White Paper

ESG Integration in Corporate Credit

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Overview

- Investment strategies that integrate Environmental, Social, Governance (ESG) factors have been shown to deliver strong risk-adjusted returns over the long term versus non-ESG integrated strategies.
- The integration of ESG into the credit research process is consistent with Longfellow Investment Management Co.'s (LIM) core philosophy of reducing downside risk and principal preservation. Integration of ESG factors into corporate credit assessments enhances our research team's ability to identify risk and value bonds.
- LIM became a signatory to the Principles for Responsible Investment (PRI)[i] in November 2014.

Introduction

At LIM, our goal is to provide strong risk-adjusted returns within the framework of our clients' investment objectives. Meeting performance objectives demands that risk be scrutinized for each investment decision. We accomplish this through rigorous bottom-up, proprietary analysis focused on credit fundamentals, relative valuation and market technicals. This risk management guideline has been applied to our customized portfolio strategies for over 30 years.

Staying true to our risk management framework, we have formalized and documented our consideration of material ESG factors in our investment decisions. Our white paper, *Responsible Investing for the Fixed Income Investor,*[ii] published in 2014, reviews the responsible investing approaches LIM applies to meet clients' investment objectives. Since then, improved corporate sustainability disclosures have allowed us to hone our approach to further integrate ESG into our credit research process. In this paper, we take a more in-depth look at LIM's approach to ESG and present our proprietary scoring framework.

ESG Integration is core to our philosophy of downside risk protection and principal preservation

It is now widely understood that negative ESG exposure can have a materially adverse effect on issuer credit quality and valuations. Fixed income investors focus on downside risk given that a bondholders' best-case scenario is a steady stream of fixed coupon payments and return of par at maturity. We believe that the integration of ESG factors into our research framework enhances our ability to identify areas of vulnerability and opportunity.

Figure 1: Common Responsible Investing Strategies

ESG Integration: The explicit and systematic inclusion of ESG considerations in credit research and portfolio construction processes. (This represents LIM's approach to ESG.)

Best-In-Class: An investment selection process that focuses on identifying companies with the most favorable ESG characteristics/profiles within a specific industry.

Negative/Exclusionary: The exclusion of certain sectors or companies involved in activities deemed unacceptable or controversial.

Thematic or Impact Investing: Investment in organizations with the goal of generating a positive social and/or environmental impact alongside a positive financial return.

Source: LIM

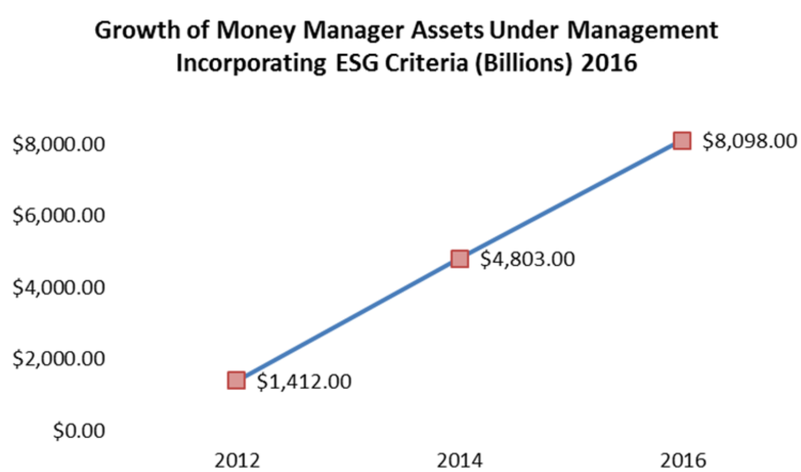
There are several methodologies used in the industry to factor ESG assessments into credit analysis and portfolio construction. ESG Integration, as an approach, differs from other methodologies in that it does not limit the investible universe by simply excluding sectors or companies with weak ESG profiles.

LIM's ESG integration approach enables our research team to identify and mitigate material risks often overlooked during traditional fundamental credit work. By incorporating analysis of ESG factors into our framework, we build a more complete and nuanced picture of a company's risk profile and more accurately price credit risk. This added scrutiny also helps us identify corporate trends and management progress in improving sustainability practices. Ultimately, companies with higher ESG scores tend to be forward-thinking and long-term focused companies that make for attractive investments.

ESG Integration is moving mainstream

Industrywide, the inclusion of ESG factors into the investment decision-making process is not the niche approach it once was. Research by The Forum for Sustainable and Responsible Investment (US SIF) has quantified the move to mainstream, and we illustrate their most recent findings in Figure 2. In its 2016 report titled, *US Sustainable, Responsible and Impact Investing Trends*, US SIF noted that assets under management incorporating ESG grew at a five-year compound annual growth rate of roughly 40% since 2012.[iii] Drilling further down, the survey found ESG Integration to be the preferred strategy affecting $1.5 trillion of assets.[iv] Greater interest in recent years has encouraged companies to increase transparency and disclosures on ESG topics, making analysis more feasible and robust. The number of companies publishing a corporate sustainability report increased from 20% of S&P 500 members in 2011 to 81% in 2015,[v] and management teams are increasingly open to dialogue on these topics.

Figure 2



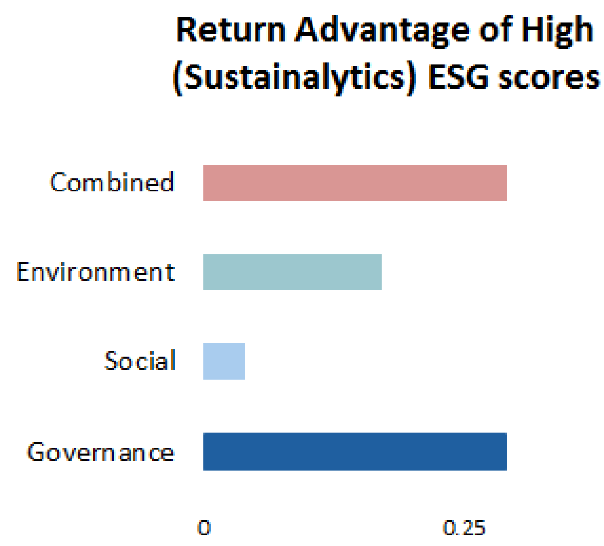
Source: US SIF

The integration of ESG into investment decision making has also evolved out of a broader understanding among investors that ESG factors can have material financial impacts. Legal, environmental and labor weaknesses can lead to increased cost of capital, reduced access to funding and reputational damage. Resource-efficient operations can buoy margins; and a diverse, independent board can alleviate business risks associated with groupthink.

Performance advantage

Initial reviews on the effect of ESG integration on performance were focused on equities. As the world's largest asset class, fixed income investors have acknowledged the pressing need for more robust research in this area. The demand is being met by an increased amount of public research and improved understanding of performance advantages.

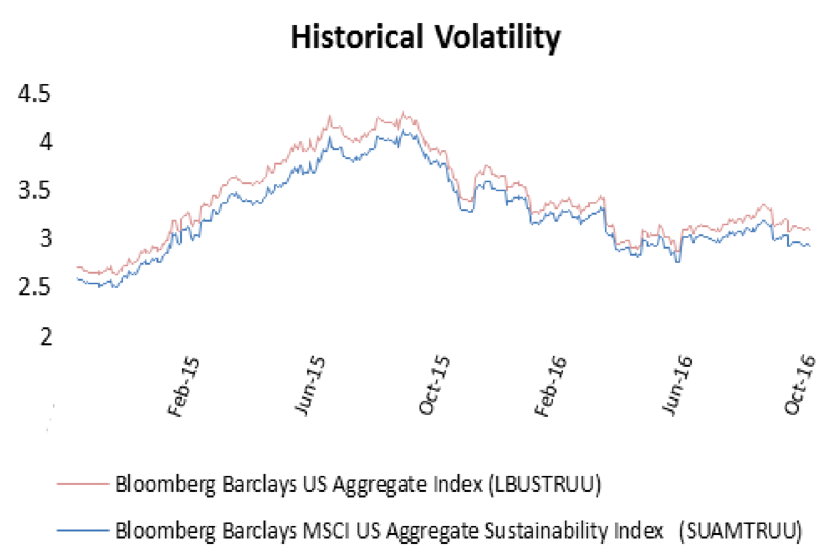
Figure 3: Fixed Income return difference between high and low ESG scores



Source: Sustainalytics, Barclays Research

Perhaps the most comprehensive and compelling evidence was published in a 2016 Barclays' report titled, *Sustainable Investing and Bond Return.*[vi] Barclays Research constructed two well-diversified portfolios designed to track the Bloomberg Barclays U.S. Corporate Investment-Grade Index, applying constraints for high and low ESG scores from Sustainalytics and MSCI. The portfolios were then reconstructed on a monthly basis to ensure tracking error remained low. Captured in Figure 3, the findings showed that a portfolio tilt to higher ESG scores resulted in a small but steady performance advantage.

Figure 4: Sustainability aggregate index volatility is lower than traditional



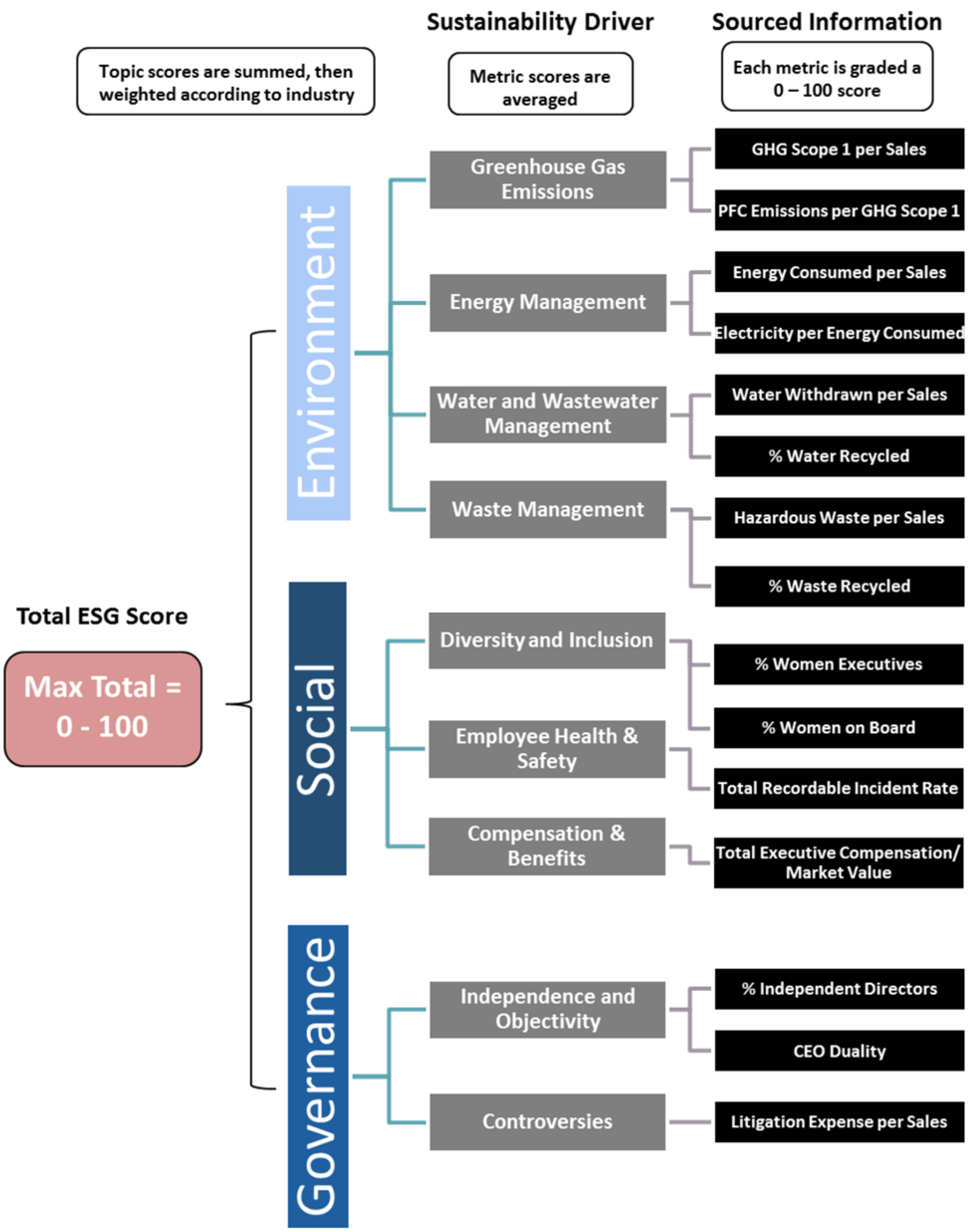
Source: LIM, Bloomberg

In addition to a potential return advantage, consideration of ESG factors can positively affect portfolio volatility. In Figure 4, we compare the Bloomberg Barclays' U.S. Aggregate Index to the Bloomberg Barclays' MSCI US Aggregate Sustainability Index. We found the historical volatility of the sustainability index to be lower on a 90-day moving average over the two-year period spanning October 31, 2014 to October 31, 2016. Each respective index has the same eligible sectors, securities, credit quality and maturity range. The sustainability indices are comprised of those issues that have an MSCI ESG rating of BBB or higher and are subject to frequent re-screening based on the MSCI ESG Impact Monitor evaluation removing any issuers in significant breach of ESG norms.

LIM scoring framework focuses on material sustainability drivers

Our research team has narrowed a list of sustainability drivers that we believe are material to the credit worthiness of specific borrowers given how they deploy capital and resources to generate products and services. The sustainability drivers serve as the basis for LIM's ESG framework and guide the sourced information that we gather. We use this framework, outlined in Figure 5, to score companies on their performance relative to peers and level of disclosure.

Figure 5: LIM's ESG Scoring Framework is a comprehensive risk assessment tool



Source: LIM

An in-house analysis on each sustainability driver informs our credit decision on a company. For example, energy management and employee health and safety are sustainability drivers for several industries. A company that manages energy efficiently may exhibit margin expansion and stability whereas a company that ensures the well-being of its employees may avoid extraordinary expenses and contingent liabilities. Figure 6 depicts how our research team uses this information as insight into a company's future financial health.

Figure 6: Each sustainability driver has unique impact to credit

Sustainability Driver	Sourced Information	Peer Standing		Impact to Credit Quality
Environmental				
Energy Management	Energy Intensity Per Sales (MWH/$)	**Leader:** Company A (Score: 95) **Peer Average:** Company C (Score: 50) **Laggard:** Company D (Score: 10)	➡	Operating Expenses
Social				
Employee Health & Safety	Total Recordable Incident Rate	**Leader:** Company C (Score: 90) **Peer Average:** Company A (Score: 45) **Laggard:** Company B (Score: 5)	➡	Extraordinary Expenses
Governance				
Independence & Objectivity	Independent Director %	**Leader:** Company B (Score: 98) **Peer Average:** Company E (Score: 75) **Laggard:** Company D (Score: 60)	➡	Risk Premium

Source: LIM

Conclusion

The integration of ESG into corporate credit analysis has served as a valuable enhancement to our research process. Increased corporate sustainability disclosures have allowed us to better support qualitative assessments with quantitative trends, highlighted by our propriety risk scoring system. In the fall of 2016, Michael Bloomberg (Founder of Bloomberg LP, Chair of the SASB Board) and Mary Schapiro (former Chairman of the SEC, Vice Chair of the SASB Board) sent a letter to the CEO and CFO of every Fortune 500 company urging companies to disclose ESG information using sustainability accounting standards refined to their industry.[vii] We support these actions and organizations like the Sustainable Accounting Standards Board ("SASB") that encourage corporations to disclose material ESG data while providing a standardized reporting framework for companies to follow. We also believe every voice matters. Despite the limitations that debt holders have to influence corporate behavior as compared to equity holders, we actively seek to engage issuers on material concerns. We believe these engagement efforts will complement our continued integration of ESG factors into corporate credit decisions.

LIM became a PRI signatory to confirm our commitment to understanding and evaluating the risks highlighted by ESG factors. We incorporate this analysis into our investment process because, as fixed income investors, it is our responsibility to understand the risks before investing our clients' assets. We strongly believe this analysis provides additional value to our clients.

[i] The United Nations-supported PRI Initiative is the leading global network for investors to learn about responsible investing and collaborate with their peers, companies, and policymakers to generate sustainable, long-term investment returns for their clients and beneficiaries. For additional information, please visit www.unpri.org.

[ii] Longfellow Investment Management Co. published a white paper, "Responsible Investing for the Fixed Income Investor," in August 2014. The white paper can be found on LIM's website at http://www.longfellowim.com/sites/default/files/Responsible%20Investing%20in%20Fixed%20Income.pdf.

[iii] US Sustainable, Responsible and Impact Investing Trends 2016. N.p.: US SIF Foundation, n.d. 14 Nov. 2016. Web. 22 Nov. 2016.

[iv] US Sustainable, Responsible and Impact Investing Trends 2016. N.p.: US SIF Foundation, n.d. 14 Nov. 2016. Web. 22 Nov. 2016.

[v] Casciotti, Julia, Alexander Cohen, Kristina Jette Mullen, Ashley Thomsen, and Alvis Yuen. "FLASH REPORT: Eighty One Percent (81%) of the S&P 500 Index Companies Published Corporate Sustainability Reports in 2015." GOVERNANCE & ACCOUNTABILITY INSTITUTE, INC., 15 Mar. 2016. Web. 17 Jan. 2017.

[vi] Desclée, Albert, Jay Hyman, Lev Dynkin, and Simon Polbennikov. Sustainable Investing and Bond Returns. Rep. Vol. 01. London, England: Barclays Bank PLC, 2016. Print. Impact Ser.

[vii] "Shape Sustainability Accounting Standards for Your Industry." Financial Executives International Daily. SASB, 17 Oct. 2016. Web. 3 Dec. 2016.