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Refining Environmental Investing in Public Markets:
A Diversified Approach

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The Rise in Environmental Investing

Interest in investing with an environmental lens has accelerated over the past decade as concerns about the effects of climate change become increasingly tangible. Today, 66% of institutional investors use or plan to use investments that support the transition to a carbon-neutral economy[1] and 88% of high-net-worth investors believe companies employing "responsible business" practices are "more likely to care about the environment [...] and more likely to succeed financially."[2] With such a dramatic rise in interest and availability of strategies, we perceive two major pitfalls for investors seeking to invest with an environmental focus in public markets:

1. **Overreliance on a Single ESG Data Source; and**

2. **Prioritizing Low Emissions Absolutism over Diversification**

So, why have these pitfalls arisen? Investor interest has directly coincided with increased corporate disclosure on environmental topics such as emissions footprint, stranded asset risk, and renewables initiatives. Despite the lack of finalized climate reporting rules in the U.S., around three-quarters of S&P 500 companies provided climate risk disclosures in 2022.[3] The combination of investor demand and corporate disclosure has enabled the proliferation of public market climate strategies with over 1,300 funds and $500B in assets globally.[4] Most of these strategies (~70%) were launched in 2020 or later, resulting in a relatively new pool of investment strategies which haven't experienced full market cycles of performance.

While we applaud interest in environmental investing, to effectively do so for a public market portfolio, we believe investors should use a multi-pronged approach to support stronger climate accountability and beneficial alpha characteristics. In this paper, we highlight the pitfalls associated with two environmental strategy approaches and delve into a practical solution via our multifactor model with its targeted overlay that differentiates between leaders and laggards for a tailored framework to environmental investing in public markets.

Pitfall #1: Overreliance on Prominent ESG Data Sources

One of the most common pitfalls that investors fall prey to is crowding into a single ESG rating data set and exposing themselves to unintended data provider concentration risks. Large, third-party service providers such as MSCI, Sustainalytics, and Institutional Shareholder Services (ISS) use dedicated resources, scope, and analyst insight to score a company on its commitment across multiple environmental, social, and/or governance (ESG) characteristics. For example, within the environmental pillar of ESG this could include an evaluation of emissions and waste, raw material sourcing policies, and biodiversity effects.

As growing evidence linking ESG scores to neutral or positive performance abounded,[5] it was only natural that use of ESG ratings proliferated as a more thoughtful and proactive alternative to divestment. By 2020 these types of providers were the "most frequently referenced source of information that institutional investors [relied] on to gauge ESG performance."[6]
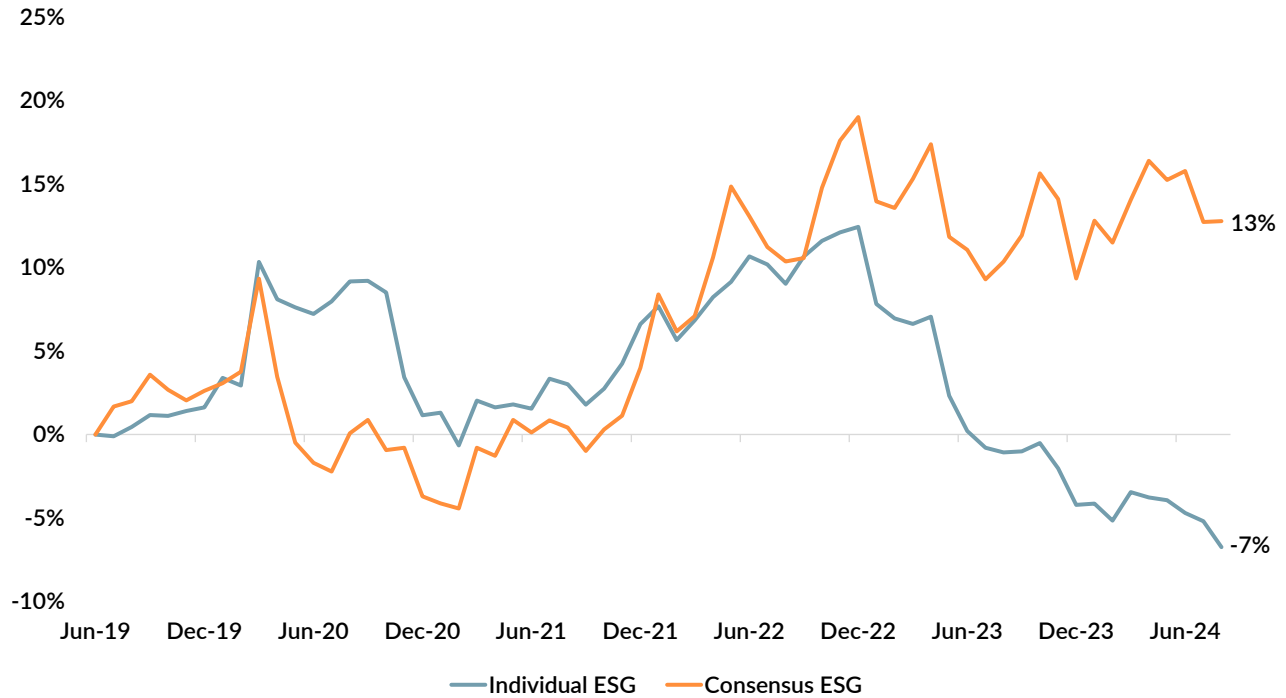
However, the use of a single ESG ratings provider does not account for the wide variances in how ESG and environmental factors are defined and measured. For instance, we've found over the years that multiple ESG data providers have a relatively low correlation with one another. This lack of correlation has been attributed to differences in methodology related to scope (56%), measurement (38%), and weight (6%).[7] Focusing on any one provider takes on the risks of that provider and its underlying factors going in and out of favor without a commensurate boost in performance.

This dynamic can be seen when evaluating the whiplash experienced by ESG-oriented investors utilizing only one ratings provider over the past five years. Evaluation of this performance spread revealed that companies with higher individual ESG scores (top quintile) underperformed lower scoring counterparts (bottom quintile) by 8% on a cumulative basis. Conversely, consensus ESG data providers showed nearly the opposite: a 14% positive spread in performance (Exhibit 1). ESG consensus data providers aggregate ratings from a variety of ESG data vendors to calculate an average industry-wide score for a security and offering a broader perspective on ESG performance.

Perhaps most importantly, we find the existence of a deterioration in the efficacy of higher quality scores versus lower quality scores to be consistent across both broad ESG scores and when isolating to environmental scores. While it's difficult to demonstrate cause and effect, the divergence in performance follows the rise in interest in ESG strategies up until 2022 at which point scrutiny increased and investors began to pull out of some of the largest, passive ESG strategies singularly employing individual provider ESG data scores.

Exhibit 1: Cumulative Return of Long/Short Individual and Consensus ESG Score Strategies - Last 60 Months

25%
20%
15%
10%
5%
0%
-5%
-10%

Jun-19   Dec-19   Jun-20   Dec-20   Jun-21   Dec-21   Jun-22   Dec-22   Jun-23   Dec-23   Jun-24

13%
-7%

— Individual ESG   — Consensus ESG

Source: Glenmede Investment Management, FactSet, MSCI (Individual ESG), & OWL Analytics (Consensus ESG)   As of 8/31/2024
ESG consensus data providers aggregate ratings from a variety of ESG data vendors to calculate an average industry-wide score for a security and offer a broader perspective on ESG performance. Returns represent past performance and are not guarantees of future results.

This extends the foundational investment tenet of the benefits of diversification beyond stock selection into data set selection. As investors deepen their interest in environmental strategies, they should be wary of employing a single data set to classify a company as high or low quality. In the absence of purchasing an exhaustive list of independent data providers, consensus ESG data could offer a more diversified and cost-effective solution. We believe that best practice dictates avoiding overreliance on a single data provider and instead combining individual (long track-record) and consensus data as inputs to our environmental model.

Pitfall #2: Prioritizing Low Emissions Absolutism over Diversification

A second common pitfall is crowding into a low carbon emissions portfolio tilt to satisfy investor preferences. This low emissions absolutism – where portfolios seek to completely minimize exposure to emissions – is highly subject to limitations around emissions reporting and can expose investors to sub-industry group concentration. For instance, emissions data availability tends to center on scope 1 and scope 2 as scope 3 is more challenging to assess and verify (definitions provided in Exhibit 2). However, scope 3 emissions are estimated to account for about three-quarters of a company's carbon footprint on average.[8] To truly capture a company's commitment to decarbonization, reliable scope 1, 2, and 3 emissions are required.

Exhibit 2:

Scope 1	Direct GHG emissions that occur from sources that are controlled or owned by an organization (e.g., emissions associated with fuel combustion in boilers, furnaces, vehicles).
Scope 2	Indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling.
Scope 3	Result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain.

Source: Scopes 1, 2 and 3 Emissions Inventorying and Guidance | US EPA
Returns represent past performance and are not guarantees of future results.

A singular focus on low emissions may also lead to imbalances within industry allocations, contributing to unintended factor tilts. For example, subindustry leadership in low emissions intensity, typically defined as scope 1 and 2 emissions adjusted by revenue is dominated by companies who focus on providing services and/or distribution, instead of incorporating companies that may be more focused on the transition to a low carbon economy (Exhibit 3). This metric also does not account for scope 3 emissions, which as previously mentioned, poses a challenge in authentically accounting for corporate carbon emissions.

Exhibit 3: Top 5 Lowest Emissions Intensity Industries (Top Quintile)

Sub-Industry	Lowest Emitting Companies by Industry	Russell 1000 Companies by Industry	Industry Concentration of Low Emitters
Research & Consulting Services	13	13	100%
Application Software	10	42	24%
Human Resource & Employment Services	8	8	100%
Property & Casualty Insurance	8	23	35%
Apparel Accessories & Luxury Goods	6	11	55%

Source: MSCI (GICS Low Emissions Subindustry & Emissions Data)
FactSet (R1000 Constituents)
Returns represent past performance and are not guarantees of future results.

An imbalanced skew to service providers and distributors may be further represented through a direct example. The large-cap tech company with the lowest emissions intensity, per MSCI, is Apple, a company which, despite being carbon neutral at the "corporate level"[9] largely relies on international partners to produce and assemble its products. Secondly the lowest intensity material name is Royal Gold, which, despite its name does not mine gold but instead relies on other companies for mining and earns revenue from purchases and royalties on precious metals. Clearly, an emphasis on low emissions in this situation does not capture the companies directly contributing to lowering emissions.

To help solve unintended sub-industry concentrations, we employ model constraints which seek to maintain industry group exposure to +/- 2% of the benchmark. As data availability of scope 3 emissions improves, we believe it will be essential to incorporate the full footprint of companies to accurately tilt towards companies across a spectrum of service providers and producers who are faring better in their emissions intensity.

A Multifactor Solution

We share factor performance below (Exhibit 4) to demonstrate that ESG and environmental factors, like other traditional investment factors may experience periods of cyclicality and underperformance. We recognize that solutions to these pitfalls are related to the development of more robust data practices and collection over time, and in the interim, investors are still interested in trying to employ an environmental tilt in their portfolios.

Beginning with the Individual Environmental Rank, from 2022 onward companies with higher environmental ratings (top quintile) underperformed in comparison to their lower ranking counterparts, as ESG factors faced cyclicality. This underperformance persisted when evaluating the performance of Individual Environmental Momentum, which assesses improvement or decline in a company's environmental score. A focus on Emissions Intensity reveals that when emissions intensive sectors (Energy, Materials, or Industrials) experienced strong performance (e.g. 2022),

Exhibit 4: Performance Spread (Top Quintile – Bottom Quintile)

	Data Provider Concentration				Low Emissions Concentration		
	Individual ENV Rank	Individual ENV Mom	Consensus ENV Rank	Consensus ENV Mom	Emissions Intensity	Eq Wgt Model	Avg Large Cap Stock
7/19-12/20	1.5	2.9	2.9	1.6	(1.5)	2.0	7.7
12/31/2020	1.0	0.7	3.0	12.2	8.1	7.1	17.5
12/31/2021	9.6	(4.3)	3.5	2.6	(1.7)	11.1	22.5
12/31/2022	1.0	(7.3)	14.2	0.1	(8.6)	(2.4)	(17.6)
12/31/2023	(7.7)	(5.1)	(2.8)	(0.7)	2.9	(2.3)	20.3
8/31/2024	(6.4)	(4.2)	1.8	1.4	(2.5)	(0.8)	10.6
Overall Return	(0.2)	(3.6)	5.3	3.3	(1.4)	2.5	10.8
Standard Deviation	(3.2)	1.3	(3.8)	(1.3)	(1.2)	(3.0)	22.0
Positive Frequency	0%	2%	6%	8%	-5%	2%	60%

Source: Glenmede Investment Management LP, FactSet, MSCI (Individual), Owl Analytics (Consensus) As of 8/31/2024
Factors are ranked by sector within the Russell 1000 Universe and rebalanced monthly. Results do not incorporate transaction costs. Equal Weighted Model is a monthly rebalanced, equally weighted combination of the five individual factors shown. Returns represent past performance and are not guarantees of future results.
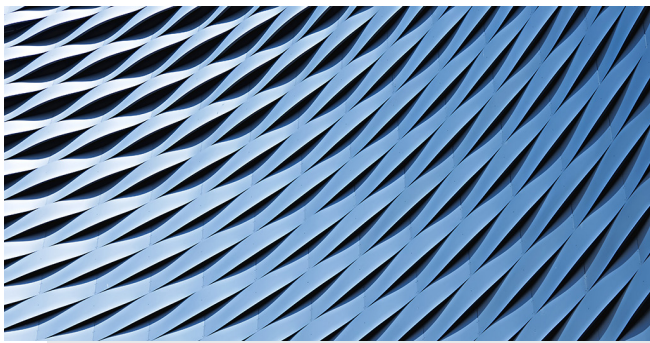
lower emitters underperformed by 8.6%. This occurred in a weak year for the average large-cap stock (-17.6%), meaning that layering on this tilt exacerbated poor performance. Consensus environmental data held up better during most periods, due to greater diversification in underlying data.

We suggest that combining each of these factors via an equal-weighted methodology instead can result in a smoother experience while still allowing for tilts towards current, best-in-class environmental criteria. While the past three years have seen drawdowns, these have been much more muted than individual thematic tilts or single data providers. Philosophically, this approach is likely more realistic, as it produces multiple, more measured bets rather than extremes in rankings from one data provider or thematic tilt, which could be due to mismeasurement or gaps in the data, as we pointed out for scope 1 and 2 emissions. There is nothing magical about the equal-weighted blend of the five factors we've listed above, but we do think that it is a practical starting point for a broad market screen to produce a portfolio with multiple positive attributes from an environmental perspective. We regularly revisit our multifactor approach and are open to incorporating more data sources in our screen as they become available.

Refined Approach to Environmental Investing via a Targeted Overlay

As detailed above, we believe that incorporating diversified data sets via a multifactor model and taking a more intentional approach to incorporating emissions can assist in avoiding common pitfalls of other environmentally oriented strategies. Over the past 20 years, we have managed strategies through multiple market cycles while witnessing the pendulum of data provider consolidation and proliferation in this field. We have also seen how a "set it and forget it" mentality doesn't work in a field that is quickly evolving. This is why we have developed a targeted overlay tool as part of our multifactor model, the Environmental Scorecard, which helps us to adjust scores for companies based on assessment of their environmental efforts when compared to peers.

We apply three levels of assessment around corporate environmental commitments:

1. **Highlight High-Quality Scope 3 Emissions Disclosure**

   We previously noted the challenges associated with measuring the true emissions footprint of a company. However, there are some companies which are beginning to report out on scope 3 emissions who have sought external validation via auditing of these calculations and score highly using leading scientific frameworks like Portfolio Carbon Accounting Financials (PCAF). While the number of companies who do so at this point is limited (approximately 19% of the Russell 1000), we increase the expected alpha in our investment models to support their strong commitment to environmental footprint via audited disclosures.

2. **Adjusting for Industry Outliers in Environmental Disclosure**

   Similarly, we seek to identify companies who are outliers in their commitment to disclosure of their environmental footprint via policies and practices that are reported. Certain practices that can be evaluated include the existence of emissions reduction initiatives, climate change policies, specific climate change disclosures, the level of investment in renewables, and the existence of climate scenario analysis. We seek not to simply reward larger companies with resources to dedicate to these commitments, rather, we penalize those companies who are clearly not on par with their industry.

3. **Adjusting Exposure to Coal Dependence**

   In alignment with best practice as it relates to targets defined under the Scient-Based Target initiative (SBTi), we assign a lower expected alpha to companies with exposure to coal greater than 20%. We perceive this as a long-term risk to a company's business model. As the Net Zero transition continues, we seek to reward companies who primarily operate using renewables; however, at this point only 5 companies in the Russell 1000 meet this criterion.[10]

Performance of companies in the Russell 1000 with positive adjustments outperformed those with negative adjustments over the past five years by 5.0% on an annualized basis (Exhibit 5). This dynamic reflects that refinement around environmental outliers, particularly as data and disclosure continue to evolve, may be additive to investment performance.

Exhibit 5: Performance Spread of Environmental Scorecard - Sector Adjusted
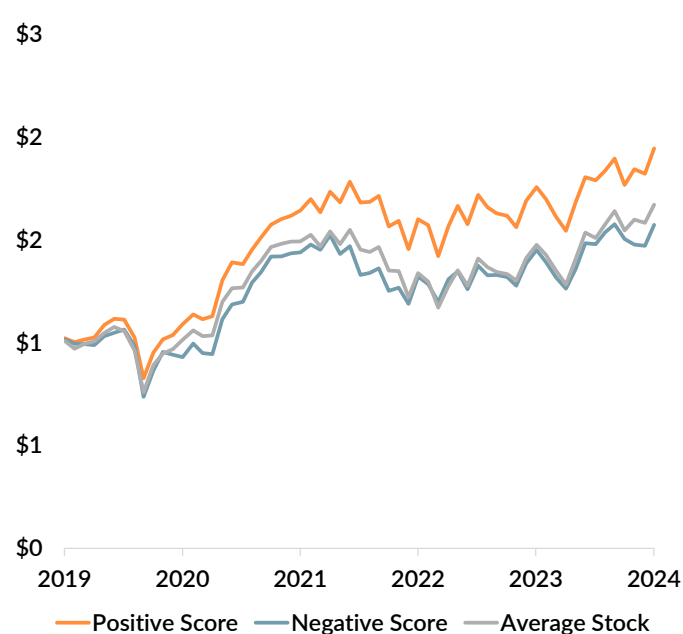
	Positive Scores	Negative Scores	Spread
7/19-12/20	11.6	4.8	6.8
12/31/2020	24.6	13.2	11.5
12/31/2021	28.2	23.9	4.3
12/31/2022	(11.6)	(14.3)	2.7
12/31/2023	14.5	17.8	(3.3)
8/31/2024	8.4	4.8	3.7
Overall Return	13.9	8.9	5.0
Standard Deviation	21.0	23.1	(2.1)
Positive Frequency	61%	55%	6%

Legend: Positive Score, Negative Score, Average Stock

Source: Glenmede Investment Management, FactSet, MSCI and Bloomberg
Performance is Sector Adjusted by Pulling out the Average Excess Return for Stocks in Each Sector on a monthly basis.
Returns represent past performance and are not guarantees of future results.

As of 8/31/2024

Conclusion

Our experience has led to a multi-pronged factor approach to environmental investing and has evolved to incorporate a refined focus on what we believe best-in-class should truly capture. Public market investors who are interested in investing with an environmental lens have a host of strategies to consider. However, it is important to look closer at the investment philosophy and mechanics of strategies to avoid common pitfalls which lead to lack of diversification and failure to capture true thematic intent.

We believe the most effective process involves a combination of data sets, factors, and a refined approach to reward and penalize outliers in the transition to a low carbon economy. When paired with an intentional engagement strategy that seeks to advocate for further climate disclosure and transparency, investors can be confident in having a constructive approach to an ever-evolving environmental investing landscape.

For more information on our approach to environmental investing, please reach out to a member of your GIM relationship team.

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¹ Cerulli, 1Q 2024 The Cerulli Edge, The ESG Issue

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