



SUMMARY

Over the past decade, environmental, social and governance (ESG) factors have become an ever-more important part of the investment process, with assets under management focused on sustainability growing from negligible to about one in four dollars of total managed assets.¹ Corporate self-reporting, third-party analysis, and public and investor demands related to ESG have also grown. Still, more progress is needed, including broad release of data on areas such as pay parity, water usage, and management-workforce compensation. Regulatory standards for sustainability reporting also need clarification and expansion. Assuming this progress, ESG factors could eventually become a normal part of investment decision-making.

Corporate disclosure of ESG data has improved substantially in recent years, allowing investors and independent rating agencies to form increasingly reliable views about the risks and opportunities associated with ESG issues and their effect on company performance. In addition to voluntary corporate disclosure, government agencies and market organizations such as stock exchanges are requiring more transparency and a growing community of stakeholders, including ESG rating agencies, asset managers, and responsible investor groups, has created a strong foundation for more transparency and accountability. Better data has also given academia and practitioners tools to strengthen the empirical case for the integration of ESG data into the investment process.

Despite these strides, however, limitations still exist. Sustainability reporting, for example, remains largely voluntary. Although there is increasing agreement on the need to address high level issues such as climate change, diversity and inclusion and corporate governance, companies may be motivated to control their sustainability “narrative” by disclosing information that promotes their positive image and conceals their negative societal or environmental impact. Even when corporations are engaged in ESG issues, their sustainability departments may not communicate effectively with their investor relations departments, leading to poor communications to investors on

KEY POINTS

In this report we examine a number of factors including:

- Many investors are incorporating environmental, social and governance factors into their investment choices yet many more are still on the fence about ESG.
- Those who engage in ESG may still be discovering which data is relevant and how to incorporate it into a traditional investment process.
- As more data becomes available, investors are likely to recognize the value in incorporating ESG factors.
- In the future, ESG data will likely be considered a normal component of all investment decision-making



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sustainability strategies and performance. Further complicating matters is the current lack of clear consensus around which ESG metrics may be relevant to a company's economic success. Navigating this complex landscape can require experience and institutional knowledge.

EVOLUTION OF CORPORATE SUSTAINABILITY REPORTING

While numerous investor groups, such as faith-based organizations, have incorporated socially responsible factors into their investment process for decades, sustainability reporting by corporate entities has only recently moved into the mainstream in North America. Most early producers of corporate sustainability reports published them in an effort to improve their image, often in the wake of public controversies. In recent years, however, corporate sustainability reporting (CSR) has become more prevalent. In fact, the percentage of S&P 500 companies producing an annual CSR grew from 20% in 2011 to 85% in 2017 (see exhibit 1).

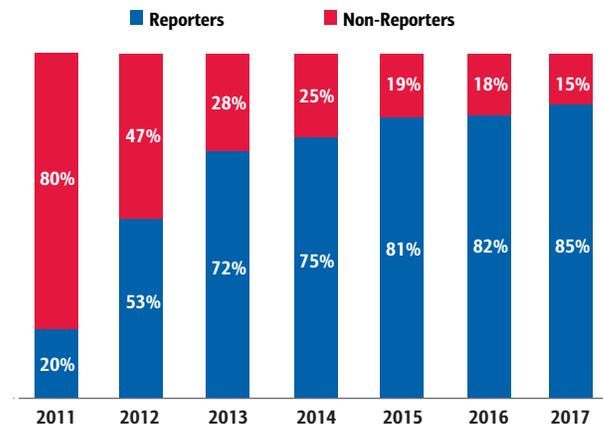
This acceleration in voluntary reporting has been driven by numerous factors including the growing importance of brand recognition and other intangible assets, stronger regulations around ESG related topics, and changing consumer preferences. Perhaps most important, the responsible investing movement has grown so quickly that companies are finding it hard to ignore: Assets invested in sustainable investing approaches rose dramatically over the last five years; in 2018, more than \$1 out of every \$4 under professional management in the U.S. was deployed in an investment strategy that incorporates ESG criteria.² Also illustrating the breadth of adoption is the rise of investor networks such as the Principles for Responsible Investment (PRI), a United Nations supported organization, which now has over 2,100 signatories, from asset owners, and investment managers to service providers.

In addition to voluntary reporting by corporations, outside entities such as government regulators, stock exchanges and nongovernmental organizations (NGOs) have contributed to the availability of sustainability data. A 2016 study that measured the global expansion of ESG reporting instruments found that in many countries, early voluntary efforts by companies to measure and report on their corporate responsibility or sustainability were followed by an increase in mandatory disclosure requirements introduced through government regulation.³ The same study found that the total of ESG reporting instruments globally more than doubled from

WHAT IS IMPACTONOMICS®?

Historically, societal and environmental factors—the economic empowerment of women, the preservation of eco-diversity, the availability of comprehensive family benefits or access to health care, and more—were rarely considered to be material financial factors in the economic analysis of risk and return on an investment. Today, those factors are increasingly relevant in investment analysis. As a consequence, the Chief Investment Office (CIO) has developed Impactonomics®, an impact-related analytic lens that includes these factors while also examining a range of relationships between economic growth and investing for impact and profit, as well as the measurable social and environmental change impact investing can enable. The resulting Impactonomics® thought leadership series probes emerging trends, research and analyses with the goal of identifying actionable impact investing ideas for investors and wealth managers.

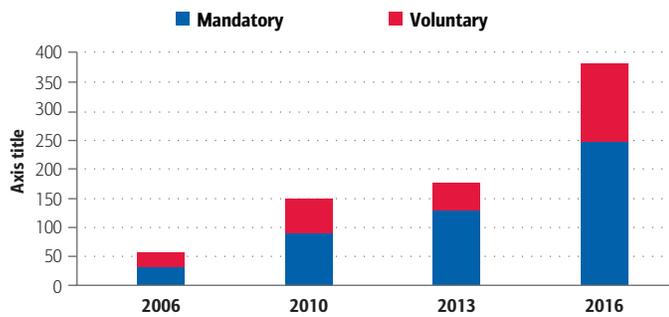
Exhibit 1: S&P 500 Companies Sustainability Reporting



Source: Governance & Accountability Institute, Inc. 2018.

2013 to 2016 (see exhibit 2). The European Union Non-Financial Reporting Directive, for example, requires large companies to disclose information on the way they operate and manage social and environmental challenges. The Sustainable Stock Exchanges (SSE) initiative, organized by the U.N. Conference on Trade and Development, is partnering with exchanges around the world to enhance corporate transparency and performance on ESG issues.

Exhibit 2: Trends in Sustainability Reporting Instruments



Source: "Carrots and Sticks: Global trends in sustainability reporting regulation and policy," 2016.

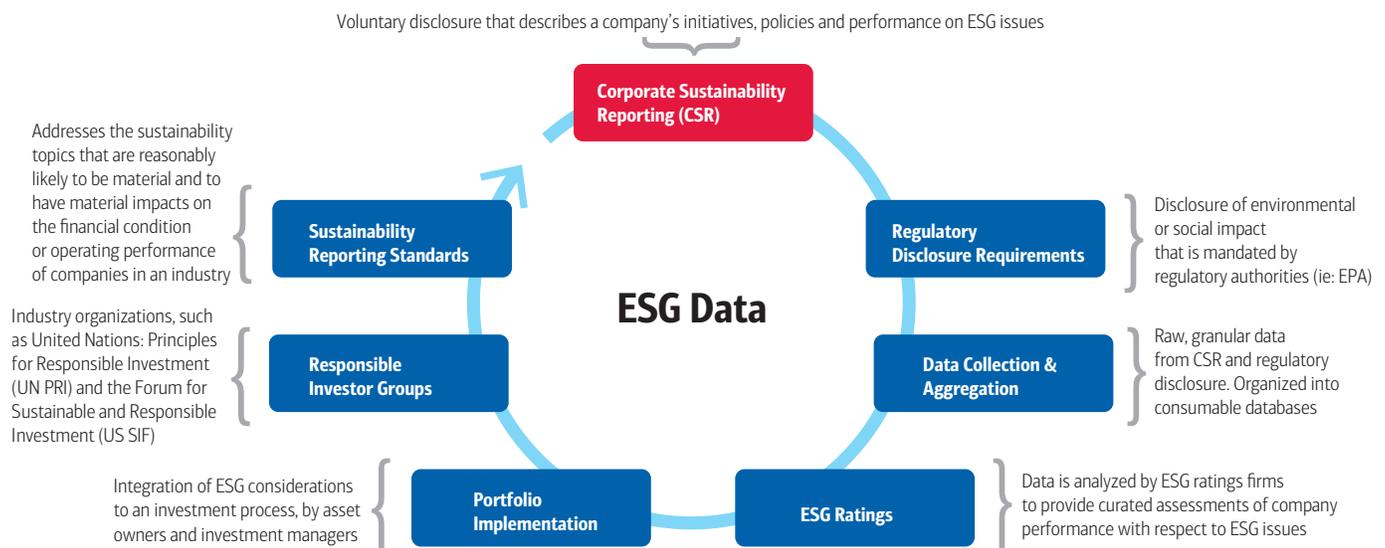
REINFORCING ADVANCEMENT

There is what might be called a reinforcing cycle that can help improve the depth and quality of ESG reporting. Data on corporate entities is aggregated, curated, and consumed by stakeholders such as investment managers, industry activists and asset owners. These stakeholders then engage with corporate issuers, directly and indirectly, to facilitate further improvements in corporate disclosure. Additionally, sustainability reporting standards organizations are creating guidelines, for use by corporate entities, investors and regulators, outlining which ESG metrics are relevant to an industry business model, with the goal of streamlining disclosure.

CORPORATE ESG DATA IS OBTAINED THROUGH THE FOLLOWING SOURCES:

- **Voluntary Disclosure:** The majority of ESG data is disclosed voluntarily by corporate entities, typically through an annual CSR.
- **Sustainability Surveys:** More and more not-for-profit organizations are using surveys to obtain sustainability data directly from companies. One of the most successful is the Carbon Disclosure Project (now known as CDP), which surveys thousands of companies globally to collect data on policies and practices relating to carbon emissions, water usage, and deforestation.
- **Regulatory Requirement:** Increasingly, government organizations such as the Securities and Exchange Commission (SEC)⁴ and the Environmental Protection Agency (EPA)⁵ are requiring companies to vote annually on corporate governance issues such as executive compensation and to disclose information about their environmental and social impact.
- **Stock Exchanges:** Some stock exchanges require corporations to commit to disclosing ESG data before than they can be listed for trading. This practice is more prevalent in Europe but is likely to extend to North America.
- **Non-Traditional Sources/Big Data:** A new technique for acquiring ESG insights is using analytical techniques and machine learning to evaluate unstructured data from news reports, public websites, and message boards.

Exhibit 3: ESG Data



Source: U.S. Trust. 2017.

Each node of the ecosystem shown above may play a part in the improvement of ESG data. For example, firms such as MSCI and Sustainalytics are creating ESG ratings accompanied by comprehensive research reports that explain the strengths and weaknesses of a company's sustainability strategies and performance. This research can be used by investment managers to better evaluate ESG risks in their portfolios. And, given the growing importance of these ESG ratings, companies themselves are taking notice and working directly with ESG raters to confirm the accuracy of data. This can create an incentive for companies to fully disclose their sustainability approach to ensure they receive credit for proactive management.

Early practitioners of socially responsible investing mainly used a strategy known as negative screening, or the avoidance of companies producing or promoting products with a clear societal harm such as tobacco or gambling. Modern exponents, however, have adopted techniques that place pressure on companies to be more transparent about the social and environmental impact of their supply chains, production processes, human capital management, and products. One technique involves direct shareholder engagement with management, with the goal of improving transparency in ESG practices. This is often accomplished through filing shareholder resolutions. For example, almost 62% of the shareholders of a large oil company voted in 2017 in favor of a motion asking management to report on how its business will be affected by worldwide efforts to reduce carbon emissions through cutbacks in the use of fossil fuels. Notably, a similar resolution in 2016 received just 38% of shareholder votes.⁶

ESG RATINGS

ESG ratings are a key component of the impact investing industry. These ratings, often presented on a scale similar to a credit rating (ie. AAA, BB, etc.), are curated assessments of how a company manages the risks and opportunities associated with ESG issues. Investment managers and asset owners can use the ratings to incorporate sustainability factors into an investment process, either to identify competitive advantages stemming from superior management of these issues, or to mitigate risks associated with poor or reactive approaches. Ratings can also be used to understand how well a portfolio is positioned relative to a benchmark or other investment managers with respect to sustainability. And while the proliferation of these ratings has doubtless improved the ability of investors and other stakeholders to understand a company's or portfolio's standing versus its peers, there are critical assumptions that must be made, and these can often lead to conflicting opinions.

Factor Selection and Materiality: Most sustainability factors fall into three categories, environmental, social or governance. The specific factors used in the evaluation a company's standing, however, can differ substantially. There is disagreement, for example, on whether issues such as water usage are relevant to a company's or industry's ESG evaluation. This is commonly referred to as a materiality assessment. Few would argue, for instance, that water usage by a power-generating utilities company is not material, given its role as a coolant in the power production process; however, there is less consensus around whether to evaluate and compare water usage by software firms, say, when assessing overall environmental stewardship. The decision to overweight, underweight, or even omit certain factors may lead to diverging opinions about company ESG ratings.

Peer Grouping: The yardstick used in ESG ratings can differ by industry and, as a result, peer groups used to derive ratings can be a critical factor. Comparing a company to global peers or domestic peers may yield substantially different results, often because regulations and cultural norms differ from one country or region to another. Recently, in September 2018, California became the first state in the U.S. to sign a bill requiring all publicly traded companies with headquarters in the state to have at least one woman on their board by the end of 2019. Increasingly, however, as corporations introduce policies to balance board representation in terms of gender and racial diversity, the "yardstick" for this particular governance or "G" factor within ESG is evolving more deeply into a companies activities in dealing with various stakeholders which includes its employees and suppliers who now too are considered part of company's ESG profile versus industry peers.

Policy vs. Performance: With a majority of large companies producing sustainability reports, it is important for ESG raters and investors to distinguish between ESG policies and ESG performance. Progressive corporate policies and robust disclosure can be positive indicators, reflecting management's commitment to broad accountability. These indicators should, however, be weighed against performance results, with objective, measurable factors being used to ensure that policy decisions produce intended outcomes.

Estimation: A meaningful portion of corporate sustainability metrics are self-reported. In cases where corporate reporting is incomplete or fragmented, some ESG ratings providers have developed methods to estimate company performance. This is often the case with carbon intensity or the ratio of carbon emissions to revenue. (Many ESG metrics are expressed as

an intensity, so as to account for the size of a company's operations when comparing peers within an industry.) Measuring carbon emissions can require the installation of measurement tools, coordination across lines of business, and so forth. Most companies, especially smaller ones, have yet to commit to reporting this metric in light of the resources required. In these cases, ESG data providers may impute the carbon emissions of a business based on metrics of varying accuracy. For certain industries, such as power utilities, this can be done with reasonable confidence by estimating average carbon intensity of various sources of power (coal, natural gas, solar, wind, etc.), in the context of a company's production mix. For other non-reporting companies, an industry average is sometimes assigned, which may or may not accurately reflect a company's operations. Whether to use self-reported or estimated data is an important decision for ESG raters and is another reason opinions can differ meaningfully from company to company and rating to rating.

Furthermore, the carbon footprint of large corporations is often even more nuanced than the power utility example above. Typically, a company's carbon emissions are categorized into three "scopes." Scope 1 refers to carbon emissions associated with sources owned directly by a company. Scope 1 emissions are typically largest for utility companies that burn fuel for electricity or industrial companies operating heavy machinery. Scope 2 refers to carbon emissions from purchased electricity. While a data-storage company may have a very small Scope 1 footprint, it may consume a significant amount of electricity to power its operations. As such, the source of purchased electricity becomes important, and that can vary by local power utilities' production mix such as coal, natural gas and solar. Finally, Scope 3 refers to the carbon footprint of the products produced by a company. This is vital for companies that produce carbon-intensive products like automobiles or airplane engines. Understanding the nuances of a company's carbon footprint is important when assessing its overall environmental impact.

The case for the integration of ESG analysis into an investment process has become more compelling as the data has improved. The materiality matrix developed by the Sustainable Accounting Standards Board (SASB) has allowed academic researchers to examine the importance of strong corporate performance on material ESG factors. A Harvard Business School study found that firms with good performance on material issues but poor performance on immaterial issues outperform market averages, highlighting the value of efficiency in sustainability investments.⁷

CONTROVERSIES AND BUSINESS INVOLVEMENT

ESG investors may come to different conclusions on how an accident, a lawsuit, a product recall or other controversy can affect a company's ESG outlook. Further complicating this analysis is how long a company should be penalized since, in some cases, the company's response to an incident can prompt it to establish new best practices.

For example, in 2010 a power utility experienced a natural gas pipeline rupture, which caused an explosion and fire in which eight people were killed. The utility was forced to pay sizable penalties in addition to settlements to those affected locally.⁸ ESG ratings for the company were lowered accordingly, and most investors agreed that the incident reflected poorly on the company's health and safety practices. In the following years, the utility took actions to make safety the cornerstone of its culture, becoming one of the first utilities ever to earn two internationally recognized safety certifications: the International Organization for Standardization (ISO) 55001 and Publicly Available Specification (PAS) 55-1. Questions that ESG investors must consider then become: how long should the company be held accountable for the incident? When should any preventative steps taken be counted as positive reflections of the company's ESG outlook? How should this be weighed in the context of other longstanding ESG strengths, such as water usage and waste management?

There are certain industries that ESG investors have avoided based on the negative societal impact of their products. These generally include tobacco, alcohol, gambling, adult entertainment, and defense and weapons. But the question of how to account for only partial involvement in objectionable categories can lead to disagreement among ESG investors. Take the aerospace and defense industry. Many large U.S. defense contractors are also industrial conglomerates with

diverse operations. The sixth largest Department of Defense (DoD) contractor, for example, generates less than 10 percent of its revenue from the development of weapons and support systems. Meanwhile, the company is responsible for the development of many clean technologies, such as energy-neutral elevators, green building and climate control solutions, and jet engines with half the emissions of competitors' models.⁹ ESG investors who avoid the company because of its involvement in defense may also forgo opportunities in its clean technologies.

OTHER ESG DATA CHALLENGES

For all the recent progress in ESG data disclosure, collection and analysis, there is still room for improvement. ESG data is still largely fragmented, dependent upon self-reporting, independent surveys, and more. The CSR has made vast amounts of information on ESG policies and performance available to investors, but its voluntary nature can be a double-edged sword: CSRs can inform investors but also lead to inconsistent reporting as companies attempt to highlight their "good" behavior. Further, disengagement between sustainability and investors relations teams at some companies may result in poor investor communications on sustainability strategy and performance.¹⁰ A survey by Pricewaterhouse Coopers showed that only 29% of investors had confidence in the quality of information received from issuers, while issuers had full confidence in the quality of the information they'd disclosed on ESG matters.¹¹

There is evidence, however, that sustainability data is experiencing a maturation process similar to that of financial accounting and reporting. Like the Financial Accounting Standards Board (FASB), which was created in 1973 to establish financial accounting and reporting standards, the Sustainable Accounting Standards Board (SASB), the Global Reporting Initiative (GRI) and other organizations are seeking to provide guidance to companies on the topic through the formation of sustainability reporting standards. SASB has developed ways to assess the material ESG issues of each market industry, and provides guidance on how public companies can disclose these factors in statutory filings such as 10-Ks, 20-Fs and 40-Fs. Some domestic companies have made strides in this regard by integrating sustainability reporting into their annual shareholder report. While this might not guarantee the reporting of all material factors, it can highlight how managing sustainability risks and opportunities is a critical element in the firm's strategy. Market-wide adoption of standardized guidelines would mark a significant improvement in sustainability reporting, as it would provide

a consistent level of data disclosure by companies within each industry, allowing for apples-to-apples comparisons and smaller gaps in data availability.

TOP 10 WISH LIST FOR ESG DATA

1. Pay parity data (same pay for same job)
2. Workforce composition and advancement by racial and sexual orientation groups
3. Scope 3 carbon emissions (more disclosure, standardization)
4. Management vs. workforce compensation
5. Recycling vs. waste %
6. Net water usage
7. Workforce safety data
8. More/better data from smaller cap companies
9. Employee engagement/satisfaction data
10. Regulatory standards for sustainability reporting

CONCLUSION

ESG data integration and analysis are currently in the early innings of market adoption. Investors are still discovering which data is relevant and how to incorporate it into a traditional investment process. As more data becomes available, and new standards emerge, this dynamic field will require persistent diligence and flexibility. But it is becoming increasingly clear that there is value in undertaking such efforts. ESG factor analysis provides new information that complements the existing financial analytical framework. In the future, ESG data may likely be considered a normal component of all investment decision-making rather than a specialized effort practiced by "social" investors.

Thank you to our partners in Socially Innovative Investing (S2) through U.S. Trust, Bank of America Private Wealth Management, for their contribution and thoughts around impact investments.

ENDNOTES

1. "Report on U.S. Sustainable, Responsible and Impact Investing Trends," U.S. SIF (Forum for Sustainable and Responsible Investing), 2018.
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11. "Investors, corporates, and ESG: Bridging the Gap," PwC's ESG Pulse, 2016.

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