

Two become one: combining corporate credit with ESG criteria

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Introduction

It has been a fascinating few years for the asset management industry as it seeks to rapidly adopt and embed ESG principles. The industry is quickly transitioning towards complete, top to bottom, integration of ESG criteria. Equities as an asset class is ahead of its fixed income counterpart with a broader range of ESG offerings, but the fixed income landscape is catching up fast with a range of creative ESG offerings appearing over the past few years.

Choosing a sustainable fixed income benchmark may seem like a trivial exercise, but the reality is there are notable differences between benchmarks in terms of risk characteristics and profile depending on whether exclusions or tilts (or both) are used to improve the overall ESG profile of the index.

In this note, we look at the various methods for improving the ESG metrics of an investment grade corporate bond benchmark index and what they imply in terms of the characteristic features of the index. In particular, we investigate the impact of the various exclusions and tilts used to construct the three popular classes of ESG corporate credit indices: SRI, Sustainability (negative screening) and ESG-Weighted and how they differ in terms of credit risk, sector and duration profiles relative to a common parent index¹. We focus on US investment grade corporate credit indices for the purposes of this investigative analysis and note that MSCI ESG ratings and scores are used.

We note the following conclusions:

- ◆ Whilst there is sector, rating and other differences between ESG indices and the parent in our sample, they are not material enough to shift the distribution of risk in a meaningful way. Put differently, we expect the ESG indices to closely track the parent in different market regimes which should be reassuring for investors looking to switch from a non-ESG to an equivalent corporate ESG benchmark.
- ◆ There is an observable relationship between the credit risk of an issuer and its ESG score. Investors should therefore factor ESG analysis into their generic credit risk analysis as it is likely to become increasingly important in the credit and default risk assessment of issuers going forwards.
- ◆ The Sustainability index has a better ESG score than the other types of ESG index and has a persistently tighter overall credit spread as a result. In general, exclusions based upon a minimum ESG score threshold – as is the case with the Sustainability index – make the largest difference to the overall ESG score of the index; more so than tilts or even exclusions based upon SRI filters such as the MSCI Business Involvement Screening Research² filter.
- ◆ The Sustainability index has a more uniform ESG scoring profile across issuer credit rating cohorts and duration buckets than the other ESG indices.

¹ For the purposes of clarity, we define the parent index as the non-ESG index from which the three types of ESG index mentioned earlier are derived via a specific set of exclusions or tilts as applied to the parent index

² Please see the Appendix for details of how the MSCI BISR filter works in practice

Framing the question

The adoption of ESG criteria and principles within fixed income presents a different challenge to equities given the features of the asset class. It requires a different mode of thinking when deciding how to allocate capital to issuers; debt issuance proceeds are typically used for refinancing purposes while proceeds from equity issuance are often used to fund longer term investment opportunities.

With fixed income, there are two elements to consider. On the one hand, debt markets offer investors the opportunity to 'lend' to corporates for specific environmental or sustainable investment projects through labelled bonds such as Green, Social, Sustainable or Sustainably-Linked and Transition bonds where the 'impact' can be measured and the use of proceeds is clear. On the other hand, corporates can be incentivised to improve their overall ESG profile in order to fund their shorter term funding needs on more favourable terms on an ongoing basis. One advantage of labelled bonds is that investors can analyse how the bond proceeds are put to work as well as looking at the ESG quality of the issuing entity offering two levels of analysis: bond issuer and bond issuance.

More broadly, investors are looking to invest in an increasingly sustainable manner, with ESG metrics such as ESG scores and carbon emissions forming the basis of their investment choices. Companies that do well on these metrics are less likely to be screened out of or 'tilted' away from in the portfolio construction process, thereby increasing demand for their fixed income securities. When it comes to a new capital raise, they can then command a lower cost of debt capital on their fixed income issuance. How these tilts and/or exclusions affect issuers' access to capital then becomes of much greater importance, not only from an investor perspective, but also from the eyes of an issuer.

The ESG group of three

Taking the Bloomberg Barclays US Sustainable product set as our universe of ESG corporate bond indices, we focus on three broad types of index:

1. SRI indices which exclude issuers according to the MSCI BISR filter
2. Sustainability indices which are based upon a “best-in class” approach which retains issuers with a minimum MSCI ESG rating of BBB (or BB) and above whilst excluding those with an ESG rating below
3. ESG-Weighted indices where parent weights are adjusted/tilted by ESG rating. This approach uses multipliers to scale up the weights of issuers with better ESG ratings whilst decreasing the weights of those that have lower ratings

In Table 1 we show how these indices³ differ from the parent index in terms of characteristic features when looking at a US focused index product set.

Table 1. Characteristic features of the US corporate ESG indices

	Parent	SRI	Sustainability	ESG Weighted
No. of constituents	6780	5728	4936	6780
No. of issuers	806	752	498	806
ESG rating (score)	A (5.61)	A (5.68)	AA (6.35)	AA (6.14)
Credit rating	A3/Baa1	A3/Baa1	A3/Baa1	A3/Baa1
OAS (bps)	88	85	81	85
YTM (%)	2.22	2.16	2.12	2.16
OAD	8.45	8.23	8.23	8.16

The Sustainability index offers the most material improvement in ESG score (13%) versus the parent index which is also accompanied by a tighter OAS, suggesting that companies with higher ESG scores typically have tighter spreads (something we verify later on in the paper).

The ESG indices have tracked their parent very closely over the past few years with the Sustainability version showing an initial deviation in terms of yield-to-maturity (Chart 1), with a notably lower YTM relative to the parent, which has since progressively closed over time as yields have been driven towards zero globally.

Source: Bloomberg, all data as at 06 April 2021

³ The following indices are used within this study with constituent data taken as of 06 April 2021:

Bloomberg Barclays US Corporate Total Return Value Unhedged USD (LUACTRUU Index)

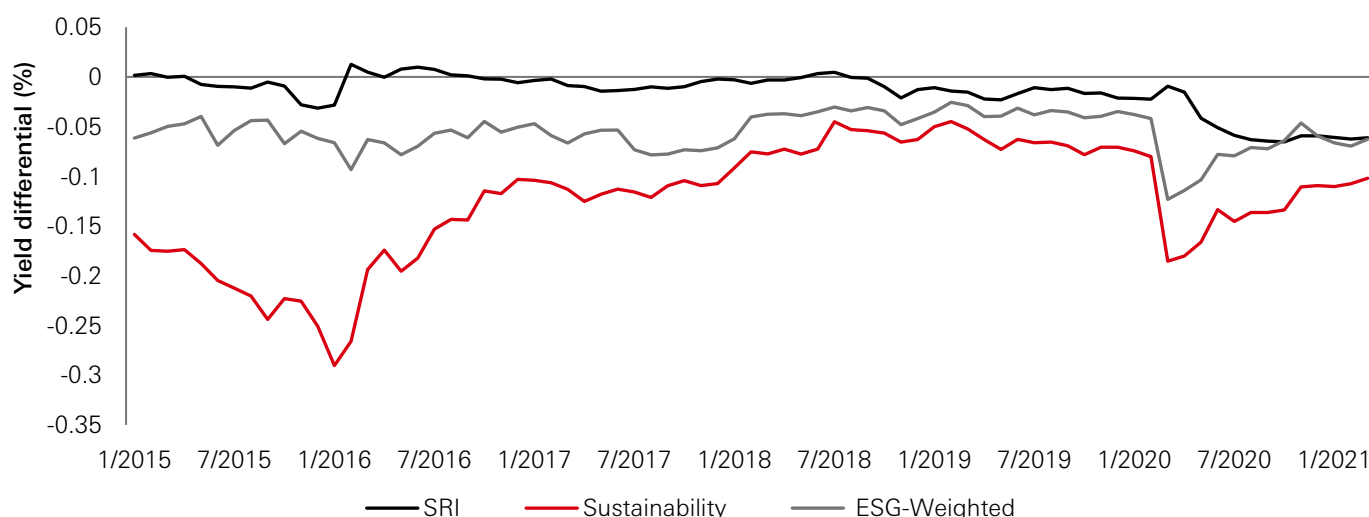
Bloomberg Barclays MSCI US Corporate SRI Total Return Index Value Unhedged USD (RUCMTRUU Index)

Bloomberg Barclays MSCI US Corporate ESG Weighted Total Return Index Value Unhedged USD (UCEWTRUU Index)

Bloomberg Barclays MSCI US Corp Sustainability Total Return Index Unhedged USD (SUCMTRUU Index)

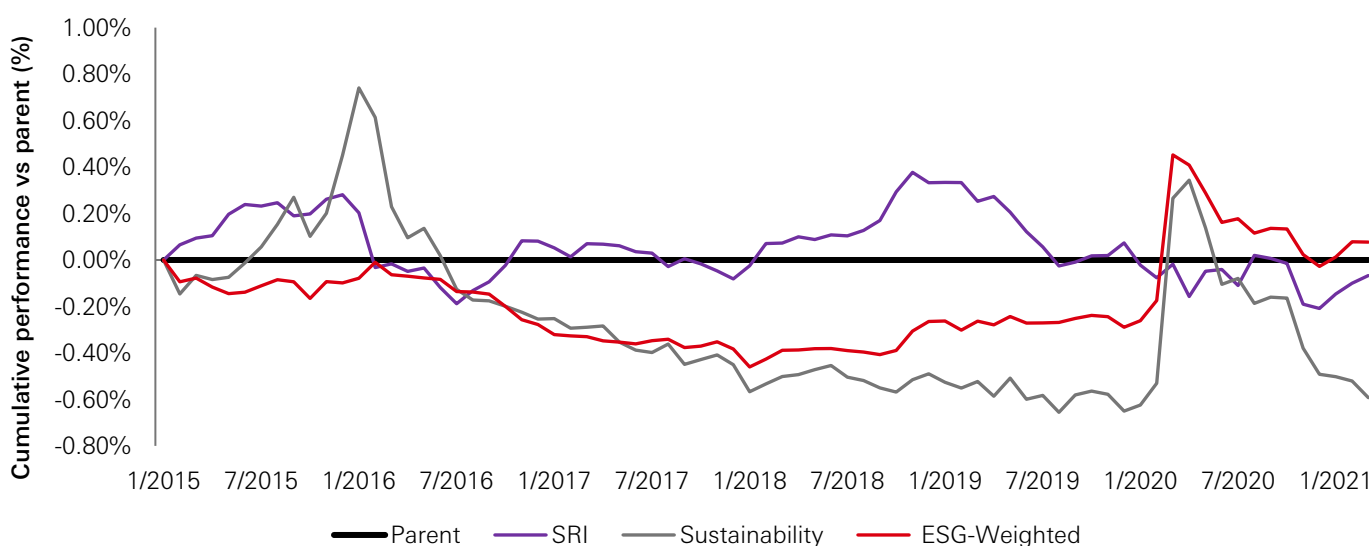
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Chart 1. Yield differential (YTM) of ESG index with respect to parent (a negative number means the ESG index has a lower yield than the parent)



From a total return standpoint, the cumulative total return performance of each of the ESG indices relative to the parent has been very similar over time – typically within 1% of the parent index. We do note that the Sustainability index has shown a little more variability in relative cumulative performance compared to the parent (Chart 2) which would be expected given it excludes many more issuers than the other ESG indices.

Chart 2. Relative cumulative performance of the ESG index product set with respect to the parent index (parent cumulative performance is marked as zero relative to itself)



As such, we shouldn't expect a material performance differential in a forward looking sense between the indices given their similar composition and risk characteristics, however, there are complications.

These indices have only really existed in a post Global Financial Crisis era where the Fed has driven interest rates ever lower and the default cycle has been relatively muted as a result of monetary and fiscal policy action. What happens if interest rates go up triggering a protracted default cycle? Questions such as this can only be tackled by looking at how the various tilts and exclusions change the profile of the parent index when creating the various ESG indices. A thorough assessment of this, and other similar questions, is beyond the scope of this note.

Past performance should not be seen as an indication of future returns.

Source: Bloomberg, all data as at 06 April 2021

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Lifting the lid

We make a number of interesting observations about the three classes of index with respect to their parents before assessing their relative ESG characteristics in the next section.

From a sector standpoint, all three index types show a notable bias towards financials (Table 2) relative to the parent index. The Sustainability and ESG-Weighted variants show a notable underweight to communications. The SRI and Sustainability variants show a positive bias towards technology stocks in contrast to their ESG-Weighted peer which underweights technology relative to the parent. Finally, the SRI variant has a material underweight to the utilities sector.

We believe that the higher average ESG score for financial stocks is responsible for the higher weight towards financials. The underweight to communications is likely a result of the generally lower ESG scores within this sector. Interestingly, the lower weight to utilities in the SRI version is likely a by-product of some utilities companies falling foul of the criteria embedded within the MSCI BISR filter⁴.

Table 2. ESG index sector differentials relative to the parent (ESG index sector weight minus parent sector weight)

Sector	SRI	Sustainability	ESG-Weighted
Basic Materials	-0.15	-0.07	0.15
Communications	1.91	-3.37	-2.00
Consumer, Cyclical	0.21	-1.55	-0.74
Consumer, Non-cyclical	0.04	0.39	-0.45
Energy	0.09	-1.31	-1.25
Financial	2.72	2.38	6.25
Industrial	-1.84	0.33	-0.83
Technology	1.36	1.46	-1.54
Utilities	-4.34	1.74	0.40

From a rating⁵ standpoint (Table 3) we notice a general reallocation of weight away from the Aa part of the parent universe, to the A part, across ESG indices. The most notable reallocation of weight occurs with the Sustainability index, where we notice a shift in weight from the Baa3, Ba1, Aa2 and A3 parts of the credit spectrum to the Baa1, A2 and A1 parts. This results in a better overall credit risk profile of the Sustainability index bringing the overall index rating closer to A3 than its other ESG peers.

Source: Bloomberg, all data as at 06 April 2021

⁴ See Appendix for details of the MSCI BISR filter

⁵ We have chosen Moodys as our preferred rating agency as they appeared to have the broadest coverage of securities listed in the parent index and hence the three ESG indices. We can assume that despite some discrepancies between rating agency ratings, across all securities in the indices, the effects of these discrepancies would be diminished

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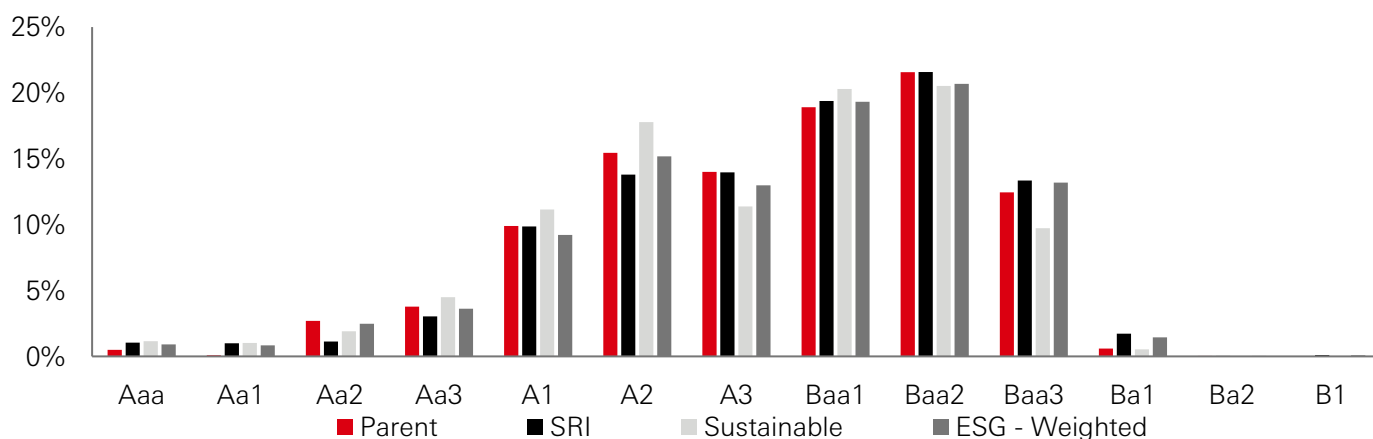
Table 3. Rating cohort weight differential relative to parent (ESG index weight minus parent weight in each rating cohort)

	SRI	Sustainability	ESG-Weighted
Aaa	0.20	0.24	-0.19
Aa1	0.28	0.42	-0.99
Aa2	-1.55	-1.18	-1.06
Aa3	-0.20	0.62	0.50
A1	1.06	2.03	1.05
A2	0.00	3.22	2.14
A3	0.10	-2.03	-0.53
Baa1	-0.63	1.68	0.04
Baa2	0.20	0.38	-0.04
Baa3	0.06	-3.58	0.04
Ba1	0.28	-1.12	-0.68
Ba2	0.01	-0.03	0.00
B1	0.01	-0.04	-0.02

This can be seen in a different way when comparing the weights of each credit rating cohort in a side by side fashion (Chart 3). We see that from an overall credit risk standpoint the Sustainability index has more weight attributed to higher rated securities within the A2 and above rating categories. The other index types (including the parent) attribute a higher weight to the Baa part of the credit spectrum.

Contrary to prior expectations, the ESG-Weighted version does not tilt the overall index convincingly towards higher (credit) rated issuers in terms of weight, which suggests that the index is tilting towards the portion of the parent universe with higher ESG scores but perhaps lower credit ratings. We find that this is the case with the tilts reallocating weight from the Aa1 and Aa2 cohorts of the credit spectrum to the A2 cohort in particular.

Chart 3. Distribution of Moodys credit ratings at the security level



These observations are corroborated by the distribution of market implied credit risk⁶ across the indices (Chart 4) where we see the Sustainability index has far more probability density attributed to lower CDS spreads, also

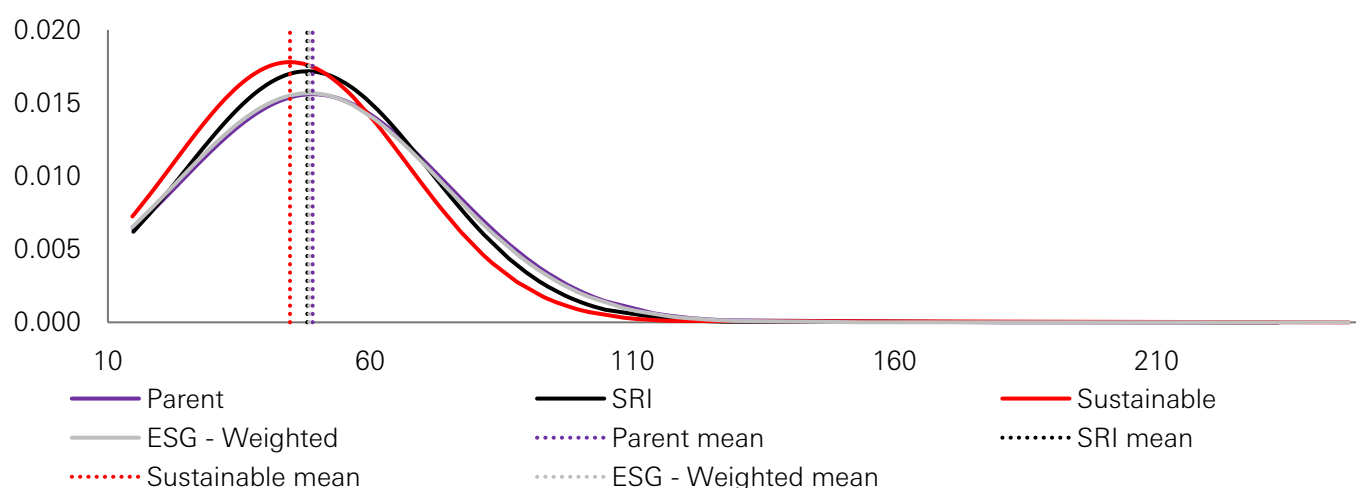
Source: Bloomberg, all data as at 06 April 2021

⁶ Market defined credit risk is a term we use to capture the market's assessment of the credit riskiness of an issuer based upon its 5 year CDS spread

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illustrated by its lower mean CDS spread. The SRI index has a similar probability density profile but the weight attributed to lower spreads is less pronounced.

Chart 4. Distribution of market implied credit risk as captured by the distribution of 5y CDS spreads within each index



Turning to an issuer level comparison of the indices versus the parent (Table 4), we note that the top ten issuers are dominated by financials in all cases with communications, and to a lesser extent technology, also featuring. We also observe that the weight of the bottom half of all issuers (not shown) in terms of total number of issuers is higher in the Sustainability index (9.8%) compared to the SRI index (6.2%) and the ESG Weighted index (6.4%), which implies that the Sustainability index has a higher degree of diversification in the 'long tail' of lower weighted issuers partially offsetting its higher concentration in the top 10.

Table 4. Top ten issuer weights

Parent Top 10	Parent weight (%)	SRI Top 10	SRI weight (%)	Sustainability Top 10	Sustainability weight (%)	ESG-weighted Top 10	ESG-weighted weight (%)
Bank Of America Corp	2.34	Bank Of America Corp	2.76	Bank Of America Corp	3.19	Bank Of America Corp	3.26
JPMorgan Chase & Co	2.19	JPMorgan Chase & Co	2.58	JPMorgan Chase & Co	2.97	Citigroup Inc	3.11
AT&T Inc	1.65	AT&T Inc	1.95	Verizon Communications	2.16	Morgan Stanley	3.06
Verizon Communications	1.59	Verizon Communications	1.87	Citigroup Inc	2.03	JPMorgan Chase & Co	3.04
Citigroup Inc	1.49	Citigroup Inc	1.76	Morgan Stanley	1.99	Wells Fargo & Company	1.62
Morgan Stanley	1.46	Apple Inc	1.68	Goldman Sachs Group Inc	1.98	Walt Disney Company/The	1.16
Goldman Sachs Group Inc	1.46	Oracle Corp	1.46	Apple Inc	1.94	Verizon Communications	1.11
Wells Fargo & Company	1.46	AbbVie Inc	1.22	Oracle Corp	1.69	AbbVie Inc	1.08
Apple Inc	1.42	HSBC Holdings Plc	1.06	AbbVie Inc	1.41	Barclays Plc	1.02
Comcast Corp	1.29	CVS Health Corp	1.03	HSBC Holdings Plc	1.23	Goldman Sachs Group Inc	1.02
Total	16.35	Total	17.37	Total	20.58	Total	19.48

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Source: Bloomberg, all data as at 06 April 2021

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Opportunity costs

In this section we outline the characteristics of the issuers that are excluded from the SRI and Sustainability indices with a view to understanding what the investor may be missing out on, either positive or negative.

We start by examining the SRI index, where around 15% of the parent index is excluded (Table 5), with utilities being the largest sector exclusion, likely due to those companies being involved in areas such as coal, nuclear power and defence and hence not making it through the MSCI BISR filter. However, we note that in terms of the overall sector exclusions, the weights of the defensive exclusions (utilities, consumer non-cyclical, energy) are roughly balanced by a similar order of magnitude reduction in cyclical sector exposures (industrials, financials, consumer cyclical, basic materials) maintaining the cyclical to defensive profile of the index.

Table 5. Sector exclusions in the SRI index (% of parent)

Sector	Weight in parent (%)
Utilities	4.94
Industrial	2.81
Consumer, Non-cyclical	2.74
Financial	2.29
Energy	1.14
Consumer, Cyclical	0.75
Basic Materials	0.52
Technology	0.04

From a credit risk standpoint, half of the total weight of the exclusions in the SRI index are Aa and A issuers and the other half Baa issuers, with minimal net impact on the overall credit rating of the index (Table 6). Also, recall from the previous section (Table 4) that the SRI index has less overall issuer concentration within the top 10 issuers compared to the other ESG indices. In this respect, from an issuer concentration standpoint, and despite the exclusions mentioned, we do not believe the SRI index has a materially riskier credit risk profile than the parent from which it was derived given its similar top 10 issuer concentration risk.

Table 6. Rating exclusions in the SRI index (% of parent)

Rating	Weight in parent (%)
Aaa	0.06
Aa2	1.82
Aa3	0.61
A1	0.48
A2	2.67
A3	1.82
Baa1	3.19
Baa2	2.81
Baa3	1.72

Source: Bloomberg, all data as at 06 April 2021

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Turning to the Sustainability index, the exclusions eliminate about 26% of the original parent portfolio (Table 7) with the largest exclusions being from the financial, communications, consumer non-cyclical and energy sectors. We note that the exclusions are skewed towards more cyclical sectors in that respect, possibly increasing the defensive nature of the index.

Table 7. Sector exclusions in the Sustainability index (% of parent)

Sector	Weight in parent (%)
Financial	6.25
Communications	5.28
Consumer, Non-cyclical	4.54
Energy	3.08
Consumer, Cyclical	2.76
Industrial	1.94
Technology	1.00
Utilities	0.91
Basic Materials	0.74

From a credit risk standpoint, the bulk of the overall exclusions are concentrated within the Baa part of the credit spectrum (Table 8) which we believe improves the overall credit risk profile of the index, hence why it has a tighter spread. However, we note that the Sustainability index has the greatest (if only marginally) concentration risk in terms of top 10 issuers (Table 4 in the previous section), hence the better overall credit profile of the index masks some additional issuer level risk.

Table 8. Rating exclusions in the Sustainability index (% of parent)

Rating	Weight in parent (%)
Aaa	0.22
Aa1	0.10
Aa2	1.74
Aa3	0.32
A1	0.90
A2	2.28
A3	4.80
Baa1	3.40
Baa2	4.91
Baa3	5.72
Ba1	1.24
Ba2	0.03
B1	0.04

Source: Bloomberg, all data as at 06 April 2021

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Finally, from a tilting perspective, the ESG-Weighted version of the index sees a very large increase in exposure to the financials sector (Table 9) mainly at the expense of the communications, technology and energy sectors.

Table 9. Sector tilts in the ESG-Weighted index

Sector	Weight in parent (%)	Weight in index (%)	Difference
Financial	30.18	36.43	6.25
Utilities	8.25	8.64	0.40
Basic Materials	2.60	2.75	0.15
Consumer, Non-cyclical	18.22	17.77	-0.45
Consumer, Cyclical	6.12	5.38	-0.74
Industrial	8.22	7.39	-0.83
Energy	7.99	6.73	-1.25
Technology	7.83	6.29	-1.54
Communications	10.60	8.61	-2.00

From a credit risk standpoint the tilting process shifts credit risk exposure away from the Aa1 and Aa2 segments to the lower rated A1 and A2 segments (Table 10) but not in a material enough way to make a significant difference to the overall credit risk profile of the index as the ESG-Weighted version of the index retains its Baa1/A3 rating.

Table 10. Rating tilts in the ESG-Weighted index

Rating	Weight in parent (%)	Weight in index (%)	Difference
Aaa	1.50	1.31	-0.19
Aa1	1.55	0.56	-0.99
Aa2	3.31	2.25	-1.06
Aa3	2.92	3.42	0.50
A1	9.04	10.08	1.05
A2	17.53	19.66	2.14
A3	12.50	11.97	-0.53
Baa1	17.49	17.53	0.04
Baa2	19.56	19.52	-0.04
Baa3	11.66	11.71	0.04
Ba1	1.58	0.90	-0.68
Ba2	0.03	0.04	0.00
B1	0.04	0.02	-0.02

ESG profiling

In this section we explore the ESG credentials of the three indices by looking at how ESG scores relate to the credit risk and duration profiles of the indices at the issuer level.

We start by observing that ***there is a defined relationship between market implied credit risk⁷ and the ESG score of an issuer*** identifiable, to differing degrees, across all indices in our study (Charts 5 to 8.). Generally speaking, the lower the ESG rating of the issuer, the wider its CDS spread. This is an important observation when thinking about benchmark selection. Assuming this relationship continues to hold, it suggests that there will be a material benefit from a credit risk standpoint to switching to an ESG benchmark. In turn, this will incentivise issuers to improve their ESG profile to ensure they receive funding on preferable terms.

Chart 5. Relationship between market implied credit risk and ESG score for the parent index

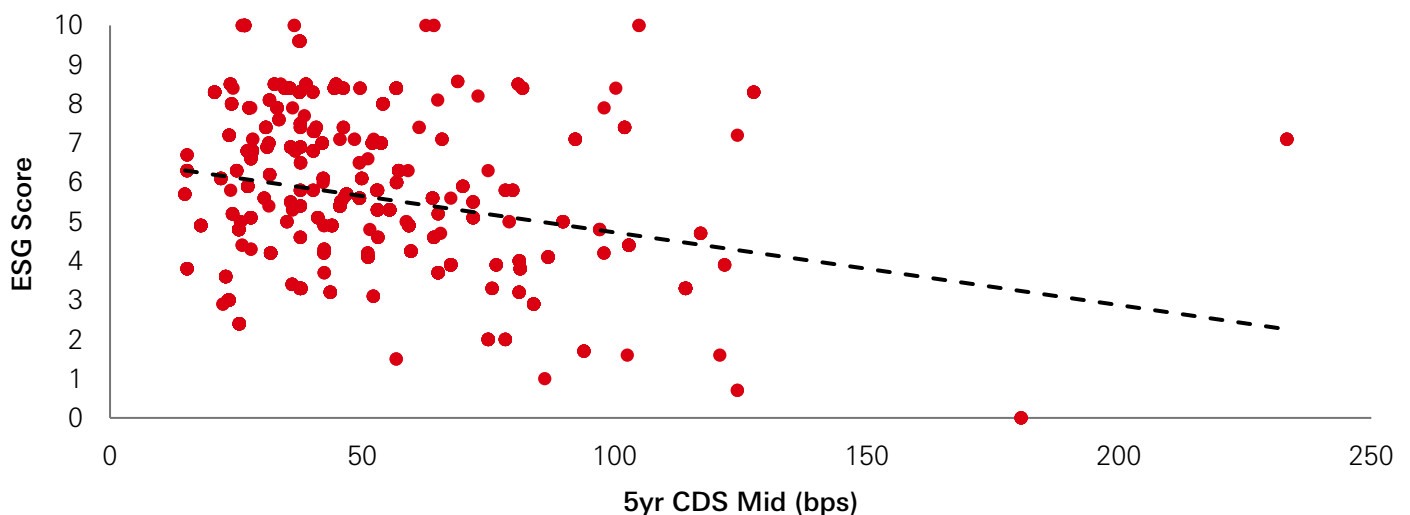
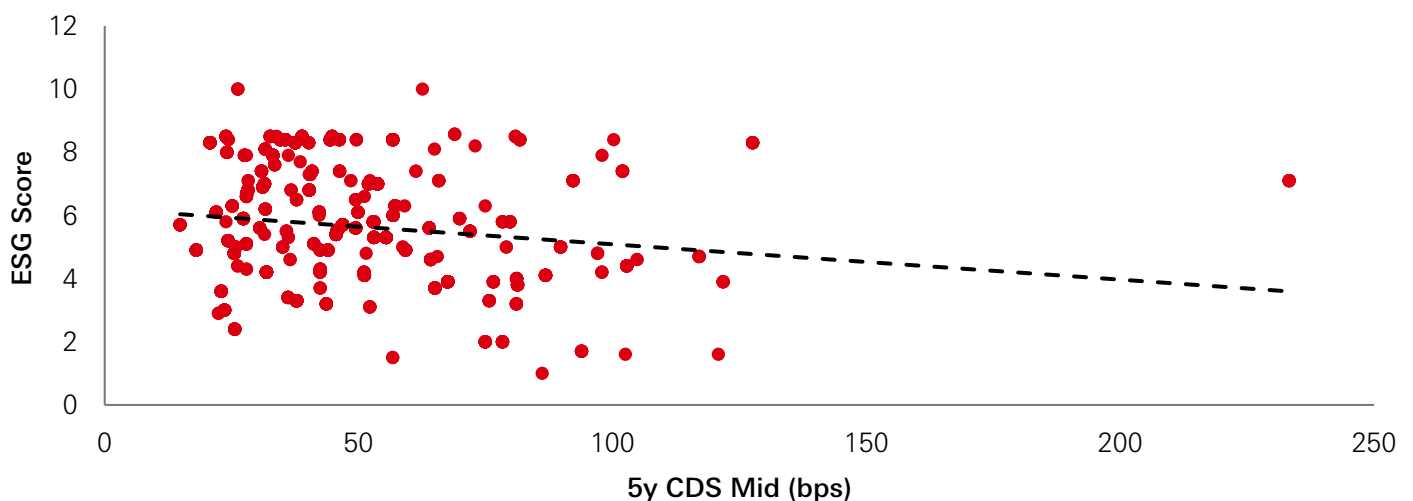


Chart 6. Relationship between market implied credit risk and ESG score for the SRI index



Source: Bloomberg, all data as at 06 April 2021

⁷ Market defined credit risk is a term we use to capture the market's assessment of the credit riskiness of an issuer based upon its 5 year CDS spread

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Chart 7. Relationship between market implied credit risk and ESG score for the Sustainability index

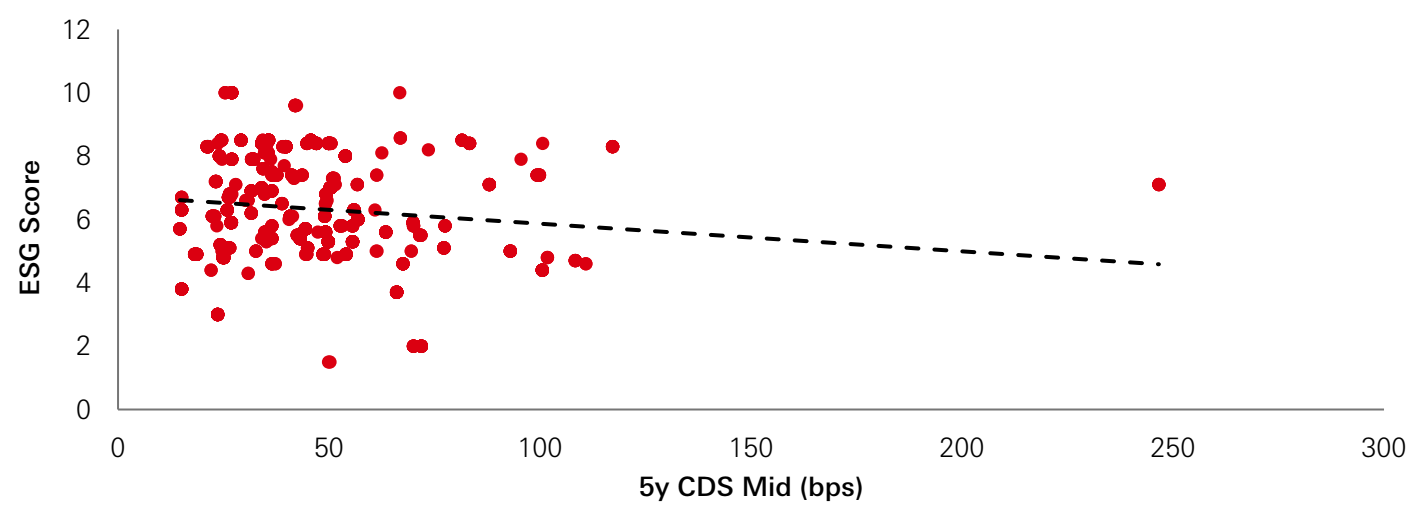
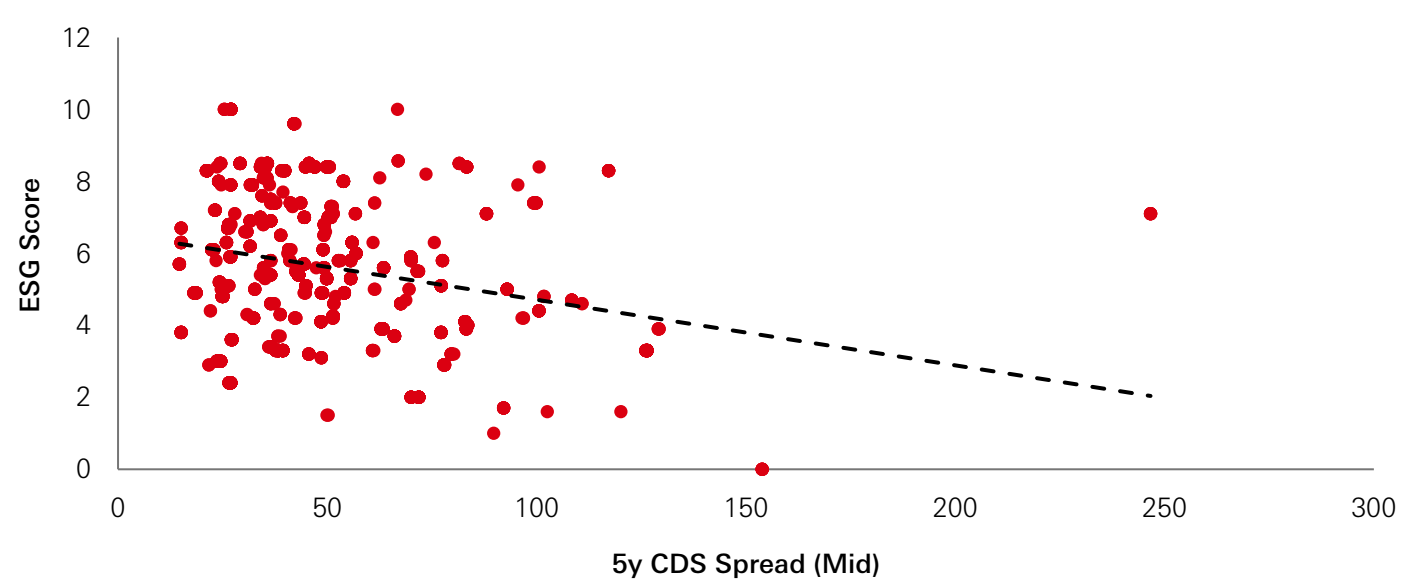


Chart 8. Relationship between market implied credit risk and ESG score for the ESG-Weighted index



When looking at the distribution of ESG scores by credit rating from the credit rating agency standpoint, we note that both the parent and the ESG-Weighted indices, which both retain the full range of issuers, have varied mean ESG scores by rating bucket (Charts 9 and 10). We were surprised to observe that the average ESG scores were worse for the higher rated part of the Aa spectrum in both instances, though this is likely to be a function of the smaller sample size in these rating cohorts. However, for the A cohort of the credit spectrum and below, the average ESG score by rating cohort trends lower as we move down the ratings spectrum in line with the relationship observed when analysing CDS spreads.

Chart 9. Parent index distribution of ESG scores across ratings⁸

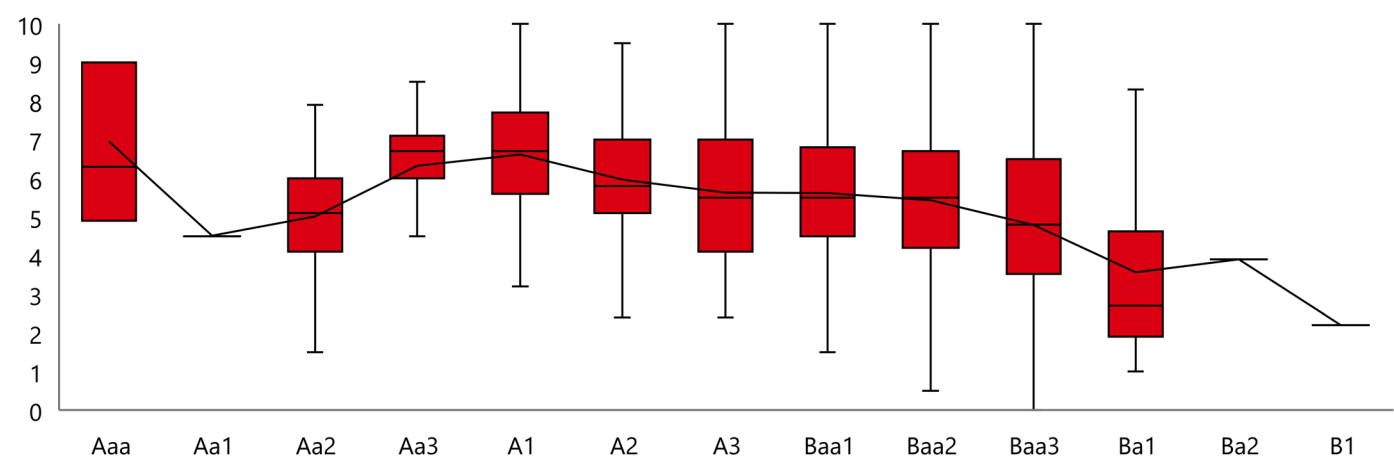
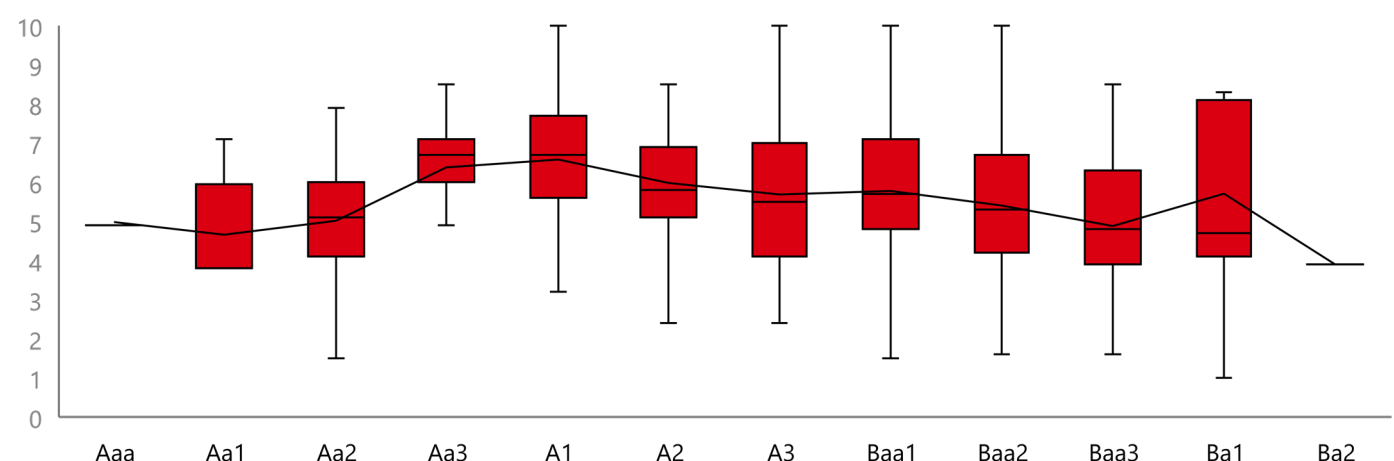


Chart 10. ESG-Weighted index distribution of ESG scores across ratings buckets



The picture is different when looking at the SRI and Sustainability indices. There is far less variability in the mean ESG scores by credit rating bucket in the SRI index (Chart 11) but still less so with the Sustainability index (Chart 12). The Sustainability index has a consistent mean ESG rating across credit rating cohorts given the tail of lower rated ESG issuers have been excluded from the index.

Source: Bloomberg, all data as at 06 April 2021
⁸ The line that runs across the boxes in the box and whisker plot connects the mean values within each box. The small lines within each box represent the median

Chart 11. SRI index distribution of ESG scores across ratings buckets

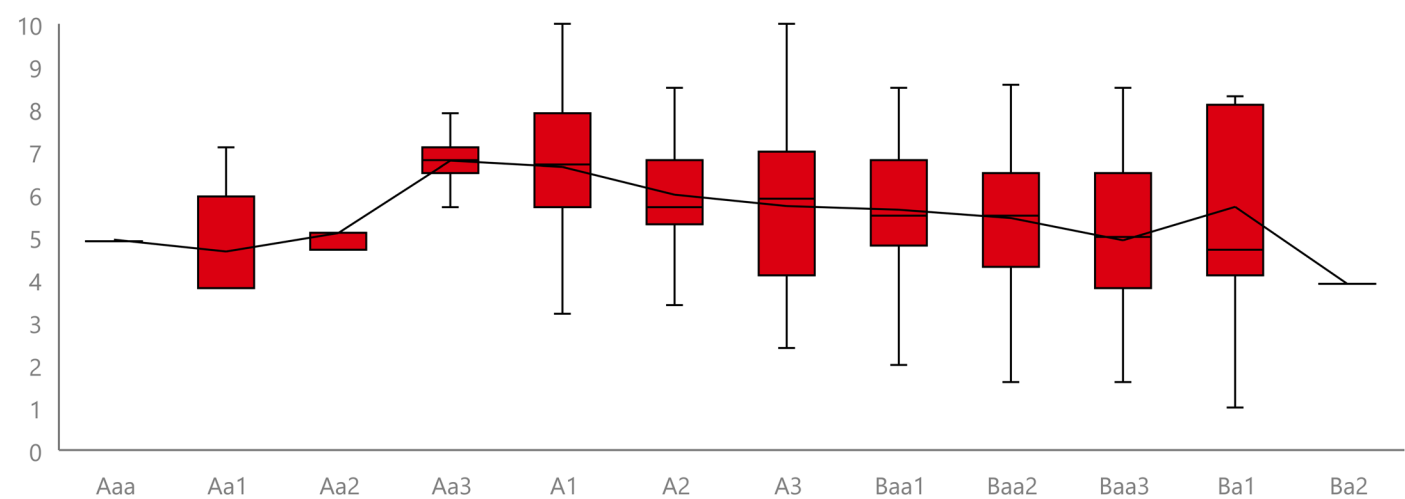
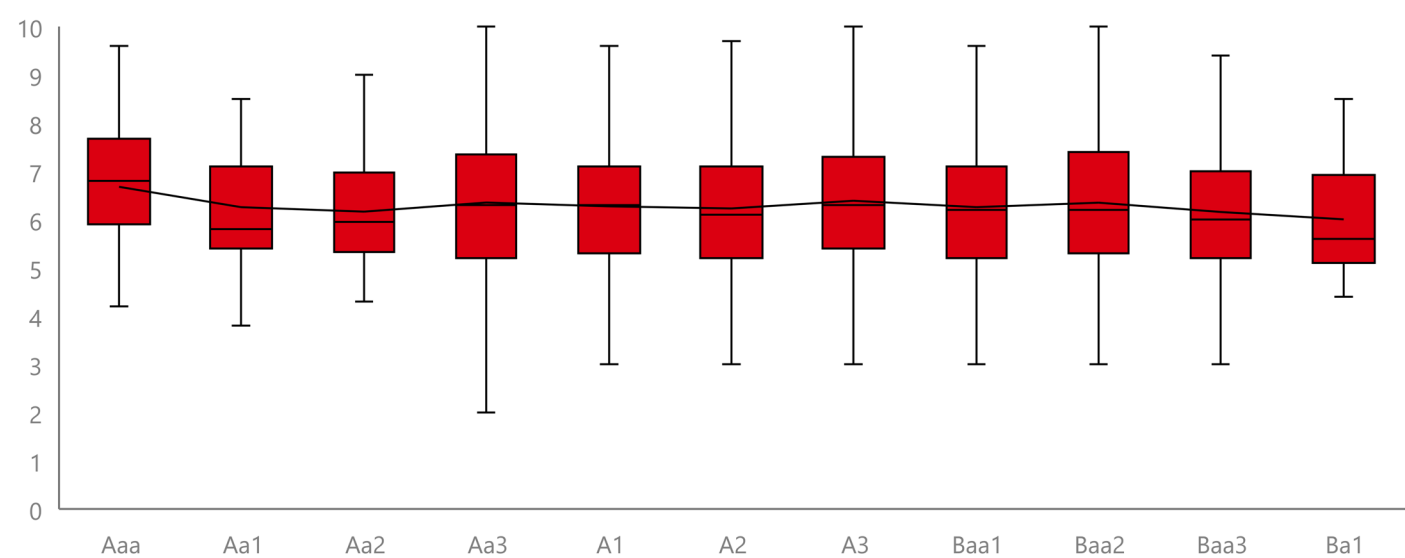


Chart 12. Sustainability index distribution of ESG scores across ratings buckets



All in all, we see that there is a relationship between ESG score and credit rating – most notably when looking at the market assessment of credit risks. However, of the ESG index family, the Sustainability index has the most stable ESG rating profile across credit risk cohorts.

Finally, we note that the mean ESG scores across duration buckets are very stable across all index types (Charts 13 to 16), which suggests that ESG scores are uniformly distributed within duration buckets. This is unsurprising given an investment grade credit curve will typically range from short to long duration and hence each issuer will likely feature in each duration bucket.

Source: Bloomberg, all data as at 06 April 2021

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Chart 13. Parent index distribution of ESG scores across duration buckets

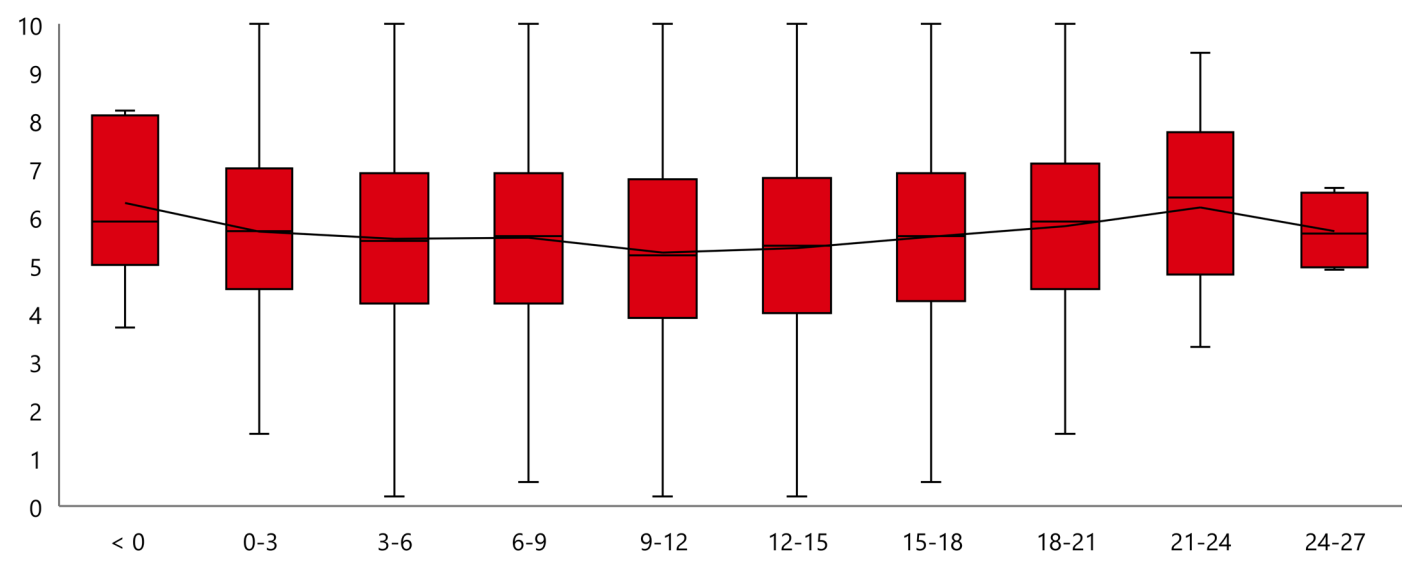


Chart 14. SRI index distribution of ESG scores across duration buckets

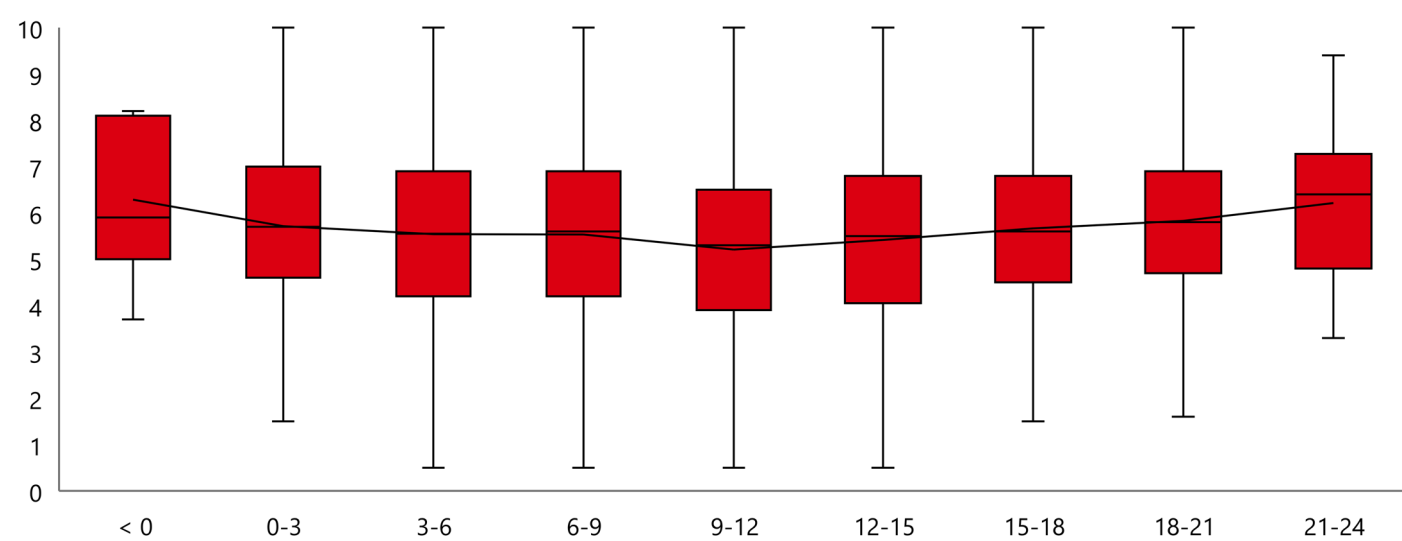


Chart 15. Sustainability index distribution of ESG scores across duration buckets

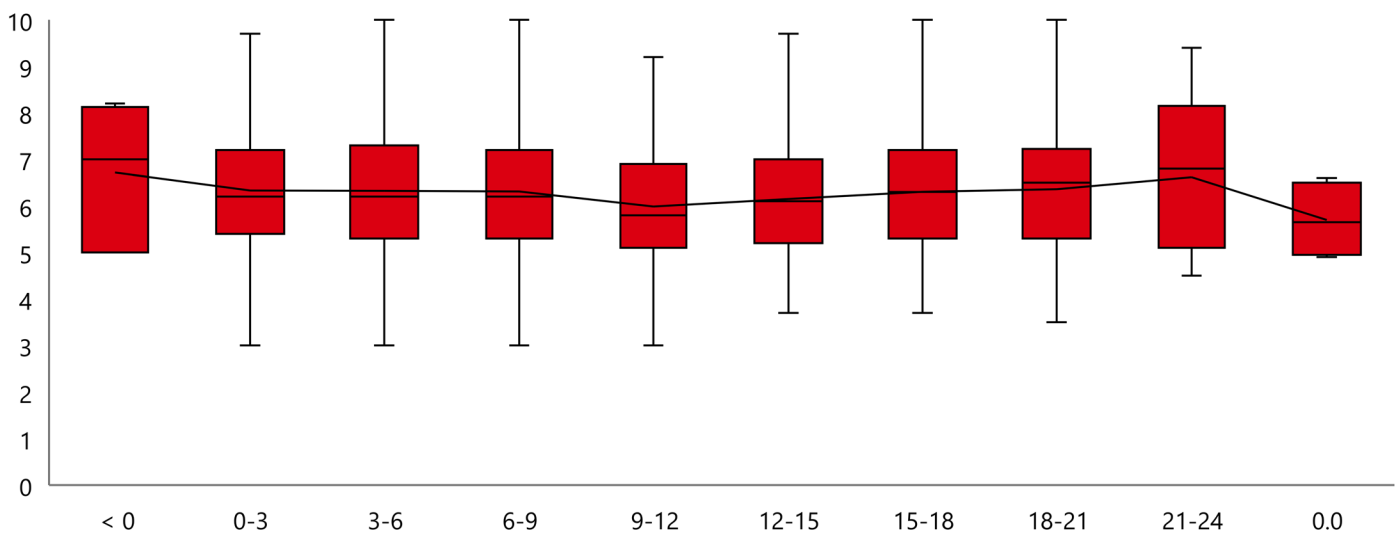
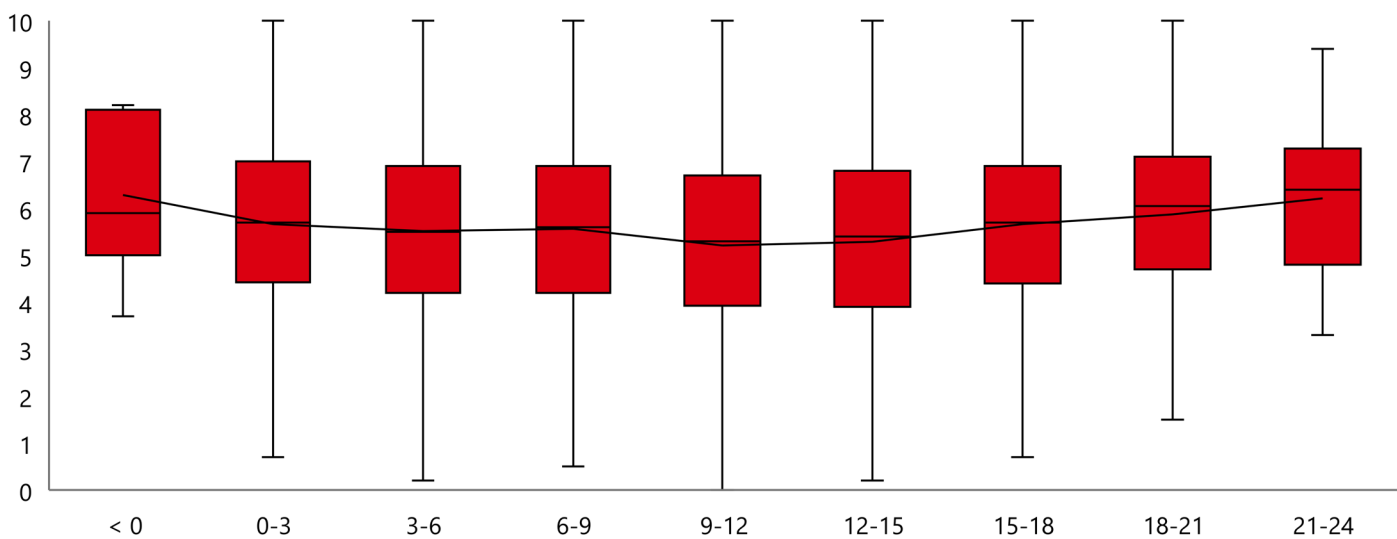


Chart 16. ESG-Weighted index distribution of ESG scores across ratings buckets



Source: Bloomberg, all data as at 06 April 2021

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Conclusion

We highlight the following observations for the three main classes of sustainable fixed income benchmarks (SRI, Sustainability and ESG-Weighted):

- ◆ There are limited differences between the indices, as expected, in terms of credit risk and duration with the only exception being the Sustainability index
- ◆ We note a negative correlation between ESG score and credit risk
- ◆ The Sustainability index has a greater defensive sector concentration
- ◆ Similar issuers in terms of credit risk, duration and sector can have very different ESG scores (especially since MSCI normalises ESG scores within sectors), therefore it is very possible for investors to reward more sustainable companies, through lower cost of debt funding, without needing to compromise on either return, duration or credit risk
- ◆ As a corollary to the last point, there could in fact be small reductions in credit risk through selecting issuers with higher ESG scores

Overall, investors tracking these benchmarks should be aware of the fact that use of an SRI index as a benchmark, whilst marginally improving the ESG characteristics of the portfolio, has more of a symbolic impact by removing a source of funding for companies that operate in controversial industries by excluding them from the index than it does a tangible impact on metrics such as the performance or credit risk characteristics of the index.

The Sustainability index, on the other hand, whilst benefitting less from this symbolic impact, takes a hard-nosed approach to companies with lower ESG ratings cutting off their source of funding. Naturally, this leads to a larger improvement in the overall ESG profile of the index as a whole.

Finally, whilst an ESG-Weighted approach doesn't have the benefit of the symbolic impact either, and the ESG improvement of the index is less pronounced given lower ESG rated issuers are still included in the portfolio, it at least gives issuers the chance to improve their ESG rating and hence their cost of debt capital without the risk of seeing a larger and more immediate impact on their cost of debt funding through exclusion in certain benchmarks.

The trade-off is really between incentives and improvement in the ESG profile of the index, and given the tangible link, the credit risk profile of the index.

Appendix

MSCI ESG Business Involvement Screening Research Exclusions

In order to ensure that benchmarks and portfolios comply with client ESG and divestment mandates, MSCI ESG Business Involvement Screening Research identifies companies and issuers involved in certain controversial business activities and industries, including those relating to:

- ◆ Religious and ethical criteria
- ◆ ESG controversies
- ◆ Breaches of international conventions
- ◆ Compliance with ESG guidelines
- ◆ Global sanctions
- ◆ Production of controversial weapons and munitions

Research process overview:

Initial Review

The majority of screened involvements include coverage of global equity issuers, with additional fixed income coverage for selected bond-issuing subsidiaries, corporate bond issuers and government-owned entities operating as corporations.

Further Research

Where potential involvements are identified, a more detailed review of all company filings and third-party sources is carried out to determine whether the company is in fact associated with one of the covered activities or industries, and provide a calculation, or estimate, of percentage revenues derived from such activities. These issuers are then excluded from their respective benchmarks or portfolios based on predefined revenue generation thresholds. MSCI are quick to note that these screens do not constitute an exhaustive list of companies without involvement, but simply flag companies for whom involvement has been confirmed.

Monitoring and Updating

All issuers are reviewed at least once per year when updated information is released during annual reporting cycles. Additional reviews can take place where necessary upon the completion of any corporate actions. At these stages, companies are invited to review their respective MSCI assessments and provide comments and clarifications. Issuers are removed from the screen if research conclusively determines that the company no longer takes part in the covered activities, or if 3 years have passed without evidence of continued involvement.

In practice, the exclusion list restricts issuers who have a significant involvement with the following:



Core weapons systems, or components/services that are considered tailor-made and essential for **banned and controversial weapons**.



Over 10% of revenue from the provision of essential or tailor-made products, services, components for conventional **military weapons**.



Revenue from **thermal coal extraction** over 10%, revenue from thermal coal electricity generation over 10%.



Manufacturing and any involvement of tobacco products, or revenue from retail of **tobacco products**.



Revenue from adult entertainment production over 10%, or revenue from **adult entertainment** distribution exceeds 5%.



Revenue exceeding 5% from manufacturing, distributing, retailing, licensing, and supplying **alcoholic products**.



Electricity generation from **nuclear power**, over 25% of generating capacity.



Revenue from **gambling operations** over 5%, or revenue from provision of specialised gambling equipment exceeds 10% or revenue from gambling products and services exceeds 10%



Considered to have breached one or more of the **United Nations Global Compact** principles.

Many of the above-mentioned threshold criteria for these screens will be adjusted gradually until 2025 to reflect the phased adoption of stricter policies. In many such cases, revenue generation thresholds will be reduced to 0%.

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