# ESG Indices and Corporate Sustainability Research from a Strategic Perspective: A Reflective Appraisal and Suggestions for Improvement

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**Abstract**

Although ESG indices and datasets from MSCI, Thomson Reuters, FTSE Group, and Dow Jones Indices are primarily aimed at aiding socially responsible investments, they have significant appeal for scholars studying corporate sustainability (CS) behavior and firm performance. The indices offer ready benchmarking of a large universe of firms on these inherently subjective and difficult to quantify, multi-level, multidimensional, and complex concepts. In this paper, we focus illustratively on the environmental, social, and governance (ESG) performance database from MSCI: MSCI-ESG-KLD STATS. Reflecting on our experiences coding over 1,500 CS reports of Fortune Global 500 firms, and triangulating with primary data and insights drawn from onsite visits, inspections, managerial interactions, and archival studies of select firms, we submit that the data structure in most ESG databases constrains investigations into firms' CS behavior from a *strategic* perspective. We highlight three issues: binary scoring schema; functional categorization of discrete activities; and setting off "concerns" against "strengths." We argue that addressing these issues could enhance these databases' utility and appeal to scholars.

## Introduction

Socially responsible investments (SRI) have grown steadily and substantively over the last three decades (Hutton, D'Antonio and Johnsen, 1998; Renneboog, Horst, and Zhang, 2008). This has coincided with increased attention and sensitivity to corporate sustainability (CS) or corporate social responsibility (CSR) by business, society, government, and academia. The ESG indices and ratings meant to facilitate SRI have simultaneously flourished, making up a critical market infrastructure (Waddock, 2008). Among the popular databases are MSCI-ESG-KLD STATS, Thomson Reuters ESG Research, FTSE4Good, and Dow Jones Sustainability Index (DJSI), with MSCI-ESG-KLD STATS (MSCI-STATS) counting among the pioneers (ibid).

While ESG indices and databases primarily target SRI investors, they have significant appeal for scholars too. Empirical CS/CSR research published in leading management journals starting from the late 1990s has used databases such as MSCI-STATS (Cheng, Ioannou, and Serafeim, 2014; Hoi, Wu, and Zhang, 2016; Sharfman, 1996; Strike, Gao, and Bansal, 2006; Waddock and Graves, 1997). For a number of reasons, datasets like MSCI-STATS hold a similar appeal for academics and SRI investors.

1. These databases and indices are among the few proprietary sources that offer a ready platform for benchmarking a large universe of firms on environmental, social, and governance (ESG) performance, as compared to the plethora of sources on financial performance data. Reliable ESG databases are relatively rare, as they are built through elaborate recording and coding of non-standard raw data from multiple sources. (Financial databases are widely available, as they capture data that are largely standardized.)
2. Sustainability involves multi-level, multidimensional, and complex concepts (Martens, 2006), rendering the related constructs and variables inherently subjective and difficult to quantify or measure scientifically. Therefore, unlike financial performance, both academics and investors find it challenging to independently generate consistent metrics or assess CS performance for a wide range of firms over time without investing significant effort and resources.
3. The performance indicators in databases such as MSCI-STATS and Thomson ESG are typically aggregated in a telescopic fashion that allows flexibility for users to compare scores at both high and granular levels across E, S, and G dimensions.

For these reasons, prominent ESG databases and indices represent rare sources of well-organized and reliable data for both informed decision making by SRI investors and empirical CS research by scholars.

Scholars have used ESG indices and ratings to examine a wide a range of research issues that lie at the intersection of strategic management and CS. In particular, data from MSCI-STATS has been used to empirically examine the relationships between environmental or social performance and a host of firm and industry level phenomena. The increasing use of MSCI-STATS and other ESG ratings data in CS-related academic research lends credibility to the data and the robustness of methods, even though there is little convergence among ratings from different raters (Chatterji and Levine, 2006; Sharfman, 1996).

Focusing illustratively on mostly MSCI-STATS, reflecting on our experiences of coding over 1,500 CS reports of Fortune Global 500 firms (see Appendix 1), and triangulating with primary data and insights drawn from onsite visits, inspections, managerial interactions, and archival study of select firms, we propose that the data structure and rating schema in ESG databases do not facilitate investigations into firms' CS behavior from a *strategic* perspective. Addressing three features of MSCI-STATS would significantly enhance its utility for strategic CS research. (These three features are also applicable to some other indices.) These features are: binary scoring schema; functional categorization of ESG activities; and the tendency to combine "concerns" and "strengths" into one score.

Binary scoring in most ESG databases artificially reduces the complexity of CS initiatives that have wide variability in application and investment and that emanate from different CS strategies. It simplifies this to a basic "1/0" assessment. While binary scoring facilitates greater objectivity, we contend that the field is mature enough to apply a multi-point rating scale that can capture variation in even inherently qualitative aspects. Given most ESG data providers already use a multi-point rating scale for some of their ESG products, we believe that shifting wholly from a binary to a multi-point rating scale would not be impossible.

In functional and activity-oriented categorization of CS initiatives, labels such as "recycling", "clean energy" (in MSCI-STATS) or "product innovation" (in Thomson ESG) explicate what function a CS initiative serves. However, these labels do not clarify underlying strategic intent. Similarly, "emission reduction" can be achieved within the firm or potentially anywhere along the firm's value chain – that is, with suppliers or logistics partners. This second kind of reform could stem from the firm championing sustainability across its ecosystem, but this would not be self-evident in MSCI-STATS.

A number of performance assessment schemes offset environmental concerns or controversies against environmental strengths. We argue that strengths and concerns derive from different sources or motivations, and combining them obfuscates the underlying CS strategies (Mattingly and Berman, 2006). Although such an approach serves investment managers well by presenting an overall, easy-to-use rating, it may sometimes gloss over important nuance.

The rest of this paper is organized as follows: In the next section we briefly outline the typical data structure in ESG databases along with the manner in which this data has been used in strategy and CS research. We then discuss what CS research entails, from a strategic perspective. Drawing on our understanding of CS/CSR practice from various sources, such as our own coding of CS reports and interactions with CS practitioners, we then expand on three problematic issues that emerge in using these datasets for strategic CS/CSR investigations. In the concluding section we summarize our critique and discuss how some of these issues could be potentially addressed for the benefit of all stakeholders.

## ESG Data in Corporate Sustainability Research

Researchers have often used ESG databases – in particular MSCI-STATS and Thomson ESG – in studies related to CS/CSR. Many of these studies have focused on associating various facets of business (accounting performance, market performance, earnings quality, and so on) to corporate environmental or social performance (Cheng, Ioannou, and Serafeim, 2014; Griffin and Mahon, 1997; Ioannou and Serafeim, 2012; Kim, Park, and Wier, 2012; Van der Laan, Van Ees, and Van Witteloostuijn, 2008). Other interesting inquiries that can use ESG databases include drivers of corporate social performance (H.L.Chih, H.H.Chih, and Chen, 2010), strategic implications of CSR (McWilliams, Siegel, and Wright, 2008), and effectiveness of ESG ratings themselves (Chatterji, Levine, and Toffel, 2009). In this section we first discuss the typical data structure in ESG data sets and then focus on the appeal of these databases for CS research.

### *The Structure of ESG Datasets*

ESG databases like MSCI-STATS and Thomson ESG provide performance scores for various parameters grouped under three dimensions: environment, society, and governance. While the performance indicators vary to some extent in the manner they are labeled, grouped, or defined, they demonstrate a fair degree of thematic similarity. For instance, MSCI-STATS's "Biodiversity and Land Use" and "Environmental Opportunities in Renewable Energy" indicators compare well with Thomson ESG's "Biodiversity Impact Reduction" and "Renewable Energy Use," respectively; both have almost identically labeled items for electronic waste management (e-waste reduction), hazardous wastes, and green buildings.

Different databases tend to adopt different modes of scoring. Figure 1 presents a sample list of environment performance indicators that MSCI-STATS and Thomson ESG use to assess firms. On each of these indicators, MSCI-STATS uniformly follows binary scoring: If a firm meets the assessment criteria established for an indicator, then it receives a score of "1." It otherwise receives "0." In comparison, Thomson ESG adopts a quantitative scoring schema for several indicators, though it also scores some indicators on a binary "True"/"False" scale.

**Figure 1: Environmental Performance Indicators – Samples from ESG databases**

| MSCI-STATS | Thomson ESG |
|---|---|
| Environmental Opportunities - Clean Tech | Biodiversity Impact Reduction |
| Waste Management - Toxic Emissions and Waste | Carbon Offsets/Credits |
| Waste Management - Packaging Materials & Waste | $CO_2$ Equivalents Emission Total |
| Climate Change - Carbon Emissions | Eco-Design Products |
| Environmental Management Systems | Environmental Expenditures |
| Natural Resource Use - Water Stress | Environmental Products |
| Natural Resource Use - Biodiversity & Land Use | Environmental Supply Chain Management |
| Natural Resource Use - Raw Material Sourcing | e-Waste Reduction |
| Natural Resource Use - Financing Environmental Impact | Green Buildings |
| Environmental Opportunities - Green Buildings | Hybrid Vehicles |
| Environmental Opportunities in Renewable Energy | Policy Energy Efficiency |
| Waste Management - Electronic Waste | Policy Water Efficiency |
| Climate Change - Energy Efficiency | Renewable Energy Use |
| Climate Change - Product Carbon Footprint | Water Pollutant Emissions |
| Climate Change - Insuring Climate Change Risk | Water Recycled |
| Environment - Other Strengths | Water Withdrawal Total |

Source: MSCI-ESG-KLD STATS Methodology 2014 and Thomson Reuters ESG Research Brochure 2017

### *The Appeal of ESG Data for Corporate Sustainability Research*

Assessing the ESG performance of a firm is a complex task because sustainability is a multi-level phenomenon influenced by and influencing entities across different levels in the ecosystem (Aguilerra et al., 2007; Martens, 2006). Moreover, performance across E, S, or G dimensions is potentially subjective and typically difficult to measure or quantify. For example, within the environmental dimension, quantitative metrics cannot capture every issue relevant to measures like biodiversity management, waste management, or eco-friendly products. Comparing firms of different sizes in different industries is also challenging. For instance, $CO_2$ emissions directly attributable to a bank are likely to be far lower than those from an energy company of comparable revenue. However, a comparative

assessment made only on the basis of such direct impact could be misleading, as the bank may be financing several carbon-intensive projects. (Factoring in such indirect impacts is a contentious issue.)

In this context, despite their inability to capture several of the inherent complexities of corporate sustainability, ESG databases currently hold great appeal. For one, databases like MSCI-STATS have achieved a commendable task in organizing ESG data on firms on a very wide range of indicators – as many as 400 – using data from a variety of sources. MSCI-STATS and Thomson ESG also indicate coverage of 2,500 and 6,000 firms, respectively. This includes several years and builds on data from company sources, government archives, and NGOs. Second, these databases have succeeded in introducing a fair degree of objectivity to the assessment of issues that are arguably not as widely appreciated as financial performance, and that otherwise fall into the realm of subjective assessment. ESG data compilation also has to contend with significant non-standard and inconsistent reporting from firms, which makes the task cumbersome. The scoring also involves a high degree of coding, given the challenges to quantitative measurement. The simple availability of ready, organized data to compare a wide universe of firms across several years on hundreds of ESG indicators, even on a binary scale, makes for a tremendously alluring product for scholars. Third, MSCI-STATS and Thomson ESG structure their databases in a telescopic manner. Along with an overall assessment score for each of the ESG dimensions, they provide scores for the primary performance indicators across each dimension. MSCI-STATS (and more recently Thomson ESG) also provides a set of negative or controversial performance indicators. These relate to events, news, or developments like regulatory fines that suggest less-than-desirable conduct by a firm. Both of these features – telescopic data and negative indicators – allow researchers to use not only the aggregate, but also the constituent indicators that may be more relevant to specific research questions.

In this paper we mostly focus on MSCI-STATS, arguably the more widely used empirical source for strategy and CS research. Figure 2 depicts the overall assessment framework of "key issues." It also shows the data structure used by MSCI-STATS, which feeds into other ESG products from MSCI. These key issues are grouped under ten themes and the three pillars of E, S, and G.

**Figure 2: Overview of MSCI-STATS Key Issue Assessment Framework**

| Pillars | Themes | ESG Key Issues |
|---|---|---|
| Environment | Climate Change | ● Carbon Emissions<br>● Product Carbon Footprint<br>● Financing Environmental Impact<br>● Climate Change Vulnerability |
| | Natural Resources | ● Water Stress<br>● Biodiversity & Land Use<br>● Raw Material Sourcing |
| | Pollution & Waste | ● Toxic emissions & Waste<br>● Packaging Material & Waste<br>● Electronic Waste |
| | Environmental Opportunities | ● Opportunities in Clean Tech<br>● Opportunities in Green Building<br>● Opportunities in Renewable Energy |
| Social | Human Capital | ● Labour Management<br>● Health & Safety<br>● Human Capital Development<br>● Supply Chain Labor Standards |
| | Product Liability | ● Product Safety & Quality<br>● Chemical Safety<br>● Financial Product Safety<br>● Privacy & Data Security<br>● Responsible Investment<br>● Health & Demographic Risk |
| | Stakeholder Opposition | ● Controversial Sourcing |
| | Social Opportunities | ● Access to Communications<br>● Access to Finance<br>● Access to Health Care<br>● Opportunities in Nutrition & Health |
| Governance | Corporate Governance | ● Board<br>● Pay<br>● Ownership<br>● Accounting |
| | Corporate Behavior | ● Business Ethics<br>● Anti-Competitive Practices<br>● Tax Transparency<br>● Corruption & Instability<br>● Financial System Instability |

Source: *ESG Rating Methodology – MSCI ESG Research–Executive Summary (2017)*

The MSCI-STATS performance indicators have periodically undergone restructuring and rationalization (MSCI, 2015). We nonetheless believe that these changes do not materially impact the thrust of our critique, as the basic structure and grouping of ESG data has remained fairly consistent.

**Strategy Research Perspectives on Corporate Sustainability**

Strategic management research has traditionally included understanding and explaining differences in firms' performances. Similarly, inquiries into CS from a strategic perspective seek to examine how and why firms differ in their CS performance, how they differ in the strategies they adopt with respect to CS, and the relationship between CS strategies and CS performance. Much of this research tends to use a firm's rating, position, or inclusion in an ESG index or its score computed out of select indicators from an ESG dataset. However, empirical research that focuses on providing a holistic understanding of the strategies or strategic orientations that determine firms' approaches to CS is rare. We contend that this gap in empirical research is partly attributable to the characteristic of empirical data that are made available through the aforementioned ESG data sources.

Integrated approaches to understanding CS adoption are relatively scant. Munilla and Miles (2005) conceptualize a managerial framework of approaches to corporate social responsibility. They characterize these as Compliance, Strategic, or Forced, and consider the impact of each of these approaches on different stakeholders. Mirvis and Googins (2006) provide one of the more comprehensive conceptual mappings of a firm's strategic approaches to sustainability in their portrayal of the stages of maturation of CS agendas. They conceive firms starting from the most rudimentary stage of "Elementary" and progressively evolving through "Engaged," "Innovative," "Integrated," and ultimately "Transforming." This last stage is characterized by game-changing concepts, intent for social change, and visionary leadership and is supported by transparency and full disclosure.

This kind of holistic analysis and framing of CS initiatives requires an intimate appreciation of what prompt firms to conceptualize and implement a sustainability agenda. For instance, what does sustainability mean to the firm's owners and other stakeholders? What are the underlying philosophy, vision, and intent of the management? What are the constraints and the extent of enabling elements? All of these aspects have a critical bearing on the firm's strategic orientation toward a sustainability agenda; in turn, they influences the firm's ESG choices and the manner in which such choices are exercised. Many of these aspects are not superficially apparent and emerge only through a process of engaging deeply with CS managers, their context, their reasoning, and their narratives. Understanding strategic orientations may also call for associating meaningful themes or categories to seemingly disparate CS actions.

The next section details what in ESG datasets we find limiting when juxtaposed against our objective of extracting strategic intent or orientation that motivate CS initiatives.

## The Limitations of ESG Datasets from a Strategic Corporate Sustainability Perspective

Amid wide heterogeneity in the sustainability practices of firms, we seek to understand the phenomenon from an integrated perspective, going beyond conceptual frames and predicating our analysis on actual data. We compare the utility of the data currently available in ESG databases to the requirements of analyzing strategic orientations to CS. We focus in this paper on MSCI-STATS – arguably one of the most widely used ESG databases in CS and strategy research – to explicate the limitations that we perceive. We identify three issues, detailed below.

### *Binary Scoring of ESG Performance Indicators*

MSCI-STATS scores all the identified ESG performance indicators on a binary scale (MSCI, 2015). This represents one manner of dealing with the combination of complexity and subjectivity inherent in most sustainability issues. However, such a reductionist approach does not capture much of the variety and richness in CS initiatives. For instance, the item "Climate Change – Carbon Emissions" in MSCI-STATS includes assessment of a firm's investment in low-carbon technologies, the increase in carbon efficiency of facilities, and comprehensive carbon policies and implementation mechanisms (MSCI, 2015). CS reports reveal that firms such as Shell and ExxonMobil have explored and invested significantly in carbon capture and storage mechanisms. However, BP, a firm whose environmental management initiatives are generally quite similar to those of Shell and ExxonMobil, has articulated economic rationale to not invest in carbon capture and storage. In this instance, all three firms would be scored uniformly as "1" under the above indicator, although there may be merit in debating if Shell and ExxonMobil have exhibited greater intent toward carbon emission control. Similarly, with regard to an item such as "Water Stress," CS reports suggest that while BP and Chevron, firms comparable in size to Shell and ExxonMobil, talk of freshwater management, they provide far less detail of specific water rejuvenation projects or replenishment initiatives. Here again a uniform scoring of "1" for all the four firms does not help differentiate approaches and intents toward water conservation.

The issue is even more complicated when extending comparison to firms operating in different industries. PepsiCo's initiatives related to water management for farming go beyond crops that they themselves procure. Similarly, Anheuser-Busch claims that high-quality water is fundamental to their business. As a result, they not only take initiatives to extensively reduce, reuse, and recycle water, but also to raise awareness of water issues

around the world in partnership with NGOs. This high-level intent around water conservation could merit a "1" on water conservation for these beverage and energy firms. However, since freshwater can be considered far more critical for beverage companies than energy companies, their approach to the water stress may be driven by existential and strategic motivations, whereas energy firms may be driven by environmental responsibility.

Even quantitative measures of carbon or water-usage reduction provide only a measure of the final outcome in a particular sub-dimension pertaining to the issue; it does not adequately convey the extent of activism within firms. This underscores how the complexities inherent in CS do not easily accommodate a uniformly objective scoring schema.

From the perspective of a holistic and strategic approach to CS research, reliance on a binary scoring schema is inadequate and can even be misleading. At a time when average CS reporting rates are about 93% for Global 250 firms and about 73% for the N100 (top 100 firms in 34 countries) (KPMG, 2015) – and given advanced data analytics methods – we argue that there is little justification for well-established ESG data providers that do not develop more nuanced scoring mechanisms.

Alternatives to binary scoring schemas are difficult to implement, but not infeasible. New York-based nonprofit Just Capital recently launched an ambitious and well-organized initiative to provide a ranked assessment to various stakeholders regarding the "justness" of American firms. Just Capital predicates its assessment on 188 indicator "components," many of which are filtered through extensive, systematic, and highly representative public surveys across America. A team of analysts facilitates this work. Most of the indicators correspond to typical ESG parameters. While a full discussion on Just Capital is outside the purview of this paper, what matters is that Just Capital combines qualitative and quantitative assessment to arrive at their rankings. While a few of the qualitative assessments are scored on a binary scale, there are many seemingly qualitative aspects, such as "Benefits Quality" or "Commitment to Work-Life Balance." These are scored on a 5- or 10-point scale and supported by detailed scoring guides. While some of these scores are crowd-sourced, Just Capital generates other scores through a panel of analysts (Just Capital, 2016).

MSCI does have an ESG-rating product that includes an assessment of key issues relevant to a firm's industry and related strategies and initiatives adopted by the firm; both of these products use a "0-10" scale (MSCI 2015, 2017). However, the ESG performance component that is presented in MSCI-STATS, and that is widely used in CS research, follows binary scoring.

### *Functional Categorization of Key Issues and Performance Indicators*

As seen in Figures 1 and 2, ESG themes and key issues/performance indicators in MSCI-STATS are categorized in a functional manner. That is, MSCI-STATS focuses on specific activities or issues, themes or risks, related to ESG. Accordingly, a user of MSCI-STATS is apprised of a firm's status with respect to biodiversity and land use, carbon emissions, waste management, and so on. Such indicators can be useful to assess performance, subject to the limitation of binary scoring.

However, this functional focus does not provide adequate information about the motivations and strategic intent underlying firms' approaches to sustainability, as noted in the examples above on PepsiCo and Anheuser-Busch. A positive score for "Natural Resource Use - Water Stress" would at best reveal that firms are taking initiative with regard to managing water use. But this score does not reveal when firms extend their water initiatives to encourage water conservation in the whole business ecosystem. Nor does the indicator reveal whether the water-related initiatives of a firm are narrow, like rain water harvesting, or extensive and long-term, like the water replenishment initiatives of ExxonMobil in Thailand (ExxonMobil CS Report, 2007).

For basic data capture, the most natural unit of assessment is at the level of ESG initiatives. However, these initiatives are only a manifestation of corporate intent, philosophy, and strategy. A particular CS strategy or orientation could manifest in a range of activities, all of which share a common theme or objective. To reflect this complexity, and to build datasets capable of examining CS from a strategic perspective, we argue that ESG data providers should group initiatives thematically, in a fashion that can reveal strategic intent. For instance, in our self-coding of 1,500 CS reports we used factor analysis to group CS initiatives under strategic themes like "Reduce Environmental Damage," "Champion Business of Green," and "Responsible Governance." These strategic orientation themes would likely vary according to the worldview of the researcher. Despite such bias, it would reveal a strategic intent to CS initiatives rather than having them listed at a functional level.

### *Combining positive and negative performance scores*

To the extent that MSCI-STATS presents positive and negative scores for several of its ESG indicators, researchers tend to set one off against the other to consolidate performance scores on variables of interest.

We posit that positive and negative performance rankings essentially derive from different sources. For instance, under the stated scoring schema of MSCI-STATS, a firm that adopted certain water initiatives to reduce carbon emissions would be scored positively under the Water Stress Positive indicator. At the same time, if it posted any significant water-related

events connected to effluent discharge or was involved in water-related cases it would be scored negatively under the Water Stress Negative indicator.

In analyzing CS initiatives from a strategic perspective, positive and negative performances should hold distinct relevance. An affirmation on a positive performance indicator suggests that the firm is adopting a certain strategy or orientation that seeks to benefit the ecology or society. A score on a negative performance or controversial indicator has two possibilities: The first is poor execution or faulty management of operations. The second is a firm indulging in undesirable practices while seeking to divert attention from such actions by resorting to public-relations exercises, including claims of high environmental performance. Such "greenwashing" by firms could even be considered deliberate strategy (Delmas and Burbano, 2011). However, setting off the negative against the positive does not bring any clarity to understanding CS from a strategic perspective.

We contend that negative performance, or events that generate controversies, need to be judged on their own merit, depending on the seriousness of the issue. A formula that systematically sets the negative against the positive may not render justice to the issue being assessed. For instance, if a firm incurs regulatory fines for not meeting certain emission standards even though it has in place policies and plans to improve its historical performance, it may earn a negative performance score. In this instance, from a strategic perspective, the mere incidence of a fine may not reveal how close a firm was to meeting the performance standards, or even that it has a strategy to address the emission issue. Consider a different instance: revelation of a firm deliberately making false claims on environmental performance. In this case, the issue is arguably a serious lapse of integrity; simply setting this negative score against other positives may be insufficient, as no degree of reported positive performance holds credibility in the face of a track record of deliberate misinformation.

Rather than follow the practice of setting negative scores against positive scores in ESG datasets, we argue that it is preferable to consider the positives and negatives separately. This approach is a better way to assess the strategic motivations that drive firms' actions.

**Next Steps for Research and Application**

Both SRI investors and academic researchers have long used ESG databases like MSCI-STATS on account of the utility they bring to benchmarking firm performance on CS/CSR initiatives. The fact that these databases offer reliable data and comparison across a fairly comprehensive set of performance indicators has significantly assisted empirical academic research on corporate environmental and social performance. ESG data providers also

regularly enhance and strengthen their offerings, in terms of products, coverage of firms, appropriateness of indicators and methods, and relevance of metrics.

Against this backdrop, the main purpose of our commentary was to bring a fresh academic perspective on using ESG databases in strategy research on CS/CSR. We aimed to highlight issues that we believe, if addressed, can materially enhance the appeal and utility of ESG databases for not only CS scholars, but also CS strategists in firms. These reflections are drawn from a number of the authors' own experiences: coding narratives in CS reports to understand strategic intent; interaction with CS practitioners that underscore the complexity and multiple influences involved in conceiving and implementing CS strategies; and study of managers' philosophical orientations toward sustainability agendas.

Examining CS from a strategic perspective, however, calls for a holistic understanding of what drives firms to adopt one specific set of CS initiatives over any other. While ESG databases provide a wealth of panel data on corporate ESG performance indicators, we argue that three features that are central to the data structure of these databases limit their ability to address strategic inquiries. These are:

1. The dominant use of binary scoring;
2. The functional and activity focus in the capture of ESG themes; and
3. Setting negative and positive performance scores against each other.

We suggest that ESG datasets adopt a multi-point assessment scale for most parameters, supported by a clear scoring guide. Even if more challenging and laborious, we argue that this shift can capture greater variability in CS practices while moderating the subjectivity in assessment. Since datasets such as MSCI-STATS and Thomson ESG both indicate that some of their ESG products derive from a broad-based scoring system, the transition to such a schema may be less daunting than it appears. Alternatively, existing data providers may need to emulate the likes of new ESG data providers like Data Capital, which appears to have a workable method for capturing diversity in qualitative data.

Bringing a strategic management orientation to ESG datasets also requires a restructuring and recombination of ESG measurement indicators. Based on current definitions, each indicator can be regrouped under themes that reflect firms' strategic purpose or orientation. Where necessary, some indicators can be rationalized or merged. This reorientation in grouping will reveal a greater directional and strategic sense in assessing the firms' environmental performance.

Finally, the practice of setting negative and positive performance scores against each other is easily addressed, as it is a matter of application, not an issue fundamental to the datasets. Rather than a simplistic summation of concerns and strengths, researchers and data

providers should consider a more sophisticated rating schema. One such approach would be to attach an appropriate weight to each concern depending on the nature of the controversy or issue. This approach would have the benefit of offering a more holistic perspective to investors and researchers; serious infractions (e.g., integrity issues) might be accorded a high weight that shifts the overall rating. Minor concerns would impact a parameter level score, but may not detract much from the overall.

ESG indices and datasets have played a central role in advancing empirical CS research and facilitating SRI. Nevertheless, with CS practices evolving and many firms across the world now reporting in great detail, CS has evolved from something that was once simply good to have and do to a pillar of corporate strategy. To keep pace with this change, ESG databases ought to adopt a systematic measurement schema that captures the increased diversity in corporate environmental and social initiatives from a *strategic perspective.*

**Limitations**

Our critique is predicated mainly on the application of a strategy lens to ESG research, and particularly from the perspective of academic research. This is but one ESG indices and rankings stakeholder. Furthermore, our appraisal also suffers from our own methodological bias, as it draws on the coding approach that we used for our analysis of CS reports. The suggestions that emerge from our critique may not be uniformly applicable to other ESG stakeholders. Nevertheless, given the issues we highlight relate to the fundamental structure of popular ESG databases, our comments may hold relevance for other users of ESG data. We hope especially that researchers designing ESG data products and services may be able to constructively build on our reflections from a strategy perspective and strengthen their offerings, to benefit both practice and academic research.

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## Appendix -1

### Note on Coding of CS Reports for Environment Sustainability Initiatives

The coding adopted by the authors for creating a proprietary database of CS initiatives followed a three-step process. In the first step we generated a consolidated list of environmental sustainability issues by collating items that were available in extant academic literature, from MSCI-STATS and from a sample reading of 70 CS reports spread over 25 firms and seven industries. We combined similar items to eliminate redundancy. In the second step, these items were further reviewed by using them to score a sample of 15 randomly chosen firms. After eliminating a few items that did not emerge as material, we arrived at the final master list of 16 environmental sustainability items. In the third step, CS reports were scored for the presence or absence of these items, for each of the years for which reports were available. If an item was discussed in a material manner – that is, if the firm reported specific measures or initiatives with regard to the particular item – it was scored as a "1"; otherwise it was scored as a "0", as illustrated below:

**Illustrative coding of CS reports for environment sustainability items**

| Code- Short Description | Score | Firm (Year) | Reference Quotes from CS reports |
|---|---|---|---|
| Reduce emissions to environment | 1 | Shell (2011) | "We work to manage CO2 emissions. Spills can harm the environment and put our employees and neighboring communities at risk. We reduce spills through rigorous controls and standards" |
| Elaborate disaster prevention measures | 1 | Shell (2012) | "We prepare thoroughly to prevent incidents. In 2012, we intend to start exploration drilling in waters off Alaska. We have worked closely with communities, coastguards and regulatory authorities to put the necessary safeguards in place" |
| Utilize carbon Credits/carbon trading | 1 | 3M (2012) | Using product carbon footprint information, 3M has offset greenhouse gas emissions from certain products through the purchase of carbon offsets. To consistently manage carbon offsets, 3M adopted a Product Carbon Footprint Offsets Standard |