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Aegon Asset Management

SUSTAINABILITY & CREDIT SPREADS: FROM LEADERS TO IMPROVERS

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Key takeaways

- A combination of sustainable leaders and improvers may provide an attractive risk-reward profile in a sustainability-themed fixed income portfolio.
- Issuers viewed as leaders in sustainability may provide downside protection during bouts of market volatility.
- Beyond sustainable leaders, issuers early in their sustainability transition, also known as improvers, may provide higher spreads and upside potential.
- Based on our analysis of investment grade corporate issuers, sustainable improvers have offered a higher-than-average spread relative to sustainable leaders or influencers over the three-year period, after adjusting for duration and credit quality.

Secular sustainability shift

The shift towards a more sustainable global economy continues to accelerate. At Aegon AM, we believe this secular shift will continue to present opportunities for investors. Entire industries and sectors are evolving as consumers and investors alike demand sustainable solutions, and governments around the world enact regulations to drive sustainability. From consumers and governments to businesses and investors, these four factors are creating what we call a sustainability domino effect. This transition toward sustainability includes various megatrends such as climate change awareness, resource efficiency, eco solutions, health and well-being as well as sustainable growth. For investors, this shift presents compelling opportunities to pursue competitive financial results through a sustainability-themed approach.

Sustainable leaders and improvers

Within a sustainability-themed portfolio, investing in sustainable leaders may seem to be an obvious choice as the issuers are clearly aligned with sustainable megatrends. We believe there is merit in looking beyond the leaders in sustainability to identify companies that are in the early stages of their transition—or sustainable improvers. By widening the opportunity set beyond the leaders, fixed income investors have additional opportunities to generate competitive long-term excess returns within a sustainability-themed portfolio.

We believe investing in a combination of leaders, influencers and improvers may be an effective strategy to optimize the portfolio's risk-reward profile. This approach is founded on the idea that sustainable leaders may provide more stable return profiles and potential downside protection in volatile markets while sustainable improvers can provide upside potential.

To evaluate one aspect of our thesis, we conducted research to analyze historical spreads of investment grade corporate issuers across our proprietary sustainable issuer categories. Our analysis aimed to answer one key question: Do companies categorized as sustainable improvers offer higher spreads relative to sustainable leaders?

Exhibit 1: Aegon AM's sustainable issuer categories

Category	Issuer characteristics
Leader	Substantial portion of revenues or assets tied to sustainable products or services and/or industry leader in sustainable business practices
Influencer	Material portion of revenues or assets aligned with sustainable products or services and/or some sustainable business practices evident
Improver	Demonstrates a clear commitment to transition to products/services or assets aligned with sustainable products or services
Neutral	Insignificant amount of revenues or assets aligned with sustainable products or services
Detrimental	Products and services against sustainable initiatives

Source: Aegon AM

Opportunity for upside potential in sustainable improvers

In Aegon AM's sustainability framework, sustainable improvers are issuers with a clear commitment to transition toward sustainable products or services. These issuers can be overlooked by investors that solely focus on the leaders in sustainability. In addition to leaders, we believe sustainable improvers can play an important role in a sustainability-themed portfolio. For investors that can identify these improvers early, they may have additional opportunities to benefit from higher spreads today and capture upside return potential over the long term. For issuers, the capital provided by investors may help accelerate their sustainable progress. As the improvers work to enhance their sustainability profile and migrate toward leaders in the future, we expect spreads to compress to that of a comparable sustainable leader. However, a long-term investment horizon is key; investors must be willing to go along with the company on their sustainable journey.

Evaluating our thesis on sustainable improvers and leaders

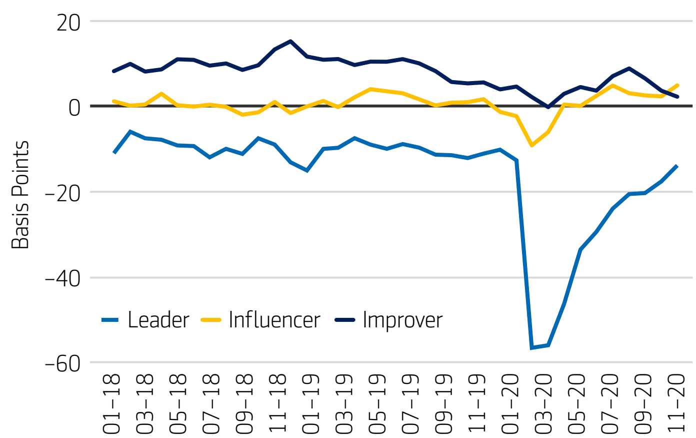
To test our leaders and improvers thesis, we conducted an analysis of Aegon AM's US corporate sustainable universe versus the Bloomberg Barclays US Corporate Index to represent the market. The sustainable investment universe is defined by our top three sustainable categories—leaders, influencers and improvers—and is based on our proprietary sustainability framework. To build this sustainable investment universe, we first identify long-term sustainable megatrends including climate change awareness, resource efficiency, eco solutions, health and well-being as well as sustainable growth. From there, our research analysts conduct comprehensive assessment of an issuer's alignment with those sustainable initiatives. This process entails looking at the issuer's products, services and/or assets that support long-term sustainable initiatives and evaluating the issuer's business practices. After a thorough evaluation by a Sustainable Investment Committee, issuers are mapped into sustainable categories to form a sustainable investment universe.

Using this opportunity set and isolating the universe to investment grade corporate credit holdings only, we evaluated the historical spreads of these sustainable investment candidates over a three-year time frame. Our analysis assumed that the sustainability profiles of these issuers were static during this time period due to data availability and the concept that sustainability is a business strategy that plays out over multiple years[1]. In other words, we used the issuer's sustainability category as of December 2020 for the entire lookback period. To control for the differences in rating composition and the impact of duration, the spread of each security was measured relative to the median market rating spread (MRS) curve[2] corresponding to the issuer's traditional credit rating.

After aggregating the results by sustainability categories, we assessed the average spread for each category relative to the market on a monthly basis for the last three years (Exhibit 2). Beginning in 2018 and extending up to the Covid-19 crisis in 2020, leaders have consistently traded tighter to the market, by about 10 basis points. In contrast, improvers have generally exhibited spreads that are wider by about 10 basis points. This confirms our thesis that, after adjusting for duration and credit quality, sustainable improvers have historically exhibited higher spreads relative to sustainable leaders or influencers.

Exhibit 2: Sustainable improvers exhibited wider spreads

Historical spread difference for sustainable leaders, influencers and improvers relative to the median market rating spread



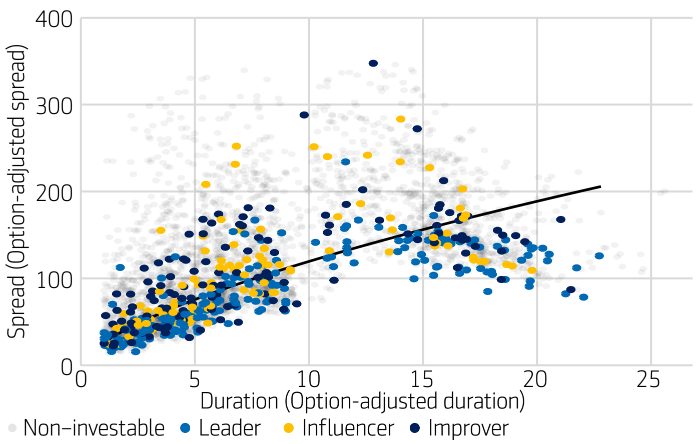
Source: Aegon AM. Spread data begins January 1, 2018 through December 31, 2020. Reflects the historical mean spread relative to the median rating spread. Includes US corporate bonds in Aegon AM's sustainable investment universe as of December 31, 2020 based on the firm's proprietary sustainability assessment. For illustrative purposes only. Refer to appendix for important information.

To provide a more complete picture of our approach, an example of a median rating spread (MRS) curve is shown in Exhibit 3 for bonds in the BBB bucket[3] as of December 2020. Also plotted in this chart are the spreads of bonds in the Index at that time[4] which have been labelled according to where they rank in terms of sustainability. The gray dots correspond to issuers that are omitted from the sustainable investment universe for our sustainability-themed fixed income portfolios. These issuers either sit at the bottom of our sustainable categories (neutral or detrimental) or have not been categorized due to lack of internal research coverage. The colored dots represent the set of bonds in Aegon AM's sustainable investment universe. Note that the median rating spread curve does not fit directly to the points in this chart, since outliers with very high spreads would skew the result. Instead, a smoothing process was performed. For more detail, please see the Appendix.

Exhibit 3 also provides a bottom-up illustration of our thesis. We see that the leaders are mainly clustered below the curve, indicating that their spreads are generally below that of the market. In contrast, the improvers are more uniformly dispersed and tend to dominate as one moves upward from the curve.

Similar behavior can be seen for other ratings and at different points in time. In order to go from this chart to the one in Exhibit 2, we aggregate the individual bonds to the category level at each point in time by taking the absolute difference of each sustainable bond spread to the median rating spread curve and weighting these differences by the market value of the bonds.

Exhibit 3: Median rating spread curve for BBB-rated US corporate bonds



Hypothetical example for illustrative purposes only. Source: Aegon AM US. As of December 31, 2020. Reflects the historical mean spread relative to the median rating spread. Includes US corporate bonds in Aegon AM's sustainable investment universe based on the firm's proprietary sustainability assessment. For illustrative purposes only. Refer to appendix for important information.

Downside risk mitigation in sustainable leaders

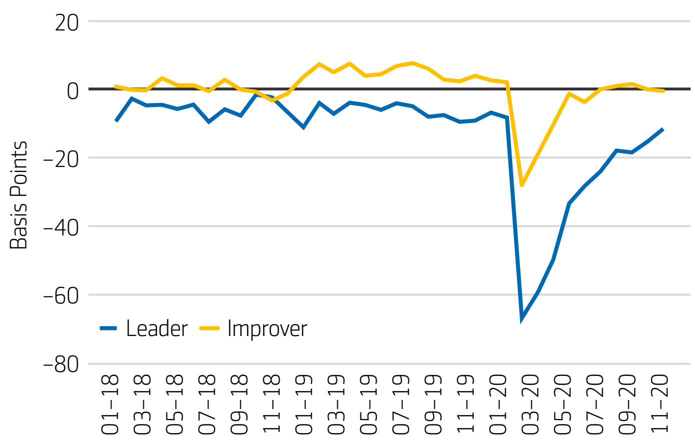
Our research also suggests that sustainable leaders may provide a powerful balance to improvers in a fixed income portfolio. Unlike improvers, sustainable leaders are more mature in their sustainable journey, such as those with a majority of revenues or assets coming from sustainable products or services or issuers with industry-leading sustainable business practices. These issuers tend to coincide with tighter spreads, yet we found that they may provide stable return profiles and potential downside protection. That is, sustainable leaders' spreads could widen less than improvers' spreads during periods of widespread market volatility as depicted by the spread movement we saw in March 2020 at the onset of the Covid-19 pandemic.

Sector considerations

While the results by sustainability category depict a strong relationship, a natural question arises: Can the results be attributed to differences in sector compositions within the categories? After all, certain sectors are more naturally aligned with sustainability initiatives than others and so companies in these sectors are more likely to have a higher sustainability ranking.

To explore this question, we examined spreads across sustainability categories within various sectors. For example, let's look at the pharmaceutical and banking sectors. The intended effect of pharmaceuticals is to enhance health and well-being, which is a clear sustainability goal. Conversely, a sector such as banking could be viewed as inherently neutral or perhaps even slightly negative since in general this sector supports fossil fuel activity. However, although a broad sector may appear to be less aligned with sustainability, certain issuers within that sector may be adopting practices or developing products and services that are more aligned with sustainability over their peers. While the majority of quantitative ESG studies have focused on the effect of an ESG tilt, or in other words, maintaining the broad characteristics—including sector composition—of a benchmark, we believe that sector allocations which deviate from the benchmark are a direct expression of our proprietary sustainability methodology. In other words, in our view it does not make sense to view sector as an independent aspect of the process; sustainability assessments must be conducted from the bottom-up on an issuer-by-issuer basis. However, even within sectors, we see similar divergence between leaders and influencers as at the aggregate level; this is evident in the chart below for pharmaceuticals.

Exhibit 4: Historical spread difference for the pharmaceuticals sector



Source: Aegon AM US. As of December 31, 2020. Reflects the median rating spread curve for US corporate bonds in the pharmaceuticals sector of the sustainable investment universe. For illustrative purposes only. Refer to Appendix for important information.

Summary

In conclusion, our analysis suggests that issuers in the early stages of their sustainability transition may offer higher spread potential relative to the sustainable leaders. Our analysis indicates that US corporate credit issuers categorized as sustainable improvers have offered a higher spread than average relative to sustainable leaders or influencers during the three-year time period, after adjusting for duration and credit quality. Further, recent experience affirmed that issuers viewed as leaders in sustainability may provide downside protection during bouts of market volatility as observed in March of 2020. As a result, we believe a combination of sustainable leaders and improvers may provide an attractive risk-reward profile in a sustainability-themed fixed income portfolio.

Appendix: Median Rating Spread (MRS) Curves

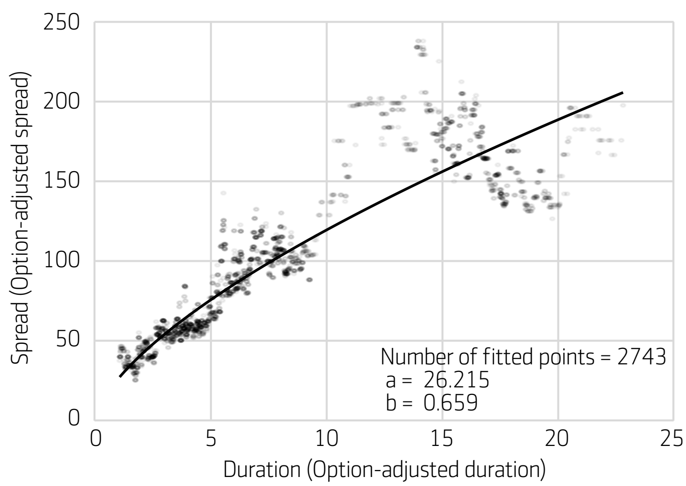
The median rating spread (MRS) curves[5] reflect the typical market price (proxied by the spread) at a particular point in time of a bond with certain credit risk (rating) and interest rate risk (duration) characteristics. They provide a reference measure for comparing the price of a particular bond to the "market standard" for all bonds with similar characteristics. For each date, there is a separate set of curves, one per rating notch, with each curve tracing out the dependence of the spread on the duration. Since we are dealing with USD-denominated corporate bonds, we utilized the Bloomberg Barclays US Corporate Index, a broadly used benchmark, to represent the market.

In the broader fixed-income literature, such curves have been applied in two main ways. The first, which is of interest to us here, relates to valuation, i.e. whether a specific bond is rich or cheap relative to what the market is pricing for similar bonds. Alternatively, one can gauge the rating implied by the market for a particular bond by determining which MRS curve is closest to the bond's spread at the given duration.

We construct monthly MRS curves from monthly Index data as follows. First, we filter out those bonds where the price is determined mainly by pull-to-par (duration < 1) or expected call exercise (bond is callable within the next year) considerations. Second, we group the remaining bonds into rating buckets, e.g. AAA, AA, etc., since we first calibrate curves for these broader buckets before finally proceeding down to the notch level. This is done to ensure that we have a sufficiently large calibration sample. However, we do not fit curves directly to the raw bond data, since there are outliers that would distort the picture. Instead, we apply a "smoothing procedure", whereby we obtain a representative spread for durations that are within a certain range. Namely, the bonds in each bucket are sorted by duration, and rolling windows consisting of a fixed number of bonds are constructed. We determine representative (spread, duration) pairs for each window from the median values. Note that each bucket curve is intended to represent the middle notch of the bucket, so the representative spread may be adjusted away from the middle value depending on the notch composition within each bucket.

We then fit power curves to the resulting data points via linear regression of the form $spread = a \cdot duration^b$, where a and b are unknown parameters. An example of the curve fitting for the BBB bucket as of December 2020 is shown in Exhibit 5 below, where the points are the calibration points, i.e. after smoothing. To get a sense of the effect of this smoothing, one can compare this plot to the one in the main text above, which shows the raw bond data. The bucket curves are then linearly interpolated to arrive at the final output of the procedure, the notch curves.

Exhibit 5: BBB curve fitting example



Hypothetical example for illustrative purposes only. Source: Aegon AM US. As of December 31, 2020.

Footnotes

[1]In 2020 approximately 5% Aegon AM's US corporate sustainable universe issuers changed categories

[2]The procedure used to construct the MRS curves is detailed in the Appendix. As stated there, callable bonds with a near-term exercise date are filtered out of the MRS calibration data set. Note however, that in the interest of maintaining a larger sample size (by over 30%), we have included such bonds in our relative spread analysis, as the results are virtually identical.

[3]Index Rating of Baa1 – Baa3. Note that the final set of MRS curves used in our analysis are at the notch level. Please see the Appendix for more detail.

[4]In an effort to improve the readability of the chart, the vertical axis has been constrained to show only all of the bonds in our sustainable universe, since that is the focus here. There are non-eligible bonds beyond this point, which, together with those shown in the chart, comprise the full set of inputs to the curve-fitting process. Please see the Appendix for more detail.

[5]The approach outlined here is based on Wang, Y., Moore, D., and D. Dwyer (2019) Moody's Market Implied Ratings: Description and Methodology; Appendix C.

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