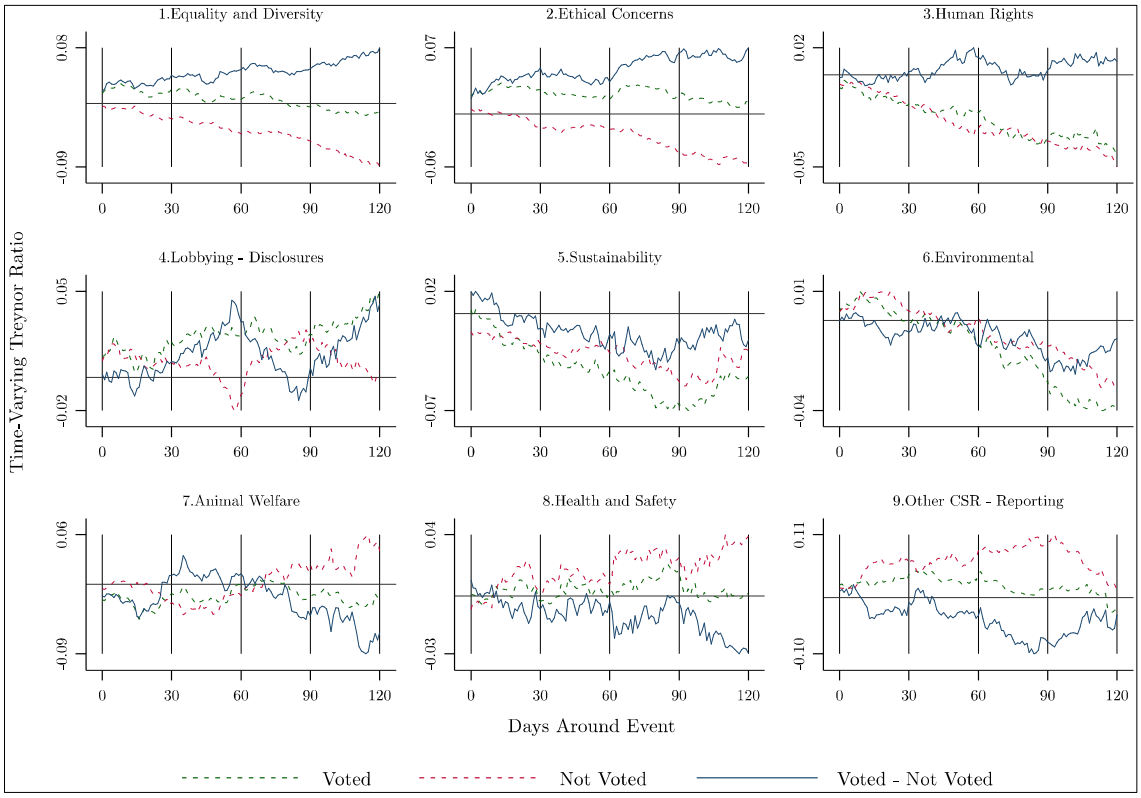


Figure 2. Mean Time-Varying Treynor Ratios by Proposal Type



References

Becchetti, L., Ciciretti, R., Hasan, I., 2015. Corporate social responsibility, stakeholder risk, and idiosyncratic volatility. J. Corp. Financ. 35, 297-309. doi:10.1016/j.jcorpfin.2015.09.007

Braun, P.A., Nelson, D.B., Sunier, A.M., 1995. Good news, bad news, volatility, and betas. J. Financ. 50(5), 1575-1603. doi:10.2307/2329327

Cuñat, V., Gine, M., Guadalupe, M. (2012). The Vote is Cast: The Effect of Corporate Governance on Shareholder Value. J. Financ. 67(5), 1943-1977. doi: 10.1111/j.1540-6261.2012.01776.x

Ferri, F., Maber, D.A., 2013. Say on pay votes and CEO compensation: Evidence from the UK. Rev. Financ. 17(2), 527-563. doi:10.1093/rof/rfs003

Flammer, C., 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. Manage. Sci. 61(11), 2549-2568. doi:10.1287/mnsc.2014.2038

Grullon, G., Michaely, R., Swaminathan, B., 2002. Are Dividend Changes a Sign of Firm Maturity? J. Bus. 75(3), 387-424. doi:10.1086/339889

Iliev, P., Lins, K.V., Miller, D.P., Roth, L., 2015. Shareholder Voting and Corporate Governance Around the World. Rev. Financ. Stud. 28(8), 2167-2202. doi:10.1093/rfs/hhv008

Jo, H., Na., H., 2012. Does CSR reduce firm risk? Evidence from controversial industry sectors. J. Bus. Ethics. 110(4), 441-456. doi:10.1007/s10551-012-1492-2

Nelson, D.B. (1991). Conditional heteroskedasticity in asset returns: a new approach. Econometrica. 59(2), 347-370. doi:10.2307/2938260