VOLUME 32
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Sustainable Financial Management

10 China's Economy Is Not Overtaking America's
Michael Beckley, Tufts University and American Enterprise Institute

24 An Honorable Harvest: Universal Owners Must Take Responsibility for Their Portfolios
Frederick Alexander, The Shareholder Commons

31 Global Public-Private Investment Partnerships: A Financing Innovation with Positive Social Impact
Patrick Bolton, Columbia University, Xavier Musca, Crédit Agricole Group, and Frédéric Samama, Amundi Asset Management

42 Columbia Law School Roundtable on The Future of Capitalism
Panelists: Sir Paul Collier and Colin Mayer, University of Oxford; Alan Schwartz, Guggenheim Partners; and Steve Pearlstein, George Mason University.
Moderated by Kristin Bresnahan, Millstein Center, Columbia Law School.

64 Sustainability at Walmart: Success over the Long Haul
Katherine Neebe, Walmart

72 How One Company Drives Ownership Behavior To Innovate and Create Shareholder Value: The Case of Varian Medical Systems
J. Michael Bruff, Varian Medical Systems, and Marwaan Karame, Fortuna Advisors

78 Attracting Long-Term Shareholders
Sarah Keohane Williamson and Ariel Babcock, FCLTGlobal

85 Embedding Sustainability Performance and Long-Term Strategy in the Earnings Call
Kevin Eckerle and Tensie Whelan, New York University Stern School of Business, and Brian Tomlinson, Chief Executives for Corporate Purpose

100 Using the Return on Sustainability Investment (ROSI) Framework to Value Accelerated Decarbonization
Kevin Eckerle and Tensie Whelan, New York University Stern School of Business, Bryan DeNeve and Sameer Bhojani, Capital Power, and John Platko and Rebecca Wisniewski, ALO Advisors, LLC

108 "Non-Financial" Is a Misnomer, but Doesn't Have to Be a Missed Opportunity
Gail Glazerman and Jeff Cohen, Sustainability Accounting Standards Board

117 A Preliminary Analysis of SASB Reporting: Disclosure Topics, Financial Relevance, and the Financial Intensity of ESG Materiality
Cristiano Busco, University of Roehampton and LUISS University, Costanza Consolandi, University of Siena, Robert G. Eccles, University of Oxford, and Elena Sofra, LUISS University

Columbia Business School

A PRELIMINARY ANALYSIS OF SASB REPORTING:

Disclosure Topics, Financial Relevance, and the Financial Intensity of ESG Materiality

by Cristiano Busco, University of Roehampton and LUISS University; Costanza Consolandi, University of Siena; Robert G. Eccles, University of Oxford; and Elena Sofra, LUISS University

On November 7, 2018, at a ceremony at the London Stock Exchange, the Sustainability Accounting Standards Board (SASB) announced that its standards had been approved by its Standards Board on October 16, 2018. This announcement capped a seven-year effort to establish measurement and reporting standards for material environment, social, and governance (ESG) issues, standards that are analogous to the financial accounting standards set by the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). SASB has now identified 91 companies that are using their standards for ESG reporting. This paper analyzes the quality of this reporting.

Communicating Corporate Purpose through Non-Financial Reporting

Today's organizations operate in a complex world, characterized by many internal and external drivers, interdependencies, and trade-offs that influence the process of decision-making, the promises that these decisions entail, and the expectations of a variety of demanding stakeholders. Organizational leaders are increasingly required to navigate these challenges by implementing a comprehensive approach to strategic planning, performance measurement, and reporting. Ultimately, if they intend to maintain and reinforce their "license to operate," companies are increasingly required to ally their business models with a statement of "Corporate Purpose," a statement that aims to articulate, as plainly and economically as possible, the board of directors' view of their company's distinctive contribution to society.

Formulating and articulating Corporate Purpose is likely to be challenging, in some cases even uncomfortable, since they may require going beyond a mere description of the company's "business-as-usual" to reflect opportunities for business innovation and disruption. It often requires rethinking the organization as it develops at the intersection of aspiration, inclusion, and action.[1] A Statement of Purpose should aim to articulate a long-term inclusive aspiration that a company is willing and able to act on, using existing resources and relationships or capabilities it could develop. According to Larry Fink, CEO of BlackRock, "Society is demanding that companies, both public and private, serve a social purpose. To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society."[2] As Fink's statement suggests, an effective Purpose requires mediating, integrating, and balancing a number of tensions among different corporate stakeholders and their goals. And the trade-offs that result from such balancing need to be acknowledged, measured, and reported as the organization attempts to create sustainable value over time.[3]

1 Grice, A., M. Reeves, and J. Fuller, "Getting Uncomfortable on Purpose," Boston Consulting Group and BCG Henderson Institute, January 23, 2019, https://www.bcg.com/ru-ru/publications/2019/getting-uncomfortable-on-purpose.aspx.

2 See the 2018 Larry Fink's letter to CEOs, January, https://www.blackrock.com/corporate/investor-relations/2018-larry-fink-ceo-letter.

3 Busco, C., M. L. Frigo, L. Hickey, A. Pavlovic, A. Riccaboni, "Towards Business 2030: Aligning Purpose with Performance and Sustainable Strategy Is Key," *Strategic*

To enable Purpose to move from "articulation" to "execution" requires connecting strategy and capital allocation with a comprehensive performance measurement system able to connect sustainability issues with financial returns. It involves reconciling competitiveness and sustainable growth within the context of inclusive business models in order to take advantage of the opportunities and face the challenges of the market. Importantly, this requires the development of new practices of accounting and reporting that are able to capture the impact of Purpose; taking account of the positive and negative social and environmental externalities that are produced by its operations and, especially, its products and services, as well as how the multiple and heterogeneous resources offered by the company's stakeholders contribute to its financial performance. Although there continue to be laggards, the investment community now broadly recognizes the need to better understand how material ESG issues matter to financial performance.[4]

The increasing pressure from investors and growing awareness of corporate leaders have led to the development of a number of accounting and reporting frameworks that attempt to capture the relationship between non-financial (sometimes labeled as pre-financial) and financial performance. While a detailed review of such developments is beyond the scope of this article, it is important to acknowledge the effort of various non-financial accounting and reporting frameworks in exploring the link between multiple performance metrics, as well as in attempting to quantify the impact of non-financial resources and material matters on the bottom line and long-run efficiency and value. Each of the accounting and reporting frameworks has been designed to engage different audiences, ranging from investors and corporate boards to other corporate stakeholders, public bodies, and NGOs. But whatever the framework considered, understanding the concept of ESG financial materiality and impact is the place to start.

There are many NGOs doing good work in establishing standards for ESG information and about the impact of ESG outputs, as well as a company's products and services. ESG information is largely about the risks associated with a company's *outputs*. Outputs, in turn, lead to ESG *outcomes* and impact is outcomes when viewed in an ESG context. To illustrate with a simple example, the amount of water a company uses in its production process that is purified after use is viewed as an output. The outcome is somewhat different—namely, how purified the water is. The impact is assessed in terms of the benefits of this purification, such as making the water potable or, if it is put back into a lake or stream, not endangering the wildlife. The Impact Management Project (IMP) is an initiative that is bringing together all of the NGOs and multilateral organizations looking to set standards for ESG and impact information through a structured network of relationships. And although this process is not yet fully functioning, it shows promise and is definitely useful in the search for future harmonization.

In this paper, we focus on non-financial information that is meant to help investors make more informed decisions and, for the more active of such investors, to provide a basis for engagement with their portfolio companies. For investors, the pillar of this process is SASB, a San Francisco-based nonprofit organization whose mission is "to help businesses around the world identify, manage, and report on the sustainability topics that matter most to their investors."[5] We begin with a bit of history about SASB and its relationship with another organization, Global Reporting Initiative (GRI), with similar goals, but somewhat different methods and practices.

SASB and GRI

With the aim of identifying the ESG issues that affect corporate financial performance and are therefore financially material for investors, SASB developed market-informed and industry-specific standards. With the intention to promote the adoption of measurement standards for reporting ESG issues of the same relevance and reliability as accounting standards for financial information, SASB initiated a process based on extensive feedback from companies, investors, and other market participants that led to the publication of a set of codified standards at the end of 2018. Because the materiality of sustainability issues varies across industries, SASB has established the Sustainable Industry Classification System™ (SICS),[6] which comprises 11 sectors that divide further into 77 industries.[7] Within this system, companies are grouped in terms of similar resource intensity, as well as sustainability risks and opportunities.

For the purposes of developing SASB standards, sustainability as a concept has been interpreted as referring to corporate ESG activities that, in the process of addressing environmental and social issues, help to maintain or even increase the ability of the company to create value over the long term. Sustainability accounting in accordance with

Finance, IMA, December 1 2018, https://sfmagazine.com/post-entry/december-2018-toward-business-2030/.

4 Eccles, R, G. and S. Klimenko, "The Investor Revolution. Shareholders Are Getting Serious About Sustainability," *Harvard Business Review,* April 13, 2019, https://hbr.org/2019/05/the-investor-revolution.

5 https://www.sasb.org/.

6 SASB, SICS™, www.sasb.org/approach/sics/.

7 Eccles, R. G. and G. Serafeim, "The Performance Frontier: Innovating for a Sustainable Strategy," *Harvard Business Review,* 91, May 2013, https://hbr.org/2013/05/the-performance-frontier-innovating-for-a-sustainable-strategy.

Table 1
SASB's Financial Value Drivers

Revenue			Operating Expenses		Non-Operating Expenses		Asset and Liabilities				Cost of Capital	
Market Share	New Markets	Pricing Power	Cost of Revenue	R&D	CapEx	Extraordinary Expenses	Tangible Assets	Intangible Assets	Contingent Liabilities & Provisions	Pension & Other Liabilities	Cost of Capital	Industry Divestment Risk

Source: Sustainability Accounting Standards Board (SASB)

Table 2
Financial Relevance of Disclosure Topics for the Internet Media & Services Industry

Internet Media & Services						
Disclosure Topic	**Revenue**	**OPEX**	**Non-Opex**	**Assets**	**Liabilities**	**Cost of Capital**
Data Privacy, Advertising & Freedom of Expression	high	medium	medium	high	medium	high
Data Security	high	medium	medium	high	medium	high
Environmental Footprint and Hardware Infrastructure	medium	high	medium			medium
Employee Recruitment, Inclusion & Performance	medium	high		high		high
Intellectual Property and Competitive Behavior	high		high		high	high

Source: Sustainability Accounting Standards Board (SASB)

SASB standards refers to the measurement, management, and reporting of such corporate activities. Overall, SASB identifies 26 sustainability general issue categories (GICs) that are organized under five broad sustainability dimensions: environment, social capital, human capital, business model and innovation, and leadership and governance. For each industry-specific material issue, SASB identifies a set of disclosure topics and a subset of associated accounting metrics. Going further, for each industry (as can be seen in Table 1), SASB has also analyzed the link between disclosure topics and each of 13 financial value drivers that are grouped into the six categories of revenue, operating expenses, non-operating expenses, assets, liabilities, and cost of capital.

At the industry level, each disclosure topic might impact one or more value drivers to a different extent (say, "high" or "medium"). The greater the number of the value drivers affected, the higher is the "financial relevance" of the material issue. Table 2 shows the most material issues in the Internet media and services industry and their likely effects on value drivers. It shows variation in terms of the relevance of each material issue for these value drivers. For example, all five material issues affect revenue and cost of capital. In the latter case, all are rated "high" except for one. Only three material issues affect assets and liabilities, with two of them being in common. However, all are rated high for assets and only one for liabilities. Conversely, data privacy, advertising, and freedom of expression, and data security are relevant to all six value drivers, the rest to only four, albeit a different set of four. The impact is high for all four value drivers in the cases of intellectual property and competitive behavior, but medium on three of the four for environmental footprint and hardware infrastructure.

The work of SASB is complemented by that of GRI, which focuses on providing reporting guidelines[8] for ESG issues that are material to all major corporate stakeholders (although not necessarily shareholders). There are two main and related characteristics that differentiate GRI from SASB. One is the targeted audience. GRI, as suggested, was founded to provide information to multiple stakeholders whose principal concerns are "externalities"—positive as well as negative effects that go beyond, but are associated with, a company's normal business activity. Hence, its definition of "materiality" is one of social impact. By contrast, since the primary audience for SASB is investors, its definition of materiality, like that of the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB), is one of the financial relevance of an ESG issue.

In sum, GRI and SASB are both essential reporting standards that serve different ends. As such, the two frameworks are by no means to be understood as competing,

8 The first guidelines launched in 2000 have undergone several revisions, the latest being the 2016 GRI G4 guidelines, an improved elaboration of the G4 guidelines released in 2013.

but rather as "complementary" and "mutually supportive," as reported by the chief executive officers of both GRI and SASB.[9] With its focus on society at large, GRI identifies issues that, while not necessarily financially material today, can become so in the future. GRI is "the canary in the coal mine." To some extent, this will occur because stakeholders can make it so. Their actions and decisions—such as whether to buy a product or go to work for a company—can make the issue a material one for investors. The need to harmonize the several existing reporting frameworks[10] is deemed essential.

To this end, the Corporate Reporting Dialogue (CRD)[11] has recently launched the "better alignment project" which seeks to foster consistency between the different frameworks in the sustainability reporting ecosystem. The project has already yielded promising results in terms of the better alignment of the frameworks' standards to the recommendations published by the Task Force on Climate-related Financial Disclosures (TCFD). "While no framework is perfect," writes Larry Fink in his 2020 letter to CEOs, "BlackRock believes that SASB provides a clear set of standards for reporting sustainability information across a wide range of issues." And as he goes on to say, "for evaluating and reporting climate-related risks, as well as the related governance issues that are essential to managing them, the TCFD provides a valuable framework."[12]

Framework alignment is important because investors today are genuinely interested in sustainability issues, but they have to sift through information that is not standardized, not comparable, and, in many cases, not material. This is why SASB's standards were developed—to measure investor-oriented material sustainability issues that have an impact on financial performance. And they are doing this by industry. Although most large companies report ESG information, it is difficult to compare this information across companies and to know which issues are financially material. In an attempt to solve this problem, SASB has identified 26 material issues; and although which issues are material clearly varies from one industry to the next—and in ways that SASB industry standards attempt to capture—such issues are those that are reasonably likely to impact the financial condition or operating performance of a company. The goal of the set of industry-specific accounting metrics developed and recommended for use by SASB is to help companies and their investors capture such effects.

Research Design

The authors recently conducted a study whose aim was to assess the extent to which companies are using SASB's standards in external reporting, and the quality of those efforts. Extent of usage was determined simply by noting whether SASB had included the company on its website as reporting according to its standards. Quality was measured by assessing how many of the material issues recommended by SASB for an industry were being reported on by these companies. A further refinement involved assessment of the degree of financial relevance and financial intensity of the topics reported on. The data were collected based on the corporate reports[13] on SASB's website.

Data and Sample

The original sample population considered for the analysis consisted of 91 companies recognized by SASB as reporting with the framework's standards in 2019. This is an admittedly very small sample, but this is not surprising. SASB published provisional standards in the period October 7, 2017 through January 31, 2018. Its codified standards did not become available until the end of 2018.

A preliminary analysis was carried out to understand whether the companies recognized by SASB as using its framework actually did in fact report in compliance with the requirements of the SICS classification system. Of the initial 91 companies, two companies were found to be out of compliance, reducing the sample to 89. (In one case, the company did not identify with the industry prescribed by the SICS classification system; in the other, the company claimed to use the framework to identify the relevant material issues but failed to provide any performance metrics based on this system.)

Each of the 11 SASB sectors, and 37 of the 77 SASB industries were represented in our sample. As shown in

9 In an interview, Tim Mohin, CEO of GRI, addressed the relationship between GRI and SASB [Allison-Hope, D., "The Sustainability Reporting Landscape: Q&A with GRI and SASB," *BSR*, November 30, 2017, https://www.bsr.org/en/our-insights/blog-view/sustainability-reporting-landscape-interview-gri-sasb]. Janine Guillot, chief executive of SASB, says the standard setters are not in competition. "SASB is uniquely designed for investors," she says. "On top of that the world needs a broader set of standards on how companies affect the world, and that's where the GRI comes in." [Mooney, A., and B. Nauman, "Larry Fink rules on the best global standards for climate risk reporting," *Financial Times*, January 20, 2020, https://www.ft.com/content/fc51227b-9d64-4e5a-b1e2-f6c07f4caa58].

10 Other than SASB and GRI there do exist other corporate reporting frameworks, such as "The International <IR> Framework" created by the International Integrated Reporting Council, https://integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf.

11 Founded in 2014 by the IIRC, the Corporate Reporting Dialogue is a multi-stakeholder platform that serves the purpose of creating coherence, consistency, and comparability between the different corporate reporting initiatives https://bit.ly/2wgDtJ6.

12 See the 2020 Larry Fink's letter to CEOs, January, https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

13 By "corporate reports" we here intend all publicly available documents found on companies' websites (e.g., Sustainability Reports, Annual Reports, ad hoc SASB reports).

Table 3
Company Sector Breakdown

SASB sector	Companies	
	Number	%
Infrastructure	21	23.6%
Extractives and Minerals Processing	15	16.8%
Financials	11	12.4%
Consumer Goods	10	11.2%
Technology and Communications	8	9.0%
Transportation	7	7.9%
Resource Transformation	6	6.7%
Services	5	5.6%
Food and Beverage	4	4.5%
Health Care	1	1.1%
Renewable Resources and Alternative Energy	1	1.1%
Total	89	100.0%

Table 4
Company Geographic Breakdown

Geographical Area	Companies	
	Number	%
U.S.	64	71.9%
EU	7	7.9%
Other	18	20.2%
Total	89	100.0%

Table 3, the top three sectors represented were Infrastructure, Extractives and Minerals Processing, and Financials, which together comprised more than 50% of our observations.

As can be seen in Table 4, the geographical breakdown shows that our sample is predominantly U.S.-based, with 64 (or more than 70%) of the companies headquartered there.

Methodology

The analysis of the final 89 companies' degree of compliance to SASB's standards was assessed at the disclosure topic level by determining whether the corporate reports of the sample population provided clear information for at least one accounting metric per disclosure topic.

To measure the degree of compliance to the SASB standard at the disclosure topic level, we calculated for each company a "Disclosure Topic Compliance Index" (*DTCI)*, measured as the ratio of the number of disclosure topics for which the company reported at least on one accounting metric to the total number of disclosure topics in the SICS™ industry of the company. To measure the "quality" of companies' compliance with SASB's standards, we looked at the financial relevance of the disclosure topics reported by the company and calculated a "Financial Relevance Compliance Index" (*FRCI*) as the ratio of the number of financial value drivers impacted by the disclosure topics reported by the company to the total number of value drivers impacted by all disclosure topics in that industry.

To provide an example, in accordance with SASB standards, Delta Airlines should be reporting on four disclosure topics related to the material issues of the airline industry: GHG Emissions, Labor Practices, Competitive Behavior, and Accident and Safety Management. Delta reports on three of them, and so has a *DTCI* of 75.0%. The disclosure topic Delta does not report on is Competitive Behavior. Delta also has a FRCI of 75.0% since its disclosure topics impact three quarters of the possible count on financial value drivers.

Given that not all the disclosure topics have the same financial relevance, a company could report on a high proportion of the disclosure topics of its industry (and so have a high *DTCI*), but the disclosure topics it reports on may not be highly financially relevant (a low *FRCI*). For this reason, the *FRCI* is a useful measure of the quality of disclosure in terms of reporting on those topics that are more likely to affect multiple dimensions of financial performance. When a company fully reports on SASB's disclosure topics (*DTCI*=100%), the *FRCI* will also be 100%.

We also attempted to measure the "intensity" of financial relevance. As shown in Table 2, when a value driver is affected by a material issue, the impact is labeled as "high" or "medium." To measure the intensity of the financial impact, for each disclosure topic we calculated a Financial Intensity Index (*FII*) as the ratio of the number of value drivers deemed to have "high" impact and the total number (13) of the value drivers considered by SASB. In our sample, the *FII* ranges from 0% (i.e., none of the drivers is impacted "high" by the disclosure topic) to 53.8%, with an average of 16.2%. At the industry level in our sample, Tobacco (30.8%), Professional and Commercial Services (30.8%), and Airlines (28.8%) were the three industries with the highest average *FII*, whereas Home Builders (9.2%), Waste Management (9.9%), and Industrial Machinery and Goods (10.8%) were the three lowest.

Finally, we calculated a Financial Intensity Compliance Index (*FICI*) as the ratio of the *FII*s of the disclosure topics reported by the company and the *FII*s of all the disclosure topics relative to the SICS industry of the company. The *FICI* can range from 0% (none of the disclosure topics reported by the company has a "high" impact on at least one value driver) to 100% (the disclosure topics reported by the company include all those disclosure topics that have a "high" impact on the value drivers).

Table 5
Detailed Sector Analysis

Sector	Disclosure Topic Compliance Index (DTCI)	Financial Relevance Compliance Index (FRCI)	Financial Intensity Compliance Index (FICI)
Food and Beverage	91.7%	90.7%	90.0%
Consumer Goods	90.0%	91.8%	94.0%
Services	89.3%	89.5%	86.0%
Transportation	86.9%	85.7%	86.2%
Health Care	83.3%	77.8%	81.8%
Infrastructure	79.6%	80.1%	76.9%
Technology and Communications	68.7%	67.0%	63.0%
Financials	65.4%	61.0%	47.2%
Extractives and Minerals Processing	61.2%	66.6%	63.2%
Resource Transformation	45.8%	34.6%	36.2%
Renewable Resources and Alternative Energy	13.3%	33.3%	58.3%

A composite analysis of the three indices—Disclosure Topic Compliance Index (*DTCI*), Financial Relevance Compliance Index (*FRCI*), and Financial Intensity Compliance Index (*FICI*)—allows us to assess the overall quality of disclosures of companies adopting SASB's framework in their non-financial reporting. To this end, we measured for each company the extent to which the disclosure topics reported by a company impact the financial value drivers and especially the "high" impact drivers. Continuing the Delta example, it has a FICI of 73.3% since it's disclosure topics total 11 on high impact versus a possible 15.

Results

Our sector-level findings, as summarized in Table 5, suggest that most companies that are reporting in accordance with SASB's standards are doing a reasonably good job. Each of the three measures, *DTCI*, *FRCI,* and *FICI*, are similar across the industry sectors. Nevertheless, in the handful of cases where the *DTCI* score is low, the financial relevance measures begin to diverge sharply (as will be shown in the case of the Renewable Resources and Alternative Energy industry below).

In terms of the *DTCI*, six of the 11 sectors have a score of 75.0% or more, which means they are reporting on at least three-quarters of the disclosure topics for their sector. Another three are between 60.0% and 75.0%. The lowest two are Resource Transformation (45.8%) and Renewable Resources and Alternative Energy (13.3%). Indeed, companies in the Resource Transformation sector report on average on less than half of the disclosure topics for each industry. In the Chemicals industry, disclosure topics that are not covered by any or only by a minority of companies are Human Rights and Community Relations and Product Design and Lifecycle Management. The same is true for Product Quality and Safety, Material Sourcing and Efficiency, and Business Ethics in the Electrical and Electronic Equipment industry. Disclosure on Material Sourcing and Efficiency was also absent in the Industrial Machine and Goods industry.

The *FRCI* scores, as expected, are very similar to the *DTCI* ones. The same six sectors have scores of greater than 75.0%, the same three have scores between 60.0% and 75.0%, and Resource Transformation (34.6%) and Renewable Resources and Alternative Energy (36.2%) are ranked significantly lower. The *FRCI* score for Resource Transformation is lower than its *DTCI* score because the disclosure topics it is reporting on are, on average, the less financially relevant ones for this industry, as they include only 35.0% of the total number of financially relevant value drivers. The opposite is the case for Renewable Resources and Alternative Energy. Although it has the lowest *DTCI* score by far, its *FRCI* score is much higher because the few disclosure topics it is reporting on have a higher level of financial relevance than the ones on which it is not.

The *FICI* scores are very similar to the *FRCI* ones—which again is not surprising, since a high *FRCI* score increases the likelihood that the company is reporting on the material issues with the highest level of financial intensity. Once again, the same three sectors have scores of 75.0% or more. However, only two of the same three sectors (Technology and Communications and Extractives and Minerals Processing) have scores of between 60.0% and 75.0%. Financials is only at 47.2%, which means that the disclosure topics being reported on are lower in financial intensity than the ones it is not reporting on. For example, in the case of Financials, Systemic Risk Management affects at a "high" level six of the 13 financial value drivers, yet none of the six commercial banks in this sector reports on it. The 36.2% score for Resource Transformation closely matches its *FRCI* score. These scores are low because the disclosure topics are especially missing some financial value drivers, including those with "high" impact. But, as we noted earlier, the fairly high score for Renewable Resources and Alternative Energy (58.3%) is much higher than its *FRCI* score. This is due to the fact that the few disclosure topics it is reporting on are of a high level of financial intensity, as they include almost 60% of the value drivers with "high" impact.

Table 6
Disclosure Topics for the Solar Technology and Project Development Industry

Disclosure Topic	ESG Dimension
Energy Management in Manufacturing	Environment
Water Management in Manufacturing	Environment
Hazardous Waste Management	Environment
Ecological Impacts of Project Development	Environment
Management of Energy Infrastructure Integration and Related Regulations	Business model and innovation
Product Design and Lifecycle Management	Business model and innovation
Materials Sourcing and Efficiency	Business model and innovation

Three Cases: Sunrun, Suncor, and Target

We now present three examples of companies to help illustrate how SASB's standards are being put into practice. We chose companies in different sectors that were not reporting on all disclosure topics to show the importance of financial relevance and financial intensity.

The first company, Sunrun, is a residential solar panel company in an industry that requires transparent sourcing of the hazardous materials it uses. Thus, it may provide an example for an industry whose supply chain requires a careful assessment of environmental and social risks associated to material sourcing.

The second company, Suncor, is an integrated energy company that explores and extracts oil and gas which it refines into products it sells to industrial, commercial, and retail customers; and as such, Suncor provides a practical example for a complex industry that is continuously under scrutiny. The third company, Target, is a retail company in a highly competitive industry where costs must be kept low while at the same time responsibly managing an extensive supply chain.

Sunrun

Sunrun is a leading home solar, battery storage, and energy services company based in San Francisco, and has led the solar technology industry since 2007. Its products are tailored to deliver a *solar-as-a-service model* that provides clean energy to households with low up-front costs. According to the Sustainability Industry Classification System™ (SICS™), the company falls in the Solar Technology and Project Development industry. Business organizations in this industry are characterized by innovative energy management systems that work to reduce costs and ensure competitive advantage through competitive pricing of products. The innovative technologies that enable this to occur are mainly solar panel systems.

Solar panel systems tend to be built out of hazardous substances that can harm the environment and the well-being of individuals. Hence, companies in this industry are bound to ensure that the management of hazardous materials is carried out in an effective way. Moreover, their production involves the use of critical materials that are subject to geopolitical tensions. The sourcing of these materials highly impacts the supply chain of companies. Businesses can preemptively avoid supply-chain related issues by ensuring greater transparency or by sourcing their materials from regions with minimal environmental or social risks.[14]

To this end, SASB has identified five disclosure topics to support companies in assessing sustainability issues that may affect their long-term value creation. The disclosure topics are reported in Table 6. Sunrun has a low *DTCI* (13.3%) because it reports information on only two of the seven disclosure topics, namely Management of Energy Infrastructure Integration and Related Regulations and Materials Sourcing and Efficiency. Although its *DTCI* is very low, its *FRCI* (33.3%) and *FICI* (58.3%) are relatively high, suggesting that the disclosure topics on which it provides information incorporate a significant number of "high-impact" value drivers, and thus the quality of Sunrun's disclosure is good. This assessment is reinforced by observing the value drivers impacted by the two disclosure topics. Providing information on Management of Energy Infrastructure Integration and Related Regulations impacts seven out of the 13 value drivers (five labeled as "high" and two as "medium"), whereas disclosing information on Materials Sourcing and Efficiency impacts only four (two "high" and two "medium").

Suncor[15]

Based in Canada, Suncor is an integrated energy company operating in the SASB industry Oil and Gas Exploration and Production. Besides being specialized in the production of synthetic crude from oil sands, the company also markets petroleum and petrochemical products. In its reporting, the company acknowledges the business transformation it must undertake to properly manage the opportunities and risks it faces and suggests that it needs to invest in innovative and transformative technologies that will provide solutions to social and environmental challenges. As part of its wide portfolio of assets, Suncor also operates a renewable energy business. All of its core business activities make intensive use

14 All the company related information for this section was found in the Impact Report issued by Sunrun and available at: https://www.sunrun.com/sites/default/files/Sunrun-2018-Impact%20Report-Web-Digital.pdf.

15 All the company related information for this section was found in the SASB Table issued by Suncor, https://sustainability.suncor.com/en/gri-and-sasb.

Table 7

Disclosure Topics for the Oil and Gas Exploration and Production Industry

Disclosure topic	ESG category
Greenhouse Gas Emissions	Environment
Air Quality	Environment
Water Management	Environment
Biodiversity Impacts	Environment
Security, Human Rights and Rights of Indigenous Peoples	Social capital
Community Relations	Social capital
Workforce Health and Safety	Human capital
Reserves Valuation and Capital Expenditures	Business model and innovation
Business Ethics and Transparency	Leadership and governance
Management of the Legal and Regulatory Environment	Leadership and governance
Critical Incident Risk Management	Leadership and governance

Table 8

Disclosure Topics for the Multiline and Specialty Retailers and Distributors Industry

Disclosure topic	ESG category
Energy Management in Retail and Distribution	Environment
Data Security	Social capital
Labor Practices	Human capital
Workforce Diversity and Inclusion	Human capital
Product Sourcing, Packaging, and Marketing	Business model and innovation

of natural capital. Companies within this industry generally produce high greenhouse gas emissions (GHGs), as well as hazardous air pollutants that significantly affect the environment and people's health. Moreover, the operations carried out may also impact biodiversity and local communities, which effects increasingly expose companies to regulatory actions. Hence, it is crucial for companies operating in this industry to adopt capital expenditure and production decisions that preemptively assess these issues in order to ensure profitability and prevent asset impairment. For most industries, SASB standards generally identify five to six disclosure topics. In the case of integrated oil and gas, the number is 11 (see Table 7).

Suncor can be seen as a model of best practice in relation to SASB standards. The company reports accounting metrics on 10 of the 11 disclosure topics, for a *DTCI* score of 90.9%. This high score also results in a high *FRCI* (87.7%) and a high *FICI* (83.3%). For example, Suncor provides information about two material issues, Biodiversity Impacts and Workforce Health and Safety, which affect a large number (seven and eight, respectively) of value drivers.

Target[16]

Target is a general merchandise retailer that operates across the U.S. and belongs to the Multiline and Specialty Retailers and Distributors industry. The company has 42 private labels in addition to a "curated" selection of national brand products.[17] Target encompasses a variety of retailing categories, such as department stores, mass merchants, and home products stores. The company has recently shifted its approach to corporate social responsibility from being a portfolio of philanthropic activities to putting corporate social responsibility at the core of its overall business.

The industry in which Target operates is highly competitive. It is characterized by companies charged with managing global supply chains that aim to anticipate consumer demands whilst keeping costs low. Moreover, goods produced are relatively substitutable and companies are exposed to high reputational risks linked to their supply chain management. Hence, issues such as Data Security and Product Sourcing, Packaging, and Marketing have critically important effects on the performance of companies.

Target reports information on almost all (four of the five) disclosure topics identified by SASB (see Table 8): Energy Management in Retail and Distribution, Data Security, Workforce Diversity and Inclusion, and Product Sourcing, Packaging, and Marketing. The company has a *DTCI* of 80.0%, a *FRCI* of 77.7%, and a *FICI* of 80.0%. These scores are very similar since Target reports information on most of the disclosure topics. According to SASB's framework, by providing information on Data Security and Product Sourcing, Packaging, and Marketing, Target is effectively disclosing effect on about half (six and seven, respectively) of the 13 value drivers.

Implications for Management

While the number of companies reporting according to SASB's standards is still small, the quality is, on average, good to very good. This suggests that for those companies

16 All the company-related information for this section was found in the Corporate Responsibility Report issued by Target, https://corporate.target.com/_media/TargetCorp/csr/pdf/2019_corporate_responsibility_report.pdf.

17 Further information is available at: https://corporate.target.com/about/products-services/Target-Brands.

that have chosen to report according to SASB, the task has proved manageable; it can be done. Furthermore, it is worth noting that when companies are selective about which disclosure topics they report on, they tend to focus on those with the highest financial relevance measured in terms of the 13 financial value drivers impacted by the topic.

Now that BlackRock has expressed its support for reporting in accordance with SASB's standards and the TCFD's climate framework, companies should consider the possibility of adopting such standards. This can be done through the following seven steps.

First, companies should familiarize themselves with the work of SASB, which can be done by reviewing the information available on its website (www.sasb.org).

Second, after confirming their sector and industry in the SICS™, companies should assess the degree to which SASB's list of material ESG issues is consistent with their own list of strategically important ESG issues, and of the disclosure topics that they deem relevant to their industries and the associated accounting metrics that SASB recommends for external reporting.

Third, companies should identify the relevant financial value drivers for each disclosure topic they deem important—and which can serve as the starting point for crafting their own narrative about how their ESG performance on material issues contributes to financial performance.

Fourth, companies should assess the quality of its internal control and measurement systems for reporting on these disclosure topics. As part of this assessment, companies should aim to achieve the same degree of rigor when assessing internal control and measurement systems for financial reporting. To the extent BlackRock's endorsement and follow-on support from the investment community causes SASB's standards to broaden into practice, investors are likely to come to expect positive assurance on ESG reporting.

Fifth, companies should consider creating a plan for SASB-based reporting. This begins with its first report based on SASB's standards, which can be done in a sustainability report or integrated report. Each year the company should strive to improve the quality of its report through the narrative in which it connects financial and non-financial performance, setting out the targets it sets for the latter, and reporting on the type of assurance done on these data.

Sixth, companies should recognize that external reporting has many more uses and audiences than those intended by an annual paper or electronic PDF report. The information provided by such reports can and should be used in investor meetings, analyst calls, the annual general meeting, and capital markets days. The company's website should be leveraged as much as possible to make it easier for users to find, understand, and analyze the information they want.

Seventh, and finally, as SASB-based reporting becomes more common, companies should establish a process for continuous improvement based on external analyses and feedback. This can start by comparing its reporting to that of others in its industry for insights into how to improve. It should also consult its investor base for feedback. And, although SASB is focused on shareholders, other stakeholders should be consulted to the extent it's practicable.

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