ESG by the Numbers

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Acadian's 2022 seminar series focused on applications of artificial intelligence and alternative data to ESG investing. Benefits are surprisingly broad, including risk mitigation, alpha generation, engagement, and alignment of portfolios with investors' values-driven preferences.

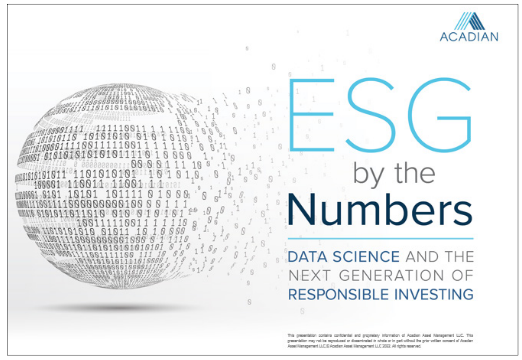
An underlying premise of ESG investing is that socially responsible companies produce superior financial results, and that markets haven't fully priced in the relationship. But questions of whether and how we can actually improve investment performance with ESG-related information have been obscured by the proliferation of uninformative and specious content and claims.

The inconvenient truth is that readily available ESG data, including off-the-shelf ESG ratings, is unlikely to be of investing value for investors seeking to maximize risk-adjusted returns. It would be surprising if it were. ESG ratings are not created (solely) for financial forecasting purposes, and they reflect the purveyor's business incentives and all kinds of judgment calls. It's no surprise, therefore, that there is enormous dispersion across ESG ratings, reflective of deep disagreement over what concepts to evaluate, how to measure those concepts, and how to weight the metrics. For example, a fossil fuel company might outscore an energy transition company depending on the relative weighting of environmental versus social and governance criteria.

Contrary to Elon Musk's recent assertion that ESG is a scam, however, ambiguity in ratings hardly implies that there is no value in ESG. It's no coincidence that ESG has developed concurrently with a revolution in systematic investing – the application of artificial intelligence (AI) to analyze alternative data, i.e., information that was originally generated for non-financial purposes. That's because there is enormous overlap between ESG-related information and the types of alt data now being exploited by systematic investors, examples of which would include free-form text in corporate communications, regulatory filings, and media reports.

ESG-related alt data is often unstructured, ungoverned, and "big." While those characteristics make the information difficult to work with, that challenge represents the seed of opportunity for systematic investors. The key to generating additional value from ESG lies in the application of a sophisticated toolkit to access, process, and analyze messy alternative data. Such methods include:

- Information retrieval—automated processing of free-form text and other alternative data sources to extract information that is material to investing. A prototypical example in the ESG context involves mining regulatory filings for significant disclosures about ESG-related risks. Doing so would be infeasible without systematic machinery (or an army of analysts) given the dauntingly long and tedious nature of such reports.



- Unsupervised machine learning—a class of AI algorithms that automatically identify patterns in data. In relation to ESG, we apply unsupervised learning to map out supply chain relationships, for example to understand companies' exposures to ESG-related themes, like climate change risk. We also apply these techniques to detect emerging ESG risks or controversies relevant to individual firms or entire industries.
- Supervised learning—the application of machine learning techniques in combination with human judgement, often to improve forecasting or to make subjective judgments. In the ESG context, we apply supervised learning to identify greenwashers, based on whether their discussions of ESG-related topics show evidence of evasion or deception. Such judgements help us to identify targets for engagement, an aspect of ESG not commonly identified with systematic investing, but one that systematic investors are uniquely positioned to pursue. Supervised learning can also help us to better engage with investee companies based on issues that are aligned with investors' values.

We believe that the systematic investing process is uniquely well-suited to achieve ESG objectives. The application of AI to analyze the alternative data that is so central to ESG represents the natural evolution of the systematic toolkit. It has perhaps surprisingly broad relevance to ESG, across alpha generation, risk mitigation, engagement, and in aligning asset owners' portfolios with their values.

Please visit www.Acadian-Asset.com for recent research on ESG, including:

ESG: The Imperative of a Systematic Approach

Decarbonizing Equity Portfolios: A "Net Zero Glidepath" Solution

ESG Engagement: By the Numbers

Quick Take: Does Decarbonization Require Betting Against Oil?

Quick Take: Decarbonizing Portfolios is Easier with Utilities out of Favor

Environmental Themes in Commodities Investing: Systematic Macro Perspective on ESG

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