ACADIAN: INVESTING IN SUSTAINABILITY

NOVEMBER 2016

IN 2009, ACADIAN SIGNED THE UNITED NATIONS' PRINCIPLES FOR RESPONSIBLE INVESTMENT (UNPRI), THE FIRST quantitative manager to do so. The decision reflected our philosophy that responsible investing naturally complements a focus on traditional fundamentals, because it captures factors that can impact firms' performance. Consistent with that view, we see responsible investing considerations as integral to Acadian's research agenda. They may help us to identify new sources of alpha, improve efficacy of existing signals, or better assess portfolio risk. We incorporate environmental, social, and governance (ESG)-based innovations into our core investment process and express them broadly across our strategy offerings rather than only via dedicated ESG offerings.

In this update, we describe our ESG research framework and highlight encouraging findings. We also touch on both the opportunities and challenges for quantitative managers as more ESG-related data becomes available.

ACADIAN'S ESG RESEARCH PROCESS

ESG themes can influence both the search for alpha and risk management. In the context of our quantitative investment process, we evaluate whether ESG attributes help us to forecast future returns or to identify and control relevant risk exposures in portfolio construction.

Development of ESG factors should start with intuition before moving to statistical validation and backtesting. In contrast, while exclusionary screens incorporated into many simplistic ESG implementations may cater to trendy investor preferences, they may not reflect a rich understanding of how the implicit signals might actually help in forecasting future returns.

With this in mind, we find two concepts particularly valuable in sourcing ESG-related alpha signals:

- **ESG attributes that reflect unrecognized risks to firms' future operating performance**
  In the context of stock selection, examples would include risks posed by poor social practices to the brand value of a consumer products company or the threat of legal and regulatory sanctions due to inadequate governance. Such considerations also motivate factor research at the country or sector level, for example, how establishment of a global price for carbon is affecting the energy industry, and how country-level risk may be impacted by poor labor practices or corruption.
- **ESG attributes that inform us with respect to management and institutional quality**
  Such factors would augment other metrics of operational controls, organizational health, and disclosure quality. Firms that measure energy use and carbon footprints, for example, may be better at quantifying costs and eliminating waste in other contexts as well.

For a candidate factor derived from such motivations to add value in our forecast model, 1) it must have a material effect on company fundamentals, and 2) investors must have difficulty in understanding or assessing it.

Our research has identified several potential ESG factors that satisfy both criteria. For example, corruption and governance quality are material for firms operating in countries with historically weaker institutional safeguards, but manifestations of the risk tend to be episodic, and they may go overlooked in markets where information quality is poor. As a consequence, we incorporated corruption and governance signals into our process years ago. Likewise, our portfolio construction methodology can readily account for business involvement exclusions and ESG related portfolio tilts, including low-carbon portfolios.

ESG RESEARCH INITIATIVES

We've identified several promising areas for our current ESG research agenda:

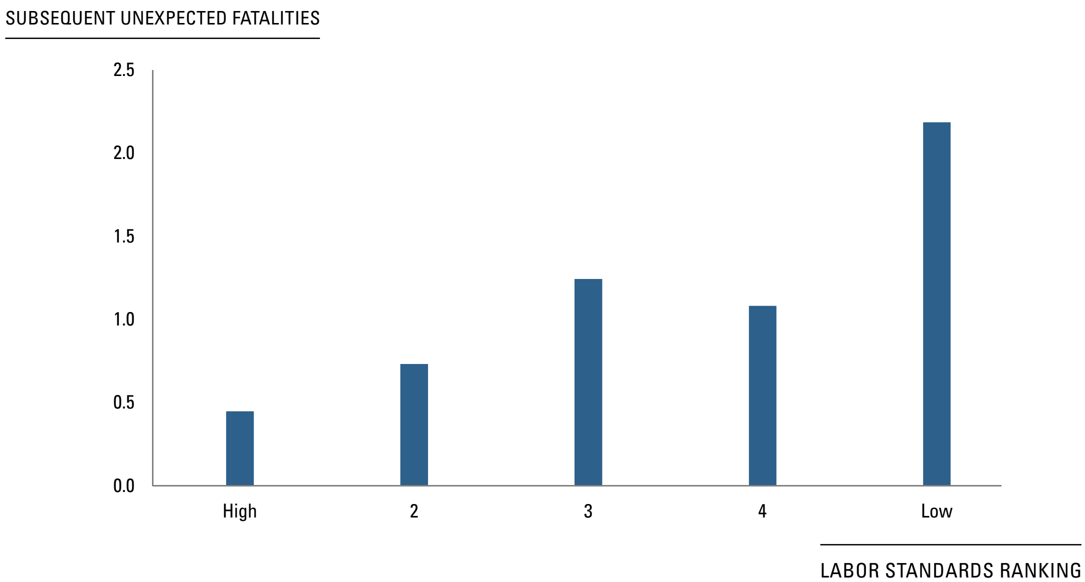
LABOR STANDARDS

For commodities firms, raw materials extraction workflows tend to be risky and complex. Delays and shutdowns due to accidents can materially harm a company's financial position, reducing revenue and generating substantial legal and regulatory costs. There may be branding and reputational costs as well.

Consistent with the intuition, our research shows that measures of labor standards, safety records in particular, are materially informative to predicting fundamentals, especially risk to the downside. We also see evidence that safety problems snowball, with current deficiencies signaling likelihood of more significant problems down the line.

FIGURE 1

Subsequent unexpected fatalities across labor standards ranking quintiles*



*Subsequent unexpected fatalities refer to deaths in the year following the labor standards ranking, reflecting proprietary adjustments for other variables that may be predictably associated with death rates.

We find that these records are indeed related to future operational outcomes, particularly when management exhibits poor practices. Figure 1, for example, suggests that labor standards rankings are associated with future death rates among employees beyond what we'd expect based on industry affiliation and other firm characteristics.

We find that the market does not easily impound such information about labor standards into stock prices of materials and energy firms, perhaps because there is debate over what constitutes a "good" safety record in these industries; such concepts may be difficult to define, measure, and value. We are exploring alternative approaches to quantifying labor standards, and we have begun to incorporate them as a factor into our alpha model.

CARBON AS A STRANDED ASSET

There is much debate about whether or not "carbon assets" (e.g., oil reserves) are "stranded," i.e., that expansion of regulatory and legal restrictions on carbon extraction and usage, such as carbon taxes or outright bans, will substantially diminish their value. In light of the potential risk, Acadian has launched fossil-fuel-free strategies, which eliminate exposure to firms that own fossil fuel reserves, as well as low-carbon strategies, which limit portfolio-level carbon exposure.

Our research agenda aims to improve our stranded carbon valuation estimates so that we can incorporate stranded carbon assets directly into our models. One hurdle is quantification of potential stranded carbon asset exposure. Rather than relying on opaque vendor-sourced ratings, we go to the source data, analyzing metrics such as expected tons of carbon emitted and energy reserves, both capitalized over a company's expected lifetime. But obtaining high quality and comparable carbon data remains a challenge, since firms are only slowly adopting global standards for defining carbon exposure. To that end, we're investing in the search for additional sources and comparison of offerings.

Once we've quantified exposure, it's conceptually straightforward to use market-implied valuations to assign a dollar value to the risk. But, in practice, there are challenges in comparing valuation discounts of firms with large carbon exposures to peers without such vulnerability. These include ambiguity over the best valuation metric, time-variation in valuation discounts, and disparities across regulatory jurisdictions. In unusual cases, we may even observe carbon premiums! Further, it may be difficult to distinguish carbon risk from generalized exposure to oil or other energy inputs. We're working on accurately estimating valuation effects in light of such complexities.

CORPORATE OWNERSHIP

We think that most investors would agree that governance is relevant to evaluating stocks. Improving governance to generate excess returns is a central premise of activist investing. But developing governance metrics that aren't so transparent that they're already impounded into stock prices is a challenge.

We see opportunity, though, around alignment of corporate ownership with shareholder interests. While certain stockholders may have incentive and influence to align management and shareholder interests, most notably founders and senior executives, certain large blockholders may be able to influence firms to adopt policies to their benefit but to the detriment of others, and some blockholders, e.g., state owners, may have no economic incentive to influence management whatsoever.

We think alignment of ownership incentives is difficult for investors to assess, so we've invested in building clean and robust data metrics regarding ownership across classes of investors. Similar to our work on carbon, we believe that misalignment of blockholder/executive/shareholder interests generates valuation discounts that we can reflect in our model.

ESG AND RISK

We believe it's important to understand, monitor and manage our portfolios' exposure to ESG-related risks. For example, in the context of a major security breach, industrial accident, or corporate fraud, the timing and materiality of the consequences aren't likely to be known immediately after the event hits the news, and risk may well increase.

While we find our standard risk forecasts already reflect higher risk associated with weaker ESG attributes, we believe that 1) ignoring ESG considerations may lead to underestimation of risk by a traditional forecast model or beta estimate, and 2) accounting for such ESG considerations may help us to reduce risk on a forward-looking basis. Some of our country-specific research, for example, indicates that companies with weakening ESG attributes tend to become more risky. That is, downgrades in company-level ESG ratings precede increases in actual realized volatility.

ESG DATA

Data is the lifeblood of quantitative investing, and ESG is no exception. At Acadian, we source ESG-related data directly from financial statements, we acquire it from third-party vendors, and we estimate/impute it where information is missing.

Although more ESG data vendors have emerged over the past decade as interest in sustainable investing has grown, only a handful of offerings have the depth and breadth of coverage to be helpful.

As well, many data providers employ subjectivity in ESG assessments, which may influence selection and relative weightings of signals within a composite metric. As a result, we tend to favor objective, granular data, e.g., a measure of fatalities, rather than an aggregate "social" score.

We're encouraged by progress towards greater disclosure and transparency that's being made through several channels, including regulatory action, stock exchange regulations, Sustainability Accounting Standards Board (SASB) initiatives, as well as investor activism. With respect to the latter, Acadian advocates for more data disclosure through both collaborative action and direct company engagement. Acadian is a leading investor in the UN PRI's collaborative engagement, which aims to promote broader disclosure of carbon emissions data. Other related global initiatives that we participate in include ESG Research Australia, the U.S.-based High Meadows Institute, and Japan's Stewardship Code.

CONCLUSION

Acadian has long believed that ESG considerations go hand-in-hand with traditional investment issues, having implemented ESG criteria into our investment process in the 1990s and becoming an early adopter of the UNPRI among our quantitative-investing peers. Over the years, we have continually invested in new ESG data sets, conducted ESG-related alpha and risk management research, participated in the development of country-level stewardship codes, and integrated a portfolio-specific ESG characteristics report for every portfolio we manage. Our efforts have been well rewarded, with Acadian in 2016 receiving an "A+" score in the Strategy and Governance module of the PRI Reporting Framework.[1]

We are emboldened by the growing acceptance and interest in ESG investing globally, and remain committed to a robust ESG research agenda containing opportunities for future factor development. Ultimately, as data availability improves, we expect greater impact from ESG signals. Our goal at Acadian is to leverage the expanding universe of data, as well as our own experience in deriving signals from that data, to remain at the forefront of an evolving ESG investing landscape.

Signatory of:

PRI Principles for Responsible Investment

[1] Acadian Asset Management LLC has been awarded an A+ score (2016) in the Strategy and Governance module of the PRI Reporting Framework. There are multiple modules that receive scores. This score is taken from the assessment report, which is compiled from Acadian's responses to the PRI Reporting Framework. The Transparency Report showing these responses is available on PRI's website. The score is not indicative of any strategy performance returns nor is it indicative of future performance. The full implementation of ESG considerations into our investment process remains client driven and client specific.

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