

NEUBERGER BERMAN



JARED MANN, CFA Senior Research Analyst Global Equity Research Department

ESG Investing in 'Dirty' Industries: Materiality and the Chemicals Industry

At Neuberger Berman, we recognize that environmental, social and governance (ESG) considerations are intrinsic to developing a complete and holistic view of the companies in which we invest. We believe that ESG characteristics are an important driver of long-term investment returns from both an opportunity and a risk-mitigation perspective.

Our approach places primary responsibility for the assessment of material ESG factors with our fundamental equity and credit research analysts, supported by specialist expertise from our ESG investing team. This approach allows us to assess the ESG risks and opportunities for any issuer—even those in energy- and resource-intensive industries that might not end up being included in a "sustainable" investment fund. Yet, the value of securities issued by those companies can still be affected by ESG factors, and so even portfolios not labeled as "sustainable" ought to be considering these factors.

My role within the Global Equity Research Department is covering the Commodity & Specialty Chemicals sector and I have found that considering sector-specific material ESG factors like workplace safety and life-cycle plastics can assist in identifying sustainable and innovative companies even in a sector traditionally thought of as "dirty."

Proprietary ratings aligned with the SASB materiality assessment

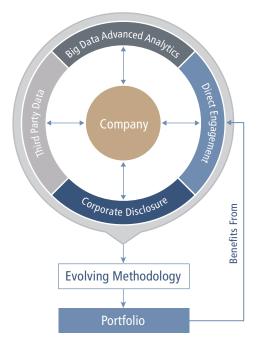
The first question that an analyst should ask when integrating ESG into their analysis of an issuer is "What specific ESG factors are generally material for the industry in which this company operates?" Fortunately after many years of consultation, the Sustainability Accounting Standards Board (SASB) has helped build a detailed framework of financially material issues that are reasonably likely to impact the financial condition or operating performance of companies from diverse parts of the economy. In November, standards for 77 industries were formally codified, and can help companies to evaluate disclosure practices and investors to analyze and engage on issues that are likely to impact financial performance.

As a longstanding supporter of the SASB—including contributing to the creation of the standards and to their ongoing maintenance via the Standards Advisory Groups—analysts at Neuberger Berman use the SASB materiality assessment as the starting point for ESG analysis. We then integrate our own sector-level expertise, and an appreciation of the investment time horizon, the specific risk and/or opportunity that a given asset class is exposed to, as well as our broader expectations for the market as a whole and the given industry relative to it. Each research analyst then works with our expert in-house ESG Investing team to identify relevant metrics, data and areas for qualitative assessment to develop an industry-specific proprietary rating for each issuer. Ultimately, each Neuberger Berman sector analyst determines which topics are most material, and can exercise their judgment to set the final rating.

As active fundamental investors, we believe in utilizing multiple sources of ESG data and research, including from third parties, as well as original insights produced by in-house analysis and from our "big data" team. Third-party data sources typically rely on voluntary company reporting, regulatory filings and publicly available government and industry data. Taken individually these data sources are imperfect and fail to capture the majority of the investable universe.

Moreover, the typical backward-looking approach to data-gathering cannot translate a company's culture and other intangibles that connote its commitment to ESG—nuances that active, fundamental research strives to uncover. That is why it is also important to engage actively with issuers on an ongoing basis to uncover timely and differentiated insights on their intentions and progress on material ESG topics. In many cases, our ratings serve as a prompt to dig beneath the surface of the results to uncover developing industry trends or company-specific actions that may not be captured in the data alone.

Active ESG "CONTINUOUS IMPROVEMENT AND ACTIVE ENGAGEMENT" Multiple Inputs Feedback Loops Evolving Methodology



During our engagement with issuers we often reference the SASB standards as our preferred disclosure framework because we believe it is intended to be decision-useful for investors. Indeed, in 2018, we integrated into our Proxy Voting Guidelines an expectation that corporate directors be familiar with the SASB standards for their industry and be able to discuss how SASB's topics and metrics relate to the risk assessment for their business. We have encouraged issuers to participate in the standards-setting process, including helping to facilitate the participation of a leading global commodity plastics company on the SASB Sector Advisory group for Resource Transformation.

Health and Safety—A Material Risk Factor in the Chemicals Sector

My own work as an equity analyst covering the Chemicals sector exemplifies the materiality-driven approach in practice. In evaluating the potentially material environmental and social factors for the sector, I particularly focus on workplace safety and sustainable product innovation over the long term, in addition to environmental issues, such as greenhouse gas emissions, air quality and water management.

CHEMICAL COMPANY RATINGS

Company Focus	Company #1 Commodity Chemical	Company #2 Specialty Chemical	Company a Company a Coating		Company #4 Agriculture Chemical	
OVERALL ES RATING	А	В	С		D	
Greenhouse Gas Emissions						
Air Quality						
Water Management						
Energy Management						
Hazardous Waste Management						
Workforce Health and Safety						
Environmental Stewardship of Chemicals						
Management of the Legal and Regulatory Environment						
Operational Safety, Emergency Preparedness & Response						
				ES rating		
			Stronger	Ave	rage Weaker	

ANALYST ASSESSMENT

In my view, plant safety is a highly material social factor as it speaks not only to management's focus on employee well-being, but also to the reliability of a company's plant operations and ultimately its profitability. Some of this can be assessed through mandatory regulatory filings (e.g., injuries reported to the Occupational Safety and Health Administration in the United States) or by using specialist third-party assessments of the robustness of the health and safety management systems in place at the company.

Nonetheless, a simplistic use of this data or assessments can be misleading in some situations. This was the case for an engine oil and industrial lubricants company that I was recently evaluating. The company was a recent spin-off into an independent, publicly traded company, and so did not have a long track record of regulatory filings, nor a robust set of publicly available health and safety policy documents. This led some third-party ESG ratings providers to negatively assess the issuer compared to its more established publicly traded company peers.

We suspected that given the company was until recently part of a relatively well-run parent, its health and safety practices were more robust than the data alone could tell us. A site tour and visit to the company's headquarters helped demonstrate a safety culture and ESG awareness on par with better-ranked organizations. For one example, the company had put in place an externally certified management system designed to drive continuous improvement in the areas of environmental, health, safety and security; this system guides everything from equipment and protocols to the stretching exercises employees perform at the beginning of their shifts to avoid musculoskeletal injuries.

Ultimately, our field work helped validate the robustness of the company's approach to health and safety, allowing me to incorporate this qualitative input into our proprietary ESG ratings. This further supported my fundamental thesis about the company's prospects.

We believe our engagement is motivating the company to improve its disclosures on workplace safety. Over time, as these disclosures feed into third-party data sources, they should boost the company's ESG standing in external ratings. As such, in this case, our active engagement allowed us to identify a potential opportunity earlier than would have been possible through the passive use of data.

Confronting Plastic Waste—A Sustainability Opportunity in the Chemicals Sector

480 billion plastic bottles per year; 500,000 plastic straws per day; 2 million plastic bags per minute.¹ These are just a few examples of the staggering rate at which plastic products pass through the hands of consumers—and in many cases into the world's oceans, lakes and rivers.

The scourge of plastic waste has not gone unnoticed, however, and there has been increasing global attention—from consumers, businesses and governments—on reducing the use of plastics. A recent European Union directive phases out certain single-use plastics in support of the "circular economy." For example, Volvo has announced that by 2025 at least 25% of the plastics used in its new vehicles will be composed of recycled material.

While such demand-limiting developments may appear broadly unfavorable to incumbent chemicals companies, deeper analysis also reveals emerging opportunities in the industry. By incorporating material environmental factors into our research, we were able to pinpoint select commodity chemical companies that are partnering with recycled-content providers to develop innovative solutions that we believe will be not only positive from a stakeholder perspective, but also material to long-term financial performance.

Plastics are likely to play a large role in the global economy for many years to come. A more nuanced look at this material recognizes its utility. Plastic is a light, durable and flexible material that helps, among other things, to reduce food waste (via its ability to preserve and protect food), cut vehicle emissions (by making cars lighter) and improve building insulation (through use of plastic foam products, which improve energy efficiency).

Several chemicals companies are aiming to limit future environmental impact of plastics by prioritizing innovations that optimize future recyclability while they simultaneously target reductions of production-related emissions and energy consumption. According to the World Bank in 2017, only 10 - 15% of plastic waste is recycled, but 25% of collected plastic cannot be recycled currently due to contaminants. Integrating recyclability into the design of plastics is a key element to improving recyclability and reducing waste.

As a case in point, one of the largest plastics, chemicals and refining companies in the world formed a joint venture to develop new polymers in conjunction with a resource management and recycling company. The ultimate goal would be to move toward a more effective plastics system that can ultimately demonstrate the potential for a wider shift from a linear to a circular economy, in which plastics never become waste. Innovation for sustainability is challenging to assess quantitatively. It takes an analyst immersed in the industry to judge how seriously a company is undertaking this kind of change and to integrate that insight into an investment assessment for the long term.

Conclusion

Assessing material ESG factors is an essential ingredient to Neuberger Berman's long-term investment philosophy, backed by fundamental research and engagement with management teams. We have built upon the SASB framework, layering proprietary insights and data to develop a perspective on individual sectors and companies that we believe can surface insights and forecast incremental improvement before they may be picked up in disclosures and third-party ratings systems. This discipline helps facilitate investment decisions in all sectors, even those like Chemicals, which may have traditionally been overlooked by sustainability-oriented investors.

¹Earthday Network, "How Much Disposable Plastic Do We Use?" April 2018.

FOR MORE INFORMATION ABOUT NEUBERGER BERMAN'S APPROACH TO ESG INVESTING, PLEASE VISIT WWW.NB.COM/ESG.

This material is provided for informational purposes only and nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security. This material is general in nature and is not directed to any category of investors and should not be regarded as individualized, a recommendation, investment advice or a suggestion to engage in or refrain from any investment-related course of action. Investment decisions and the appropriateness of this material should be made based on an investor's individual objectives and circumstances and in consultation with his or her advisors. Information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. All information is current as of the date of this material and is subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Neuberger Berman products and services may not be available in all jurisdictions or to all client types.

Investing entails risks, including possible loss of principal. Diversification does not guarantee profit or protect against loss in declining markets. Investments in hedge funds and private equity are speculative and involve a higher degree of risk than more traditional investments. Investments in hedge funds and private equity are intended for sophisticated investors only. Indexes are unmanaged and are not available for direct investment. **Past performance is no guarantee of future results**.

This material is being issued on a limited basis through various global subsidiaries and affiliates of Neuberger Berman Group LLC. Please visit <u>www.nb.com/disclosure-global-communications</u> for the specific entities and jurisdictional limitations and restrictions.

The "Neuberger Berman" name and logo are registered service marks of Neuberger Berman Group LLC.

T0361 12/18 275552 ©2018 Neuberger Berman Group LLC. All rights reserved.



Neuberger Berman 1290 Avenue of the Americas New York, NY 10104-0001

www.nb.com