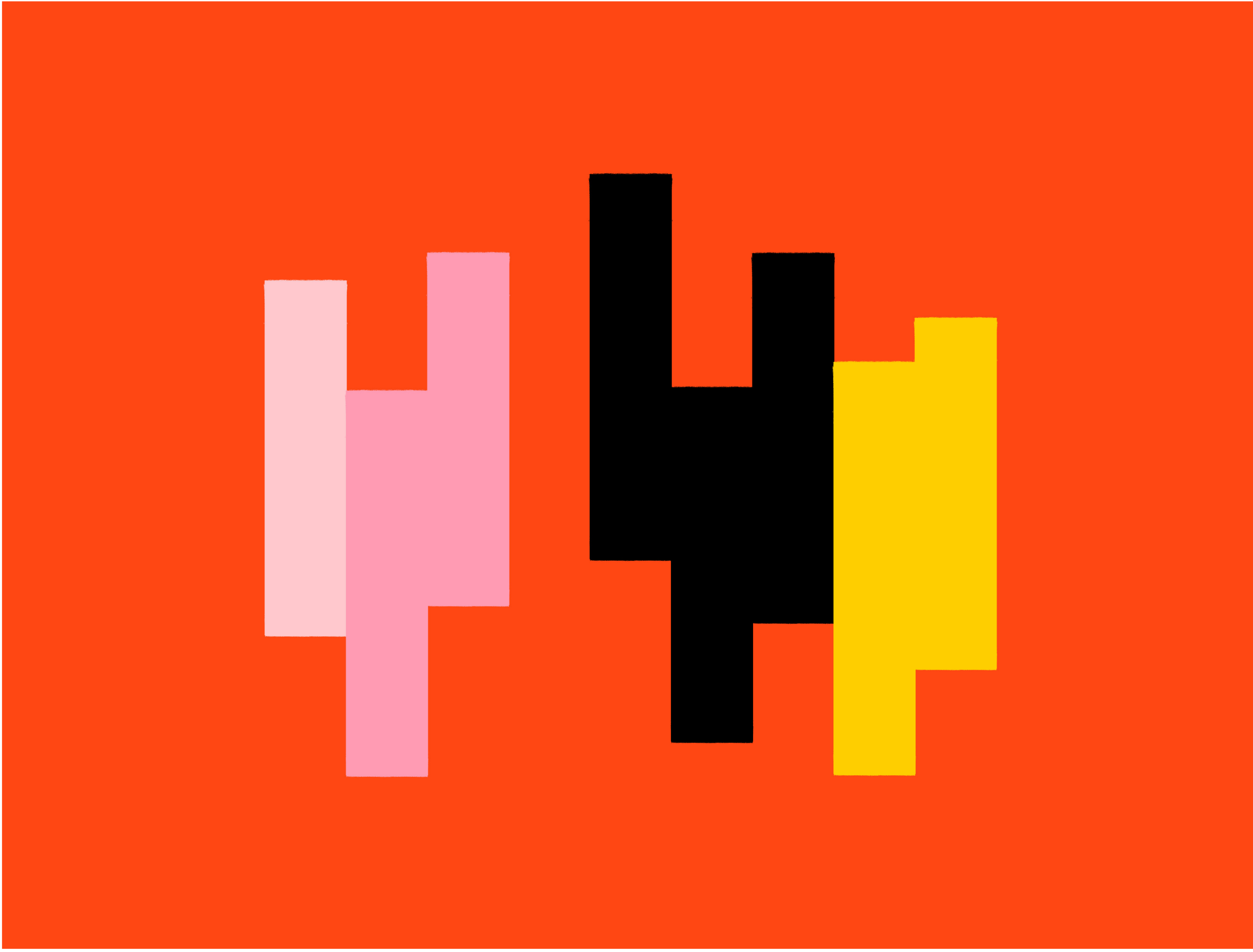

VALUES-ALIGNED INVESTING

Aperio’s Guide to Thinking About ESG in the Marketplace

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aperio
by BlackRock

Introduction

ESG and sustainability have spread to nearly every corner of the financial services industry under a number of different labels, styles, rationales, and asset classes. Aperio, founded in 1999 and part of the BlackRock family since February 2021, has grappled with ESG issues for some 15 years. BlackRock offers a wide range of sustainable investing options to the marketplace. Aperio Group, LLC, ("Aperio") offers solutions in a much narrower band—we provide public-equity, systematically constructed separately managed accounts, customized to our clients' needs on ESG, factors, and taxes.

This paper seeks to answer two questions: What should investors know about the contours of the broad ESG landscape? How does Aperio fit into that landscape? We hope to prepare the reader to engage in ESG conversations with data providers, asset managers, asset owners, and all manner of social and environmental interest groups. A multiplicity of views and definitions is swirling around in the marketplace. We will share our perspective but prepare the reader for what they may encounter. We will not represent the entirety of BlackRock's approach to sustainable investing, only Aperio's.

As an indexed, systematic public equities asset manager supporting values-aligned investors, Aperio has developed a core philosophy regarding environmental, social, and governance (ESG) issues that differs in some significant ways from a good portion of the ESG investment industry. This philosophy derives from our approach to investing and our core understanding that different investors have different values/beliefs and different motivations/objectives. We start with the working assumption that the world will continue to evolve. Just as 20 years ago there was a shift from the SRI (socially responsible investing) language and underlying approaches that had been used for about 30 years, there may be another shift in the future.

Functionally, Aperio helps investors align their portfolios to their personal values or organizational missions. By customizing the ESG criteria applied in a systematic portfolio construction approach, an Aperio portfolio closely tracks an investor's selected benchmark index while reflecting the investor's values. So, whether the asset owner is an environmental foundation focused on climate change, a pension fund for Reformed Jewish rabbis, a Catholic university, a community foundation looking for local economic development, or a multigenerational family with taxable assets interested in using shareholder activism to promote change within companies, Aperio customizes their portfolios to align with the investor's values, motivations, and investment objectives.

This paper provides an overview of the ESG landscape and Aperio ESG processes and implementation within that landscape. (We will use the "ESG" term as the generic industry descriptor to save space, but as you will see, we use this term in its most expansive definition.) In each of the following sections, we introduce the concepts that frame the ESG world and then include a subsection on how Aperio approaches the issues highlighted:

1. What's in a name—why ESG?
2. The differing concepts of ESG
3. Investor motivations
4. ESG data, ratings, and evaluations
5. Company impact
6. Investor decision-making/portfolio construction
7. Investor and portfolio impact
8. Summary of Aperio's ESG process
9. Summary of Aperio's ESG approach and philosophy
10. Glossary

Section 1: What's in a name–why ESG?

From the early 1970s through the late 1990s, investors who sought to incorporate thinking beyond traditional investment considerations, particularly investors applying a "moral" lens to their decision-making, described themselves as "socially responsible investors" (SRI). Many of the early modern SRI investors were religiously motivated and came from the liberal or social justice end of the faith spectrum. Pax World mutual funds was founded by a couple of United Methodist clergy. From this time, a number of significant advocacy campaigns against companies arose, many of which included some investor action: companies producing war materiel in support of the Vietnam War, particularly napalm; companies doing business in South Africa during Apartheid; Nestlé and the sale of breast milk substitute in developing countries; and the Exxon Valdez oil spill in Alaska.[1] This is certainly not an exhaustive list but an indication of the range of issues that were beginning to seep into grassroots consciousness about the (sometimes) negative role of corporations in the world.[2] The mainstream investing community alternately attacked and dismissed SRI as delivering lower returns. Noted economist Milton Friedman[3] penned an oft-cited *New York Times* opinion piece in 1970 that is a good example of these attacks, arguing that the responsibility of companies is to make money for its shareholders and that to do anything else with company resources that doesn't further this objective is spending other people's money. Socially responsible investing and its close cousin corporate social responsibility (CSR), in Friedman's view, with a few limited exceptions, were pursuing objectives that didn't further the goal of the company to maximize making money.

Friedman's view continued (continues?) to hold sway, but by the late 1990s and early 2000s, the SRI industry—a rough amalgamation of self-described SRI asset managers and asset owners, data providers, and other interested parties—desperately wanted to "go mainstream." It increasingly made arguments that SRI criteria and its advocacy for changes by companies were in the best financial interests of companies, not just the "right thing to do." These propositions were an early version of what is referred to today as "materiality," the financial impact of an issue (and action or inaction of the company in response to the issue) on the company.[4] Put another way, SRI investors not only wanted the world to change and companies to be more responsible, but they saw the world changing and wanted the evaluation of their investment options to recognize the need for companies to admit the coming changes and inherent risks of not modifying their behavior. For example, companies that did not curb their pollution would be subject to increased regulation and reputational problems with consumers, and companies that did not treat their employees well could face labor actions, lawsuits, and again, reputational problems with the public. This evolution in rhetoric was accompanied by a sense that the SRI industry should rebrand itself. The label "SRI" carried too much baggage as a left-leaning, do-gooder, and underperforming investment approach.[5]

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1 Arguably, each of these is an example of the world shrinking a little and people being more aware of issues in other parts of the world. Television brought the gruesome images of the Vietnam War into living rooms and swayed public opinion. Images of environmental destruction have also swayed opinion.

2 These are issues that also swayed politics and regulation. Richard Nixon created the Environmental Protection Agency as a regulatory agency by executive order in December 1970 and later that month signed the Clean Air Act into law; states and cities passed selective purchasing and divestment ordinances related to companies doing business in South Africa during Apartheid.

3 Friedman won the Nobel Prize in 1976, though for topics not directly related to SRI investing.

4 Much of the discussion around "materiality" and "values" could also be framed as a question of the relationship of companies to externalized costs. For an investor seeking to maximize return, there is significant incentive to externalize any cost possible. For some values-oriented ESG investors, companies should pay the "real" cost of their activities and internalize these costs. Investors concerned with ESG risks often look at currently externalized costs and assess the risk that regulation or public opinion will force a company to bear those costs in the future.

5 As with much financial analysis, the studies on which these assessments were based were often cherry-picked and lacked rigor but fed into and benefited from confirmation bias.

Other shifts began during this time as well. Prior to this period, critics frequently tied SRI to negative screening and an activist bent on filing “annoying” (and “frivolous”) shareholder resolutions asking companies to shift their policies and practices in “fringe” directions. (The three pillars of SRI were often described as screening, shareholder activism, and community investing.) Partly in response, industry adjustments in the early 2000s included an increased SRI focus on forward-looking assessments of companies, a desire by investors to invest in companies doing good rather than simply avoiding companies doing harm, and investors more fully engaged in activism that could promote change at companies. These shifts were partly driven from the industry trying to reframe their relevance to the marketplace and partly from the interested investing public expressing a desire for a new kind of financial product.

One example of the change in shareholder activist thinking was a 2002 resolution filed by Robert Monks, Sr.[6] to split the roles of board chair and CEO at ExxonMobil. Neither the concept of a governance shareholder resolution nor the specific issue of chair-CEO duality was new, but the rationale was—ExxonMobil was not adjusting its strategy to address the realities and challenges of climate change to the company. Monks argued that fresh perspectives were needed on the Exxon board so that the governance oversight body could protect the financial interests of shareholders from the challenge of climate change. In hindsight, this was a foreshadowing of the 2021 Engine No. 1 proxy fight to elect a slate of its nominees to Exxon’s board for the explicit purpose of bringing climate expertise into board discussion. Nineteen years after the Securities and Exchange Commission (SEC) allowed Monks’ shareholder resolution to be omitted from the Exxon proxy statement, climate change issues forced a significant change to the Exxon board. Monks’ proposal was perhaps the first prominent corporate governance shareholder resolution with an environmental rationale.

Competing labels, including sustainability, impact, values-aligned, and sustainable responsible impact (a different definition of SRI) investing, all competed for top billing as the industry sought to rebrand, but the SRI industry migrated toward using “ESG” as the default industry descriptor. Part of the transition was influenced by the framing used by the Global Reporting Initiative (GRI)[7] of environmental, social, and economic issues. The structure of “ESG” was first used in a 2004 United Nations (UN) Global Compact report, “Who Cares Wins.” Ivo Knoepfel, then of Sustainable Asset Management (SAM) in Zurich, coined the phrase. “ESG” is the most generic and most frequently used term to describe the broad industry, though all of these labels continue to be used today. This shift to ESG language and the materiality orientation of the industry took place over the same time frame.[8]

6 Monks is a corporate governance advocate, author, and founder of the proxy voting firm Institutional Shareholder Services (ISS).

7 GRI had its first conceptual gathering of thought leaders in 1998, held its first global gathering in 1999, and launched its first disclosure standard in 2000.

8 ESG is environment, social, and governance. When it’s linked with sustainability, the question may be, why governance? In part, inclusion of this metric is reflective of the corruption issues present in the UN Global Compact, but it also recognizes that governance refers to decision-making structures within organizations, in this case, companies.

Aperio's approach: One label may not represent all investors

Aperio uses many of these labels (SRI, faith-based, sustainable, etc.), but the most appropriate to describe our offerings is "values-aligned" investing.[9] With this phrase, we flag that our focus is client values rather than company materiality and that we are customizing to "align" portfolio criteria to each particular client. We also believe that investors' views on risk and return (and their implications for financial performance) may be personal values to be reflected in/with a portfolio. Because we work with a wide range of clients on different issues, our team that develops expertise on all of these issues is called the ESG Team.

[9] BlackRock frequently uses the term "values-based" for this concept.

Section 2: The differing concepts of ESG

Defining ESG in an agnostic agnostically

The most frequently used definition of ESG (environment, social, governance) investing in today's marketplace would likely center on evaluating companies to determine which issues are material to their financial/investment performance and that of the portfolios in which they are held. Aperio's definition is broader than this—involving an investor's values regardless of materiality. We conceive of ESG as a list of issues about which companies may be evaluated. This approach does not exclude the financial materiality perspective but explicitly adds investor values and issue area salience.[10] While a materiality orientation causes an investor to focus on the impact of an issue on companies' financial performance (positive and negative), looking at issues from a salience perspective shifts an investor's focus to the impact of the company on the issue/world (positive and negative). We would add that ESG does not inherently have a values orientation. We cannot think of ESG as being inherently left or right of center politically or right or wrong moralistically. We start our discussion noting that ESG should be broadly construed and that we should not jump to conclusions about investors' orientations as soon as we hear they are ESG investors.

If ESG represents a comprehensive list of all material and salient environmental, social, and governance issues, then terms like "SRI" (socially responsible investing), "BRI" (biblically responsible investing), "values-based investing," "values-aligned investing," "sustainability investing," and "impact investing" can each be thought of as a subset of ESG issues with a particular orientation added on top. For instance, BRI is most frequently thought of as being concerned with a combination of industries that are viewed as problematic by conservative Christian investors; sustainability investing[11] is most frequently thought of as focusing on environmental issues from the perspective of avoiding dirty industries, or at least selecting the least dirty companies from dirty industries and overweighting environmental solutions. But even within these terms, significant differences exist. There are self-described "progressive Christians" who would bristle at a conservative definition of "biblically responsible" and might seek to bring their own interpretation to that phrase. In this way, ESG, as defined by each individual investor and the specific labels they choose to use, becomes a reflection of the political, social, and religious diversity present in our national and global discourse.

The terms we've listed above are from an investor's perspective. "Corporate social responsibility" (CSR) and "corporate sustainability" are the terms used most often from a company perspective. The long list of ESG issues is the same whether from an investor or company perspective. When we discuss the process of evaluating companies and engaging with companies to effect change, realizing that investors and companies are working on the same issues from two different perspectives is helpful.

There are times when frameworks emerge from beyond the investment landscape that play an outsized role in how ESG investing is framed. One recent example is the UN Sustainable Development Goals (SDGs). They are frequently—thought not exclusively— highlighted as a framework for impact. It's important to understand that these goals were not written with companies (much less investors) in mind. They were created to help measure and prioritize development progress by governments. Through public-private partnerships, companies can certainly work with governments in some of these areas. For instance, with its philanthropy, a company could support local food banks, day care options for the community (not just employees), and second vocation training programs, all in partnership with local governments to address long-term cycles of poverty. These kinds of public-private partnerships

[10] As used here, salience first came to Aperio's attention as a term of art in 2019 at an Interfaith Center on Corporate Responsibility (ICCR) meeting.

[11] BlackRock uses the term "sustainable investing" in a broader way, to refer to the use of ESG data to help allocate capital.

would certainly further SDG 1 regarding poverty alleviation, but beyond a rating/evaluating philanthropy, would not likely appear as part of an ESG evaluation assessing a company as being involved in poverty issues. The SDGs are a helpful way to think about important societal issues and can be a framework for identifying appropriate areas for business to play a productive roll in addressing these issues. However, using the SDGs as an investment framework runs the risk of trying to address the SDGs comprehensively and forcing a fit of ESG data inappropriately into the framework. Such an approach is neither helpful in constructing ESG evaluations nor fruitful in working on the important issues highlighted by the SDGs.

An additional framework more directly aimed at the investment space is the Principles for Responsible Investment (PRI), a code of conduct for investors and asset managers. The PRI focuses on how investment decisions are made, including the PRI's first principle that "ESG issues [will be incorporated] into investment analysis and decision-making processes." This orientation is much more fundamental and active than quantitative and index-tracking approaches.[12] Aperio was not historically a signatory to the PRI because we felt that our client-specific customization did not lend itself to making this commitment.[13]

Aperio's approach: Values alignment

Since Aperio customizes portfolios to reflect the values of the investor, we tend to be much more focused on the salience of these issues (the impact of the company on the world) than the materiality of the issues to companies' financial performance. Our clients identify the specific issues that matter, and we group the aggregate list of issues from all of our clients together as ESG issues. We note again that Aperio is agnostic and does not take a stand on which issues are important or unimportant or whether specific companies are good or bad.

[12] Some index providers use ESG issues within their index construction methodologies. Asset managers choosing to use such indexes will have incorporated ESG considerations into their decision to do so. Most indexes do not take ESG issues into account in their construction.

[13] Aperio was acquired by BlackRock in February 2021. BlackRock has been a PRI signatory since 2008.

Section 3: Investor motivations

Often, the label investors self-identify with reflects their motivation in pursuing some form of ESG investing. Whether for a client or as self-reflection, it is important to understand investor motivations to best pair the investment tools to the expressed motivation. This section outlines the different motives that investors bring to their ESG portfolios. Among the motivations ESG investors bring to their choices, a common one is using ESG in a quest to beat the market, to find alpha. Aperio's core orientation is that consistent pre-tax outperformance has proven elusive, on average, for any type of active strategy over long time periods. Thus, while Aperio may not endorse the notion of active pre-tax alpha of any type, we're not singling out ESG investors but rather remaining consistent with our overall philosophy.[14]

As we will see later, Aperio uses four basic tools to implement investor ESG motivations: divestment/exclusion, tilts based on ESG Scores (security over- or underweights relative to the benchmark weights), engagement/activism, and purification/offset. These motivations can reflect investors' personalities and identities as well as projections of how they may want the community to perceive them. As we discuss later, not all the investment options are able to successfully implement each motivation. Below is a sampling of the most common ESG investment motivations.

- **Avoiding profit from objectionable products/companies:** Most easily accomplished through the implementation of negative screening or exclusions, the motivation is to avoid an affiliation with business activities thought by the investor to be unpalatable. One very public example: In his book *How to Avoid a Climate Disaster*, Microsoft co-founder and philanthropist Bill Gates writes of fossil fuel companies, "I don't want to profit if their stock prices go up because we don't develop zero-carbon alternatives."[15] If the investor's primary orientation is to not profit from significant climate change–contributing industries, the investor might choose to exclude fossil fuel companies, electric and gas utility companies, cement companies, auto manufacturers, and airlines from their investments. Aperio frequently implements exclusionary criteria for clients.

  Realizing that not all "negative" issues can be completely avoided through exclusion, Islamic investing incorporates the concept of purification. By identifying the percentage of the investment that is impure and donating to charity that portion of the profit, the investor avoids an affiliation with abhorrent investments. While ESG investors may not always have the Islamic concept of purification in mind (though the notion of buying carbon credits or offsets for greenhouse gas [GHG] emissions attributable to a portfolio is similar), they will often set the definition for exclusions, allowing for a de minimis level of involvement in the issue area. (Keep in mind that the de minimis level may be different for each investor.)

- **Seeking profit:** Much about investing is trying to ascertain future movements of the market. If an investor knows that a certain industry or product will no longer earn revenues (buggy whips?), then the investor will move out of those investments. ESG issues can also be thought of as societal and public policy issues, meaning that the fortunes of companies may evolve based on how society addresses the issues (and how companies plan for and respond to changing realities). A number of investors will make decisions related to ESG issues from this perspective. One example of public policy risk is the potential that future legislation might require companies to internalize current externalities—effects not paid for directly by a company. Climate change is an example of this kind of risk, and a carbon tax could be the potential policy mechanism politicians use to cause

[14] Aperio is part of BlackRock, which has been very public in its assertion that ESG issues offer insights that can lead investors to outperform the broad market.

[15] As an example of how views and values can change, in 2007, the *Los Angeles Times* published a series of articles critical of the investment approach used by the Bill and Melinda Gates Foundation. At that time, the only investment screen the foundation used was to exclude tobacco companies. Gates' book is a chronicle of how he started to pay attention to climate change issues, so he is not claiming to have held this "no profit" view of oil for long.

companies to internalize their costs and therefore seek to reduce their emissions. Decisions to divest from, underweight, or short fossil fuels could be an investor response to the possibility of a carbon tax, in other words, to seek the better performers (lower carbon profiles) already positioned for a transition to a low-carbon economy. On some issues, Aperio has data to evaluate aspects of these market transitions; in other areas, data are elusive. The structure of data often determines the portfolio construction techniques available to use the data and reflect the investors' concept. For example, Aperio can overweight companies tied to specific concepts, but if an investor's motivation is to profit from specific company strategies, fundamental analysis and stock picking may be a better strategy.

- **Making companies (or the system) better:** If an investor believes a company could operate in a more responsible manner, and believes that there are mechanisms that can encourage it to improve, then the investor might shun divestment, seek investment, and encourage the company to improve. Our discussion here is focused on investor interactions with companies and their decision-making processes. Investors are also voters, and the role of advocacy (individual or organizational) in shaping the public policies by which companies must operate may be a separate activity they want to pursue. If an investor's primary motivation for considering ESG issues in their investment decision-making is to improve companies, then the investor may want to consider political and policy system types of issues. For example, the investor might evaluate companies based on their climate transition plans or their lobbying posture. Truly bad performance on these issues might result in a company being excluded from the portfolio, but others that aren't "doing enough" might be the target of engagement activities to accelerate their responsiveness to climate change issues. The possibility of excluding companies combined with company engagement creates a carrot and stick approach. Aperio's proxy voting and shareholder resolution partnerships bring our clients into the larger engagement framework.[16]
- **Accelerating market trends:** Some investors want to help drive the net zero transition, including funding the formation of technologies that will solve problems. Investors interested in battery technology or wave energy production might be examples. By getting new capital to companies working to prove the concepts of new technologies or to expand operations to scale, investors can pave the way for market transformations.

Aperio seeks to understand the motivations investors bring to the process and, where possible within its approach to portfolio construction and management, to assist the investor in achieving these goals. Aperio knows and communicates clearly when it is not able to meet specific objectives. We also work to help investors understand that trade-offs may be necessary in the choices they make. ESG data characteristics and the way ESG data interact with financial data in a systematic portfolio construction process inform the choice of portfolio construction tools, and the specific ESG exclusions and/or tilts the investor may want to select.

For example, using only an industry exclusion for Oil, Gas & Consumable Fuels companies from a portfolio is likely to result in overweighting Energy Equipment & Services companies. Since these two industries' returns tend to be highly correlated, this portfolio construction decision by the optimizer will likely reduce tracking error. An investor may decide this choice is appropriate as a balance between managing portfolio risk and divesting from the direct fossil fuel companies, or the investor may want to exclude both industries.

There may be other issues an investor does not know to flag or ask about. For instance, a client concerned about animal welfare might specifically identify animal testing and fur as exclusions but

[16] BlackRock engages extensively with companies through its Investment Stewardship work, including on ESG issues. Aperio's direct support of clients is through its own proxy voting policies and in giving clients the opportunity to sponsor shareholder resolutions. These activities are separate from BlackRock's work in these areas.

might not think to ask about animal entertainment issues. Or an investor who identifies addiction issues as their concern and specifically lists alcohol, tobacco, and gambling may not realize that cannabis is now a line of business for some publicly traded companies.

Aperio's approach

Documenting values

As highlighted above, different values and worldviews necessitate different portfolio specifications to appropriately reflect them. Values investors may be conservative or liberal or any point in between; they will have interests in a variety of themes, such as the environment, human rights, pay equity, privacy, reproductive issues (pro-life or pro-choice), and corporate governance. Separately managed accounts (SMAs) holding individual stocks are an ideal vehicle to reflect a particular investor's values because they allow for a high degree of customization. Mutual funds and exchange-traded funds (ETFs), on the other hand, require asset managers to take a stand on specific ESG issues.[17] Aperio's ESG solutions seek to personalize the values reflected in a portfolio, meaning that Aperio can be values agnostic and investors need not accept a prepackaged values set to work with Aperio. For investors wanting to customize the ESG criteria used in a tight tracking error portfolio, Aperio is the solution; for investors whose values match exactly the ESG criteria in a low-cost ETF, that option may be better.

Investors' values and worldviews are full of nuance. The heart of Aperio's ESG process is hearing from our clients this nuance, often from direct engagement in what we call a Social Conversation. Hearing not just the "what" but also the "why" in how an investor describes the issues they care about is important to the process of mapping values to ESG data and constructing a portfolio.

Investors come in many different forms: individuals, couples, multigenerational families, family foundations, and large institutions, to name just a few. The procedures for establishing a decision-making model and determining who is involved at which stages of these activities are even more varied. When discussing values, we are considering deeply help personal beliefs—issues about which there can be significant disagreement. (Of course, even when working with a foundation's investment committee, we are working with people.) Because of this complexity, it is important to set the basis for making decisions at the start of the process. The more people who expect to be part of the discussion, the more important this step becomes because it is difficult to agree on the process for decision-making when a substantive disagreement on an issue is already in play. Once the decision-making model is established, open-ended conversations, structured conversations, and surveys are all methods available for exploring and agreeing on the values that will drive the investment process. Aperio works closely with the advisor and the end investor to rightsize the process. Some investors are not interested in lots of detail, so a 45-minute discussion can be enough. Other investors want to dive into the specifics. We have worked with investors who wanted multiple introductory educational calls and then a daylong workshop.[18] Most investors fall between these extremes (and toward the shorter end), but the experiences can be as unique as the

[17] Exchange traded funds (ETFs) track an index. The firm constructing the index expresses a set of beliefs in setting the rules for the index, and the asset manager choosing to use the index for an ETF buys in to that set of beliefs in offering a product tracking the index, at least to the extent they are willing to market the ETF.

[18] Aperio worked with a faith organization's pension system to develop its ESG criteria for the pension fund. With an issue area advisory group made up of faith leaders, we held multiple meetings to answer ESG data questions, mapped resolutions adopted by the larger faith community to ESG data, and ultimately held a daylong workshop to walk through the ESG issues to decide on appropriate criteria to reflect their values.

investor. We also note that some advisors/investors do not want or need a conversation at all. They are able to use the Aperio SRI/ESG Menu to document their values and criteria choices.

The pitfalls of assumptions

Many ESG issues are intertwined, and human feelings and decision-making are typically not linear. We might assume that an investor concerned with environmental issues would like to use Aperio's Clean Technology Solution tilt as part of their portfolio since it tilts toward pollution prevention and alternative energy revenues. That assumption, however, doesn't always pan out. In a recent client engagement, the investor's primary orientation centered on ocean issues, and he did not want to invest in any battery companies, believing it likely that increased battery production will inevitably lead to ocean floor mining of rare earth metals. Other examples of misplaced assumptions include the notions that all environmental investors oppose nuclear power, evangelical investors don't care about climate change, and Christian investors are all pro-life on abortion issues. These are just a few of the examples that lead us to frequently remind ourselves to not make assumptions about client values and to ask thoughtful questions then listen carefully to what motivates that investor and how the investor expresses their views.

This engagement is not just about avoiding assumptions; it is also about hearing the nuance of the investor's motivations. For instance, clients primarily concerned about climate change might differ on how best to align their portfolios with their concerns. One might decide to divest all fossil fuels, a second might divest coal but leave natural gas in the portfolio as a transition fuel, and a third might intentionally hold companies in all these fields in order to file shareholder resolutions and participate in other advocacy activities. All three investors have the same worldview goal (a world that has addressed climate change), but each has a distinct theory of change[19] or at least a different way they want to engage with the issue. In addition, an investor's circumstances may influence which approach is feasible. For instance, a portfolio with ossified (highly appreciated) stock holdings may not be a good candidate for divestment because of the tax implications. That said, a given investor may view any tax impact as inconsequential to the process of ridding the portfolio of objectionable holdings.

As noted above, many ESG issues are interrelated. An investor concerned about gender equality may want to pull in climate change issues because of the impact climate change can have on women in developing countries.[20]

Finally, it is important to recognize when an investor is looking for impacts that are beyond the reasonable scope of public equities portfolios and may be more appropriately addressed in other asset classes or public policy activities. The sample investor mentioned above concerned with gender equality may express an interest in education as part of this concern. There is certainly the issue area linkage, but an interest in addressing public education issues—whatever the rationale for the concern-- is an example of an impact best pursued through asset classes other than public equities.

The process of listening to and documenting an investor's values or mission is a mutual exploration. The conversation is not just Aperio's opportunity to hear but is also the investor's chance to understand Aperio's process. We strive to be clear about what we can accomplish and what we cannot accomplish in expressing values and mission in a portfolio. If we think an investor

[19] A theory of change is how someone believes progress is made. Is it through dialogue? Through avoidance? Through direct confrontation? Each approach is present as a strategy in ESG investing, but which is most appropriate depends on how the investor believes the world works and how the investor wants to interact with the working world.

[20] For more discussion of the intersectionality of issues, please see Aperio's "There Is More to Diversity Than Initially Meets the Eye."

will be better served by an ETF or an active manager or some other solution, we share that belief with the investor.

Values vs. materiality

Aperio customizes ESG strategies to reflect an individual investor's personal values or a foundation's or endowment's mission. This approach does not incorporate materiality considerations (the financial importance of ESG issues) when deciding which ESG metrics to incorporate and at what weights. However, if an investor is interested in applying ESG considerations to their portfolios because they believe these metrics will be a material driver of risk-adjusted returns, the portfolio construction methodology allows this.[21]

As we have noted earlier, for those interested in high-conviction, concentrated portfolios, active strategies may be a better fit. Aperio's goal is to implement client values into a portfolio in a risk-controlled manner, partnering with financial advisors to provide investors with solutions that meet both their financial and ESG goals.

[21] See Lisa Goldberg's blog post addressing materiality issues: "Will Investing in Gender Diversity Make You Rich?"

Section 4: ESG data, ratings, and evaluations

Implicit in the investor motivations described above is a need to evaluate companies against criteria that can facilitate outcomes consistent with these motivations. This assessment requires data. Asset managers and asset owners seeking to use ESG data have to address all of the standard data management/data analysis issues that anyone working with data faces, but understanding the ESG context of these issues is helpful in knowing how to craft the appropriate solutions in an ESG world.

Raw data's path to investment decisions

Data flow framework

Raw data (facts[22]) → **Derived data** (calculated and estimated data/metrics) →

Ratings (introduction of priorities) → **investment decisions** (thresholds and other decisions)

This framework outlines the conceptual flow of raw information to eventual investment decisions. Whether formal or informal, every investor goes through a process of converting raw information into decisions. Aperio tries to make these steps explicit and structure the process so that meaningful distinctions remain, allowing our clients to express their values and views of the world.

Understanding the process of taking data and turning it into an evaluation may be helpful. Ideally, raw data (or information) exist absent any value set or judgment. Raw data can also be converted into derived data, which itself has two types—calculated and estimated/modeled. Calculated data converts information into a form that might be more useful but is completely replicable and does not make a judgment, though one may be implied. For instance, a ton of GHG emissions is an example of raw data. A ton of methane emissions is also raw data. Converting the ton of methane emissions (based on a formula) to its equivalent in GHG emissions allows it to be added to the raw GHG emissions, generating a calculated value for GHG-equivalent emissions. Normalizing data based on revenues or market cap or number of employees also qualifies as generating calculated data. Estimated or modeled data are also derived data but include judgment in constructing the model. Modeled data is critical in addressing some of the missing-data dilemmas ESG investors presently face, including GHG emissions datasets made whole through input-output and other models when companies do not directly disclose their emissions. With a set of raw and derived data (calculated or estimated/modeled), an investor may generate an evaluation. We can also describe this process as creating a score or a rating. Put simply, creating an evaluation is a process of determining which raw data to use and at what relative weights the raw data will be combined. When evaluating companies' environmental impacts, an environment rating could include information about the energy and water use of the company. Raw and derived data may have been developed for each, but what should the ratio of energy to water issues be in the rating? Similarly, if an ESG rating is being developed that will address environmental, human rights, diversity, and labor issues, what is the relative importance of each of these issues to the overall ESG concept? Any rating methodology has to answer these types of questions.

The final step in this process is using an evaluation (score or rating) to make a decision. While described in more detail in Section 6, the important takeaway here is that evaluations can imply a decision, but investors have multiple ways of using an evaluation.

[22] We acknowledge that information collection can be inaccurate or embed bias. We continue to use the term "facts" here to make the point that our "raw data" term represents granular pieces of information about the world. The information available to an investor is often not at the raw data stage, and this is the distinction we make here.

Aperio's approach: raw data

At Aperio, when available, we use raw data, which allows us to customize our evaluations of companies to match the interests and beliefs of our clients. By definition, ratings embed a perspective or bias, and predetermined ratings (like those from MSCI, Sustainalytics, and Institutional Shareholder Services [ISS],[23] for example) are therefore less useful to our clients.

From where does ESG data come?

ESG data exist in a complex ecosystem shaped by the definitions and issues discussed above. ESG data can come from two possible sources: internal company information and external observations of the company. Wherever an investor first encounters information about a company, the data originated from one of these sources. Being able to identify that source is helpful to appropriately interpreting the data.

Internal

As we've discussed above, investors rely on companies to disclose much of the ESG information they seek. Sometimes this disclosure is based on regulatory requirements (financials in US Securities and Exchange Commission filings, board information in a proxy statement, Toxic Release Inventory data to the US Environmental Protection Agency [EPA]), but often it requires voluntary release of information. While internal data offer the possibility of being most accurate, they present challenges as well: reliance on voluntary disclosure, the incentive of the company to present a rosy picture (not necessarily "full and complete" information), the difficulty of inconsistency of definitions among companies, the expense to the company in generating the information, and the large-cap bias that may result from expensive disclosure systems.

External

Here, we want to draw a distinction between ratings, which are generated by external organizations but may be largely based on internal data, and information that is generated from an external observation of the company. This kind of information could include fines or other regulatory action imposed by a government agency that then reports this information directly to the public, government contracts with companies, datasets that present consumer or employee opinions, or any other externally generated information. External data offer the possibility of well-defined metrics and better comparability across companies while potentially lacking in breadth of coverage since the creator may have been focused on an audience other than investors and therefore did not consider coverage of an investor universe when creating a new dataset. The US Occupational Safety and Health Administration (OSHA) did not have investors in mind when it created a database of OSHA violations. The regulations that govern finding companies in violation may or may not define subject companies in a manner that overlaps with an investment universe.

[23] These are a few of the companies that provide ESG research to the marketplace. ESG data vendors offer a range of services from raw data feeds to ESG ratings to investment indexes with an ESG focus to consulting services on ESG and other topics. Note that in addition to being an ESG data vendor, ISS also provides research on proxy voting issues and other proxy voting services.

Disclosure standards[24]

Since internally generated company data are such an important part of the ESG data ecosystem, a word about standard disclosure frameworks is appropriate. Frameworks like the Global Reporting Initiative (GRI); Sustainability Accounting Standards Board (SASB), which merged with the International Integrated Reporting Council (IIRC) to become the Value Reporting Foundation in June 2021; CDP (formerly, the Carbon Disclosure Project); and the Task Force on Climate-Related Financial Disclosures (TCFD) are the most well-known standards for voluntary disclosure, with more being developed, vetted, adopted, and discarded. While each framework approaches the question of establishing disclosure guidelines from a different starting point, each defines an easy-to-understand set of reporting principles and metrics as the basis for sustainability disclosure. In addition, these different frameworks are increasingly collaborating to avoid discrepancies in guidance to companies. The key takeaway is that these disclosure standards become the basis for the available data provided through company voluntary disclosure. Regulatory standards are also expanding, particularly in Europe with work like the Sustainable Finance Disclosure Regulation (SFDR).

While the original source of the information may be internal or external, there are a number of different ways in which the information is available to investors seeking to evaluate companies. These include: ESG data vendors, nongovernmental organizations' (NGOs') reports and websites, media stories, government databases (like EPA's Toxic Release Inventory and OSHA sources), and company websites and publications. In addition, the information can be presented as raw data, narrative story, ratings, or end financial product (e.g., an ESG index where the company made the index but investors don't have access to the rating). Again, each of these forms has potential utility but may not be able to answer all of the questions a specific investor poses.

Types of data

ESG data and evaluations can be conceived through multiple lenses or categories. We've already touched on the materiality versus salience aspects, but we describe a more granular set of lenses in more detail below.

Risk

The notion that an ESG issue can negatively impact a company fits squarely within the materiality umbrella. Concerns can include things such as physical risk (sea level rise), public policy risk (future climate regulation), supply chain risk (sourcing from conflict zones), reputational risk (see below), and others, each of which could then impact investors' assessments of the company and thereby its share price. Put simply, risk is an assessment of the environment within which a company operates. Each of the different types of risk can elicit a different model for response, which implies a potentially different set of data and evaluations.

Products

The positive side of product evaluations/categories can be viewed as opportunities such as industry shifts. For instance, electric vehicles are an emerging product category. Evaluating companies on their exposure to this "positive" product could be a factor in portfolio construction. A large number of ESG investors also think about products from a negative perspective (i.e., tobacco, nuclear power, fossil fuels, firearms, etc.). Negative screening of portfolios on the basis of products has been a mainstay of values-based investing throughout its modern era. In many ways, the argument against these products,

[24] Regulations regarding corporate disclosure (both what is required and what is prohibited) vary from country to country. While certain examples in this section may be drawn from a US context, the concepts and how the availability of company-disclosed data affect investors are more global in character.

and therefore the companies that produce them, is equivalent to a "Scope 3" assessment (or at least the customer use side of a Scope 3 assessment). Just as Scope 3 GHG emissions measure the emissions generated through the use of a product, many products have other negative externalities tied to their use. Often, the use of the product is viewed as controversial—the future use of a firearm, or the health effects of a cigarette, or the nuclear waste from atomic energy. These types of evaluations are often implemented by measuring the percentage of revenue generated from a specific type of product or service. In some instances, a single company has explicitly good and bad products (i.e., oil companies with renewable energy products and services) and single products can be viewed as both good and bad (Tesla's electric vehicles as a product that helps society make progress on climate change but uses lithium with significant human rights and environmental challenges of its own). In these kinds of circumstances, the investor must ultimately decide which issue is more important—in essence, recognizing a trade-off and prioritizing one issue over the other.

Reputation

As mentioned above, reputation is most frequently considered as a subset of risk. We call it out here to acknowledge that it is also the most frequently available and well-developed kind of data based on sources other than company disclosures. Controversies can include oil spills, governance spying scandals, emissions cheating scandals, sexual harassment allegations, and many other headlines we have all seen regarding large and small companies. It is important to note that data labeled as controversies and events still amount to reputational risk evaluations.

Policy/governance/management

This metric evaluates the framework of a company and can be the most forward-looking aspect of evaluating that company. How is the company preparing itself for the future? These areas can be viewed as the response to risk. For example, does the company address child and forced labor in its supply chain code of conduct policy? Does it have auditing and enforcement mechanisms to implement the policy? Some ESG investors are critical of evaluations based on these lenses because they can come across as "check the box" exercises. Such information generally requires disclosure by the company.

Performance

Metrics that measure what has occurred at the company are by definition backward looking and at the heart of what many ESG investors would like to evaluate; after all, it's what the company did. Examples include the number of women on the board and in senior leadership, tons of toxic emissions, and revenue generated by solar production. Such metrics generally require disclosure by the company even when the immediate source is a government database. To fill some of the gaps left after direct company disclosure, ESG data providers have developed estimation methodologies.

Transparency

Estimation models do not fill all of the gaps in company performance or policy/management data. In fact, for some data concepts, it is the rare exception that a company does disclose information. On this basis, evaluating transparency can be a specialized way of thinking about management/governance evaluations. For instance, in the US, diversity disclosure is voluntary and rare.[25] Companies could be rated positively for publicly releasing the EEO-1 diversity metrics from the mandatory Employment Information Reports they file with the US Department of Labor even if their actual diversity numbers are not great.

Each of these different data types answers different sets of questions about the company. And each can be developed in relation to any ESG topic, creating a matrix of considerations. Each has advantages and disadvantages if conducted in isolation. A combination of these can create a more robust view of a company. But it's also important to think about them in relation to the motivation that investors have in asking their questions. While all of these approaches to evaluating companies are valid, some may be more appropriate to the reason the investor is asking ESG questions.

Practical considerations

There are also other considerations for an investor in determining that a particular source of data is appropriate. We list some of these here.

Company coverage

Particularly for systematic investors like Aperio, major holes in country, market capitalization, or other coverage can render a dataset much less useful. Whether a vendor is a broad-spectrum ESG research shop or specializes in a specific issue, Aperio prefers a broad universe of coverage. Active managers might be able to use small datasets that fit their investment theses, but the marketplace and indexed equity investors like Aperio rely on more complete coverage. Note that we have developed approaches that make use of limited datasets, but these are possible only in specific circumstances. For example, if the investor wants overweighted exposure to a list of companies (as with our Clean Technology Solutions offering) or when there is an utter lack of data on a topic (such as LGBTQ issues, where we use of Human Rights Campaign [HRC] data), we are able to use smaller datasets. There are limitations, however. For example, when using the HRC data, we cannot use certain indexes because the dataset does not cover the companies.

Missing data

Data may be missing for a number of different reasons, and accurate documentation detailing why a particular piece of information is missing can be helpful. Some reasons data may be missing include: it's not disclosed by the company; it's not considered "material" by the researcher (with potential added

[25] The international context for diversity data can be very different than in the US. For example, in France, there are prohibitions on collecting, much less disclosing, demographic data regarding employees.

nuance regarding why it's not material for a specific company); it's never available in a specific market; a recent corporate action (merger, IPO, etc.) means there hasn't been time for even an initial level of disclosure; the value is zero or null; or it is missing for some other reason. From a data use standpoint, the worst possibility is that a single coding for missing data may be used for more than one reason. Any rating of companies has to determine how it will address missing data in the evaluation. Vendor datasets need to incorporate appropriate methods for users like Aperio to understand what's missing and why.

ESG vendors have developed strategies to minimize or mitigate missing data, including developing estimation models to plug gaps when they exist. These approaches are most prevalent in GHG emissions datasets but have been used in other environmental issue areas as well. In addition, attempts to use natural language processing (NLP is the computer scanning of websites or other documentation to gather specific kinds of information based on the interpretation of plain text) to create more complete datasets are widespread. While the desire to have a dataset populated across all (or as many as possible) companies is important, it is equally important to assess the type of data and what it means or does not mean in evaluating a company. Controversies data may be more comprehensive across a universe of companies, at least within the defined NLP parameters of the research vendor, but they provide a different type of information than pounds of toxic emissions, percentage of the workforce who are women, or CEO to average employee pay ratios. Just because a dataset is comprehensive within a specifically defined evaluation does not mean that it answers all ESG questions, or even those relevant to a particular investor.

Global datasets and research criteria

Ideally, a dataset will contain a consistent set of factors across a global universe of companies. Unfortunately, global data are often incomplete (see above regarding missing data). In addition, investors in different markets have different concerns (think racial and ethnic diversity concerns in the United States), so limiting datasets to those issues that can be covered globally is a disservice to some investors. Because voluntarily disclosed information creates so much missing data, datasets that rely on mandatory disclosure, most frequently based on a regulatory requirement, can be very helpful in evaluating companies. Such a regulatory requirement, however, almost certainly means a lack of consistency across countries. As an example, US Environmental Protection Agency data has frequently been used as a source for data based on mandatory disclosure, but since it is not consistent with European or Asian equivalent data, it has been dropped from many datasets because it is not global. At Aperio, when we find datasets that are helpful, we use them even if they are not global in coverage. The best example is data regarding LGBTQ issues. There is barely any data from ESG vendors relevant to this issue for scoring and tilting, so we use the Corporate Equality Index from the Human Rights Campaign to represent these issues. The dataset is large-cap and US-biased, so it does not work for all benchmarks. For smaller US companies, the only available data flags whether LGBTQ issues are identified in a company's labor policy. For non-US companies, we have found no company-specific data so rely on information regarding the criminalization of LGBTQ persons by countries of domicile. This issue area demonstrates the complexity of piecing together data across a wide investment universe that provide the desired issue area representation.

Data flow time lines

An inherent issue of latency is built into most ESG investment systems. An example: A company has a relatively minor oil spill. While the event may make the news and could therefore feed into a daily controversies dataset, it likely wouldn't make it into an overall ESG assessment immediately. ESG researchers likely have a schedule on which they check government lists of spills, often annually, but maybe more frequently. Once the ESG data vendor has the information, it has to be processed, checked, and fed out to data clients. An asset manager like Aperio then has its own processes to integrate refreshed data into its systems and ESG evaluations. Once ESG evaluations have been updated, they are available for portfolio updates. So, in this simple example, at any asset manager, there can be a substantial delay before the event has any impact in a portfolio.

Values complexity: When data do not provide a complete answer

While it may seem obvious, it's worth noting that many ESG questions or ideas cannot be answered with currently available ESG data. In some instances, companies haven't disclosed the information. In other instances, the nature of the question can't be supported by current ESG research methodologies. For example, if an investor is concerned with child labor, the question that investor asks might be, "Which companies use child labor?" No dataset can comprehensively facilitate the answer to this question. At best, there are accusations of child labor use that are relevant to supply chain assessments or references in a company's own disclosures and policies related to human rights issues and child labor policies. Because the data can't answer every question as it is asked, investors (and their asset managers) need to think creatively about how issues interrelate. What's the best available data that can address the questions asked? What's a proxy for the issue identified? (For instance, concerns around economic inequality can sometimes be addressed by using CEO pay data or looking at predatory lending issues.)

The decision of how to best reflect a particular issue in/with a portfolio given this complexity may also rely on the investor's motivation, as described earlier. The lack of data (directly relevant or as a proxy) regarding an issue or concern could prompt an exclusion of companies about which an assessment is not possible. Alternatively, an investor could seek broader disclosure of information or changes of policies and practices by a company through engagement and proxy voting. Investors could also conclude that certain concerns do not lend themselves to solutions through investment in public equities. We've previously pointed to poverty and education as examples of such issues.

There is one overriding concept that is appropriate to conclude this section on ESG data and ratings—investors need an honest assessment of the quality and appropriateness of using any particular ESG data. We have outlined above a number of the considerations that should be part of such an assessment.

Aperio's approach: Investor-centric portfolio construction

The core of Aperio's ESG philosophy is acknowledging different investors' values and the complexity of finding ESG data to reflect those values and appropriately pair them with portfolio construction techniques to meet the investors' objectives and values expectations. By being direct with a client about what we can do AND what we cannot do and why, we demonstrate to investors that we have heard and understood their values and portfolio goals and are not trying to push a solution that does not align with their objectives. Aperio is committed to transparency on these issues. We are very aware of the flaws in the data and the frequent overstatement by ESG practitioners regarding ESG data and the impact of ESG investing. We strive to not fall into these traps.

Translating values to ESG themes, issues, and data

With investor's ESG objectives in hand, Aperio then translates (or maps) those objectives into specific criteria based on ESG data. In many cases, Aperio can use a series of preconstructed components (building blocks) combined in a unique way to meet an investor's needs. Sometimes, new components are needed. Other times, no data exist that directly address the investor's framing of values/mission. In these cases, we can look for proxies. Earlier, we highlighted that education is a difficult issue to address in a public equities portfolio. For some investors, the representation of their educational values might be manifested as training and diversity issues. For other investors, these options miss the point. In each case, an understanding of the ESG research and data ecosystem may be helpful to pair with the careful documentation of the investor's concerns and motivations.

The data ecosystem

The wide range of values/missions investors bring to Aperio to reflect in portfolios necessitates both breadth and depth in ESG data. In addition, no ESG data vendor has a monopoly on "good" ESG data. For this reason, Aperio sources data from a number of vendors, including: MSCI ESG Research, Bloomberg, ISS, GeoPhy, and MV Index Solutions. Aperio also uses data from other organizations such as the American Friends Service Committee and the Human Rights Campaign.

Aperio works with raw data, where available, rather than preconstructed ESG Scores or ratings from ESG data providers. This choice allows for a high degree of flexibility in deciding which specific data series to incorporate, and at what relative weights, to create ESG Scoring Components. As noted earlier, our focus is on client values rather than materiality (the financial importance of ESG issues), in contrast to many preconstructed ESG Scores and ratings.[26] Aperio uses Scoring Components as the basis for building our standard strategies (found on the SRI/ESG Menu) and for conversations with larger clients to create bespoke Scoring Profiles. ESG data come in a variety of forms that are frequently not comparable or easily combined. Since Aperio's goal is to create company assessments across a number of ESG topics that can then be the basis for portfolio construction, we must standardize ESG data. Whether quantitative performance data such as carbon emissions or the number of women on a company's board, or qualitative data such as human rights supply chain controversies, different ESG data distributions need to be addressed. These efforts create ratings on a common scale that can be used to tilt a portfolio toward a better market-cap-weighted ESG Score (the metaphorical "average" company) as defined by the investor's values/mission.

[26] Here again we note that BlackRock sustainable investing focuses on the materiality of ESG issues in investment decision-making.

The role and effect of corporate disclosure on the ESG data ecosystem

One of the main challenges in creating values-aligned portfolios is the lack of publicly available data and, related, inconsistencies in the available data. We, like all ESG asset managers, rely heavily on voluntary disclosure by companies. In some cases, voluntary disclosure for companies should be easy and inexpensive (disclosing EEO-1 diversity metrics from Employment Information Reports a company has already submitted to the US Department of Labor being an example), while in other cases, that may be difficult (nearly impossible?) and expensive (definitively identifying child labor in a supply chain, for instance). For issues where it may be expensive for companies to collect and disclose information, there may be a large-company bias in what is disclosed. For example, larger companies may have the resources to do so while smaller companies may not.[27]

This reliance on voluntary disclosure may leave the possibility for gaps in the data. A careful review of why data are missing for a specific Data Element at a specific company is necessary. Aperio considers the following scenarios regarding why data may be missing and how to treat the gap in its scoring systems. First, companies may fail to disclose information sought by the research vendor. In these instances, Aperio assigns a “low” score for the missing data to penalize the company for its opacity. Second, the vendor may have determined that the data concept is not relevant to the specific company and decided to not look for the information. If Aperio agrees that the data were likely not relevant to the company, we assign a “high” score for the missing data so that the company is not penalized for the lack of research effort. However, if Aperio believes the data concept may be relevant, we assign an “average score” based on the research universe regarding the missing data.[28] In these instances, Aperio does not want to inappropriately assign a “high” score when we do not have the data or to penalize the company for the failure of the vendor to look for the data.

Refreshing ESG data

Aperio refreshes its ESG data and evaluations on an annual basis. Since much of the data used are made available by companies annually through Form 10-K filings as well as sustainability and corporate responsibility reports, more frequent updates are not particularly useful for an individual company evaluation. The annual refresh also provides an opportunity to tweak scoring approaches for issue area Scoring Components and for standard Aperio strategies. For instance, in a recent refresh, Aperio broadened the diversity theme within the Aperio SRI Strategy to take advantage of additional data on the racial and ethnic makeup of boards of directors. The data refresh also includes a portfolio feasibility assessment. These assessments generate portfolios against a list of standard benchmarks to determine the feasibility of using the scoring data at specific tilt levels with each benchmark. This process is used to set the standard tilt levels for various strategies, including Aperio SRI.

[27] Many social and environmental resolutions ask for greater disclosure by the target company. For a values-agnostic asset manager like Aperio, or an equally agnostic ESG research vendor for whom corporate disclosure is the lifeblood of the research process, disclosure may be an issue on which advocacy is warranted. For more on this perspective, see “Relying on Corporate Transparency: Q&A with Aperio's Mark Bateman.”

It may also be worth noting that different investors may have different feelings about what level of expense companies should be willing/able to bear in providing ESG information. As a general rule, investors more focused on financial materiality of ESG issues may have a lower bar for declaring an ask for disclosure as too expensive. A values-based ESG investor may expect more disclosure across the board regardless of expense. As is probably obvious, companies fall into the former category and will generally be quick to cry, “Too expensive!”

[28] As an example of an issue area where Aperio assigns an “average score” based on our belief that the issue is relevant, within the Water Management Scoring Component, we assess multiple fields within the vendor’s data to determine that for some water issues, the vendor has collected data or found water to be a relevant issue, but for the Data Element we use in our system, the data are missing. In these cases, where we have reason to believe the issue area is relevant, we assign an average score.

Section 5: Company impact

We consider two primary baskets of impact: first, the manner in which a given company exacerbates, mitigates, or solves environmental and societal problems; second, the impact to which the investment portfolio exacerbates, mitigates, or solves environmental and societal problems. This section addresses company impact and begins to look at how companies are evaluated.

When approaching ESG issues from a salience perspective, the premise is that companies have an impact on the world. "Impact" is a values-neutral term—though, interestingly, most people probably initially react negatively to the statement that "companies have an impact on the world," while the term "impact investor" usually has a positive connotation. The fact is that impact can be positive or negative and that, simply by being, companies have an impact on the world. The challenge of ESG investing for the investor is to evaluate companies' impacts in relation to the issues that matter to the investor and make decisions based on those evaluations.

It is one thing to conceptualize impact; it is another thing to measure impact. Measuring impact implies a two-part process:

1. Identifying and measuring the output of the company (dollars spent on lobbying, GHG emissions, minorities hired, solar panels sold, etc.)
2. How that output exacerbates, mitigates, or solves environmental or societal challenges (new regulations killed by lobbying, total global GHG emissions increased year over year, income inequality among races decreased, percent of electricity in the US produced by solar increased).

The difficulty of determining how the output interacts with environmental and societal challenges is in identifying the context of the company's action. In the parenthetical examples above, investors may have access to information about the dollars spent on lobbying but may not know what lobbying was done. Or even if they know what lobbying was done, were others also lobbying on that issue? For what percentage of the total lobbying effort on a particular topic was a company responsible?

When contextualizing GHG emissions, we know more of the global context. Researchers have (estimates of) total global emissions and (estimates of) the level of total reduction that needs to take place. With this information, investors can theoretically measure the total contribution (as a percentage) a given company is making to total global emissions.

This two-part calculation of impact, however, does not address questions around the appropriateness of that level of impact given the activity and the level of effort required by the company to achieve the impact. It may, therefore, be helpful to think about absolute, normalized, and trend line assessments. Absolute measures represent the total output (on a given concept) of a company. As an example, when thinking about a company with GHG emissions, we can measure the absolute level of those emissions, and since it does not matter where in the world those emissions take place, we know that a ton of GHG emissions from one company has the same impact on the planet as a ton of emissions from another company.

Normalized measures provide some aspect of context, but the context depends on the normalization factor. If GHG emissions are normalized by revenue, the result provides a metric of efficiency within the company; if GHG emissions are normalized by market capitalization, the outcome is an adjustment based on allocated capital—an investor-focused adjustment for size; if emissions are normalized by total global emissions, that factor provides a measure of global responsibility. None of these metrics are wrong, but they each provide a different sense of a company's performance and therefore of different assessments of impact.

Trend line measures (of either absolute or normalized metrics) provide a sense of momentum and direction, which can be helpful in assessing company performance. An investor might want to evaluate a company generating significantly more GHG per dollar of revenue this year than its average over the past five years differently than a second company on a downward trend over that time frame. Time frames themselves can be important concepts to consider. Some issues have immediate consequences—large oil spills, as an example. Others may be more cumulative in nature. An increased rate of hiring and promoting women may not result in a significant improvement now, but over time, if maintained, it can become a significant improvement in diversity performance.

Remember that impact is not synonymous with ESG performance. (Since the investment industry uses the term "performance" to refer to financial performance, we will use the term "ESG performance" to avoid confusion.) ESG performance is an important precursor to any assessment of impact but represents only the first component we described above—measuring output. As we have seen, some aspects of normalization can lead to the second step in assessing impact—assessing the manner in which the company exacerbates, mitigates, or solves societal problems. Many approaches to normalization are insular, providing a basis for better comparison between two companies while still failing to provide a basis for comparison to the larger world.

Section 6: Investor decision-making/portfolio construction

Investment decisions require judgment, which in the case of ESG investing means expressing beliefs about specific ESG issues and making a decision about which companies are acceptable in a portfolio and how to construct a portfolio that most closely aligns with those values.

When starting the process of evaluating companies, it's important to remember that no company is perfect. While this seems an obvious point, when establishing criteria to express their values, investors often need a reminder that a given company may be good at some things while being bad at others. This dynamic creates a dilemma for investors—which issues matter most in evaluating companies and which issues/evaluations will drive decision-making? These questions can be resolved in the design of a rating or in the application of multiple ratings (and in the specific investment tool deployed) to arrive at a decision. As we have highlighted before, these decisions take the form of recognizing and making trade-offs.

All ESG investment products won't match all investors' values

The bridge between ESG data and investment decisions is often an ESG rating. The construction of a rating also requires judgment and embeds beliefs. For an investor using a rating, the decision has to be whether the values/judgments reflected by the rating are a reasonable representation of the values/beliefs intended by the investor. Those constructing ratings may need to wrestle with issues such as the role of nuclear power generation. Is it to be avoided because of concerns around nuclear waste storage? Or is it a critical piece of base power generation for a low-carbon energy future? Or, if companies with the best diversity are in industries that some investors cannot stomach, how should the rating be constructed? If the environmental engagement goals of an investor cannot be pursued without investing in companies that fail to protect LGBTQ rights, how should ratings and motives be interpreted in building a portfolio and engagement strategy? These inconsistencies have to be resolved either with the rating or in the decision-making/implementation process where the ratings are applied. Determining which of these conflicting issues/strategies to pursue at a given time is not an indication that the ultimately secondary issue is not important, only that the investor believes the first issue requires priority attention. Aperio's approach to customizing ratings to reflect values is ultimately to realize that different values and different investors answer these questions differently.

The portfolio construction process offers a number of unique opportunities to add nuance to the interpretation of ESG data (or ratings). Since ESG data can be used to draw bright lines or define a continuum, they can also be used to define explicit inclusions/exclusions or overweights/underweights. Whether an investment manager has an active or passive orientation, virtually all investment management decision-making is a version of whether to buy (or not) a particular security, and if to buy, at what percentage of the portfolio. Values regarding ESG issues can be expressed through decision-making processes and may depend on the motivation of the investor. Inherently, investors have some expectation about the financial performance of the investment (maintenance of principal, earnings, etc.) It is possible, perhaps even likely, that investment objectives may occasionally (though not always) come into conflict with ESG values. In these instances, it is in the process of portfolio construction where the financial objectives and ESG values must coexist.

An investors' values may sometimes conflict

While in the preceding discussion we've presented ESG as a single values statement, it is possible that during the portfolio construction process it will become obvious that ESG issues may come into conflict with each other. For instance, investors might be concerned with animal welfare issues and prefer to not invest in any companies that perform tests on animals and be pro-choice and want to overweight companies that provide abortifacients to the market. Both of these views may be firmly held, but they come into conflict in constructing portfolios since pharmaceutical companies that manufacture abortifacients also conduct tests on animals. In such an instance, the investor would need to choose which issue is most important to reflect through their investments.

Reflecting the values of the investor does not stop with portfolio construction, however, and the approach that an investor wishes to take post-construction can influence portfolio construction decisions. Investors who wish to use active ownership tools of proxy voting and filing shareholder resolutions to improve companies' performance related to certain ESG issues may need to make sure they are not excluding companies based on those performance issues. For example, seeking to encourage companies to adopt minimum diversity policies for their boards of directors could be significantly hampered by excluding companies with no women on the board of directors from the portfolio.

Investors may also be interested in tools that will mitigate any damage from the portfolio once it is constructed. An investor concerned with climate change may be interested in purchasing carbon offsets or emissions permits to account for the carbon emissions represented by their portfolio. Similarly, Islamic investors will "purify" their portfolios by contributing to charity the portion of their profits associated with forbidden businesses that were below an exclusionary threshold.

We also know that investor views may evolve over time. The level of emphasis on racial justice issues for some investors in 2021 was much higher than it was in 2019. This evolution is natural and part of the ongoing process of managing a values-based investing process.

Aperio's approach: Crafting optimized values-based portfolios

Portfolio implementation via optimization

Aperio personalizes ESG client portfolios using two sets of ESG portfolio construction tools: exclusions and tilts. A third set of tools—active ownership—includes SRI proxy voting and shareholder advocacy. When appropriate for an investor, these customizations can also be combined with factor tilts and tax-efficient management.

Aperio's approach is to construct a well-diversified public equities portfolio that is more thoughtfully aligned to the investor's values than a portfolio that doesn't consider these issues. Aperio uses an optimizer and a multi-factor risk model in this systematic portfolio construction process.[29] Investor values/mission alignment is typically achieved using a combination of company exclusions and tilts (security under- or overweights relative to the benchmark weights) to achieve a higher portfolio-level market-cap-weighted ESG Score than that of the benchmark index.

For example, the Aperio SRI Strategy, which incorporates environmental, human rights, labor/workplace, diversity, and corporate governance considerations, has a target ESG Score

[29] Aperio uses the MSCI Barra risk models to manage active risk in the implementation of investment strategies. The Barra risk models and portfolio optimization system are used to determine the optimal security weights of the portfolio in order to minimize the forecast tracking error after taxes and transaction costs while maintaining any client customizations. Reliance on models in the optimization and equity risk analysis presents "model risk," which is defined as the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. Model risk can lead to financial loss. The mathematical calculation and quantification exercise underlying any model generally involves application of theory, choice of sample design and numerical routines, selection of inputs and estimation, and implementation in information systems. Errors can occur at any point from design through implementation. The quality of model outputs depends on the quality of input data and assumptions, and errors in inputs or incorrect assumptions will lead to inaccurate outputs. Even a fundamentally sound model producing accurate outputs consistent with the design objective of the model may exhibit high model risk if it is misapplied or misused. Models by their nature are simplifications of reality, and real-world events may prove those simplifications inappropriate.

improvement of 20% relative to the benchmark index.[30] The Low-Carbon Footprint tilt, on the other hand, targets an 80% reduction in carbon emissions and emissions intensity (emissions scaled by company revenues). The result of this process is a better directional alignment of the portfolio with the ESG issues that an investor who chooses these options cares about. Overall, an investor will have more exposure to companies with better scores[31] and less exposure to companies with worse scores. It is worth noting that unlike exclusions selected by the investor, tilting is about shifting the weighted average and does not draw a bright line that excludes companies from a portfolio. For this reason, the optimizer may include low ESG scoring companies in the portfolio when they help reduce overall portfolio risk or contribute positively to the other portfolio considerations, such as mitigating taxes. For example, clients are often surprised to see ExxonMobil in a portfolio for which environmental issues are important. While Exxon may be rated worse than companies in cleaner industries (i.e., Information Technology or Financials), compared to other energy companies, Exxon often rates well. In the context of a well-diversified portfolio seeking comparable investment risk characteristics to those of the benchmark index while tilting toward "better" environmental companies, Exxon may be included in the portfolio. Because industry diversification is part of the risk model, Exxon, based on size and its relative environmental profile within the Energy sector, can be a good choice for the twin goals of environmental tilt and a benchmark-like risk profile. In many respects, the risk-minimizing process that Aperio uses leans the portfolio construction process toward a best-in-class approach because of its preference to represent every industry. This outcome is not absolute, but the process does lean this direction. This means that absent an explicit exclusion, some seemingly surprising companies may make it into a portfolio.

Aperio's approach to ESG investing is best suited for investors seeking some combination of the following: customized ESG criteria (exclusions or tilts), tight tracking error to the benchmark index, efficient tax management, an SMA's flexibility to be involved in sponsoring shareholder resolutions, and engaged thought partners as the field of ESG investing evolves. Aperio is not the right choice if the investor is looking for combinations of active, high-concentration, high-impact, materiality-grounded stock picking. There is a place for these approaches to asset management; it's just not Aperio's approach.

Trade-offs *(across ESG criteria, risk, and taxes[32])*

There exist trade-offs along four dimensions in Aperio's personalized portfolios: values, factors, taxes, and risk. We'll focus on the values trade-off. Typically, the higher the values intensity of a portfolio (the more exclusions, the more different ESG tilts, and the higher the expected improvement in these tilts relative to the benchmark), the higher also the portfolio risk as measured by tracking error. (For the visual learner, this is represented by the Social Efficient Frontier concept, depicted and described below.) There may also exist trade-offs between the tax implications within the portfolio and particular values criteria. The simplest example of this trade-

[30] Each of Aperio's standard strategies is refreshed annually with updated ESG data. As part of this process, Aperio conducts a feasibility analysis to assess the forecast tracking error for the strategy. Realizing that client circumstances, including legacy holdings for taxable clients, and different combinations of additional tilts and exclusions combined with standard strategies will interact with the optimization process differently, we identify a level of tilt that we believe will be acceptable in these disparate circumstances. In most instances, we try to keep the stand-alone strategy forecast tracking error below 1%. Since this analysis is done at a point in time to set the standard tilt level, the forecast tracking error will vary throughout the year until the next feasibility analysis.

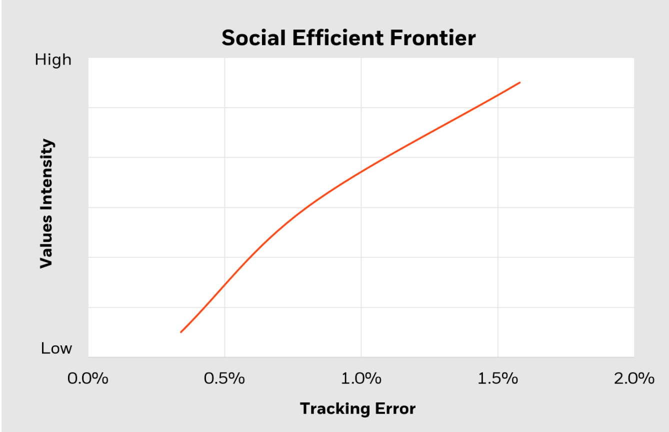
[31] Note that Aperio uses "better/worse" rather than "higher/lower." If the score is carbon emissions, investors usually want lower scores; if the score is percentage of women on company boards, investors often prefer higher scores.

[32] For a more detailed discussion of trade-offs and the technical aspects of portfolio construction, please see the work of our colleagues Michael Branch, Lisa Goldberg, and Pete Hand in the *Journal of Portfolio Management* article "A Guide to ESG Portfolio Construction."

off dimension is when a legacy holding with low cost basis is identified for exclusion as part of the values criteria. Aperio typically presents portfolio options at different levels of values intensity, which enables the investor to select, together with their financial advisor, the portfolio option where the trade-offs are most reflective of the client's values/mission preferences while meeting the investor's financial needs in the context of their overall asset allocation and tax situation.

Social Efficient Frontier

The efficient frontier concept is based on the realization that a given group of securities could be combined into very different portfolios based on their relative weights in each portfolio. The efficient frontier then identifies the line that is a series of optimal combinations of the two measurements from among all the possible portfolios. In the Social Efficient Frontier, we compare the intensity of values (often measured by a single ESG Score) to the forecast tracking error. In this way, the line—the frontier—represents the lowest possible tracking error achievable at each incrementally higher values intensity. Anything below and to the right of the line is achieving a lower values intensity for the tracking error forecast than is possible.



Rebalancing process

After the initial series of trades to implement the investor's preferred values-aligned portfolio, Aperio's portfolio managers continue to systematically monitor and rebalance the portfolio, considering the need to adjust the security weights in the portfolio to maintain the portfolio's ESG and factor objectives, the requirement to control risk, and available tax losses to harvest. In addition, ESG data used to support investor accounts is refreshed at least annually. (Most ESG data are disclosed annually by companies.) The quarterly rebalance following the data refresh rolls ESG accounts forward to this updated data. There can be turnover and tax implications associated with these updates. When these changes are outside the acceptable range, Aperio coordinates with the advisor and client to plan an appropriate course forward.[33]

[33] Every taxable Aperio ESG client is asked to express a preference about the relative importance of values and taxes. Should ESG criteria be maintained regardless of tax consequences, or should taxes be avoided regardless of the impact on which ESG criteria can be fully implemented? Or should the portfolio target a middle ground that seeks to balance the two but not quite achieve either fully?

Section 7: Investor and portfolio impact[34]

As noted above, many investors are trying to use their investments to mitigate or solve environmental and societal problems while some investors just want to sleep better at night by not being directly associated with exacerbating those problems through their portfolios. Concepts of investor impact are closely related to the motivations we discussed in Section 3 as well as the concepts of company impact from Section 5.

Since Aperio is a public equities manager using a systematic indexed approach, we will limit our discussion to concepts of impact related to this approach to investing.

Public equities portfolios

Since publicly traded companies do not always have a direct nexus to all areas of desired impact (e.g., public education), what are the opportunities for impact with a public equities portfolio? There are two primary strategies for impact:

1. Becoming part of the movement
2. Investing to create change from the owner's seat

- **Movement:** In essence, this is a strategy for changing the environment within which companies operate. The more investors choose investment vehicles that take ESG issues into account, and the more companies are aware of the kinds of choices that investors make, the more companies will be influenced to change their approaches to managing their businesses. The key is to close the loop—how are an investor's decisions aggregated into a global understanding of ESG issues? Multiple prongs of activity can communicate these values.
    - The first is how the asset manager participates in the ESG industry and conversations. Do they engage with data vendors in describing the kind of issues their clients care about? Do they respond to industry questionnaires that aggregate client interest? Do they engage directly with companies to gather additional information on behalf of their clients? (Aperio engages with data vendors and responds to industry initiatives.[35])
    - Second, how does the individual investor contribute to the larger ESG conversation? Do they tell their friends, respond to opinion polls, communicate personally to companies about their issues and the decisions (criteria) they've adopted? Foundations also have the opportunity to participate in industry initiatives that aggregate their interests and magnify them to the marketplace. The actions of both the investor and the asset manager are ways of closing the loop so that the world knows what decisions have been made.
    - A variation of this activity is the "political scorekeeping" that Bill McKibben (the founder of 350.org, which sparked major activism by college students regarding climate change issues in university endowments) describes when talking about fossil fuel divestment. Divestment from fossil fuel companies is not going to cause the business model for oil companies to disappear. (Mark Bateman often says that divestment is an attempt at a "supply-side solution to a demand-side problem.") McKibben says that his goal with divestment is not to drive fossil fuel companies out of business but to use it as a way of tallying the number of investors who are

[34] Note the case of the term "impact" in this header. Apart from the style of using lowercase, here it is an indication that we are not referring to a specific product that uses this label. In this section, we will explore the meaning and inferences of "impact." Different organizations will use "Impact" in uppercase to label a specific product or offering.

[35] BlackRock engages directly with companies, making its expectations of corporate management clear on a range of ESG topics, including climate change, sustainability/ESG disclosure, and board diversity.

concerned with climate change and fossil fuel company business models. These tallies can then be used as talking points in legislative and regulatory discussions with policymakers.

- **Active ownership:** This approach is the more direct way of having an impact as an individual investor because it can be clearer how the process is additive. Active ownership (sometimes called stewardship or shareholder activism) is possible once the shares are owned in a portfolio, which puts the investor in the category of "owner." As an owner, the investor has two rights that provide the opportunity to influence the company. The first is the right to vote at company meetings along with all other shareholders. While this role is reactive to whatever is on the ballot, it is an opportunity to send a message to corporate management, whether it's voting on the election of directors or on social and environmental shareholder resolutions. The second right that share owners have is to help set the agenda for the company by filing shareholder resolutions on issues that matter to them.
- **Impact that public equities investors do not have:** To remove any doubt, there are only a few instances in the life cycle of a company where the share price affects the cost of capital for a company. On this basis, most ESG equities investors should not view changing the cost of capital as a motivation or a likely impact. It seems more likely that affecting the share price would impact executive compensation when equity is a part of that compensation than impacting the capital available to the company. It is also unlikely that a public-equity investment will take cars off the road, plant trees, or alleviate poverty. A portfolio can potentially select companies doing these things and avoid companies not doing them, but the portfolio does not cause—or even increase—the desired behavior through the investment. Investors can think about their relationship to impact more from the standpoint of responsibility. As owners of a fraction of many different companies, they are owners of that fraction of the behaviors of those companies and therefore responsible for those behaviors. Here, investments likely do not change behavior (i.e., they do not impact behavior), but they bear responsibility for the behaviors with which they are associated.

Notes on other asset classes

Different asset classes play different roles in providing capital into the economy. The majority of the time, public equities are a mirror of the company, but changes in share price play only minimally into the cost of capital for a company. Bond offerings, however, directly affect capital available to the company. If the risk to a bond is sufficient, it may require higher yield rates to attract subscribers. Similarly, private-equity investors may require higher ownership percentages for poor ESG/higher-risk companies at the same amount of investment. It is also worth noting that just as different asset classes relate to the cost of capital differently, different asset classes have the potential to relate to different types of impact. For instance, it is very difficult to address early childhood education in a public equities portfolio. School district bond offerings, however, may be appropriate to provide that kind of direct investment in the issue area. Similarly, a public equities portfolio may be a difficult asset class to use to represent a high commitment to solar energy production. Private direct investment may be better to achieve this kind of direct impact.

Aperio's approach: Personalized ESG reporting

ESG reporting vs. benchmark

While every investor expects regular performance reporting, ESG investors reasonably expect some representation of how the ESG aspects of their portfolios are playing out. Sometimes referred to as "impact" reports, Aperio's SRI Report delineates the differences between the investor portfolio and the benchmark index for the ESG criteria the investor selected. These reports document both the level of exposure a portfolio avoided based on its exclusions as well as the percentage “better” a client’s portfolio is than the benchmark for selected tilts the investor selected. These statements can also include additional ESG issue areas not set as constraints within the account. For instance, an investor might want to know the carbon footprint of their portfolio even though they are not in a low-carbon strategy.

It is worth noting that Aperio is very conservative in its ESG reporting. The investments made in Aperio client portfolios are in public equities. The portfolios are constructed as a series of decisions (through the optimization process) regarding whether or not any given company will be in the portfolio and if so, what percentage of the portfolio that company will represent. The absence of a company from the portfolio does not stop that company from operating in the world, so the absence from the portfolio of a company that pollutes does not stop that pollution. Similarly, the construction of a portfolio does not plant trees or take cars off the road. Because portfolios don’t do these things, we feel ESG impact reports that imply otherwise are intellectually dishonest. Aperio’s ESG reports provide information regarding what is (or is not) in a portfolio.

We also note that Aperio uses credible data from a variety of sources as the basis for its work. Each of these data sources provides a disclaimer, the gist of which is: the vendor believes the data are collected from reliable sources but cannot guarantee the accuracy or completeness of the data. From time to time, Aperio clients have their own datasets from different vendors than Aperio’s (which undoubtedly come with similar disclaimers). If these clients run the Aperio portfolio against data from these different datasets, they might encounter discrepancies. Such exercises prove the veracity of the disclaimers. The processes Aperio uses for portfolio construction and reporting are only as good as the data available in our system. We work to vet the data, but there will occasionally be discrepancies to other datasets.

An Aperio portfolio is an amalgam of specific attributes and behaviors. In this way, we provide an opportunity for investors to own the attributes and behaviors that most closely align with their specific values and worldviews. (Note once again that there is the opportunity to influence behaviors through active ownership once companies are in the portfolio.)

Aperio also provides aggregate proxy voting reports and shareholder advocacy reports. Since proxy voting does not occur on a client specific basis, but on behalf of all Aperio’s ESG accounts, this aggregate proxy voting report is a representation of the impact ESG account holders at Aperio have on companies.

Proxy voting

As a default for values-aligned accounts,[36] Aperio uses the ISS SRI *Proxy Voting Guidelines*. These guidelines seek to reflect a broad consensus of the socially responsible investing community on social and environmental matters and create and preserve economic value while advancing good governance principles. The general rules tend to be more supportive of social and environmental shareholder resolutions than standard voting policies. While these voting guidelines are more supportive of shareholder resolutions, ISS has the longest history of doing research on shareholder proposals of any proxy voting agency. As part of its research and recommendation process, ISS reviews each proposal at each company to determine its recommendation.[37]

[36] Accounts with no ESG portfolio construction criteria may also select the ESG proxy voting solution. For many custodians, this option is available at no additional fee. For custodians where Aperio is not able to wrap multiple accounts into a single ballot per company annual general meeting, an additional fee for this option may apply.

[37] Aperio’s approach to proxy voting is overseen by its Proxy Voting Committee. This committee determines the appropriate voting policies for its offerings, including two sets of guidelines: one with an ESG focus and one with a traditional non-ESG

For example, the *US SRI Proxy Voting Guidelines* (2021) include the following:

- Generally, vote for social and environmental shareholder proposals that promote good corporate citizenship.
- Vote for disclosure reports that seek additional information, particularly when it appears that companies have not adequately addressed shareholders' social, workforce, and environmental concerns.
- Vote against/withhold votes from incumbent directors who serve as members of the nominating committee if the board lacks at least one woman and one racially diverse director, and the board is not at least 30% diverse. If the company does not have a formal nominating committee, vote against / withhold votes from the entire board of directors.

For recent sample votes and data on resolutions, please refer to Aperio's 2020 SRI Proxy Voting Review.

Shareholder advocacy

Aperio also offers investors the opportunity to influence corporations and their fellow shareholders by sponsoring or endorsing shareholder resolutions. The shareholder advocacy program is an opt-in choice for interested clients. Specific resolutions are also opt-in. Aperio works with partner organizations to do this work. Our largest partner is As You Sow,[38] but we also work with Proxy Impact, Rhia Ventures, and Whistle Stop Capital. Each of these organizations and their staffs have substantial experience engaging with companies and dealing with the mechanics of filing shareholder resolutions. Recent examples include resolutions on climate change, diversity data disclosure, and human capital management reporting based on SASB (Sustainability Accounting Standards Board) standards.

A shareholder resolution is a proposal to the management of a public company, presented and voted on during the company's annual general meeting. While shareholder resolutions are usually nonbinding, they can help draw attention to ESG issues and put pressure on company management. The most successful shareholder resolution may be one on which shareholders never vote because it was withdrawn following an agreement with company management to improve its actions related to the issue of the resolution. In 2021, Aperio clients sponsored 134 resolutions—43 of those resolutions were withdrawn after agreement with the companies.

Some investors may choose to participate in this kind of advocacy without using any portfolio construction criteria. This decision may be to avoid additional risk or to avoid taxes from low-basis holdings. For more detail on the resolution process and shareholding requirements, please see Aperio's Shareholder Resolution Process Info Sheet. For information on recent shareholder resolutions, please refer to Aperio's 2020 Shareholder Advocacy Review. Both documents require a login. Please contact Aperio if needed.

focus. Aperio's ESG offerings are usually bundled with the ESG voting policy, but clients and their advisors direct which proxy voting policy is appropriate for their accounts.

[38] Aperio (now part of BlackRock) supports the work of As You Sow through a charitable donation made to the organization.

Section 8: Summary of Aperio's ESG process

Choosing to work with Aperio on a customized ESG account will be as a result of a series of decisions. The following is an outline of some of these decisions:

- Is an SMA an appropriate structure given the size of the account? If yes, continue to consider Aperio.
- For taxable accounts, are there tax management concerns for this investor that suggest tax-efficient SMA management will be advantageous? If yes, continue to consider Aperio.
- Does this investor, whether taxable or non-taxable, have a specific set of values or ESG criteria they would like reflected in a portfolio? If yes, continue to consider Aperio.

Aperio's ESG process can be summarized in a few key steps:

- **Social Conversation and values documentation:** The Aperio ESG Team listens carefully to the end investor to understand their worldview. These conversations and listening sessions are the basis for the rest of the work we do in creating an ESG portfolio for the client.
- **Mapping ESG criteria to data:** Aperio's ESG Team uses the results from the Social Conversation to create criteria sets based on the available ESG research and data.
- **Sample portfolio construction and review with investor:** The ESG Team collaborates with the Portfolio Management Team to create a sample portfolio using ESG criteria. This sample portfolio is then the basis for a review with the client to confirm that the ESG criteria are appropriate and that the risk and tax transition profile of the account are aligned with the client's expectations. The ESG criteria and specific portfolio construction approach can be iterated at this point.
- **Account implementation:** Based on the final approved ESG criteria and approach, the account is funded and traded.
- **Account maintenance, periodic issue review with clients, and reporting:** In addition to the portfolio being managed according to standard maintenance protocols, we are happy to review ESG developments with the client and, when appropriate, modify the ESG criteria used in the portfolio. In addition, we provide standard investment reporting as well as making ESG reports available.

Section 9: Summary of Aperio's ESG approach and philosophy

It's a journey

Every investor's circumstances are different. An ESG portfolio must solve for the investment needs, risk tolerance, and tax circumstances just as much as the unique values of the investor. We also know none of these situations are static over time, and economic and market conditions will change as well. For these reasons, rather than expressing a fixed strategy, an investor's portfolio will likely be a journey as it is modified over time to reflect their latest issue area concerns and investment circumstances. For example, in 2015, an investor might have been focused on climate change issues and chosen Aperio's Environment Strategy with fossil fuel exclusions and a Low-Carbon Footprint tilt to reduce the carbon footprint of the portfolio by 80%. In 2020, this investor might have reacted to the racial strife of the year and asked that Aperio add exclusions related to private prisons and predatory lending as well as modify the environmental scoring to also include an evaluation of diversity policy and performance. This is not to say that the investor would have been anti–racial justice in 2015 but that climate change was the dominant issue they needed to address with their portfolio at that time. In many cases we've encountered, the emphasis within the investor's values set evolves.

Data also evolve. Several years ago, diversity performance was limited to gender diversity issues. Then Aperio became aware that Institutional Shareholder Services[39] had developed a dataset that assesses racial and ethnic diversity on company boards. For investors who had expressed interest in diversity issues, this evolution offered an opportunity for Aperio to offer a more robust option as part of their portfolios seeking to reflect diversity issues.

In addition, ESG data and the field of values-aligned investing continue to develop. As new ESG issues emerge, as more data become available (on new issues and more robust data on longer-standing issues), and as new techniques for incorporating ESG issues into portfolios are developed, the options for ESG investors grow exponentially.

These kinds of changes all lead us to understand that ESG is a journey.

Aperio's ESG philosophy: Individuality, trade-offs, and transparency throughout the journey

As we've worked through all of these issues, we hope you as the reader have gained a deeper understanding of the possibilities and challenges associated with ESG investing. Having wrestled with these issues at Aperio since at least 2007, we have developed a number of core tenets that anchor our thinking about ESG issues and ESG investing and our approach to working with clients to support their efforts in this space. We share them here as a summary of what we have learned about ESG:

- Aperio's core objective is to understand our clients and deliver personalized portfolios that meet their needs. For our ESG clients, we know that each investor has a different reason for pursuing ESG, different impact and values-alignment objectives, and different sets of issues that matter to them.
- We know that no companies are perfect and that trade-offs may be necessary when evaluating companies on issues that matter to clients.
- We know that the ESG data available to evaluate companies are not an ideal reflection of investors' concerns. We have a responsibility to be clear about which questions data can and cannot answer.

[39] Aperio purchases proxy research and services from ISS in addition to ESG data.

- The kinds of impact it is possible to have in a public equities portfolio are limited. Other asset classes offer other kinds of impact. We have a responsibility to be clear with our clients regarding what kinds of impact are possible and what kinds of impact are not possible within an Aperio portfolio.
- Since societal concerns, individual investor interests and views, available data, and company performance and practices all evolve, we are committed to Aperio's ESG processes and solutions facilitating ongoing engagement with our clients and living the phrase: It's a journey.

Section 10: Glossary

- **CSR**—Stands for corporate social responsibility. The term tends to be used more in relation to corporate-specific views of issues rather than investor views. See Section 1 for a full discussion.
- **ESG**—Stands for environment, social, and governance. See Section 1 for a full discussion on why and how this term is used.
- **ESG criteria**—ESG issue rules put in place to use ESG data or Aperio Scoring Components for portfolio construction.
- **ESG/Social Score/rating**—Aperio uses the terms “ESG Score” and “Social Score” interchangeably. Aperio may also occasionally use the terms “score” and “rating” interchangeably, though “score” is preferred.
- **Materiality**—An approach to assessing ESG that focuses on which issues are financially material to the company.
- **Optimizer**—A tool used to determine portfolio security weights in a systematic portfolio construction process. Aperio uses a portfolio optimizer designed by MSCI Barra to minimize the combination of active risk (i.e., forecast tracking error), the tax liability on realized gains, and any other constraints applied to the portfolio, including ESG criteria.
- **Proxy voting**—The process of Aperio voting, through vendors, at corporate meetings for each share in an investor’s portfolio.
- **Risk model**—A model to measure the risk of a security relative to the market. In a factor model, a security’s return-generating process is summarized by a limited number of common risk factors and the security’s sensitivity to each factor. In a fundamental model, the factors may include metrics such as earnings growth and yield. Risk models may be used as part of an optimization process to determine the security weights in a systematically constructed portfolio. Aperio uses the Barra Global Total Market Equity Model for Long-Term Investors for global portfolios.
- **Salience**—An approach to assessing ESG that considers the impact of companies on the issues and on the world.
- **Scoring Component**—A preconstructed combination of data within a specific topic area, for instance, Environmental Management or Diversity Performance.
- **Scoring Profile**—A combination of Scoring Components used to generate an ESG Score for each company. Scoring Profiles may be customized for a specific client or used for an Aperio standard strategy.
- **Separately managed account**—A portfolio managed by a professional investment management firm in which individual securities are held in the name of the account owner, not the investment manager.
- **Shareholder resolution**—A proposal submitted to a corporate annual meeting by shareholders according to rules governed by national securities regulator agencies (in the US, the Securities Exchange Commission).
- **Social Conversation**—Aperio’s approach to hearing from the owners of an investment portfolio about their values, their worldview, and their theory of change. These conversations are the basis on which Aperio constructs ESG criteria to apply to portfolio construction.
- **SRI**—Stands for socially responsible investing or sustainable responsible impact investing, or other variations depending on when the term was used and by whom. See Section 1 for a full discussion.

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- **SRI/ESG Menu**—Aperio's standard set of ESG offerings, including core ESG strategies, issue area specific tilts, and exclusions. The menu is one of the primary ways that clients indicate the combination of ESG issue criteria they would like applied to their portfolios.
- **Tilt**—A combination of security over- and underweights in a portfolio, relative to their benchmark weights, based on how well they score along predetermined ESG criteria.
- **Tracking error**—Standard deviation of the difference between a portfolio's returns and those of the benchmark it is constructed to mimic. Forecast tracking error can be used as a measure of a portfolio's active risk.
- **Values alignment**—An investing approach that focuses on personal values or organizational mission and values. See Section 1 for a full discussion.

Important Notes

The information contained herein is provided with the understanding that Aperio is not engaged in rendering legal, accounting, or tax services. We recommend that all investors seek out the services of competent professionals in these areas. The strategies and/or investments referenced may not be suitable for all investors, because the appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. None of the examples should be considered advice tailored to the needs of any specific investor or a recommendation to buy or sell any securities.

Investing involves risk, including possible loss of principal. Asset allocation and diversification may not protect against market risk, loss of principal or volatility of returns. With respect to the description of any investment strategies, simulations, or investment recommendations, we cannot provide any assurances that they will perform as expected and as described in our materials. Past performance is not indicative of future results.

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