Fixed Income Investing:

How Does ESG Impact Performance?

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pfm asset management

What is Environmental, Social and Governance (ESG) Investing, and Why is it so Popular?

An ESG investing approach considers non-financial, material ESG risks in the investment management process alongside traditional financial and market considerations. Material ESG risks are factors that could significantly impact operating performance and enterprise value. Examples include an organization's impact on climate change and pollution, treatment of its workers, the diversity of its workforce, and corporate governance practices. Some of the considerations of this investment approach include improved risk management, aligning an organization's investment approach with its mission and values, and addressing concerns raised by the community and other stakeholders.

Another factor in the adoption of this is the potential impact on investment performance. Many ESG supporters believe that an ESG investment strategy will result in better performance. In other words, issuers that more effectively manage their ESG risk are more likely to produce higher long-term investment returns. Conversely, skeptics believe that ESG reduces investment opportunities and will consequently detract from investment performance.

So, which view is correct?

While several analytical studies have focused on addressing the ESG-performance correlation in the equity markets (with mixed results), there has been less of a focus on, or analysis of, that relationship in the fixed income space.

In this InvestEd, we examine the impact of ESG on performance in the fixed income sector by evaluating the performance and risk characteristics of comparable ESG and non-ESG indices. Our analysis seeks to answer the following questions:

- How does the performance of fixed income ESG indices compare with non-ESG fixed income indices with similar construction and risk profiles?
- If there is a performance difference, what other factors could be at play?

Comparison of Fixed Income ESG and Non-ESG Historical Performance

To better understand how fixed income ESG portfolios perform, our analysis evaluates the performance of three ESG and three comparable non-ESG corporate bond indices developed and tracked by ICE Data Services (ICE). In order to determine eligibility for inclusion in the index, the ESG indices apply a "best-in-class" ESG approach to the parent non-ESG index.[1]

1 Introducing the ICE ESG Bond Index Family, ICE Data Indices, LLC.

The ESG indices use the analytical framework developed by Sustainalytics, a Morningstar Company, which is a leading provider of independent ESG and corporate governance research, ratings, and analytics. This best-in-class approach (used by ESG indices) positively screens for issuers with lower ESG risk profiles. It also screens for and excludes issuers with significant involvement in controversial weapons.[2]

The ESG indices adjust the security weightings of the eligible constituents to closely match the duration, rating and sector distributions of the non-ESG or parent Index. Standardizing across these risk factors attempts to isolate the impact of different ESG-related issuer weightings on the index returns.

Our analysis evaluates the entire available performance period from December 31, 2016, to June 30, 2021.

Summary Results

December 31, 2016 – June 30, 2021

Index	Average Effective Duration (Years)	Average Credit Rating	Average Monthly Return	Standard Deviation Monthly Returns	Since Inception Annualized Return	Correlation Coefficient
1-5 Year Investment-Grade ICE Indices						
ESG	2.86	A3	0.31%	0.80%	3.69%	0.999
Non-ESG	2.75	A3	0.31%	0.81%	3.69%	
Master Investment-Grade ICE Indices						
ESG	7.38	A3	0.49%	1.70%	5.92%	1.000
Non-ESG	7.53	A3	0.49%	1.72%	5.86%	
High Yield ICE Indices						
ESG	4.02	B1-BB3	0.55%	2.10%	6.26%	0.989
Non-ESG	3.92	B1	0.55%	2.24%	6.42%	

ESG PERFORMANCE ANALYSIS: INVESTMENT-GRADE BONDS

ICE U.S. 1-5 Year Corporate Best-in-Class ESG Index versus ICE BofA 1-5 Year U.S. Corporate Index

The results indicate that there is not a significant return difference between the 1-5 year ESG and non-ESG indices. As indicated below, the investment performance of these two indices were the same over the two-year, three-year and since inception periods; performance differed by only 0.1% over the one-year period ended June 30, 2021. The average monthly return and standard deviation of returns were also the same at 0.3% and 0.8%, respectively. In addition, other key index characteristics, such as option-adjusted spread (OAS), convexity, duration and credit rating distribution[3] were also very similar.[4]

2 Source: ICE Data Services, "Introducing the ICE ESG Bond Index Family," published July 16, 2020. ESG Risk Rating Criteria: Excludes issuers with high and severe risk (an ESG Risk Rating >=30 on a scale of 0 to 100); Controversial Weapons Involvement Criteria: Excludes issuers with a Controversial Weapons involvement of medium, high, or severe (a Controversial Weapons score >=20).

3 According to the CFA Institute, the option-adjusted spread (OAS) is the single spread added to a risk-free yield curve to produce a value or price for a bond. OAS is typically calculated using Monte Carlo or other analyses and is used to quantify the value of an embedded option in a bond. OAS is sensitive to interest rate volatility: the higher the volatility, the lower the OAS for a callable bond. Bond duration, in general, is a linear estimate of the price-yield relationship of a bond and measures the sensitivity of the market value of a bond to a change in interest rates. A bond with a higher duration is more sensitive to changes in interest rates than a bond with a lower duration. Convexity measures the curvature of the price-yield relationship of a bond and is generally used in tandem with duration to provide a more accurate estimate of the change in market value of a bond due to a change in interest rates. Other things being equal, a more convex bond appreciates in price more than a less convex bond when yields fall and depreciates less when yields rise. Credit ratings enable investors to compare the credit risk of debt issues and issuers within a given industry, across industries, and across geographic markets. Standard deviation measures the dispersion of a series of observations. A higher standard deviation means more volatility.

4 The average monthly OAS for the ESG index from 12/31/2016 to 6/30/2021 is 0.81% and the non-ESG index is 0.83%. The average monthly effective convexity for both the ESG and non-ESG indices are 0.09; the average spread duration for the ESG index is 2.89 years and the non-ESG index is 2.78 years.

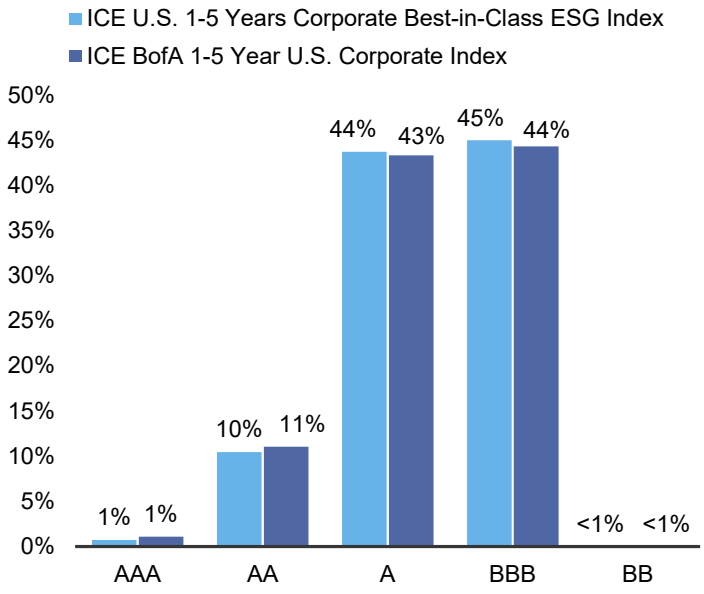
Performance Comparison as of June 30, 2021
Annualized Total Returns

	1 Year	2 Year	3 Year	Since Inception (12/31/2016)
ICE U.S. 1-5 Year Corporate Best-in-Class ESG Index	2.5%	4.1%	4.9%	3.7%
ICE BofA 1-5 Year U.S. Corporate Index	2.6%	4.1%	4.9%	3.7%
Return Difference	(0.1%)	0.0%	0.0%	0.0%

Effective Duration
January 2017 — June 2021
(Since Inception)

Source: Bloomberg, ICE BofA indices.

Average Credit Rating Distribution
January 2017 — June 2021
(Since Inception)



Source: Bloomberg, ICE BofA indices.

ICE U.S. Corporate Best-in-Class ESG Index versus ICE BofA U.S. Corporate Index

The analysis results of intermediate investment-grade fixed income indices are similar to those of the 1-5 year investment-grade indices. The ESG index outperforms the non-ESG index by 0.1% for the 2-year, 3-year and since inception annualized periods. The average monthly return and standard deviation for the ICE U.S. Corporate Best-in-Class ESG Index and the ICE BofA U.S. Corporate Index are identical at 0.5% and 1.7%, respectively. Key index characteristics including OAS, convexity, duration and credit rating distribution are also very similar.[5]

5 The average monthly OAS for the ESG index from 12/31/2016 to 6/30/2021 is 1.22% and the non-ESG index is at 1.24%. The average monthly effective convexity for the ESG index is 1.04 and the non-ESG index is 1.10. The average spread duration for the ESG index is 7.27 years and the non-ESG index is 7.39 years.

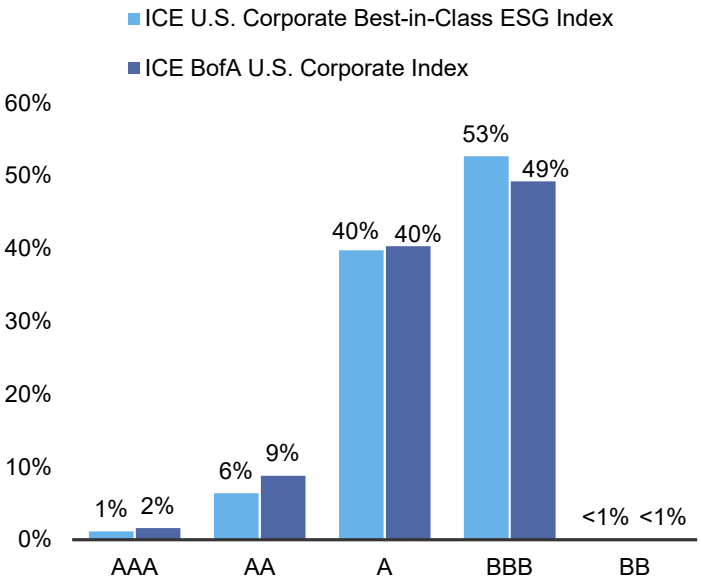
Performance Comparison as of June 30, 2021
Annualized Total Returns

	1 Year	2 Year	3 Year	Since Inception (12/31/2016)
ICE U.S. Corporate Best-in-Class ESG Index	3.5%	6.5%	7.9%	5.9%
ICE BofA U.S. Corporate Index	3.6%	6.4%	7.8%	5.9%
Return Difference	(0.1%)	+0.1%	+0.1%	0.0%

Effective Duration
January 2017 — June 2021
(Since Inception)

Source: Bloomberg, ICE BofA indices.

Average Credit Rating Distribution
January 2017 — June 2021
(Since Inception)



Source: Bloomberg, ICE BofA indices.

ESG PERFORMANCE ANALYSIS: HIGH YIELD BONDS

High Yield ICE U.S. Corporate Best-in-Class ESG Index versus High Yield ICE BofA U.S. Corporate Index

The high yield ESG intermediate-term index slightly underperformed its non-ESG index counterpart on an absolute basis over each of the periods we examined. However, the ESG index had lower return volatility, as indicated by its lower monthly standard deviation of returns (2.10% compared to 2.24%). In addition, we observed a modest difference in the OAS of the two indices, with the non-ESG index offering a higher average OAS of 4.19% as compared to 3.97% for the ESG index. These distinctions may be partly explained by the difference in the overall credit risk of the two indices. The ESG index maintained a higher average credit rating than the non-ESG index (B1-BB3 compared to B1).[6]

6 The average monthly OAS for the ESG index from 12/31/2016 to 6/30/2021 is 3.97% and the non-ESG index is 4.19%. The average monthly effective convexity for the ESG index is -0.21 and the non-ESG index is -0.22. The average spread duration for the ESG index is 3.85 years and the non-ESG index is 3.70 years.

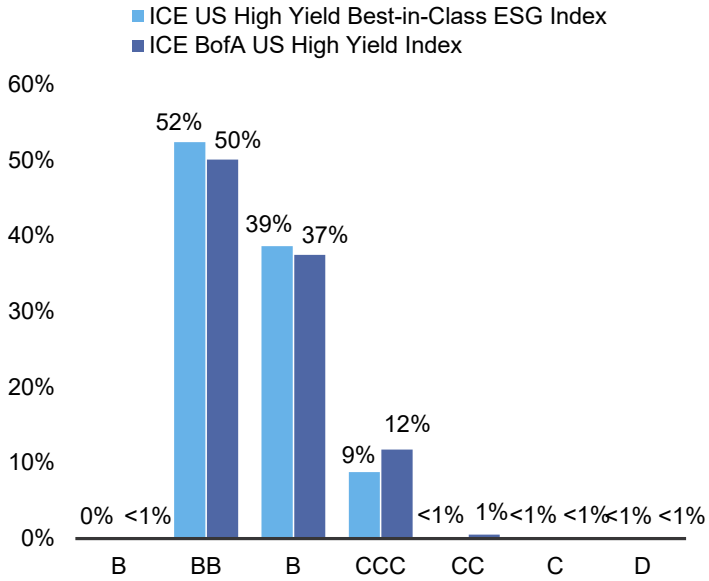
Performance Comparison as of June 30, 2021
Annualized Total Returns

	1 Year	2 Year	3 Year	Since Inception (12/31/2016)
ICE U.S. High Yield Best-in-Class ESG Index	14.1%	6.4%	7.0%	6.3%
ICE BofA U.S. High Yield Index	15.6%	6.9%	7.1%	6.4%
Return Difference	(1.5%)	(0.5%)	(0.1%)	(0.1%)

Effective Duration
January 2017 — June 2021
(Since Inception)

Source: Bloomberg, ICE BofA indices.

Average Credit Rating Distribution
January 2017 — June 2021
(Since Inception)



Source: Bloomberg, ICE BofA indices.

Conclusion

The primary objective of this analysis was to identify differences in the performance of ESG versus non-ESG investment strategies, controlling for factors that may traditionally lead to performance differences to help identify and isolate their impacts. The results of our analysis suggest that ESG strategies in the investment-grade fixed income sector do not sacrifice returns while having the same general risk factors as non-ESG strategies. The results of our high-yield fixed income ESG analysis suggest a very modest return reduction, but with lower overall volatility (as measured by standard deviation) and higher credit quality (as measured by the average credit rating of each index).

We note that the investment results for any ESG strategy will differ and depend on the ESG parameters that are adopted and implemented by the investor. The investment results will also vary depending on traditional market factors such as duration positioning, portfolio composition, credit quality, and changes in interest rates and yield spreads.

ESG investment strategies are likely to become more prevalent, particularly in today's more environmentally- and socially-conscious society. PFM Asset Management can help you create a customized and flexible ESG fixed income approach that appropriately incorporates your organization's key sustainability objectives into the investment management process.

For more information on PFM Asset Management's customizable ESG strategies, please contact your PFM Asset Management representative or reach out to David Reeser at reeserd@pfm.com.

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