IQ INSIGHTS

Harnessing ESG as an Alpha Source in Active Quantitative Equities

By Anna Lester, Chen He and Chris McKnett

At State Street Global Advisors (SSGA), we engage in environmental, social and governance investing (ESG) across a broad range of asset classes and investment styles. Approaches range from the screening of ESG themes to the full integration of ESG criteria in investment processes employed by our active quantitative equities (AQE) team. Our AQE group views ESG as a source of alpha that could lead to positive portfolio performance over time. In this article, we look at how AQE includes ESG as a measure of quality when evaluating stocks.

Why ESG Matters

In the past, a great company had to be financially sound and operationally excellent. Looking forward, we believe that great — and sustainable — companies must be operationally excellent, financially sound and ESG-proficient. Globally, how to capture the performance potential of ESG is an area of significant attention for asset managers and investors. Our Active Quantitative Equities team has been hard at work on this challenge for years and has developed its own approach to ESG analysis and stock selection.

ESG investing is based on the idea that environmentally efficient, socially responsible and well-governed firms are better positioned to withstand emerging risks and capitalise on new opportunities. This premise rests on the thesis that value creation (or destruction) is influenced by more than financial capital alone, especially longer term.

Environmentally efficient firms consume fewer resources and produce less waste than competitors, helping them lower costs and generate higher returns on capital. Social factors have emerged as important proxies for talent and management quality. For example, studies show that firms with greater gender diversity provide strong corporate performance.[1] The importance of good governance is as clear as ever, especially in light of recent scandals related to auto emissions, food safety and labour issues that cost firms dearly. Effective, independent boards are a threshold condition for long term value creation and can reduce the likelihood of misconduct, fraud and other ethical breaches that damage shareholder value.

Over the last half century the composition of firm value has shifted dramatically from tangible to intangible assets. Investment theory centered on determining intrinsic value was historically linked to physical assets and book value. The mosaic theory of investing — the idea that all material fundamental data could be pieced together in a mosaic to form an assessment of investment opportunity — now needs further recalibrating to reflect the increasing importance of intangibles and non-traditional factors like ESG that influence value.

The rise of ESG in investment decision making reflects a shifting economic landscape, one in which the greatest global risks facing people, institutions and economies over the next decade may come from threats outside of purely financial categories, such as the various impacts from climate change, including extreme weather events and water crises, as well as the growing risks around cyber security.[2] Conventional investment analysis by itself has not adequately examined these non-traditional forces on future returns.

Why ESG for AQE?

Our Active Quantitative Equity team believes that markets are not efficient due to behavioural biases and limits to arbitrage that create opportunities for excess return. Critical to our success is a strong emphasis on an economic rationale for every investment theme in our strategies. We believe that over the long term, high-quality stocks with reasonable valuations and good sentiment are the most likely to outperform.

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Earnings quality — evaluating the strength of a firm's financial statements with an emphasis on the balance sheet — is the typical measure of quality. ESG, however, is another measure of quality that evaluates less tangible metrics and can provide unique insights. For example, firms that have poor ESG scores are more likely to be involved in an organisational scandal or impropriety. While these types of incidents can directly affect a stock's valuation, the opportunity cost may be greater than expected as management focuses on fixing problems rather than the long term growth prospects of the firm.

AQE believes that ESG is a source of alpha that leads to positive portfolio performance. As such, ESG is grouped with our other quality measures and contributes to evaluating all the stocks in our investable universe.

ESG Research from Early Days to Materiality

Researchers have been debating and analyzing how to invest with an ESG mindset over the last three decades, including:

- clarifying the definitions of ESG, namely what ESG investing exactly means;
- correlation and causality between ESG measures and firms' financial performance; and
- implications of ESG investing for different stakeholders.

Earlier research suffered from inconsistently defined ESG data, but over the years, the data on ESG has been improving and the scope of research has been expanded from developed to developing countries and from large to small capitalisation firms.

The primary focus of early research was on the more straightforward and objective corporate governance data such as board membership, independence, diversity and compensation. The validity of governance as a profitable trading strategy was demonstrated in Gompers et al (2003) in which they showed that well-governed firms outperform poorly governed ones.

Empirical research on "E" and "S" is less conclusive. On the one hand, Derwall et al (2005) documented a positive relationship between environmentally efficient stocks and their following market returns. On the other hand, Brammer et al (2006) showed that spending capital on some corporate social activities is destructive of firm value.

Looking ahead, as ESG data becomes more consistent and abundant, and accounting standards are likely to become more aligned, thus changing the overall context in which ESG is defined, formulated and invested, we expect to see a new generation of empirical research.

Materiality — Less is More

An important shift in ESG research has been the focus on materiality, that is, tailoring ESG metrics by industry to ensure that only the subset of available metrics that link to financial value are used in an ESG evaluation.

AQE believes that some ESG metrics are applicable across most firms. Such environmental metrics include environmental policies, carbon intensity, and greenhouse gas emissions. Cross-cutting social issues include topics such as the treatment of the firm's customers and employees. Governance issues include the quality, independence and effectiveness of the board and the quality of the audit committee.

Many ESG metrics are relevant to specific industries. For example, the environmental issue of "Share of Property Portfolio Invested in Sustainable Buildings" would be applicable to firms that own real estate. A social issue such as "Policy on Drug Donations" is only germane to healthcare firms that engage in the development and sale of drugs. Such targeted analysis not only makes ESG more contextually relevant but also diminishes the possibility of greenwashing wherein firms focus on ESG issues that are easier to control but may not be as relevant to their business.

The Sustainability Accounting Standards Board (SASB) develops standards that identify material topics and metrics, by industry, which can be used by firms and investors to identify ESG information to include in financial disclosures and investment analysis.

The benefits of a materiality-based approach were confirmed in a paper by Khan et al (2016) where the authors used the SASB sustainability map to generate a score for each firm that measures only material sustainability issues and showed that such an approach can generate positive portfolio returns. This work lends credence to the concept of responsible investing as defined by the Principles for Responsible Investment (PRI), which state that using ESG criteria can lead to better investment performance without making any claims on moral or ethical grounds.

Challenges of ESG Information

ESG information comes from a variety of sources including financial statements, corporate sustainability reports, research vendors and web crawling for news stories. There are several limitations of the data that must be understood to properly analyze ESG.

First, the historical data is abbreviated, with higher coverage starting in 2009 or later. However, ESG data is evolving quickly, with key issues being introduced that tend to have

even shorter histories. Further, the robustness of corporate ESG practices has varied considerably by region, which influences information availability. European firms are at the forefront with other regions catching up, while investor pressure around the world is growing on companies to provide more consistent and reliable ESG reporting. Still, analysis must be sensitive to this short history and both quantitative and qualitative judgements are required.

Second, while accidents and impropriety can happen at any time, the ESG themes manifest themselves over longer time horizons as opposed to more traditional financial metrics whose consequences can impact more quickly. A long term view of performance is required. There is some evidence that a focus on ESG issues leads to adopting a longer term mindset.[3]

Third, ESG information tends to be the most effective at identifying poor ESG firms that are more likely to underperform as opposed to predicting future outperformers. Hence using ESG information may be more valuable for identifying firms whose risks should be more closely evaluated.

Finally, ESG data providers can in fact have very different scores for the same company coming from several sources. Each data provider uses their own materiality framework, which can vary greatly. And qualitative ESG metrics can differ between data providers whose analysts have different views or criteria.

AQE has met these challenges by creating our own proprietary industry materiality mapping. We developed this mapping by evaluating the frameworks across different providers. We then employed both quantitative and qualitative techniques to select the relevant metrics for each industry. We also tested our selected metrics to determine whether our approach would positively impact our portfolios. We specifically did not first test the efficacy of each metric by industry and then select only those that generated positive results. We believe that given the data limitations of ESG, it was essential to identify metrics on their relevance and investment intuition before running any statistical analysis on the metrics' ability to predict future returns.

Empirical Results of Our Enhanced Approach

Using our proprietary ESG signal, which incorporates our definition of materiality, generates positive returns in the MSCI All Country World Index (ACWI) universe on a back-tested basis.

In the figures, we assess securities in the ACWI universe by ESG and compute the average return over investment horizons ranging from one to 36 months for the top 10% and bottom 10% of securities using historical data starting in 2009. We then calculate the spread returns.

Figure 1: MSCI ACWI Annualised Decile Returns, September 2009–March 2017

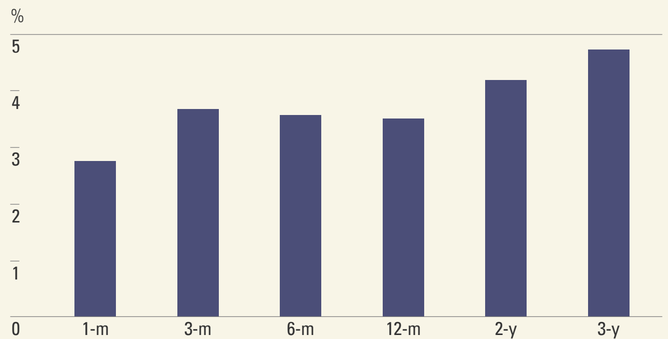
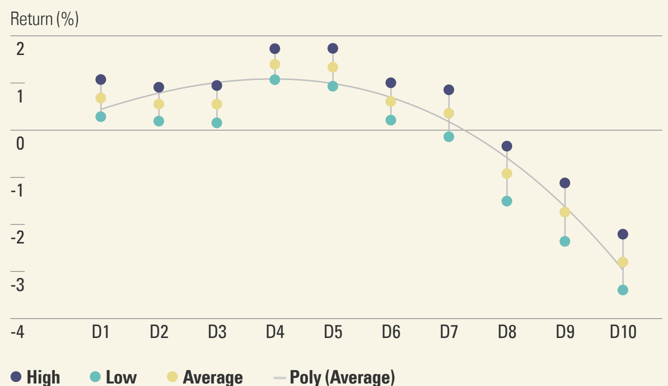


Figure 2: MSCI ACWI Decile Returns, September 2009–March 2017



For figures 1 and 2: Source: SSGA, Sustainalytics, and MSCI, data as of April 2017. Past performance is not an indication of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect capital gains and losses, income, and the reinvestment of dividends.

The positive spread indicates that during this testing period, an investment strategy that favoured securities with higher ESG scores would outperform.

Future of ESG Research

Improvements in data availability and quality, more unique data, the evolution of ESG reporting standards and the growth of new data techniques such as artificial intelligence will only enhance our ESG research and its application to our strategies.

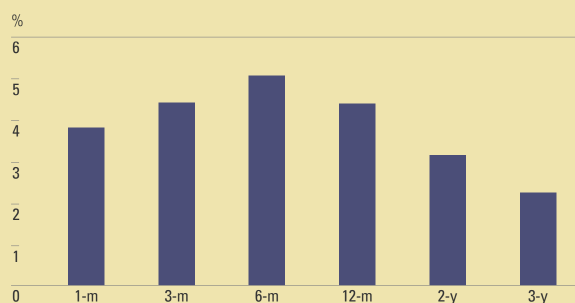
We believe the integration of material ESG metrics with other key financial measures is a powerful combination that offers the potential for long term outperformance. Unlike many traditional stock selection metrics, ESG is in its infancy with industry standards and data still evolving. These challenges are in fact an opportunity for AQE to make full use of its research capabilities and build a framework for continuous ESG research.

ESG in Emerging Markets: A Fool's Errand?

Many investors hold the belief that the ESG thesis fails in an emerging markets context. This misperception is underpinned by several commonly held views such as:

- Companies may take advantage of less developed local standards and ignore the need for strong internal ESG practices
- Local corporate governance structures may not be designed to the benefit of shareholders, particularly foreign shareholders — for example, concentrated ownership and interlocking relationships may be more common, with little disclosure of financial and related-party transactions
- Firms may be driven to grow quickly in countries where regulations are laxer than in developed markets, often at the expense of their communities and environment.

Figure 3: MSCI ACWI Index, Annualised Emerging Markets Decile Returns October 2011–March 2017



Past performance is not an indication of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect capital gains and losses, income, and the reinvestment of dividends.

While these challenges persist, they should not prevent EM firms that wish to establish a sound business from seeking to adopt robust ESG standards. Companies of any size and origin that wish to compete in the global marketplace or engage in mergers and acquisitions must adhere to global standards, including those for ESG. Nor should they discourage investors from evaluating these firms in an ESG framework.

Many emerging markets are now adopting ESG standards which should increase investor and regulator engagement with corporate governance. Moreover, international investors are helping to raise ESG awareness, inducing greater accountability via their capital allocation.

Whatever the current state for a particular market, across emerging markets overall there is an ability to more clearly differentiate between ESG leaders and laggards. We do not find the dispersion of ESG scores to be greater than developed markets, but overall ESG scores in emerging markets have lower means and skew toward the lower end of our rating scale.

[1] Women on Boards: Global Trends in Gender Diversity on Corporate Boards, MSCI, November 2015; *Is Gender Diversity Profitable? Evidence from a Global Survey,* Peterson Institute for International Economics, February 2016.

[2] *The Global Risks Report 2018, 13th Edition,* World Economic Forum.

[3] "The Investing Enlightenment: How Principles and Pragmatism Can Create Sustainable Value Through ESG", March 2017, Center for Applied Research, State Street Corporation.

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