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## The State of ESG Investing: A Portfolio Management Perspective

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Kenneth Blay, and Glen Yelton





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# The State of ESG Investing: A Portfolio Management Perspective

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## KEY FINDINGS

- This article gives an overview of the current state of ESG investing, highlighting the challenges faced by investors with ESG investment objectives and the obstacles confronting portfolio managers with ESG investment mandates.
- A framework is described for articulating ESG investment objectives that distinguishes between financial and nonfinancial goals. This clarity provides both better direction to portfolio managers and a framework for the evaluation of investment performance.
- A framework for ESG corporate reporting includes desirable qualities from a fund investor's perspective. Notably, the ability to aggregate issuer-level information to the portfolio level is an overlooked characteristic in corporate reporting.
- Recommendations include a standardized ESG product template that focuses on non-financial investment objectives, process elements, and measurable outcomes. At least initially, the template should focus on fewer rather than more metrics based on measurability and materiality.

## ABSTRACT

Environmental, social, and governance (ESG) strategies have experienced a massive inflow of capital over the past decade, despite investors having little concrete evidence that ESG investing accomplishes its purported goals. This capital inflow also happened without investors possessing the information, tools, and methods needed to evaluate and communicate their specific ESG values, objectives, and preferences. Without evidence of efficacy and clearly articulated investment objectives, it is impossible for investors with ESG intent to know whether they are receiving what they are paying for, to distinguish between investment managers based on nonfinancial objectives, and to improve the likelihood of achieving positive ESG investing outcomes. This article highlights the key challenges faced by ESG investors and portfolio managers implementing ESG investment mandates. Recommendations include an issuer reporting framework that supports portfolio reporting and evaluation as well as an ESG product template that focuses on nonfinancial investment objectives, process elements, and measurable outcomes.

According to one estimate, one-third of the world's assets under management are environmental, social, and governance (ESG) investments (e.g., Global Sustainable Investment Alliance 2020). Has this tectonic shift of assets into ESG funds had its intended effect?

A number of studies show that carbon emission disclosure mandates decrease reported carbon emissions (e.g., Jouvenot and Krueger 2019, Tomar 2019, and Rauter 2017). Other disclosure mandates have been shown to decrease water pollution, increase worker safety, and decrease corruption (Chen, Hung, and Wang 2018; Christensen et al. 2017; and Rauter 2017), as well. Scant evidence indicates, however, that shifts in investment policy decrease carbon emissions, increase human rights, level the playing field for underrepresented groups, mitigate soil erosion, or improve water purity.

Friedman (1975) notes, “One of the great mistakes is to judge policies and programs by their intentions rather than their results.” Similarly, investments must be judged on their outcomes relative to their objectives. Funds aiming to do good are no different. A fundamental premise of this article is that evaluating ESG investment outcomes requires more specifically articulated investment objectives; without such objectives, ESG investing is reduced to feeling good rather than doing good (Statman 2004, 2010).

Howard-Grenville (2021) notes the dearth of ESG metrics for investing to support performance evaluation but offers guidance on desirable qualities, including the ability to capture end outcomes and impacts. Without evidence of the efficacy of ESG investing or the existence of investment objectives against which to judge performance, it is impossible to know whether investors with ESG objectives are receiving the product for which they are paying—nor can investors distinguish between good and bad investment managers based on nonfinancial objectives.

This article evaluates the state of ESG investing through the lens of a literature and industry review that provides a comprehensive overview for those becoming familiar with the field. For those more acquainted with the ESG investing landscape, we outline a series of challenges and offer a number of recommendations for investors, portfolio managers, and standard setters.

Importantly, we approach this work from a fund or portfolio perspective rather than from an issuer or firm perspective, focusing especially on fund reporting to investors, which to date is an underdeveloped segment of ESG investing. Significant emphasis has been given to standardizing sustainable corporate reporting, but little attention is given to sustainable investment fund reporting. Our specific contributions and recommendations include:

- An overview and evaluation of the state of ESG through the lens of challenges.
- A framework for articulating ESG investment objectives that distinguishes between financial and nonfinancial goals. This clarity provides better direction to portfolio managers as well as a framework for evaluating investment performance.
- A framework, ESG corporate reporting, which includes desirable qualities from a fund investor’s perspective. Notably, the ability to aggregate issuer-level information to portfolio-level information represents an overlooked characteristic in corporate reporting.
- Recommendations for investors, portfolio managers, and regulators, including specifically a standardized ESG product template that focuses at least initially on fewer rather than more metrics, based on measurability and materiality.

## LITERATURE REVIEW

ESG as an investment philosophy has existed for decades. Other aspects of investment management (e.g., economics, financial reporting, security valuation, and performance evaluation) have evolved over a hundred years. Viewed in this light,

ESG investing is still young, with understandable growing pains. Our aim is to elevate its practice to the same standards demanded of traditional investing approaches.

Bragdon and Marlin (1972) are among the first to empirically examine whether investors must choose between economic value and environmental virtue. Noting the variety of plausible economic forces for which pollution control would increase profits (e.g., by lowering raw material and labor costs), they find a positive correlation between pollution control activity indexes (a precursor to today's ESG ratings) and profits for 110 virgin paper mills over a 5-year period.

Corporate governance has long been studied as a factor possibly leading to better financial performance (e.g., corporate outcomes), increased risk-adjusted investment returns, or both. Becht, Bolton, and Röell (2003); Denis et al. (2003); and Claessens and Yurtoglu (2013) offer surveys of academic studies of the link between corporate governance and firm value.

Gompers and Metrick (2003) develop a corporate governance index based on shareholder rights provisions and find that in the 1990s, firms with stronger shareholder rights provisions have higher valuations (i.e., Tobin's  $q$  ratios). It is possible, however, that savvy investors understand the opportunity and compete away the profits from investing in well-governed companies. Gompers and Metrick (2003), however, conclude that firms with stronger shareholder rights provisions lead to higher risk-adjusted returns. A combination of increased valuation and higher future excess returns for firms with stronger governance suggests that the value of corporate governance is not (or at least was not) fully priced in by investors.

Bebchuk, Cohen, and Wang (2013) replicate Gompers and Metrick (2003), using more recent data and determining that although good governance firms continue to trade at higher valuations in the 2000s, the link between corporate governance and abnormal returns breaks down during that period. This result suggests that although well-governed firms may enjoy higher valuations, lower cost of capital, and increased profits, investors have learned to properly price this aspect of governance, thereby eliminating the profit opportunity in an investment strategy employing this factor. Sloan (1996) develops a different measure of corporate governance based on the aggressiveness of a company's accounting choices (as evidenced by its accruals) and observes that firms with less aggressive accruals produce positive abnormal returns.

Beyond governance (G), there are reasons to believe that social (S) or environmental (E) factors might lead to some combination of higher profits, increased valuations, and excess returns. Eichholtz, Kok, and Quigley (2010), for example, show that green buildings command higher rents and selling prices than otherwise identical buildings.<sup>1</sup> More generally, a plethora of researchers address whether socially responsible firms and indexes produce the following results:

- Socially responsible firms generate higher financial performance (e.g., Margolis, Elfenbein, and Walsh 2009; Friede, Busch, and Bassen 2015; Busch and Lewandowski 2018; Eccles, Kastropeli, and Potter 2018; and Giese and Lee 2019) or increased stock returns (e.g., Krüger 2015; Halbritter and Dorfleitner 2015; and El Ghouli and Karoui 2017, 2019).
- Socially responsible funds produce higher risk-adjusted returns (e.g., Renneboog, ter Horst, and Zhang 2008; El Ghouli and Karoui 2017, 2019).
- Socially responsible indexes outperform conventional indexes (e.g., Schröder 2007; Dimson, Marsh, and Staunton 2020a). (The evidence is inconclusive.)

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<sup>1</sup>Although some of the price premium can be attributed to energy savings, higher rents suggest that the label itself affects perceptions in the marketplace.

Adler and Kritzman (2008) illustrate, without making assumptions about the relative performance of “good” and “bad” companies, that exclusionary socially responsible investing approaches can impose significant costs on investing outcomes. Their point is not to dissuade investors from pursuing socially responsible objectives, but rather to make clear that there are likely tradeoffs and alternative approaches that investors should consider. Dimson, Marsh, and Staunton (2020a), on the other hand, demonstrate that large-scale exclusions based on carbon exposure have little impact on risk and return in the long run.

Settling these empirical debates about the relation between ESG and investment returns is not our aim. We seek to facilitate the evaluation of ESG investment strategies on nonfinancial grounds. Horan et al. (2021) and Horan et al. (2022), for instance, develop ESG portfolio evaluation models while assuming that data exist to make those evaluations. This article proposes features that data should incorporate so that such evaluations can be made.

## ESG INVESTMENT CHALLENGES

Peirce (2018) argues against the concept of stakeholder capitalism on the basis that shareholders are a distinct identifiable group of individuals with well-defined interests that corporate managers are expected to serve. Stakeholders, on the other hand, are an ill-defined class of constituents with elastic and sometimes conflicting interests. Although attractive from a social perspective, this attribute is problematic from a reporting and evaluation perspective because it impairs clarity, measurability, and accountability. Moreover, this attribute is also the common denominator of many of the challenges we discuss subsequently.

In this section, we describe some of the most relevant challenges that investors face when implementing an ESG investment mandate. Although we focus initially on the challenges, our goal is to improve ESG investing, not impugn it, so that investors receive what they pay for and achieve the objectives they intend.

### Challenges with Real-World Impact

Bebchuck and Tallarita (2022) provide evidence based on filings of over 130 US public companies that joined the much-hailed Business Roundtable (BRT) Statement on the Purpose of a Corporation (Business Roundtable 2019). The BRT articulates a more expansive view of corporate stakeholders, beyond shareholders. Sadly, however, a great majority of the signing firms neither mention adopting such a view in their 2020 proxy statements nor discuss other stakeholders in their corporate governance guidelines. In fact, in response to shareholder proposals regarding implementation of the BRT Statement during the 2020 or 2021 proxy season, most explicitly state that their joining the BRT Statement did not require any such changes.

Another example of this type of disconnect arises with corporations wishing to report lower carbon footprints. Firms with carbon-intensive assets might claim to divest them. Although such a position may improve the sustainability credentials of the seller, the assets do not simply disappear; they are often sold to private equity partnerships (and the issuer might even have an economic interest in such partnerships). The private entity organization is not part of the issuer’s reporting orbit and therefore is not subject to the ESG reporting requirements or conventions of the carbon-emitting sellers. Not only has the company artificially deflated its carbon emissions with no real-world impact, the new (and perhaps unscrupulous) owner of the high-carbon assets now has end-game incentives to operate myopically, knowing

that the operating life of the carbon-intensive asset or the ability to operate it without corporate reporting obligations may be limited.

Dai et al. (2021) present international evidence of this phenomenon, showing that decreases in Scope 1 carbon emissions (direct) by US firms are associated with increases in their imports and a corresponding rise in their Scope 3 (supplier) emissions. Dai et al. (2021) further demonstrate that firms with higher imported emissions are less incentivized to develop clean technologies.

### Challenges with ESG Fund Objectives

Evaluating the real-world outcomes of ESG investments requires that (1) investors state their objectives clearly; (2) issuers provide accurate and useful information related to those objectives; and (3) portfolio managers aggregate this information and report against those objectives in a way that delivers digestible data to investors.

The Financial Conduct Authority (FCA), the financial services and markets regulator in the UK, notes that ESG and sustainable fund applications lack measurable non-financial objectives. Even for approved funds, it is often difficult to reconcile a fund name or fund objective to its holdings. For instance, Gibson-Brandon et al. (2021) show that US-domiciled institutional investors that publicly commit to responsible investing have at best the same (or perhaps even lower) ESG scores as institutional investors that do not make a public commitment.

It is essential, therefore, that “funds marketed with a sustainability and ESG focus describe their investment strategies clearly and any assertions made about their goals are reasonable and substantiated” (Financial Conduct Authority 2021). The FCA recently issued guidance to fund managers that, if ESG or sustainability is used in the fund name, two conditions should be met: (1) an ESG or sustainability approach should be articulated in the fund objectives; and (2) the fund should be managed materially differently than one not employing the approach (e.g., fund holdings or active share might be distinctive).

Recognizing that the term “impact” or “impact investing” has specific connotations, the FCA further expects that a real-world nonfinancial impact should be part of an impact investment objective and that the impact is measured or monitored. The Organization of Economic Co-operation and Development (OECD), International Organization of Securities Commissions (IOSCO), and ESG researchers similarly identify concerns related to greenwashing and make recommendations regarding ESG fund labeling, monitoring of nonfinancial metrics, and sustainability reporting (e.g., Boffo and Patalano 2020, IOSCO 2021).

Clear investment objectives are a necessary prerequisite for relevant and reliable fund reporting. The CFA Institute also entered the fray by issuing ESG Disclosure Standards for Investment Products designed to create “disclosure requirements for the ESG-related aspects of an investment product’s strategy” (CFA Institute 2021b). Stopping short of defining what constitutes an ESG or sustainable investment product or a strategy for determining best practice, the consultation paper focuses on classifying ESG-related funds as having one or more ESG-related features, including ESG integration, screening, best-in-class, thematic investing, impact investing, and stewardship (CFA Institute 2020a).<sup>2</sup>

These features align closely with the well-established Global Sustainable Investment Alliance (GSIA) classification scheme (Global Sustainable Investment Alliance 2020).

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<sup>2</sup>The consultation paper informing the subsequent exposure draft and standards describes the best-in-class feature as having the “aim to invest in companies and issuers that perform better than peers on one or more performance metrics related to ESG matters” (CFA Institute 2020a). Nearly two-thirds of the respondents feel that the term is not clear and appropriate.



Importantly, however, these proposed standards do not specify fund reporting standards, such as metrics or targets.

### Issues with ESG Fund Management

A growing chorus of critics notes the weak relationship between marketing claims of ESG and sustainable investment products and their actual investment holdings or performance. DWS, for example, attracted the attention of the Securities and Exchange Commission (SEC) in the US and BaFin in Germany for allegedly overstating their sustainability efforts (Kowsmann, Ramey, and Michaels 2021).

The world's 20 largest ESG funds hold investments in 17 fossil fuel producers, including ExxonMobil, Saudi Aramco, and a Chinese coal-mining company (The Economist 2021). They also invest in stocks of companies engaged in gambling, alcohol, and tobacco. Moreover, the holdings and performance of top ESG funds (with active management fees) are very similar to each other and, importantly, similar to the S&P 500 index (Brown 2021). All of the ESG funds, for example, invest between 20% and 23% of their portfolios in Meta (Facebook), Amazon, Apple, Netflix, and Google (Alphabet) (i.e., the five firms known as FAANG) and Microsoft (MSFT). Moreover, investment performance is nearly identical, with correlations between 90% and 99%.

What are investors receiving in exchange for their active management fees? If portfolio weights are 90% similar to those of the index, an ESG investor could replicate these ESG funds by investing 90% of the investor's money in an index fund and the remaining 10% in a long-short portfolio that duplicates the active share component (i.e., deviations from the index weights), saving substantial management fees. Depending on the evaluation schemes, managers may simply exclude a few petroleum producers or investments in Indonesia and Brazil, Russia, India, China, and South Africa (the BRICS countries) to improve the portfolio's carbon footprint without fundamentally changing the portfolio holdings (du Toit 2021). Alternatively, fund managers may have an incentive to make initial high-carbon investments to establish a forgiving benchmark against which improvement can be demonstrated.

Even if ESG funds excluded offending firms, that action would have no measurable impact on lowering emissions, according to some observers (Fancy 2021). It simply labels some assets as ESG and other assets as non-ESG. However, non-ESG assets do not disappear. In fact, the naive belief that refusing to own carbon-intensive companies slows emissions has the potentially unintended consequence of governments—which are perhaps better positioned to address market imperfections such as negative externalities and the tragedy of the commons—that may be less likely to act (Darwall 2021, Fama 2020).

### Challenges with ESG Education

Having struggled for decades to convey salient insights about diversification, the efficient frontier, or post-modern portfolio theory (issues with which they are presumably proficient), investment practitioners now find themselves confronting a need to be well versed (if not expert) in climatology, sociology, biology, earth sciences, and more. Not surprisingly, many practitioners are struggling to adapt.

A recent survey of financial advisors and advised investors shows that lack of personal knowledge is a barrier to sustainable investing for practitioners (Emory 2021). Despite a keen interest in ESG investing, financial advisors do not have a clear understanding of ESG terminology beyond "negative screening." They report needing clarification for terms such as "impact investing," "ESG integration," "thematic investing," and "stewardship." As a result, financial advisors have difficulty distinguishing between different types of sustainable funds and cite this difficulty more commonly

than any other factor as a key challenge in ESG investing. Financial advisors over the age of 55 have particular difficulty talking to investors about ESG investing.

Like their advisors, investors find ESG terminology overwhelming. Interestingly, they are uncomfortable or unfamiliar with the “ESG” acronym, preferring instead terms such as “sustainable,” “responsible,” “ethical,” and “green.” At the most basic level, we lack a lingua franca to understand each other. Therefore, investment practitioners need education and consistent and reliable data to manage portfolios to investors’ nonfinancial objectives.

### Challenges with ESG Fund Reporting

More than three-quarters of financial practitioners perceive a need for improved standards relevant to ESG products to mitigate greenwashing (Orsagh 2020). Practitioners consistently cite the lack of reliability and verifiability, comparability across firms, and consistency across time as limiting factors in implementing ESG investment strategies at both the issuer and product levels. We argue next that a key and overlooked attribute is aggregability from the issuer level to the portfolio level.

**Nonstandardization of Issuer Reporting.** No one is surprised that corporate reporting of ESG factors is nonstandardized. The SEC Investor Advisory Committee (2020) reflects complaints from institutional investors that environmental and social disclosures lack the comparability and consistency required to make informed investment decisions (SEC Investor Advisory Committee 2020). Moreover, the oftentimes qualitative nature of the data introduces subjectivity, so the data are difficult to aggregate at the portfolio level.

The Sustainable Accounting Standards Board (SASB) developed issuer-level reporting standards, and the industry is coalescing around them. These standards are intended to identify issues that are likely to affect the financial condition or operating performance of companies. In addition, these standards have the advantage of being simple and succinct. Importantly, however, the well-intended focus on materiality by industry introduces nonstandardization across industries because materiality differs by industry, which impairs aggregating information at the portfolio level to support both portfolio management and reporting.

The International Financial Reporting Standards (IFRS) Foundation is also working with IOSCO to develop issuer-level sustainability reporting standards. It is unclear, however, whether these efforts will produce consistency across industries that can be aggregated at the portfolio level to support portfolio reporting and evaluation for investors.

Even reporting that lends itself to quantification is highly nonstandardized. The greenhouse gas disclosures for major petroleum companies differ substantially from each other and over time. Exxon, for example, reports absolute carbon dioxide equivalent (CO<sub>2</sub>e) emissions annually and CO<sub>2</sub>e per unit of throughput, including both oil and chemical production (ExxonMobil 2021). Shell reports the annual percent change in net carbon footprint, defined as CO<sub>2</sub>e per megajoule produced (Shell 2020). Valero (2020) reports greenhouse gas emissions per barrel. These differences make aggregating to the portfolio level (to report results to the end investor) a difficult if not impossible task.

**ESG Ratings.** In a quest for a standardized metric to support portfolio evaluation and reporting, fund managers reach for ESG ratings. Nearly two-thirds of portfolio managers employ relative ESG rankings in their company analyses—more frequently than any other method—but very few use it as a primary input (Orsagh 2020). It is peculiar, then, that Yang (2021) indicates that ESG ratings serve as the primary fund reporting metric and the primary independent variable in academic studies exploring the impact of ESG investing on fund performance. Yang (2021) also notes that issuers

can positively influence their ESG ratings and that ESG ratings are poor predictors of future environmental and social transgressions and troubles for the firm. Of course, given the lack of previously cited standardization, it is understandable that fund managers embrace any available metric for comparison, without questioning the details.

The variability of ESG ratings across providers is well documented (e.g., Berg, Köbel, and Rigobon 2019). Dimson, Marsh, and Staunton (2020b), for instance, document low correlations between the ESG ratings by three major providers—MSCI, FTSE, and Sustainalytics—and anecdotally note a high dispersion among ratings for some high-profile large-capitalization issuers (e.g., Tesla, Facebook, Johnson & Johnson, and Walmart). Correlations among aggregate ESG ratings across a larger set of firms are predictably higher (between 0.30 and 0.59) than the correlations of their component parts. The E ratings from MSCI and Sustainalytics, however, demonstrate little agreement (= 0.11) while the agreement among G ratings is even slightly negative (= -0.02).

Dimson et al. (2020b) cite several factors for this disagreement, including using different metrics to measure the same attribute, comparing the metrics against different benchmarks (e.g., industry versus market), imputing missing data by using different methods, increasing volume of corporate reporting information, and identifying the weighting scheme for the various component parts.

In fact, Christensen, Serafeim, and Sikochi (2020) report that increased ESG disclosure leads to greater ESG rating disagreement, which in turn is associated with greater return volatility. Rather than resolving information asymmetries, ESG disclosures appear to create them. Not surprisingly, then, the large body of research investigating relationships between these ratings and financial performance (or between ratings and financial returns) is largely inconclusive.

Fund reporting will certainly benefit if relevant standardized corporate reporting is implemented. Viewed in isolation, however, standardization is not a solution. It must be coupled with a portfolio reporting framework that considers how many corporate metrics to aggregate, which ones are material, and how to incorporate them into decision-making, which we address in our recommendations.

## CLIENT OBJECTIVES

How can these challenges be addressed? Evaluating an investment strategy requires comparing investment results with investment objectives. Clarity begins with client objectives. The FCA notes the “wide spectrum of ESG and sustainable investment funds, reflecting different objectives, investment strategies and characteristics” (FCA 2021). As described by Horan et al. (2022), investor interest in ESG varies across at least two spectrums—topics and intensity.

### ESG Topics

The first spectrum that characterizes investor objectives is topical. Investors exhibit varying interest in specific ESG issues. Some investors may want to emphasize E, S, or G.<sup>3</sup> Others may wish to focus on a particular issue within E, S, or G.

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<sup>3</sup>The SEC in the US attempts to define ESG investment funds in a February 26, 2021, investor bulletin, noting, “An ESG fund portfolio might include securities selected in each of the three [E, S, and G] categories—or in just one or two of the categories. A fund’s portfolio might also include securities that don’t fit any of the ESG categories, particularly if it is a fund that considers other investment methodologies consistent with the fund’s investment objectives.” Such a description highlights the breadth and lack of specificity of the ESG or sustainability monikers.

**EXHIBIT 1****Spectrum of ESG and Sustainable Investing**

Climate change takes center stage for many investors these days, but others are keenly interested in human rights or racial inequity, for example. Investors can assign different intensity to different topics according to their values.

This heterogeneity poses another challenge to ESG investment standardization. Recognizing the spectrum of approaches and topical issues that prompt the most investor concern, Horan et al. (2021) develop a flexible framework for specifying ESG investment objectives and evaluating outcomes that allows for multiple (even conflicting) value systems as well as numerous investment approaches.

**ESG Intensity**

The second spectrum that characterizes investor objectives represents the degree of investor interest in, or commitment to, ESG and sustainable investing (Exhibit 1). This spectrum ranges from disinterest (characterized by an exclusive focus on traditional financial objectives) to a singular, perhaps exclusive, focus on a specific impact (characterized by intentional proxy voting, company engagement, and active ownership).<sup>4</sup>

Between those extremes, investors may have ESG investment ambitions but are unwilling to trade off risk-adjusted returns. For example, some investors may claim nonfinancial objectives for which they are unwilling to make financial tradeoffs. Such investors are satisfied with a fund's portfolio holdings that are identical to a portfolio with financial-only objectives if the alternative were lower risk-adjusted returns.

Other investors are willing to incur return tradeoffs, but to varying degrees. The willingness to balance financial and nonfinancial goals is a key element in this categorization scheme. This continuum is referred to as "intensity" and is consistent with the "willingness to pay" concept of Barber, Morse, and Yasuda (2021).

The investment categories in Exhibit 1—traditional, responsible, sustainable, and impact—resemble those identified by a variety of standard-setting bodies (e.g., SASB, FCA) that have noted the varying degrees of responsible investing. This continuum, however, uniquely highlights the potential tradeoff that investors are willing to make between value (a financial criterion) and values (a nonfinancial criterion). The important implication is that a measure of intensity allows investors to communicate to investment managers their willingness to make financial tradeoffs (whether or not such tradeoffs are necessary in the capital markets) for nonfinancial gain and thus provides a framework for evaluating fund managers and advisors.

**Financial versus Nonfinancial Tradeoffs**

Selecting investments based on ESG factors for financial or economic gain is tantamount to fundamental investing. We therefore differentiate between ESG investing

<sup>4</sup>In fact, these impact characteristics can be considered as a spectrum of investor engagement or stewardship on the right-hand side of the graphic in Exhibit 1.

that increases expected risk-adjusted financial returns and ESG investing that does not enhance returns because traditional investors would anyway select investments and portfolios based on ESG factors that are expected to increase risk-adjusted financial return. The ESG investing related to intensity does not necessarily increase risk-adjusted return but conveys nonfinancial gains that should also be incorporated in investment objectives.

Pedersen, Fitzgibbons, and Pomorski (2021) develop a model of ESG-adjusted efficient frontiers that differentiates between investor preferences for ESG factors and acknowledges possible financial-nonfinancial tradeoffs. They distinguish between investors who are unaware of ESG factors and those who are aware of such factors and exploit them to improve their estimates of risk and expected return. These two classes of investors resemble uninformed and informed investors competing to maximize risk-adjusted return.

### ESG for Nonfinancial Gain

Distinguishing between ESG investing expected to produce financial gains and investing for nonfinancial gain is a necessary but insufficient condition to align portfolio management behavior with investor objectives. Consider an investor focused on an investment program that will help decrease carbon emissions,<sup>5</sup> who can pursue one of at least three strategies: (1) passive ESG investing, or investing in today's low carbon emitters; (2) active ESG investing, or predicting which firms will become tomorrow's new low carbon emitters (e.g., high net zero performers); and (3) activist ESG investing, or influencing firms to become tomorrow's low carbon emitters.

**Passive ESG Investing.** Although an investment strategy of exclusion of carbon emitters exerts little long-run influence on risk and return (Dimson, Marsh, and Staunton 2021), Fama (2021) argues that excluding investments in companies that are currently polluters or carbon emitters is naive because it has a negligible impact on portfolio construction, at least in the aggregate. Fama (2020) and Darwall (2021) contend further that the naive belief that refusing to own carbon-intensive companies slows emissions holds the potential for an unintended consequence of deterring governments—which are perhaps better positioned to address market imperfections such as negative externalities and the tragedy of the commons—from taking action.

Nonetheless, an extreme investment strategy would be to formulaically weight portfolio holdings based on some observable metric (e.g., carbon intensity), much as index fund weights are based on market capitalization. This algorithmic approach can be characterized as a passive ESG investment strategy because its portfolio holdings and weights are determined exogenously. In addition, because carbon emissions are concentrated among a very small number of firms in one or two industries (most notably petroleum and coal manufacture), an exclusion strategy produces portfolios that differ little from passive index funds or an active strategy that an investment manager might have otherwise pursued.

**Active ESG Investing.** Alternatively, investors can choose portfolio holdings that are expected to cut emissions the most over some period of time, which represents an active bet on companies that will transition the most completely or the most quickly (on either an absolute or relative basis). This predictive strategy is consistent with favoring firms that adopt more aggressive net zero objectives or are making progress toward them and thus can be called active ESG. This approach is not based on a formulaic approach but rather reflects investor expectations of the future and is likely to produce a portfolio quite different from one for a market capitalization-weighted index.

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<sup>5</sup> "Low carbon" is simply a specific example of an ESG objective. The concept can be applied to any ESG objective or set of ESG objectives.

**Activist ESG Investing.** A variation on active ESG investing could be dubbed activist ESG investing if the intention is to influence portfolio companies to transition more fully or more quickly to, for example, a net zero carbon footprint. Dimson, Karakas, and Li (2015) examine corporate social responsibility engagements with US public companies from 1999 to 2009, finding that successful engagements (defined as those where changes are implemented) yield positive abnormal returns, improve accounting performance and governance, and increase institutional ownership. They interpret their results to mean that ESG activism improves social welfare, attenuates managerial myopia, and hence helps minimize negative externalities.

Dimson, Karakas, and Li (2015) also conclude that firms with inferior governance improve their governance and performance after successful engagements, particularly on ES issues. This finding illustrates that portfolios constructed with the intent of targeting and holding stock in companies susceptible to influence to improve their ESG credentials (or firms likely to enhance them on their own) will be very different from portfolios investing in today's already-converted angel investments.

There are many variations on these strategies, and without advocating for passive, active, or activist approaches, we observe that few ESG funds distinguish between them. A passive ESG investment objective that invests in today's low carbon emitters may be at odds with an active or activist ESG strategy that invests in today's high carbon emitters. The overarching point is the impossibility of evaluating a portfolio manager's performance without articulating the specific ESG investment objective. Consequently, we need portfolio objectives that identify the specific strategy and metrics that are clearly associated with the client's stated intent.

## **CORPORATE REPORTING THAT SUPPORTS PORTFOLIO MANAGEMENT**

Corporate ESG reporting should similarly be linked to investor objectives. Because most investors access markets through fund managers, the corporate reporting must be aggregable so that data can be summarized at the portfolio level. In this way, managers can make informed investment decisions and report to their clients. Currently, data cannot be easily summarized at the portfolio level.

### **State of Corporate Reporting**

Firms are being besieged by new nonfinancial ESG reporting requirements for corporate issuers, coming from regulators (e.g., IOSCO), standard setters (e.g., Task Force for Climate-Related Financial Disclosures, Taskforce on Nature-Related Financial Disclosures, and IFRS), investment trustees (e.g., CalPERS), universal owners (e.g., Norway's sovereign wealth fund or New Zealand's sovereign wealth fund), investors (e.g., Larry Fink), and even consumers.

Nonetheless, more than half of the investment professionals surveyed by the CFA Institute cite a lack of measurement tools as the primary barrier to incorporating climate risk into their investment analyses (Orsagh 2020). According to McKinsey and Company, inconsistency, incomparability, and lack of alignment to a standard are cited as the main shortcoming of current sustainability reporting (Bernow et al. 2019). A total of 89% of investors indicate that reducing the number of sustainability reporting standards would be beneficial. Three-quarters respond that there should be one reporting standard.

Of course, these data are self-reported and unaudited, adding to their lack of not only consistency but also comparability and reliability (CFA Institute 2020b). Reported information must be objective in the sense that it could be replicated independently

## EXHIBIT 2

### Qualities of Desirable ESG Corporate Reporting

1. Relevant
  - Aligned
  - Actual
  - Material
2. Reliable
  - Measurable
  - Accurate
  - Verifiable
  - Consistent
  - Comparable
3. Relatable
  - Accessible
  - Benchmarked
  - Timely
  - Aggregable

by another person (sometimes called consensus objectivity). The evaluation of that information is the function of financial analysis and need not (perhaps ought not) be consensus driven.

The issue of objectivity reflects a defining feature of sustainability reporting. Aside from greenhouse gas emissions and some measures of diversity, the information reported tends to be qualitative rather than quantitative. Its qualitative nature adds to its richness and provides an opportunity to supply a framing and narrative with the information. However, such qualitative data are more difficult to aggregate and benchmark than quantitative data. Modern analytical techniques (e.g., artificial intelligence and machine learning) can adroitly handle and analyze qualitative data, but such data remain more difficult to manipulate in the aggregate than quantitative data.

The absence of standards has also offered little guidance to issuers regarding areas of focus. Thus, the breadth of issues addressed in reporting is wide.

The SASB has provided an industry-specific materiality framework for corporate reporting that is intended to identify issues that are likely to affect the financial condition or operating performance of companies so that financial services companies are not reporting on hazardous waste, but resource companies are. The SASB framework is simple and succinct. The investment industry is coalescing around these issuer-level reporting standards SASB (2020).<sup>6</sup>

The challenge to this seemingly sensible approach is that it is difficult to aggregate information across firms in different industries. If portfolio companies are reporting only on factors material to their industry, but a portfolio contains holding in all or most industries, they must report all metrics, all which relate to a different portion of the portfolio. This example illustrates that positive attributes for corporate reporting at the micro level are not necessarily positive for fund reporting at the macro level.

### Qualities of Desirable ESG Corporate Reporting

Much attention has focused on what data can be reported. Surprisingly little attention emphasizes identifying information that fund investors need to evaluate portfolio managers. We therefore propose a corporate ESG reporting framework that supports portfolio reporting. Our framework shares some attributes with the SASB (2020) Conceptual Framework but includes some additional attributes (e.g., data are aggregable) and excludes others (e.g., financially material data). A fundamental distinction between the SASB Conceptual Framework and our ESG reporting framework lies in the tenet of reporting as industry specific, which in our view impairs aggregability, which we explore in more detail here.

To be useful, issuer ESG reporting must be relevant, reliable, and relatable. Several characteristics lend themselves to each of these attributes and are summarized in Exhibit 2.

**Relevant.** To be meaningful, reported information should be aligned with investor nonfinancial objectives. Reporting financially material information (whether it carries an ESG name or not) is noncontroversial and should be part of traditional financial reporting. Assuming that investors are interested in producing a real-world impact,

<sup>6</sup>For instance, the CFA Institute and BlackRock endorse the SASB standards.

reporting nonfinancial ESG information need not be subject to a financial materiality constraint. This approach represents a fundamental departure from the SASB Conceptual Framework SASB (2020), which states that ESG reporting should be financially material. Because financially material information is already reported under legacy framework, requiring it for ESG reporting is duplicative.

To be relevant, information must be material. A strict definition of materiality eludes even regulators, but the concepts applied to financial materiality also apply well to nonfinancial materiality. Specifically, materiality is contextual (evaluated considering surrounding circumstances [SEC 1999]). For example, an isolated data point deemed immaterial by itself can be material when combined with other information, which may reveal a pattern.

Hakola, Poll, and Vannefors (2020) study the ESG reports of the 100 largest Nordic companies and find that although Nordic companies supply a large quantity of ESG information, less than one-third is financially material data, according to the SASB materiality map.

**Reliable.** Investors should have confidence in financial information reported by issuers. Nonfinancial information is no different, requiring some amount of quantification or at least objectivity. Not all reliable reporting needs to be quantifiable and objective, but if all ESG reporting is qualitative and subjective, we lose an important mechanism to achieve accuracy, consistency, and comparability.

Currently, much of ESG reporting risks being inaccurate because estimation methods are not standardized and because self-reported information is not audited. Despite Nordic companies being early adopters of ESG reporting frameworks, Hakola, Poll, and Vannefors (2020) show that few companies use third-party assurance to convey credibility. Common estimation methods and third-party assurances would mitigate this challenge, provide consistency through time, and permit intertemporal comparisons. Standardization and third-party assurance would especially serve investors who are focusing on transitioning to more sustainable operations. The notion of consistency is largely omitted from the SASB Conceptual Framework SASB (2020).<sup>7</sup>

Standard methodologies would also enable comparability across firms within an industry that share common elements in a materiality map. As it stands now, no two sustainability reports look the same, according to the Dansk Bank study (Hakola, Poll, and Vannefors 2020), thereby impairing intra-industry comparisons, let alone inter-industry comparisons.

**Relatable.** Data are meaningful only in relation to something else, such as a known benchmark. Therefore, ESG reporting needs to be relatable. Consistency and comparability certainly contribute to relatability, and sometimes an absolute benchmark is appropriate. Either way, the data must share a common unit of account for comparability; the methodology needs to be consistent; and the delivery should be timely so that it can guide investment decisions.

Information must also be understandable and accessible to investors in various formats. An important although perhaps counterintuitive feature of accessibility is the quantity of information reported. Too much information increases the noise-to-signal ratio, obfuscating important data and information. As the adage goes, “When everything is disclosed, nothing is disclosed.”

The breadth of ESG topics poses one of the greatest challenges to relatability. Hart and Zingales (2017) propose a shareholder voting system to prioritize nonfinancial objectives to ensure that managers (who work at the behest of shareholders) are pursuing shareholder objectives rather than management’s objectives. The SASB solution to this challenge is to report only information deemed material to the firm’s industry. Unfortunately, this increases the number of data points. Thus, 70 industries

<sup>7</sup>Consistency is nominally mentioned as part of the “decision-useful” objective (SASB 2020) but is not highlighted as a specific attribute.



with, say, 10 nonoverlapping data points represents 700 data points. The real-world experience is much more sobering. The 100 largest Nordic company ESG reports disclosed roughly 21,000 different data points, with only 1,000 that overlapped across reports.

Aggregability is a final necessary ingredient to support portfolio reporting or fund reporting, and it is missing from the SASB framework. Data and information must be aggregable to provide investors with summative metrics that distill data into information. This quality certainly lends itself to quantitative measures, reinforcing the previous point about measurability. At the moment, ESG scores are one of the few metrics spanning industries and firms. As we note previously, however, ESG scores diverge greatly across providers, impairing their reliability.

### Fund Reporting Standardization

At the fund level, high-quality ESG reporting should share attributes similar to those of corporate reporting, listed in Exhibit 2. Apart from being aggregable, not all ESG issues are relevant to all fund investors. Some investors may focus on a subset of the UN's 17 Sustainable Development Goals, for instance, and will be attracted to funds with that focus. Why then should a climate fund be required to report on gender diversity to its investors and vice versa? (or a gender diversity fund report on climate).

CFA Institute ESG Disclosure Standards for Investment Products implicitly acknowledge this point. In its initial consultation paper, the CFA Institute intentionally did not seek “to define what constitutes an ESG or sustainable investment product or strategy or to make determinations about the relative strength of any one ESG-related investment approach versus another” (CFA Institute 2020a, p. 3). The standard intends neither to “define best practice for any particular strategy or approach” nor to “prescribe criteria for the design or implementation of investment products with ESG-related features” (CFA Institute 2020a, p. 4).

The proposed CFA Institute standard follows a descriptive rather than a prescriptive approach. The standard focuses on disclosing ESG investment objectives, methods, and processes. That is fortunate because investor values are not universal but rather subjective and individual.

Therefore, although the concept of standardizing ESG disclosures is considered unassailable, its application to fund reporting implies a nonexistent universal truth. The SASB standards, which are defined differently across different industries, artfully dodge this dilemma. However, it is more difficult to escape at the fund level as information is aggregated into portfolio reporting, which would potentially require funds to report on the entire materiality map, not just those elements that are material to a specific industry.

## A PATH FORWARD

The challenges presented here might result from constituents who, in good faith, myopically solve problems in their respective part of the investment value chain. Our contribution is to point out implications when looking at the whole of the investment value chain, beginning with achieving and documenting real-world results. We propose a path forward with significant implications for all market participants.

### Implications for Investors

The first and most foundational implication of this work is for investors. Investing often conveys nonpecuniary benefits to the investor, even outside of the ESG

realm—sometimes referred to as “expressive benefits” (Fama and French 2007; Statman 2004, 2010). Nonpecuniary investor ambitions need not be specific or even articulated if the fiduciary investment advisor or investment manager is not responsible for fulfilling them.

On the other hand, if investment professionals are to be held accountable for nonfinancial objectives, those objectives must be revealed and codified. “Doing good” is an insufficient directive. If the investment industry is to be more impactful in creating nonfinancial real-world change, the industry needs greater clarity and specificity in objectives.

### Implications for Portfolio Managers

Financial advisors and portfolio managers have a duty to guide investors as the latter articulate their ESG objectives, applying well-structured frameworks that outline relevant tradeoffs. Constructs such as ESG intensity, an ESG-adjusted performance metric (Horan et al. 2021), and ESG portfolio attribution (Horan et al. 2022) can be useful tools in that endeavor.

After helping investors to communicate their nonfinancial objectives, portfolio managers should identify metrics that are aligned with investor objectives and can be used to evaluate ESG performance and then should agree to compensation linked to those objectives.

### Implications for Regulators and Standard Setters

Regulators and standard setters play important roles in developing ESG investment frameworks. The very nature of environmental and social issues is predicated on the idea of negative externalities that result from decoupling the costs of a particular activity from its benefits. Prudential entities hold a duty to reconcile these discrepancies. In doing so, they better serve stakeholders by focusing more on fund-level reporting and the corporate reporting framework described herein rather than on disclosure.

**Standardized ESG Product Template.** The ESG landscape is vast, requiring an understanding of a broad array of disciplines from earth sciences to political science. This breadth exacerbates the challenge of producing useful reporting that aligns incentives and avoids unintended consequences. One of our key recommendations therefore is proposing a concise standardized ESG product template for investment products, proffering nonfinancial ESG investment mandates (but not products with exclusively financial mandates). Our template would focus on three key areas: (1) fund objectives, (2) investment process, and (3) outcomes—and would serve much the same function for nonfinancial objectives as investment performance reporting does for financial objectives.

An ESG key information document would be succinct, focusing on reporting metrics with the attributes listed in Exhibit 2 rather than disclosing information and filling a truth-in-investing role—much like the Truth in Lending Act of 1968 is designed to promote the informed use of consumer credit by requiring standardized disclosure about its terms and cost. The EU took an important step in this direction by establishing a sustainable finance disclosure regime (SFDR) for financial firms to prevent greenwashing.

Our template would not apply to funds incorporating ESG factors for purely financial gain because, for these funds, ESG represents an investment factor, just like any other factor intended to produce positive risk-adjusted returns, and should be handled in the same way as disclosure for other investment strategies. To impose

(or even permit) such a fund to report metrics on a standardized ESG product template is an exercise in marketability rather than accountability.

This approach differs from the SFDR requirements to disclose principal adverse impacts (PAIs) and from the ESG Disclosure Standards for Investment Products (CFA Institute 2021b) in at least the following four ways:

1. Investment products using ESG for purely financial gain would fall outside of this reporting framework.
2. PAI and CFA Institute standards focus on disclosures rather than reporting specific data points.
3. Neither PAIs nor the CFA Institute disclosure standards are succinct.
4. CFA Institute disclosure standards focus only on process, not objectives and outcomes.

Guidance for designing such an ESG product disclosure template might come from the three-page Key Information Document (KID) that the EU has adopted for packaged retail investment and insurance products (PRIIPs) that contain exposure to the performance of an underlying investment portfolio or other assets. KIDs are intended to provide concise and standardized information on the key characteristics of different retail investment products to facilitate consumer comprehension and comparability. KIDs include specific information, such as the name of the product and producer, target investors, risk-reward profile of the product, costs, and complaint resolution process.

The specific key nonfinancial data points for an ESG product are clearly a matter of debate, but we also subsequently outline a framework for that debate. However, key non-financial information should conceptually satisfy the qualities of desirable ESG reporting, as summarized in Exhibit 2. Key non-financial information might also incorporate ESG-adjusted investment performance and attribution measures such as those developed in Horan et al. (2022).

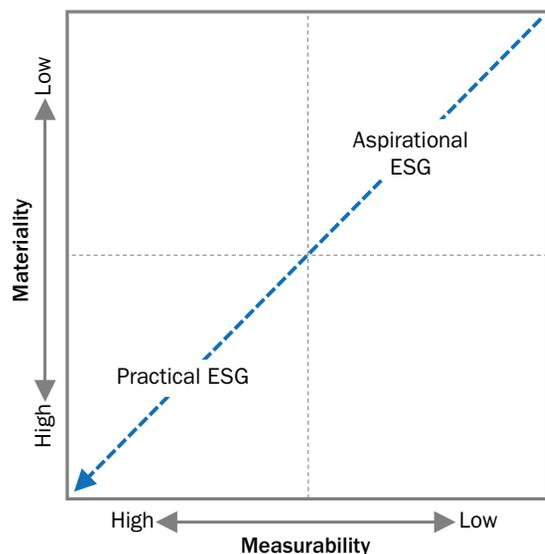
The three-page PRIIP KID template is often characterized as retail unfriendly and may be one to two pages too long. The intention and format are directionally correct in that reporting focuses on objective and verifiable information relevant to investors. A short-term improvement could be adding ESG components to a KID. A longer-term solution would develop a more comprehensive and retail-friendly point-of-sale document that (1) calibrates the range of data presented, (2) improves usability, and (3) functions as a better point-of-sale document.

**Multiple Metrics.** The wide range of potential ESG metrics poses a significant challenge. Using single versus multiple metrics has both advantages and disadvantages. A single metric derived from a narrow scope of issues accrues the advantage of requiring a smaller quantity of data and hence encountering fewer data problems. The disadvantage of a single metric lies in a singular focus becoming a target for gaming and manipulation (Howard-Grenville 2021).

Multiple metrics better reflect the breadth of ESG, are more comprehensive, and are more difficult to game. Such metrics require more data, however, and consequently introduce additional statistical noise. Worse yet, multiple metrics entail greater opportunities for bias. Qualitative data exacerbate these issues.

The wide range of ESG issues hampers ESG investing as much as ESG reporting (Toplensky 2021). Moreover, such a range sometimes comes with conflicting priorities. Nuclear power, for example, is valued as a sustainable energy source by some and derided as a ticking time bomb of environmental disaster by others. Even the environmental impact of solar power is questioned by those who note that their manufacture in and import from China rely extensively on coal for production and on petroleum for transport (Dalton 2021).

### EXHIBIT 3 Measurability-Materiality Framework



Even if ESG priorities are not in conflict, the breadth of scope requires the weighting of those priorities so that they can be summarized. ESG rating agencies are quite familiar with that dilemma. The widely acknowledged divergence of commercial ESG ratings noted by Dimson, Marsh, and Staunton (2020b) and others is partially the result of inconsistent weighting schemes when each implies some universally accepted standard that may (or may not) reflect the diversity of investor values. Limiting the number of metrics would avoid confusion and opacity as well as the need to define numerous weights.

**Measurability and Materiality.** Unlike traditional financial metrics that emerge from an organizing framework, ESG metrics have developed through convenience. ESG metrics are often based on qualitative data, relying heavily on judgment, which creates massive discrepancies and inconsistencies among the metrics.

We suggest focusing initially on a tractable (likely incomplete) scope of ESG issues and metrics. This initial approach runs the risk of focusing on an overly

narrow set of metrics, which can lead to unintended consequences. Lessons learned can be applied to subsequent issues, so mistakes can be made on a small scale—and multiplying mistakes across many dimensions can be avoided.

The conceptual measurability-materiality framework in Exhibit 3 can guide the process. The task is to classify ESG issues into those that can be standardized and those that might be standardized someday. To paraphrase Cameron (1963), that which is measurable is not necessarily material and vice versa. Our framework suggests starting at the outset with practical ESG issues and metrics that are both material *and* measurable.

Corporate reporting already enjoys a framework for (if not a definition of) materiality that can be applied in this ESG context. Measurability should focus on metrics that align incentives and avoid unintended consequences (such as the transfer of carbon-belching assets to unscrupulous entities that fall outside of the ESG regulatory and reporting nets).<sup>8</sup> Avoiding these pitfalls is no small task, but it promises a better outcome in the long run than mandating a massive volume of subjective, malleable, and unaudited data that cannot meaningfully be distilled into a portfolio context for investors.

Once we master using practical ESG metrics, we can turn our attention to incorporating what today might be considered aspirational ESG issues; at that point, they may no longer be aspirational.

Carbon emissions offer a useful illustration of the framework. Scope 1 and Scope 2 emissions, despite their issues, are good candidates for practical ESG measures. Scopes 1 and 2 are highly measurable and have high materiality and hence can be used today. The use of Scope 3 emissions remains aspirational because their measurability is severely compromised. Over time, this will improve as metrics become

<sup>8</sup> Another unintended consequence relates to carbon capture and storage (CCS) designed to remove carbon from the atmosphere. Recognizing carbon as a valuable commodity, petroleum producers have an incentive to pursue CCS in their enhanced oil recovery (EOR) efforts (i.e., pumping CO<sub>2</sub> into an almost depleted oil field to increase its yield, thereby lowering the cost of carbon). Moreover, most of the carbon captured by CCS and used for EOR comes from nearby underground reserves rather than the atmosphere.

more consistent and reliable, and Scope 3 can increasingly be utilized, but currently, Scope 3 would sit in the aspirational end of the ESG framework.

**Portfolio Aggregation.** Most investment is transacted through intermediaries who must aggregate metrics for individual securities into a portfolio reporting framework. ESG reporting at the portfolio level is necessary for investors to hold portfolio managers accountable for their ESG claims.

Issuer ESG reporting therefore needs to support portfolio-level reporting. Issuer reporting rightly prioritizes the investor perspective but underemphasizes a portfolio management perspective. Traditional financial reporting already supports portfolio-level reporting. Financial statement information (e.g., P/E ratios or debt ratios) can be easily aggregated into a portfolio metric that summarizes the portfolio's individual holdings. Existing ESG reporting proposals, such as PAIs, lack this important feature.

Thus, if regulators intend to keep investors at the forefront of ESG issuer reporting, they would be well advised to ensure that reporting can be understood and used in a portfolio context.

## CONCLUSION

ESG investing is riddled with challenges related to misrepresentation, unintended consequences, vague client objectives, measurability, standardization, and the inability to aggregate and summarize information at the portfolio level. Clearly specifying investor objectives is paramount to addressing these challenges. Investors are heterogeneous, so it is critical to accommodate the spectrum and diversity of sustainable investment intent and intensity in our methods. We highlight the following necessary ingredients to disciplined sustainable investment:

1. Clear investment objectives that measure an investor's willingness to trade off nonfinancial results for financial results.
2. Investment outcomes that are:
  - Measurable.
  - Reflective of real-world impacts.
  - Aligned with investor objectives.
3. Portfolio reporting that is:
  - Clear.
  - Concise.
  - Aligned with investor objectives.
  - Aggregated from portfolio holdings.
4. Standardized ESG product template that specifies:
  - Nonfinancial investment objectives.
  - Elements of the ESG investment process.
  - Nonfinancial investment outcomes.

None of these elements is unique to ESG investing. As a group, they apply to any fiduciary investment activity. In that sense, ESG investment is no different. The quagmire ensues because ESG investment objectives are amorphous and ill-defined and because outcomes are poorly measured and not aligned with those objectives.

We suggest a path forward for investors, portfolio managers, regulators, and standard setters. If the investment industry fails to tackle sustainable investing with the same rigor applied to traditional investing over the last 100 years, the long-term allocation of capital toward ESG investing will eventually face a reckoning. We already

see ESG investors questioning the reality of the promises they were sold.<sup>9</sup> However, if we are successful in our endeavor, we will elevate ESG investing operations so that they more closely resemble traditional investing.

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<sup>9</sup>O'Leary and Vladmanis 2021.

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