



ESG INTEGRATION

INSIGHTS

2017 OMNIBUS
EDITION

Introduction



Just as the advent of financial accounting standards provided a common language for companies and investors to communicate about financial performance, the SASB Standards enable companies and investors to develop a common language about performance on financially material ESG issues. The SASB Standards are designed to yield *comparable, consistent, and reliable data on the ESG issues that matter most to business financial performance*. SASB thus enables rigorous integration of ESG considerations into investment decisions, across many types of investment strategies and asset classes.

Our purpose in launching *ESG Integration Insights* in 2016 was to share best practices on investor use of SASB Standards and tools. We were also striving to demystify investor use of sustainability information for corporate professionals – ranging from sustainability practitioners to financial executives and board members – by demonstrating how investors use the SASB Standards in investment decision-making. We were delighted to feature five case studies in the premier edition of *ESG Integration Insights* that demonstrated the utility of SASB Standards to global investors in fundamental equity and credit analysis, private equity due diligence, as well as by asset owners in manager selection.

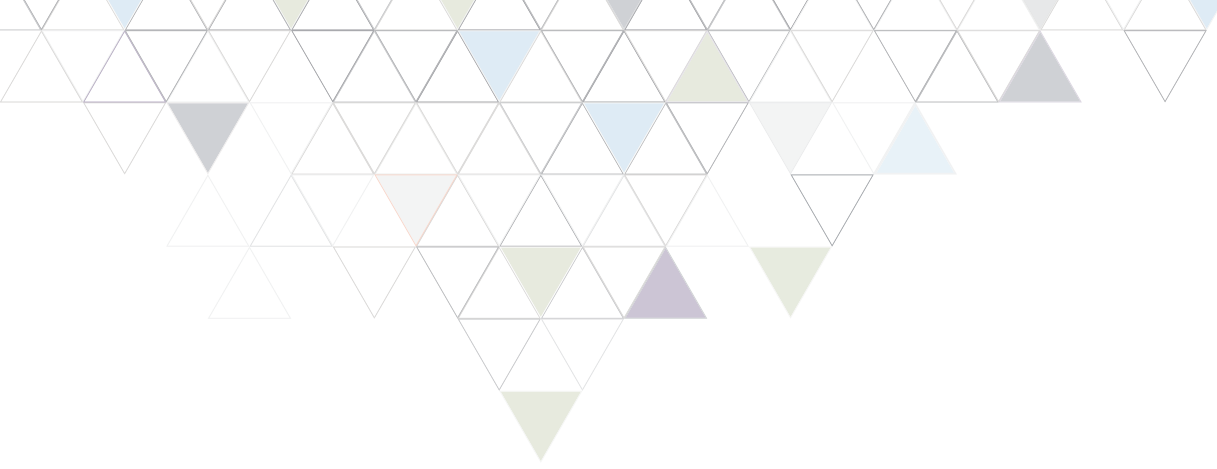
The 2017 compendium of *ESG Integration Insights* includes eight case studies, demonstrating the increasing depth, breadth and rigor of ESG integration by investors. It includes case studies by equity and fixed income investors, including use of the SASB Standards to evaluate risk in emerging markets. This year's case studies also explore the utility of SASB's Sustainable Industry Classification System (SICS™), in the context of more effectively constructing less carbon-intensive indices, and how certain industries are more exposed to risk and opportunities inherent in the Sustainable Development Goals (SDGs). The case studies also continue to explore the use of the SASB Standards by asset owners to evaluate investment managers.

SASB's Standards reflect years of work – not only by SASB, but also by investors, corporations and others – whose efforts have helped shape and refine the standards. We thank everyone who has contributed to development of the SASB Standards and the contributors to this publication. We look forward to sharing future insights with you as the practice of ESG integration continues to mature. Please contact me if you are interested in submitting a case for inclusion in future editions of SASB's *ESG Integration Insights*.

Best regards,

A handwritten signature in black ink that reads "Janine Guillot". The signature is fluid and cursive, with a large initial "J".

Janine Guillot
Director, Capital Markets Policy and Outreach



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BlueSky Investment Management

ESG Integration: the Evolution of Value Investing

Introduction

Professional investment management is organized around the principle of fiduciary duty. Simply stated, a manager's actions must be undertaken for the sole benefit of the client, typically measured by risk-adjusted financial return. Today, there is mounting evidence that environmental, social and governance (ESG) factors can impact financial return, including a wide body of academic studies, investment bank research, as well as research conducted by the Sustainability Accounting Standards Board (SASB). To further explore the impact of ESG on financial return, BlueSky conducted our own research over an 18-month period and found that, while the majority of ESG data available showed little value, there is a high correlation between material ESG factors and share performance and return on invested capital (ROIC), confirming the significant financial impact of ESG and consideration of these factors in the investment process.

We believe the performance of many recently created ESG-focused products suffers from the following shortcomings:

- Use of ESG as a secondary screening tool, and reliance on subjective third-party ESG scoring and rating methodologies that may have little or no connection to financial materiality
- Strong home country bias among US investment managers, offering few global or international equity ESG-integrated investment solutions
- Integration of ESG in investment decisions solely from a growth investing perspective

The financial materiality of ESG factors can influence both value and growth, and can be applied beyond the US to evaluate international companies.

▶ BlueSky is a global fundamental value investment management firm, dedicated to active, high-quality value equity investing and founded on a process-driven, repeatable approach. We seek high-quality businesses, with enduring competitive advantages, purchased at reasonable prices. Our unique investment approach integrates material environmental, social and governance (ESG) factors that our proprietary process has demonstrated to be highly correlated with performance. We believe our broader perspective to investing, which analyzes companies across a wider set of material information, can enhance performance and provide superior risk management.

ESG Integration: the Evolution of Value Investing

BlueSky was founded on the simple concept that integrating value investing with ESG analysis can enhance performance and better manage risk – that ESG integration is an evolution of value investing. In short, this approach employs a wider lens that can more fully reveal risks and opportunities, leading to better investment outcomes. BlueSky is unique as an ESG integrated fundamental value firm with global, international, and US strategies. As value investors, we believe the key to long-term investment success is our ability to identify and purchase companies that trade at significant discounts to their intrinsic value and sell these investments when intrinsic value is realized. From our perspective, integration of carefully selected and financially material ESG factors represents a significant opportunity to evolve and improve upon traditional value investing techniques. Our ESG integration approach broadens the pool of potential risks we seek to avoid while also identifying potential competitive advantages, enabling the evaluation of companies across a more complete set of material information to drive better investment decisions.

Margin of safety is one of the key principles of value investing, originally developed by Benjamin Graham and described in his book, *The Intelligent Investor*. This simple concept is the cornerstone of active investment management, which illustrates the importance of buying a company at a significant discount to its intrinsic value. The greater this discount, the greater the margin of safety. Stocks trading below their intrinsic value will typically fall less in a declining market and thus offer the benefit of lowering investment risk. We believe ESG integration further enhances value investing principles; managing material ESG risks can reinforce the margin of safety principal.

In determining a company’s intrinsic value, fundamental value investors have traditionally focused on ROIC, free cash flow, strength of balance sheet, margins, competitive advantages/moats, and management team quality. Including analysis of material ESG issues that may affect a company’s intrinsic value can strengthen the fundamental value investing framework.

One might ask, how can a company’s ESG performance be tied to financial performance and affect the fundamental value analysis? While material ESG factors differ by sector, we offer some broad examples of how a company’s ESG performance can create shareholder value or affect company risk in Figure 1, below.

Figure 1: Value Creation and Risk Management in ESG Factors

Value Creation	Environment Companies increase profitability through effective resource management, waste reduction and adoption of sustainable processes.	Social Capital A high quality workplace can be key in attracting and retaining top talent, which can increase productivity, reduce employee turnover, and create significant competitive advantages.	Leadership and Governance Sound governance practices create a culture of transparency and accountability, safeguarding license to operate and reinforcing brand reputation. Prudent management of the supply chain can help protect fair treatment of the workforce and suppliers and help ensure ethical sourcing of materials. Strong brand reputation can boost demand for products or services.
Risk	Poor environmental performance can increase cost of capital, and operating costs, and create potential liabilities including fines and lawsuits.	Poor management of human capital can create higher turnover, increase costs, and make companies less competitive.	Poor governance can result in fines; legal costs; disruptions to materials; and labor and productivity. These negatively impact revenues, increase cost of capital, and severely damage brand reputation.

Figure 1 clearly demonstrates the potential financial impact of ESG. BlueSky believes that it is our fiduciary duty to integrate ESG across material issues that can impact a company’s financial performance. From our perspective, it is only a matter of time before investors recognize that the real risk lies in the failure to assess ESG impacts in the investment process.

Nonetheless, we have found it challenging to find quality ESG data to properly evaluate how companies are responding to material ESG issues. Despite a growing body of ESG data in the marketplace, investors are faced with the following problems:

- Data of varying quality
- Understanding what is being measured
- Subjective ratings and ranking methodologies
- Immateriality of data disclosed
- Limited coverage beyond large caps

Development of BlueSky Investments’ ESG Integration Methodology

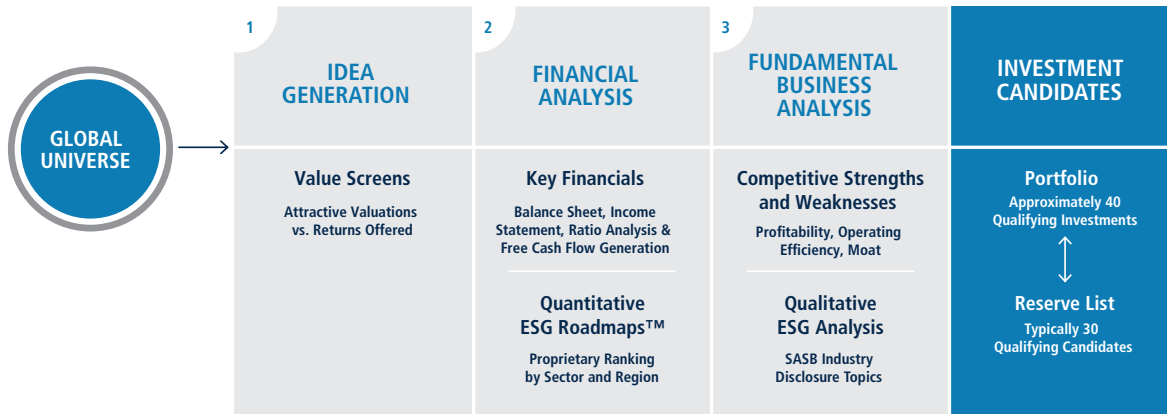
Faced with the aforementioned ESG data challenges, BlueSky conducted 18 months of quantitative research to explore the financial materiality of ESG issues, with the goal of integrating material ESG factors into a fundamental value investing framework.

Our research determined that the materiality of ESG factors varied by sector and region. Companies performing well on material ESG factors in a given sector and region were positively correlated to both increased ROIC and share performance. The major stumbling block revealed by our research was that much of the current body of ESG data provides little correlation to performance and risk, emphasizing the importance of an empirical approach.

BlueSky proceeded to develop a proprietary ESG evaluation framework designed to drive alpha and better manage risk. We created over 40 unique ESG Roadmaps™ comprised of material ESG factors unique to each sector and region. We then ranked companies based on a composite score of empirically selected material factors sourced from corporate disclosures, specialized datasets, and other publicly filed information. This process allowed us to integrate only financially material ESG data that adds value to our process, while ignoring vast amounts of data that was financially immaterial.

During the initial phase of our investment process, companies identified by our value screens are evaluated through our proprietary quantitative ESG framework, which ranks each company’s ESG performance on financially material issues by sector. Utilizing these screened results, the firm concentrates on the most attractive three deciles (30%) of companies for portfolio inclusion. We then screen for quality to further narrow portfolio candidates, considering, among other factors, balance sheet strength, operating efficiency and profitability.

Figure 2: BlueSky’s investment process seeks to broaden traditional fundamental value work by integrating the quantitative and qualitative ESG assessment described below.



To provide a more complete understanding of a company's ESG performance on material issues, BlueSky combines our quantitative work with an equally focused and rigorous qualitative ESG analysis. This is particularly valuable in situations where there is limited ESG data. SASB's industry standards and disclosure topics are integral to this phase of analysis, providing ideal roadmaps to best assess each company's unique subsector risk exposures and potential opportunities.

In this final phase of evaluation, we closely examine a company's management quality, its three to five year business outlook, and its ability to maintain competitive advantages. Fundamental analysis of a company's operational performance and survivorship is based on profitability, leverage, and liquidity rates. Companies that do not score above-average on our ESG ranking or that lack sufficient ESG data may be further considered if there is reasonable confidence the company is performing well across SASB industry disclosure topics in our qualitative assessment. ESG risks and opportunities unique to each company and sector are discussed and carefully considered in determining future outlook. (See Figure 2.)

Case Study: Howdens Joinery



Howdens Joinery Group Plc is one of the largest integrated suppliers of kitchens and joinery products in the United Kingdom. Founded in Yorkshire in 1995 under the name Galiform Plc, the company originally operated as a successful business unit within MFI Industries. Following a restructuring, MFI sold its unprofitable retail businesses to focus on the more profitable Galiform, and the company was renamed Howdens Joinery in 2010. Last year, Howdens designed, manufactured and sold over 400,000 kitchens, 2.5 million doors, and 770,000 appliances in the United Kingdom alone. This was accomplished through their network of over 600 outlets across the UK that cater primarily to local tradesmen. With presence in Belgium, France, Germany, and the Netherlands, Howdens is testing formats for potential expansion.

In the fall of 2016, Howdens first appeared on several of our value screens after falling approximately 25% following the UK vote to leave the European Union. We believed the market fears were at extremes for a company that had sound management, competitive gross and operating profit margins, good cost controls, and a flexible business model with sound incentives for both managers and employees of outlets. Additionally, the company was buying back shares and had net cash on their balance sheet. Howdens had also demonstrated it had pricing power and was able to navigate successfully through the 2008 credit crisis.

From an ESG perspective, there was limited coverage of Howdens across the material ESG data in our proprietary quantitative model. Had our approach relied solely on ESG data, we would not have been able to continue with our analysis. However, because our process utilizes both data and a qualitative ESG assessment, we were able to move forward with our research. We began analyzing the company's performance across material topics identified in SASB's SICs classification for Building Products & Furnishings (Consumer Goods Sector*). Here are our findings:

SASB Disclosure Topic: Energy management in manufacturing

Howdens Joinery has been certified by the Carbon Trust Standard for several years in recognition of their success in reducing overall energy usage and their commitment to continued reductions. The company reduced its carbon footprint (tCO₂e per £m) by 13.4% from 2014 to 2016. Over this time period, the company's total scope 1 and scope 2 emissions have remained relatively flat while revenues increased by 19.8%. The company has reduced energy use through technology innovations in their cabinet production, conversion to LED lighting, and other efficiencies. Additionally, the company manages and measures truck fleet efficiency, having improved miles per gallon by 7% since 2014.

* In 2018, SASB's Sustainable Industry Classification System (SICS) will be updated, at which time the "Consumption II" sector will be renamed "Consumer Goods."

Case Study: Howdens Joinery (cont.)

SASB Disclosure Topic: Management of chemicals in products

The company follows a number of regulatory guidelines and processes to ensure safety of workers and consumers of its products. Howdens' internal process is governed by the Control of Substances Hazardous to Health (COSHH) Regulations 2002. Under these guidelines, the company is required to formally assess and approve chemicals used in manufacturing, maintenance, and cleaning. This includes the impact of chemicals on workers in the manufacturing process and the full life cycle impact. The company also requests formal confirmation from all suppliers that there are no Substances of Very High Concern (SVHC's) as listed under the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulations. Howdens' cabinets are manufactured from pre-made wood based panels that are certified under the EU Construction Products Regulation, which conforms to strict chemical standards. The company also performs risk assessments of materials and products in terms of country of origin, degree of complexity, and prevalence of non-compliance based on industry intelligence. Higher risk products are then screened through additional testing to ensure compliance with required standards.

SASB Disclosure Topic: Product lifecycle environmental impacts

The company has been successful in reducing waste in its manufacturing process through the implementation of newer machinery and the use of software technology. They have worked with suppliers to manufacture custom-sized chipboard in order to ensure minimal waste in production. Despite this, since wood-based products make up over 75% of their products, the company produces a lot of sawdust waste. The company realized an opportunity to use the sawdust waste as an energy source and installed efficient biomass boilers at their two manufacturing sites in 2015. Over 12,000 tons of sawdust was converted to energy in 2016, generating approximately 42,000 MWh of energy. The company recycled or reused 98% of its total waste in 2016. 100% of all packaging was from recycled sources. The company implemented a policy of repairing and reusing wooden shipping pallets over nine years ago. In 2016, over 165,000 pallets were repaired and reused, thus significantly reducing what might have become addition waste.

SASB Disclosure Topic: Wood sourcing

Over 75% of Howdens' products are wood or wood-based, and the company sources 100% of wood-based materials from FSC (Forest Stewardship Council) certified sources. FSC is a non-profit organization setting what is widely considered to be the gold standard for responsible forest management and wood sourcing. The company is committed to using FSC certified sources to ensure that there is independent verification of responsible sourcing. The company also works closely with suppliers to ensure continued compliance with FSC standards.

With very little ESG data to rely on, this qualitative ESG assessment gave our team a high degree of confidence that Howdens Joinery was performing well across financially material ESG factors. This example highlights the challenges regarding the state of ESG data, but also emphasizes the importance of combining both data and qualitative ESG research. SASB's research helped us focus on material topics likely to impact financial performance and, following further fundamental work, we ultimately added Howdens Joinery to our portfolio. Had our process relied solely on ESG data, we likely would not have been able to move forward with purchasing this company.

ESG in the Global Context

As part of our proprietary research, BlueSky examined ESG materiality globally and we found much of SASB's industry standards to be applicable in analyzing European companies. However, within a global context, BlueSky has observed regional and cultural differences that required us to create customized ESG Roadmaps™ that incorporate only those ESG factors that are uniquely correlated to financial performance in that particular region. For example, we have found very little materiality across social factors in Japan, while certain environmental and governance factors remain important there. Our quantitative research found social factors such as supply chain management, workplace satisfaction, human capital development, and employee retention to have no correlation to increased ROIC or share performance, while these same factors showed more significant correlations to increased ROIC in both the US and Europe. Further, to compare a Japanese industrial company to a European industrial company requires a more nuanced approach due to, among other things, the keiretsu corporate structure prevalent in and unique to Japan. At BlueSky, we made the strategic decision to carve out Japan and other geographic regions as separate universes in order to effectively evaluate and rank companies on financially material ESG factors.

In Conclusion

While we believe it is challenging to formally quantify all ESG risks and opportunities, our quantitative work combined with our qualitative ESG analysis (which leverages SASB's framework) allows our team to confidently assess a company's performance across financially material ESG factors. Our team can then discuss each individual portfolio candidate within our holistic value/ESG framework. ESG provides an important measure of corporate quality that broadens traditional fundamental value investing to more fully reveal risks, opportunities, and competitive positioning. Through this wider lens, we are able to identify great businesses at attractive valuations where we are confident that the company is addressing material ESG risks that reinforce our margin of safety. Our focus on financially material ESG issues also assists us in identifying companies that may have competitive advantages that can increase intrinsic value.

DISCLOSURES

BlueSky Investment Management, LLC is a Registered Investment Adviser. This presentation is solely for informational purposes and not a solicitation to invest. Advisory services are only offered to clients or prospective clients where BlueSky Investment Management, LLC and its representatives are properly licensed or exempt from licensure. Past performance is no guarantee of future returns. Investing involves risk and possible loss of principal capital. No advice may be rendered by BlueSky Investment Management, LLC unless a client service agreement is in place. Please contact a financial advisory professional before making any investment.



Nordea Asset Management

Nordea 1 Emerging Stars Equity Fund – ESG Integration in Emerging Markets

Executive Summary

The global momentum for responsible investment continues as corporates navigate the challenges and opportunities brought by the rapidly-transforming landscape of environmental, social and governance (ESG) issues. Investors increasingly recognize that company performance on ESG factors can result in material impacts on the risk and return profiles of their investments; now, more than ever, sustainable (and unsustainable) business practices can significantly affect financial returns and the health of financial markets. The following case outlines Nordea Asset Management's (NAM) investment philosophy and approach in creating the *Nordea 1 Emerging Stars Equity Fund* and specifically, how SASB Standards were used to augment our framework for assessing a Chilean copper mining company¹ as an attractive and responsible investment for inclusion in the fund.

Nordea Asset Management and ESG Integration

Responsible investment has long been an integral part of our DNA as a Nordic asset manager. NAM signed the UN-backed Principles for Responsible Investment (PRI) in November 2007. As one of the first asset managers in the Nordic market to sign the PRI, we have long been committed to incorporating ESG issues into our investment decisions and have a longer track record than many global asset managers in developing a cohesive approach to such integration.

▶ Nordea Asset Management (NAM, 219bn EUR in assets under management) has a global business model, and manages asset classes across the full investment spectrum, including equity, fixed income, and multi asset solutions. NAM is a leading investment manager in the Nordic region, and also serves a large and growing body of clients in Europe, the Americas and Asia. NAM's mission to deliver returns with responsibility is based on active management and thorough risk management. We strive to optimize risk-adjusted returns for our customers vs. a benchmark or on an absolute level. Our client base is equally split between our captive distribution channel and external clients.

¹ Nordea Investment Management, AB has selected these case studies for illustrative purposes only and is not intended or should be interpreted as a recommendation to purchase or sell such security. The security references may or may not be held in portfolios managed by Nordea Investment Management, AB and, if such security is held, no representation is being made that such security will continue to be held.

We include ESG considerations in our investment analyses, decision-making processes, and ownership policies and practices. We believe that incorporating ESG factors in our investment activities can safeguard shareholder value and enhance long-term returns. This is supported by growing bodies of industry and academic research² correlating ESG performance to corporate financial performance and improved shareholder returns. Considering material ESG issues in our investment decisions is a part of our fiduciary duty to our clients; being ESG proactive is reflected in our mission statement.

Nordea 1 Emerging Stars Equity Fund

Nordea Asset Management launched the *Nordea 1 Emerging Stars Equity Fund* in April 2011, with the aim of creating a unique emerging market equity fund in which fundamental strategy and valuation analysis in portfolio stock selection fully integrates ESG factors. Rather than utilising a “first-generation” approach to ESG considerations, i.e., utilising a “negative screen” to avoid certain companies and sectors, we wanted to take a positive, “second-generation” approach, in which ESG analysis could add value to the investment case. The vision was to create a high alpha performing fund in which ESG considerations act not only as risk mitigants in securities analysis and portfolio construction, but also improve understanding of *a company’s value drivers more holistically*. We recognised a number of key factors as we developed this portfolio:

1. Important information which could have a material impact on companies in emerging markets was not discernible via the traditional data sets used in conventional investment analysis.
2. While emerging markets are typically considered to carry higher risk, favourable structural growth dynamics in certain markets have the potential to interact strongly with company-level ESG factors and thus, present significant return opportunities in these markets. ESG analysis would, therefore, provide us with a better “distribution curve” of future performance and potential value creation.
3. Engaging with companies to improve management of material ESG issues could be an additional lever to unlock value if a company’s cash flow was being overly discounted due to either poor reporting or poor management of ESG factors.

We were one of the first-movers in creating a “second-generation” approach to integrating ESG in investments, and have one of the longest track records on this approach from a performance perspective.

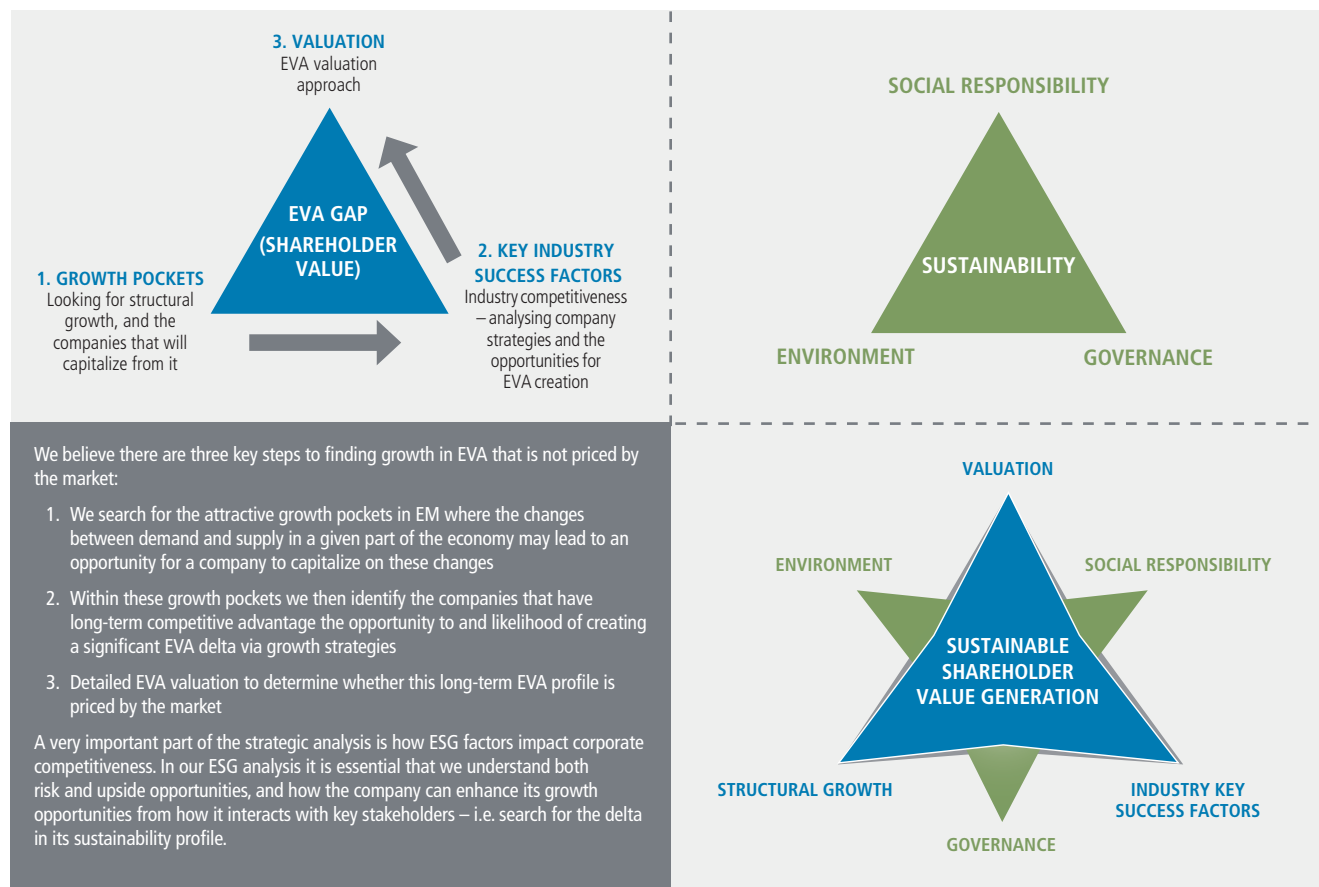
The Emerging Stars Investment Philosophy: “Returns with Responsibility” in Emerging Markets

We believe that, when Economic Value Added (EVA)—the incremental difference in the rate of return over a company’s cost of capital—is not properly priced by the market, excess shareholder value can be generated. Companies now operate against a backdrop of mounting operational complexity, characterized by unprecedented wealth transfers, shifting demographic and political landscapes, rising emerging-market competitiveness, and disruptive technologies, among other things. Thus, we believe that an approach to securities selection focused solely on long-term EVA is no longer adequate to generating alpha for our clients. Complementing traditional investment analysis with ESG enquiry is necessary to understand how these issues—which tend to be excluded from conventional investor-focused communication—affect the ability of companies to grow and create shareholder value. Furthermore, we believe that on-the-ground company interaction is necessary to get a full picture of how companies are managing these complex issues.

With this in mind, we identify the companies that can create a significant relative change in their EVA generation in a sustainable way; i.e., have a “delta” in EVA profiles as well as a “delta” in Sustainability profiles (see Figure 1). We believe this process identifies the future “star” companies in emerging markets; i.e., the companies that will generate sustainable shareholder value and outperform.

² Khan, Mozaffar and Serafeim, George and Yoon, Aaron S., *Corporate Sustainability: First Evidence on Materiality* (November 9, 2016). *The Accounting Review*, Vol. 91, No. 6, pp. 1697-1724

Figure 1: “Returns with Responsibility” in Emerging Markets



Integration of ESG information in competitive advantage analysis (e.g., impact to cost structure, risk factors, etc.) and into the valuation for our explicit forecast period differentiates our process from that of others. Investment time horizon and longer-term forecasting capabilities are important components of this process; ESG data holds information critical to understanding how companies are positioned to manage longer-term risks. This is explicitly incorporated in our valuation framework through the setting of our “fade rate” for the company. The fade rate describes the share of the excess return the company generates, which we view as sustainable in the longer-term. In general we view companies’ competitive advantages as eroding over time, resulting in declining excess returns. However, with the integration of the ESG aspect, we allow companies with positive scores and thus stronger competitive advantages to maintain a higher ROIC premium in the longer term.

We believe true integration of financial and ESG factors requires in-depth analysis and that our methodology for identifying emerging market “star” companies generates sustainable shareholder value. The *Emerging Stars Equity Fund* has shown significant outperformance³ both compared to MSCI Global Emerging Markets and Peers, where it is ranked in first quartile on all relevant horizons. The key performance driver has been stock selection, in particular, exposure to the “New Economy” driven by consumers in emerging markets and insights into companies’ growth opportunities and value creation through company stakeholder analysis.

³ Past performance is not a reliable indicator of future results.

Proprietary ESG Analysis and Integration of SASB Standards

Our proprietary ESG research approach attempts to identify stakeholder risks at the company level and is conducted from two perspectives. First, we assess alignment (or misalignment) of business models in relation to global sustainability goals such as climate stability, resource scarcity, healthy ecosystems, basic needs, wellbeing or decent work.⁴ Second, we evaluate a company’s ability to manage material ESG issues in relation to stakeholders, such as employees, suppliers, customers, communities, regulators, or the environment. This involves assessing a company’s strategy and performance to address exposure to material ESG issues that could impact its risk/reward profile or growth opportunities.

Incorporating SASB Standards in our ESG analysis has enabled us not only to better assess and identify the **financial materiality** of ESG issues, but also to identify the relevant indicators or data points that could reflect a company’s positioning on those issues. Utilizing SASB industry standards along with country ESG risk indicators provides us with further granularity on materiality.

Our proprietary ESG analysis is summarised in a company scorecard comprising of five pillars, as displayed in Figure 2. The business model and corporate governance pillars receive a fixed weight, whereas the three remaining pillars – business ethics, environmental considerations and social issues – are variably weighted depending on the company risk exposure, financial impact, and reputational risk. This results in a final rating ranging from A to C, and positive or negative momentum indicators, as displayed in Figure 3. Our research approach also allows us to identify areas of underperformance and then engage with companies in hopes of influencing them to address challenges and move in the right direction.

Figure 2 – ESG Scorecard

ESG Scorecard: Company PLC						Rating: A-C / + - 2017-06-12
	BUSINESS MODEL	CORPORATE GOVERNANCE	BUSINESS ETHICS	ENVIRONMENT	SOCIAL	
	Development Contribution	Board structure and independence	Key Issue	Key Issue	Key Issue	
	Country/Sector Risk	Board compensation practices	Key Issue	Key Issue	Key Issue	
		Minority shareholder influence	Key Issue	Key Issue	Key Issue	
		Diversity of Board & Executive management				
		Audit & Accounting practices				
		Sustainability governance				
RATING	A-C	A-C	A-C	A-C	A-C	
Risk exposure			1-3	1-3	1-3	
Financial impact			1-3	1-3	1-3	
Reputational impact			1-3	1-3	1-3	
WEIGHT	30%	10%	Variable%	Variable%	Variable%	

RATING

- Key sector issues are identified
- These are complemented with country and company specific issues
- Policy, strategy, performance are KPIs evaluated
- Voting and engagement conducted with companies to improve rating

WEIGHT

- Business model 30%
- Governance Quality 10% (implicitly assessed in the remaining 3 pillars)
- Business ethics, Environment and Social have variable weights based on
 - Risk exposure
 - Financial impact
 - Reputational impact

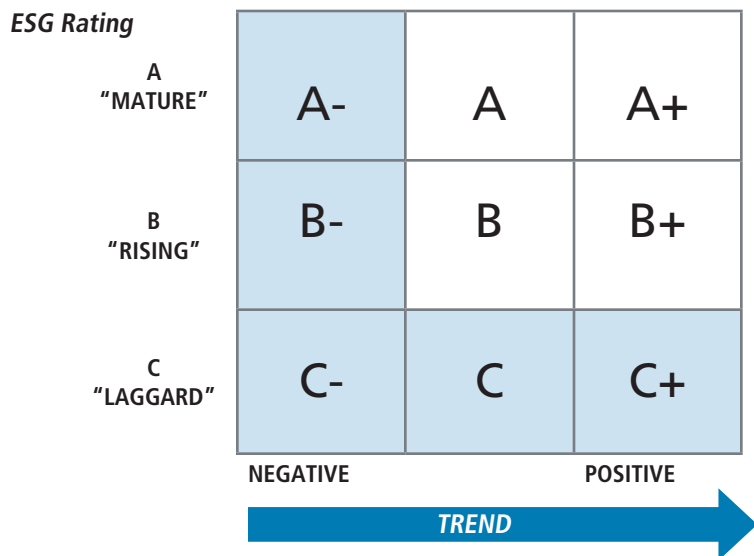
RISK MITIGATION AND VALUE CREATION

▶ Incorporating SASB Standards in our ESG analysis has enabled us not only to better assess and identify the **financial materiality** of ESG issues, but also to identify the relevant indicators or data points that could reflect a company’s positioning on those issues. Utilizing SASB industry standards along with country ESG risk indicators provides us with further granularity on materiality.

▶ Our active ownership and engagement activities not only enhance corporate transparency, but have also benefited from access to SASB Standards as engagement tools for industries globally. We believe regulators and exchanges in emerging markets (e.g., China, India, South Africa, Malaysia, Thailand, etc.) would do well to look to SASB Standards as they pursue encouraging recent initiatives to establish ESG reporting requirements for listed companies in these markets.

⁴ Investment Leaders Group, Cambridge Institute for Sustainability Leadership

Figure 3 – ESG Rating Matrix



SASB Standards and Disclosure in Emerging Markets

Although companies have improved their ESG disclosure in recent years, the state of disclosure on relevant and quantifiable data points remains relatively low. This has been true especially in emerging markets. Thus, when NAM launched the *Emerging Stars Equity Fund* in 2011, we found ourselves to be pioneers in emerging markets ESG investing, and found it difficult to find good information on how companies were managing material ESG issues in these markets. We also discovered a “disclosure bias” in which emerging market companies suffered from poor—in some cases, artificially low—ESG ratings compared to their developed market peers via third-party rating agencies. To augment third-party ratings viewpoints, we implemented on-site visits as part of our ESG research process through which our in-house analysts regularly meet with management.⁵ Thus, we have developed assessments of ESG performance for emerging markets issuers over time that differ from those of third-party ESG ratings agencies. Our active ownership and engagement activities not only enhance corporate transparency, but have also benefited from access to SASB Standards as engagement tools for industries globally. We believe regulators and exchanges in emerging markets (e.g., China, India, South Africa, Malaysia, Thailand, etc.) would do well to look to SASB Standards as they pursue encouraging recent initiatives to establish ESG reporting requirements for listed companies in these markets.

⁵ Click on the following link to view a summary of our on the ground engagement with Antofagasta, a Chilean-based mining company <https://www.youtube.com/watch?v=dlyrs3LujYA&t=2s>.

Can a “Responsible Investor” Invest in a Mining Company?

Can a “responsible investor” invest in a mining company? Our answer is “yes”. We believe Antofagasta, a company in the mining (copper) industry, can deliver a risk-adjusted return in a sustainable way.

The following example demonstrates how we have integrated SASB Standards into our company analysis for Antofagasta⁶, a Chilean-based copper mining company in the *Nordea 1 Emerging Stars Equity Fund*. Antofagasta plc is a leading mining group and one of the ten largest copper producers in the world. It owns interests in and operates four open-pit copper mines in Chile (Los Pelambres [60%-owned]; Centinela [70%-owned]; Antucoya [70%-owned]; and; Zaldivar [50%-owned]).

1. Sustainability of the Business Model: alignment of copper with broader sustainability trends...

Copper plays an increasingly important role in the transition to a low carbon economy because of its wide use in rapidly growing market segments, including the electric vehicles (EVs), renewable energy infrastructure, and buildings constructed to meet LEED (Leadership in Energy and Environmental Design) designation. According to some estimates, EVs contain about three times more copper than vehicles powered solely by internal combustion engines, and even more copper is required for EV charging stations. Copper also plays a role in the transmission and wiring of renewable energy infrastructure, such as solar and wind power generation and distribution. Lastly, copper is widely used in green building construction due to its corrosion-and oxidation-resistance, its thermal and electrical conductivity, and recycled content. It is thus widely used in buildings that aim for a LEED certification. We therefore see interesting growth opportunities in copper.

... but with high inherent operational risks

The question is then, should one invest in just any copper company? Our answer is an emphatic “no”! ESG risk is inherently high in this industry, as indicated by provisional SASB disclosure topics for Metals and Mining (see Figure 4). NAM considers all disclosure topics in provisional SASB Standards for this industry relevant. When we layer our sector framework and country ESG risk indices (see Figure 5) over our company-specific analysis, water management, energy management, employee health and safety and community relations emerge as risks of primary importance for Antofagasta. Chile is a stable, transparent and well-regulated country from a country-risk perspective. However, copper mines in Chile are situated in water-challenged regions. Declining ore grades in recent years have led to higher stripping ratios to simply maintain production, meaning that more water is required to produce each tonne of copper. On the community relations dimension, numerous large-scale Chilean mining projects have been delayed or cancelled by local communities due to real or perceived threats to traditional land uses, biodiversity or natural resource quality; permitting of expansion projects has also grown increasingly stringent with associated delays. Ultimately, growing scrutiny of these environmental and social factors in Chile has either directly resulted in delays meeting production targets or risked doing so, resulting in increased operating costs and capital expenditure for mining companies there.

▶ ESG risk is inherently high in this industry, as indicated by provisional SASB disclosure topics for Metals and Mining (see Figure 4). NAM considers all disclosure topics in provisional SASB Standards for this industry relevant.

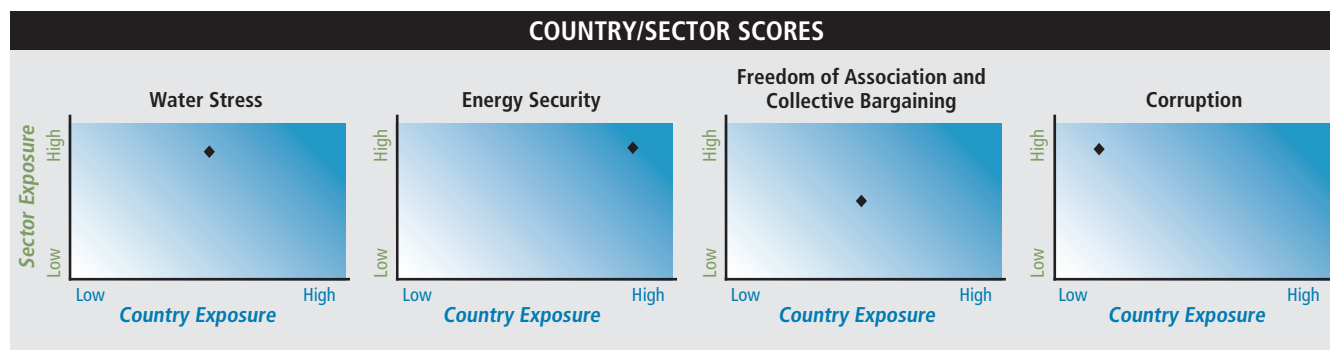
⁶ Nordea Investment Management, AB has selected these case studies for illustrative purposes only and is not intended or should interpreted as a recommendation to purchase or sell such security. The security references may or may not be held in portfolios managed by Nordea Investment Management, AB and, if such security is held, no representation is being made that such security will continue to be held.

Figure 4: Disclosure Topics and Metrics: SASB Metals and Mining Industry Standards

TOPIC	ACCOUNTING METRICS	UNIT OF MEASURE	CODE
Greenhouse Gas Emissions	Gross global Scope 1 emissions, percentage covered under a regulatory program	Metric tons CO2-e, Percentage (%)	EM0302-01
	Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	n/a	EM0302-02
Air Quality	Air emissions for the following pollutants: CO, NOx (excluding N2O), SOx, particulate matter (PM), mercury (Hg), lead (Pb), and volatile organic compounds (VOCs)	Metric tons (t)	EM0302-03
Energy Management	Total energy consumed, percentage grid electricity, percentage renewable	Gigajoules (GJ), Percentage (%)	EM0302-04
Water Management	Total fresh water withdrawn, percentage recycled, percentage in regions with High or Extremely High Baseline Water Stress	Cubic meters (m3), Percentage (%)	TA04-28-01
	Number of incidents of non-compliance with water-quality permits, standards, and regulations	Number	TA04-29-01
Waste & Hazardous Materials Management	Total weight of tailings waste, percentage recycled	Metric tons (t), Percentage (%)	EM0302-07
	Total weight of mineral processing waste, percentage recycled	Metric tons (t), Percentage (%)	EM0302-08
	Number of tailings impoundments, broken down by MSHA hazard potential	Number	EM0302-09
Biodiversity Impacts	Description of environmental management policies and practices for active sites	n/a	EM0302-10
	Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation	Percentage (%)	EM0302-11
	(1) Proven and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Metric tons (t), Grade (%)	EM0302-12
Community Relations	Discussion of process to manage risks and opportunities associated with community rights and interests	n/a	EM0302-13
	Number and duration of non-technical delays	Number, Days	EM0302-14
Security, Human Rights, and Rights of Indigenous Peoples	(1) Proven and (2) probable reserves in or near areas of conflict	Metric tons (t), Grade (%)	EM0302-15
	(1) Proven and (2) probable reserves in or near indigenous land	Metric tons (t), Grade (%)	TA04-30-01
	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	n/a	EM0302-17
Employee Health and Safety	(1) MSHA All-Incidence Rate, (2) Fatality Rate, (3) Near Miss Frequency Rate and (4) Average hours of Health, Safety, and Emergency Response Training for (a) full-time employees and (b) contract employees	Rate	TA04-31-01
Labor Relations	Percentage of active workforce covered under collective-bargaining agreements, broken down by U.S. and foreign employees	Percentage (%)	EM0302-19
	Number and duration of strikes and lockouts*	Number, Days	EM0302-20
Business Ethics & Payments Transparency	Description of the management system for prevention of corruption and bribery throughout the value chain	n/a	EM0302-21
	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Metric tons saleable (t)	EM0302-22

*Note to EM0302-20 – Disclosure shall include a description of the root cause for each work stoppage.

Figure 5: Mining Sector Materiality in the Context of Geographic Exposure



Source: Based on data from Verisk Maplecroft and SASB Standards.


2. Stakeholder Analysis in the Context of SASB Disclosure Topics and Metrics

See Figure 6 for an overview of our analysis of Antofagasta⁷ on select disclosure topics, with particular focus on how the company performs on financially-material ESG issues based on SASB-based disclosure.

Figure 6 – Antofagasta Disclosure (Actual vs. Proxy) on Select Disclosure Topics in Provisional SASB Metals & Mining Industry Standards

	2013	2014	2015	2016
Activity metrics				
Copper Production (t)	721,200	704,800	630,300	709,400
Direct employees	6098	6609	5950	5427
Contract workers	15,347	19,542	14,892	13,100
Social metrics				
Employee Health and Safety				
Health and Safety Policy	Y	Y	Y	Y
Health & Safety Training	Y	Y	Y	Y
Percentage of certified management systems				66.60
Lost Time Injury Frequency Rate	1.90	1.70	2.00	1.50
Near Miss Frequency Rate	N/A	7.80	13.50	50.20
Fatalities	2.00	5.00	1.00	2.00
Labour Relations				
Major Layoffs				No
Fair Remuneration Policy	N	N	N	N
Trade Union Representation (%)	62.00	55.00	59.00	68.00
Employee Turnover (%)	N/A	N/A	N/A	N/A
Employee Satisfaction (%)	81.00	82.00	N/A	N/A
Community Relations and Human Rights				
Human Rights Policy	Y	Y	Y	Y
Policy Community Involvement	Y	Y	Y	Y
Community spending (mUSD)	26.60	31.10	21.90	24.3
Environmental metrics				
Environmental Expenditures (USD)	5,500,000	6,200,000	30,100,000	3,700,000
Environmental Provisions (USD)	494,300,000	434,300,000	394,000,000	392,100,000
Energy management				
Energy Efficiency Policy	Y	Y	Y	Y
Targets Energy Efficiency	N/A	N/A	Y	Y
Total Energy Consumption (MWh)	4,665	4,812	4,954	5,842
Renewable Energy Use (%)	N/A	N/A	N/A	17.00
GHG Emissions				
CDP Regulatory Risk exposure	Y	Y	Y	Y
CDP Physical Risk Exposure	Y	Y	Y	Y
Climate Change Policy	Y	Y	Y	Y
CO2 Equivalents Emission (Scope 1) (mt)	706,463	693,179	654,146	795,994
CO2 Equivalents Emission Total (Scope 1&2) (mt)	1,620,700	1,506,000	1,412,760	2,000,010
CO2 Emissions Intensity Per Tonne (mining)	3.09	2.98	3.24	3.67
CDP Performance	C	D	D	B
Water management				
Policy Water Efficiency	Y	Y	Y	Y
Total Water Consumption (Th cubic meters)	44,666	47,444	45,247	55,261
Salt Water Withdrawals (Th cubic meters)	20,217	20,682	20,573	26,554
Water recycling rate (%)	#N/A N/A	N/A	80.00	86.00
Water Consumption per tonne (LpS/kt)	3.56	3.84	4.10	4.59

 Company performance disclosed via SASB metrics

 Proxy used for company performance on SASB metrics

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SASB Disclosure Topic: Employee Health and Safety

Safety is still a challenge for the company, but remains a top priority for management.

- **Risk exposure:** Poor safety records or serious accidents could have a long-term impact on Antofagasta's reputation, employee morale, and production. All operations are exposed to safety risks due to the nature of mining activities. Further exacerbating this risk is the fact that 72% of the total workforce is made up of contractors vs. 28% direct employees, and 60% of the total workforce lives in nearby regions.
- **Risk management:** Antofagasta's safety practices are in line with the industry's. Safety performance is reviewed by the Board and is linked with executive remuneration. The company's executive team is also required to regularly visit the mining operations as part of their safety leadership programme. The majority of Antofagasta's operations are also certified to the Occupational Health and Safety Standards (OHSAS). Regular training is provided on the OHSAS 18001 standard, an internationally applied British Standard for occupational health and safety management systems. Nevertheless, Antofagasta⁸ has experienced health and safety challenges, particularly with respect to contractors. We are encouraged by improvements demonstrated in these areas, such as their Critical Safety Controls verification and "near-miss" incident reporting.
- **Performance trend:** Unfortunately, two fatalities were recorded in 2016. The company is, however, performing better than peers on additional safety KPIs and is showing signs of improvement.

SASB Disclosure Topic: Water Management

Antofagasta is implementing pioneering technologies to ensure reductions in water use and increases in water recycling for future operations.

- **Risk exposure:** Availability of key strategic resources such as water could impact Antofagasta's growth opportunities. The Group operates in challenging environments, including the Atacama Desert, where water scarcity is a key issue. In addition, water demand in the Chilean mining industry is expected to increase by 66% between 2014-2025. Regulatory requirements to mitigate mining-related stress on the fresh water supply, such as a mandate to use seawater for mining activities, are anticipated.
- **Strategy and implementation:** Antofagasta has demonstrated best practice in terms of deploying water-saving technologies. Antofagasta was the first mining company to use thickened tailings technology (increasing water recovery) on a large scale. This practice has also improved the structural safety of tailings (reduced likelihood of spills vs. traditional tailings). Antofagasta is also a pioneer in the use of untreated sea water in its mining operations, with a scope for wider adoption (currently used at Antucoya and Centinela).
- **Performance trend:** Antofagasta has secured water rights to meet current production levels and has water recycling and water-use intensity rates that are better than industry averages. The company already meets and exceeds expected regulatory mandates on the use of seawater in mining operations. Seawater accounts for nearly 50% of the company's current total water use; anticipated regulations requiring the use of 38% seawater for Chilean mining operations will become effective in 2020. However, Antofagasta's total water consumption rose in 2016 due to the integration of new operations into the company's operational mix.

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SASB Disclosure Topic: Energy Management & GHG Emissions

The company benefits from energy efficiency initiatives and is increasing the share of renewables in its energy portfolio to address rising energy costs and reduce carbon emissions intensity.

- **Risk exposure:** Power costs are 15% of Antofagasta's total operating costs. Energy efficiency measures have the potential to achieve the company's strategic goal of controlling costs and increasing cost competitiveness. The use of seawater and energy-intensity of desalination however, naturally result in increased energy use. In addition, a carbon tax was implemented by the Chilean government in January 2017.
- **Strategy and implementation:** We welcome the approval of Antofagasta's Climate Change Standard in 2016, aimed at mitigating climate change vulnerabilities such as higher temperatures and decreased precipitation in northern Chile, where Antofagasta's operations are situated. Antofagasta's strategy to limit GHG emissions is through improved energy efficiency and renewable energy sourcing. Energy efficiency initiatives are in place at all sites. Los Pelambres has secured renewable energy from conveyor belt self-generation as well as several wind and solar sources. The company aims to source 80% of its energy through renewables by 2019. That said, as production grows, GHG emissions will rise in the short term. The Group seeks to de-couple GHG emissions from production growth.
- **Performance:** 46% of energy use at the Los Pelambres mine, Antofagasta's flagship mine, is renewable. Renewable energy currently accounts for 17% of the company's total energy consumed. However, energy intensity and CO2 intensities are increasing due to the increasing use of seawater in mining operations. These intensities are, however, still lower than industry averages. CDP has upgraded their third-party assessment of Antofagasta's performance on climate change up to a B rating.

SASB Disclosure Topic: Community Engagement

A new community engagement model is poised to effectively manage community relations going forward.

- **Risk exposure:** Failure to effectively manage community relations could result in delays and cost overruns for the Group's development projects and impact the Group's social license to operate. The Los Pelambres mine has been the source of local community opposition resulting in production losses in 2015. The expansion of Los Pelambres has already been delayed by three years due to environmental permitting issues.
- **Strategy and implementation:** Antofagasta is securing its licence to operate and reducing project delays with a new participatory approach to community engagement. This approach has allowed them to resolve community disputes at Los Pelambres and is now being replicated across the region. Antofagasta's new community engagement model systematically identifies community controversies, challenges, and opportunities together with community stakeholders, building a shared vision of sustainable local development.
- **Performance:** Community engagement is still an area where we struggle to find meaningful metrics. Here, a more qualitative assessment of controversies and the degree to which the company engages with its stakeholders is necessary. The company has resolved disputes and secured agreements with the local communities, albeit with some minor opposition.

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A “Star” Company in Emerging Markets

We find Antofagasta’s risk/reward profile attractive given the supply and demand outlook for the copper mining industry. Antofagasta has good options for growth in copper output, and has limited downside risks due to a healthy balance sheet, a stable operating environment, and a strong focus on mitigating ESG risks. From an investor’s perspective, we are convinced that proactive management of ESG risks is necessary for long-term success in any business, and particularly in a high-risk business such as mining. The degree to which a company manages these risks is critical to the level of confidence we assign to the probability of returns further in the future. Management’s focus on reducing water consumption and improving water recycling rates gives us a higher degree of confidence in the company’s ability to guarantee future operations. Likewise, initiatives regarding energy efficiency and renewable energy production will generate operational cost savings that make Antofagasta¹⁰ a more competitive copper producer. Finally, securing a social licence to operate further reduces potential downside risks related to project cancellation or delays we have seen with numerous mining companies in the region and globally. The SASB Standards have allowed us to evaluate our investment more thoroughly and conclude that Antofagasta understands and manages its material stakeholder risks. The company is well-positioned to take advantage of long-term, attractive demand we see in the copper market, driven in part by our transition to a “clean & green” world.

Click on the following link to view a summary of our on-the-ground engagement with Antofagasta in Chile: <https://www.youtube.com/watch?v=dlyrs3LujYA&t=2s>.

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Payden & Rygel

Emerging market credit analysis, augmented by SASB standards – Arcos Dorados

Investor concerns about environmental, social and governance (ESG) risks now extend from individual investors to mainstream institutional investors, and span all corners of the global capital markets. Across the investment management industry, “growth for ESG assets, in the aggregate, has consistently outpaced growth in total assets under management,”¹ with the sum of global ESG assets under management estimated to have reached \$22 trillion in 2016.²

Growth of investor interest in ESG factors’ impact on value, however, has been accompanied by the realization that “traditional” methods for evaluating performance on ESG factors are inadequate. Particularly at the investment-decision level, translating often abstract ESG factors into meaningful measures of risk and return is imprecise and hampered by inconsistent communication from companies about how they are managing these issues. A new approach was necessary.

Founded in 1983, Payden & Rygel is a leader in the active management of fixed income and equity portfolios, and is one of the largest privately-owned investment advisers globally. Advising the world’s leading institutions and individual investors, we provide strong performance, customized solutions, and real-world strategy on the global economy and capital markets from offices in Los Angeles, Boston, London, and Paris. The firm manages \$110 billion in assets, including \$9 billion in emerging market strategies. Over the past five years, Payden & Rygel has noticed a significant increase in client demand for thorough analysis of ESG considerations in Payden’s portfolio decisions. Meeting this demand, however, has been frustrated by the lack of consistent, comparable ESG data. Thus, Payden & Rygel finds tremendous value in the Sustainability Accounting Standards Board’s (SASB) business-relevant, industry-specific standards.

This case study demonstrates how Payden & Rygel utilizes SASB’s standards to complement traditional company and sovereign analysis to better evaluate an emerging market (EM) debt investment in one corporate issuer—Arcos Dorados—in Brazil.

► Payden & Rygel uses the SASB industry standards to complement traditional company, sovereign, and ESG analysis in our credit research process. As shown in the following examination of one emerging market corporate debt issuer—Arcos Dorados—integrating SASB’s standards into credit analysis keeps investors focused on material risks related to portfolio companies.

¹ State Street Global Advisors (2016). “ESG Investing.” Accessed 30 January 2016.

² *ibid.*

For Emerging Market Debt Investors, ESG May Not Be as Easy as 1, 2, 3

Since the inception of our emerging markets (EM) strategy in 1998, Payden has sought to invest in those countries and companies which take seriously all risks: immediate and long-term, financial and non-financial. In our experience, corporate transparency and the quality of ESG stewardship and disclosure by companies in emerging markets sometimes lags the corporate transparency found in European and North American markets. Quantitative ESG metrics are especially wanting in smaller EM company disclosures.

This fact makes quantitative ESG analysis based only on third-party ESG scores more difficult in emerging markets. Indeed, with a limited pool of quantitative and standardized information on which to draw, we find third-party ESG scores are often insufficient for making sound investment decisions. SASB's industry standards provide a superior guide for analysis.

SASB's Standards in the Context of Emerging Market Debt: Payden's Integration Process

In determining the attractiveness of EM corporate debt for our portfolios, we use a multi-step process – working from the issuer level up to the country level – to explore and vet nonfinancial-statement business risks to the fullest extent possible. In this example, SASB's Restaurant Industry Standards were integral to our analysis of Arcos Dorados, an EM restaurant debt issuer.³

Arcos Dorados is the largest McDonald's franchisee in the world, currently operating 2,140 McDonald's restaurants across Latin America and the Caribbean. Founded in 2007 by Woods Staton, who previously served as the President of McDonald's Latin America South division, Arcos Dorados is a key strategic partner to McDonald's. With Arcos currently registering \$2.9 billion per annum in sales, and with fast-food chains growing rapidly in Latin America, the Golden Arches look set to gleam on.

ESG data available from third-party data providers has been limited and/or not targeted enough to inform our investment decisions. For example, the Bloomberg ESG disclosure score is one indicator an investor might use to evaluate Arcos' performance on ESG factors. Proprietary Bloomberg scores are industry-specific, importance-weighted, and, "based on the extent of a company's Environmental, Social, and Governance (ESG) disclosure...that ranges from 0.1 for companies that disclose a minimum amount of ESG data to 100 for those that disclose every data point collected by Bloomberg."⁴ Bloomberg considers up to 270 possible ESG data points in their calculation of this score. On this measure, Arcos registers only 9.09, among the lowest in its peer group. But a low score in this case can be misleading.

Payden & Rygel believes that the management of *material* ESG factors can enhance or diminish the ability of issuers to repay corporate debt. Bloomberg's ESG disclosure scores largely reward companies for the volume of disclosure, not necessarily for the quality of disclosure on industry-specific factors that can affect a company's ability to repay debt. This may be because, until recently, standards identifying likely material ESG factors at the industry level were not available. We have found SASB's standards an invaluable framework to guide our analysis of a broader range of issues likely to be faced by companies in our portfolio.

► Particularly in emerging markets, with a limited pool of quantitative and standardized information on which to draw, we find third-party ESG scores often insufficient for making sound investment decisions. SASB's industry standards provide a superior guide for analysis in these cases.

► Arcos Dorados is a key strategic partner to McDonald's. Arcos currently registers \$2.9 billion per annum in sales, and with fast-food chains growing rapidly in Latin America, the Golden Arches look set to gleam on.

³ Restaurants Sustainability Accounting Standard, Sustainability Industry Classification System (SICS™ #SV0203, Prepared by the Sustainability Accounting Standards Board, December 2014 [provisional standard])

⁴ Bloomberg L.P. (2017). "ESG Disclosure Score Definition."

In the case of Arcos Dorados, an in-depth analysis of their master franchising agreement with McDonald's, as well as a comprehensive review of their SEC filings for SASB Restaurant Industry Standards disclosure topics, yielded insights into the credit-worthiness of the company not readily available through other means.

In particular, three SASB disclosure topics from the Restaurant Standards were found to be most salient to our analysis of the company: management of environmental and social impacts in the supply chain; nutritional content; and fair labor practices. In addition to evaluating the company's overall governance, examination of Arcos' position through their 20-F disclosures, alongside consideration of broader implications of how the company manages ESG-related risks, yielded what we believe to be a more comprehensive view of Arcos' credit-worthiness.

SASB Restaurant Industry Standard Disclosure Topic #1 – Supply Chain and Food Management

Critical to the success of a restaurant business is the quality and consistency of the food which makes it onto customers' plates. Mishaps or oversights in a restaurant's food supply chain can threaten even the largest of restaurant businesses.

Arcos Dorados manages supply and distribution in accordance with the International Organization for Standardization, the British Retail Consortium and other entities considered to represent the highest supply and distribution industry guidelines. These standards include cleanliness, product consistency and timeliness in terms of food delivery to the restaurants. The company publicly identifies supply chain management as an "important element of [their] success and a crucial factor in optimizing [their] profitability."⁵

Additionally, the company strives to meet or exceed all local food regulations. Arcos has established its own Hazard Analysis Critical Control Plan, or HACCP, a systematic approach to supply chain management that monitors third-party suppliers' processing facilities through analysis, inspection and follow-up.

With respect to raw materials, Arcos Dorados ensures that its produce suppliers undergo verification audits. All of its protein suppliers also undergo Animal Welfare Policy, "mad cow" disease and HACCP audits. Arcos Dorados conducts seminars annually with all key suppliers on topics such as standards calibration, product sensory evaluation and best practices; and all suppliers are audited annually by a third party for compliance with McDonald's Supplier Quality Management System.

Furthermore, in April 2014, the company committed to ensuring that, by the end of 2016, all pork procured by Arcos Dorados would be sourced from producers that can document plans to promote group housing for their pigs. In March 2015, Arcos Dorados announced that it would only source animal protein from suppliers who can guarantee that their animals (i) are raised without growth-stimulating antibiotics; (ii) have only received antibiotics to cure or prevent disease under veterinary supervision; (iii) are only administered antibiotics approved for veterinary use; and (iv) are raised in environments that encourage healthy animal welfare and husbandry conditions to help reduce the need for antibiotic use. Most recently, Arcos announced in October 2016 that their McDonald's restaurants would serve only cage-free eggs by 2025.⁶

► **SASB's Supply Chain and Food Management Metrics** are designed to help track conformance with environmental and social standards as well as conformance with animal welfare standards and best practices.

SV0203-15: Percentage of food purchased that meets environmental and social sourcing standards, and the percentage that is third-party certified

SV0203-16: 1) Percentage of eggs purchased from cage-free sources and 2) percentage of pork purchased from gestation crate-free sources

SV0203-17: Discussion of strategy to manage environmental and social risks within the supply chain

► The company committed to ensuring that, by the end of 2016, all pork procured by Arcos Dorados would be sourced from producers that can document plans to promote group housing for their pigs. Arcos announced in October 2016 that their McDonald's restaurants would serve only cage-free eggs by 2025.

5 Arcos Dorados (2011). SEC Form 1 Registration Statement (accessed March 2017).

6 Business Wire (2016). "Arcos Dorados To Exclusively Source Cage-Free Eggs." Accessed March 2017.

Arcos Dorados is a member of the Global Food Safety Initiative (GFSI), and 100% of Arcos' suppliers have committed to ending procurement of any goods from the Amazon region. Even at the broader corporate level, in October 2011, McDonald's signed a global moratorium on harvesting soy from the Amazon region and has maintained this commitment every year since, including actively supporting the 2014 renewal of the Brazilian Soy Moratorium.

SASB Restaurant Industry Standard Disclosure Topic #2 – Nutritional Content

Arcos Dorados was the first restaurant chain in Latin America to provide full nutritional and calorie information about its menu on its websites in every country, as well as provide consumers with printed nutritional information on every tray liner at the restaurants.

This conscientiousness around product health and nutrition puts Arcos in a respectable place compared to other emerging (and even some developed) market food retailers. Their push to inform consumers of their product's nutritional content even stretched to their website, where, in 2014, Arcos Dorados added a nutritional calculator for consumers to check and monitor their food intake.

Arcos Dorados' willingness to take product health and nutrition seriously will only grow in importance. Our conviction on this front stems from the outsized growth of chain-restaurant fast food in Arcos' largest market, Brazil (see Figure 1). According to Euromonitor, growth of fast food chains in Brazil over the past five years has outpaced that of overall fast food restaurants, with a compound annual growth rate of 22% for the former compared to 16% for the latter (and 11% for food services overall). Chain-store fast food now accounts for 31% of total fast food sales, compared to 25% in 2010. Keeping consumers aware of what they are eating will only become more important as more consumers turn toward Arcos' McDonald's products.

Recent studies from the market research group Mintel indicate that consumers in Brazil increasingly see healthy eating as an essential element of twenty-first-century life. Indeed, when surveyed, 83% of Brazilian adults "agreed that it is worth spending more on healthier food options."⁷ In a bid to meet consumers where they are, Arcos has worked incrementally to improve the nutritional content of their offerings by reducing the sodium content of Happy Meals, as well as cutting 40% of the added sugar from their smoothies.

Figure 1: Burgers Are Flying Off the Grill as Fast Food Chains Gains Market Share in Brazil

R\$ Billions	2010	2011	2012	2013	2014	2015	Trend	CAGR 2010-2015
Chained Fast Food	9.7	11.8	15.7	19.0	22.7	25.7		22.0%
Independent Fast Food	29.5	33.8	39.6	46.0	51.6	56.7		14.0%
Total Fast Food	39.2	45.6	55.3	65.0	74.3	82.4		16.0%
% of Total								
Chained	25%	26%	28%	29%	31%	31%		
Independent	75%	74%	72%	71%	69%	69%		

Source: Bloomberg

► **SASB's Nutritional Content Metrics** reflect increasing consumer preferences for healthier choices. Companies that are able to offer more nutritious menu options are likely to capture new markets for health-conscious consumers and improve market share with mainstream consumers. A higher share of nutritious options may have a beneficial effect on a company's reputation and revenue growth in the long term.

SV0203-08: Percentage of meal options consistent with the Dietary Guidelines for Americans, or foreign equivalent, sales from these options

SV0203-09: Percentage of children's meal options consistent with national dietary guidelines for children or foreign equivalent, sales from these options

SV0203-10: Number of child advertising impressions made, percentage promoting products that meet national dietary guidelines for children or foreign equivalent

⁷ Zegeler, Jennifer (2016). "Four Key Food and Drink Trends for Brazil in 2016." Mintel Group Ltd. (accessed March 2017).

SASB Restaurant Industry Standard

Disclosure Topic #3 – Fair Labor Practices

As a food retailer with 83,348 employees, labor is one of Arcos Dorados' largest costs. Labor practices are also important for investors to monitor in Arcos' case because the company operates across numerous geographies.

While the company's most recent 20-F filing does include some boilerplate information relating to minimum wage and Arcos' labor force, it is not comprehensive or decision-useful for investors. For instance, Arcos does not provide a dollar amount or percentage of in-store employees earning minimum wage, one of the suggested metrics included in the disclosure topic covering fair labor practices in SASB's Restaurant Industry Standard. We have asked the company for additional information on minimum wage across its workforce, both in terms of the extent and geography of these workers, to better understand the cost structure.

By contrast, the company's commentary on its Brazilian labor relations is an example of constructive and relevant information for creditors. Since 2012, Arcos has been litigating a civil complaint brought against the company by the Public Labor Ministry of the State of Pernambuco (a state in northeast Brazil). The complaint seeks to compel the company to transition all workers at its 14 locations in Pernambuco to fixed, not variable, work schedules. In addition to the operational changes, the state is seeking fines for non-compliance. Litigation such as this in Brazil, Arcos' largest market, could appear to be highly problematic.

However, because Arcos does disclose some fair labor factors included in the SASB Restaurants Standards – specifically a full schedule of the penalties and costs related to the case – investors can better contextualize the implications of this case. It does not appear that this litigation threatens Arcos' business. The company's disclosures indicate the complaint applies to only 20% of the company's Brazilian employees. In the interest of better understanding, we have engaged Arcos Dorados' investor relations, asking for additional insights on the Pernambuco litigation.

Sovereign-level ESG Analysis

Another critical step in any credit analysis within Payden's emerging market strategy occurs at the portfolio and sovereign level. Our portfolio managers and sovereign analysts contemplate the relative value and ESG performance of the countries in which the corporate issuer does business. Strategists and analysts filter each issuer country through a proprietary scoring system to produce a proprietary internal ESG score for the country. While countries are scored quarterly with regard to credit, rates, and currency, the starting point – the sovereign view – is the product of collaboration between country analysts and local strategists. Each factor is assigned a score between 1 and 5 (5 signaling strong improvement and 1 strong deterioration). Unlike a credit rating agency, we score countries with a six-month forward-looking view, which allows us to compare across credit quality. Factors are weighted based on dynamic individual country considerations. The subjective weights allow us to properly capture the relative importance of a single factor for a country's outlook.

In the case of Arcos, the most important country scorecard from an investment standpoint is Brazil. While 70% of Payden & Rygel's Brazil country scorecard is a weighted average score of other macroeconomic factors, 30% of the scorecard is dedicated to ESG analysis (see Figure 2).

► **SASB's Fair Labor Practices Metrics** reflect the international nature of franchised restaurants and the impact labor issues at franchises can have on brand image across markets. Properly managed human capital, competitive wages, and safe working environments can improve employee morale while reducing turnover rates and related administrative costs involved with employee acquisition and training.

SV0203-11: 1) Voluntary and 2) involuntary employee turnover rate for restaurant employees

SV0203-12: Average hourly wage for restaurant employees, by region; percentage of employees earning minimum wage

SV0203-13: Amount of legal and regulatory fines and settlements associated with labor law violations

SV0203-14: Amount of tax credit received for hiring through enterprise zone programs

► Because Arcos complies with SASB's fair labor standard, which asks for reporting on the amount of legal and regulatory fines and settlements associated with fair labor practices, the implications of the Pernambuco case can be better contextualized.

Figure 2: In Payden & Rygel's Country Scorecards, ESG factors Comprise 30% of the Country Weight

BRAZIL COUNTRY SCORECARD		Brazil (Ba2/N, BB/N, BB/N)				
		FACTOR	SUB-FACTOR	ANALYSIS	WEIGHT	SCORE
ESG	Governance	Institutional strength	<ul style="list-style-type: none"> Michel Temer has assumed office in 09/16. Given Temer's more competent team and better political relationships, impeachment has paved the way for a fresh start and hope that a new structural reform agenda will take root. The next presidential elections will be held in October 2018. Political uncertainties still remain. One watch point is whether the electoral court determines that illicit campaign financing disqualifies the Rousseff/Temer ticket. This is a tail risk but quite serious. Another is the fallout associated with the Odebrecht plea bargain. 	25%	3.5	
		Corruption				
		Regime stability				
		Rule of law				
	Social/ Environmental	Human capital	<ul style="list-style-type: none"> Against a backdrop of recession, unemployment has surged from 6.5% (12/14) to 11.6% in 07/16. The middle class in Brazil has become more cognizant of the quality of state services and corruption issues. This may ultimately lead to stronger institutions, but, in the meantime, there have been a number of social protests expressing discontent with the political system. 	5%	2.0	

Source: Payden & Rygel

Tying It All Together

A number of factors make it difficult to contextualize third-party data on ESG performance of companies in emerging markets. Thus, SASB's standards are helpful to investors interested in characterizing material ESG risk at both the industry and issuer level. The addition of an industry lens directs investor focus and inquiry towards ESG factors most likely to impact investment performance.

The Arcos Dorados case is an excellent example of the applicability of SASB standards to an emerging market, fixed income investment. A review of the credit using only vague, third-party ESG scores might have soured an investor's opinion on Arcos. However, augmenting our credit analysis with SASB's industry-specific standards helped better contextualize ESG risks and opportunities at Arcos, and gave us confidence that the company is focused on the management of ESG-related issues that could impact its business and investors in the future. Analysis of these factors, which were previously obscured in third-party ESG scores, improved our investment decision. Strong growth of fast food chain restaurants in Brazil, a unique McDonald's partnership, and the importance of brand-building across emerging markets for McDonald's – coupled with their management of material ESG factors for the restaurants industry – made Arcos Dorados appear to be an attractive investment.

► Overlaying issuer-level analysis of ESG-related credit risk using SASB's industry-specific standards helped contextualize ESG risk in ways previously impossible using third-party ESG scores and country-level analysis.

The information provided herein is not designed to be representative of any particular reader's financial needs. Nor does the information contained herein constitute financial management advice. Payden & Rygel makes no warranty or representation regarding the accuracy or legality of any information contained herein, and assumes no liability for the use of said information.

PIMCO – ESG for Commercial Banks

Think like a treasurer, engage like a partner, hold to account as a lender

PIMCO's sustainability/ESG framework

PIMCO has incorporated sustainability factors into its investment process for decades. The process emphasizes rigorous analysis of broad secular trends that are at the core of both global sustainability and long-term asset returns. In recent years, PIMCO has developed a platform that supports Environmental, Social and Governance (ESG)-focused investment solutions and has enhanced its credit research process to incorporate a robust ESG assessment for corporate and sovereign credit issuers that complements the traditional ratings assigned by credit analysts.

At PIMCO, we are in the business of delivering risk-adjusted returns for our clients in a manner that is sustainable over the long term. That means making sure that the investments we make on their behalf represent business models that are competitive not only today, but also well into the future. Our credit research analysts complement traditional analysis of companies' financial statements with careful consideration of intangibles and secular ESG trends that can have a profound impact on companies' financial condition if they materialize.

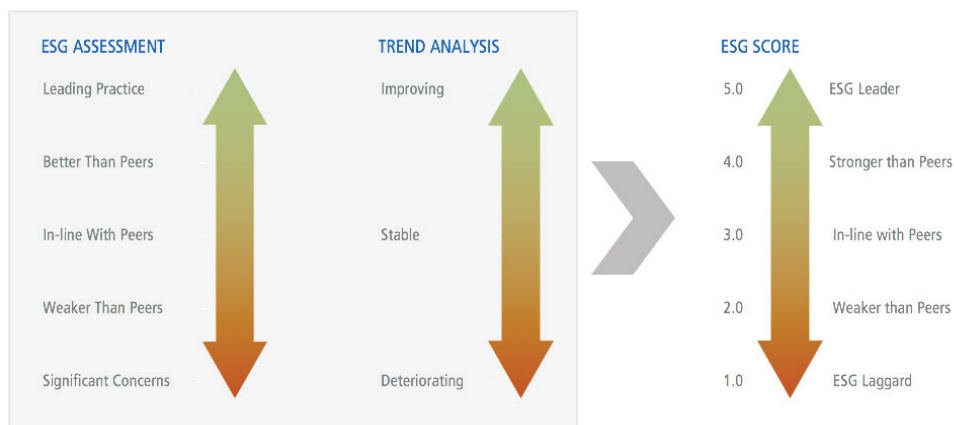
► PIMCO is committed to being the world's premier fixed income investment manager. With our launch in 1971 in Newport Beach, California, PIMCO introduced investors to a total return approach to fixed income investing. In the 45+ years since, we have continued to bring innovation and expertise to our partnership with clients seeking the best investment solutions. Today we have offices across the globe and 2,100+ professionals united by a single goal: creating opportunities for investors in every environment.

Overview of PIMCO's ESG assessment

Overall process

PIMCO's 50+ credit research analysts assess the ESG profile of the issuers that they cover relative to peers with a goal of separating leaders from laggards. Using industry-specific ESG frameworks similar to the Sustainability Accounting Standards Board (SASB) materiality map, PIMCO analysts review their companies' ESG performance based on information available in public filings, recent ESG news and controversies, as well as through regular

Figure 1: PIMCO ESG Scoring System



engagement with company management teams to assign separate scores for Environment, Social and Governance. PIMCO’s resulting ESG assessments are proprietary and distinct from those provided by ESG rating providers, with scores distinguishing between issuers with Leading Practice ESG practices to those that raise Significant Concerns (see Figure 1). Credit analysts also provide a forward-looking assessment of the ESG Trend for each issuer to recognize companies whose ESG performance is significantly improving or deteriorating. These factors are combined to create a granular PIMCO ESG Score that adjusts the relative weighting of the E, S and G pillar views and trend assessments based on the company’s business profile and differences in industry dynamics.

Engagement with issuers

PIMCO believes that bondholder engagement is critical to understanding the risk and reward profile of the issuer and ultimately making investment decisions. Engagement can be a critical factor in encouraging positive change. The objective of engagement at PIMCO is to influence change, improve returns and reduce risks for our clients. Given PIMCO’s size and global presence, our analysts and portfolio managers spend a significant amount of time meeting with senior management of issuers, including over 1,000 calls and in-person meetings conducted in Q1 2017 alone. In addition to discussing financial matters, we also focus on strategic issues that relate to responsible business practices, such as how risk management and business strategy address climate change risks. We also encourage firms to move toward greater transparency for reporting and disclosure among industries, including by encouraging companies to provide full disclosures using SASB standards. Information gleaned throughout the engagement process is incorporated into our ESG assessments, often pushing an issuer’s ESG score higher or lower.

For ESG-focused portfolios, we follow a proprietary engagement protocol which is driven by a dedicated specialist working in concert with our broader ESG and portfolio teams. This protocol is guided by the following principles:

- Think like a treasurer: Identify issuers with capacity to change, then develop a set of core engagement objectives.
- Engage like a partner: Successful engagement is based on collaboration, a productive dialogue and mutual agreement on objectives.
- Hold to account as a lender: Measure progress against a pre-defined benchmark. Agree on planned remedies if underperformance is material. Divest where necessary.

PIMCO’s engagement approach varies based on the specific engagement plan for each issuer and may include in-person meetings with company management, regular conference calls and questionnaires. Although we do not have access to the communication channels available to equity investors (e.g., proxy voting), given the scale of our fixed income operations and our touchpoints with company management we have found this method of dialogue to be highly effective. In addition, the fixed income universe offers the opportunity to engage with issuers who may not be accessible to equity investors, such as private companies and occasionally sovereigns.

Investing for impact

The engagement model is core to PIMCO’s active management approach. We believe that an evolution is underway in which the passive screens traditionally used in Socially Responsible Investing (SRI) are no longer the only tools available for sustainability-minded investors. Dynamic analysis of material non-financial information in ESG

Figure 2: Sustainable investing has evolved beyond simple screening – now the goal is to generate an impact

Sustainable investing has evolved beyond simple screening – now the goal is to generate an impact



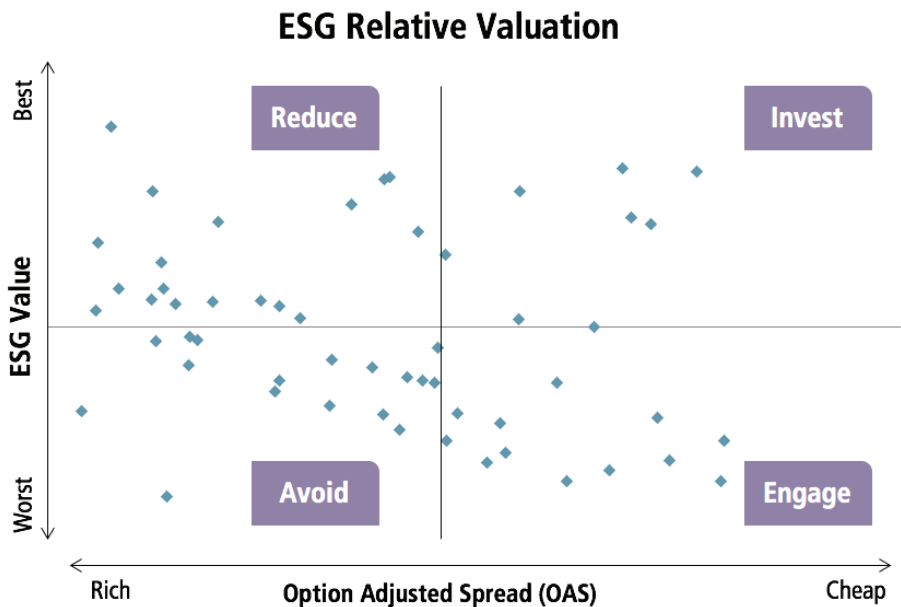
investing enables PIMCO to evaluate corporate performance on ESG factors as part of our day-to-day credit analysis, and to incorporate ESG-related themes in our portfolios. The investment landscape is evolving even further via the ability to direct investments toward issuers through which measurable, beneficial social, or environmental impacts may be achieved – impact investing (see Figure 2). Our view is that credit investors can achieve an impact by proactively engaging with issuers to achieve specific, ESG-related objectives.

Integration into portfolio management

PIMCO credit analysts have assessed over 1,700 parent issuers on ESG performance to date. ESG assessments are highlighted in their credit research notes alongside our internal ratings and recommendations for portfolio managers to consider when they are evaluating investments for all PIMCO portfolios, including for non-ESG-dedicated

accounts. Analysts’ ESG views include narrative assessments and rationales for material factors that have the potential to impact investment performance. Over time, these assessments have been relevant in shaping the investments in our broader credit portfolios. For example, a generalist portfolio manager may decide to switch between two companies with similar fundamental risk profiles trading at comparable spread levels based on their relative ESG value. The illustration in Figure 3 below separates potential investments into four quadrants: Invest in issuers trading at attractive valuations and with strong ESG profiles; Engage with companies trading cheaply, but which have weaker ESG profiles; Reduce exposures to companies trading at unattractive valuations despite strong ESG profiles, and; Sell/Avoid companies with unattractive valuations and weak ESG profiles.

Figure 3: ESG relative valuation
Sample for illustrative purposes only



Case study of how PIMCO ESG research works in practice: ESG for commercial banks

The approach outlined above can be illustrated tangibly by focusing on how PIMCO looks at ESG for a specific industry: commercial banks. Analysis of ESG factors is particularly important for bank investments because the confidence of their depositors and borrowers significantly drives valuations. Public confidence in the banking system is crucial to the proper functioning of financial markets; likewise, the loss of public confidence in the banking system can severely damage overall economic growth.

The reputation of the banking industry has been tarnished in recent years by systematic failures of governance and breaches of public trust. However, we do not believe that these past transgressions should be overwhelming factors in the forward-looking ESG assessments of individual banks, particularly for banks that performed well through the crisis or banks that have wholly revamped their management teams and governance processes. We view the much stronger regulatory framework and elevated stature of risk management as significant credit positives, both in terms of the higher capital and liquidity balances now held by banks and in terms of lower earnings volatility. While many of the changes may have been mandated by regulators, leading banks have fully internalized the changes and have invested heavily in redefining their cultures and the conduct of their employees. As PIMCO considers investments in individual banks today, we seek to recognize banks that have made significant progress in improving their own cultures and conduct in addition to the more tangible improvements in risk management and financial product safety.

Material sustainability measures, including integration with SASB

PIMCO's ESG assessment for global banks incorporates many of the material sustainability topics and accounting metrics outlined in the provisional SASB Standards for Commercial Banks (see Figure 4). While our assessment of leadership and governance is paramount, we also carefully assess each bank's integration of ESG factors in its underwriting as well as the company's track record of regulatory compliance and litigation. Detailed stress test results provide a view of banks' internal risk management as well as the aggressiveness of company management in rewarding shareholders versus maintaining a conservative capital cushion in case of a downturn.

Figure 4: SASB Disclosure Topics for Commercial Banks



Individual banks are assessed across 11 major factors ranging from Sustainable Lending Impact (which maps to 'Integration of Environmental, Social and Governance Risk Factors in Credit Risk Analysis' within SASB standards) to Systemic Importance/Regulatory Environment (maps to 'Management of the Legal & Regulatory Environment' in SASB standards) and Customer Privacy & Data Security. The individual scores then roll up to PIMCO's overall ESG Score, which places greater weight on Governance (60%) and Social factors (25%) and de-emphasizes Environmental factors (15%) given that the material non-financial risks facing bank investors have been historically related to Governance and Social exposures.

Comparing global banks across material sustainability factors

Figure 5 shows a high-level summary of how PIMCO's ESG scores for major global banks across geographies. While there remains considerable variation at the individual bank level within each region, this heat map provides portfolio managers with immediate insights into the key ESG strengths and weaknesses of major banking systems. For example, the U.S. Federal Reserve System has created a strong, stable regulatory framework, and its Comprehensive Capital Analysis and Review (CCAR) stress-testing process enforces strong risk management and capital discipline by constraining payouts to shareholders that could lead to undercapitalization in the

event of a severe macroeconomic shock. This supports our stronger view of risk management and accounting at U.S. banks; however, banks in the U.S. have yet to demonstrate lasting improvements in culture/business conduct, and many continue to lag European peers at integrating ESG in underwriting and product safety.

Overview of material ESG factors for global banks

Major factors that PIMCO tracks in ESG assessments are described below, many of which map directly to provisional SASB Standards for Commercial Banks. At present, few banks report according to the SASB Standards for Financial Inclusion & Capacity Building; however, we are encouraging banks to expand their disclosures.

Governance (60% of PIMCO ESG Score)

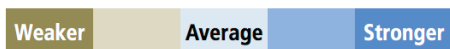
- Culture/business conduct represents a forward-looking view of the bank’s internal business culture/ethical performance. Our assessment incorporates quantitative SASB measures such as the volume and severity of legal and regulatory settlements, though we recognize that these are often backward-looking metrics. Forward-looking inputs include our assessment of the company’s reputation in the marketplace (e.g., do their bankers put client interests first?) and recent

controversies (e.g., was senior management held accountable when customers were harmed?).

- Risk management represents our view of management’s risk appetite as well as the company’s capacity to manage those risks over the cycle. Our view incorporates the results of stress tests under adverse economic scenarios, one of the provisional SASB Standards for Commercial Banks. In addition, we consider how management balances short term ROE targets vs long-term solvency, how the company’s loan portfolio and loss rates have performed over business cycles, M&A appetite and whether management has set and met achievable targets. We note that it is possible for leading banks to have an aggressive risk appetite as well as a strong risk management and culture.
- Accounting assesses whether the bank’s disclosures are “credible,” recognizing that accounting standards in some regions enable banks to delay recognition of bad debts for years or to systematically “optimize” risk-weighted assets to report higher capital ratios and/or enable higher payouts. We seek to avoid banks and banking systems that engage in such ploys, recognizing that many investors have been burned by simply trusting banks’ published financial data. As a result, our assessments often vary as

Figure 5: ESG heat map for major banks by region

ESG Quality



ESG HEATMAP FOR MAJOR BANKS BY REGION

		US	Canada	UK	Europe (Core)	Australia	Japan	China
15%	Environmental	Stronger	Average	Stronger	Average	Average	Stronger	Stronger
	<i>Sustainable Lending Impact</i>	Stronger	Average	Stronger	Average	Average	Stronger	Stronger
	<i>Environmental & Sustainability Plan</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Average	Weaker
	<i>Green Bond Issuance</i>	Average	Stronger	Stronger	Stronger	Stronger	Average	Stronger
25%	Social	Stronger	Average	Average	Average	Stronger	Average	Stronger
	<i>Systemic Importance / Regulatory Environment</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger
	<i>Integration of ESG in Underwriting / Product Safety</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger
	<i>Financial Inclusion & Capacity Building</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger
60%	Governance	Stronger	Average	Average	Average	Stronger	Stronger	Stronger
	<i>Culture / Business Conduct</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger
	<i>Risk Management / Risk Appetite</i>	Stronger	Average	Stronger	Average	Stronger	Stronger	Stronger
	<i>Accounting Quality</i>	Stronger	Average	Stronger	Average	Average	Stronger	Stronger
	<i>Board Quality</i>	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger	Stronger
<i>Human Capital (training, expertise, incentives)</i>	Stronger	Stronger	Average	Stronger	Stronger	Average	Stronger	

much by country as by company – e.g., peripheral European countries historically have had weaker accounting rankings than banks in the UK or U.S., where regulations are much more stringent and disclosures more robust and reliable.

- Board effectiveness represents our assessment of board leadership. Leading Practice banks have diverse boards with deep expertise in banking, risk & compliance and have a track record of replacing underperforming directors. Possible negatives include a combined CEO/Chair role, ongoing regulatory citations, and/or inconsistent strategic focus.
- Human capital is quite simply our assessment of the quality of the non-executive employee base. Does the company attract top candidates and provide them excellent training and advancement opportunities? We often do this using a simple thought experiment: Where would the bank rank for a top-tier graduate applying for a job, assuming that the candidate had received comparable offers from every bank? First-choice employers receive higher human capital scores; banks that attract employees with less sterling qualifications/reputations receive lower scores.

Social (25% of PIMCO ESG Score)

- Systemic importance includes elements of the Systemic Risk Management and Regulatory Environment disclosure topics in provisional SASB standards; however, PIMCO does not automatically presume that large, systemically important (“Too-Big-To-Fail”) banks should be viewed negatively. In the post-crisis regulatory environment, the largest banks often offer the greatest protections to creditors due to tighter regulatory scrutiny and higher capital and liquidity standards. All else being equal, this means that bigger can be safer, even in the context of potential “bail-in” for creditors in a resolution. Systemic importance weighs on our ESG assessment only when the bank’s business activities create negative social externalities, which we do not feel is still the case in the US and Europe.
- Financial inclusion/integration of ESG in underwriting assesses banks’ commitment to providing financing to underserved market segments in a safe-and-sound manner (e.g., without exposing themselves to higher losses or potential regulatory fines). While prior infractions are considered, our rating is forward-looking and

incorporates an assessment of both the scope of the lending commitment as well as the company’s management of related risks. For banks with a focus on non-prime consumers, we look critically at the benefits that their products offer to customers rather than focusing only on the profitability to the bank. For example, a bank with a strong track record of providing home loans to immigrant communities at reasonable rates could score highly, while a bank offering high-fee, high-interest credit cards to low-FICO borrowers might score poorly. This strategy has allowed PIMCO to avoid payday credits that were later sanctioned by regulators or fined by the Consumer Financial Protection Bureau.

- Customer privacy & data security is at present a subjective measure given that few banks report the specific metrics recommended by the SASB (e.g., volume and impact of data security breaches). Until reporting becomes more ubiquitous, we reserve our highest scores for companies that have communicated strategic investments in data security and had no public data security breaches, while companies that have suffered such incidents score lower.

Environmental (15% of PIMCO ESG Score)

- Sustainable lending impact includes lending exposure to energy, oil & gas, basic materials and mining (SASB). PIMCO views “impact” here more broadly than simply the percentage of loans to industries with negative environmental impacts. We also look at underwriting trends, including whether the bank is reducing lending to the coal sector, expanding lending for renewables and whether the bank is involved in controversial projects.
- Environmental impact & sustainability plan includes a discussion of credit risk to the loan portfolio from climate change (SASB). Leading Practice banks have disclosed detailed sustainability targets and made public greenhouse gas reduction commitments. Extra credit is given for banks that have explicitly mapped their revenues to Sustainable Development Goals (SDGs).
- Green bond issuance gives credit to banks that have been active in issuing “green bonds” – instruments that fund projects with positive environmental benefits – either as a part of their own funding or on behalf of clients.

Conclusion

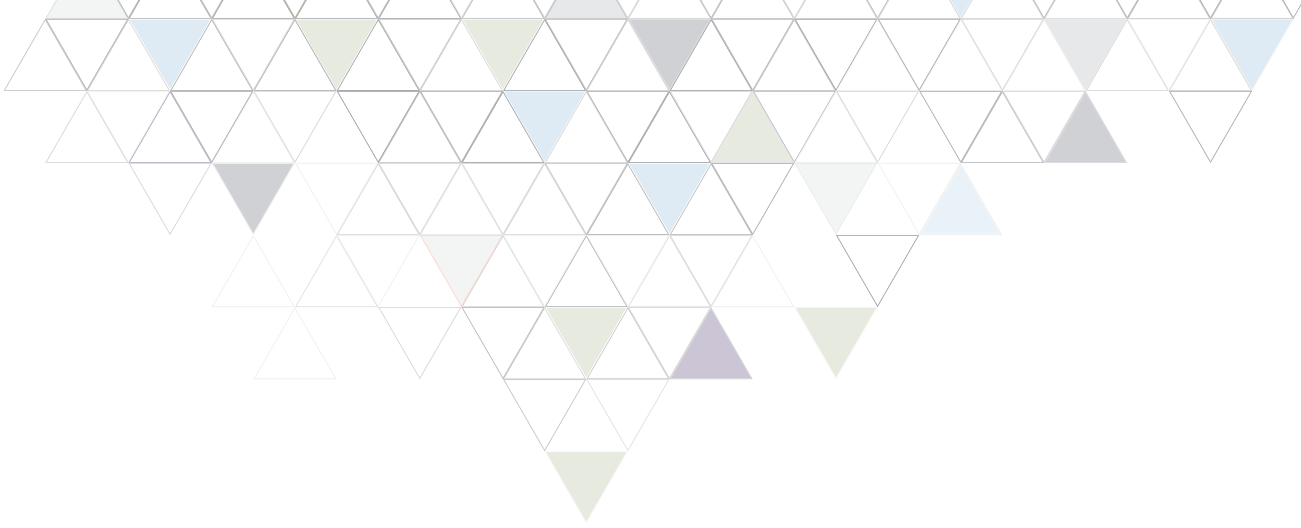
PIMCO incorporates ESG analysis throughout its investment process to ensure that all portfolios benefit from a detailed review of significant non-financial factors that have the potential to impact long-term credit performance. This analysis supports our favorable credit view for leading global commercial banks given the significant regulatory and risk management improvements that have been made since the crisis. Looking ahead, we will continue to engage with major banks to encourage ongoing improvements in their sustainability and social lending programs, and we will continue to encourage banks to improve the quality of their sustainability disclosures, in particular by disclosing the provisional SASB standards.

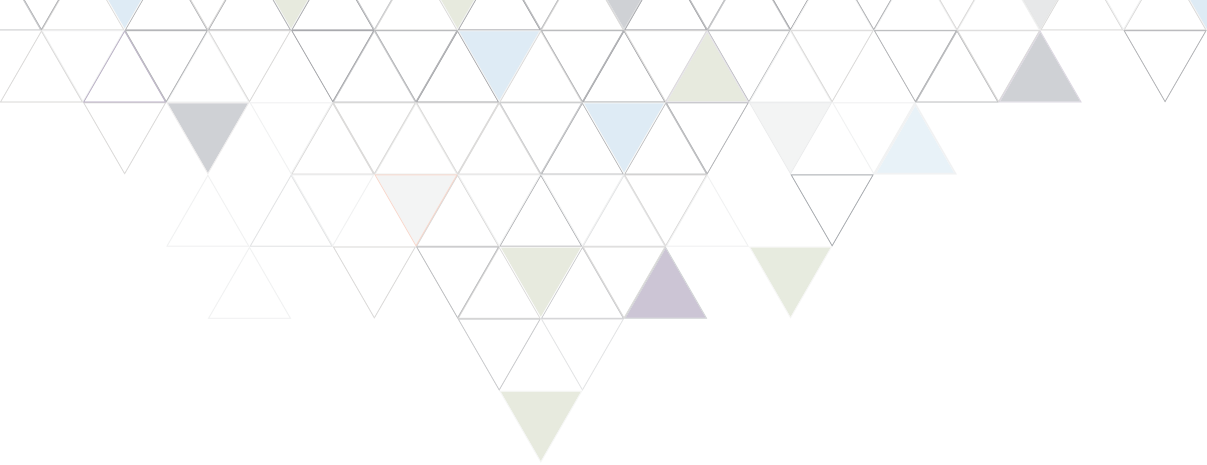
DISCLOSURES

All investments contain risk and may lose value. Investing in the bond market is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and the current low interest rate environment increases this risk. Current reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed.

There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market. Investors should consult their investment professional prior to making an investment decision.

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PineBridge Investments

Assessing the Carbon Footprint of a High-Quality Bond Portfolio¹

Introduction

Founded in 1996, PineBridge Investments is a private, global asset manager with a focus on active, high conviction investing across fixed income, equities, and alternatives. The firm manages over US\$88 billion in assets under management as of 30 September, 2017, including US\$19 billion in developed markets fixed income strategies. Our global client base includes institutions, insurance companies, and other intermediaries. PineBridge Investments has welcomed SASB's development of standards for the disclosure and analysis of sustainability-related performance, as a means through which to directly integrate customers' sustainability concerns, as opposed to using negative screens. PineBridge employs a top-down portfolio allocation assessment of core ESG risks in its investment decisions, and responds to material changes in the sustainability profile of a sector and its issuers in a consistent and timely fashion. In 2015, the firm launched its first dedicated ESG investment-grade fixed income composite strategy. Since its inception, the client base of that strategy has grown tenfold.

The consideration of ESG criteria into our investment business dates back to 2006. PineBridge was then part of the former asset management arm of American International Group (AIG) – the first U.S. insurer to issue a policy statement on the environment and climate change and an early signatory of the Principles of Responsible Investment (PRI). The firm has been at the forefront of socially responsible investing through a variety of corporate initiatives, including participation in the Investor Network on Climate Risk (INCR) and the United Nations Environment Programme Finance Initiative (UNEP FI). PineBridge continues to build on that legacy by maintaining its PRI signatory status and incorporating sustainability analyses into the portfolio construction process, upon which its investment strategies are built.

This case study illustrates how PineBridge utilizes SASB's metrics as a guide to derive a set of **Key Risk Indicators (KRIs)** of the carbon footprint of corporate bond portfolios, a sustainability issue which remains paramount for institutional asset owners.

► Founded in 1996, PineBridge Investments is a private, global asset manager with a focus on active, high conviction investing across fixed income, equities, and alternatives. The firm manages over US\$88 billion in assets under management as of 30 September, 2017, including US\$19 billion in developed markets fixed income strategies. Our global client base includes institutions, insurance companies, and other intermediaries.

¹ We gratefully acknowledge Alessia Falsarone, represented in the first cohort of SASB's Fundamentals of Sustainability Accounting (FSA) credential holders (FSA), for her contribution to the development of this case study; and Robert Vanden Assem, CFA for the presentation of the ESG capabilities for developed markets fixed income on behalf of PineBridge Investments.

Defining Carbon Exposures

In early 2016, our fixed income team started analyzing the impact of carbon dioxide (CO₂) emissions across client portfolios as compared to the universe of blue-chip corporate issuers listed in the United States. The effort was conducted in accordance with the PRI and UNEP FI recommendations on the integration of ESG issues by asset managers in several of our customers' jurisdictions.² The process required us to (1) clearly define the sources of carbon intensity of the sectors and companies represented in our investment portfolios; and (2) to adopt a consistent methodology to measure carbon exposures in a sector-invariant way, for the purpose of running historical and peer group comparisons.

- 1. Sources of Carbon Intensity.** We utilized the definition of emission intensity of a sector – the total level of greenhouse gas (GHG) emissions released by all companies involved in a sector's supply-chain – developed by the World Resources Institute (WRI)³. The number of individuals (i.e., customers, employees, distributors and affiliates) that are part of a sector ecosystem and the economic value generated by its output (i.e., the sector's contribution to local or country GDP) are the two main drivers of absolute emissions for a given sector. As a result, we consider the growth of GHG emissions vs. economic growth attributed to a sector as the sector's emissions' intensity.
- 2. Measurement of Carbon Exposures.** We referenced the Greenhouse Gas Protocol⁴, a widely-used international tool to assess carbon exposure that classifies GHG emissions as follows: Scope 1 emissions from sources that are owned or controlled by a company; Scope 2 emissions involving purchased goods; and, Scope 3 emissions from activities such as transportation of purchased fuels and other outsourced activities, e.g., supply chain-related emissions. By viewing our investible universe through a SASB lens, we were able to prioritize the direct (Scope 1) emissions attributed to a sector overall and to assess the potential impact of indirect (Scope 2 and 3) emissions.

The outcome of this analysis was quite striking. Approximately 15% of total issuers in developed economies that are active participants in fixed income markets and that are rated as investment-grade, operate in sectors associated with Scope 1 emissions (see Table 1). By broadening SASB's environmental factor lens to include management of waste and hazardous materials, and air quality, that percentage reaches almost 50% of investment-grade issuers in these markets. Additionally, while exposure to Scope 1 emissions seems to have plateaued since 2015, the impact of indirect activities on the environmental footprint of an issuer's operations appears to have intensified. We believe that this trend may be associated with disruptions in the supply and value chains of entire sectors that continue to face global trends such as increased mobility and resource scarcity.

Table 1 GHG EMISSIONS SASB MATERIALITY ASSESSMENT (2015-2017)

ENVIRONMENTAL FACTOR	% BOND ISSUERS AFFECTED (*)
Water and Wastewater	50%
Energy Management	47%
Waste and Hazardous Materials Mgmt.	31%
GHG Emissions (Scope 1)	15%
Air Quality	15%
Biodiversity	15%
Fuel Management	4%

Note: Analysis references the Bloomberg Barclays US Investment Grade Corporate Index with bond trading liquidity of up to 3 days for buy/sell execution.

(*) The percentage does not add up to 100% since environmental factors are not mutually exclusive and an issuer may be affected by multiple factors.

Source: PineBridge Investments, Bloomberg Barclays Indices and SASB Materiality Map™ as of September 30, 2017.

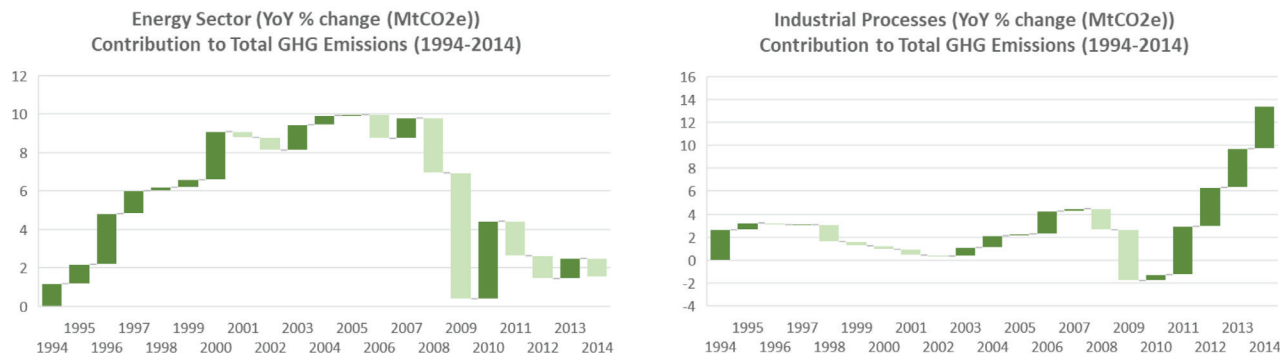
² Fiduciary Duty in the 21st Century, Country Roadmaps, UNEP Finance Initiative, PRI, and Design Inquiry: Design of a Sustainable Financial System January 2016.

³ World Resources Institute's (WRI) Climate Analysis Indicators Tool (CAIT). CAIT-US GHG data are derived from the State Inventory Tool of the U.S. Environmental Protection Agency's Emissions Inventory Improvement Program.

⁴ <http://www.ghgprotocol.org>

These findings were reinforced by observing that the contribution of the Energy Sector to the growth rate of total G-7 GHG emissions plateaued in 2004 and then declined steadily on a year-over-year basis through 2014, while GHG emissions generated by other industrial sectors followed an upward path over the same time period (see Figure 1).

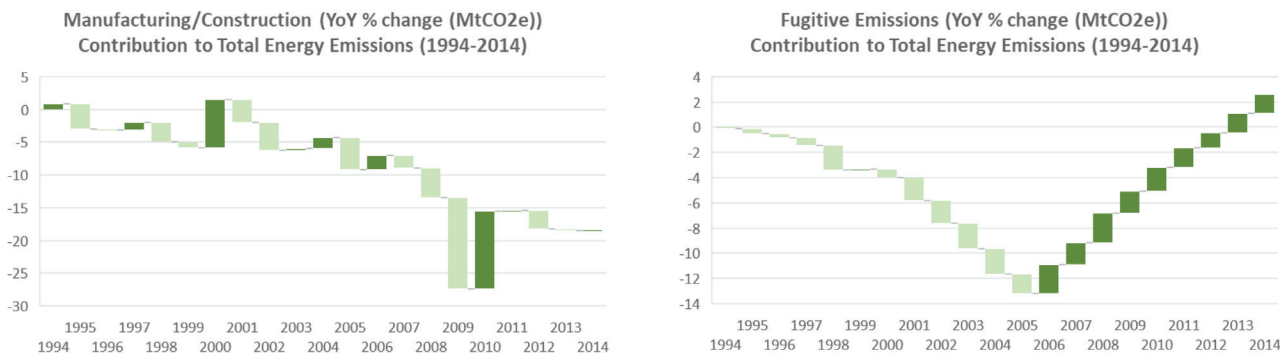
Figure 1. Growth Rates of Total GHG Emissions in G-7 Countries (1994-2014), Energy Sector vs. Non-Energy Sectors



Source: PineBridge Investments and CAIT-US GHG data for G-7 countries as of latest available (December 31, 2014).

Moreover, within the Energy Sector, the contribution to total GHG emissions from fuel combustion in manufacturing and construction activities, as well as electricity and heat generation, slowed significantly during the same time period (2004-2014); whereas this sector’s contribution to GHG production from fugitive emissions (e.g., caused mostly by leaks from industrial activities) registered a noticeable uptick in 2005, and has climbed steadily from 2011-2014 (see Figure 2).

Figure 2. Energy Sector: Manufacturing/Construction GHG Emissions vs. Fugitive Emissions in G-7 Countries (1994-2014)



Source: PineBridge Investments and CAIT-US GHG data for G-7 countries as of latest available (December 31, 2014).

Research shows that the growth of carbon dioxide emissions in developed economies has flattened in recent years, but emissions from other greenhouse gases, such as methane, continue to soar⁵. Thus, assessing the carbon footprint of an investment portfolio requires moving beyond analyzing Scope 1 emissions generated by the Energy Sector alone, to account for Scope 2 and 3 emissions—not only of CO₂, but also other greenhouse gases, including emissions produced by companies in sectors outside the Energy Sector.

⁵ Recent studies explore how agriculture and wetlands, as opposed to fossil fuels, could be causing a global rise in methane concentrations which are much more persistent in the atmosphere than carbon dioxide. Ref. *Key Indicators to Track Current Progress and Future Ambition of the Paris Agreement*, Nature Climate Change 7, 118-122 (2017).

Applying the SASB Lens to GHG Emissions: Issuer vs. Sector Concentration

PineBridge finds that, of all sectors in the US Investment Grade Corporate Universe, approximately one quarter is directly impacted by GHG emissions and CO2-related issues when viewed through SASB’s lens of financial materiality. 150 companies across the top five of these sectors represent nearly 15% of the market capitalization of this securities universe. Issuers in the Energy Sector represent half of the market value of companies with Scope 1 GHG emissions exposure, with companies in Transportation, Consumer Cyclicals, Basics and Capital Goods sectors accounting for the remainder. Within the Energy Sector, such exposure appears less concentrated at the individual company level because of the higher number of issuers in this sector relative to others. This leads us to conclude that non-energy CO2 emitters may carry a higher carbon footprint than their Energy-sector peers *when compared on the basis of economic output* (see Table 2). In fact, we find the average GHG emission-intensity of issuers in the Energy sector to be at the low end of the spectrum among the affected sectors.

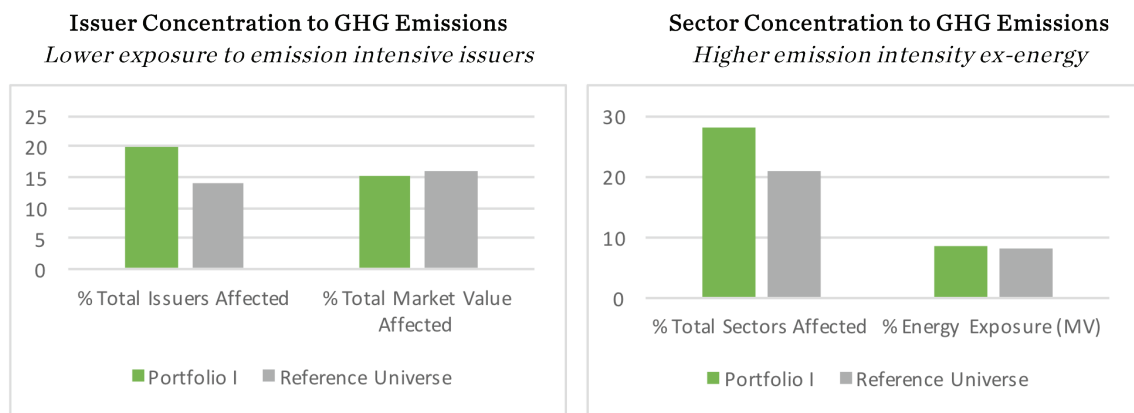
Table 2 U.S. INVESTMENT GRADE CORPORATE BOND LIQUID UNIVERSE EXPOSURE TO GHG EMISSIONS BY SECTOR (2015-2017)

CORPORATE SECTOR*	MKT VALUE EXPOSURE (% TOTAL SECTOR)	# ISSUERS	GHG EMISSION INTENSITY PER ISSUER (%)
Energy	50%	82	< 1
Consumer Cyclicals	47%	17	≈ 3
Transportation	31%	31	≈ 1
Basic Industries	15%	12	≈ 1 ¼
Capital Goods	4%	6	< 1

Note (*): Bloomberg Barclays US Investment Grade Corporate Index with bond trading liquidity of up to 3 days for buy/sell execution. Source: PineBridge Investments, Bloomberg Barclays Indices and SASB’s GHG emissions disclosure topic by industry as of September 30, 2017.

Such insights become extremely valuable when assessing the sector allocation of our investment portfolios with the goal of minimizing carbon footprint and lowering GHG emissions’ risk. It also implies that building a more “sustainable” portfolio, in environmental terms, may not necessarily be achieved by excluding all corporate entities operating in the Energy Sector. On the contrary, managing the magnitude of overweight positions in GHG emission-prone sectors (energy and non-energy) and the underlying issuer concentration is likely to yield a more “sustainable” portfolio in the long run. Let’s consider the following portfolio profile:

Figure 3. Portfolio I - Sample Portfolio Allocation versus Reference Universe (GHG Emissions Concentration by Issuer and by Sector)

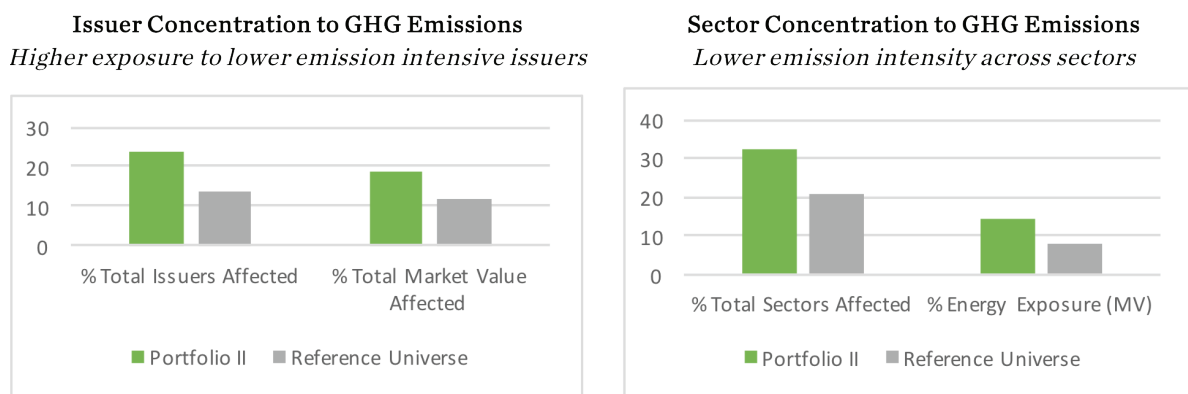


Source: PineBridge Investments. For illustrative purposes only. We are not soliciting or recommending any action based on this material.

Portfolio I exhibits a lower exposure to GHG emitters as a percent of total market value allocation to these issuers. Yet, the portfolio presents a higher concentration of non-energy CO₂-prone sectors in terms of carbon intensity. In this case, the carbon footprint of Portfolio I can be offset by a strategic underweight to the higher carbon-intensity sectors, such as Consumer Cyclical and Basics, relative to the Reference Universe. Maintaining such underweight in the short term may result in containing the exposure to carbon risk in the longer run. However, Portfolio I may not benefit from opportunities less carbon-intensive issuers within carbon-intensive sectors may enjoy in a transition to a low-carbon economy.

Therefore, optimizing carbon risk exposure to capture the cross-sector opportunities generated by secular shifts, such as transition to a low carbon economy, would yield a portfolio profile such as the following:

Figure 4. Portfolio II - Optimal Portfolio Allocation versus Reference Universe by GHG Emission Intensity



Source: PineBridge Investments. For illustrative purposes only. We are not soliciting or recommending any action based on this material.

Portfolio II is tilted in favor of lower emission-intensive corporations as a means to achieve lower aggregate emission intensity across sectors. Importantly, these sectors are exposed to the business opportunities presented by the replacement of the fossil fuels supply chain with other notable alternatives⁶. Specifically, in the Energy Sector, a higher share of portfolio allocation would be given to those issuers that are innovating their operational processes to reduce their carbon footprint and building efficiencies along their value chain that reduce GHG emitting activities.

Employing Key Risk Indicators to Unveil Carbon Opportunities

How would a bond portfolio manager adjust investment portfolio sector allocations to avoid individual issuers' near-term headline risks, while also taking advantage of sustainability opportunities yielded through the combined efforts of companies, governments and academics?

At PineBridge, we have assigned **Key Risk Indicators (KRIs)** to those sustainability issues which most affect our investible universe in terms of their material impact on the financial viability of each sector and its constituents. KRIs address the "opportunity cost" of our portfolios missing participation in a longer-term sector trend which is likely to yield significant opportunities for positive economic impact in the marketplace. The use of KRIs helps shift investor focus **to alpha enhancers**; i.e., shifting investor exposure to sectors more likely to provide solutions to sustainability-related risks, rather than risk avoidance; e.g., avoiding carbon-intensive sectors. KRIs track to the relevant industry-level SASB accounting metrics; for example, the average pricing of reserves (cost of carry) for companies in the Oil & Gas Exploration & Production Industry, or the capex devoted to fuel economy for the Transportation

⁶ Nelson, D., Hervè-Mignucci, A., Goggins, A., Szambelan, S.J., Zuckerman, J. "Moving to a Low-Carbon Economy: The Financial Impact of the Low-Carbon Transition", Climate Policy Initiative, October 2014.

Industry (see Table 3 for other examples). They provide us with the flexibility to run cross-sector, as well as historical, comparisons. For example, over 50% of investment-grade rated issuers in developed markets are affected by repercussions of environmental issues on their financial and operational health. Below, we show the sample KRIs for GHG emissions in the top five sectors affected by emission intensity in this investment universe (see Table 3):

Table 3 PINEBRIDGE KEY RISK INDICATORS OF GHG EMISSIONS BY SECTOR
US INVESTMENT GRADE CORPORATE BOND LIQUID UNIVERSE (2015 – 2017)

CORPORATE SECTOR*	MKT VALUE EXPOSURE (% TOTAL SECTOR)	# ISSUERS	GHG EMISSION INTENSITY PER ISSUER (%)	PINEBRIDGE KEY RISK INDICATORS	3 YR TREND
Energy	50%	82	< 1	Avg. Pricing of Reserves (Cost of carry)	↗
Consumer Cyclical	47%	17	≈ 3	Energy Consumption Intensity (by market share)	↗
Transportation	31%	31	≈ 1	Capex devoted to Fuel Economy	↘
Basic Industries	15%	12	≈ 1 ¼	Renewable footprint (in-house)	↗
Capital Goods	4%	6	< 1	Avg. Pricing of Reserves (Cost of carry)	↔

Note (*): Bloomberg Barclays US Investment Grade Corporate Index with bond trading liquidity of up to 3 days for buy/sell execution. Source: PineBridge Investments, Bloomberg Barclays Indices and SASB’s GHG Emissions disclosure topic by industry as of September 30, 2017.

By measuring the magnitude of our sector exposures to CO2 emissions, in light of the improving or deteriorating trends in the relevant KRI, we are able to: 1) assess the near-term impact of investing in sectors which are directly exposed to GHG emissions, such as Energy and, 2) overweight exposures to those sectors and companies which exhibit consistent management of their carbon footprint. One example is that of fossil fuel reserves and their cost of carry. In our framework and according to our experience, sectors and corporations which have allocated capex and made formal efforts to advance in areas, such as storage technologies, as well as increasing investment in renewables, are likely rewarded with enhanced liquidity in the secondary bond market when negative headlines affect their broader peer group. At PineBridge, we look for positive KRI trends over time to enhance or challenge our “conviction calls” on sustainability issues.

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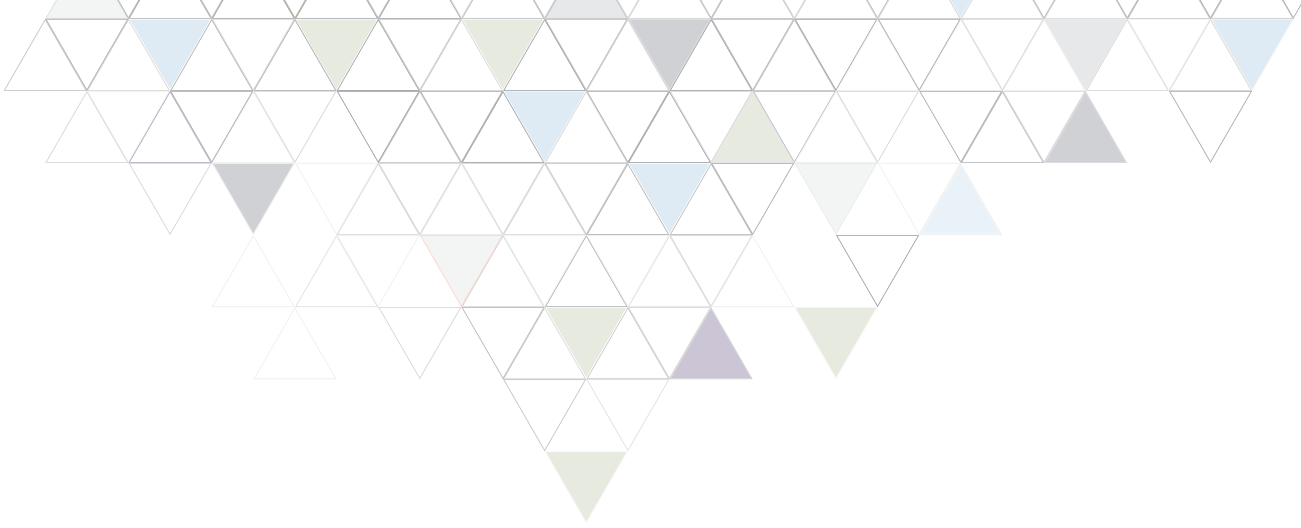
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Last updated 6 March 2017.





Wespath's Analytical Insights: ESG Integration in External Asset Manager Selection

Uncovering Managers' ESG Strengths in the Search Process

Introduction

Wespath Investment Management (Wespath) invests in a sustainable and responsible manner, creating long-term value for our participants and clients while aspiring to uphold the values of The United Methodist Church (UMC).

Our comprehensive approach to sustainable investment supports our role as prudent fiduciaries and our aspiration to have a positive impact on the environment and society.

We believe a long-term focus best aligns investment returns and risks with investor needs, and supports the management of plan liabilities. This investment approach requires that we consider how the world might change in the future. We believe companies adept at identifying and managing environmental, social and governance (ESG) issues are more likely to be sustainable; i.e., they will avoid risks and capitalize on new opportunities. As such, Wespath is committed to incorporating ESG issues into investment analysis and decision-making, as we believe the intentional integration of ESG factors in the selection and management of investments positively affects long-term performance.¹

The relationships that we have with our external asset managers reflect this long-term view, and we seek managers who share our perspective.² For this reason, when Wespath engages a new asset manager, our evaluation of ESG competencies helps provide valuable information in the search and selection process. These insights complement conventional investment criteria (such as investment philosophy and process, unique competitive advantages, team experience, track record, etc.).

¹ Wespath's *Investment Beliefs*: <https://www.wespath.com/assets/1/7/5066.pdf>

² As of September 30, 2017, Wespath's total assets under management were approximately \$23 billion—96% of Wespath's assets are managed by 57 external managers.

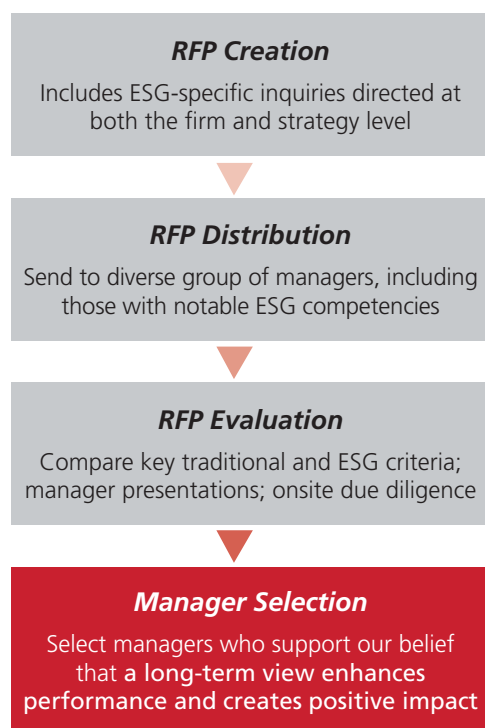
▶ Wespath Investment Management (Wespath) is a division of Wespath Benefits and Investments, a general agency of The United Methodist Church. Wespath provides investment solutions for the endowment and retirement plan (defined contribution and defined benefit) portfolios of United Methodist-affiliated institutional investors, including foundations, higher education institutions and health care organizations through a broadly diversified family of daily-priced funds.

Wespath's investment process proactively incorporates the consideration of environmental, social and governance (ESG) factors into investments across asset classes and in the selection of external asset managers. Wespath's activities promoting sustainability include proxy voting, corporate and public policy engagement, and positive impact investing.

Ultimately, we believe assessing a manager’s ESG competency during the selection process is an important element of enhancing long-term investment returns and mitigating investment risks.

► This paper complements Wespath’s Analytical Insights—ESG Integration: Evaluating and Monitoring External Asset Manager Performance, an excerpt of which SASB published in the premier edition of ESG Integration Insights in 2016.

Integrating ESG Factors into the Search Process



Wespath’s dedicated asset class investment teams typically lead searches for new external managers after the Chief Investment Officer (CIO) authorizes a new search. The Sustainable Investment Strategies (SIS) team, a department in the Investments division, works with the asset class teams to evaluate ESG competencies throughout the search process.

RFP Creation: One of the first steps in searching for a new investment manager is the development of a formal request for proposal (RFP). We include specific questions in the RFP to help us identify and understand a manager’s ESG competencies. As we continue to refine our RFPs, we have found that questions should address both how managers incorporate ESG practices and policies at the *firm* level, and at the specific *strategy* (or mandate) level. This helps us identify managers that apply their ESG practices systematically across investment strategies.

At the firm level, questions typically include:

- Can you describe the firm’s commitment and experience in sustainable investing, including how ESG issues are integrated firm-wide?
- Does the firm have a sustainable/responsible/ESG investment policy? If so, how frequently is it reviewed and updated, and who approves it? Please attach relevant documents and links.

While firm-level RFP questions can apply across multiple asset classes, we tailor questions at the strategy level to the specific ESG-related nuances of each asset class. This ensures that we receive information that is relevant to the specific RFP.

At the strategy level, questions and inquiries include:

- **Public Equity**—emphasizing how ESG affects value creation:
 - Can you provide specific examples demonstrating how you identify, prioritize and address material ESG factors at a security level within the strategy?
- **Private Equity**³—stressing the critical role of General Partners (GP) in the underlying fund:
 - How do you assess that adequate ESG-related competency exists at the underlying GP level? Include any relevant monitoring processes you have in place to assess an underlying GP’s management of ESG factors.
- **Fixed Income**—recognizing how engagement can help mitigate downside risk:

³ Wespath executes its Private Equity strategy through the use of Fund of Fund managers and does not invest directly in private equity funds.

- Summarize the extent to which you engage with company management/public policymakers on ESG-related issues.

RFP Distribution: We aim to distribute the RFP to a diverse group of asset managers, from small specialist boutiques to large investment managers offering multiple investment products. Regardless of size, strategy and firm resources, we expect all managers to integrate the consideration of material ESG issues into investment decision-making. For all investment manager searches, we draw on discussions with our peers and industry sources, as well as databases to develop a preliminary list of prospects. To complement these efforts, the SIS team maintains a pipeline of managers with ESG competencies and credentials. By keeping an up-to-date internal ‘ESG manager database,’ the SIS team can help streamline the distribution of the RFP.

RFP Evaluation: Wespath summarizes and evaluates the responses to all RFPs in a matrix, which compares key traditional and ESG criteria across responding managers. The ESG portion of the matrix offers a high-level assessment of ESG competencies and strategies, a detailed analysis of individual responses to each RFP question, and a relative ESG rating for each submission. The matrix ensures a consistent and reliable process to compare and evaluate manager responses, and plays an integral role in creating a short list of finalists.

Wespath invites representatives from all RFP finalists to its offices to present to the entire Investments division. The Investments division debates the relative strengths and weaknesses of each finalist, and each member of the division provides a ranking and rationale for his or her top candidates. In an effort to encourage individual thinking, senior members of the division wait to disclose their perspectives until the other team members have contributed their thoughts. The CIO offers comments last. The CIO and asset class lead will consider the aggregate ranking of the finalists—combined with the group’s overall comments and concerns—before selecting firms (typically two) for on-site location due diligence visits from two representatives of the Investments division.

▶ Managers that appear particularly skilled at incorporating the analysis of ESG factors into their research frameworks tend to define and prioritize ESG opportunities and risks on a sectoral basis. This reflects the fact that material ESG issues vary depending on industry sector, geographic region and core business activity. We have found the Sustainability Accounting Standards Board (SASB) standards best represent the emerging criteria used to identify sectoral materiality. While not all managers use SASB’s sector-based approach, Wespath considers the SASB framework an important benchmark in determining RFP candidates’ ESG awareness and understanding.

Indicators of Best Practice

While each new search allows us to expand and refine our understanding of best practices, the managers that we consider ‘best-in-class’ demonstrate three distinguishing characteristics regarding ESG integration:

1. They take a long-term view of all factors that could materially impact operational strategy and performance, including ESG issues

While managers may not always self-identify as taking an “ESG-specific” approach, leading managers incorporate an assessment of material ESG factors into an analytical framework that extends beyond short-term business cycles. They recognize how ESG factors can expose potential investment opportunities and risks, and impact financial performance. They also recognize that these factors provide insights into the quality of a company’s management team and strategic direction in the near and longer-term.

2. They systematically define and prioritize ESG risks and opportunities by sector

Managers that appear particularly skilled at incorporating the analysis of ESG factors into their research frameworks tend to define and prioritize ESG opportunities and risks on a sectoral basis. This reflects the fact that material ESG issues vary depending on industry sector, geographic region and core business activity. We have found the Sustainability Accounting Standards Board (SASB) standards best represent the emerging criteria used to identify sectoral materiality. While not all managers use SASB’s sector-based approach, Wespath considers the SASB framework an important benchmark in determining RFP candidates’ ESG awareness and understanding.

3. They recognize that effective ESG integration provides analytical insights and a greater understanding of a truly sustainable economy

Managers who effectively integrate ESG considerations into their analysis are able to demonstrate to us that they gain specific insights into a company's business strategy and financial performance. These managers are also more likely to evaluate how corporate activity might positively or negatively affect all stakeholders (e.g., employees, local communities, customers, etc.) in a dynamic, complex and interconnected world. In doing so, best-in-class managers are increasingly highlighting connections between long-term value creation and the development of a truly sustainable economy that creates positive financial, social and environmental impacts. These managers are also increasingly emphasizing connections between unsustainable economic practices and value destruction. From a fixed income perspective, given the importance of non-corporate issuers to the overall market, best-in-class managers are more likely to recognize the connections between 'real-world' impacts and systemic risk within the financial markets. For example, in the lead-up to the financial crisis, clearer links might have been made between the social and financial risks represented by the over-leveraging of the sub-prime debt market, and the role of collateralized mortgage obligations (CMOs) in precipitating the market crash.

ESG Integration Challenges

We have also identified three shortcomings that prevent managers from effectively integrating ESG factors into their analysis:

1. A narrow interpretation of how ESG factors can materially affect company performance and investments

Certain managers only evaluate how ESG issues might affect a company's reputation. While reputational risks may be material in certain industries, many other ESG factors affect company performance (as SASB's Materiality Map™ illustrates). We believe that such a narrow interpretation of ESG integration precludes a manager from gaining possible insights into the quality of a company's management and the viability of its long-term strategy and financial performance.

2. A reactive and fragmented approach to ESG integration

Managers that have a reactive and fragmented approach to ESG integration often fail to demonstrate a systematic research process that assesses material ESG risks across portfolios. These managers focus more on how individual companies respond to short-term events—like environmental, social and governance crises. In doing so, they demonstrate a lack of repeatable and scalable research processes that could help them analyze whether a company has sustainable business policies and practices. Furthermore, evidence that a manager's focus is on shorter-term, events or crises, provides us with information that their investment time horizons may not be aligned with our own.

3. Elements of ESG integration are driven solely by possible client demand, rather than long-term value creation

While Wespath supports the development of ESG-related products and services, our expectation is that managers are primarily motivated to integrate ESG factors into all of their investment decision-making as a means of enhancing long-term value creation. Indications that ESG integration is solely responsive to client demand rather than an inherent belief that ESG integration is value-driven, raises concerns that managers are professing ESG competence in order to develop new products for a segment of their target market.

Aspiring towards Comprehensive ESG Integration

Wespath is a long-term investor. We believe it is imperative that the companies in which we invest demonstrate sustainable business policies and practices, helping to ensure their viability well into the future. For this reason, we believe that integrating ESG issues into our searches for new managers:

- Enhances our ability to select partners that align with Wespath’s long-term, sustainable investment horizon
- Contributes to our funds’ financial performance
- Results in positive impact for our multiple stakeholders

Our sustainable investment strategies and asset class investment teams continue to strengthen their collaboration when searching for new managers to achieve these aims.

Over the past 18 months, we have reviewed 39 RFP responses for six new mandates across public equity, fixed income, private equity, and private debt asset classes. For each of these new mandates, there has been consensus between the SIS and asset class investment teams on the finalists that should present to Wespath’s entire Investments division. We believe this reflects:

- A more coordinated understanding of the attributes that Wespath expects from best-in-class managers, and
- An increasingly strong pool of prospects able to demonstrate how ESG integration supports long-term financial performance.

More broadly, we hope that the intentional integration of the consideration of ESG factors in any search process can help extend the investment horizons of asset owners and asset managers. We believe, like many other sustainable and responsible investors, that focusing on longer-term investment horizons can promote greater financial stability. This will enhance investment performance for broad market participants while also creating scalable, positive impact for the environment and society. We hope this paper encourages further consideration of ESG factors, alongside traditional financial criteria, when asset owners evaluate service providers’ ability to manage investment risks and opportunities.

► “It is imperative that the companies in which Wespath invest demonstrate sustainable business policies and practices, helping to ensure their viability well into the future.”

Authors (Wespath Case Study)



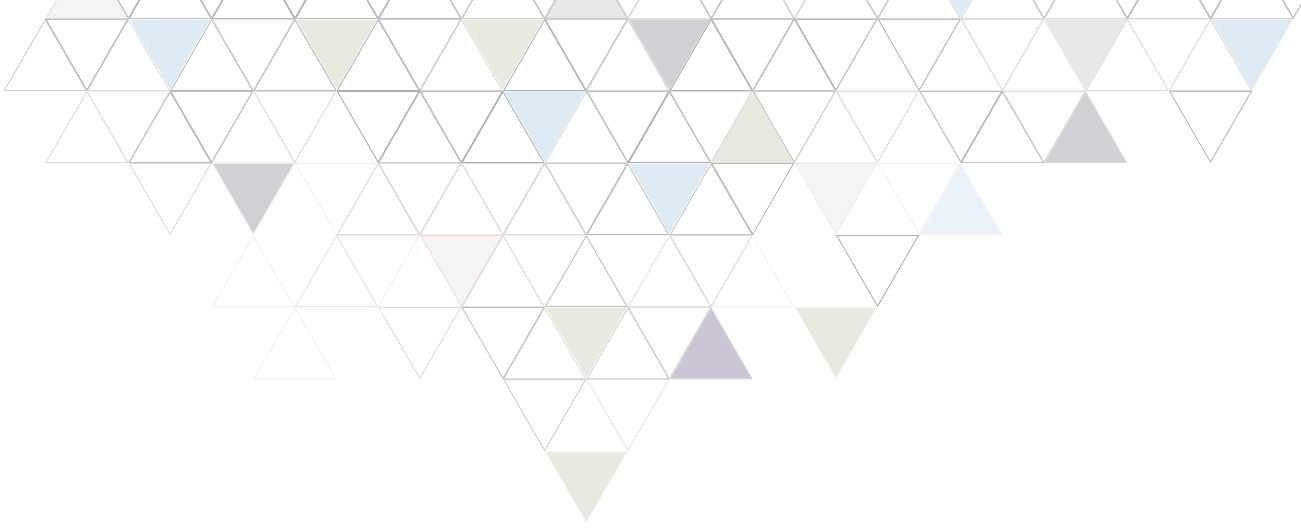
Nicholas Abel - Sustainable Investment Specialist, Sustainable Investment Strategies

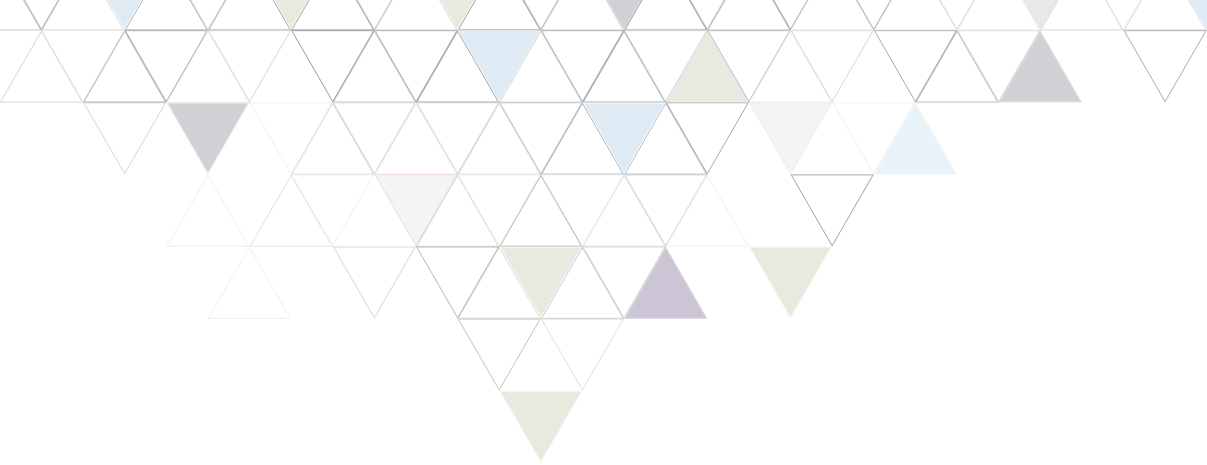
Nick joined Wespath in October 2016. As a sustainable investment specialist, Nick works to integrate ESG factors into Wespath’s investment process. Nick also leads Wespath’s corporate governance engagement activities. Previously, he was a senior investment analyst at investment consultant RVK, Inc., where he performed ESG-product portfolio analysis, capital market research and investment due diligence for institutional investors. Nick received his bachelor’s degree in Finance from Western Washington University.



Juan Lois - Research Analyst, Sustainable Investment Strategies

Juan joined Wespath in September 2015. As a sustainable investment research analyst, he ensures that Wespath’s investment program incorporates ESG metrics into the investment process. He is also responsible for overseeing Wespath’s ethical exclusions and contributes to the team’s corporate engagement and proxy voting activities. Prior to joining Wespath, Juan worked in institutional sales and business development at Cornerstone Capital Group, a financial services firm dedicated to mainstreaming the discipline of sustainable finance. Before that, he worked in the energy industry in Latin America, focusing on mining, electricity generation and renewable energy technologies. Juan received his bachelor’s degree in Latin American Studies from Tufts University, and his master’s degree in International Relations from The George Washington University.





Calvert Research Management

Incorporating the UN Sustainable Development Goals into ESG Investment Research via SASB Tools

Why Do the Sustainable Development Goals (SDGs) Matter to Investors?

The influence of corporations has evolved over time as markets globally have opened and liberalized. This evolution brings with it a shift in societal expectations about the role of corporations in society. Corporations are assuming broader responsibility for the social, environmental, and economic impacts of their operations. These factors increasingly affect companies' valuations in the stock market and their value to society.

As the role of the corporation in society has evolved so has the role of the investor. In this regard, investors are increasingly tracking and analyzing company performance on environmental, social, and corporate governance (ESG) issues in order to allocate capital in ways that align with international norms. The United Nations Sustainable Development Goals (SDGs; see Figure 1), established in 2015, are increasingly drawing the attention of investors.

▶ Calvert Research and Management is a leader in Responsible Investing, with approximately \$10.2 billion of mutual fund and separate account assets under management as of June 30, 2017. The company traces its roots to Calvert Investments, which was founded in 1976 and was the first to launch a socially responsible mutual fund that avoided investment in companies that did business in apartheid-era South Africa. Today, the Calvert Funds are one of the largest and most diversified families of responsibly invested mutual funds, encompassing actively and passively managed strategies, U.S. and international equity strategies, fixed-income strategies and asset allocation funds. Calvert Research and Management is a wholly owned subsidiary of Eaton Vance. For more information, visit calvert.com.

Figure 1: Sustainable Development Goals (SDGs)



The SDGs are a global call to action to end poverty, protect the planet and ensure all people enjoy peace and prosperity. They can serve as a valuable resource by:

- Prioritizing key development goals necessary for stable societies and functional market economies that foster economic growth
- Providing a common framework and language to facilitate engagement among investors, companies, governments, and other key stakeholders in the global economy
- Calibrating investors with evolving societal norms and conditions that can materially impact companies and on which companies have significant economic and social influence
- Encouraging investors to expand the breadth and depth of investment research to keep pace with companies that are increasingly mapping their operations to the SDGs and beginning to report corporate performance relative to them
- Helping to differentiate between leaders and laggards on issues Calvert Research and Management believes can contribute to long-term value creation. For example, companies that exhibit leadership on the SDGs, through proactive engagement with the communities and environments in which they operate, can solidify their social license to operate by fostering more stable operating environments and thriving local economies.

► This case study outlines how Calvert has endeavored to translate the SDGs meaningfully into the investor context using the SASB materiality matrix as a tool to identify SDGs that are likely to be financially material.

Nation-states are the principal agents of the SDGs. Therefore, investor engagement with company management to align corporate goals with SDGs can be challenging; however, the SDGs cannot be accomplished without the active involvement of profit-seeking corporations and investors. This case study outlines how Calvert has endeavored to translate these global norms meaningfully into the investor context using the Sustainability Accounting Standards Board (SASB) materiality matrix as a tool to identify SDGs that are likely to be financially material.

Calvert's Approach to Incorporating the SDGs into ESG Investment Research

As the globally-recognized standard-setting body for sustainability disclosure to investors, SASB has developed a materiality-focused approach that aligns well with the investment research approach of Calvert, emphasizing sustainability issues that most impact a company's financial performance over the long term. The SDGs provide a similar, parallel, framework for nation-states and national programming that emphasize key development goals, the achievement of which is necessary to reach sustained, equitable, economic growth and prosperity for all citizens. The United Nations, since adopting the SDGs, has made it clear that the Goals cannot be achieved without the active involvement of the private sector and investors.

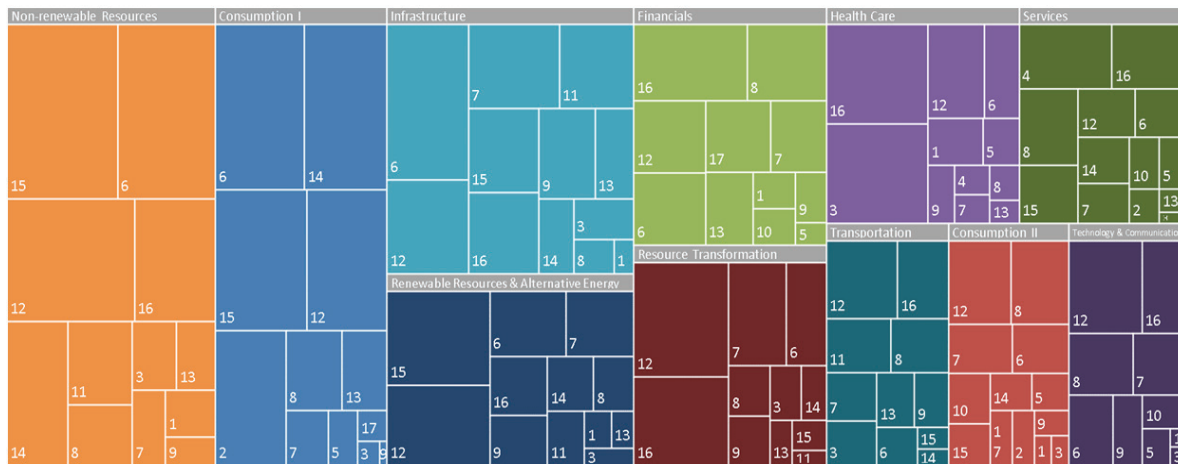
As a responsible investor, with a mission tied to positive financial and societal outcomes, Calvert conducted a mapping exercise to identify common themes between SASB Standards and the SDGs. This involved matching each of SASB's disclosure topics on financially-material ESG issues and related accounting metrics, across SASB-defined sectors and industries, with the SDGs and related targets. Because the SASB Standards are specifically designed for the investor context, and the SDGs are primarily intended for nation states and a broader group of stakeholders, our findings that these frameworks do not match perfectly is unsurprising. Nevertheless, we find that a substantial portion of SASB metrics do map to the SDGs and their related targets, which helps us to identify industries in which the SDGs are most likely to be financially material. This finding enables us to see a clearer path to investments most likely to achieve the SDGs and related positive societal outcomes, and those better positioned to generate positive financial outcomes.

Overall, Calvert took a conservative approach to mapping SDG targets to SASB accounting metrics in order to determine with greater confidence which targets are most closely associated with financial materiality. We found that not all SDG targets can be mapped to SASB accounting metrics, and not all SASB metrics have a corresponding SDG target. However, a sizable portion (71 percent) of SASB accounting metrics do map to the SDGs.

▶ 71% of SASB accounting metrics map to the SDGs.

Figure 2 provides a high-level overview of our findings on exposure¹ to the SDGs by sector, using the SASB Sustainable Industry Classification System (SICS™).² The size of each sector’s color block enables comparison of overall exposure to the SDGs, sector by sector. Consumption I, for example, has greater overall exposure to the SDGs than Consumption II.³ Within sectors, each box is numbered to represent an SDG (1-17) to which that sector is exposed, and the size of each SDG box proportionately represents the size of the sector’s exposure to that SDG. Non-renewable Resources, for example, has the greatest exposure to SDG 15 (Life on Land) and the least exposure to SDG 9 (Industry, Innovation and Infrastructure).

Figure 2. Calvert Research & Management View of Exposure to the Sustainable Development Goals (SDGs) by sector, Mapped via SASB’s Sustainable Industries Classification System (SICS™)



While Figure 2 broadly depicts which SDGs are the most influential to business operations by sector, this model is not without limitations. A relatively small SDG box, for instance, can indicate any one of the following: (1) a particular SDG has relatively little impact on the sector; (2) the targets for this SDG did not match closely with SASB’s accounting metrics; or (3) certain underlying SDG targets are not drafted for application in the corporate context.

We began identifying sectors for which SASB Standards were likely to map to the SDGs by screening them against topics in SASB’s Materiality Map™. ⁴ We were then able to “drill down” to the industry level of SASB Standards and the target level of the SDGs to determine which SDG targets correlated with SASB industry-level metrics. Figure 3 provides a high-level overview of the first phase of this process.

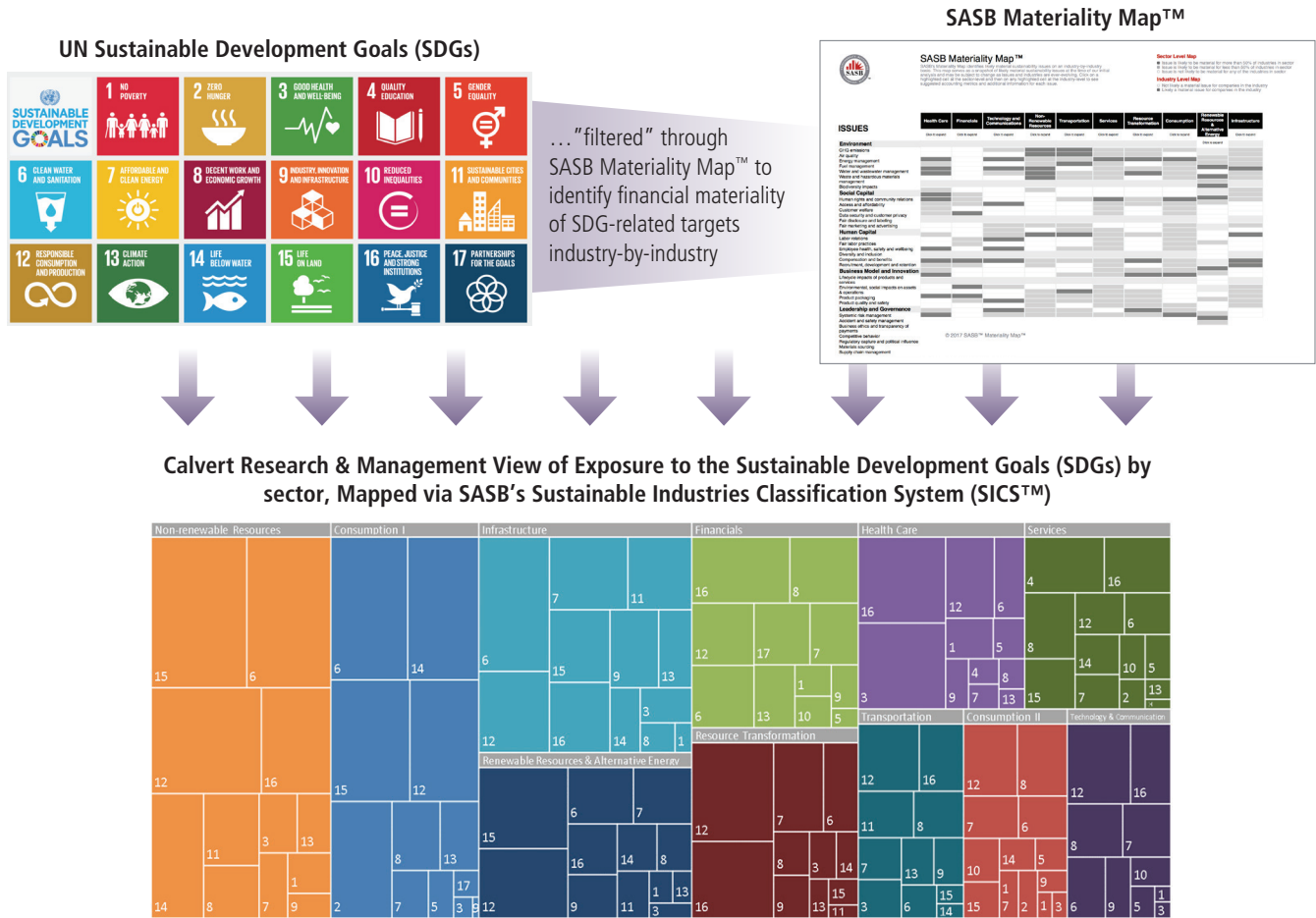
¹ Exposure is defined as the quantity of SDG target to SASB accounting metric matches; the greater the number of matches, the greater the exposure.

² SASB’s Sustainable Industry Classification System (SICS™), prior to codification as of Q3 2017. Subsequent to Calvert’s mapping of the SDGs to SASB’s SICS™, the following sectors will be renamed as follows: “Non-renewable Resources” will be “Extractives and Minerals Processing”; “Consumption I” will be “Food and Beverage”; “Consumption II will be “Consumer Goods”.

³ Ibid

⁴ <https://www.sasb.org/materiality/sasb-materiality-map/>

Figure 3: Overview: Process for Mapping SDG's to SASB Standards



Evaluating Corporate Performance against Financially-material SDG Sub-Targets – a Deeper Dive

To track how companies are changing their practices in response to changing social norms, such as the SDGs, it is necessary to go beyond the high-level tracking of exposure to the SDGs by SICS™ sector shown in Figure 2.

Calvert Research and Management has tracked over 200 SDG sub-targets or indicators to metrics in provisional SASB Standards to enable more meaningful research on and analysis of corporate performance on financially-material SDGs.

Example: SDG 15 (Life on Land) Tracked to SASB's Engineering & Construction Services Standards

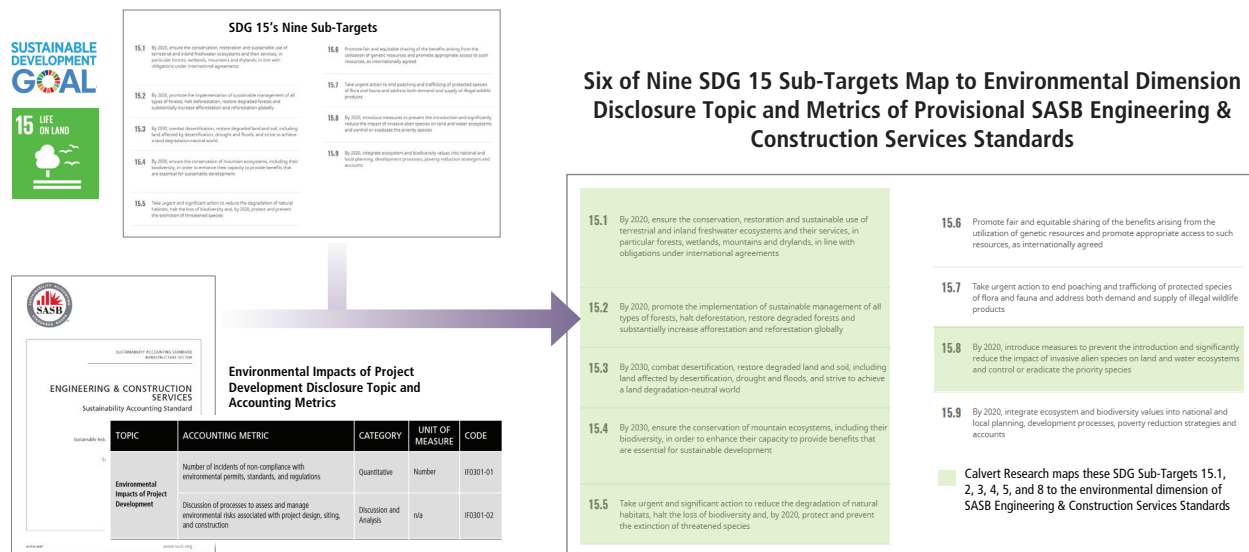
For example, Calvert identified six out of nine possible SDG 15 sub-targets as “matches” with biodiversity-related accounting metrics in SASB's Standards for Engineering & Construction Services Industry⁵—the disclosure topic addressing environmental impacts of project development— and specifically accounting metrics IF0301-01⁶ and IF0301-02⁷. Figure 4 illustrates more specifically how SDG sub-targets 15.1-5, as well as 15.8, track to SASB accounting metrics.

⁵ SASB Standards for Engineering & Construction Services (in provisional form)

⁶ Ibid, p. 11

⁷ Ibid, p. 12

Figure 4.: Six out of Nine SDG 15 “Life on Land” Biodiversity Targets Map to SASB Engineering and Construction Services Standards



SDG targets 15.6, 15.7, and 15.9 fall outside the purview of SASB Standards for this industry because they are drafted in a manner that is specifically applicable to governments. (Sub-targets 15.6 and 15.7 address the responsible use of genetic resources and the protection of flora and fauna from trafficking and poaching; 15.9 aims to integrate ecosystems and biodiversity values into national and local planning, development processes and poverty reduction strategies, and accounts by 2020.)

Not All SDG Targets Line up with SASB Standards

The example of how SDG 15 tracks to a specific SASB standard (and, how some sub-targets do not) exemplifies our broader findings, which show that not all SDG targets line up with existing SASB Standards. There are three core reasons for this:

- **SASB standards and accounting metrics are industry specific and SDG goals are not.** For this reason, an SDG may map to a material issue within a given industry; however, it is possible that not all underlying SDG targets will be applicable.
- **Some SDG targets fall exclusively under the purview of governments and therefore cannot be mapped to an industry.**
- **The SDGs address a broader set of issues than may be financially material today.** For this reason, not all SDG targets meet SASB's definition of financial materiality.

For example, SDG 13, the goal for climate action and its related targets, is primarily drafted in ways that are most relevant for governments⁸ and that do not directly tie to corporate operations. Thus, while aimed at an issue that is societally and increasingly financially material, Goal 13 could not be sufficiently mapped to SASB Standards in this exercise. Although this goal appears, to some degree, in Calvert Research & Management's view of exposure to the SDGs by sector (Figure 2), the size of exposure is not representative of the impact and influence of climate change across sectors. Transportation and Non-renewable Resources, for example, are sectors where one would expect climate change to play a larger role; however, because many SDG targets are drafted for nation states, there are fewer matches with SASB accounting metrics. Thus, the size of box 13 within each sector is smaller than one might

⁸ SDG targets for climate change can be found at <https://sustainabledevelopment.un.org/sdg13>

expect. SASB has, however, done extensive work examining the material risk of climate change. SASB identifies climate-related risk in 72 of 79 industries for which it sets standards. See *SASB's Climate Risk Technical Bulletin*, as well as *Converging on Climate Risk: CDSB, the SASB and TCFD* for specifics on the ways climate risk manifests itself across different industries and how companies can begin reporting in alignment with the Task Force on Climate-related Financial Disclosure (TCFD) recommendations. Despite the challenge of mapping certain targets to SASB accounting metrics, this exercise reveals useful insights regarding which industries have a financially material interest in advancing one or more SDGs.

▶ Despite the challenge of mapping certain targets to SASB accounting metrics, this exercise reveals useful insights regarding which industries have a financially material interest in advancing one or more SDGs.

Calvert has recently gone one layer deeper with our research in this area, and has matched ESG vendor data⁹ to SDG-mapped SASB accounting metrics. We rated the vendor data indicators on how close a proxy they are to each SASB metric.¹⁰ This second layer of mapping has allowed for a preliminary understanding of how well some industries and companies are managing their resources and operations to achieve the SDGs. An initial assessment finds that 66 percent of SASB accounting metrics could be mapped, with varying degrees of exactness (ranging from “proxy” to “exact match”), to ESG data vendor indicators. This insight brings to light the information gap that exists between an evolving corporate disclosure environment and traditional investor resources. It also highlights that, as the web of disclosure requirements and standards for corporations grows larger and more complex, finding commonalities between these standards can benefit companies and stakeholders by distilling what is most relevant and material.

In Calvert's view, corporations deliver a net benefit to society through the provision of products and services, the creation of jobs, and through broader contributions to social and economic development. While still in its early stages, this case study is just one example of how Calvert, as a responsible and reasonable investor, continues to enhance its ability to identify companies that are exhibiting leadership not only in managing sustainability risks to their businesses, but also in seeking opportunities to reduce poverty and promote sustainable development in their broader spheres of influence. Calvert believes companies that are considering all these issues are the ones that will be best positioned to outperform financially in the long run.

⁹ MSCI and Sustainalytics

¹⁰ Vendor data is categorized as “remote proxy”, “proxy”, “close proxy”, or “exact match”, depending on how closely it matches the SASB indicator.

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ET Research

Use of SASB's Sustainable Industry Classification System (SICS™) in the Engaged Tracking Carbon Ranking and Index Series

Introduction

ET Research is best known for producing the *Engaged Tracking (ET) Carbon Ranking Series*, a unique, publicly-available ranking of the largest global companies by carbon intensity. Our work enables investors to not only engage with companies regarding their emissions, but to also send strong signals to companies to lower emissions and disclose complete emissions data. *The ET Carbon Ranking Series* is the only low-carbon, fossil-free index series based on a fully transparent, public ranking of all index constituents.

The ET Carbon Ranking Series scores the world's largest listed companies based on their production of greenhouse gas (GHG) emissions and the intensity of those emissions. Beginning in 2018, ET Research will widen the scope of its rankings to include additional sustainability metrics.

Incentivising Decarbonisation and Related Disclosure via the ET Carbon Ranking Series

Since the first iteration of the *ET Carbon Rankings*, a major challenge has been to reconcile the suitability of the various industry classification systems and their effectiveness in truly reflecting the emerging low carbon economy.

This challenge is primarily due to the way in which the *ET Carbon Ranking Series* assesses carbon intensities in the context of incomplete datasets due to poor or incomplete disclosure. Companies with incomplete or no public data on carbon emissions are assigned a surrogate score, using the worst GHG emissions-intensity score from a company within the same industry that does disclose on these measures.

▶ ET Research is a mission-driven organisation dedicated to helping investors and corporates identify, understand, and manage, climate and sustainability-related risks and opportunities. The company is based in Canary Wharf, London at Level39, Europe's largest financial technology accelerator.

ET Research was spun out from the not-for-profit Environmental Investment Organisation (EIO) in 2014 with funding from Climate-KIC, the European Union's main climate innovation initiative.

The company was initially nurtured at the Imperial College Innovations Incubator, working with Imperial College's Risk Management Laboratory to validate its models and methodologies. In March 2017, the company was accepted as a member of the Social Stock Exchange, the world's first regulated exchange dedicated to businesses and investors seeking to achieve a positive social and environmental impact through their activities.

Assigning this “inferred” GHG emissions-intensity score (tonnes CO₂e Scope 1, 2 & 3/USDm Revenue) based on an industry peer that does disclose on these measures is intended to: 1) penalise companies for non-disclosure of carbon emissions information, 2) appropriately recognise companies that do disclose this information, and 3) ensure that disclosing companies always rank better than non-disclosing companies in the ET Carbon Ranking Series.

The “inferred” worst case is taken from an industry peer at the most granular industry level possible, provided there are enough disclosing companies at that level. In cases where there are not enough disclosing companies at the industry level, an “inferred” worst case score is taken from the sub-sector level. In the event there are not enough disclosing companies at the sub-sector level, the worst case is taken from the sector level.

SICS™ Helps Overcome Challenges Inherent in Other Industry Classification Systems

Traditional industry classification systems, such as the Industry Classification Benchmark (ICB) or the Global Industry Classification Standard (GICS), have been slow to adapt to the transition to a low carbon economy. For example, neither system includes the “Renewable Resources & Alternative Energy” (Renewables) industry recognized by SASB in its Sustainable Industry Classification System (SICS™).

Because neither GICS nor ICB classifies “Renewables” as an individual sector, non-disclosing Renewables companies would, as a consequence, have been benchmarked against the worst performers from within the Oil, Gas and Coal sector. Additionally, as there are comparatively few Renewables companies, “inferred” data for non-disclosing Renewables companies would have been drawn from the top-level “Energy” sector based on the ET Research methodology. Comparing emissions intensities of Renewables companies with those of even the best-performing fossil fuel companies presents significant challenges if one were to rely solely on GICS or ICB. The purpose of the *ET Carbon Ranking Series* is to incentivise reduction of GHG emissions and improve disclosure thereof. Thus, penalising Renewables companies in this manner is clearly counter intuitive.

► To enable improved peer-to-peer comparison of GHG emissions intensities across industries, ET Research has been using the SICS™ for the *ET Carbon Ranking Series* since 2014.

To enable improved peer-to-peer comparison of GHG emissions intensities across industries, ET Research has been using the SICS™ for the *ET Carbon Ranking Series* since 2014.

While the Renewables industry is set to become increasingly important over the coming years, the number of Renewables companies making up the largest 800 companies, by market cap globally, remains small. The 2016 ET Global 800 Carbon Ranking contained only two companies from the Renewable Resources and Alternative Energy sector (see Figure 1).

Figure 1: Example of Renewable Resources and Alternative Energy Industry Carbon Intensities

Rank	Company Name	Country	Industry	Reported Scope 1+2 Total (tCO ₂ e)	Scope 1+2 Intensity Accepted or Inferred	Reported Scope 3 Total (tCO ₂ e)	Scope 3 Intensity Accepted or Inferred	No. S3 Categories Disclosed	Combined Scope 1+2+3 Intensity
375	Vestas Wind Systems A/S	Denmark	Wind Energy	74,000	8	-	645	0	653
416	Weyerhaeuser Co	United States	Forestry and Logging	2,660,000	376	-	645	0	1,020

SICSTM Use-Case Example: an Engaged Tracking Custom Index Strategy

In addition to the “off the shelf” low carbon and fossil free indices, ET Research frequently works with clients to tailor strategies designed to meet their specific needs.

A recent example of one such client-tailored solution is ET Research’s “Low Carbon Momentum” strategy developed for a French investor. This strategy seeks to track companies that have most lowered their year-on-year emissions, relative to their peers within a given investment universe.

In order to meet the objectives of the 2015 Paris Agreement—limiting global warming to no more than 2 degrees Celsius (2°) this century—the global economy must, on average, decarbonise by 6-7% each year. Article 173 of the 2015 French Energy Transition Law mandates that institutional investors in France explain their 2° decarbonisation plans in their annual reporting.

The “Low Carbon Momentum” strategy recognizes companies on this decarbonisation pathway by identifying those which demonstrate at least a 5% reduction in Scope 1 (direct) and Scope 2 (indirect) emissions intensity from the previous year.

Additionally, inclusion in the “Low Carbon Momentum” strategy requires companies to both improve their Scope 1 & 2 emissions-intensity scores and their standings in the *ET Carbon Rankings*. Such improvements demonstrate an absolute reduction in emissions intensity and improved performance relative to their peers.

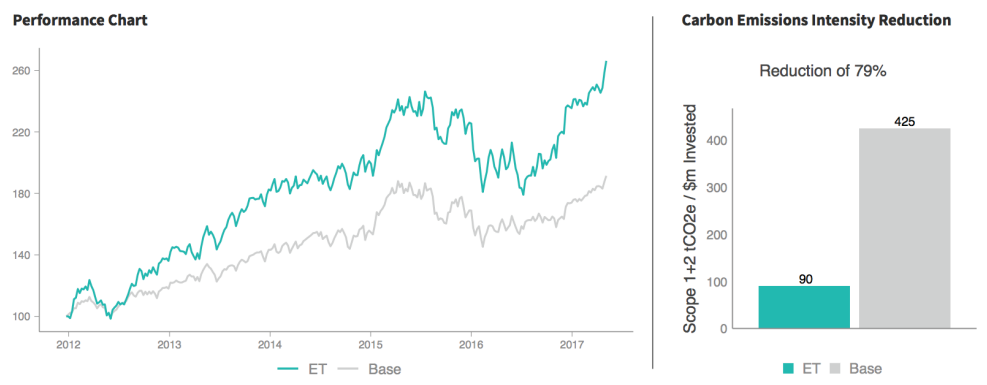
For this particular client, ET Research identified 40 stocks exhibiting the strongest “carbon momentum” to define the final investment universe.

ET Low Carbon Momentum Index Emissions and Market Performance

Not only is the resulting intensity of carbon emissions in the ET Low Carbon Momentum Index 79% lower than the benchmark, it has also outperformed the market for the last six years (see Figure 2), as has each index in the ET Low Carbon Index Series.

With ease, this strategy can equally be applied to all eligible stocks over a predefined period, and any carbon reduction threshold within a given investment universe.

Figure 2: ET Low Carbon Momentum Strategy – Performance



Performance Statistics

	1Y Returns	3Y Returns	5Y Returns	3Y Ann. Returns	5Y Ann. Returns	3Y Ann. StdDev	5Y Ann. StdDev	3Y Return/Risk Ratio	5Y Return/Risk Ratio	Tracking Error	Avg. ET Carbon Rank
ET	36.06%	41.79%	147.78%	12.34%	19.90%	19.81%	19.00%	0.62	1.05	8.36%	97
Base	22.85%	27.73%	80.89%	8.50%	12.59%	16.08%	14.70%	0.53	0.86	-	145

Base Index indicates the original version of the index or fund prior to optimisation by ET Index Research - unless specified it is market capitalisation weighted. Carbon emissions intensity data comes from ET Index Research. Index performance is based on Total Returns.

Figure 3: ET Low Carbon Momentum Strategy – Sector and Country Weighting

Sector Weights



Top 10 Country Weights

Country	Base	ET
France	14.9%	31.2%
Germany	14.1%	15.5%
United Kingdom	23.2%	14.6%
Spain	4.8%	9.2%
Ireland	4.2%	9.1%
Netherlands	6.6%	6.4%
Switzerland	16.9%	4.4%
Sweden	4.4%	4.1%
Norway	0.9%	3.8%
Denmark	2.4%	1.0%

Beyond Carbon to the UN Sustainable Development Goals

From 2018, ET Research will widen the scope of its rankings to include additional sustainability metrics in line with the UN Sustainable Development Goals (SDGs).

As part of this endeavour, ET Research is in the process of completing a key internal initiative which will review and look to address the missing links between SASB sector materiality research findings and other reporting frameworks. Once completed, investors and corporates will have the means by which they can contribute towards and build a comprehensive and harmonised set of SDG-aligned indicators that are applicable across industries.

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