SUSTAINABILITY ACCOUNTING STANDARDS BOARD

SASB™

ESG INTEGRATION INSIGHTS

PREMIER ISSUE
Q4 2016

Welcome to the premier edition of SASB's ESG Integration Insights.

The landscape of ESG integration has evolved considerably from its early days to the present. The purpose of SASB's ESG Integration Insights is to further advance the practice of incorporating ESG factors into investment decision-making by sharing the perspectives of many types of investors. These investors are using SASB standards and tools to inform their investment decisions across asset classes using a variety of investment strategies.

The case studies herein are a handful of a growing number of examples we will be making available throughout the year on SASB's website. A compilation of best practices will be published and distributed to attendees of SASB's annual Symposium.

SASB's vision is that all investors will have access to comparable, consistent and reliable data on material ESG factors to incorporate into investment decisions. As the landscape of ESG integration develops further and SASB's provisional standards are codified over the coming year, we expect investor use of SASB tools and the practice of ESG integration to become even more sophisticated and robust. We look forward to sharing these 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,

Janine Guillot
Director, Capital Markets Policy and Outreach

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Why ESG Integration is Important Across Externally-Managed Portfolios

One of Wespath Investment Management's (Wespath) core investment beliefs is that *"the intentional integration of environmental, social and governance (ESG) factors in the selection and management of investments positively affects long-term performance."* As a founding signatory of the Principles for Responsible Investment (PRI), we are committed to *"incorporating ESG issues into investment analysis and decision-making"* and *"promoting acceptance and implementation of the principles within the investment industry."*[1]

Like many asset owners, a large portion of Wespath's assets are managed by external asset managers.[2] We expect our external partners to demonstrate how they integrate ESG considerations into investment decision-making—considering both risks and opportunities—as well as how they vote their proxies and engage with companies in their role as active owners.

This case study outlines Wespath's approach to ESG integration across our externally-managed portfolios. We have an internal ESG Appraisal process to evaluate and monitor our external asset managers' policies and practices, which allows us to provide practical feedback to encourage ongoing progress.

[1] www.unpri.org

[2] As of 09/30/2016, Wespath's total assets under management were $21.2 billion—95% of Wespath's assets are managed by 55 external asset managers.

By sharing this case study, Wespath hopes to stimulate discussion with like-minded asset owners around the world about the merits of our approach. We welcome ideas and comments to further improve it.

Wespath's Approach to Appraising ESG Integration

In 2014, Wespath's Sustainable Investment Strategies and Investment Management teams (reporting to the Chief Investment Officer) agreed to a joint goal[3] to evaluate how our external asset managers were integrating ESG factors into investment decision-making. A close partnership between these two teams is fundamental in:

- Embedding ESG integration at the very start of the investment chain (i.e., the asset owner)
- Emphasizing Wespath's focus on ESG and long-term value creation
- Communicating to managers with "one voice" that ESG integration is a core element in Wespath's overall management assessment and retention, and avoiding multiple lines of inquiry from Wespath representatives and related burdens on managers

[3] Every year, Wespath's Institutional Investment Services, Investment Management and Sustainable Investment Strategies teams agree to a set of performance goals. Many of these goals are shared across the three teams and their successful completion is a core component of performance measurement and compensation. The development of an ESG Appraisal process was a shared goal between the Investment Management and Sustainable Investment Strategies teams.

Wespath initially focused its ESG Appraisal on public equity managers because (i) public equities comprise the largest asset class in Wespath funds and (ii) this asset class has received the most attention from the sustainable investment community in integrating ESG issues. We plan to extend the ESG Appraisal to other asset classes (with methodology adjustments as needed) in coming years.

Development of Wespath's ESG Appraisal Informed by SASB Tools

In 2014, recognizing the need for a more formalized ESG manager evaluation process, we developed a specific ESG Appraisal within Wespath's overall annual manager evaluation process. We conducted our first formal appraisal the following year.

Wespath's ESG Appraisal incorporates SASB's tools and has three main elements:

1. ESG Reporting Questionnaire and Guidance Document

Wespath developed an *ESG Reporting Questionnaire* that we require our managers to complete among their annual reporting responsibilities to Wespath. It includes questions about ESG integration at the organizational (firm) level and the individual strategy (mandate) level. Answers to the questions help us understand how ESG integration filters down from organizational policies to everyday investment decision-making. We use the responses to inform the performance snapshots and individual manager assessments described below.

One of the lessons we learned was the need to clarify our expectations about the responses. For example, some early responses to our questions focused solely on how managers apply our ethical exclusions (negative screening of certain stocks, often colloquially called "sin stocks"), or on their own internal corporate social responsibility and philanthropic activities. Furthermore, we recognized that while certain managers may not specifically use the term "ESG" to describe their analysis, they do in fact assess many of the material environmental, social or governance trends impacting specific sectors and industries.

To address this, we created a *Guidance Document* to accompany our ESG reporting questionnaire. The Guidance Document highlights the level of detail, scope, and the type of answers that will be most useful. It also includes SASB's *Materiality Map*™,[4] which highlights ESG issues by sector and industry likely to be material. The Materiality Map provides (i) a common conceptual platform about ESG issues that leads to more informative responses from managers and (ii) helps refine managers' knowledge of ESG issues.

2. Performance Snapshot

Wespath benchmarks managers' ESG performance. Each manager sees its relative position versus its peers, although we conceal the names of the other asset managers. See Figure 1 for an example of this benchmarking, where managers can see whether we view them as being "race leaders," in the "chasing pack," or on the "starting grid," based on three criteria: (i) policy and resources, (ii) ESG integration strategy and (iii) active ownership.

Figure 1: Peer Benchmarking

External public equity managers																			
Managers	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	**Manager**	P	Q	R
1. Policy and Resources																			
ESG Policy																			
Dedicated Resources																			
2. ESG Integration																			
Integration Strategy																			
3. Active Ownership																			
Engagement																			
Proxy Voting																			
Overall Score	100%	100%	98%	97%	86%	79%	78%	75%	69%	67%	61%	55%	42%	34%	30%	30%	19%	19%	13%
Momentum	↑	↑	N/A	↔	↔	↑	↔	↔	↑	↔	↔	↑	↑	↑	↑	↔	↑	↔	↔
Category	Race Leaders					Chasing Pack								Starting Grid					

[4] http://www.sasb.org/materiality/sasb-materiality-map/

3. Individual Manager Assessment

Wespath also performs a gap analysis of individual manager performance, based on our 25 ESG indicator framework[5] for evaluating ESG integration (see Figure 2 and Appendix). Each manager receives feedback on indicators, noting strengths and areas for improvement.

The individual assessment includes a definition of each indicator and an explanation of how indicators are weighted to determine overall performance. Checkmarks on the manager assessment indicate that the manager meets Wespath's expectations for a specific indicator. Indicators are color-coded to reflect their importance to Wespath (primary, secondary and tertiary).

Results—Charting Progress

Wespath uses the ESG Appraisal for two purposes:

1. **Manager feedback:** we disclose the Performance Snapshot and Individual Manager Assessment to each external asset manager to reinforce our expectations and encourage progress. We regularly follow-up with managers to respond to their questions and share resources, including SASB's "Engagement Guide for Asset Owners and Asset Managers."[6] The Engagement Guide encourages a strategic approach to active ownership and is helpful in reinforcing our expectations about activities that focus on long-term value creation.

[5] The 25 ESG indicator framework applies to active managers. For index managers, we have adapted the framework accordingly.

[6] Sustainability Accounting Standards Board, "Engagement Guide for Asset Owners and Asset Managers", (July 2016). The Guide is available via https://www.library.sasb.org.

Figure 2: Summary of Individual Manager Assessment

Policy and Resources (25%)	Firm Level						
ESG Policy (20%)	E,S,G + ✓	Materiality ++ ✓	Active Ownership ++	Integration Process +++	Oversight ++ ✓	Refreshed +	PRI Signatory + ✓
Dedicated Resources (5%)	Collaboration and Initiatives +	Use of External Resources + ✓	Dedicated Personnel ++				
ESG Integration (50%)	Strategy Level						
ESG Strategy (50%)	E,S,G + ✓	Materiality ++ ✓	Risk and Opportunities ++	Influences Decision Making +++	Systematic/ Process Implementation ++	Knowledge Building ++ ✓	ESG Reporting +++
Active Ownership (25%)	Firm and Strategy Level						
Engagement (12.5%)	E,S,G + ✓	Strategic +++	Impact +++	Public Policy +			
Proxy Voting (12.5%)	Own Guidelines +++	E,S,G +	Active Voting +++	Assurance + ✓			

+++	Primary indicators
++	Secondary indicators
+	Tertiary indicators

2. **Manager evaluation:** the results of the ESG Appraisal and our reflections on managers' progress over time factor into Wespath's ongoing manager performance and retention assessment.

Over the past two years, Wespath has evaluated 22 public equity managers using the ESG Appraisal described above. Many managers have been surprised (both positively and negatively) by their position in the benchmarking analysis and/or by their individual performance evaluations.

Initial reflections on our progress include:

- Improving ESG integration at Wespath: by developing the ESG Appraisal as a joint goal between Wespath's Investment Management and Sustainable Investment Strategies teams, we have improved our internal collaboration and ESG integration across our own activities.
- Enhancing manager ESG integration: managers have welcomed our feedback and a systematic (if qualitative) evaluation of their ESG activities. The ESG Appraisal allows us to have better conversations with managers, including supporting several of our smaller/boutique managers in their ESG policy development and integration strategy.
- Refining our understanding of managers' investment approaches: the results of the ESG Appraisal and our review of manager progress year-over-year, have allowed us to create a more comprehensive profile of each manager, informing our ongoing allocation decisions.

Next steps

This case study is an excerpt from a more detailed paper on this topic which Wespath will publish in early 2017. Please contact Kirsty Jenkinson (kjenkinson@wespath.org) or Juan Lois (jlois@wespath.org) of Wespath's Sustainable Investment Strategies team for further information.

About Wespath Investment Management

Wespath Investment Management (Wespath) is the investments division of Wespath Benefits and Investments, a general agency of The United Methodist Church. Wespath provides investment solutions for the endowment and pension (defined contribution and defined benefit) portfolios of institutional investors, including foundations, higher education institutions, health care organizations, and churches through a broadly diversified family of daily-priced funds. Wespath's investment process proactively incorporates environmental, social, and governance (ESG) factors through active ownership practices (engagement and proxy voting) and investments in market-rate community development loans. As of September 30, 2016, total assets under management exceeded $21 billion.

Appendix:

Active Manager: Individual Manager Assessment

Wespath 25 ESG Indicator Framework

1. Policy and Resources (25%)	Firm Level						
ESG Policy (20%)	E,S,G + Includes a position on all three environment, social and governance issues	Materiality ++ Clarifies ESG analysis is based on financial materiality (i.e., sector, geographic location, company size, holding period of security)	Active Ownership ++ Describes the manager's approach to engagement and proxy voting	Integration Process +++ Explains details of the ESG integration strategy across its portfolios	Oversight ++ Signed-off at the Board, CEO, CIO or compliance level	Refreshed + Reviewed and updated constantly as-needed	PRI Signatory + Signatory to the PRI
Dedicated Resources (5%)	Collaboration and Initiatives + Collaborates and/ or is affiliated with relevant partners (i.e., CII, ICGN, CERES, etc.)	Use of External Resources + Uses ESG data or research from ESG providers and sell-side	Dedicated Personnel ++ Has dedicated personnel for ESG strategy and activities that works closely with the investments team				
2. ESG Integration (50%)	Strategy Level						
ESG Strategy (50%)	E,S,G + Incorporates all three environment, social and governance issues	Materiality ++ ESG analysis is based on financial materiality (i.e., sector, geographic location, company size, holding period of security)	Risk and Opportunities ++ Considers ESG issues from both, a risk and an opportunities perspective	Influences Decision Making +++ Includes a clear protocol for when ESG issues trigger a buy/ sell, overweight/ underweight decision-making	Systematic/ Process Implementation ++ ESG analysis is systematically integrated into each security's financial analysis (not ad-hoc to only certain situations)	Knowledge Building ++ Formal structures exist to further develop and/ or share ESG knowledge beyond the ESG team (i.e., training, development of proprietary research, etc.)	ESG Reporting +++ ESG activities are measured and reported on a systematic basis and shared with clients
3. Active Ownership (25%)	Firm and Strategy Level						
Engagement (12.5%)	E,S,G + Covers all three environment, social and governance issues	Strategic +++ Targets and topics are chosen strategically considering materiality and overall risk/ opportunities at portfolio level	Impact +++ Positively impacts company's performance by increasing disclosure or improving practices	Public Policy + Addresses public policy in cases where ESG issues impact a whole segment/ sector of the market			
Proxy Voting (12.5%)	Own Guidelines +++ Publishes its position regarding specific proxy voting issues	E,S,G + Guidelines include a position on all three environment, social and governance issues	Active Voting +++ Issues are voted individually and manually or through a customized policy reflecting manager's guide-lines (i.e., not only in line with ISS or Glass Lewis)	Assurance + Accountable for voting activity (i.e., publishes votes, issues annual report/audit of voting)			

+++	Primary indicators
++	Secondary indicators
+	Tertiary indicators

From theory to practice:

How SASB standards and tools inform UBS Asset Management's fundamental equity valuation

Introduction

With roughly USD 670 billion in assets under management as of September 30, 2016, UBS Asset Management offers a comprehensive range of active and passive investment styles and strategies across both traditional and alternative asset classes and markets designed to meet your needs. In particular, we have a dedicated Sustainable Investors team that manages about 4 billion in assets using an environmental, social and governance (ESG) integration approach.

Changes in business and societal landscapes make the inclusion of ESG data an important, complementary element of fundamental investment analysis, providing a more complete value creation picture for corporate business models and management. Leveraging material ESG information helps us make better-informed investment decisions and build better portfolios. As active investors, we believe that the adoption of standards for ESG disclosure is particularly important to the long-term effort to make markets more efficient and transparent. The standards and tools of the Sustainability Accounting Standards Board (SASB) are welcome additions to our investment decision-making landscape.

This case study illustrates how ESG considerations complement fundamental equity analysis, how we integrate ESG considerations in our equity analysis and capital allocation decisions, and how SASB informed the development of our proprietary tools used in these decisions.

Fundamental approach adapted to modern companies

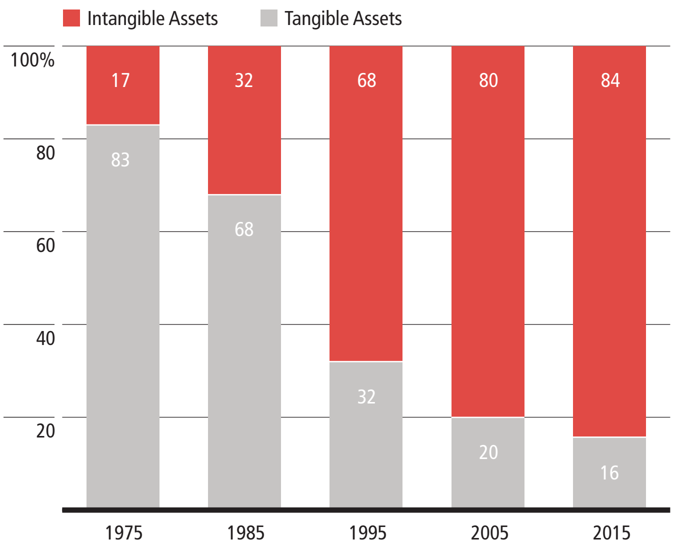
Security Analysis, the foundation for traditional financial analysis published in 1934 by Benjamin Graham and David Dodd, is still the bedrock of fundamental investment processes. [1] Published just after the Great Depression, the book introduces some of the most important concepts used in financial analysis. One concept is intrinsic value; what an investor would pay for an entire company. In 1934, intrinsic value was closely tied to the value of a company's physical assets, which were, in turn, related to book value. The other concept introduced by the book is the mosaic theory of investing; the idea that all the material fundamental data could be pieced together in a mosaic to form a "picture" of the investment opportunity.

One of the changes that has occurred over nearly a century of economic development is that the traditional concept of book value offers less insight into today's market values than it did when pioneered in the 1930s, due to several factors including the shift in the ratio of tangible to intangible asset values over

[1] Benjamin Graham, David L. Dodd, Sidney Cottle, Roger F. Murray, and Frank E. Block. 1934. Graham and Dodd's security analysis. New York: McGraw-Hill.

time (see Figure 1). As developed economies grew a broad range of service companies with few physical assets, and as manufacturing companies outsourced their supply chain (or even their entire manufacturing base), physical assets have become less important to a company's value. With intangible assets accounting for over 80 percent of the market value of S&P 500 companies, and stocks trading at multiples of book value, analysts require better information on "non-financial" factors to understand what the market is paying for. Investors agree that these intangible assets have value, but traditional financial statements simply shed less light on how these assets are created, maintained and priced in the markets. "Attitude of the public towards the issue" was included among (non-financial) issues impacting the relationship between intrinsic value factors to the market price of securities by Graham and Dodd in their original 1934 work, although their fundamental equity analysis framework falls short of measuring shifts in societal attitudes.[2]

Figure 1: Components of S&P 500 market value



Source: Ocean Tomo, "Ocean Tomo's Intangible Asset Market Value Study," January 2015.

The list of environmental, social and governance factors that follows includes but a few examples drawn from today's markets of other "non-financial" factors that have changed the value creation prospects of public companies, but for which fundamental equity analysis does not readily account:

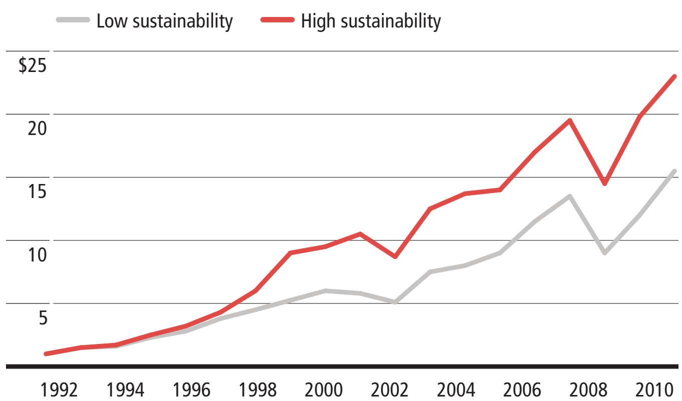
- Labor practices (e.g., the collapse of the Rana Plaza clothing factory in Bangladesh)
- Extreme weather (e.g. impacts of flooding in Thailand on chip manufacturers)
- Drought (e.g., threat of stranded bottling plant assets in Kerala, India)

[2] Ibid, p. 23.

Increasingly, many asset managers and a growing number of investors view ESG factors as complementary to fundamental analysis. Examining corporate performance on material ESG factors ties into financial theory to complete the picture on valuation. The integration of material sustainability factors in fundamental analysis, we believe, yields a more complete, holistic picture of a company that better informs the investment process. We do not believe that consideration of these inputs pushes aside traditional finance. Rather, we believe that they are additive to financial analysis, valuation discipline and other forms of well-accepted fundamental research in a way that is likely to result in better judgment and risk management, leading to superior returns.

Performance on sustainability issues is a corporate competence that enables improved performance and achievement of better returns for shareholders, a view supported by mounting evidence that highly sustainable companies outcompete and outperform industry peers that are less sustainable.[3] (See Figure 2.)

Figure 2: Research from Harvard shows that highly sustainable companies outcompete and outperform



Note: The "High Sustainability group," as defined by the study's authors as companies that adopted all or most of certain environmental and social policies, outperformed the "Low Sustainability group," as defined by companies that adopted almost none of these policies. Total sample 180 US companies. For illustrative purposes only. This does not represent the performance of any particular investment, and does not take into consideration any applicable fees, taxes or expenses. Past performance is not a reliable indicator of future returns.

Another recent Harvard study[4] using SASB standards to classify performance data on sustainability issues found that:

- Firms performing well on *material* sustainability factors enjoy enhanced accounting **and** market returns over firms that perform poorly on such factors.

[3] Robert G. Eccles, Ioannis Ioannou, and George Serafeim. "The Impact of Corporate Sustainability on Organizational Processes and Performance." *Management Science* 60, no. 11 (November 2014): 2835-2857.

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

- Firms performing well on *immaterial* sustainability factors do not generate significantly different financial results than firms that perform poorly on these factors.
- Firms simultaneously performing well on *material* sustainability factors and poorly on *immaterial* sustainability factors achieve the best financial results of all.

In our view, companies that are skilled at marshaling all their assets, tangible and intangible, are more likely to: have superior supply chains that drive brand equity and pricing, attract better employees that create new products and services, have better governance that protects shareholders, and develop greater energy- and water-use efficiencies that expand margins. We believe that these skills help companies build and protect their competitive position, which competitive strategists such as Prof. Michael Porter have shown leads to higher capital returns. We believe that if we can identify these business models and invest in them at an attractive valuation we have a greater chance to deliver superior returns.

Idea generation and investment decision-making tools

Our holistic view of valuation includes non-financial factors alongside financial factors examined in a traditional valuation process. Only inputs and factors considered to be material in nature – that is, only factors that could cause the "reasonable investor" to change their capital allocation decisions – are included in this process.

Thus, SASB's focus on materiality and the industry specificity of this focus has been very valuable to us. Specifically, SASB metrics, or KPIs, for the disclosure of material ESG factors and SASB's Materiality Map™ have been important to the development of our proprietary sustainability database and sustainability ranking system, which is integral to fundamental valuation portfolio construction.

This proprietary sustainability database, residing alongside the UBS Global Equity Valuation System (GEVS), is used to rank companies based on a scoring system tailored to reflect UBS Asset Management views on sustainability issues most likely to affect corporate performance. Industry-specific weightings and data generate a company-specific score that is scored into deciles with others in an industry. This complements the fundamental analysis results in the fully integrated idea generation and investment process represented in Figure 3. Securities that are attractive based on traditional fundamental analysis and achieve high rankings for sustainability performance or opportunity are eligible for capital allocation decisions on our Portfolio Optimization Platform. No explicit trade-offs are made. In other words, we do not invest in companies with high sustainability rankings but poor fundamentals, nor do we invest in attractive or cheap stocks with poor sustainability rankings.

Conclusion

We believe that this approach is fully consistent with financial theory, capital asset pricing model and our own belief in fundamental analysis. Simply put, we are striving to enhance all of the traditional fundamental analysis that we conduct with additional inputs that layer additional insight in the stock selection process. The SASB Materiality Map has been invaluable as a guide to our data gathering and investment process. See the Apple Computer example that shows our practice at work.

Figure 3: Disciplined idea generation

The Apple Computer Example

As active investors and owners of Apple stock in many strategies, when a series of articles detailing human issues in Apple's supply chain emerged in 2012,[5] UBS Asset Management had to decide whether these issues could endanger Apple's business from both a financial and reputational perspective. Our analyst had a detailed cash flow forecast for Apple that indicated the stock price appeared to be attractively valued. And of course, as an experienced industry analyst he had a view of the company's existing and new product line and the possible effect on forward-looking earnings. The issues mentioned in the articles included hazardous working conditions, excessive overtime, improper disposal of hazardous waste, falsified records, disregard for worker's health and seeming disregard for Apple's supplier code of conduct and supplier responsibility reports. A discussion continued in the press that focused on Apple's role and responsibility for supply chain conditions, whether conditions were better or worse than competitors or Chinese industry as well as many other topics.[6]

After an internal discussion, our Sustainable Investor team decided that one way to assess the severity of the issue was to treat Apple and its supply chain as if they were a single company. We recognized that this approach was not actually how the company was structured but we reckoned that if we could gain insight on the severity of the issue on the supply chain, we would have a sense of the effect on Apple's products and brand equity.

Although the concept of materiality is not unique to SASB, the combination of the concept and a list of key performance indicators (KPIs) in SASB standards helped guide our thinking and discussion. Our analysts and portfolio managers are experienced investors with a long history of assessing the opportunities and risks in the technology sector. Nonetheless, the list of industry-specific SASB KPIs for this industry proved to be a very good guide to the most important issues we needed to consider.

Apple's supply chain is represented in the SASB Materiality Map and SASB standards within the Technology and Communications sub-segment of Electronic Manufacturing Services and ODM. The most relevant KPIs within Human Capital – those that have high financial impact – are Labor relations, fair labor practices and employee health, safety and wellbeing. In addition, three other categories are material but have lower impact: diversity and inclusion, compensation and benefits and recruitment, development and retention.

The connection between these categories and the parent company, Apple, is represented by SASB disclosure metrics for the Hardware Industry: Material sourcing and Supply chain management. This helps explain why we considered Apple and its external supply chain "as one", because a fault in the supply chain would create a material impact on the supply chain management factor, which, in turn could have meaningful effect on product quality, brand perception and other significant intangible factors. These factors enable Apple to sell its products for a premium—according to Forbes, Apple has the most valuable brand in the world with an estimated value of $154.1 billion.

The SASB framework was very helpful in framing the discussion between UBS Asset Management analysts, portfolio managers and the company. A list of questions for management and supply chain executives based on SASB standards and the Materiality Map helped inform our analysis and led to the conclusion that Apple was making significant steps to improve supply chain control and reduce the real and perceived risks to its brand. We also concluded that our financial analysis could be supported by this analysis of sustainability risks and opportunities, giving us increased confidence in our investment decision to hold the shares and add to our overall position.

[5] New York Times, In China, Human Costs are Built Into an iPad, Duhigg and Barboza, January 25, 2012

[6] Atlantic, Who's Really to Blame for Apple's Chinese Labor Problems, March 2, 2012

Disclosure

The views expressed are as of November 2016 and are a general guide to the views of UBS Asset Management. The information herein is for illustrative purposes only and should not be considered a recommendation to purchase or sell securities or any particular strategy, product or fund offered by UBS Asset Management.

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How SASB Disclosure Topics Inform Terra Alpha Investment's Stock Selection Process

Introduction

Terra Alpha Investments is an advocacy investment firm managing a global equity portfolio that operates on the premise that Environmental Productivity (the efficiency by which companies use and impact natural resources) will enhance business and investor risk-adjusted returns. ***Specifically, Terra Alpha uses environmental data to hone in on carbon, water, and materials efficiencies as key - but not the only - factors in identifying companies that will provide competitive returns within the investment fund.*** *Terra Alpha advocates to business leaders and other investors that a focus on Environmental Productivity is a better way to invest and run a business, and is the way forward for global systemic change in a world of increasingly-constrained natural resources. It was formed by professionals who have decades of experience at "traditional" investment firms.*

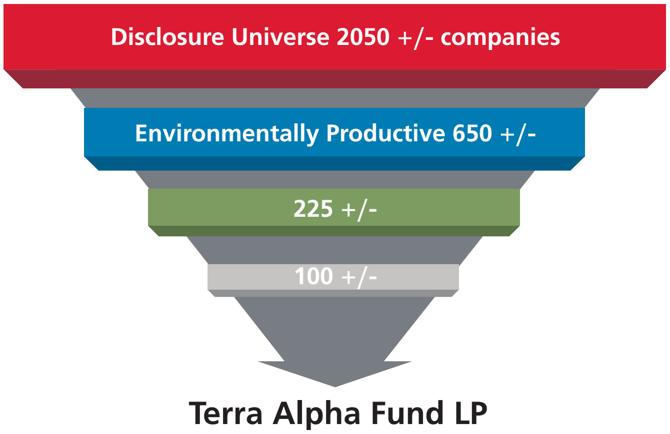
Our aim is to generate better returns by utilizing disclosed environmental data as key factors in our investment process. We think disclosing environmental data – greenhouse gas emissions, water use and impact, material use/waste – is a critical step in being prepared to be sustainable/profitable in an increasingly resource-constrained future. The adage "if you measure it, you will manage it" we think holds true. We advocate for this data to be disclosed publicly and agree with the SASB premise that this sort of environmental information should be disclosed as material information for investors.

As part of our investment research in identifying material issues for each sector, we reference the disclosure topics highlighted for each industry in the SASB standards. We are pleased to have been involved in the feedback process that created them and are supportive of the premise of standardizing a framework for this sort of material information so all investors can know where and how to access it alongside traditionally released company data. We also support the idea of lessening the load of numerous surveys companies receive annually into a more standardized reporting framework like SASB's, CDP's, GRI's and/or company financial annual reports.

As part of our advocacy, we have written and make available (at no cost) our research reports on water (Navigating Rough Waters) and material efficiency (Investing in a Resource-Constrained World), as they relate to investors' consideration. In December of 2016 we will release our report on energy/carbon efficiency entitled "Emitting Money". Each of these reports is available on our website to download. We have also contributed a chapter to the recently published book Sustainable Investing: Revolutions in Theory and Practice.

General Investment Process

Terra Alpha's investment process starts by filtering all global publicly-listed companies down to those that are disclosing certain environmental metrics (initially business greenhouse gas emissions). There are currently over 2,000 companies – for perspective, 81% of the S&P 500 – that are disclosing this data in sustainability reports, up from 20% in 2011.



The SASB standards play an integral role in the next stage of our investment process. Within the Environmental Productivity (EP) stage of our evaluation, we use the SASB standards to examine the ESG factors that are deemed significant for each industry. Specifically, **the standards assist us in determining the weightings for factors within our proprietary multi-variable, industry-specific EP measure,** which incorporates carbon efficiency, water efficiency, and material efficiency.

The most efficient companies in each sector, based on our EP measure, advance to the fundamental assessment stage of the process. We utilize our combined 75+ years of investment experience and access to extensive data sets to gauge the strength of businesses over a five- to seven-year time horizon. We focus on companies with strong operating fundamentals, strategies, and balance sheets by assessing dozens of factors from various categories (e.g., quality, profitability, growth, debt ratings, corporate governance, etc.). **Other quantitative and qualitative data points from the SASB disclosure topics are used in this stage to help assess companies.** Fundamentally strong companies advance to the valuation stage of our process.

During the valuation assessment stage, we analyze several fundamental equity valuation measures on both an absolute and relative basis to ensure we do not overpay for growth.

Overall, the process results in Terra Alpha Fund LP, a portfolio of roughly 100 of the most environmentally-productive, fundamentally-strong, and attractively-valued companies globally.

The General Mills Example

General Mills, Inc. is a U.S.-based company that manufactures and markets branded and packaged consumer foods worldwide. The company also supplies food products to the foodservice and commercial baking industries. Its brands include: Cheerios, Betty Crocker, Pillsbury, and Häagen-Dazs. The company is a member of the Processed Foods industry within the SASB Sustainable Industry Classification (SICS) framework and the Food Products sector within the ICB sector classification system.

As a publicly-listed company that discloses environmental data, General Mills makes it through the disclosure stage of our investment process. In fact, the company provides historical environmental data, including emissions, water, and waste, back to 2005 in its sustainability reports.

In regard to its quantitative EP scores, General Mills is near the top of the Food Producers sector. **When developing our factor weightings for the Food Producers sector, we consult the SASB disclosure topics and accounting metrics.** The SASB disclosure topics are helpful to identify likely material ESG factors for any industry. We use these topics to identify qualitative and quantitative factors and apply them at the company level as they impact a company's global operations, market position, and prospects as an investment.

SASB disclosure topics for the Processed Foods Industry are:

- Energy and Fleet Fuel Management
- Water Management
- Food Safety
- Health and Nutrition
- Product Labeling and Marketing
- Packaging Lifecycle Management
- Environmental and Social Impacts of Ingredient Supply Chains

Based on SASB's accounting metrics and provided evidence, along with our own knowledge of the industry, we tilted our factor weightings for the sector to overweight the water efficiency and material efficiency measures. *(It is worth noting that while the water and material efficiency measures are over-weighted as factors, the carbon efficiency measures still have the highest absolute weight of the factors.)* As SASB describes in the Processed Foods Research Brief: "Climate change and water scarcity are fundamentally affecting the cost of raw materials for the industry. This exposure presents the industry with operational financial risks that threaten long-term profitability." [1]

With our factor weightings determined, we use General Mills' disclosed environmental data to determine Terra Alpha's assessment of the company's Environmental Productivity. See the company data below:

Carbon *Tonnes CO2e/mUSD Revenue*		**Water** *Cubic Meters/ mUSD Revenue*	**Waste** *Tonnes / mUSD Revenue*
Carbon Scope 1 GHG Intensity	Carbon Scope 2 GHG Intensity	Water Intensity	Waste Intensity
16.41	43.39 **vs. 254.15 (combined 1 & 2)**	472.6 **vs. 33,596.83**	10.69 **vs. 77.30 ← Sector Averages**

With its carbon efficiency measure in the top third of the sector, its water efficiency in the top quartile of its sector, and its material efficiency around the mid-point of its sector, General Mills' Environmental Productivity is among the best within the sector. The company, therefore, advances to the fundamental assessment stage of our investment process.

As a company progresses from this initial step, in addition to verifying the environmental data points, we collect additional pieces of information regarding the company's reporting standards and environmental targets, including: the year the company began reporting on sustainability factors; the frameworks on which disclosed metrics are associated (CDP Climate Change, CDP Water, etc.); whether sustainability reports are assured by third-parties and if so, by whom; whether the corporation has established sustainability goals or targets (e.g. science-based or UN Sustainable Development Goals).

[1] Sustainable Industry Classification System™ (SICS™) #CN0103 Research Briefing Prepared by the Sustainability Accounting Standards Board® June 2015. To access this brief, please consult the SASB Navigator™ (https://navigator.sasb.org) or the SASB Library (https://library.sasb.org/)

	Targets	Progress
GHG Targets	1) Reduce Scope 1 & 2 emissions from wholly owned global manufacturing by 20% with 2005 base year by 2015. 2) Reduce Scope 3 emissions outbound US logistics by 35% by 2015. (vs. 2009 baseline)	1) Complete 2) 25% complete
Water Targets	1) 20% reduction in water usage rate by 2015 (vs. 2006 baseline)	1) This rate increased 20% through 2015, compared to a 17% increase in 2014, failing to meet the target.
Waste/ Material Targets	1) Reduce solid waste generation rate by 50% by 2015 (2005 baseline). 2) Improve 60 percent of global packaging volume by 2015 (initial 40 percent goal exceeded in 2012). our products by 2015 compared to 2009, when the baseline was set at 7,500 tonnes	1) The rate decreased by 38% through 2015, compared to 41% in 2014, falling short of the target 2) Target exceeded, improving 70 percent through 2015

Not only is the firm a robust discloser of data, it has also set targets for reducing GHG emissions, energy use, fuel use, water use, and solid waste generation. General Mills has made significant progress in all of these categories and holds itself accountable where progress has not reached targeted levels.

Then in the fundamental assessment stage, we include dozens of factors from various categories to analyze - e.g., strategy, management, business quality, profitability, growth, debt ratings, corporate governance, etc. In addition to these more traditional measures and metrics about the company's operations, SASB's guidance on the Processed Foods Industry focuses our analysis of the company to look more closely at the supply chain and its product line in terms of material efficiency, emissions, human rights, and healthy living, in addition to in its own operations, (including the extent to which the company has received food safety violations or violations for non-conformance with regulatory labeling codes as identified in the SASB accounting metrics for the industry).

In summary, throughout our investment decision-making process, which begins with assessing quantitative Environmental Productivity and includes all fundamental factors about a company, we incorporate SASB guidance to enhance our fund's long-term investment returns.

Breckinridge Capital Advisors:

Integrating ESG into Credit Analysis, the SASB Lens

Introduction

Breckinridge Capital Advisors is a Boston-based investment advisor specializing in the management of high-grade fixed income portfolios for institutions and private clients. Environmental, social and governance (ESG) factors are fully integrated into the firm's in-depth fundamental research.

In constructing separate accounts for clients, regardless of the accounts' customization requirements, Breckinridge uses thorough, bottom-up research to determine the securities that comprise the portfolios. Over the firm's history, Breckinridge has always sought to strengthen the rigor of its research and broaden and deepen its understanding of its borrowers. More than six years ago, Breckinridge's investment team assessed whether the consideration of ESG factors would improve the analysis and pricing of risk in investment-grade credit research. Ultimately, the firm determined that the analysis of ESG factors is highly relevant and material to credit evaluation, and Breckinridge became one of the first firms to layer ESG analysis into active fundamental fixed income research. Building off this initial effort, Breckinridge continues to refine and enhance its understanding and analysis of ESG factors.

We believe that ESG analysis adds an additional level of rigor to fundamental analysis and helps to assess the reliability of future cash flows for an issuer, the ability of an issuer to repay and the richness (or cheapness) of the price of a bond. The analysis also rewards practices that support long-term viability through lower costs and higher innovation potential. In our opinion, ESG is a natural match for investment-grade fixed income strategies, given the longer time horizon of investments and the lower risk tolerance of most investors. Figure 1 presents a flow chart depicting how ESG analysis is integrated into our investment process. Our process is driven by a proprietary scoring system informed by in-depth fundamental credit research, ESG analysis and issuer engagement. We provide further details of our process in the next section.

Figure 1: ESG Analysis Helps Inform Internal Credit Ratings & Security Selection

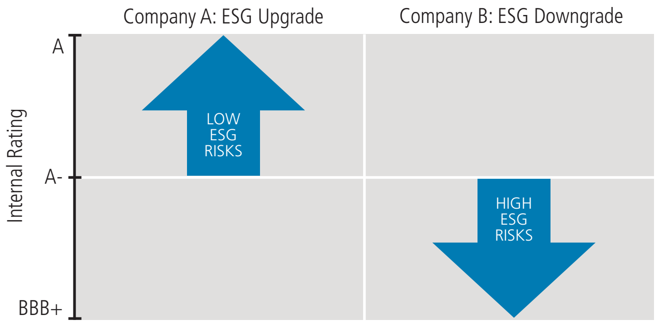
Ratings and security selection

Breckinridge's ESG assessment consists of analyzing a wide range of ESG factors through a quantitative as well as qualitative process.

The quantitative process is based on a framework Breckinridge created to evaluate ESG metrics from a variety of external sources. These ESG indicators are weighted and aggregated into a sustainability score for each company. As part of our qualitative credit research, our corporate analysts review a company's ESG policies and targets. Analysts also consider how corporate management teams articulate their strategic priorities and at which companies sustainability issues are viewed as opportunity to drive revenue growth. Additionally, takeaways from our engagement calls with corporate management teams supplement our ESG research. Our corporate analysts are informed by the issuer's quantitative score and consider their qualitative analysis when they assign a final sustainability rating. Once an analyst determines a sustainability rating for an issuer, they incorporate the rating into the overall credit rating for the issuer. Sustainability ratings are assigned to all corporate issuers under coverage and are reviewed at least annually.

Importantly, these sustainability ratings may affect the analyst's overall internal credit rating for an issuer. The analyst can upgrade the internal rating to reflect a corporation's low ESG risks and/or if it is taking advantage of sustainability to drive revenue growth, or downgrade the rating if ESG risks are considered high or poorly managed.

Figure 2: Low or High Sustainability Ratings Can Prompt Adjustment to Overall Internal Ratings



As an example, if a corporate issuer's ESG risks and opportunities result in our highest sustainability rating, then we could potentially upgrade its overall internal rating by one notch (Figure 2, Company A). On the other hand, if an issuer is assigned the lowest of our internal sustainability ratings, then the suggested adjustment to the rating is a one-notch downgrade to reflect a higher level of ESG risks (Figure 2, Company B). In these cases, when combined with traditional credit analysis, the ESG assessment can shift the 'A-' rating up a notch to 'A' or down a notch to the 'BBB+' level. Our portfolio managers consider our analysts' internal credit ratings, sustainability ratings, internal outlooks and target weightings in generating relative value assessments and in making purchase and sell decisions.

Importance of materiality

Research shows that ESG issues can influence a company's performance, but financial analysts and investors have been challenged to determine which factors are material for each industry. Contributing to this challenge is the fact that companies that are disclosing on ESG factors largely use "boilerplate" ESG language in their financial statements that gives little investable insight into a company's ESG profile. Nonetheless, financial analysts are tasked to compare ESG performance across companies – a task that was made more difficult in the absence of standards for calculating and benchmarking sustainability metrics.

SASB was established in 2011 to help alleviate these issues. The SASB Materiality Map™[1] summarizes the issues likely to be material identified by SASB, industry by industry, in an interactive, web-based tool. Breckinridge uses SASB's recommendations on how best to evaluate specific ESG criteria to help construct accurate ESG pictures for corporate issuers in our universe.

As an example, a view of SASB's Materiality Map for industries in the health care sector is provided in Figure 3. In the pharmaceuticals industry, ESG issues identified as likely being material include: energy management; employee health, safety and well-being; supply chain management; and business ethics and transparency of payments, among others. The heavily scrutinized pharmaceutical industry has a long lead time for new drugs and requires a patient management strategy that carefully invests in research and development. Therefore, a longer-term view helps investors distinguish those pharmaceutical companies willing to make long-term R&D investments as opposed to those solely performing mergers and acquisitions to boost stock prices or supplement R&D. SASB standards for pharmaceutical companies include metrics for drug safety and side effects that can have a long-term impact.

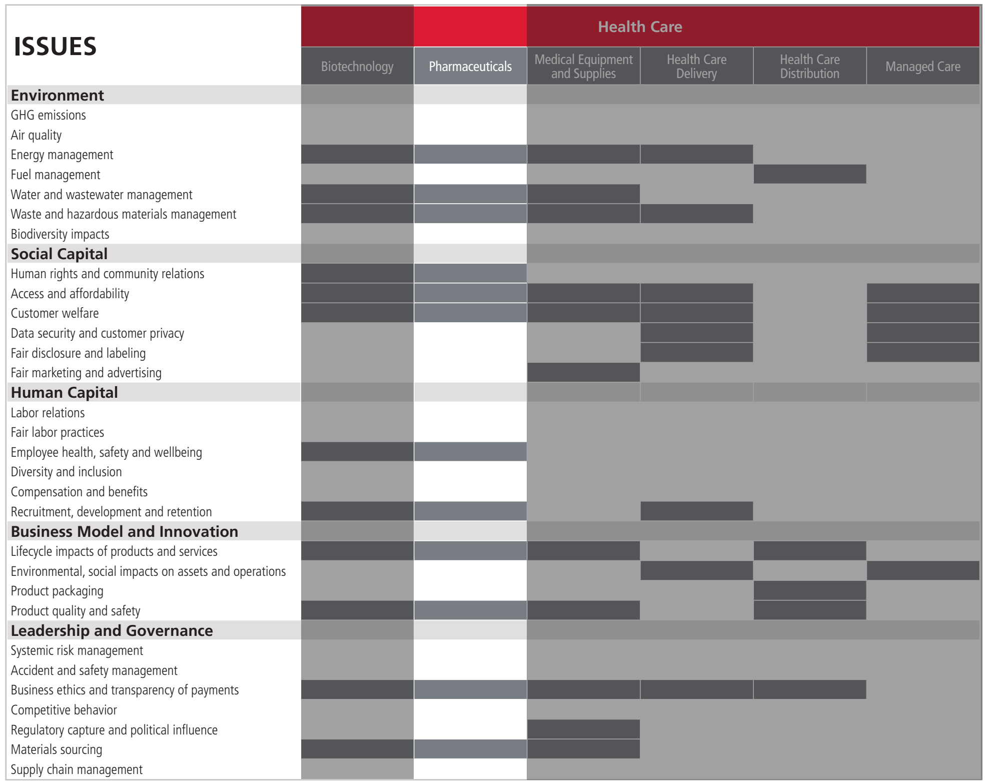
A user can access the SASB recommended disclosure topics and related reporting metric or metrics by clicking on an issue in the Materiality Map.

[1] http://www.sasb.org/materiality/sasb-materiality-map/

Figure 3: Material ESG Indicators for the Pharmaceuticals Sector

SASB Materiality Map™

SASB's Materiality Map identifies likely material sustainability issues on an industry-by-industry basis. Click on a highlighted cell at the sector-level and then on any highlighted cell at the industry-level to see suggested accounting metrics and additional information for each issue.



Sustainability standards

SASB's focus is on creating standards to foster the reporting of comparable and decision-useful sustainability information for investors. As we noted, the Materiality Map is useful in helping analysts direct their ESG research to the ESG topics likely to be material, as determined by SASB through its multi-stakeholder standards-setting process. Once companies broadly adopt SASB's standards, analysts will be empowered to compare companies in an industry on an "apples to apples" basis. For example, when all aerospace companies are disclosing the number of data security breaches and the percentage involving confidential information – a SASB metric for the data security topic – analysts will be able to use straightforward calculations to identify leaders and laggards.

Until that time, SASB metrics are still quite effective in assessing:

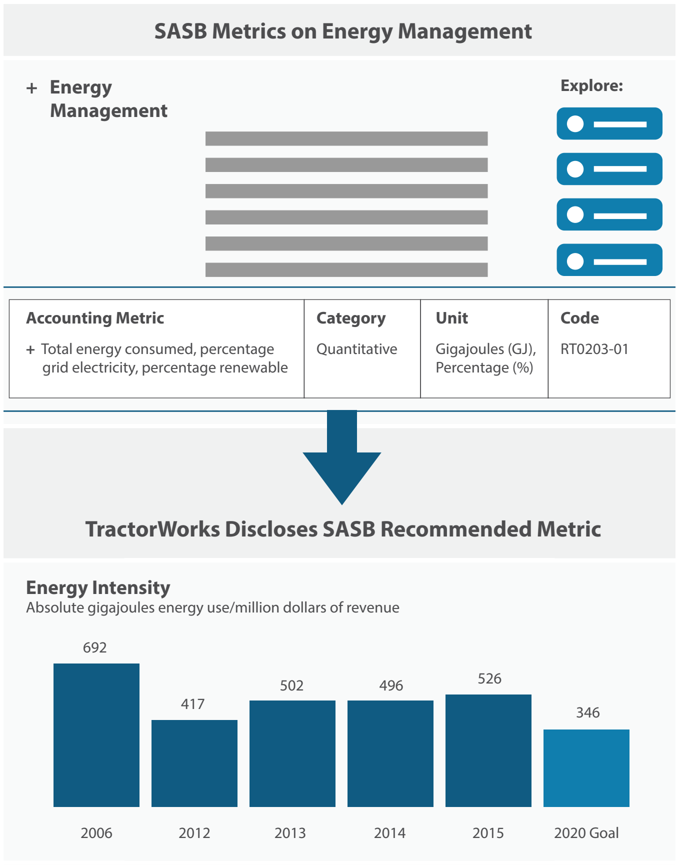
1. whether a company is reporting ESG information that could be material from a financial perspective;
2. how a company compares to its peers from a reporting standpoint (Company A discloses the SASB recommended metric while Company B does not); and
3. whether a company is reporting information suggested by SASB (for example, an airline may discuss the importance of health and safety performance in its corporate responsibility report, but does not report the number of accidents which is the related SASB metric).

The following is an example of how Breckinridge applies SASB's standards in our corporate ESG research. In evaluating TractorWorks Inc.,[2] a firm in the Industrial Machinery & Goods sector, our analyst covering the sector found that the company emphasized a number of environmental initiatives, ranging from cutting water use to energy conservation in its sustainability report. This information was helpful and is important to a number of stakeholders, including Breckinridge. SASB's Materiality Map flags energy management as a more specific environmental issue likely to be material from an investor perspective. SASB standards provide industry-specific metrics for the disclosure of information to investors on energy management as well as other issues likely to be material for companies in the industry (Figure 4).

[2] The fictional name of TractorWorks Inc. is used to maintain anonymity but the example is from an actual company.

The analyst evaluating TractorWorks' discerned that the company's efforts in energy conservation align with SASB's view on energy management. In addition, the company reported one of the same metrics, total energy consumed in gigajoules, included in SASB standards for the energy management topic (Figure 4). [3]

Figure 4: Hypothetical Comparison of SASB Suggested Metrics and Actual Disclosure



Moreover, the company also reports its renewable energy use, and thereby complies with two of the three SASB reporting metrics (percentage of grid electricity is not disclosed). Given this performance, the analyst would likely characterize the company's disclosure on this environmental topic as good. The analyst will then compare the company's disclosure with that of other Industrial Machinery & Goods companies using the same criteria. The analyst will also view TractorWorks' performance in this metric versus its internal goal; in this case, the analyst would likely note that progress could be better, as 2015 energy use was higher than the previous four years and that the company has significant work ahead to reach its goal in 2020.

[3] TractorWorks reports total energy consumed in gigajoules, normalized by revenue. To obtain the total gigajoules figure, the analyst multiplied the normalized figure by revenue.

Engagement discussions

Our ESG research is supplemented by corporate engagement calls. We believe that corporate engagement plays an instrumental role in effective investment research and analysis, as it enables us to deepen our understanding of a company's overall business risks and opportunities. As such, takeaways from our engagement calls can impact our overall qualitative assessment of a corporate issuer.

When thinking about topics for an engagement discussion, analysts will consider SASB standards to inform the types of issues material to the issuer's industry. We also ask companies whether they plan to disclose SASB metrics and adhere to SASB reporting standards. Our hope is that companies will begin incorporating SASB's disclosure topics and metrics in their SEC filings in the near term, enabling greater alignment with the issues that we and our colleagues at other firms prioritize in ESG research and analysis.

This case study contains the opinions and views of Breckinridge Capital Advisors, Inc. All information is current as of the date(s) indicated; they are subject to change without notice.

SASB Standards and Private Markets:

Partners Group's Adaptive Approach

Introduction

Partners Group is a leading global private markets investment manager, with USD 55 billion in assets under management across private equity, private real estate, private infrastructure, and private debt. The firm has a long-standing commitment to Responsible Investment, having been one of the first private markets asset managers to become a signatory of the UNPRI in 2008. Responsible Investment is also embedded within Partners Group's core values, as written in the firm's charter: "We manage assets with a long-term perspective to the benefit of individuals and societies worldwide. We aspire to be a role model in corporate responsibility and we continuously raise environmental, social and governance standards."

The first of the UNPRI's six principles is to "incorporate ESG issues into investment analysis and decision-making processes." While this may seem a simple and straightforward concept, investment managers have long wrestled with how exactly to go about this task in a way that is targeted, efficient, and of course, material. The ESG universe is vast and a long-standing challenge for investment managers has been both how to choose the "right" ESG factors for a given investment, and how to effectively integrate an assessment of those factors into the overall investment analysis.

Over the years, Partners Group has developed its own ESG Integration Methodology, which is applied to each investment opportunity and ensures material ESG factors are integrated throughout the investment cycle, from sourcing to diligence through to ownership, across all private markets asset classes. As SASB released its provisional standards beginning in 2013, Partners Group immediately recognized the value they could add to its existing methodology, particularly with initial company portfolio due diligence.

ESG analysis from due diligence through to ownership

In 2015, Partners Group performed a first screening on 3,851 direct investments, 567 of which made it to an initial due diligence stage and 156 to a more in-depth due diligence stage, ultimately resulting in 74 investments. Every investment that reaches the due diligence stage is subject to an ESG assessment, with the twin goals of a) vetting any investment for reputational risks related to ESG factors and b) identifying opportunities to enhance the value of an asset during ownership through improvements to ESG factors. Throughout the assessment process, establishing materiality is critical, as ESG analysis loses its impact if it cannot be tied to a core aspect of a business.

To facilitate and further institutionalize the process of establishing materiality across sectors and industries, Partners Group's Responsible Investment team recently developed a proprietary ESG due diligence tool, which draws on SASB standards. To develop the tool, the team consolidated sector-specific sustainability topics and accounting metrics across all industries and sectors into a database before adding a simple user interface for all the firm's investment professionals. Once the industry and region of the asset under due diligence has been selected from a drop-down menu, the tool auto-populates the ESG assessment with the relevant topics and metrics for that sector, including those defined in the SASB standards.

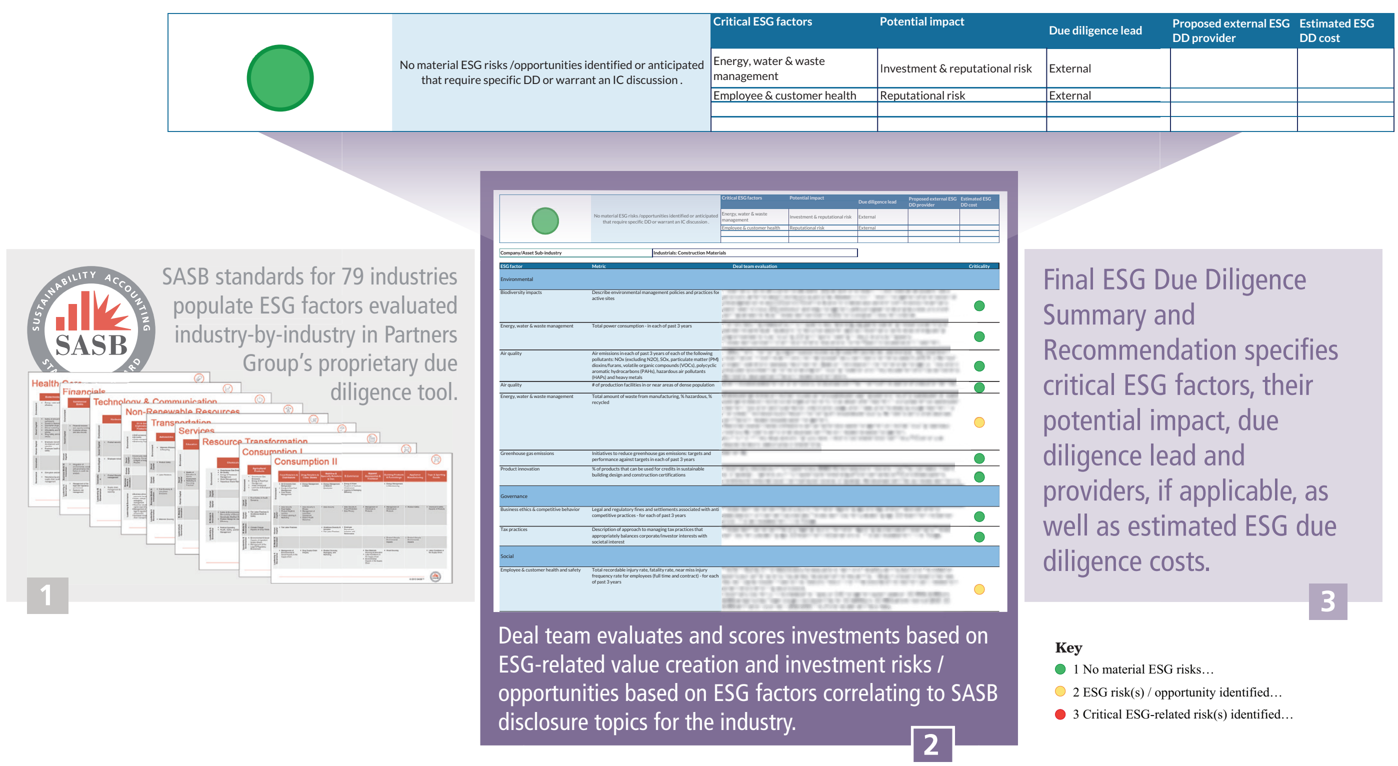
The adoption of the tool by investment professionals has freed up the Responsible Investment team to have more value-added conversations about ESG analysis deeper into the due diligence stage, rather than focusing simply on identifying the most material ESG topics early in the due diligence process.

The integration of the SASB standards into the tool has added significant value to the initial ESG assessment. SASB standards encompass all sectors of the economy and provide comprehensive coverage of the diversity of investment targets in Partners Group's multi-asset class pipeline. Furthermore, SASB industry briefs help pre-empt conversations about the materiality of the selected topics, clearly demonstrating the impact of each topic on the financial performance of a company. Importantly, using the SASB standards supports the long-term goal of truly incorporating ESG analysis and intuition into the investment process by removing intermediaries from the process of determining what ESG factors are relevant.

While the SASB standards deliver a great deal of value to the process of establishing materiality, the steps required to perform the subsequent ESG analysis are equally important. With the pre-populated list of ESG factors likely to be material in a given industry, investment teams set about collecting the relevant data on the target company for their first due diligence submission. They then continue to refine and build out their analysis in subsequent rounds of due diligence leading up to the investment recommendation and decision. In general, private markets investors enjoy a number of advantages relative to public markets investors in terms of access to management, information, and ultimately, influence.

The SASB standards help investors tame the vast universe of ESG topics into the 15-20 most relevant and material metrics for a given industry. In the initial round of ESG analysis, Partners Group's investment teams narrow this list further by assigning a "stoplight" value to each metric: green signals

Partners Group's Proprietary ESG Due Diligence Tool, Informed by SASB Standards



to the investment committee reviewing the analysis that no material ESG risks or opportunities were identified or anticipated that require specific due diligence or warrant a discussion; yellow means that an ESG risk or opportunity was identified or anticipated that warrants deep due diligence and notification to the investment committee, but that a material impact on the decision to invest is not expected; red indicates that critical ESG-related risk(s) were identified that could affect valuation and/or Partners Group's decision to invest, requiring deep follow-up due diligence and a dedicated investment committee discussion. One critical output of this process is a data-rich feedback cycle in which Partners Group continuously refines and sharpens its list of potentially material ESG topics with each successive assessment.

Once an investment has been made on behalf of Partners Group's clients, Partners Group conducts an ESG on-boarding with each company or asset's management in the first 100 days of ownership to align on priority areas for ESG engagement during the holding period. Integrating the SASB standards in the ESG analysis once again adds value to the process by clearly demonstrating the link between the target areas of engagement and the potential for material impact on the business.

Lessons learned and the path forward

Integrating the SASB standards into the due diligence process has improved the efficiency of Partners Group's ESG analysis. Through the process of developing its proprietary ESG due diligence tool, the firm's Responsible Investment team has learned a number of lessons.

First, while the SASB standards provide the best industry-specific coverage of sustainability topics, they do not necessarily incorporate ESG factors arising from non-industry characteristics like geography. For example, SASB may highlight corruption and bribery as a material sustainability topic only for the infrastructure sector while it would be relevant for a much wider range of industries operating in countries where such issues are endemic. This dynamic presents itself with other non-industry-specific ESG factors like the responsible handling of tax practices. In these cases, Partners Group has amended its database of ESG factors to reflect such topics that reach across industry boundaries.

Second, the diversity of businesses in the economy means that many do not fit neatly into the industry and sector categories laid out in the SASB framework. Indeed, SASB acknowledges this dynamic in its own guidance, urging analysts to choose material topics and metrics based on the share of revenue from different business lines within a company. In the context of Partners Group's process, this means that investment teams sometimes have to customize the set of sustainability factors analyzed for a given target, based on the unique profile of the business.

Finally, Partners Group has modified its ESG due diligence tool to reflect its varying levels of influence across different investment types and asset classes. For example, when performing ESG analysis on debt investments, where Partners Group has less influence on company management than it would with an equity investment, the firm prioritizes ESG factors that pose investment or reputational risk over those that require hands-on work with management to capture up-side value creation potential.

Going forward

Partners Group looks forward to SASB's contributions to sustainability analysis and ESG integration in the investment management industry. As SASB continues to refine and update its list of material sustainability topics to reflect the fast-changing economy, Partners Group will continue to integrate these developments into its tool to make more robust, well-rounded, and ultimately more responsible investment recommendations and decisions.

Accounting for a Sustainable Future™

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