Bloomberg SASB US Corporate High Yield ESG Ex-Controversies Select Bond Index

The Bloomberg SASB US Corporate ESG Ex-Controversies Select Bond Index measures USD-denominated, high yield corporate bonds from both developed markets issuers. The Bloomberg SASB US Corporate High Yield ESG Ex-Controversies Select Bond Index is based on the flagship US Corporate High Yield index and is optimized to maximize its R-Factor™ score by State Street Global Advisors® while minimizing tracking error. The index negatively screens issuers that are involved in business activities that are restricted because they are inconsistent with certain values-based business involvement criteria. The index was created in August 2021, with history backfilled to January 2017.

This document is intended to be read in conjunction with the Bloomberg US Corporate High Yield Bond Index Methodology; these documents collectively constitute the index methodology for this Index.

The features specific to this Index are set out below.

Description of Index Constituents	Corporate (industrial, financial institutions, utility) issues only
Index Ticker	I36569US Index: Total Return USD Unhedged

Eligibility Requirements:

Currency	Principal and coupon must be denominated USD
Credit Rating	High Yield
Minimum Amount Outstanding	USD150mn minimum par amount outstanding
Maturity	At least one year until final maturity, regardless of optionality
Minimum Liquidity Requirements	See Minimum Amount Outstanding specified above
Rebalance Date	The optimization is run once per month to update the projected universe on the third-to-last business day (T-2) prior to month-end using T-3 prices and positions

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Environment, Social and Governance (ESG) Rules

This section is not intended to be exhaustive and is being provided for information purposes only - detailed ESG disclosures set out in dedicated section below.

R-Factor™ (Responsibility Factor)

State Street Global Advisors' Responsibility Factor or R-Factor™ measures the performance of a company's business operations and governance as it relates to financially material ESG challenges facing the company's industry. The R-Factor™ score is used to weight constituents to maximize the index R-Factor™ score while minimizing tracking error and excludes all companies without an R-Factor score. Refer to the below for further information on the R-Factor™:

• https://www.ssga.com/global/en/our-insights/viewpoints/r-factor.html

• https://www.ssga.com/investment-topics/environmental-social-governance/2019/04/inst-r-factor-reinventing-esg-through-scoring-system.pdf

Sustainalytics Exclusions

The data used to identify the companies involved with these specific business criteria is sourced from Sustainalytics.

Tobacco:

• Excludes all researched companies deriving 5% or more of their revenue from the production or supply of tobacco or tobacco related products and services, or 10% or more of their revenues from the distribution and retail sale of tobacco products.

Controversial Weapons:

• Excludes all researched companies classified as involved in the core weapon system or components and services that are considered tailor-made and essential for the lethal use of controversial weapons.

Civilian Firearms:

• Excludes all researched companies deriving 5% or more of their revenue from the manufacturing and/or sale of assault and non-assault weapons to civilian customers and/or their key components, as well as from the distribution and/or retail sale of assault and/or non-assault weapons.

Thermal Coal:

• Excludes all researched companies deriving 5% or more of their revenue from the extraction of thermal coal.

• Excludes all researched companies deriving 5% or more of their revenue from generating electricity from thermal coal.

Oil Sands Extraction:

• Excludes all researched companies deriving 10% or more of their revenue from the extraction of oil sands.

Arctic Oil and Gas Exploration:

• Excludes all researched all companies deriving 10% or more of their revenue from oil and gas exploration and extraction in the Artic.

ESG Controversy:

• Excludes all researched companies included within Category 5 (Extremely Severe Controversies).

UNGC Violations:

• Excludes all researched companies that have breached a principle of the UN Global Compact.

Ticker Mapping

All bonds with the same corporate bond ticker will have the same R-Factor score and Sustainalytics data. If two or more underlying issuers have different R-Factor scores, State Street Global Advisors will select a single issuer's R-Factor score to apply to all bonds in the bond ticker grouping. If any underlying issuer violates the Sustainalytics exclusions, the entire ticker is ineligible.

Optimization Constraints and Calculations

Overview

The objective of the optimizer is to maximize the weighted average R-Factor score of the custom index while minimizing active total risk. The base index is the Bloomberg US Corporate High Yield Bond Index.

Tracking Error

Tracking Error (TE) is measured using the PORT MAC 2 Risk Model. Tracking error volatility is expressed annualized units.

Optimization Goals

#	Group	Name	Unit	Trade-Off
1	ESG	R-Factor score		20
2	TE	Tracking Error	%	1
3	Turnover	Turnover	%	50

Constraints

The following specified constraints, including turnover limits, are designated either "soft" or "hard" according to corresponding roles. The optimizer will limit solutions in reference to the following boundaries:

#	Group	Name	Calculation	Type Hard/Soft	Penalty	Measure	Unit	Range Lower	Range Upper
1	Turnover	Turnover	Total Buy/Sell	Soft	0.1	Absolute	%		4
2	Yield	Yield to Worst	Weighted Average	Hard		Relative	%	-0.1	
3	DTS	Duration Times Spread	Weighted Average	Hard		Relative		-0.2	0.2
4	OAD	Option-Adjusted Duration	Weighted Average	Hard		Relative		-0.15	0.15
5	Gross Value OAD	Industrials	Weighted Average	Soft	0.5	Relative		-0.15	0.15
		Utilities			0.5			-0.15	0.15
		Financials			0.5			-0.15	0.15
6	Gross Value DTS	Industrials	Weighted Average	Soft	0.5	Relative		-0.2	0.2
		Utilities			0.5			-0.2	0.2
		Financials			0.5			-0.2	0.2
7	Sectors	Industrials	Market Weight	Soft	0.5	Relative	%	-2	2
		Utilities			0.5			-2	2
		Financials			0.5			-2	2
8	Index Ratings	AAA	Market Weight	Soft	0.5	Relative	%	-3	3
		AA			0.5			-3	3
		A			0.5			-3	3
		BBB			0.5			-3	3
9	Tickers	Bond Ticker	Market Weight	Hard		Relative	%		2

#	Name	Field	Aggregation	Hard/Soft	Value	Absolute/Relative	Unit	Lower	Upper
10	Bonds	Bond	Market Weight	Hard		Absolute	%		1
11	Bonds with an R-Factor score >= Benchmark Weighted Average	Bond	Market Weight	Hard		Relative	%	Reference benchmark weight	15 times reference benchmark weight
12	Bonds with an R-Factor score < Benchmark Weighted Average	Bond	Market Weight	Hard		Relative	%		15 times reference benchmark weight
13	Years from Dated Date	Years from Dated Date	Weighted Average	Hard		Relative		0	
14	Transaction Cost	Transaction Cost	Total percentage of buys weighted by the age of the bond in years.	Soft	5	Absolute	%		2
15	Bonds with a Dated Date less than 3 years old	Bonds with a Dated Date less than 3 years old	Market Weight	Soft	0.1	Relative	%	0	
16	ESG	R-Factor score	Weighted Average	Soft	0.1	Relative		20% higher than the benchmark weighted average	
17	TE	Tracking Error		Soft	0.01	Relative	%		0.5

1. No short positions are allowed.

2. No cash exposure (long or short) immediately after the rebalance.

3. Only securities eligible for the Bloomberg US Corporate High Yield Bond Index are eligible.

4. Between the T-3 position determination date and month-end, securities may leave the projected universe if the bond is no longer eligible for a flagship Bloomberg index, including, but not limited to, the base index.

Version History

Date	Update
September 2023	Publication in new format

Environment, Social and Governance (ESG) Factor Disclosures

Where an index applies Sustainalytics screens and a security/issuer is not included in the Sustainalytics research coverage for that screen, unless otherwise noted, this index will include such security/issuer, provided it meets the relevant index eligibility rules. This applies to government, securitized (ABS, CMBS, and MBS), and corporate issuers not covered by Sustainalytics ESG Product Involvement Data, Sustainalytics ESG Controversy Scores, and Sustainalytics Global Standards Screening Data.

All companies without an R-Factor score are excluded.

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY			
1. Name of the benchmark administrator.		Bloomberg Index Services Limited ("BISL")	
2. Type of benchmark		Fixed Income	
3. Name of the benchmark or family benchmarks.		Bloomberg SASB US Corporate High Yield ESG Ex-Controversies Select Index	
4. Does the benchmark methodology for the benchmark or family of benchmarks take into account ESG factors?		Yes	
5. Where the response to Item 4 is positive, please list below, for each family of benchmarks, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816. Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets. The ESG factors shall be disclosed at an aggregated weighted average value at the level of the family of benchmarks.			
a) List of combined ESG factors considered	R-Factor	Weighting & Exclusion	ESG scoring system developed by State Street Global Advisors which captures environmental, social and governance factors. It measures the performance of a company's business operations and governance as it relates to financially material ESG issues facing the company's industry. The R-Factor™ score has two components: an ESG component and a corporate governance, or "CorpGov", component. • "ESG": This component is created by mapping the raw data from three third-party providers (ISSESG, Sustainalytics, and Vigeo-EIRIS) to the financial materiality framework published by the Sustainability Accounting Standards Board ("SASB"). The SASB framework identifies financially material ESG issues that are industry-specific for each of 77 industries in 11 sectors. • "CorpGov": The corporate governance component is created by mapping the raw data from ISS Governance to 17 region-specific corporate governance codes developed by investors or regulators. These transparent codes describe minimum governance expectations of a particular region. The total R-Factor score combines the ESG and CorpGov components into one final score. Further information available here: https://www.ssga.com/us/en/intermediary/ic/capabilities/esg/data-scoring/r-factor-transparent-esg-scoring https://www.ssga.com/investment-topics/environmental-social-

			governance/2019/04/inst-r-factor-reinventing-esg-through-scoring-system.pdf The objective of the optimizer is to maximize the weighted average R-Factor Score of the custom index while minimizing active total risk. The base index is the Bloomberg US Corporate High Yield Bond Index. All companies without an R-Factor score are excluded.
b) List of environmental factors considered:	Thermal Coal	Exclusion	• Excludes all researched companies deriving 5% or more of their revenue from the extraction of thermal coal. • Excludes all researched companies deriving 5% or more of their revenue from generating electricity from thermal coal.
	Oil Sands Extraction	Exclusion	Excludes all researched companies deriving 10% or more of their revenue from the extraction of oil sands.
	Arctic Oil and Gas Exploration	Exclusion	Excludes all researched all companies deriving 10% or more of their revenue from oil and gas exploration and extraction in the Arctic.
c) List of social factors considered:	International treaties and conventions, United Nations principles or, where applicable, national law used in order to determine what constitutes a 'controversial weapon'.	Exclusion	International treaties and conventions used to define Controversial Weapons include Non-proliferation Treaty (1968), Biological and Toxin Weapons Convention (1972), Chemical Weapons Convention (1997), Anti-Personnel Mine Ban Convention (1999), Convention on Cluster Munitions (2008), United Nations Convention on Certain Conventional Weapons (1980), and Convention on the Physical Protection of Nuclear Material (1980)
	Weighted average percentage of benchmark constituents in the controversial weapons sector.	Exclusion	Excludes all researched companies classified as involved in the core weapon system or components and services that are considered tailor-made and essential for the lethal use of controversial weapons.
	Companies involved in the production of tobacco	Exclusion	Excludes all researched companies deriving 5% or more of their revenue from the production or supply of tobacco or tobacco related products and services, or 10% or more of their revenues from the distribution and retail sale of tobacco products.
	Extreme Event Controversies	Exclusion	The Controversy Rating reflects a company's level of involvement in issues and how it manages these issues. A controversy as an event or aggregation of events relating to an ESG topic. The highest Event rating under a controversy indicator automatically becomes the Controversy Rating. The methodology takes into account incidents and events, analysing the severity by taking into account impact, risk and management of the issues.

			Excludes all researched companies included within Category 5 (Extremely Severe Controversies). Further information is found below: https://connect.sustainalytics.com/hubfs/INV/Methodology/Controversies%20Research%20Methodology.pdf
	Civilian Firearms	Exclusion	Excludes all researched companies deriving 5% or more of their revenue from the manufacturing and/or sale of assault and non-assault weapons to civilian customers and/or their key components, as well as from the distribution and/or retail sale of assault and/or non-assault weapons.
	Companies in violation of the United Nations Global Compact (UNGC) principles or the Organisation of Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises	Exclusion	Number of International treaties and conventions used to define anti-bribery and anti-corruption are the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions. All researched companies in breach of these are excluded from the Benchmark.
c) List of governance factors considered:	Weighted average percentage of board members who are independent.	N/A	The family of benchmarks does not apply this factor in the pursuit of its ESG objectives.
	Weighted average percentage of female board members.	N/A	The family of benchmarks does not apply this factor in the pursuit of its ESG objectives.

6. Where the response to Item 4 is positive, please list below, for each benchmark, those ESG factors that are taken into account in the benchmark methodology, taking into account the ESG factors listed in Annex II to Delegated Regulation (EU) 2020/1816, depending on the relevant underlying asset concerned.
Please explain how those ESG factors are used for the selection, weighting or exclusion of underlying assets.
The ESG factors shall not be disclosed for each constituent of the benchmark, but shall be disclosed at an aggregated weighted average value of the benchmark.
 Alternatively, all of this information may be provided in the form of a hyperlink to a website of the benchmark administrator included in this explanation. The information on the website shall be easily available and accessible. Benchmark administrators shall ensure that information published on their website remains available for five years

a) List of environmental factors considered:	As above
b) List of social factors considered:	As above
c) List of governance factors considered:	As above
7. Data and standards used.	
a) Data input. *(i)* Describe whether the data are reported, modelled or, sourced internally or externally. *(ii)* Where the data are reported, modelled or sourced externally, please name the third party data provider.	ESG data for the benchmarks is sourced externally from: Sustainalytics - Please refer to the link below for additional details: https://www.sustainalytics.com/investor-solutions/esgresearch/esg-screening/esg-criteria State Street Global Advisors – State Street Global Advisors (SSGA) provides the list of constituents that will be excluded from the Base index based on business involvement. SSGA additionally provides R-Factor (ESG) scores for index constituents, which determine the weight of constituents in the index. R-Factor scores are proprietary scores generated by SSgA from a composite framework of underlying ESG score providers (ISS-ESG, Sustainalytics, and Vigeo-EIRIS.) Please see below for an additional explanation of R-Factor.

	https://www.ssga.com/us/en/intermediary/ic/capabilities/esg/data-scoring/r-factor-transparent-esg-scoring https://www.ssga.com/library-content/products/esg/inst-r-factor-reinventing-esg-through-scoring-system.pdf

b) Verification of data and guaranteeing the quality of those data. *Describe how data are verified and how the quality of those data is ensured.*	BISL conducts verification of the SSGA data by conducting various checks on the data received, including, but not limited to, the following:
	
	• Calculation of the coverage of relevant ESG scores on the security universe. If there is a significant variance from previous quarter the team will engage with the ESG data provider.
	• Review of the quantile-quantile plot to compare distribution from the previous quarter to identify any unexpected or abnormal distribution characteristics.
	
	Sustainalytics has processes in place to validate the quality and reliability of the data.
	
	• Universe Management
	  o Centralized universe definitions and processes for rebalancing;
	  o Quarterly rebalances of Sustainalytics' standard coverage and compliance universes;
	  o Clear, transparent and consistent approach to the allocation of research versus coverage entities.
	
	• Company Research
	  o Continuous improvement and maintenance of quality and research standards;
	  o Feedback that is received from Companies in Sustainalytics' Coverage Universe and that are a part of Sustainalytics ESG Risk Ratings and controversy research is taken into consideration, and whenever relevant included;
	  o Quality reviews of ESG assessments before publication; ○ Reviewing controversy ratings by the Events Oversight Committee – focus on controversy level changes to and from level 4 and 5.
	
	• Data and deliverable management
	  o Quality and reliability of Sustainalytics Covered Company and identifier data through automated quality assurance;
	  o Quality and reliability of Sustainalytics proprietary (i.e. research) data through automated quality assurance, prior to publication;
	  o Quality and reliability of standard deliverables through end-of-gate quality assurance process.
	  o Quality and reliability of custom client deliverables through end-of-gate quality assurance processes (automated and manual);
	  o Monitoring and investigating ESG score fluctuations and their root causes using automated tools.
	
	• Update cycle
	  o Sustainalytics aims for annual updates of management indicators for the Covered Companies;
	  o Continuous updates are made as incidents occur and feed into updates of event indicators, which is not disclosure driven;
	  o Annual updates to the rating framework (selection of material ESG issues, weighting of indicators).

c) Reference standards *Describe the international standards used in the benchmark methodology.*	The Sustainability Accounting Standards Board (SASB) standards serve as the basis for the "ESG" component of the R-Factor score. The SASB framework attempts to identify ESG risks that are financially material to the issuer-based on its industry classification. This component of the R-Factor™ score is determined using only those metrics from the ESG data providers that specifically address ESG risks identified by the SASB framework as being financially material to the issuer-based on its industry classification. Link to relevant standards below: https://www.sasb.org/standards-overview/download-current-standards/. The second component of the score, the CorpGov score, is generated using region-specific corporate governance codes developed by investors or regulators. Corporate governance codes are made publicly available by the relevant regulator / investor network UNGC Violations: The United Nations Global Compact (UNGC) Principles, the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions. Controversial Weapons: International treaties and conventions used to define Controversial Weapons include Non-proliferation Treaty (1968), Biological and Toxin Weapons Convention (1972), Chemical Weapons Convention (1997), Anti-Personnel Mine Ban Convention (1999), Convention on Cluster Munitions (2008), United Nations Convention on Certain Conventional Weapons (1980), and Convention on the Physical Protection of Nuclear Material (1980)
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