Do Corporate Controversies Help or Hurt Performance?
A Study of Three Portfolio Strategies

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Abstract

Industry researchers and practitioners have become increasingly sophisticated in determining how integrating best-in-class environmental, social, and governance (ESG) signals can impact portfolio exposures to traditional financial factors with an aim to reduce portfolio risk and produce higher risk-adjusted returns over the medium- to long-term. Similarly, the broad effects of excluding entire business lines, typical of the more traditional values-aligned socially responsible portfolio, are also generally understood. However, little research has been done on the performance implications of exclusions based on alleged corporate wrongdoing, though such exclusions are common. In this study, we investigate the risk and return impact of excluding companies involved in events negatively impacting stakeholders, testing three model portfolios with increasingly stringent criteria. Our universe for analysis consists of constituents of the MSCI World Index, which represent ~1,600 large- and mid-cap public companies in developed markets, over the sample period February 2007 through June 2017. We found that exclusions of the worst types of corporate wrongdoing had a mildly positive effect on returns but that, beyond this, as exclusions increased, so did tracking error. Returns were also negatively impacted by more sweeping exclusions. For a given level of severity, larger companies had lower stock-specific returns on average than their smaller peers. The smallest stocks with alleged wrongdoing outperformed the average MSCI World stocks of similar size, indicating that over this period smaller companies were not penalized in their stock price by the occurrence of moderate or even severe events.

Introduction

In recent years, institutional investors have increasingly directed capital to investments that take into account environmental, social, and governance (ESG) factors.[1] The dominant practices in ESG investing have typically fallen along two lines. The more traditional approach tries to align a portfolio with investors' ethical or social values by excluding companies whose business model or behavior contravene those professed values. To achieve values-alignment, portfolios are typically constructed to exclude companies involved in certain lines of business (e.g. tobacco or controversial weapons) or that have faced serious allegations of wrongdoing (e.g. human rights violations or environmental degradation). A more recent approach takes a risk or performance focus and aims to improve a portfolio's long-term risk-adjusted returns by integrating select ESG factors that could impact the risks and opportunities of portfolio companies. To achieve better long-term returns, investors typically use ESG signals in portfolio construction that are specifically aimed at capturing industry best-in-class performers, such as industry-relative ESG ratings.

Industry researchers and practitioners have become increasingly sophisticated about how integrating best-in-class ESG signals can impact portfolio exposures to traditional financial factors, such as value, quality, or volatility (e.g. Northern Trust, 2016; Melas et al., 2016). There is also a growing body of research suggesting that integrating ESG factors has historically reduced portfolio risk and produced higher risk-adjusted returns over the medium- to long-term (e.g. Nagy et al., 2016; Dunn et al., 2017; Chaudhry, 2016; Hitchens et al., 2015). Similarly, the broad effects of excluding entire business lines, typical of values-alignment methods, are also generally understood, inasmuch as this approach often leads to notable industry skews and, depending on the scope of exclusion, may hurt performance (e.g. Kacperczyk and Hong, 2009); at minimum, no performance gain is expected.

Less is known about the performance implications of incorporating exclusions based on alleged wrongdoing, though this approach is commonly deployed in real-world portfolios that profess to invest with ESG principles. In contrast to the more straightforward "best-in-class" and industry- or business-line exclusions, investors' aims for excluding companies implicated in alleged wrongdoing are often less straightforward. There are three main rationales, and individual investors often cite more than one in choosing to exclude alleged corporate wrongdoers from their investments:

1. Ethical reasons – An unwillingness to hold stocks in companies whose behavior crosses non-negotiable ethical lines.

[1] For example, signatories to the United Nations Principles for Responsible Investments has grown to number over 1,700 institutions, accounting for over US$90 trillion in assets. https://www.unpri.org/

2. Reputational risk – Concerns that holding stocks of alleged wrongdoers could harm the investor's reputation or raise uncomfortable questions from stakeholders.
3. Performance risk – A belief that companies facing allegations of serious wrongdoing may experience prolonged poor performance following the allegations and/or that such allegations indicate underlying problems at the company.

This multiplicity of rationales is driven in part by the fact that "alleged wrongdoing" comes in many flavors. These are event-based incidents, some of which may be more directly financial, such as accounting irregularities, paying bribes, or major product recalls. But often the financial impact of these events is either uncertain in scope or negligible in relation to the size of a company. Examples include labor disputes, health and safety problems, and toxic spills. The severity of wrongdoing varies as well, with a range of possible negative impacts on stakeholders. Finally, not all allegations of wrongdoing receive equal public attention or elicit equal public backlash, which could also influence the effects on a company's financials (Kölbel et al., 2017).

Companies are not a uniform category either: some may be better equipped to manage controversial events, or certain types of controversial events, than others. For example, smaller companies could have fewer resources or less capacity than larger ones to absorb negative fallout. Or, conversely, smaller companies may not attract as much public or stakeholder attention to controversial incidents as larger ones, thereby avoiding potential costs to rectify the situation or rebuild their reputation.

From the perspective of portfolio construction and performance, if the exclusion of companies involved in alleged wrongdoing is more akin to making ethics-based exclusions, or is done largely to protect the investor's reputation, we might anticipate a negative performance impact. (Though if we assume that such events are largely idiosyncratic we would not expect to see the sector biases introduced by business activity exclusions.) On the other hand, if wrongdoing presents a risk that weighs on a company's financial prospects, we would expect to see some positive portfolio performance effects from excluding such companies.

To date little research has been done to disaggregate the effects of wrongdoing-based exclusions on portfolio performance over time and to understand how these exclusions contribute to under- or out-performance.

In this paper we investigate three main questions:

1. To what extent do exclusions that are highly company specific and event-based impact the sector, country, and factor/style skews of a portfolio, i.e. result in unintended bets?
2. To what extent do these effects change with the severity of the wrongdoing?
3. Does size matter to how companies financially weather an incident of wrongdoing?

To investigate these questions, we analyzed the effects of excluding increasingly large selections of stocks based on the severity of wrongdoing in which they had been implicated. We found that exclusion of a small number of stocks involved in the most severe events had a moderately positive effect on portfolio returns over our sample period. Increasing the number of stocks excluded – expanding to include implications in less severe wrongdoing – quickly increased tracking error and led to a number of unintended systematic bets and deterioration of realized active returns. In an analysis of stock-specific performance among excluded companies, we found that smaller companies accused of wrongdoing tended to have more positive returns over the study period than larger companies with the same level of alleged wrongdoing. This suggests that smaller firms may have paid a smaller performance penalty when they got into trouble.

Data and Methods

To study the effect of excluding corporate wrongdoers, we constructed three model portfolios. We began with simple market cap-weighted portfolios based on the MSCI World Index. To each portfolio we then applied increasingly stringent exclusion criteria based on severity of wrongdoing. For this we used the MSCI ESG Controversies research. Our analysis focuses on risk and return aspects of these exclusion-based portfolios from February 2007 through June 2017.[2]

Data

MSCI ESG Controversies research defines a controversy as an incident or ongoing situation in which a company faces allegations of negatively impacting stakeholders[3] via some type of wrongdoing. While public data and media reporting are essential sources of information, the aim of ESG Controversies research is to objectively assess the severity of the negative impact of each event or situation, rather than the extent of negative press attention or public opprobrium. As such, no distinction is made in the data between incidents with

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[2] Exclusions were updated monthly based on the most recent controversy scores

[3] Depending on the nature of the controversy, relevant stakeholders may include customers, workers, communities, the environment, shareholders, or society at large. See Appendix 1 for the full list of controversy categories.

equivalent negative impact on stakeholders even if the reach or volume of reporting on those incidents is dramatically different. The emphasis of the research methodology is on accurately assessing the on-the-ground impact of the event. In addition to the sources of information that are monitored, the research process entails that companies are provided the opportunity to review controversies cases attributed to them and to provide factual updates related to each incident.

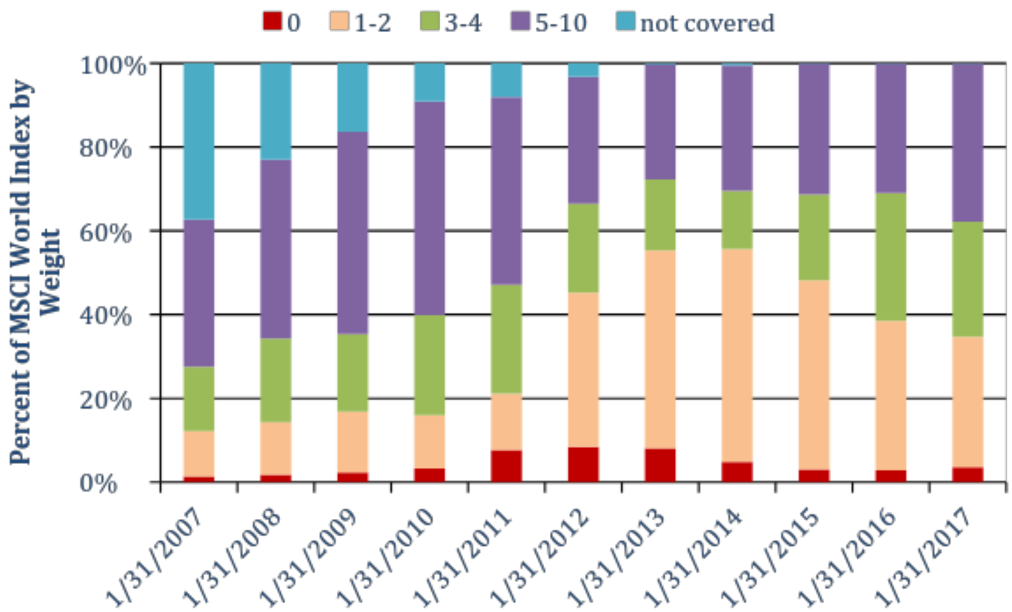
Controversies are classified as "Very Severe," "Severe," "Moderate," or "Minor" according to a rules-based matrix that gauges two dimensions of each case: the scale of the negative impact (e.g. number of injuries, size of geographic area affected, etc.) and nature of the negative impact (e.g. death or irreparable damage versus minor procedural failing, etc.). The severity assessment is accompanied by an assessment of whether the case is ongoing or concluded, and whether it represents a structural failing at the company. A 0-9 score is derived formulaically from these factors with the score of 10 being reserved for instances where there is no wrongdoing alleged. A company's overall score, which we used as the exclusion criteria in portfolio construction, is determined by its most severe case. The overall score for a company is hence driven by the lowest score associated with any case and is not affected by multiple cases of varying severity (see Appendix 1 for the category list).

Sources are monitored continuously and consist of government databases (e.g. U.S. Environmental Protection Agency, Food & Drug Administration, and equivalent agencies in other countries), NGOs (e.g. Amnesty International, Natural Resources Defense Council), and thousands of news media sources in several languages spanning the globe, all of them vetted for reliability. Controversies are logged and assessed when they first appear in any of the monitored public information sources. They are subsequently updated as additional information becomes available. They can remain active for several years depending on how they develop and whether and how they are resolved. The intent of the data set is to identify and track situations where wrongdoing is alleged and then provide an objective and consistent assessment of how serious the negative impact is.

New information about an instance of alleged wrongdoing may result in a change in the assessment and consequently the score. If the death toll in a factory accident grows larger in the days or weeks following the initial report of the event, the severity assessment could be changed, for example, from Moderate to Severe. Similarly, new information indicating high-level executive involvement in a controversy could shift the assessment. And finally, as lawsuits are settled or situations resolved, the status of a case may change from ongoing to concluded, also affecting the score. Changes in the scores are published daily.

Figure 1 shows the weight of various score segments in the MSCI World Index over the study period. The most severe cases represented less than 10% of the index market capitalization throughout the sample period, hitting a peak around 2012 and 2013. Expanding the criteria to more moderate cases (represented by scores of 0-4) captures a much larger portion of the universe: starting with roughly 30% weight, this group also reached a peak in 2012 around 70%.

Figure 1: Weight Distribution of MSCI World Index Controversy Scores, February 2007-June 2017



Increasing coverage of the MSCI World Index over the 2007-2012 period caused these shifts in score distribution. As companies with no controversy scores were added to coverage, some of them began to appear in groups identified for exclusion in this study. In the later years of the study period, wider availability of information and increased methodological formalization also contributed to shifts in score distributions.

Model Portfolios

We constructed three controversy groups, starting by identifying companies with the most extreme ESG controversies in the MSCI World Index and successively adding stocks implicated in less severe events. We created the corresponding three model portfolios by excluding these groups from the MSCI World Index to test the effect of such exclusions at varying thresholds. We rebalanced the portfolios monthly, excluding newly disqualified stocks and re-adding any that became qualified due to controversy case updates, as well as adjusting for MSCI World Index quarterly rebalances. Monthly portfolio rebalancing is a common practice among investors applying exclusion rules. Between the time required for MSCI ESG Controversies to assess a new event and the monthly rebalancing frequency, the portfolios were unlikely to capture any instantaneous stock price movements when a new incident was reported publicly. A newly disqualified stock could potentially remain in the portfolio for almost a month; likewise, newly qualifying stocks could remain excluded during the same timeframe. The performance effects captured by our analysis would typically be over a longer time period.

Portfolio 1: World ex Worst

In the first model portfolio we took a very conservative approach to the screening process, maximizing the remaining opportunity set by excluding only a small set of companies that were involved in the worst types of alleged wrongdoing – typically either massive scandals or incidents representing gross violations of global norms around human rights, environmental protection, and so on. These corresponded to companies with an ESG Controversies score of 0 and assessment of "Very Severe."

The investment hypothesis behind this approach would be that allegations of corporate bad behavior are so common as to be expected and that only a handful of truly egregious cases would noticeably impact financials or draw public attention sufficient to hurt the investor. From an ethical standpoint, the position of this approach would be one of compliance with minimal standards, such as those set out by the United Nations Global Compact.[4]

Examples of companies excluded from this portfolio at various points throughout our sample period:

- Tokyo Electric Power (Tepco): Tepco was assessed "Very Severe" for environmental, community, and workforce impacts following the devastation of its Fukushima nuclear power facility in 2011. As of end of June 2017, the workforce case had been upgraded because the company addressed working conditions with excessive radiation exposure. The environmental case remained "Very Severe" as the area surrounding the nuclear facility remained environmentally damaged and 1,500 spent nuclear fuel rods continued to threaten further radiation leaks. The community impact case also remained "Very Severe" as the area surrounding the facility was still unsafe to inhabit. More than 2,000 people died early deaths either from radiation exposures or other impacts associated with trauma and evacuation.

[4] https://www.unglobalcompact.org/what-is-gc/mission/principles

- BP PLC: BP was assessed "Very Severe" in 2010 after the Deepwater Horizon oil spill in the Gulf of Mexico, which followed years of inadequate safety management. The spill released 3.2 million barrels of oil into the Gulf over 87 days before it was stopped, constituting the largest offshore oil spill in U.S. history. The case was upgraded in 2016 after a U.S. federal judge approved a US$20 billion settlement that provided adequate funding for the remaining cleanup; the company had already completed substantial cleanup activities and settled with thousands of government and business entities.

Portfolio 2: World ex Severe

In the World ex Severe model portfolio, we excluded the most egregious cases ("Worst") plus an additional set of companies facing incidents or allegations of wrongdoing more serious than most. These exclusions corresponded to companies with an MSCI ESG Controversies score of 0-2.

The investment hypothesis behind this approach would be that headline risk matters in any serious case of alleged wrongdoing, but that garden-variety negative news is still just noise. From an ethical or reputational perspective, this approach would represent a compromise: an attempt to maintain a reasonable opportunity set while avoiding association with any significant wrongdoing.

In addition to the stocks with "Very Severe" cases excluded in the World ex Worst portfolio, examples of companies excluded from the World ex Severe portfolio at various points throughout our sample period include:

- Carnival Corp.: In addition to being excluded from 2012-2015 with a score of 0 related to a cruise ship crash that killed 32 people, Carnival was excluded from the ex-Severe portfolio again in late 2016 with a "Severe" case upon pleading guilty to criminal charges that it intentionally used bypass equipment to illegally discharge waste into the sea off the U.S. and UK coasts over the course of ten years.

- Rio Tinto PLC: Rio Tinto has long been assessed "Severe" in connection with its 40% ownership stake in the Grasberg Mine in Papua, Indonesia. (Freeport-McMoran owns the other 60% and has been assessed "Very Severe" because of its direct controlling relationship with the mine. It was likewise excluded from this portfolio.) The mine, through its financial support for Indonesian security forces, is alleged to be complicit in killings, torture, rape, and other human rights violations. Rio Tinto is also assessed "Severe" for the exceptional environmental damage inflicted by the riverine tailings disposal (RTD) used by the Grasberg mine (Freeport-McMoran is again assessed "Very Severe" for this case.)

Portfolio 3: World ex Moderate

Finally, to test the effects of extensive wrongdoing-based exclusions, we constructed the World ex Moderate portfolio, which excluded all of the companies excluded by the World ex Severe portfolio plus companies implicated in what might be thought of as garden-variety negative incidents or allegations regarding environmental, social, or governance issues. These exclusions corresponded to companies with MSCI ESG Controversies scores of 0-4.

The investment hypothesis behind this approach would be that any such incident could have the potential for negative financial impacts or be indicative of poor management. From an ethical perspective, an investor seeking to hold only "good" companies that avoid trouble might apply such a broad-brush approach.

In addition to the companies excluded because of "Very Severe" and "Severe" events, the World ex Moderate portfolio also excluded companies with allegations of "Moderate" wrongdoing such as:

- Alphabet: The company formerly known as Google has been implicated in numerous "Moderate" cases in the last few years. These include allegations of anti-competitive behavior dating back to at least 2011, typically alleging that the company has privileged its own services in search results; numerous allegations of privacy and data security violations related to data tracking as well as security flaws; allegations that the company has paid its female employees substantially less than male employees; and numerous allegations of tax evasion in several jurisdictions.

- Marks and Spencer Group: M&S has faced "Moderate" allegations related to working conditions in its supply chain. There were recent allegations of poor working conditions for Syrian refugees in Turkish garment factories supplying the company as well as older allegations regarding working conditions in supplier factors in Cambodia and Bangladesh.

Controversy Group Characteristics

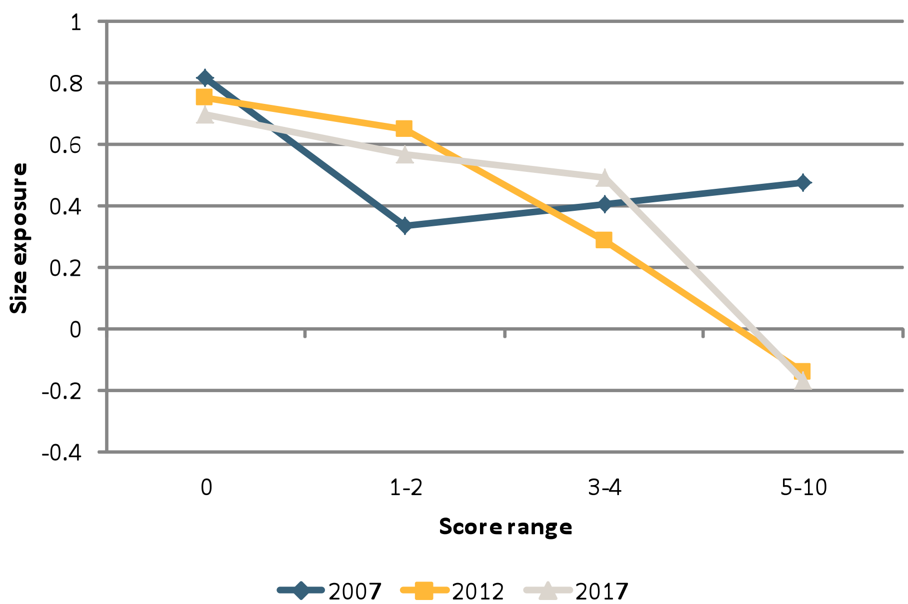
In the following section, we briefly look at some characteristics of these groups.

First, we find a link between the size of the company and the probability of being implicated in a more or less severe event.

Figure 2 plots the size exposure[5] of groups of stocks against the MSCI ESG Controversies scores, showing the ranges used in the construction of the model portfolios. Larger stocks tended to be implicated in more severe wrongdoing, and as the case severity decreased, the size of the corresponding companies also decreased. This may be because larger companies have more capacity to do damage via a larger footprint or because incidents involving larger companies are more likely to be reported.

Figure 2: Size Exposures of Stocks Against Controversy Score Ranges

Size exposure is a z-score. That is, it expresses how many standard deviations away the company's market capitalization is from the weighted average. The weighted average market capitalization of MSCI World Index constituents at the end of June 2017 was approximately $118 bn, and the standard deviation was approximately $50 bn.



Second, we analyzed potential linkages between alleged wrongdoing and sector. Tables 1-3 describe the composition of the excluded group of companies for each of the three portfolios, by year.

[5] We use the Global Total Market Equity Model to calculate portfolio exposures. The Size exposure of the model is directly related to the size of the company, more positive values corresponding to larger companies.

Table 1: Sector Distribution of “Worst” Companies

For each year, the chart shows the fraction of companies in each sector among all the excluded companies. The average proportion of each sector among the entire MSCI World Index is displayed at the bottom; these ratios remained roughly stable from year to year.

year	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	IT	Telecom	Utilities	Total %	Total Number
2007	16.7%			33.3%	50.0%						100%	6
2008	11.1%		11.1%	22.2%	55.6%						100%	9
2009	11.1%	11.1%	22.2%		44.4%		11.1%				100%	9
2010	7.1%	21.4%	21.4%	7.1%	28.6%	14.3%					100%	14
2011	20.0%	24.0%	12.0%	4.0%	16.0%	12.0%	4.0%	8.0%			100%	25
2012	20.7%	24.1%	10.3%	10.3%	10.3%	10.3%	3.4%	6.9%		3.4%	100%	29
2013	23.3%	23.3%	10.0%	16.7%	6.7%	10.0%	6.7%			3.3%	100%	30
2014	36.4%	22.7%	4.5%	13.6%	4.5%	13.6%				4.5%	100%	22
2015	31.6%	36.8%		15.8%	5.3%					10.5%	100%	19
2016	28.6%	33.3%	4.8%	19.0%	4.8%					9.5%	100%	21
2017	26.3%	26.3%	5.3%	21.1%	5.3%		5.3%			10.5%	100%	19
Average over time	**21.2%**	**20.3%**	**9.2%**	**14.8%**	**21.0%**	**5.5%**	**2.8%**	**1.4%**	**0.0%**	**3.8%**	100%	18
MSCI World average	**6.7%**	**8.9%**	**16.1%**	**15.6%**	**7.4%**	**7.2%**	**20.9%**	**9.4%**	**2.8%**	**5.0%**	100%	1693

As evident in Table 1, “Very Severe” cases did not occur in all sectors equally during the study period. They historically occurred more frequently in sectors whose operations had the most intensive effects on the environment and surrounding communities – namely Energy and Materials. Consumer Staples occurred frequently too, given product safety issues. No “Very Severe” cases occurred in the Telecom sector. The IT and Financials sectors were less frequently implicated.

Table 2: Sector Distribution of "Severe or Worse" Companies

For each year, the chart shows the fraction of companies in each sector among all the excluded companies. The average proportion of each sector among the entire MSCI World Index is displayed at the bottom; these ratios remain roughly stable from year to year.

year	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	IT	Telecom	Utilities	Total %	Total Number
2007	6.7%	4.1%	15.0%	21.2%	10.9%	2.1%	25.4%	9.8%		4.7%	100%	193
2008	7.9%	4.6%	16.2%	20.8%	12.0%	2.3%	22.7%	8.8%		4.6%	100%	216
2009	10.9%	6.3%	17.6%	17.2%	9.0%	3.2%	22.6%	9.5%		3.6%	100%	221
2010	11.9%	8.6%	21.3%	13.1%	9.4%	4.5%	19.7%	7.8%		3.7%	100%	244
2011	10.4%	8.4%	22.8%	13.6%	9.6%	5.6%	19.6%	6.8%	0.4%	2.8%	100%	250
2012	8.1%	13.8%	18.8%	10.8%	8.5%	10.4%	10.4%	8.8%	2.7%	7.7%	100%	260
2013	8.6%	11.3%	20.6%	14.5%	11.3%	8.3%	12.3%	6.4%	1.7%	5.1%	100%	408
2014	11.8%	10.5%	16.5%	12.5%	12.0%	8.8%	13.5%	4.8%	2.5%	7.0%	100%	399
2015	11.3%	12.2%	14.5%	12.8%	13.6%	9.3%	13.6%	4.1%	2.9%	5.8%	100%	345
2016	8.4%	10.5%	15.5%	16.2%	15.2%	10.8%	12.5%	2.0%	2.7%	6.1%	100%	296
2017	7.4%	13.2%	13.6%	13.6%	14.5%	12.4%	14.5%	2.5%	2.5%	5.8%	100%	242
Average over time	9.4%	9.4%	17.5%	15.1%	11.5%	7.1%	17.0%	6.5%	1.4%	5.2%	100%	279
MSCI World average	6.7%	8.9%	16.1%	15.6%	7.4%	7.2%	20.9%	9.4%	2.8%	5.0%	100%	1693

Including less severe events, (score 0-2) leads to a more even distribution by sector. The Energy and Consumer Staples sectors were still overrepresented among "Severe" events, whereas the Telecom and IT sectors were the most underrepresented.

Table 3: Sector Distribution of "Moderate or Worse" Companies

For each year, the chart shows the fraction of companies in each sector among all the excluded companies. The average proportion of each sector among the entire MSCI World Index is displayed at the bottom; these ratios remain roughly stable from year to year.

year	Energy	Materials	Industrials	Consumer Discretionary	Consumer Staples	Health Care	Financials	IT	Telecom	Utilities	Total %	Total Number
2007	7.2%	14.4%	16.8%	18.1%	8.7%	5.2%	17.1%	7.4%	0.2%	5.0%	100%	404
2008	8.6%	14.2%	18.0%	17.4%	9.4%	5.2%	15.7%	6.4%	0.4%	4.7%	100%	466
2009	8.7%	11.0%	18.4%	17.2%	8.9%	4.9%	17.2%	8.1%	0.4%	5.3%	100%	472
2010	9.3%	10.8%	20.8%	14.2%	9.0%	5.9%	17.2%	6.8%	0.3%	5.7%	100%	592
2011	9.8%	11.2%	20.7%	14.4%	9.5%	5.8%	17.4%	6.2%	0.5%	4.7%	100%	634
2012	9.3%	13.0%	17.7%	14.2%	8.2%	8.2%	12.1%	6.7%	3.9%	6.8%	100%	571
2013	8.7%	11.4%	18.5%	15.5%	10.2%	8.6%	12.0%	5.2%	2.9%	7.2%	100%	699
2014	11.6%	9.4%	16.9%	15.3%	11.4%	7.6%	13.1%	4.5%	2.9%	7.4%	100%	649
2015	12.0%	10.0%	16.7%	14.9%	10.6%	8.1%	13.2%	4.8%	3.1%	6.6%	100%	651
2016	9.3%	10.5%	16.1%	16.3%	11.0%	9.0%	14.8%	4.0%	3.0%	6.1%	100%	657
2017	5.4%	10.5%	15.9%	17.3%	11.3%	9.6%	14.6%	6.9%	3.6%	4.9%	100%	533
Average over time	**9.1%**	**11.5%**	**17.9%**	**15.9%**	**9.8%**	**7.1%**	**14.9%**	**6.1%**	**1.9%**	**5.9%**	100%	575
MSCI World average	**6.7%**	**8.9%**	**16.1%**	**15.6%**	**7.4%**	**7.2%**	**20.9%**	**9.4%**	**2.8%**	**5.0%**	100%	1693

Finally, if we take into account "Moderate" and worse events (score 0-4), the distribution again becomes more uneven. The Energy sector remained the most overrepresented, and the IT sector was the most underrepresented relative to its representation among index constituents.

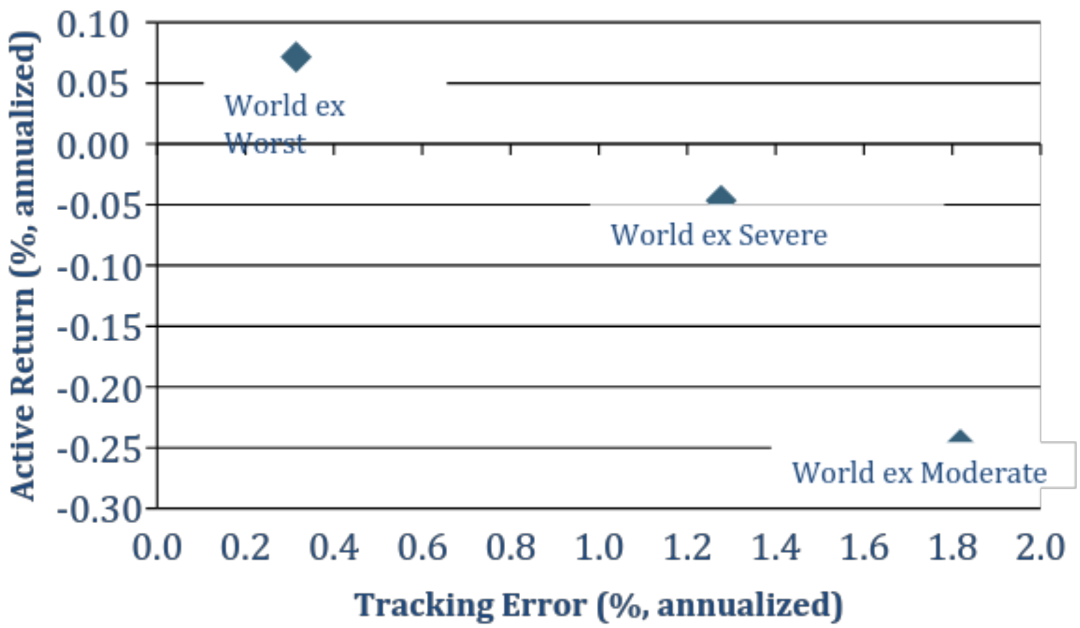
Overall, we see that, historically, certain sectors were overrepresented among companies with alleged wrongdoings, even though the controversy analysis process included no explicit sector biases. This indicates that certain sectors may have been more inclined by their nature to undertake activities with potential harmful impacts on the environment, stakeholders, or public at large – especially for very severe cases. The investment implication is that even if controversy-focused investors do not have a sector-based exclusion approach in mind at the outset, the portfolio they build can nevertheless end up having a sector tilt.

Exclusion Effects

Our analysis focuses on risk and return aspects of these exclusion-based portfolios from February 2007 through June 2017. First, at the high level, we look at the relationship between the tracking error and the active return relative to the MSCI World Index. Not surprisingly, the realized tracking error increased with the weight of excluded stocks, from 0.3% for the World ex Worst portfolio to 1.8% for the World ex Moderate portfolio. Second, we found that the exclusion of the most severe controversies led to a mild outperformance of the portfolio, but screening out more moderate infractions put a drag on performance.

Figure 3: Tracking Error and Active Return of Model Portfolios Relative to MSCI World, Feb 2007 – June 2017

These results reflect monthly rebalancing of the portfolios to exclude newly disqualified stocks and include newly qualified stocks.



What drove the differences in portfolio returns? As Table 4 shows, returns can come from two sources: either systematic tilts or asset-specific contributions.

Table 4: High-level Performance Attribution of Screened Portfolios, Feb 2007 – June 2017

Return Source (%)	World ex Worst	World ex Severe	World ex Moderate
Total Active	**0.07**	**-0.05**	**-0.25**
Style	0.01	0.03	0.04
Industry	0.03	0.07	-0.03
Country	0.00	-0.04	-0.01
Currency	0.00	-0.13	-0.12
Specific	0.03	0.03	-0.13

Systematic Effects

We look at some of the systematic effects in the most risky portfolio: World ex Moderate. Style exposures provide a good illustration of the unintended bets that a portfolio can take after excluding a large number of stocks. In this particular case, the resulting contributions were positive overall, but further analysis reveals that many of the style factor bets actually detracted from performance. On the plus side, after exclusion, there was a pronounced tilt towards the smaller companies in the benchmark universe (cf. **Figure 2** and Table 5). This is visible in the positive Mid Capitalization and negative Size exposures, which resulted in a 26 bps positive contribution. The lower Residual Volatility of the portfolio also added 18 bps to return. The portfolio was also somewhat tilted towards higher price momentum stocks, which added 20 bps.

Offsetting the positive contributions, the portfolio had a tilt toward lower dividend yield, lower investment quality, and higher liquidity stocks, which collectively subtracted 35 bps from performance overall. The total contribution from style factors reached 4 bps.

Table 5: Style factor contributions to the World ex Moderate Portfolio Active Performance Relative to MSCI World, Feb 2007 – June 2017

World ex Moderate	**Average active exposure**	**Annualized Contribution**
Momentum	0.02	0.20%
Mid Capitalization	0.23	0.18%
Residual Volatility	-0.05	0.18%
Size	-0.30	0.06%
Growth	0.06	0.04%
Long-Term Reversal	-0.03	0.03%
Earnings Variability	0.02	-0.01%
Earnings Quality	-0.06	-0.03%
Profitability	-0.01	-0.03%
Book-to-Price	-0.04	-0.05%
Beta	0.02	-0.05%
Leverage	-0.02	-0.05%
Earnings Yield	-0.11	-0.07%
Dividend Yield	-0.11	-0.10%
Investment Quality	-0.07	-0.10%
Liquidity	0.10	-0.15%

Unintended currency bets also collectively detracted 13 bps from the World ex Moderate portfolio's performance, and, as such, were responsible for half of the underperformance. As Table 6 shows, the portfolio had a small positive tilt on the Japanese Yen, which alone was responsible for a 17 bps drag on portfolio performance. Other currency tilts had much smaller individual effects.

Table 6: Top/bottom Three Currency Factor Contributions to the World ex Moderate Portfolio Active Performance Relative to MSCI World, Feb 2007 – June 2017

World ex Moderate	Average active exposure	Annualized Contribution
Japan	0.05	-0.17%
United States	-0.07	-0.06%
Sweden	0.01	-0.01%
Switzerland	-0.01	0.02%
Hong Kong	0.01	0.02%
Australia	0.01	0.08%

Again, based on these historical observations, we can draw similar conclusions: the portfolios created by excluding controversial stocks did not target any style or country bias, but ended up having them nevertheless, with important contributions sometimes arising from them.

Stock-Specific Effects

Besides systematic effects, stock-specific contributions can also be an important part of portfolio performance. As Table 4 shows, while net stock-specific contributions for the full ten-year period were mildly positive when excluding only the most severe cases of alleged wrongdoing, they deteriorated as exclusions were extended to include less-severe events.

At first glance, this indicates that, historically, stocks with the most severe cases underperformed their peers, but stocks with a lower level of severity rather, were outperformers. However, this conclusion demands more nuanced consideration, as the effect of monthly rebalancing is not clearly visible. It is possible that both gross and less-severe alleged wrongdoing tended to cause negative price effects, with the effects from more serious cases lasting longer. If that were true, the negative price impact of very severe cases can be more easily avoided in portfolios with monthly rebalancing, whereas a more frequent – and also more costly – rebalancing maybe needed to avoid the negative price effect of less severe cases. Further research is needed to shed more light on this question.

So far, we have been talking about the three groups of excluded companies as if they formed a homogeneous entity. But was the stock price reaction uniform among stocks with similar level of controversies, or was there something differentiating them?

Figure 4: Average Stock-specific Return Contribution Relative to Size for Companies with Events of the Same Severity

The chart illustrates the relationship between size and stock specific returns for companies involved in negative incidents of the same severity for the period Feb 2007 – June 2017. All stocks meeting criteria for exclusion from the World ex Severe and World ex Moderate portfolios were sorted monthly by Size exposure and divided into four equally weighted quartile sample portfolios whose performance is evaluated over the sample period.

Size exposure is a z-score. That is, it expresses how many standard deviations away the company's market capitalization is from the weighted average. The weighted average market capitalization of MSCI World Index constituents at the end of June 2017 was approximately $118 bn, and the standard deviation was approximately $50 bn.

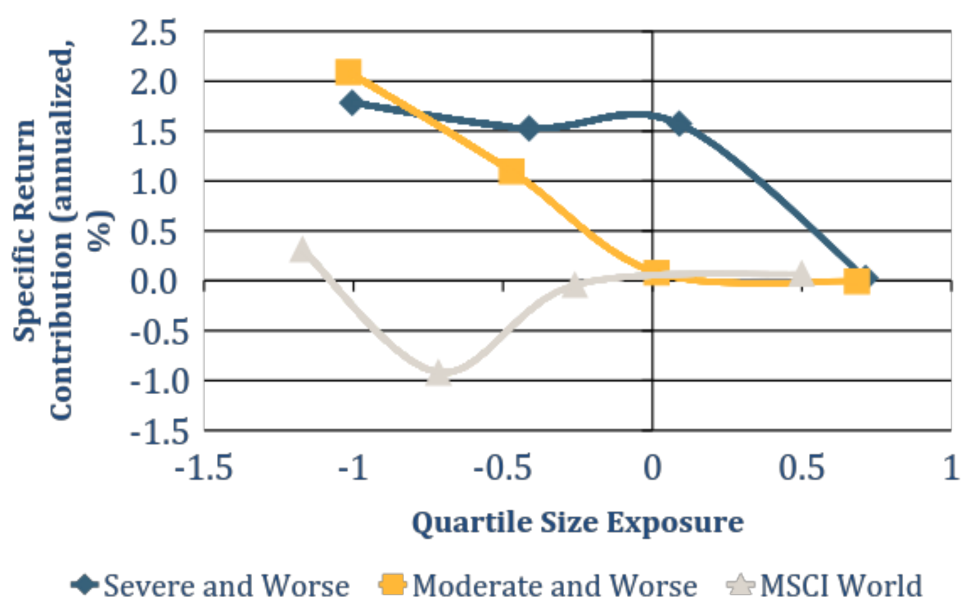


Figure 4 reveals an interesting trend. For a given level of severity, larger companies had lower stock-specific returns on average than their smaller peers. The smallest stocks with alleged wrongdoing outperformed the average MSCI World stocks of similar size, indicating that, over this period, smaller companies were not penalized in their stock price by the occurrence of moderate, or even severe, events.

The finding that large companies seem to be penalized by the market more than small companies for alleged wrongdoing could be due to a number of factors. One reason could be that market reactions to these incidents are mediated through media coverage, and media treatment of larger companies may differ from coverage of smaller companies. Previous research focused purely on the intensity and reach of media coverage, as opposed to the nature and impact of the incidents themselves. This suggests that media of greater reach had a larger negative financial impact (Kölbel et al., 2017). It is possible that for an incident of given severity or "true" on-the-ground impact on stakeholders, larger companies may attract more media coverage from outlets with greater reach; even fairly serious issues associated with smaller companies may not result in much press.

Another reason could be that companies of different size may have different reputations for corporate social responsibility (CSR). Previous research has suggested that CSR activities may act as a protective shield, or a form of insurance, against shocks from negative events. Following this line of argument, companies with stronger CSR reputation would be better positioned to absorb negative events (Godfrey, 2005; Godfrey et al., 2009). The prevailing research has suggested, however, that larger companies rather than smaller companies tend to undertake more CSR activities of the variety that academic researchers have used in these studies. Hence, our findings would run counter to this line of reasoning.

Research indicating that companies with both the strongest CSR reputations and weakest CSR reputations tended to attract greater media scrutiny suggests a more nuanced explanation (Luo et al., 2012). It is possible that larger companies occupy both ends of the spectrum: they have more resources to invest in enhancing their CSR reputation and have larger footprints that can lead to larger negative impacts. Occupying the extreme ends of CSR reputation could mean that they attract more intensive and wider media coverage when negative events occur.

The current dataset measures the level of impact or harm to stakeholders of each single incident, rather than the level or nature of media attention to any given incident. Further studies would first need to establish the relationship between an incident and its media coverage, and then between how differences in coverage might mediate how incidents translate into market reactions.

Conclusion

Our findings suggest a number of practical implications for investors.

Exclusions based on alleged wrongdoing are a blunt instrument. As our exclusion criteria became more stringent, portfolio tracking error increased without necessarily leading to outperformance. Unintended systematic bets and negative stock-specific contributions seemingly caused this. However, our analysis indicates that excluding only a handful of the worst offenders did not significantly impact the model portfolios' risk or returns.

Our analysis also suggests that events with severe negative stakeholder impacts may not (or may not always) hurt a company's returns. While existing literature would suggest that larger companies with greater resources to manage stakeholder relationships could better absorb negative events, our findings suggest otherwise. In fact, larger companies seemed to suffer more than smaller companies from involvement in incidents with negative stakeholder impact. It is possible that the negativity of media coverage rather than the negativity of the actual impact more directly affects company returns.

As indicated in the introduction, institutional investors have varied, and sometimes multiple, reasons for excluding corporate wrongdoers from their portfolios. They may implement this type of exclusion in order to: (1) withhold capital from companies that contravene their ethical standards or established global norms; (2) protect the investor's own reputation by avoiding investments associated with corporate wrongdoing; and/or (3) mitigate financial risks that may result from corporate wrongdoing, such as penalties or revenue loss.

For investors that aim to meet a minimal ethical standard, our analysis indicates that excluding only the worst offenders from a portfolio would allow them to meet this objective while retaining close to the full market opportunity set. As of May 2017, holding a hypothetical MSCI World ex Worst portfolio would mean that investors would avoid stocks like Freeport-McMoran, BHP Billiton, and Saipem, which violated the Global Compact on issues ranging from environmental pollution to community destruction to large scale corruption.

For investors that aim to protect their reputations, excluding the worst offenders is a critical starting point, as these companies are associated with the most severe negative stakeholder impacts. Such a portfolio, however, would still contain companies implicated in "Severe" controversies. Carnival and Rio Tinto, for example, remained in the World ex Worst portfolio. Investors with higher reputational sensitivities should be aware that excluding a broader set of companies implicated in less-severe controversies did appear to incur a cost in both unintended bets and stock-specific returns. It bears noting that for investors with higher reputational sensitivities, the proliferation of information and news alert functionalities may seem to suit the purposes of avoiding association with poor press coverage. However, implementing exclusions based on the growing flow of news could quickly increase portfolio tracking error, as well as run the risk of excluding both false positives (negative news event that later prove to have no grounding) and false negatives (incidents that do not initially attract press coverage but in fact have large negative stakeholder impact).

Finally, for investors who aim to mitigate financial risks, our analysis suggests that purely excluding corporate wrongdoers is too blunt an approach. While allegations of corporate wrongdoing may sometimes connect to negative reputational and financial impact, the relationship does not appear to be universal. Company size, type of controversy (labor rights versus toxic spills versus bribery), and nature of media coverage may all play mediating effects that are not well understood. Additionally, allegations of wrongdoing are single events and ignore the industry and organizational contexts that can differentiate companies' capacity to rectify the negative stakeholder impact or mitigate the financial impact. A more holistic view of companies' risk management capacity is likely more effective for capturing potential financial impact from single negative events.

As allocations to ESG-related investments continue to grow, investors have become increasingly sophisticated, differentiated, and nuanced in the objectives they aim to achieve and the tools they use to implement their objectives. This study contributes to the growing literature on the performance implications of integrating ESG factors in portfolio construction. Whereas industry research in recent years has focused on taking a risk-based approach to integrating ESG factors, no research to date has explored the performance implications of the widely used approach in portfolio construction of excluding stocks implicated in harming stakeholders. This paper makes a first attempt to understand whether the implications of controversies-based exclusions are more akin to ethically based exclusions or to risk-based approaches. Our findings suggest the former. Investors should be cautious about making exclusions beyond the handful of worst offenders, given the potential impact on portfolio performance from unintended bets and uncontrolled stock-specific impacts.

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Appendix 1: List of MSCI ESG Controversies Categories

Sub-Pillar	PERFORMANCE INDICATORS
ENVIRONMENT	• Biodiversity & Land Use • Toxic Emissions & Waste • Energy & Climate Change • Water Stress • Operational Waste (Non-Hazardous) • Supply Chain Management • Other
CUSTOMERS	• Anticompetitive Practices • Customer Relations • Privacy & Data Security • Marketing & Advertising • Product Safety & Quality • Other
HUMAN RIGHTS & COMMUNITY	• Impact on Local Communities • Human Rights Concerns • Civil Liberties • Other
LABOR RIGHTS & SUPPLY CHAIN	• Labor Management Relations • Health & Safety • Collective Bargaining & Union • Discrimination & Workforce Diversity • Child Labor • Supply Chain Labor Standards • Other
GOVERNANCE	• Bribery & Fraud • Governance Structures • Controversial Investments • Other

Environment

Biodiversity & Land Use: This indicator measures the severity of controversies related to a company's use or management of natural resources where there is an alleged or anticipated negative impact on the environment, especially in ecologically sensitive areas. Topics covered under this indicator include issues such as species loss, reduction in biodiversity, habitat damage, depletion of or competition for natural resources, loss of economic value (for example, in fisheries or tourism), as well as post-consumer waste issues. Biodiversity impacts primarily caused by toxic releases are captured under the Toxic Emissions & Waste key performance indicator (KPI). Competition for water resources and controversies regarding water usage are captured under the Water Stress KPI. When there is a substantial impact on a local community that results from an environmental controversy classified under Biodiversity & Land Use, an additional controversy case is logged and assessed under the Impact on Communities KPI in the Human Rights & Communities sub-pillar; the assessment in that case is based on the impact on the community rather than the environmental impact.

Toxic Emissions & Waste: This indicator measures the severity of controversies related to a firm's operational non-GHG emissions or releases to land, air, and/or water. This includes controversies related to accidental spills or releases as well as the environmental impacts of standard operational emissions, whether within or in exceedance of levels allowed by permit. When there is a substantial impact on a local community that results from an environmental controversy classified under Toxic Emissions & Waste, an additional controversy case is logged and assessed under the Impact on Communities KPI in the Human Rights & Communities sub-pillar; the assessment in that case is based on the impact on the community rather than the environmental impact.

Energy & Climate Change: This indicator measures the severity of controversies related to a firm's climate change and energy-related impacts. Issues covered include, for example, lawsuits over a company's alleged contribution to climate change, public controversy or criticism of a company's contribution to climate change, or status as an exceptionally large emitter of GHGs, as well as resistance to calls for improvement.

Water Stress: This indicator measures the severity of controversies related to a firm's water management practices. Issues covered include, for example, ecological damage resulting from water withdrawals, depletion of water resources for other users, and regulatory action or community disputes regarding the company's water usage. This indicator does not capture water pollution cases, which are covered under the Toxic Emissions & Waste KPI. When there is a substantial economic impact on a local community that results from an environmental controversy classified under Water Stress, an additional controversy case is logged and assessed under the Impact on Communities KPI in the Human Rights & Communities sub-pillar; the assessment in that case is based on the impact on the community rather than the environmental impact.

Operational Waste (Non-Hazardous): This indicator measures the severity of controversies related to the impact of a firm's non-hazardous, non-toxic operational waste, meaning waste, emissions, or effluents produced through normal operations and/or as part of the production of a product. Controversies related to toxic and hazardous waste emitted to air, land, or water are captured under the Toxic Emissions & Waste KPI. Controversies related to post-consumer waste are captured under Biodiversity & Land Use.

Supply Chain Management: This indicator measures controversies related to the sourcing raw materials or other inputs that have a substantial negative environmental impact. Issues covered include, for example, degradation of natural resources through use of raw materials that are resource intensive and/or waste intensive, including tropical hardwoods, palm oil, or unsustainable fisheries.

Other: This indicator measures any environmental issues that fall outside of the more targeted indicators listed above.

Social: Customers

Anticompetitive Practices: This indicator measures the severity of controversies related to a firm's anti-competitive business practices. Topics covered include, for example, price fixing, collusion, bid rigging, and predatory pricing. Business-to-business claims are generally not covered unless a regulator joins the suit. Likewise, standard pre-merger regulatory inquiries are not considered controversial.

Marketing & Advertising: This indicator measures the severity of controversies related to a firm's marketing and advertising practices. Topics covered include, for example, false or deceptive marketing or advertising, marketing of products for off-label uses, and controversies regarding the marketing of products to children or other vulnerable populations, labeling controversies, and spam or ad-ware. Controversies about known product safety issues are covered under the Product Safety & Quality KPI.

Product Safety & Quality: This indicator measures the severity of controversies related to the quality and/or safety of a firm's products and services. Topics covered include, for example, food safety, controversial media content, product recalls, service disruptions, and the use of chemicals of concern in products.

Customer Relations: This indicator measures the severity of controversies related to how a firm treats its customers or potential customers. Topics covered include, for example, fraudulent or improper billing, excessive or hidden fees, predatory financial products, and restricted or discriminatory access to products or services.

Privacy & Data Security: This indicator measures the severity of controversies related to a firm's privacy and data security practices. Issues covered include, for example, controversial legal uses of personal data, security breaches, regulatory action against the company related to these, and changes to a company's policies or practices that erode customer privacy. Privacy issues affecting employees are captured under the Labor Management KPI in the Labor & Supply Chain sub-pillar. Government surveillance and related issues are captured under the Civil Liberties KPI in the Human Rights & Communities sub-pillar.

Other: This indicator measures any customer issues that fall outside of the more targeted indicators listed above.

Social: Human Rights & Community

Impact on Communities: This indicator measures the severity of controversies related to a firm's interactions with communities in which it does business. Topics covered include, for example, land use disputes, negative economic impacts resulting from environmental damage or the presence of company operations, disputes over access to economic opportunities or jobs, impacts of facility closures, and disputes over access to clean water, clean air, or other natural resources. Controversies that are primarily about environmental impact are classified under the appropriate Environment pillar KPI (e.g. Biodiversity & Land Use, Toxic Emissions & Waste). A case in which there are substantial environmental impacts in addition to community impacts may be logged and assessed under and environmental KPI as well as under Impact on Communities.

Civil Liberties: This indicator measures the severity of controversies related to the impact of a firm's operations on civil liberties. Topics covered include, for example, cooperation with repressive governments requiring censorship, conducting surveillance, or limitations on other civil liberties such as freedom of movement and freedom of the press. Violations of customer privacy are captured under the Privacy & Data Security KPI in the Customers sub-pillar. Violations of employee privacy are captured under the Labor Management Relations KPI in the Labor & Supply Chain sub-pillar.

Human Rights Concerns: This indicator measures the severity of controversies related to the impact of a firm's operations on human rights. Topics covered include, for example, complicity in killings, physical abuse, displacement, or other rights violations, as well as complicity with such actions by governments or other parties.

Other: This indicator measures any human rights or community issues that fall outside of the more targeted indicators listed above,

Social: Labor Rights & Supply Chain

Labor Management Relations: This indicator measures the severity of controversies related to a firm's labor-management relations. Topics covered include, for example, instances of wrongful termination, reductions in benefits, mistreatment of either employees or contractors, controversial workforce reductions, controversies over wages and hours, employee privacy issues, and forced labor.

Health & Safety: This indicator measures the severity of controversies related to the health and safety of a firm's employees, temps and contractors, and franchisee employees. Topics covered include, for example, on the job accidents, injuries, and fatalities, mental health issues, as well as kidnappings and physical harm experienced by employees in the field. This KPI does not cover health and safety issues in the traditional supply chain, for example in supplier factories; those issues are captured under the Supply Chain Labor Standards KPI.

Collective Bargaining & Union: This indicator measures the severity of controversies related to a firm's union relations practices. Topics covered include, for example, anti-union activities, efforts to prevent non-unionized employees from unionizing, strikes, lock-outs, and the use of replacement workers, acrimonious contract negotiations, and controversies regarding alleged breaches of union contracts. Organized strikes by non-unionized employees are also captured here. Union issues in the supply chain are captured under the

Supply Chain Labor Standards KPI. Health and safety issues raised by a union but not primarily about the company's relationship with the union are captured under the Health & Safety KPI.

Discrimination & Workforce Diversity: This indicator measures the severity of controversies related to a firm's workforce diversity, including its own employees as well as temporary employees, contractors, and franchisee employees. Topics covered include, for example, allegations of discrimination on the basis of sex, race, ethnicity, or other characteristic. Discrimination at supplier facilities is captured under the Supply Chain Labor Standards KPI. Discrimination on the basis of unionization or union sympathies is captured under the Collective Bargaining & Unions KPI.

Child Labor: This indicator measures the severity of child labor controversies in a firm's own operations or its supply chain. Topics covered include allegations that the company has used underage workers or that underage workers are present at supplier facilities.

Supply Chain Labor Standards: This indicator measures the severity of controversies related to workers in a firm's supply chain. Topics covered include, for example, allegations of unsafe working conditions, inadequate pay, excessive working hours or overtime, union issues at supplier facilities, the use of forced labor or prison labor by suppliers, and discrimination. Underage labor in supplier operations is captured under the Child Labor KPI.

Other: This indicator measures any labor issues that fall outside of the more targeted indicators listed above.

Governance

Bribery & Fraud: This indicator measures the severity of controversies related to a firm's business ethics practices. Topics covered include, for example, bribery, insider trading, money laundering, tax evasion or avoidance, violations of government sanctions, and accounting irregularities.

Governance Structures: This indicator measures the severity of controversies related to a firm's corporate governance practices. Topics covered include, for example, shareholder or board-level objections to pay practices and governance structures and shareholder resolutions seeking change to governance practices, as well as conflicts of interest, unethical behavior, or misrepresentation of, or lack of qualifications on the part of directors or senior executives.

Controversial Investments: This indicator measures the severity of controversies related to the social and environmental impact of a firm's lending, underwriting, and financing activities. Topics covered include, for example, financing projects that are controversial because of their actual or anticipated environmental or social impact, as well as criticism of mining companies, real estate investment trusts, and similar companies that receive royalties or own shares in a particular project that they neither own or operate.

Other: This indicator measures any governance issues that fall outside of the more targeted indicators listed above.

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