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AMPLIFY

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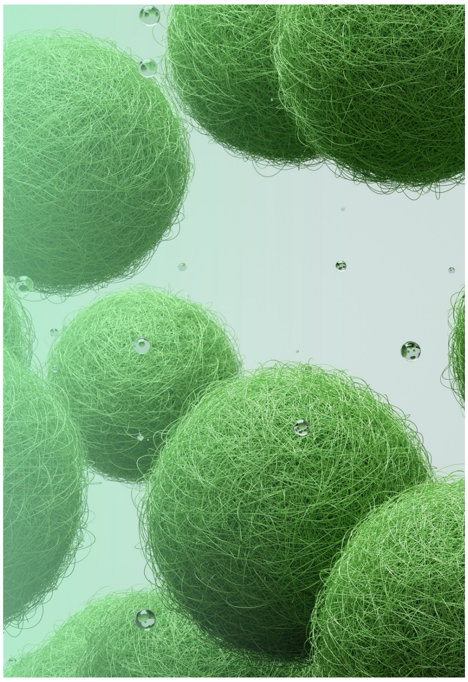
Anticipate, Innovate, Transform

ESG Reporting Trends

CONTENT

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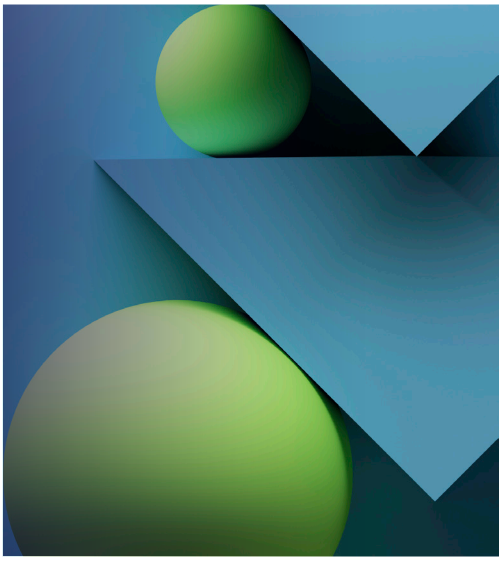

ESG REPORTING TRENDS

BY ETHAN ROUEN, GUEST EDITOR

The skyrocketing demand for information from companies on their environmental, social, and governance (ESG) activities has been among the most interesting corporate phenomena of the last century. By 2021, more than 75% of large US firms had published a standalone ESG report, despite an absence of regulation requiring them to do so.

The growing amount of corporate ESG disclosure — in standalone reports, more nuanced disclosures, conference calls, social media, and less traditional venues — around the globe suggests this information may be of use to various stakeholders, including investors, who are demanding more and better ESG disclosures.

However, the usefulness of these disclosures remains in question, in large part because the lack of regulation and the broad umbrella of topics that falls under ESG means companies can discuss issues that may not be comparable across time (or within industry) or that may be irrelevant to investors but of interest to other stakeholders.

For example, in researching a working paper I coauthored that examines regulated human capital disclosures after the US Securities and Exchange Commission (SEC) required firms to begin discussing this topic in their Form 10-Ks, we found that firms disclosed across nine metrics categories (e.g., workforce diversity, employee turnover, safety), but few disclosed on more than two. Although the variety of disclosures was similar across sectors, no sector reported uniformly on a single metric, or even a single topic.[1]

This outcome is a result of the principles-based approach to the rule — with the SEC acknowledging it could not even define "human capital" because it expected the definition to vary across firms, and even within the same firm across time. This argument jibes with an article I cowrote in *Harvard Business Review* that involved asking more than a dozen executives what is meant by "human capital" and receiving a dozen different answers, an outcome that is likely frustrating to investors looking for comparability to make judgements about firms' strategies.[2]

The most common metric that firms began disclosing in response to the SEC's rule change relates to diversity, equity, and inclusion. This is unsurprising for numerous reasons. First, the rule was introduced shortly after the murder of George Floyd, when racial and gender diversity had taken center stage in the media. Second, asset managers like State Street were actively campaigning for firms to release this type of information, believing that diversity data could provide valuable insights into human capital development. Third, firms were already collecting this data through their Equal Employment Opportunity-1 forms, which the US Equal Employment Opportunity Commission requires firms to report confidentially (so the common complaint that developing new disclosures is costly did not hold for this information).

Overall, companies have been incredibly responsive to the rule change. The amount of publicly traded US companies devoting a section of their 10-K to a discussion of human capital increased from 0% to more than 85% in a year.[3] This reaction underscores companies' desire for clearer insights into what ESG information investors want.

In another paper of mine, we found further evidence of companies' belief that ESG information is valuable to investors. Using advanced machine learning techniques, we examined the content of all ESG reports for S&P 500 firms from 2010 to 2021. Using the Sustainable Accounting Standards Board's (SASB) industry-level definitions of financially material ESG information, we found that, on average, the amount of material information is 40% higher than the amount of information deemed less relevant to investors.[4]

> **THE SEC AND EUROPEAN REGULATORS ARE CONTEMPLATING SWEEPING CHANGES TO THE CORPORATE REPORTING LANDSCAPE THAT WOULD REQUIRE FIRMS TO PROVIDE DETAILED DATA ON THEIR ESG ACTIVITIES**

The amount of material information in these reports has increased over time, driven by two market forces. First, in the years immediately following the release of SASB standards, firms increased the amount of material information by more than 10%. Second, firms that voluntarily provided feedback to SASB on the standard-setting process had been increasing material information in their ESG reports in the years leading up to SASB's creation. These findings suggest two important aspects of the current ESG disclosure landscape. First, even without regulation, firms are coalescing around specific types of disclosures on ESG topics. Second, firms believe this information is relevant to investors. Still, firms have unlimited leeway in what, if anything, they choose to disclose, so investors likely are not getting the full picture, especially on topics that might make a firm or its management look bad.

A compelling body of evidence points to the benefits of regulation to shape ESG disclosures in ways that are useful to investors and ESG behaviors in ways that are useful to society. A paper examining the 2014 EU directive that required large companies to publish nonfinancial reports found that those impacted by the directive increased their ESG activities in meaningful ways, and the companies with the weakest ESG disclosures and activities had the greatest improvements.[5] Another paper looking at the introduction of mandated ESG reporting in countries in Africa, Asia, and Europe showed that firms disclosed not just more but also better ESG information after the mandate, and the increase in disclosure also led to an increase in firm value.[6]

Currently, the SEC and European regulators are contemplating sweeping changes to the corporate reporting landscape that would require firms to provide detailed data on their ESG activities. Yet even with evidence of the potential benefits of such mandates, political winds are fickle, and there remains tremendous uncertainty about when, or even if, effective regulation will go into effect.

IN THIS ISSUE

This issue of *Amplify* provides insights into how to interpret ESG information in the current environment, what information is needed to make better decisions, and why we need increased disclosure and greater transparency. The articles offer guidance on how to act now and how to prepare for a more regulated future.

In our first article, Alex Saric looks at applying circular economy principles to supply chain emissions. Sustainability goals consistently rank as a top corporate priority, and Scope 3 sources (greenhouse gases produced by external suppliers and customer activities) make up at least 70% of overall emissions for most industries. Saric says companies should leverage data provided by suppliers and third-party data sources to create a verification framework and, with that in hand, look for circular economy methods to reduce emissions.

Next, Cynthia E. Clark focuses on strategies for navigating the climate-related information-disclosure landscape. Clark describes the current status of disclosure regulations in the US and Europe, as well as actions being taken by various stock exchanges. She then delves into strategies for boards of directors, including avoiding greenwashing, staying up to speed on potential regulatory changes, reporting on the risks of transitioning to net zero, and having a dedicated team accountable for ESG reporting to ensure information accuracy.

Following Clark's piece, Rachael R. Doubledee, Matthew Nestler, and Kelley-Frances Fenelon highlight focus group data on the American public's perception of corporate disclosures and corporate transparency. Spoiler alert: Americans want more accessible, honest disclosures, including confessions about missteps. After showing how low disclosure rates are in America's largest public companies, the authors go into detail about how business leaders can meaningfully communicate corporate impact on people and communities.

Finally, T. Robert Zochowski and Ryan Daulton argue that most mainstream ESG reporting frameworks don't capture the ultimate social and environmental effects of corporate activities. They propose an alternative called the Impact-Weight Accounts Product Framework and say data from such an approach shows a close correlation between a company's product impact and profitability. They conclude that "firms that quickly adopt methodologies that allow them to evaluate alternatives in product design to maximize impact will have a significant advantage over firms that do not."

We hope this issue of *Amplify* guides you toward more meaningfully understanding the need for better ESG information disclosure and puts you on the path to improve decision-making in your organization around this important topic.

REFERENCES

[1] Bourveau, Thomas, Maliha Chowdhury, Anthony Le, and Ethan Rouen. "Human Capital Disclosures." SSRN, September 2022.

[2] Rouen, Ethan, and Marcela Escobari. "Does Your Company Offer Fruitful Careers — Or Dead-End Jobs?" *Harvard Business Review*, 3 March 2022.

[3] Rouen, Ethan, Kunal Sachdeva, and Aaron Yoon. "The Evolution of ESG Reports and the Role of Voluntary Standards." SSRN, 31 October 2022.

[4] Rouen et al. (see 3).

[5] Fiechter, Peter, Jörg-Markus Hitz, and Nico Lehmann. "Real Effects of a Widespread CSR Reporting Mandate: Evidence from the European Union's CSR Directive." *Journal of Accounting Research*, Vol. 60, No. 4, September 2022.

[6] Ioannou, Ioannis, and George Serafeim. "The Consequences of Mandatory Corporate Sustainability Reporting." Harvard Business School Research Working Paper No. 11-100, SSRN, 1 May 2017.

About the guest editor

ETHAN ROUEN

Ethan Rouen is Associate Professor of Business Administration at Harvard Business School, where he teaches "Reimagining Capitalism" and is Faculty Cochair of the Impact-Weighted Accounts Program. He is also a member of Arthur D. Little's AMP open consulting network. Professor Rouen's research approach combines empirical archival methodologies with leading-edge data science techniques, such as machine learning and neural network models. His current research areas include understanding economic inequality and the measurement of human capital; the evolution and current status of ESG voluntary disclosures; and the SEC disclosures related to the CEO pay ratio. Professor Rouen has also researched financial statement errors and the effect of US corporate tax policy on the performance of US corporations versus the overall economy. His research has been published in *Journal of Financial Economics, The Accounting Review, Management Science*, and *Review of Accounting Studies*. Professor Rouen has also appeared in *The Boston Globe, Le Monde, HuffPost, The Hill, CEOWORLD*, and *Fortune*, among others. He appears frequently in national and international media outlets. Professor Rouen was awarded Best Junior Contribution to the Theory and Practice of Intangibles, Intellectual Capital, and Sustainability by the European Institute for Advanced Studies in Management (EIASM) at the *2022 EIASM Interdisciplinary Conference* for "Regulated Human Capital Disclosures" with Thomas Bourveau, Maliha Chowdhury, and Anthony Le. He was also the winner of the 2022 Innovation in Research Award from the Diversity Section of the American Accounting Association for "Inclusive Managers" with Wei Cai and Yuan Zou. Additional awards include the Competitive Manuscript Award, the Deloitte Foundation Wildman Medal, and the Best Dissertation Award in the Financial Accounting and Reporting Section from the American Accounting Association. Professor Rouen earned a PhD in accounting and an MBA in finance and accounting from Columbia Business School, a master's of science degree in journalism from Columbia University Graduate School of Journalism, and a bachelor of arts degree in history and English from the University of Wisconsin-Madison. He can be reached at erouen@hbs.edu.

USING A CIRCULAR ECONOMY TO SLASH SUPPLY CHAIN EMISSIONS

Author

Alex Saric

Investors in public companies should be able to get accurate data about long-term corporate risks so they can make well-informed decisions about their investments. With interest in corporate social responsibility increasing, many investors are asking for public disclosures about environmental, social, and governance (ESG) issues to assess potential risks. Yet risks associated with ESG reporting do not usually show up in earnings statements or annual reports.

For this reason, regulators are putting greater emphasis on the disclosure of nonfinancial ESG information. At the same time, employees and partners increasingly seek companies that demonstrate a commitment to addressing environmental concerns. Likewise, consumers are growing more concerned about the environment and prefer brands with values that align with their own.

Investors who value the long-term health of corporate America support greater corporate disclosures on environmental impact as a financial safeguard against undue risk. Not surprisingly, most regulated organizations have signaled their intentions to achieve net-zero emissions by 2050, if not much sooner.

In a recent Honeywell/Futurum Research survey, sustainability goals were ranked as the top corporate priority by 75% of respondents.[1] Sustainability beat out digital transformation initiatives (56%), financial performance (47%), and event market growth (47%). The leading types of corporate environmental initiatives included energy efficiency, recycling, and circularity. The leading types of corporate environmental initiatives included energy efficiency, recycling, and circularity.

Sustainability, including how companies align their ESG objectives with supplier management decisions in the supply chain, is a topic of particular interest for regulators and investors. As a result, many companies are working to adopt a more sustainable approach to procurement.

By gaining a clearer picture of their business relationships, manufacturers can choose suppliers based on how well they measure and track their ESG metrics and their willingness to collaborate on improvement plans. Suppliers that show real progress toward meeting sustainability, data privacy, labor, and corporate governance rules are increasingly being prioritized as partners by many organizations. Companies that lag in meeting ESG standards may face a negative backlash from investors, employees, and consumers, potentially impacting growth prospects and limiting their ability to attract top workforce talent.

> **SUSTAINABILITY IS A TOPIC OF PARTICULAR INTEREST FOR REGULATORS AND INVESTORS**

SCOPING OUT GHGs IN THE VALUE CHAIN

One of the most challenging aspects of environmental reporting involves calculating greenhouse gas (GHG) emissions. This issue stretches back to at least 2001, when the Greenhouse Gas Protocol organization set out a framework for business standards on carbon reporting. The simple system classifies emissions as Scope 1, 2, or 3.

Scope 1 involves GHGs stemming from the direct production of goods and services; Scope 2 involves emissions from indirect energy consumption, such as office electricity. Most organizations have become steadily more effective in how they measure and mitigate emissions from their Scope 1 and Scope 2 sources.

Scope 3 sources (GHGs produced by external suppliers and customer activities) represent the largest opportunity to lower emissions, making up at least 70% of overall emissions for most industries.[2] As such, companies that are serious about minimizing their carbon footprint must focus strongly on Scope 3 (see Figure 1).

For example, computer peripheral maker Logitech says Scope 3 emissions make up 99.8% of its current global GHG emissions.[3] That overwhelming percentage is due to the company reportedly reducing its Scope 1 and Scope 2 emissions to "negligible" levels.

Logitech plans to cut its Scope 3 emissions in half or more by 2030 by refurbishing more products for resale and incorporating lower-carbon materials into production.[4]

Despite the obvious environmental and financial benefits of reducing emissions, only 47% of companies currently include Scope 3 planning in their efforts to reach net-zero emissions by 2050.[5] This situation stems from the fact that gauging emissions from external suppliers, let alone reducing them, is much more difficult than creating internal programs to measure and reduce emissions from in-house processes and systems. Scope 3 requires proof that emissions in a business's extended supply chain be reduced, something that can't be done without the active contribution of suppliers and customers.

The path to reduce emissions requires an inside-outside approach. Internally, organizations need to become more efficient in managing resources, energy, manufacturing plants, and transportation systems. Business leaders must analyze where and how their organizations are most wasteful and develop action plans for mitigation. For IT departments, this includes scrutiny of interrelated factors like data center energy use, cloud adoption, enterprise architecture sustainability, end-user-device decarbonization, and deploying environmental-monitoring software.

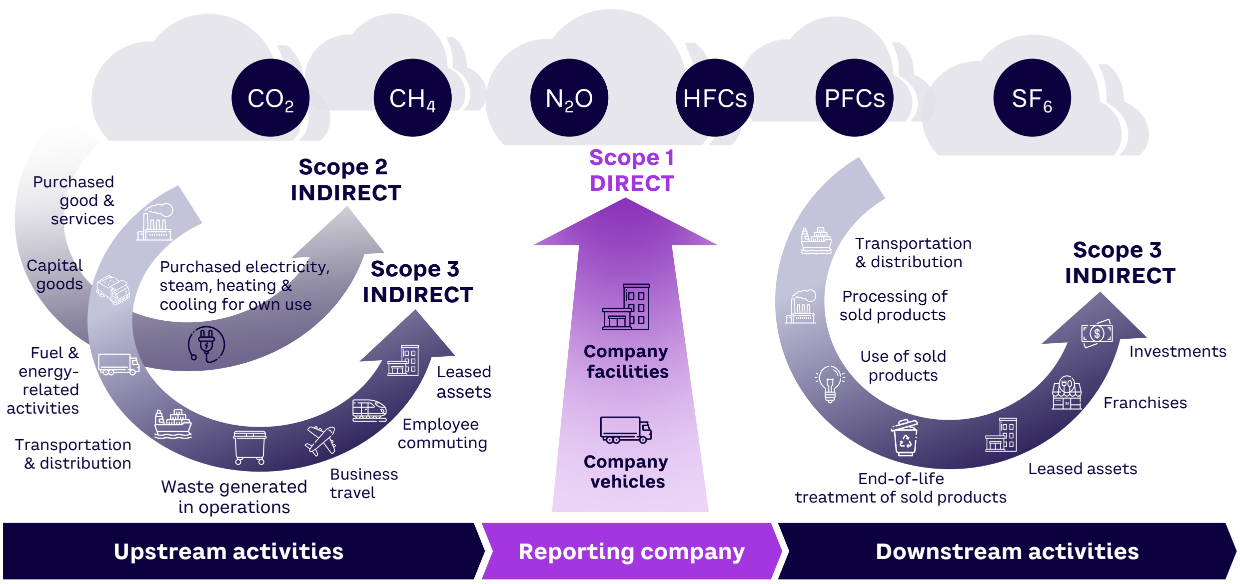

Figure 1. The 3 scopes of greenhouse gas emissions (source: Greenhouse Gas Protocol)

Externally, organizations must become more collaborative in how they work with suppliers to drive mutual gains in meeting targets. Most emissions reductions will come not from selecting different suppliers, but from continuous improvements and innovations developed by (or jointly with) suppliers. Organizations that build the most collaborative relationships with suppliers will have an opportunity to realize a long-term competitive advantage in their markets.

To address the Scope 3 challenge, companies must closely align their efforts across all supplier networks. Working together, partners can develop structural innovations that will allow them to share, lease, reuse, repair, refurbish, and recycle existing materials as a way of reducing their overall environmental impact. This collective approach serves as the basis for a longstanding strategy known as a "circular economy."

CLOSING THE CIRCLE ON EMISSIONS REPORTING

Think of a circular economy as an industrial system that is restorative or regenerative by design. After use, the circular model returns products to be reused, recycled, or repurposed. This approach differs from a linear model of turning raw materials into products that are only used once before being wastefully discarded.

In a circular economy, things are made and consumed in a way that minimizes the waste of natural resources and lowers carbon emissions. A circular economy recaptures "waste" as a valuable resource to manufacture new materials and products. Organizations using this model reduce material consumption by redesigning materials, products, and services to be less resource-intensive. A circular economy can include material harvesting, repackaging, reusing, and recycling to efficiently reduce a company's waste footprint and thus close the circle on circular economics.

To achieve a circular economy, companies must first develop a comprehensive view of emissions data across their extended supply chain. Developing such a baseline at the supplier and category level is essential to identifying the greatest opportunities and developing an effective action plan.

Companies then leverage data provided by suppliers and third-party data sources. Independent data is needed to gauge supplier sustainability, verify the impacts of emissions on ESG and compliance goals, and provide estimates when suppliers lack the knowledge to provide accurate, detailed carbon data. One respected data source is EcoVadis, which provides business sustainability ratings for public and private enterprises to monitor and improve the sustainability performance of their trading partners. Other sources provide category-level estimates of carbon emissions.

This effort must include sub-tier suppliers, where the bulk of an organization's immediate suppliers' emissions are likely to be generated. This adds complexity, as it greatly extends the number of suppliers involved and likely includes small suppliers that have looser controls and little or no ability to calculate carbon emissions.

THINK OF A CIRCULAR ECONOMY AS AN INDUSTRIAL SYSTEM THAT IS RESTORATIVE OR REGENERATIVE BY DESIGN

Baselining carbon emissions remains a difficult, imperfect process. This is compounded by suppliers' challenges assessing their own carbon emissions and that of their suppliers. To maximize baseline accuracy while minimizing effort, companies should focus on larger suppliers of more carbon-intensive and heavily purchased categories. This reduces strain on procurement staff as well as suppliers.

With a verification framework in place, many large companies have made impressive strides toward reaching net-zero emissions. For example, luxury goods maker Moët Hennessy estimates that Scope 3 emissions make up 93% of its total carbon footprint. Moët Hennessy has launched a project called "Golden Seeds" to ensure that liquids extracted in its harvesting processes can be reused and recycled across other operations.[6]

Similarly, auto manufacturer Volvo reuses surplus green hydrogen from its steelmaking process to power filling stations and hydrogen-fueled vehicles. Volvo has several active partnerships for battery-charging and hydrogen infrastructure projects across the US and Europe to increase the adoption of hydrogen power and reduce carbon emissions.[7]

Meanwhile, Safran, a key aerospace and defense supplier to the US, now recycles 60% of raw materials used in its titanium and nickel alloys. Safran achieved this milestone in France, at the first European manufacturing plant to successfully adopt recycling in the production of aeronautical grade alloys. The plant employs a clever circular economy by producing new titanium ingots wholly from scrap metal collected from the company and its subcontractors.[8]

Upstream Scope 3 emissions are, on average, 11.4 times higher than direct emissions.[9] In the raw materials sector, they average less than 30% of total emissions, but in the finished good sector, they often contribute more than 75%. For example, 83.3% of Nestle's emissions are generated by the supply of ingredients and packaging. The production of Apple's products with suppliers accounts for 70% of its emissions.[10]

MEASURING SUPPLIER EMISSIONS: TRUST, BUT VERIFY

These examples reveal the power of a circular economy strategy to broadly lower Scope 3 emissions across various industry groups. In addition to reducing the costs of materials and production, this strategy can help safeguard against long-term financial or legal liabilities while ensuring an organization keeps pace with its more innovative competitors.

However, all emissions records must be scrutinized, so it is up to companies to build systems for reliable reporting across their supply chains. This is a demanding task due to the need to assess the accuracy of each individual supplier's inputs and fill gaps between supplier data and independent data sources. Systems must be designed with sufficient flexibility to accommodate new sources of data and formulas as market data improves over time and regulations potentially evolve and become more prescriptive.

One useful benchmark is measuring the financial investments that partners make toward collaborative projects. This can include documented evaluations of transport or distribution channels and the resulting emissions they produce. Another approach involves auditable documentation of emissions stemming from materials and energy use. Broad industry coalitions and affiliations are being formed to support these efforts, such as Catena-X, a data-sharing platform used by automotive suppliers and factories. Collaborating on such platforms with competitors and partners helps alleviate the strain placed on suppliers and improves overall reporting accuracy, especially in light of the lack of clearly defined industry standards in most cases.

The watchwords for these supplier relationships should be the old saying popularized by former US President Ronald Reagan during Cold War nuclear weapon negotiations: "Trust but verify." Emissions data gathered from partners should be made transparent and accessible to the greatest extent possible. There can be no collective accountability to shareholders and other stakeholders if the emissions data is not clearly shared across the entire supply chain as a single source of truth.

Achieving a state of mutual transparency requires a software platform for data sharing, along with dashboards and analytics engines for users to analyze trends and make course corrections. Armed with these tools, organizations can successfully execute their circular economy initiatives by building up partnerships with suppliers that meet their strict sustainability thresholds.

Scope 1 and Scope 2 goals are being successfully met by many, but Scope 3 still presents a nagging problem for most organizations. To make greater progress, it is important for leaders to bring suppliers and partners into not only the planning process, but also daily procedures and operations that may affect emissions controls. By taking a circular economy approach, companies can set clear goals, manage their efforts, and measure outcomes to ensure steady progress toward slashing Scope 3 emissions.

REFERENCES

[1] "Environmental Sustainability Index." Honeywell/Futurum Research, 2023.

[2] "Why It's Time for Procurement to Drive the Enterprise Sustainability Agenda." Spend Matters, 12 May 2022.

[3] "Climate Positive: We're Taking Action to Help Shape a Climate Positive Future." Logitech, accessed July 2023.

[4] Huber, Nick. "Tech Manufacturers Wrestle with Supply Chain Emissions." *Financial Times*, 4 May 2022.

[5] Murray, Alan, and David Meyer. "The Latest *Fortune* 500 CEO Survey Does Not Show a Lot of Optimism." *Fortune*, 24 May 2022.

[6] "The Race Towards Carbon Neutrality: Procurement on the Frontline." Ivalua, accessed July 2023.

[7] "Volvo Group in Fossil Free Initiative." Volvo, accessed June 2023.

[8] Ivalua (see 6).

[9] EPA Center for Corporate Climate Leadership. "Supply Chain Guidance." US Environmental Protection Agency (EPA), 17 January 2023.

[10] Ivalua (see 6).

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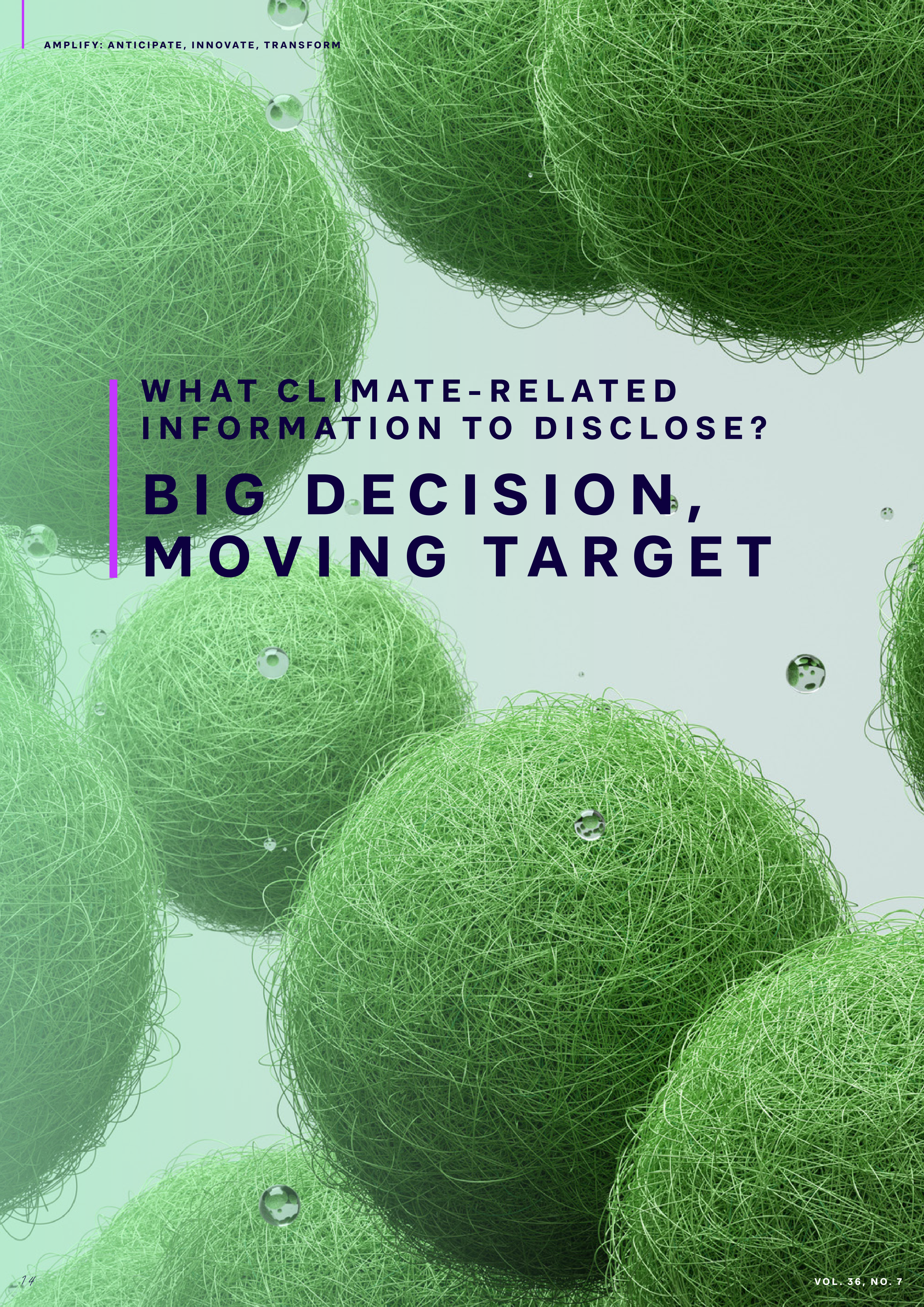
Alex Saric is the CMO of Ivalua, where he works closely with companies to support their digital transformation journeys through effective spend management. For more than 20 years, he has advocated for sustainable business models in supplier relationships. Prior to Ivalua, Mr. Saric spent 12 years with Ariba, first building and running the spend analytics business as General Manager. He then built and led Ariba's international marketing team until its successful acquisition by SAP, transitioning to lead business network marketing globally. He is also a founding member of Zeborg (acquired by Emptoris), where he developed vertical procurement applications. Mr. Saric began his career in the US Cavalry, leading tank and scout platoons through training and combat deployments. He earned a bachelor of science degree in economics from the US Military Academy at West Point and an international MBA from INSEAD. He can be reached at asa@ivalua.com.



WHAT CLIMATE-RELATED INFORMATION TO DISCLOSE?

BIG DECISION, MOVING TARGET

Author

Cynthia E. Clark

The pressure on companies to do something about the environment has grown substantially over the past decade, after years of many companies either watching from the sidelines or refusing to engage at all. That pressure is coming from all fronts — investors, customers, regulators, proxy advisors, and the media — and is often targeted at the board of directors.

According to a board member of a diversified financial services company: "We want to be apolitical, but it's kind of hard to be that. It goes back to examining what we say we stand for. Is that in conflict or harmony with certain things that are going on in the world?"

How a company handles environmental concerns — or crises— is central to what it stands for, and it's becoming increasingly divisive. Not surprisingly, it seems every major country is focused on how environmental information should be disclosed to stakeholders, with a focus on climate-related information. For many years, companies have been presented with a patchwork of conflicting rules and requirements, making it hard to compare them, even within an industry. Executives and boards have been calling for the multiple prevailing standard-setters to not only consolidate but to do so on a global scale. This article examines how companies and boards can navigate the landscape of climate-related information disclosure and provides recommendations on managing the journey.

THE DISCLOSURE LANDSCAPE

Disclosure priorities for companies include those that have a substantial impact on the company or its stakeholders and/or are considered material information by a well-known standard-setting board like the US Securities and Exchange Commission (SEC) or the Sustainability Accounting Standards Board (SASB). Responsibility for the disclosure of material information rests with senior management and boards, and firms often have a formal disclosure committee to decide these matters.

Climate-related disclosure activity is centered around three overarching organizations. The International Financial Reporting Standards (IFRS) covers some 140 country jurisdictions, requiring disclosures about physical risks, transition risks, and climate-related opportunities. It fully incorporates the Task Force on Climate-Related Financial Disclosures (TCFD) and includes SASB's climate-related industry-based requirements.

> **HOW A COMPANY HANDLES ENVIRONMENTAL CONCERNS — OR CRISES— IS CENTRAL TO WHAT IT STANDS FOR, AND IT'S BECOMING INCREASINGLY DIVISIVE**

TCFD recommendations on climate-related financial disclosures are a good place for companies to start because its 2017 recommendations were designed to solicit decision-useful, forward-looking information that can be included in mainstream financial filings. The recommendations center around four thematic areas representing core elements of how organizations operate: governance, strategy, risk management, and metrics/targets. The organization's 2022 status report indicates it's seen an increase in the number of governments and regulators incorporating TCFD into their rules and guidance each year since 2017.[1]

SASB's niche is providing individual standards, by industry, that identify the sustainability factors most likely to have material financial impacts on a company to inform investors. In November 2021, during the United Nations (UN) *Climate Change Conference (COP26)*, IFRS announced the formation of the International Sustainability Standards Board (ISSB) as yet another unifying attempt. In February 2023, ISSB voted to release global guidelines that attempt to harmonize environmental disclosures available for regulatory purposes, which would go into effect in January 2024.

ISSB's standards require companies to report emissions from their Scope 1 direct operations and their value chains, including suppliers. These value chain emissions (known as Scope 3) will require extra time, due to the challenge of gathering data from suppliers. (Scope 2 includes indirect greenhouse gas [GHG] emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the company).

Until its 2023 policy update, Institutional Shareholder Services (ISS), the largest proxy advisory firm in the world, did not have recommendations for climate accountability, despite buying its way into the ESG ratings arena in 2018. In its 2023 report, it asks for detailed disclosure of climate-related risks according to the framework established by TCFD.[2]

In October 2021, the UK government established rules requiring UK-based companies to disclose climate-related financial information in the form of the Corporate Sustainability Reporting Directive (CSRD). This follows on the April 2021 European Commission (EC) proposal of a CSRD framework that would amend existing reporting requirements to include a broader range of companies. EC tasked the European Financial Reporting Advisory Group (EFRAG) with developing reporting standards that consider existing standards and frameworks, including TCFD's framework. In late June 2022, the European Parliament and the Council of the EU reached a provisional agreement on CSRD, which further expands the scope of companies covered and describes the phase-in of reporting requirements beginning with financial year 2024.

CONCERNS & PUSHBACK

Although it's likely that standards coming out of the EU and the US will have some crossover with ISSB, it's still a moving target. A 2022 letter signed by 80 CFOs asked ISSB to include social issues other than climate. With good reason, some international executives have raised concerns about how ISSB's rules will interact with SEC's proposal to require companies to report on GHG emissions and climate risks.[3]

Included in SEC's proposal are disclosure of the processes and frequency by which board committees discuss climate-related risks and how they consider these exposures in relation to the company's business strategy, risk management, and financial oversight. Also potentially required is disclosure about whether and how the board sets climate-related targets or goals and how members oversee progress toward achieving these aims.[4] The disclosures are modeled in part on TCFD's disclosure framework, signifying possible coalescence around this framework.

The proposed rule amendments, which could be finalized as soon as late summer 2023, take issue with the current disclosure rules (that companies have to disclose climate costs and risks they judge to be material) because it allowed companies to simply decide that certain costs/risks weren't material. The result is fewer companies reporting.

Under the new rules, companies would have to analyze climate-related costs and risks for each line item of their financial statements, such as revenue, inventories, or intangible assets. Any climate costs that are 1% or more of each line-item total would have to be reported. Many companies have spoken out against these changes, including heavy hitters like Amazon, Walmart, and BlackRock.[5]

STOCK EXCHANGE DEVELOPMENTS

Stock exchanges are also taking up the charge. The UN Sustainable Stock Exchanges (SSE) launched a database that provides information on the 132 stock exchanges taking actions to support enhancing climate-related financial disclosures in line with TCFD recommendations in their markets.[6] In the US, the New York Stock Exchange (NYSE) and the Nasdaq have joined SSE. Nasdaq has published a TCFD compliance report since 2020, and NYSE publishes "ESG Guidance: Best Practices for Sustainability Reporting," which is designed to assist companies with ESG disclosure by highlighting key elements of good-quality reporting.

According to TCFD's 2022 status report, an increasing number of stock exchanges are requiring and/or reporting via TCFD (see Figure 1). For example, in October 2021, the London Stock Exchange Group issued "Guidance on Climate Reporting Best Practice and TCFD Implementation" for companies listed on the London Stock Exchange's markets. In December 2021, the Singapore Exchange mandated that all issuers must provide climate reporting in their sustainability reports.

Despite these welcome attempts at consolidation, some companies find themselves putting together three reports: one for SEC, one for ISSB, and one in the EU via CSRD. SEC estimates the plan will raise the cost to businesses to comply with its disclosure rules from US $3.9 billion to $10.2 billion.[7] That ongoing additional annual cost will be greater for small publicly listed companies, due to their need to hire staff to manage the process.

WHERE TO GO FROM HERE?

The board of directors generally has two functions: strategy and oversight. It should be no different for ESG.

In terms of strategy, it's less a question of whether a company should report on climate-related financial information but how it will do so. Boards and management should work together to define their climate agenda by asking questions like "What areas are important to our business, our industry, and our investors/employees/consumers?"

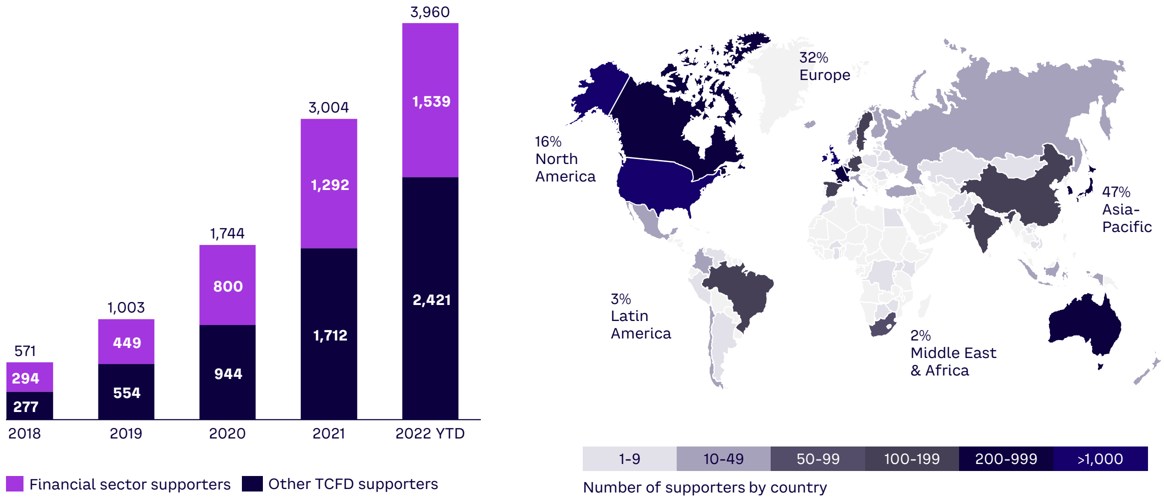


Figure 1. An increasing number of stock exchanges are requiring and/or reporting via TCFD (source: Task Force on Climate-Related Financial Disclosures)

The reporting frameworks just discussed will dictate some of this, but there is room for firms to put their own stamp on it. My conversations with directors reveal that most boards struggle to develop the type of long-term strategy necessary for environmental change. Here's how one director put it: "We strive for a good give-and-take with management once we see their plan, but with climate disclosures looming, we need more expertise. When we revisited our board matrix, it was eye-opening." To be sure, a board needs either the expertise or the necessary education.

It's also important to consider the area(s) in which a company can realistically make a difference and demonstrate real progress. Given that greenwashing is a frequent concern with ESG, the last thing companies want is to be overly aspirational. Indeed, 48% of global executives recently told Capital Group they believe greenwashing is still prevalent in the asset management industry.[8]

Boards also need to stay up to speed on potential regulatory changes and their strategic implications. For example, the Heartland Institute, which advocates for anti-ESG bills, has identified, proposed, or passed bills in 24 US states, with Florida and Indiana the latest to pass such laws. Similarly, the US Supreme Court's 6-3 decision in *West Virginia v. EPA* in June 2022 called into question whether or not SEC has the legal authority to adopt and enforce its proposed climate-related disclosure rule, even while the final set of guidelines are expected in late summer 2023.[9]

Since the big three institutional investors (BlackRock, Vanguard, and State Street) are looking specifically for a company's ability to transition to a net-zero economy and what business risks that may cause, the specifics of this transition must also be part of strategy. Here, reporting on Scope 1 and Scope 2 emissions (those relating to systems that are within reasonable control of the firm) serve as the minimum.

Oversight flows from strategy. Not only do boards need to know what management is doing in terms of collecting, analyzing, and verifying the company's climate data, but these efforts must be a central part of ESG oversight. According to board members I interviewed, this data should be in hand before disclosure and reporting decisions are made. "At the very least, we need it alongside reporting," said a board director at a mid-sized bank-holding company. The board needs that information to perform its oversight and assess whether the time and money going toward sustainability are focused on long-term value.

Thus, it's important to have a dedicated management team accountable for the reporting to ensure information accuracy. Since 88% of institutional investors subject ESG to the same scrutiny as operational and financial considerations, this is a C-suite and board-level responsibility.[10] After Sarbanes-Oxley passed in the US in 2002, boards began establishing disclosure committees. These still matter and can be made up of insiders and board members to enhance coordination and information flow. This contrasts with the nominating and governance committee, which must be composed of independent directors, and now accounts for most of the board oversight of ESG issues. According to Spencer Stuart's 2022 Board Index report, however, just 12% of S&P 500 companies have a standing committee dedicated to the environment.[11]

To gain oversight of climate-related disclosures, one must understand disciplines from electricity to emissions to ecology before tackling the myriad frameworks for disclosing information. This idea resonated with directors I spoke with: "We've needed to ramp up very quickly over the past three years, and I still don't feel like I know what I'm talking about," said a consumer products company board member.

CONCLUSION

Companies face some serious challenges when it comes to climate disclosures. These challenges come from a wide variety of stakeholders, including institutional investors, regulators, stock exchanges, consumers, and the public at large. This is one reason to anchor your climate-change strategy in social and organizational purpose and connect it to specific company operations. The strategy and oversight roles of the board intersect at climate change, suggesting companies need to onboard people with both climate competency and board expertise — a tall order.

REFERENCES

[1] "Task Force on Climate-Related Financial Disclosures: 2022 Status Report." Task Force on Climate-Related Financial Disclosures (TFCD), October 2022.

[2] "Americas: Proxy Voting Guidelines — Benchmark Policy Changes for 2023: US, Canada, Brazil, and Americas Regional." Institutional Shareholder Services (ISS), 30 November 2022.

[3] Williams-Alvarez, Jennifer. "Proposed Sustainability Disclosure Rules Draw Comments and Concerns." *The Wall Street Journal*, 12 August 2022.

[4] Banham, Russ. "Mastering the SEC's Climate Challenge: A Guide for Directors." Corporate Board Member, accessed July 2023.

[5] Eaglesham, Jean, and Paul Kiernan. "SEC Considers Easing Climate-Disclosure Rules After Investor Pushback." *The Wall Street Journal*, 3 February 2023.

[6] "ESG Disclosure Guidance Database." Sustainable Stock Exchanges (SSE) Initiative, accessed July 2023.

[7] Eaglesham, Jean, and Paul Kiernan. "Fight Brews over Cost of SEC Climate-Change Rules." *The Wall Street Journal*, 17 May 2022.

[8] Ground, Jessica. "ESG Global Study 2022." Harvard Law School Forum on Corporate Governance, 17 June 2022.

[9] Zucker, Taryn, Lauren Lee, and Evelyne Kim. "*West Virginia v. EPA* Casts a Shadow over SEC's Proposed Climate-Related Disclosure Rule." Harvard Law School Forum on Corporate Governance, 3 August 2022.

[10] "Edelman Trust Barometer 2021." Edelman, 2021.

[11] "2022 US Spencer Stuart Board Index." Spencer Stuart, accessed July 2023.

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THE CASE FOR INCREASED CORPORATE DISCLOSURE:

AN EXAMINATION OF TRANSPARENCY, TRUST & TAXONOMY

Authors

Rachael R. Doubledee, Matthew Nestler,
and Kelley-Frances Fenelon

An array of standard setters, raters, and advisors have emerged in response to increasing awareness of what some refer to as "nonfinancial factors" in company performance. Corporate disclosures have been broadly categorized into "financial" and "nonfinancial," but this distinction is somewhat misleading.[1] In reality, companies navigate systems of interconnected contexts (from community impacts to worker advancement) to create value for consumers, employees, and shareholders.

Ignoring workforce and community impacts to focus only on traditional financial factors means ignoring the larger palette in favor of one color, painting an incomplete picture of company value creation, cost, and risk.[2] Stakeholders are increasingly demanding transparent and comparable disclosures that represent a more holistic assessment of company performance. Lacking a complete picture, companies, investors, and other stakeholders like employees, communities, and customers are unable to fully evaluate company performance and make informed decisions.

Environmental disclosures are becoming standardized, but workforce and community impact disclosures are less so, especially in the US. At the same time, elevated inflation, a tight labor market, attendant competition for talent, and shifting expectations from younger generations underscore the importance of workers and an organization's community interactions in sustaining operational success.[3] As stakeholders increasingly expect meaningful and transparent disclosure, companies are looking for clarity on what metrics to report and how to report them.

This article focuses on understanding how the American public perceives and prioritizes transparency in corporate disclosures and examines alignment with the public's expectations for corporate transparency and corporate disclosure on key workforce topics. This framing is essential: the public drives perception of corporate reputation and brand loyalty and is composed of key stakeholders who impact company valuation, including consumers, investors, and workers.[4]

THE AMERICAN PUBLIC WANTS MORE CORPORATE TRANSPARENCY

Large majorities of Americans, across demographic groups and the political spectrum, want improved transparency and disclosure from America's largest public companies.[5] One survey found that 85% of Americans agree that companies should disclose more about their business practices, including their environmental (94%) and societal (86%) impact.[6]

> **AS STAKEHOLDERS INCREASINGLY EXPECT MEANINGFUL AND TRANSPARENT DISCLOSURE, COMPANIES ARE LOOKING FOR CLARITY ON WHAT METRICS TO REPORT AND HOW TO REPORT THEM**

In another survey, 93% of Americans favored large companies publicly releasing the wage ranges for various types of jobs at their company, and this finding held across the political spectrum, favored by 95% of Democrats, 91% of Independents, and 94% of Republicans.[7] Similar bipartisan consensus was found among the 89% of respondents who favored the release of minimum wage rates for frontline and entry-level workers (94% Democrats, 87% Independents, 87% Republicans).[8]

Our company conducts yearly focus groups in the US. Participants are recruited to ensure representation by key stakeholders, such as workers at large companies, and across demographic groups and political affiliations. It is important to keep in mind that workers are also consumers and shareholders, and they often bring that lens to discussions.[9]

Last year, we conducted six focus groups, each containing seven participants and a moderator, to discuss topics related to just business behavior by the largest public corporations in America. Inductive thematic analysis revealed four main themes around transparent disclosure: (1) accessibility of information, (2) disclosure of missteps, (3) trust and follow-through, and (4) responsibility to society.[10]

Participants said that honest, transparent disclosures affect how positively or negatively consumers and shareholders value the company and that they expect large public corporations to follow through on commitments and statements. Studies have shown that greater corporate transparency results in higher levels of customer trust and brand loyalty.[11,12]

ACCESSIBLE, HONEST DISCLOSURES

Five out of six focus groups explicitly stated that companies should disclose honestly, in good faith, and in more detail than required by regulatory mandates. Participants consistently noted that some disclosure was better than none, and more was better than less.

Disclosures written in accessible language and formats are considered the most transparent. As one participant said, disclosure should be written in a way that "the average Joe can look at it in bullet points and say, 'These are the main points.'" Similarly, clear disclosure should include comparable standards. One person said, "Telling us how many gallons doesn't put into perspective what other companies use and what the standard is. There's got to be some level metric to delineate whether or not it's good or bad. I think more transparency with all that would be better."

Participants said accurate and contextual information should be provided to avoid the appearance of being misleading. As one participant put it, "So just saying we want to require them to report, this doesn't necessarily mean that the information that they're required to report is good. It just means that they reported it. I think proper plain context should be required, rather than just a reportability requirement."

DISCLOSE WHEN YOU MESS UP

All six focus groups agreed that companies should disclose the bad with the good and not try to hide missteps. As one participant put it: "If you're doing something evil, at least you told us, so we know." Interestingly, there was also a perceived upside in disclosing such incidents: disclosing the bad with the good made a company's good statements more believable.

When risk incidents occur, participants said companies should act quickly and disclose remedial plans clearly in an effort to "be transparent with what's happened, to what's going on. So as things occur, say, 'Yeah, hey, we [messed] this up. That's on us. And this is what we're doing to recover from this, to repair the damage we caused.'" Failure to disclose missteps was perceived as "shady" by participants.

Most focus groups were understanding of mishaps and thought companies should be allowed to recover from mistakes. One woman said: "You can do bad things; just like humans, we make mistakes, so we can't just keep them at fault." However, participants wanted to see willingness to do better and learn from mistakes, with one noting that if companies were "not willing to fix themselves, then that's an issue." Disclosure of a clear plan can foster public trust and is seen as less risky than attempting to keep mistakes under wraps.

TRANSPARENCY EQUALS TRUST

Five out of six focus groups connected transparency to trust and confidence in a business. Participants made it clear that if a company was not transparent, the public trusted the company less. Participants also said if they had a choice between a more transparent and a less transparent company, they would do business with the more transparent company. As one person put it, "If I can't trust you, I'm not dealing with you."

Absent or bare-minimum corporate disclosure was perceived as "likely hiding something." The risks of disclosing only the bare minimum required is considered reputational, but participants said it could also negatively affect company value. Some noted that companies that only disclose the bare minimum risk being "left behind" by peer companies that disclose more information.

One participant said: "When I think about the companies that have said something versus the ones that haven't, it's not a good look for the ones that haven't. The fact that they haven't said anything, or when they do it's just like bare minimum, has definitely given them a negative reputation versus the other companies that have said something."

Being proactive (rather than reacting to public pressure) and following through on commitments enhance trust in corporate statements. Participants said they want disclosures that allow them to "see [a company's] vision for society and their communities," so they can "maybe not necessarily hold them accountable but understand that they have a vision to begin with and then see how they progress with that vision year after year."

Participants struggled to trust statements made by large companies if they did not follow through on commitments. Many viewed statements without clear actions and goals as performative. Although this theme emerged in many discussions, it was consistently reiterated when participants were asked if companies had followed through on recent diversity commitments. Many said that inclusion efforts were either not well publicized by companies or not clearly disclosed, and most did not believe that companies were making progress, dismissing the possibility with "not that I've really seen."

TRANSPARENT, HONEST DISCLOSURE: A RESPONSIBILITY TO SOCIETY

Americans believe that large public companies have a responsibility to society to be transparent and to communicate honestly about policies and practices; four of the six focus groups discussed transparency as a "duty" or a "responsibility" of the firm. When asked what responsibilities large corporations have to society, transparency was often listed by participants. One man said, "They need to communicate the truth about their business, be honest with the public and their consumers, their stakeholders. I like transparency, and I wouldn't want to be led to think one thing and the company be doing something else."

Participants view public, transparent disclosure as a bare-minimum obligation that companies have to employees, customers, communities, and shareholders. Because transparency is linked to customer trust and brand loyalty, and thus company performance, companies can gain an edge on competitors by putting these principles into practice.

DISCLOSURE AMONG AMERICA'S LARGEST PUBLIC COMPANIES IS LOW

Our focus groups show that the American public seeks transparency, yet disclosure by the largest public companies falls short on workforce, job-quality, and equity topics. Our JUST Jobs Scorecard evaluates companies on 28 job-quality indicators. Table 1 shows that nearly half of all indicators have a disclosure rate of less than 20%, 20 out of 28 indicators have a disclosure rate between 0%-40%, and no indicators have disclosure rates between 80%-100% in Russell 1000 companies.[13]

This pattern of low disclosure is hardly new. In a 2021 study, we evaluated the state of disclosure by the 100 largest publicly traded US employers on 28 human capital topics, finding that 23 out of the 28 metrics had a disclosure rate below 20%, five between 20%-40%, and just one between 40%-60%.[14]

Similarly, our 2022 Racial Equity Tracker's evaluation of equity disclosures by the 100 largest publicly traded US employers found disclosure was low on many topics, including less than 10% disclosure of internal hire or promotion rate by race/ethnicity, local supplier/small business spend amount, and reentry or second-chance policies.[15] Because larger companies tend to disclose at higher rates compared to smaller companies, low disclosure in the largest 100 publicly traded US employers suggests that smaller companies have even lower rates.[16,17]

DISCLOSURE RATE	JOB-QUALITY INDICATORS (n=28)
0%-20%	12
20%-40%	8
40%-60%	5
60%-80%	3
80%-100%	0

Table 1. Job-quality disclosure rates in Russell 1000 companies (source: JUST Capital)

There have been some improvements. For example, the share of Russell 1000 companies that publicly disclosed the gold standard for workforce demographic disclosure (the EEO-1 report)[18] or similar intersectional data more than tripled from September 2021 to September 2022, from 11% to 34%.[19] Likewise, the share of Russell 1000 companies disclosing a gender pay gap analysis grew from 23% to 32% over the same period.[20] These improvements demonstrate a willingness to clearly and transparently communicate performance, especially when given clear disclosure guidelines.

HOW TO MEANINGFULLY COMMUNICATE CORPORATE IMPACT ON PEOPLE & COMMUNITIES

Employees, customers, shareholders, and other stakeholders share a desire to be better informed about the products and services they use. Business leaders can take the following steps to meaningfully communicate corporate impacts on people and communities. First, effectively organize information for the intended audience and clearly communicate the strategic purpose. Second, determine the scope of the disclosure based on the audience's needs and what the company is comfortable disclosing. Third, provide contextual information to make disclosures accessible and comparable to stakeholders.

EFFECTIVELY ORGANIZE INFORMATION & CLEARLY COMMUNICATE STRATEGIC PURPOSE

To clearly communicate disclosures based on the intended stakeholder audience, companies can use taxonomies to align information with stakeholder objectives in a more digestible way. This kind of framing provides structure and focuses the messaging, helping stakeholders better interpret disclosed information.

Companies can use such taxonomies to cut through details and draw important analytical distinctions. For example, in the Racial Equity Tracker, we categorize corporate disclosures as either "commitment" or "action." We provide a clear definition for each category, defining commitment as "a statement or generic policy that notes that a company is committed to a certain element of anti-discrimination or inclusion" and action as "a program, disclosure or policy that shows progress of accountability toward a commitment or one that has an immediate impact."[21]

Similarly, in a 2022 analysis of workplace and human capital policies, we categorized items as "policy" or "performance." The former referred to "whether companies disclosed the presence or absence of corporate workplace and human capital policies," and the latter "[evaluated corporate] performance on these issues." The latter can be understood as more detailed, evaluative, and transparent disclosure.

These distinctions draw a line from the underlying information to the larger messaging around how companies are performing on racial equity commitments and workplace and human capital policies. Companies can adopt similar taxonomies to include more information while providing a focused throughline that helps stakeholders accurately assess performance.

DETERMINE THE SCOPE

Companies should determine the scope of their disclosures by balancing operational objectives with meaningful, transparent information for stakeholders. Whenever a company can disclose more details, especially in regard to actions or policies that directly impact stakeholders, it should. These details make disclosure more meaningful for stakeholders.

In workforce and job-quality metrics, disclosing the details of a policy often provides more valuable information than simply disclosing whether the company has a policy.

Consider the example of paid parental leave. Some companies disclose only that they provide paid parental leave to employees. Other companies disclose both the paid parental leave policy and the number of weeks provided for various types of caregivers and employee classifications. The latter conveys more useful information to help stakeholders evaluate how competitive a company is in the labor market.

> **COMPANIES SHOULD DETERMINE THE SCOPE OF THEIR DISCLOSURES BY BALANCING OPERATIONAL OBJECTIVES WITH MEANINGFUL, TRANSPARENT INFORMATION FOR STAKEHOLDERS**

Including various types of disclosures with several levels of detail helps capture company performance and make disclosures more comparable, especially when companies can't disclose more information due to legal risks.

This is well illustrated in our recent analysis of Russell 1000 companies' performance on gender pay gap analyses. We assessed both disclosure of a gender pay gap analysis, and, if reported, the adjusted women-to-men pay ratio at the company. We found that although 32% of Russell 1000 companies (302 companies) say they conducted a gender pay gap analysis, only 14% (130 companies) disclose the pay ratio.[22] Of the 130 companies that disclose a pay ratio, nearly all reported a ratio at or near gender parity (1:1).[23]

Having both metrics allows us to more accurately interpret the data. If we had only considered the adjusted women-to-men pay ratio disclosure, we would have concluded that although disclosure was low, nearly all companies have small, if any, gender pay gaps. Capturing the pay gap analysis disclosure led us to conclude that companies may not disclose results that reveal they are not near parity.

Although disclosing less may seem prudent, the public understands that companies are continuously improving. In the absence of disclosing direct results, companies should remember that some information is better than none. Disclosing clear roadmaps and goals lets stakeholders see the color palette even when the full painting is not yet ready to be displayed.

ADD CONTEXT TO MAKE INFORMATION ACCESSIBLE

Companies should ensure that disclosures provide contextual information that makes them easily understood by stakeholders and comparable across similar companies. For example, in a disclosure about paid-leave policies, companies could provide details about which employees the policy applies to (e.g., full time, part time, temporary, gig), whether it is limited by geographic location, and whether it applies on the first day of employment or requires tenure.

For disclosures of quantitative metrics, such as turnover rate, companies should consider providing context. For example, if a relatively higher turnover rate is a part of a company's business strategy, it may be beneficial to communicate that information so stakeholders can more accurately interpret the statistic.

Done mindfully, corporate disclosure is an opportunity for companies to demonstrate to stakeholders the value they add not only in products or services, but in the lives of workers and the communities where they operate — understanding that the two are intertwined. In good times, it is a space to invite stakeholders to share in visions and plans for the future. In difficult times, it is a space for companies to provide context to decisions and disclose clear goals and plans that show they are more than their mistakes.

FUTURE DIRECTIONS

Over the last decade, it has become clear that traditional financial disclosures do not represent a complete picture of company performance; financial outcomes are inseparably fused to workforce and community impacts and actions.

We expect transparent disclosure of corporate impacts on workers and communities to continue to be a priority for multiple stakeholders, including the American public, investors, and regulatory bodies like the US Securities and Exchange Commission (SEC). Increasing global attention to transparent disclosures will bring pressure from regulatory bodies for companies to disclose new quantitative and qualitative information clearly, consistently, and in a way that allows for benchmarking and comparison.

Although the US may be slow to enact standards, many American companies will be impacted by the Corporate Sustainability Reporting Directive requirements the EU will implement in a phased approach over the next few years.[24] This framework will require companies to assess both past actions and future goals, as well as independent auditing plans.

As disclosure of workforce and community impact factors are increasingly regulated, the largest companies will likely adopt consistent and comparable disclosures and model clearer best-practice standards for other companies to follow. Similar practice diffusion can be expected across key metrics that are not required, but where consensus from stakeholders advocating for disclosure nevertheless exists.

For example, the UK's requirement of gender pay gap reporting for companies with more than 250 employees has prompted pay gap analyses by multinational corporations across employees in other countries and created an expectation among investors and other stakeholders that companies implement and disclose such analyses.[25] Stakeholder demand has also led to a significant uptick in the public disclosure of EEO-1 workforce demographic data, a step not legally required of companies. Pressures from both stakeholders and regulatory bodies indicate that companies should prepare to disclose more across a range of topics.

The key themes and perspectives highlighted in this article indicate a path forward to develop more comprehensive disclosures and help companies recognize how to expand their palette in an effort to paint a more complete picture.

REFERENCES

[1] Some use the term "human capital" to capture topics associated with "nonfinancial factors," but both of these terms obscure the fact that investors consider topics like workforce cost and turnover as being financially material. To avoid using terms that mean different things in different fields, in this article, we talk about "workforce and community impact" metrics and disclosures. We define these as topics that entail material risks and opportunities to companies.

[2] Working Group on Human Capital Accounting Disclosure. "Petition for Rulemaking." US Securities and Exchange Commission (SEC), 7 June 2022.

[3] Markenson, Steve, and David Orgel. "Transparency in an Evolving Omnichannel World." NielsenIQ/Food Industry Association (FMI), 2022.

[4] "The State of Corporate Reputation in 2020: Everything Matters Now." Weber Shandwick/KRC Research, 14 January 2020.

[5] These findings are based on quantitative surveys conducted by our company of representative samples of the American public.

[6] Tonti, Jennifer. "Survey Analysis: Americans Want to See Greater Transparency on ESG Issues and View Federal Requirements as a Key Lever for Increasing Disclosure." JUST Capital, 15 February 2022.

[7] Mizell, Jill, and Kelley-Frances Fenelon. "Across Political Divides, Americans Agree: Companies Should Prioritize Workers' Economic Security, Driving Competitive Advantage." JUST Capital, 31 August 2022.

[8] Mizell and Fenelon (see 7).

[9] "JUST Capital Ranking Methodology." JUST Capital, January 2023.

[10] Braun, Virginia, and Victoria Clarke. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology*, Vol. 3, No. 2, July 2008.

[11] Maloney, Devon. "Transparency in Business: The Next Wave in Company Evolution." Slack, 30 November 2019.

[12] "BBB Business Tip: Demonstrating Transparency Increases Consumer Trust and Brand Loyalty." Better Business Bureau (BBB), 8 June 2021.

[13] "JUST Jobs Scorecard Shows Room for Companies to Lead on Job Quality Disclosure, with Established Leaders Outperforming Peers." JUST Capital, 13 March 2023.

[14] Bonta, Emily, et al. "The Current State of Human Capital Disclosure in Corporate America: Assessing What Data Large US Employers Share." JUST Capital, 5 October 2021.

[15] "The 2022 Corporate Racial Equity Tracker." JUST Capital, 30 May 2022.

[16] Radeva, Aleksandra, Ian Sanders, and Shane Khan. "The Current State of Disclosure on Worker Issues: Assessing What Data Russell 1000 Companies Publicly Share." JUST Capital, accessed July 2023.

[17] Thornton, Laura, et al. "The Current State of Environment Disclosure in Corporate America: Assessing What Data Russell 1000 Companies Publicly Share." JUST Capital, accessed July 2023.

[18] Companies with 100 or more employees in the US are legally required to submit the EEO-1 report to the US Equal Opportunity Commission and Department of Labor (though not to publicly disclose). This includes Component 1, which shows workforce demographics by race, ethnicity, and gender by 10 standardized job categories.; see: "EEO-1 Data Collection." US Equal Employment Opportunity Commission, accessed July 2023.

[19] Nestler, Matthew, Aleksandra Radeva, and Ian Sanders. "Companies Disclosing the Gold Standard of Workforce Diversity Data — The EEO-1 Report or Similar Intersectional Data — More Than Tripled Between 2021 and 2022." JUST Capital, accessed July 2023.

[20] Nestler, Matthew, Aleksandra Radeva, and Ian Sanders. "Despite an Uptick in 2023, Only 32% of the Largest US Companies Analyze Their Gender Pay Gaps." JUST Capital, 14 March 2023.

[21] "The 2021 Corporate Racial Equity Tracker." JUST Capital, accessed June 2023.

[22] Indeed, we found that disclosure of the performance data points was even lower than policy data points.

[23] Nestler et al. (see 20).

[24] These requirements will mandate that companies publicly report nonfinancial information detailing impacts on people and the environment. Although 2024 compliance will only impact EU companies with over 250 employees and an annual turnover more than US $43 million, these provisions will also eventually apply to some of the largest non-EU companies who do business within the EU; EU companies with an annual turnover that exceeds $163 million will also be expected to comply, with a few exceptions.

[25] Schlager, Tobias, et al. "Research: Customers Will Reward Companies for Smaller Gender Pay Gaps." *Harvard Business Review*, 15 November 2021.

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MONETARY IMPACT ACCOUNTS:

AN OPPORTUNITY TO IMPROVE PRODUCT DESIGN

Authors

T. Robert Zochowski and Ryan Daulton

Social expectations for corporate responsibility are changing rapidly across the global economy, with a large increase in the number of companies reporting on environmental, social, and governance (ESG) performance, a rising demand for sustainability reporting regulation, and an increased emphasis on sustainable brand performance from younger generations.[1]

Corporations are frequently asked to comment on or change strategy related to decisions or activities that violate social expectations. For example, Adidas and Ye (formerly known as Kanye West) dissolved their partnership after Ye made antisemitic remarks in October 2022, causing the hugely popular Yeezy clothing and shoe line to swiftly swing from asset to liability.

Indeed, potential liability and brand contagion were so dramatic that they caused a drop in operating profit. In February 2023, Adidas reported that its 2023 revenue would decline by US $1.3 billion and operating profit by $534 million due to this decision (but showed no sign of a reversal).[2] Adidas plans to strip Yeezy logos from existing inventory to try to make the products sellable and cut losses.

> **FOR A MORE COMPLETE VIEW, CORPORATE INPUT AND OUTPUT DATA MUST BE LINKED TO IMPACTS AND OUTCOMES THROUGH IMPACT PATHWAYS**

Yet, there is substantial opportunity for innovation as businesses adjust to this new paradigm and try to avoid issues like those faced by Adidas. Proactive measurement and management of consumer product impacts can minimize the risks of running afoul of social expectations and enable analysis and decision-making alongside financial metrics by translating those impacts into units of currency. We call this "monetary impact accounts."

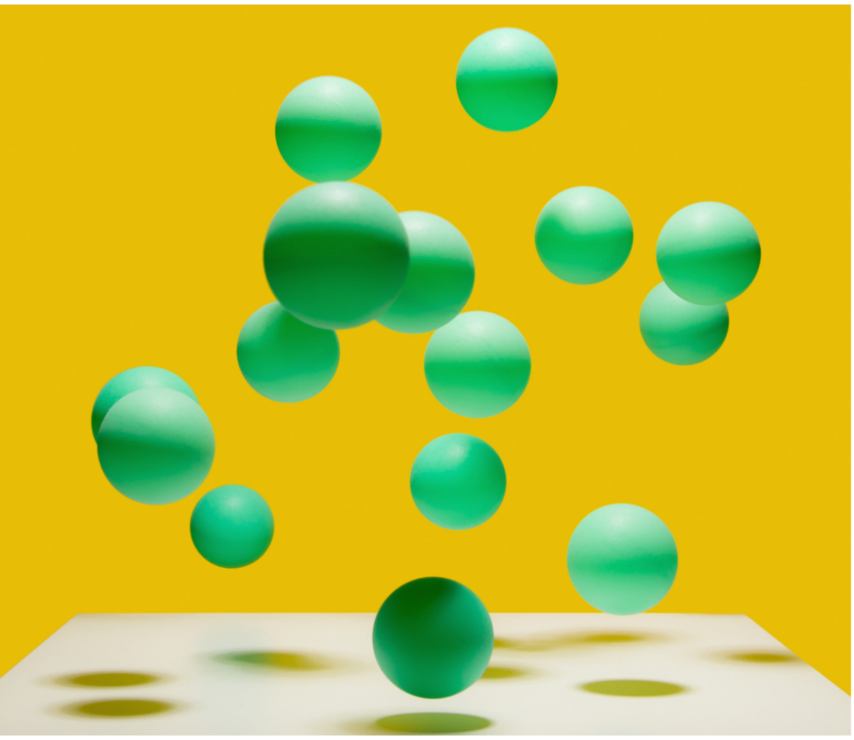
WHAT ARE MONETARY IMPACT ACCOUNTS?

Today, most mainstream ESG reporting frameworks require disclosure of corporate and investment input and output. Examples include cubic meters of water intake and discharge, metric tons of greenhouse gas produced, nitrogen and phosphorous emissions, and wages paid. Although important, these disclosures do not capture the ultimate ESG effects of corporate activities.

For a more complete view, corporate input and output data must link to impacts and outcomes through impact pathways. Here are two examples:

1. **CO2 emissions increase the relative concentration of gases in the atmosphere (outputs).** This causes increased radiative forcing, increasing the Earth's global average temperature, which sets off pathways (impacts) that ultimately reduce crop production, affect human health, accelerate species extinction, and cause a decline in ecosystem health (outcomes).

2. **Consumer packaged goods companies produce and manage a portfolio of food and beverage products (outputs).** Their choices regarding the nutritional component of this portfolio, marketing practices, and pricing (among other elements) have implications for who purchases the product, what nutrients are accessible at a certain price point, whether the products are recyclable, and whether children are more likely to ask for or purchase the product. These have numerous downstream implications (impacts) on increasing or decreasing obesity, health, and environmental degradation (outcomes).



Because they focus on the beginning of the impact pathway (inputs and outputs) rather than the end point changes for the various stakeholders affected, current ESG reporting frameworks do not contain the amount of information needed to properly evaluate corporate sustainability performance. Today's frameworks provide an important starting point by standardizing scope and measurement of these data points, but they are insufficient. To assess corporate sustainability and product impact, we need to see a complete impact pathway.

Even if impacts to affected groups or the environment were clearly disclosed, this would not be sufficient to achieve the economy-wide changes needed to solve some of society's biggest problems. One reason is that many impacts are measured in units specific to a particular discipline. For example, disability-adjusted life year (DALY) and quality-adjusted life year (QALY) are used by public health officials to assess the burden of disease when comparing treatment options.

We frequently hear that corporate decision makers and investors struggle to comprehend the following:

- Is the impact metric a lot or a little?
- Is the impact metric in line with thresholds or benchmarks?
- Are the impacts from one choice better or worse than those for another?
- What produces the greatest positive or minimizes the negative impacts for those affected?

The solution is using rigorous data and stakeholder-driven approaches to reflect the impacts created by any given corporate activity or choice.[3] Impact-weighted accounts use impact monetization to supplement traditional financial accounts used in financial and managerial accounting. By providing comparable, transparent measures of impacts for stakeholders, we can truly understand whether a product, project, or organization creates net value.

Monetarily valued impacts are interoperable with financial analyses and can be directly compared to financial returns, providing critical context to decision makers.

INCORPORATING ESG INTO PRODUCT DESIGN & DEVELOPMENT

Product development involves market intelligence on consumer trends and tastes, emerging technologies, competing products, expected costs, production requirements, and projected-total-demand and market-share estimates.

Often, assumptions from these analyses are aggregated into a pro forma profit-and-loss projection used to determine whether the contribution to profit margins is high enough to justify greenlighting the project and/or prioritizing it.

Some organizations have incorporated ESG analysis into their product development process by analyzing reputational risk and ESG metrics. Unfortunately, barring a glaring redline issue like animal welfare, sanctions, child-labor risk, or massive environmental risk that can halt a project, the ESG analysis is often subordinate to the financial analysis. It is just too hard to compare the two.

This is where monetary impact accounts are most helpful, translating these disparate metrics into language that can be understood, compared, and acted on by various stakeholders (senior leaders, boards of directors, investors, and customers).

THE IMPACT-WEIGHTED ACCOUNTS PRODUCT FRAMEWORK

Between 2019 and 2022, the Impact-Weighted Accounts (IWA) Project at Harvard Business School developed a framework that categorizes various impacts so that they are measurable and comparable, making it easier to understand trade-offs.

In designing that framework, IWA referred to these five guiding principles:

1. **Consistency** — ensures the framework has consistent units, scale, and approach, increasing the relevance of the information, its understandability for business decision makers, and the comparability of information.
2. **Incentive alignment** — encourages consideration of the behavior that is incentivized by the framework to ensure it aligns with positive environmental and social impact.
3. **Best-in-class benchmarking** — mitigates the possibility that the impact of a product or industry is benchmarked to a very low threshold.
4. **Conservatism** — bases the framework in conservative assumptions and comparisons, increasing the likelihood of faithful representation while mitigating the probability of positive bias through "cheap talk" and "impact-washing."
5. **First-order effects** — limit scope to impacts from product usage. We recognize this excludes impacts to both broader stakeholders in the value chain and higher-order impacts to the direct stakeholder, but it likely decreases measurement error.[4]

IWA used frameworks and tools from other leading organizations in the impact measurement and valuation ecosystem, including the Capitals Coalition and the Impact Management Platform, to develop its framework and accompanying guidance. The harmonization of frameworks and methodologies is a critical step toward widespread adoption of monetary impact accounts.

The IWA product-impact analysis framework shown in Figure 1 ensures comparability between various product-design choices and provides clarity about not only the total impact of the product, but also the drivers of that impact (i.e., price, environmental impact in use or end of life, or features of product design). The framework dimensions are consistent across different products and industries, but the metrics used to analyze those dimensions are unique due to inherent heterogeneity in products.

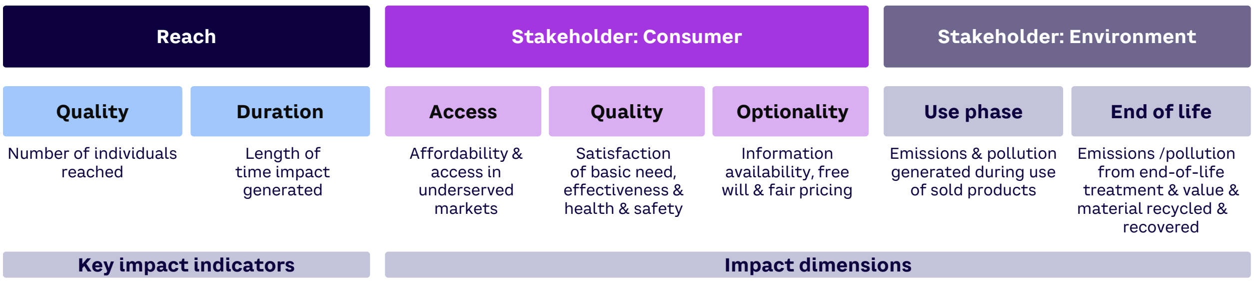


Figure 1. Impact-Weighted Accounts product-impact analysis framework

KEY RESULTS

Analysis of more than 50 companies across seven of the 11 Global Industry Classification Standard (GICS) sectors shows that product impacts can be a driver of substantial positive impact.[5] The data set consisted of product-impact estimates for leading firms across seven GICS sectors spanning four years, 2015–2018.

The data set is limited to firms that are publicly traded in the US with more than $2 billion in revenue (to ensure data availability). The firms meeting these thresholds include 15 automobile manufacturers, 11 consumer packaged foods manufacturers, 4 consumer finance firms, 6 airlines, 12 telecommunications operators, 4 water utilities, and 9 oil and gas companies. Because of a lack of data availability, product-impact estimates for packaged foods manufacturers are limited to a single year: 2018.

Given the small sample, we did not intend to achieve statistical significance. Rather, the goal was to provide a blueprint of how financial analysis could be conducted in the presence of more data. Our analysis presents associations rather than causal links between product impact and financial performance (which would require a significantly larger data set of product-impact estimates).

To compare companies of different sizes and scale, we present the results as a percentage of EBITDA (earnings before interest, taxes, and amortization). Figure 2 shows the diversity of impacts across industries in 2018. Figures 3 and 4 provide additional granularity, showing the 10 companies with the most positive and negative product impacts.

The impacts measured are a direct result of specific choices made by corporates in designing, pricing, marketing, and distributing their products. Traditionally, product development decisions have been made to maximize profit and resonance within target markets while minimizing cost. Monetary impact accounts produce information that informs decisions related to trade-offs between profitability and product impact.

Figure 2 shows that the consumer packaged foods and oil and gas industries tend to generate overall negative product impact for society while the telecommunications industry tends to generate positive product impact. Several other industries present opportunities to fine-tune product portfolios for positive impact — companies in the same industry are on both sides of the positive/negative impact line.

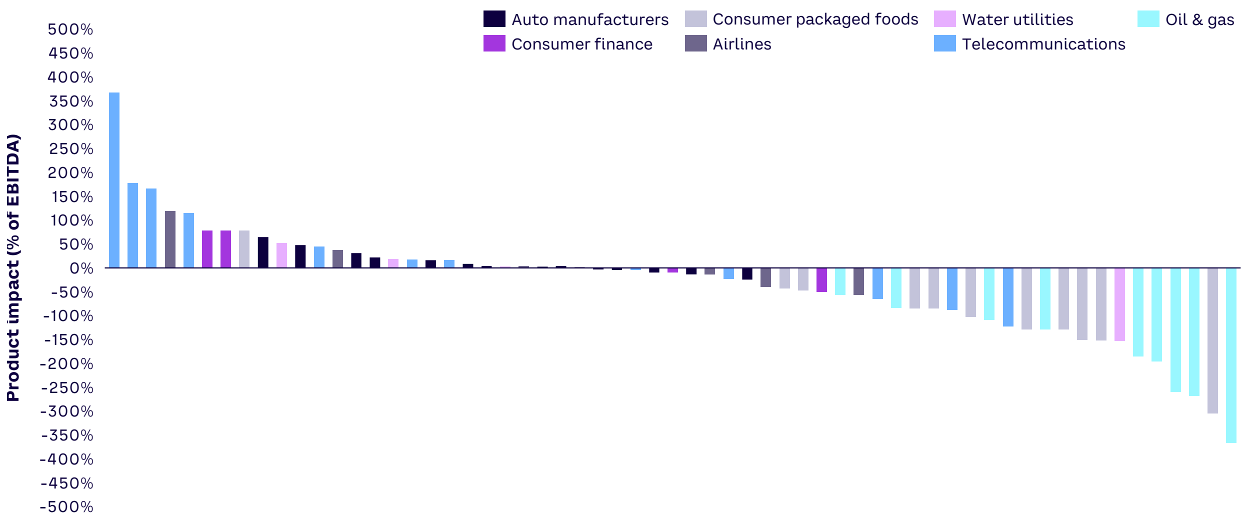


Figure 2. Distribution of product impact as a percentage of EBITDA, 2018

We used the data to answer three performance-related questions. First, do products with more positive impact sell more over time? Second, do products with better impact enable a company to exhibit a higher profitability ratio in terms of return on assets (ROA)? Third, we decomposed ROA to a profitability-margin effect (in terms of return on sales [ROS]) and an operating-efficiency effect (in terms of asset turnover) to understand what might be driving differences in profitability, according to the following equation:

ROA = ROS × asset turnover = (operating income)/ sales × sales/assets

We categorized firms in our sample as high-impact or low-impact, based on overall product impact from 2015–2018 and then benchmarked within industry. The high-impact and low-impact samples consist of seven automobile manufacturers, six consumer packaged foods manufacturers, two consumer finance firms, three airlines, six telecommunications firms, two water utilities, and four oil and gas firms.

We first compared year-over-year sales growth of high-impact and low-impact firms to identify whether firms with higher product impact demonstrated higher sales growth. We calculated the median estimate within each group to avoid outliers from calculating the mean value. Figure 5 shows that high-impact firms tend to display higher sales growth. Figure 6 shows that high-impact firms display similar or slightly higher ROA.

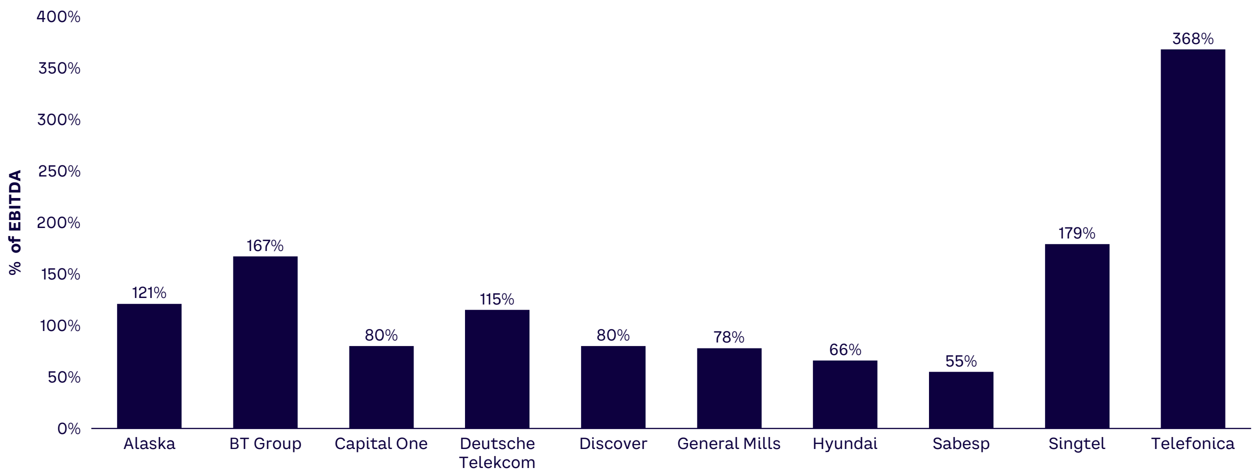


Figure 3. Top 10 companies by product impact, 2018

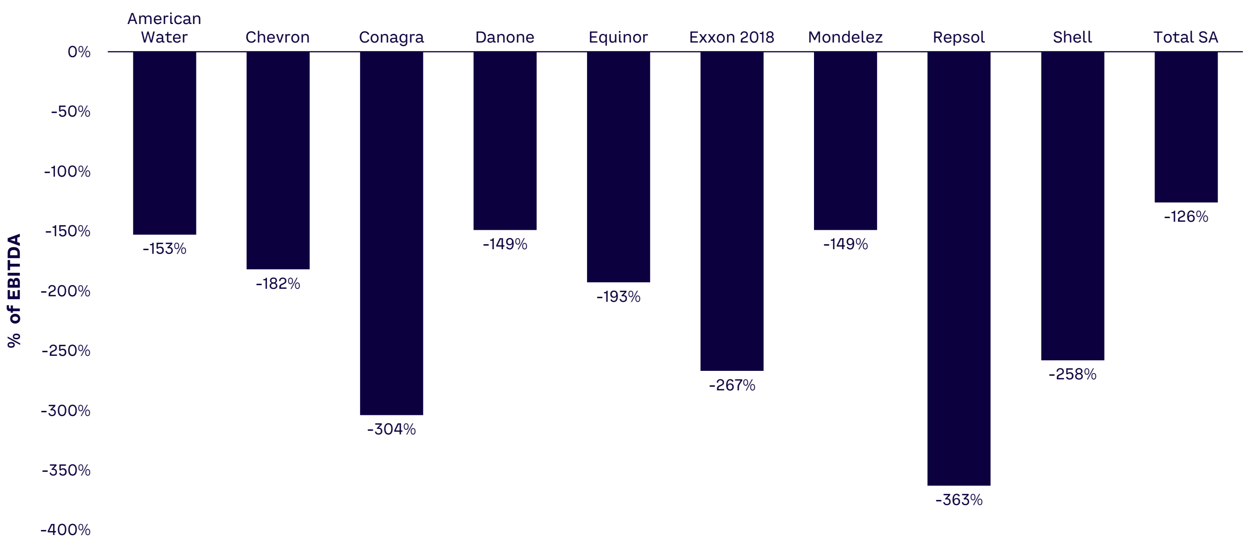


Figure 4. Bottom 10 companies by product impact, 2018

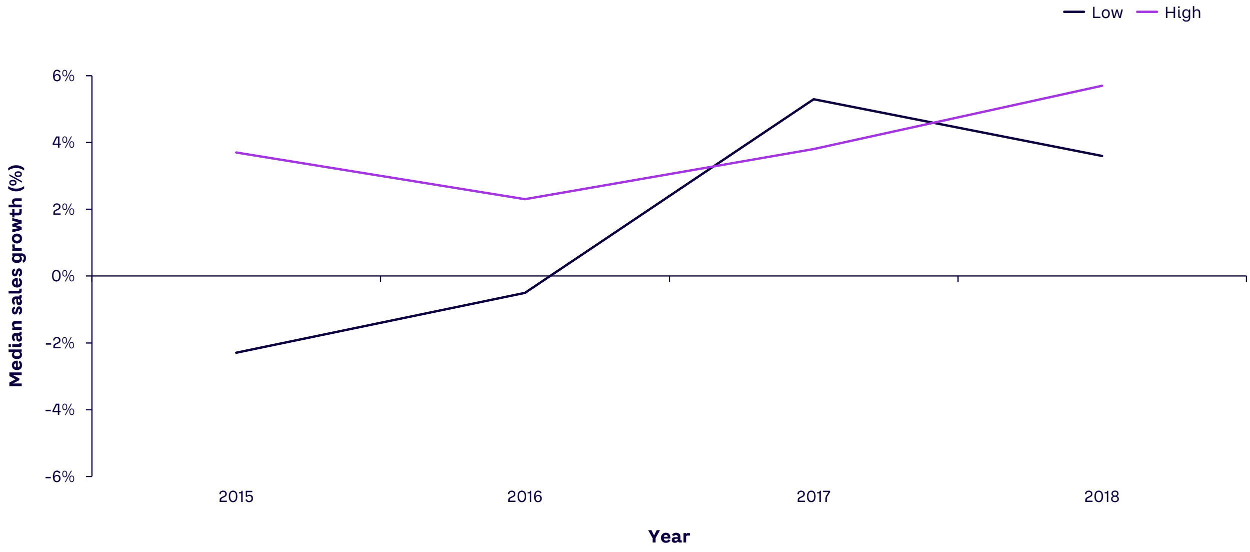


Figure 5. Year-over-year sales growth for high-impact and low-impact firms

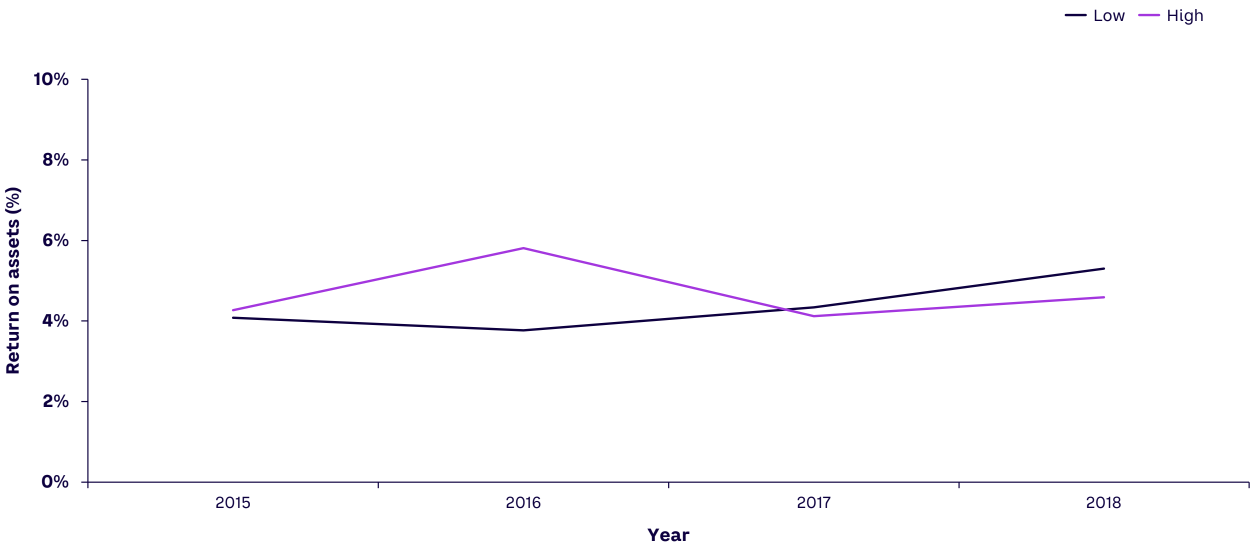


Figure 6. ROA for high-impact and low-impact firms

Figure 7 shows that high-impact firms achieved a higher ROS for three out of four years. Figure 8 shows that high-impact firms had a similar asset-turnover ratio as low-impact firms.

We recognize that it's currently difficult to determine clear associations with financial performance. As the product-impact analysis framework is expanded by academics and corporations to additional applications and industries, the International Foundation for Valuing Impacts, which grew out of work from the IWA Project, will continue to examine the relationship between a company's product impact and profitability.

THE FUTURE OF PRODUCT DEVELOPMENT

Given rapidly changing social norms, we expect the trends seen so far to continue and the differences between high-impact and low-impact firms to expand. Firms that quickly adopt methodologies that allow them to evaluate alternatives in product design to maximize impact will have a significant advantage over firms that do not. In addition to potentially losing market share, firms risk making investments or CAPEX decisions related to product development that could end up being costly mistakes or result in stranded assets stemming from reputational damage.

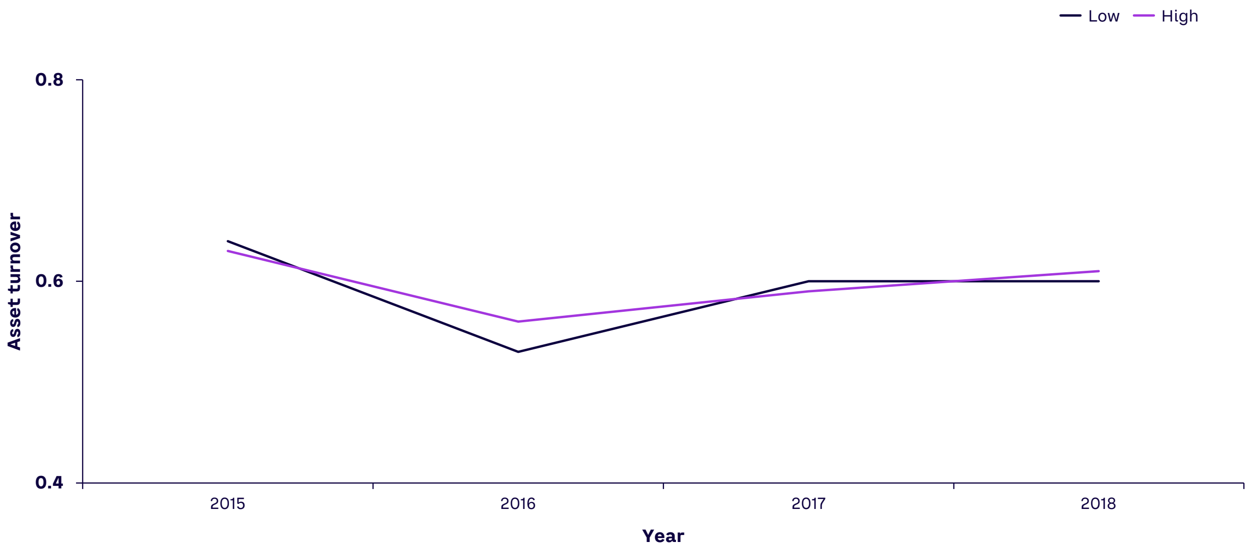


Figure 7. ROS for high-impact and low-impact firms

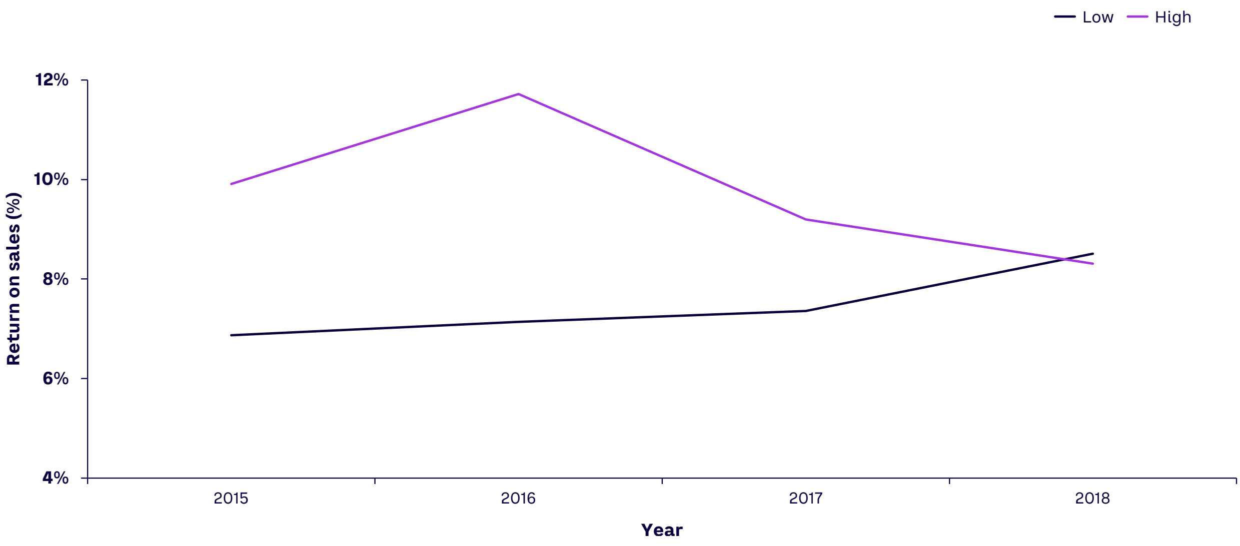


Figure 8. Asset turnover for high-impact and low-impact firms

REFERENCES

1 Versace, Chris, and Mark Abssy. "How Millennials and Gen Z Are Driving Growth Behind ESG." Nasdaq, 23 September 2022.

2 Valinsky, Jordan. "Adidas Says Dropping Kanye West Could Cost It More Than $1 Billion in Sales." CNN, 10 February 2023.

3 The ISO 14008 Standard as well as the Capitals Coalition Social & Human Capital and Natural Capital Protocols provide guidance for what constitutes a well-defined monetization coefficient and accepted price-discovery methodologies.

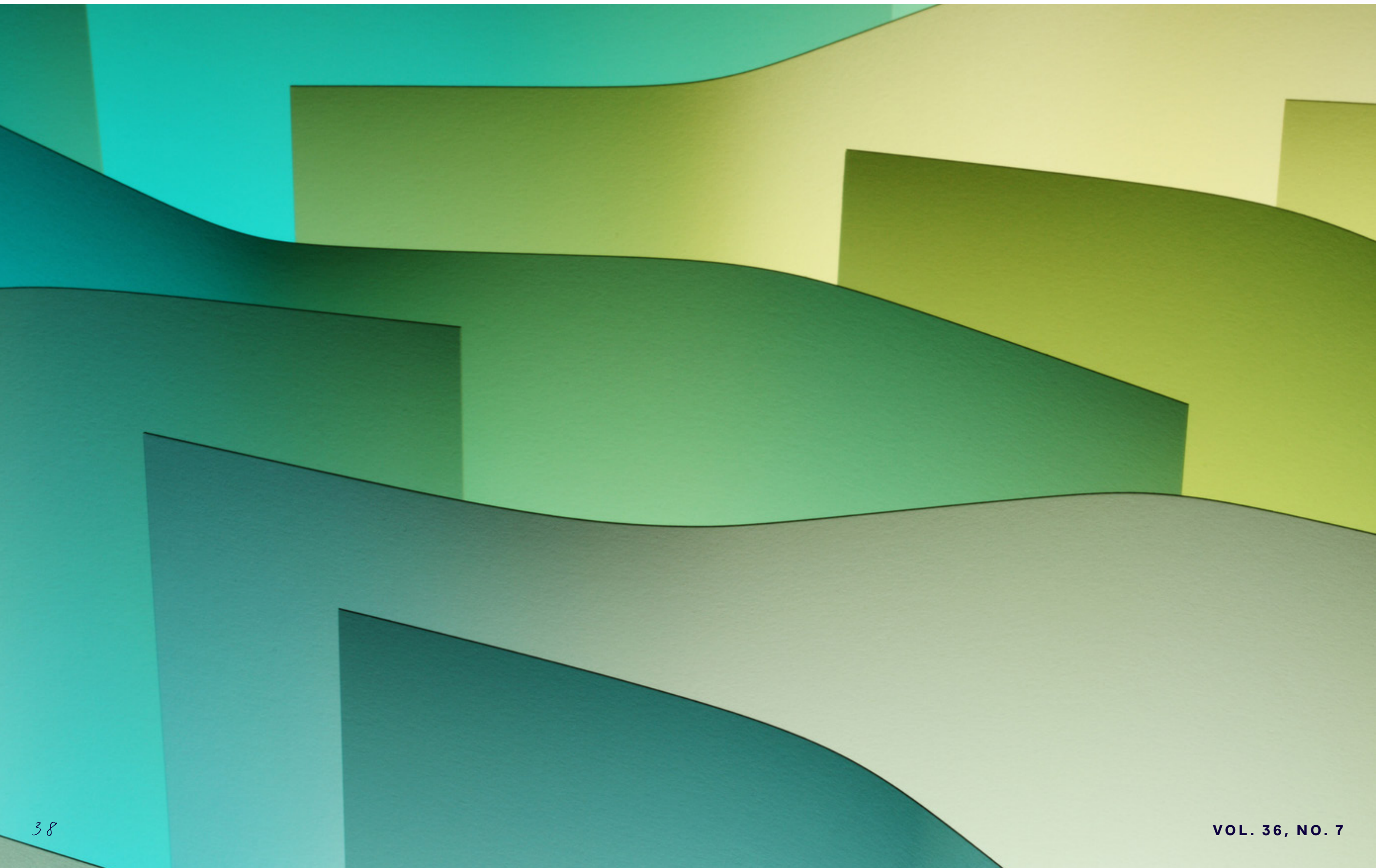
4 Serafeim, George, and Katie Trinh. "Impact Accounting for Product Use: A Framework and Industry-Specific Models." Harvard Business School, 2021.

5 The automobile manufacturers included in the data set are: BMW Group, Daimler, Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Honda Motor Company, Hyundai Motor Company, Kia Motors, Mazda Motor Corporation, Nissan Motor Company, Groupe PSA, Subaru, Tesla, Toyota Motor Corporation, and Volkswagen Group. The consumer packaged foods firms included in the data set are: Ajinomoto,

Campbell's, ConAgra Brands, Danone, General Mills, The Hershey Company, Hormel Foods Corporation, The Kellogg Company, The Kraft Heinz Company, Mondelez International, and Nestlé. The consumer finance firms included in the data set are: The American Express Company, Capital One Financial Corporation, Discover Financial Services, and Synchrony Financial. The aviation firms included in this data set are: Alaska Airlines, American Airlines, Delta Air Lines, JetBlue Airways, Southwest Airlines, and United Airlines. The telecommunications firms included in this data set are: AT&T, BT Group, Deutsche Telekom, Nippon Telegraph and Telephone, Orange, Singapore Telecommunications, Swisscom, Telefónica, Telenor, Telstra, Telus Communications, and Verizon. The water utilities firms included in this data set are: American Water, Sabesp, Severn Trent, and United Utilities. The oil and gas firms included in this data set are: BP, Chevron Corporation, Eni, Equinor, ExxonMobil, Petrobras, Repsol, Royal Dutch Shell, and TotalEnergies.

Disclaimer: The framework and results presented in this article were developed by the IWA Project at Harvard Business School. The International Foundation for Valuing Impacts (IFVI) grew out of the IWA Project. In 2022, IFVI launched as an independent organization with rights to the IWA Project's intellectual property and the team in order to scale and achieve the ambitious goals set out by the G7 Impact Taskforce in its December 2021 report.

IFVI assumed the right to all the IP and work products of the IWA Project in December 2022. This article represents legacy research. Under the governance established by IFVI, the Valuation Technical & Practitioner Committee (VTPC) has been established to direct, validate, and approve the IWA research and methodology produced by the cooperation of IFVI and the Value Balancing Alliance (VBA) (The "Mandate"). The above research has not been evaluated by the VTPC at this time, and thus does not reflect the views or positions of that body, but the research is expected to be submitted in due course of IFVI's research agenda.



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AMPLIFY

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