

US Corporate Bond Indices: A Comparison

SPDR EMEA Strategy and Research

- As the importance of ESG in fixed income grows, it also becomes important to understand the characteristics of different bond indices, given the benchmark for a portfolio becomes the basis of an investor's beta.
- Many US corporate bond ETFs and index funds in Europe track different indices. In this paper, we compare the Bloomberg SASB US Corporate ESG Ex-Controversies Select Index, an innovative best-in-class ESG index launched in 2020, and the Markit iBoxx USD Liquid Investment Grade Index.

Inclusion Criteria

Rules for inclusion differ between the indices, although the Bloomberg SASB indices are based on the Bloomberg Barclays parent index. The main difference with the Markit iBoxx family is the bond issuance size required for inclusion into each index as well as the weighting mechanism, exclusion and optimisation for the ESG index.*

The iBoxx index also has a higher minimum maturity compared with more traditional indices (with a minimum of 36 months of remaining maturity versus 12 months for the Bloomberg indices). The iBoxx index also has a higher minimum outstanding amount requirement at \$750 million versus \$300 million for the Bloomberg indices.

Index Comparison Summary

	Bloomberg SASB® US Corporate ESG Ex-Controversies Select Index	Markit iBoxx USD Liquid Investment Grade Index
Minimum outstanding amount	\$300 million par	\$750 million par and issuer minimum total debt of \$2 billion
Rating	Investment Grade (from S&P, Moody's and/or Fitch)	Investment Grade (from S&P, Moody's and/or Fitch)
Maturity	At least 1 year of remaining maturity at rebalancing	At least 3 years of remaining maturity (and 3.5 years for new issues) at rebalancing
Index rebalancing	Last business day of each month	Last business day of each month
ESG	Exclusion and Best In Class based on State Street Global Advisors R-Factor™ score	N/A

Source: State Street Global Advisors, Bloomberg SASB Index factsheet, as of 3 November 2020 and Markit iBoxx index guide as of 30 September 2020.

* For more information on the ESG inclusion in the index construction, please read our [fund brochure](#).

Figure 1
Summary of Index Rules

	Bloomberg SASB® US Corporate ESG Ex-Controversies Select Index	Markit iBoxx USD Liquid Investment Grade Index
Minimum amount outstanding	\$300 million minimum par amount outstanding.	The outstanding face value of a bond must be greater than or equal to \$750 million as of the bond selection cut-off date. The outstanding face value of all bonds denominated in USD from the issuer in the broader Markit iBoxx USD Investment Grade Corporate Index (excluding fixed-to-floater and perpetual bonds) must be greater than or equal to \$2 billion as of the bond selection cut-off date.
Rating	<p>Securities must be rated investment grade (Baa3/BBB-/BBB- or higher) using the middle rating of Moody's, S&P and Fitch; when ratings from only two agencies are available, the lower is used; when only one agency rates a bond, that rating is used. In cases where explicit bond-level ratings are not available, other sources may be used to classify securities by credit quality:</p> <ul style="list-style-type: none"> Expected ratings at issuance may be used to ensure timely index inclusion or to properly classify split-rated issuers. Unrated securities may use an issuer rating for index classification purposes if available. Unrated subordinated securities are included if a subordinated issuer rating is available. 	<p>All bonds in the Markit iBoxx USD Liquid Investment Grade Index must have an iBoxx Rating of investment grade. Ratings from the following three credit rating agencies are considered for the calculation of the iBoxx Rating:</p> <ul style="list-style-type: none"> Fitch Ratings Moody's Investor Service S&P Global Ratings <p>Investment grade is defined as BBB- or higher from Fitch Ratings and S&P Global Ratings and Baa3 or higher from Moody's Investor Service. If a bond is rated by more than one of the above agencies, then the iBoxx rating is the average of the provided ratings. The rating is consolidated to the nearest rating grade. Rating notches are not used.</p>
Maturity	<p>At least one year until final maturity, regardless of optionality.</p> <p>Bonds that convert from fixed to floating rate, including fixed-to-float perpetual, will exit the index one year prior to conversion to floating-rate. Fixed-rate perpetual bonds are not included.</p>	<p>All bonds must have at the rebalancing day an expected remaining life:</p> <ul style="list-style-type: none"> of at least three years, and all new insertions must have an expected remaining life of at least three years and 6 months. <p>The expected remaining life is expressed in years and calculated as follows:</p> <ul style="list-style-type: none"> For plain vanilla bonds, the expected remaining life of the bond is its time to maturity, calculated as the number of days between the last calendar day of the current month and its maturity. For dated and undated callable hybrid capital bonds, the first call date is always assumed to be the expected redemption date. The expected remaining life is calculated as the number of days between the last calendar day of the month and the expected redemption date. For soft bullets, the expected remaining life of the bond is its time to the expected maturity and not to its final maturity date.
Index Rebalancing	Last business day of each month calendar month	The index is rebalanced monthly on the last business day of the month. Any inclusion after the index cut-off day (t-3) will not be considered in the rebalancing process, but will become effective at the end of the following month. New bonds issued are taken into account if they are publicly known to settle until the last calendar day of the month, inclusive, and if their rating and amount outstanding has become known at least three trading days before the end of the month.
Exclusions	<p>Contingent capital securities, including traditional CoCos and contingent write-down securities with explicit capital ratio or solvency/balance sheet-based triggers</p> <p>Bonds with equity type features (e.g., warrants, convertibles, preferreds, DRD/QDI-eligible issues)</p> <p>Inflation-linked bonds, floating-rate issues</p> <p>Fixed-rate perpetuals</p> <p>Taxable and tax-exempt municipal securities</p> <p>Private placements, retail bonds</p> <p>\$25/\$50 par bonds</p> <p>Structured notes, pass-through certificates</p> <p>Illiquid securities with no available internal or third-party pricing source</p>	<p>Preferred shares</p> <p>Optionally and mandatory convertible bonds</p> <p>Subordinated bank or insurance debt with mandatory contingent conversion features or with any conversion options before the first call date is ineligible for the index</p> <p>Bonds with other equity features attached (e.g., options/warrants)</p> <p>Perpetual bonds</p> <p>Fixed-to-floater bonds (except Senior fixed-to-float bonds issued by banks with a call option up to 25 months prior to maturity)</p> <p>Floating rate notes</p> <p>Pay-in-kind bonds (during the pay-in-kind period)</p> <p>Zero coupon bonds</p> <p>Zero step-ups (GAINS)</p> <p>Bonds with differences between accrual and coupon payment periods and monthly-paying bonds</p> <p>Private placements</p> <p>Retail bonds</p>

Source: State Street Global Advisors, Bloomberg SASB Index factsheet, as of 3 November 2020 and Markit iBoxx index guide as of 30 September 2020.

Characteristics

The main difference between the two indices in terms of inclusion criteria is the minimum issue size. The Bloomberg SASB index has a minimum issue size of \$300 million versus Markit iBoxx with \$750 million. This difference results in the Bloomberg SASB index having a broader universe of bonds. In terms of characteristics the Bloomberg SASB US Corporate ESG Select EX-Controversies Index and the Markit iBoxx USD Liquid Investment Grade Index differ principally due to the maturity rules that lead to increased duration and thus duration spread.

Figure 2

Comparison of Index Characteristics

	Bloomberg SASB® US Corporate ESG Ex-Controversies Select Index	Markit iBoxx USD Liquid Investment Grade Index
Market Value (\$M)	1,265,677	3,885,441
# Issues	3170	2350
Yield to Worst	1.86	2.06
OAD	8.74	9.83
OAS	96	105
OAC	1.41	1.64
Maturity	12.28	13.80
DTS (Duration Times Spread)	10.68	12.33
Coupon Par Weighted	4.17	3.91
Index Rating	A3/BAA1	A3/BAA1
R-Factor™ Score	74.2	64.4

Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 1 February 2021. Characteristics are as of the date indicated and should not be relied upon as current thereafter. R-Factor™ data coverage is 98.8% for the Markit iBoxx USD Liquid Investment Grade Index. The score has been re-weighted on a 100 base in order to be comparable with that of the Bloomberg SASB U.S. Corporate ESG Ex-Controversies Select Index.

Sector Breakdown

In terms of sector breakdown, both indices are broadly similar at the sector level BCLASS2, as the Bloomberg SASB index seeks to align with its parent index. At the industry level, the differences are more meaningful given the ESG focus that the Bloomberg SASB index aims to improve the ESG score based on a responsibility factor developed by State Street Global Advisors. The most notable differences are in REITS and Technology, which are higher scoring sectors from an ESG standpoint.

The “liquidity” and maturity biases of the iBoxx index can create some sector deviations versus the broad US corporate universe, in particular in the electric utility industry, where minimum issuer and issue size create a lower weight versus the traditional index, which typically stands around 7%.

Figure 3
**Comparison of Index
 Sector Distribution**

	Bloomberg SASB® US Corporate ESG Ex-Controversies Select Index	Markit iBoxx USD Liquid Investment Grade Index
Financial Institutions	30.04	30.25
Banking	21.14	24.04
Brokerage /AM /Exchanges	0.60	0.83
Finance Companies	0.36	0.94
Insurance	2.19	3.49
REITS	5.75	0.96
Other Financial	—	—
Industrial	63.67	66.32
Basic Industry	4.01	1.88
Capital Goods	4.02	4.67
Consumer Cyclical	5.65	6.77
Consumer Non-Cyclical	19.13	18.60
Energy	5.48	8.67
Technology	15.22	11.94
Transportation	0.38	1.47
Communications	9.51	12.33
Industrial Other	0.28	—
Utility	6.30	3.10
Electric	5.17	2.69
Natural Gas	0.76	0.36
Other Utility	0.37	0.05
Non-Corporate	—	0.32
Foreign Agency	—	0.32

Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 1 February 2021. Characteristics are as of the date indicated and should not be relied upon as current thereafter.

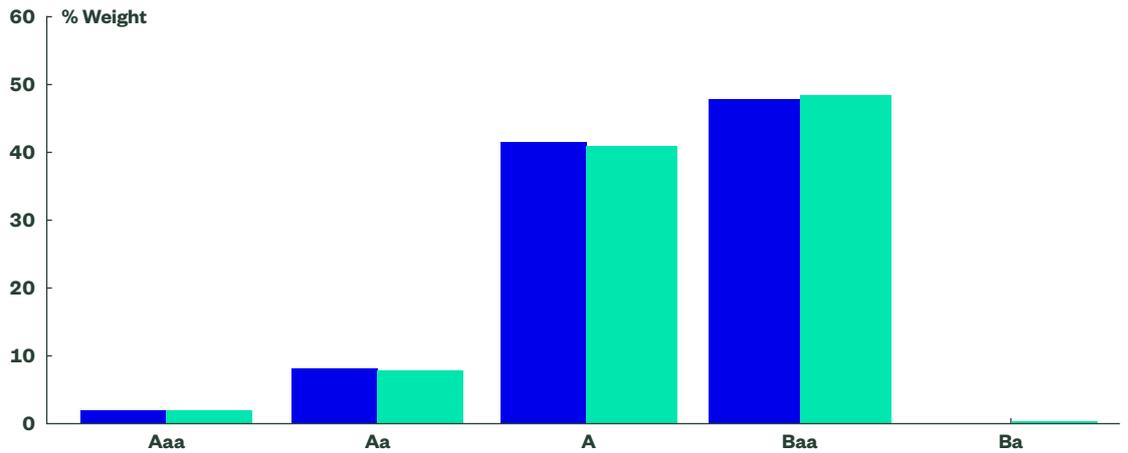
Rating Breakdown

From a credit rating perspective, both indices are relatively close as the Bloomberg SASB index has embedded controls to remain in line with its parent index, and thus in line with the broad universe.

Figure 4

Credit Rating Breakdown

- Bloomberg SASB US Corporate ESG Ex-Controversies Select Index
- iBoxx USD Liquid Investment Grade Index



Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 1 February 2021.

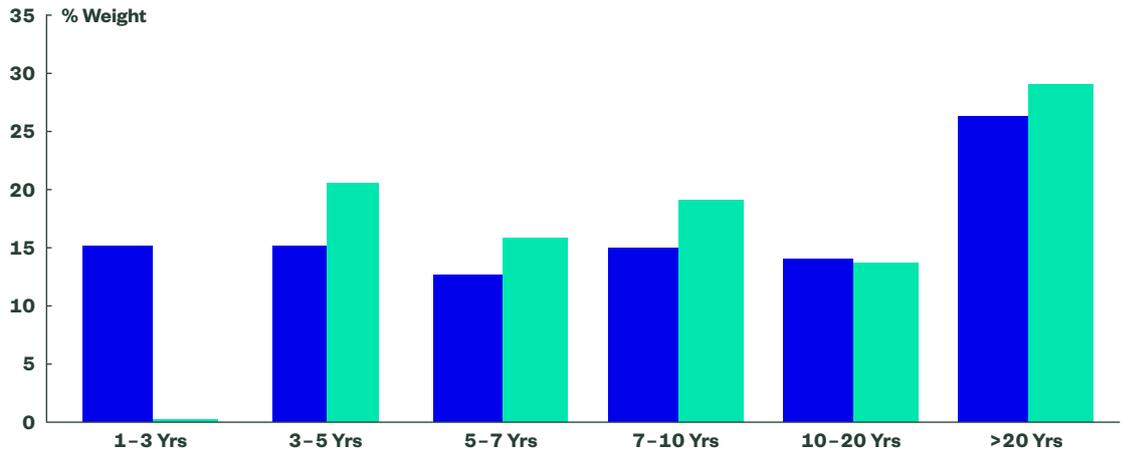
Maturity Breakdown

The overall maturity distribution between the two indices diverges given the different maturity rules. The iBoxx index has a higher weight in the belly of the curve as well as in the longer end.

Figure 5

Index Maturity Breakdown

- Bloomberg SASB US Corporate ESG Ex-Controversies Select Index
- iBoxx USD Liquid Investment Grade Index

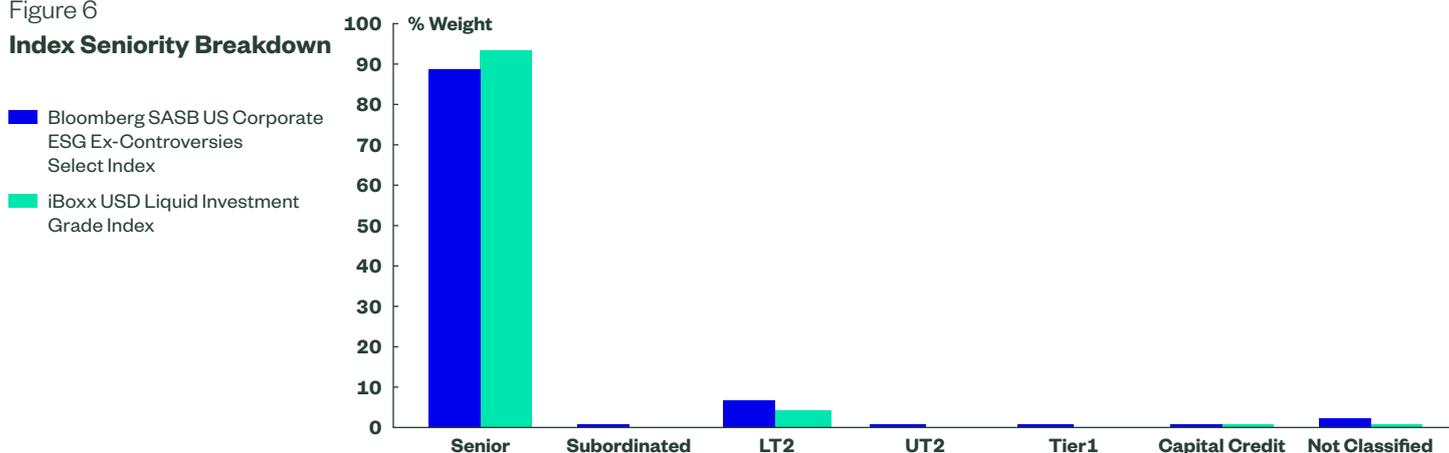


Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 1 February 2021.

Subordination Breakdown

The Bloomberg SASB index has a slightly larger allocation to subordinated debt compared to the Markit iBoxx Index, but the focus on subordination has historically been more a euro bond concern and is less a driver of spread difference than the maturity profile.

Figure 6
Index Seniority Breakdown



Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 1 February 2021.

Performance

Given its lower duration and the effect of ESG selection, the Bloomberg SASB US Corporate ESG Ex-Controversies Select Index has exhibited a better risk-adjusted return than the iBoxx USD Liquid Investment Grade Index. While the past 12 months have seen US treasury yields move from close to the flattest levels in history to a rapid steepening since the 2020 US elections and the vaccine breakthrough in November, this would have had a more meaningfully negative impact in the iBoxx index.

Meanwhile, the Bloomberg SASB US Corporate ESG Ex-Controversies Select Index has exhibited lower drawdowns than the iBoxx index given its DTS profile and, potentially, as a result of its inherent quality skew linked to the ESG approach.

Figure 7
Comparison of Index Performance

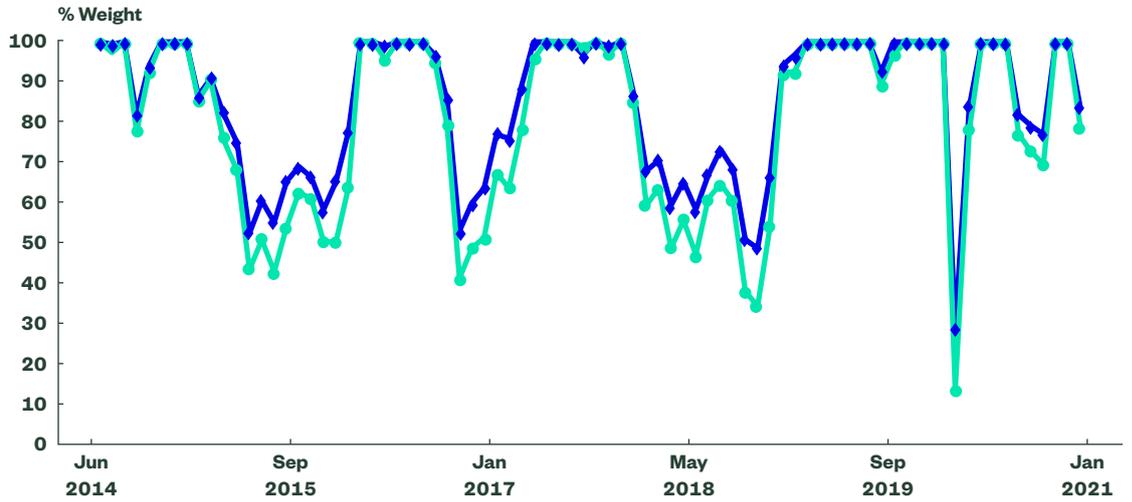
31/01/2021	Annualised Return (%)		Annualised Volatility (%)		Sharpe Ratio	
	Bloomberg SASB US Corporate ESG Ex-Controversies Select Index (%)	iBoxx USD Liquid Investment Grade Index (%)	Bloomberg SASB US Corporate ESG Ex-Controversies Select Index (%)	iBoxx USD Liquid Investment Grade Index (%)	Bloomberg SASB US Corporate ESG Ex-Controversies Select Index	iBoxx USD Liquid Investment Grade Index
Last 12 Months	6.63	6.57	9.39	11.20	0.65	0.54
Last 3 Years	7.24	7.74	6.37	7.70	0.88	0.80
Last 5 Years	6.55	7.12	5.45	6.62	0.96	0.88

Source: State Street Global Advisors, Bloomberg Finance L.P., as of 29 January 2021. Risk-free rate based on JP Morgan 1M USD Cash index.

Figure 8

Index Drawdowns Since Common Inception

- Bloomberg SASB US Corporate ESG Ex-Controversies Select Index
- iBoxx USD Liquid Investment Grade Index



Source: State Street Global Advisors, Bloomberg Finance L.P., Markit iBoxx, as of 29 January 2021.

Summary

Understanding the characteristics of different US corporate bond indices is key since the benchmark for a portfolio becomes the basis for an investor’s beta.

Bond indices aim to span and weight the appropriate markets, instruments and issues that reflect opportunities available to investors. Indices typically only include securities in which an investor can trade into and out of at short notice and for which firm prices exist. They also differ from each other, however, and sometimes significantly.

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