December 10, 2021

Bloomberg SASB Euro Corporate 0-3 year ESG ExControversies Select Index

The Bloomberg SASB® Euro Corporate 0-3 year ESG Ex-Controversies Select Index is an investment grade, fixed-rate, EUR-denominated benchmark that optimizes its R-Factor™ score by State Street Global Advisors®. Based on the Bloomberg Euro Corporate 0-3 year Index, the ESG Ex-Controversies Select Index selects securities eligible for Euro Corporate 0-3 year Index and weights them using an optimization process, while controlling for active total risk. The index excludes issuers that are tagged with Extreme Event Controversies, Controversial Weapons, UNGC Violations, Civilian Firearms, Thermal Coal Extraction and Power Generation, Oil Sands Extraction, Artic Oil and Gas Exploration, and Tobacco Companies. The index was launched in November 2021 with history backfilled to February 2017.





Historical Index Values (rebased) - ESG Ex-Controversies Select vs Euro Corp 0-3yr

Historical Average R-Factor Score - ESG Ex-Controversies Select vs Euro Corp 0-3yr

Rules for Inclusion

Sector

Corporate (industrial, utility and financial institutions) issuers only.

Eligible Currencies

Principal and interest must be denominated in EUR.

Quality

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:

- 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.

Amount Outstanding

USD300mn minimum par amount outstanding.

Coupon

- Fixed-rate coupon.
- Original zero coupon bonds are included.
- Callable fixed-to-floating rate bonds are eligible during their fixed-rate term only.
- Bonds with a step-up coupon that changes according to a predetermined schedule are eligible.

Maturity

Securities must have less than 3 years remaining to maturity, regardless of optionality.

Seniority

Senior and subordinated issues are included.

Market of Issue

Fully taxable, publicly issued in the global and regional markets.

Security Types

Included

Bullet, putable, sinkable/amortizing and callable • Tre

- Original issue zero coupon
- Underwritten MTN
- Fixed-rate and fixed-to-float (including fixedto-variable) capital securities

Excluded

- Treasuries, government-related, securitized and covered bonds
- Contingent capital securities, including traditional CoCos and contingent write-down securities
- Bonds with equity type features (eg, warrants, convertibles, preferreds)
- Inflation-linked bonds, floating-rate issues
- Private placements, retail bonds
- Structured notes, pass-through certificates
- Illiquid securities with no available pricing

Optimization Constraints and Calculations

Overview

- The Bloomberg PORT Optimizer is used to select and weight each security in the index.
 - The optimizer runs once per month, selecting securities and calculating notional positions.
 - This process will not impact bond prices and other security-level analytics.
- The optimizer has three main objectives:
 - Maximize the overall R-Factor Score.
 - Minimize Active Total Risk versus the Parent Index. This is the ex-ante (or predicted) annualized tracking error based on the Bloomberg Fixed Income multi-factor risk model.
 - Minimize Turnover.
- Each of these objectives is assigned a weight (trade-off) in order to make these goals directly comparable:
 Active Total Risk is assigned the highest weight, followed by R-Factor Score and then Turnover. Active Total
 Risk is assigned a trade-off value of 1, R-Factor Score is assigned a trade-off value of 20, and Turnover is
 assigned a trade-off value of 50.
- Index turnover is calculated using two-way turnover: buys and sells (excluding cash).

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• The Parent Index is the Bloomberg Euro Corporate 0-3 year Index.

Optimization Constraints

Each of these constraints, unless otherwise noted, are soft constraints. This means that the optimizer will consider solutions outside of these bounds, with penalties for those violations. The trade-off values are used to specify the penalties for the violations compared to the main objectives. These values are listed after each soft constraint.

- OAD (option-adjusted duration) must be within 0.15 years of each Class 2 sector of the Parent Index.
 Trade-off value: 0.5.
- DTS (duration times spread) must be within 0.2 years of each Class 2 sector of the Parent Index. DTS is
 calculated by multiplying spread duration by Libor option-adjusted spread. DTS measures sensitivity to
 relative spread change as opposed to absolute spread change like modified duration. Trade-off value:
 0.5
- OAD must be within 0.15 of the Parent Index. Hard Constraint.
- DTS must be greater than -0.01 and less than 0.2 years relative to the Parent Index. Hard Constraint.
- Yield to worst must be greater than -0.01bps relative to the Parent Index. Hard Constraint.
- Transaction costs cannot be greater than 2%. Transaction costs are a function of all the buy trades implemented each month. The cost is defined as the number of years since issuance (years from dated date). For example, a 1% buy transaction in a security issued 1 year ago adds has a transaction cost of 1%, while a 1% buy transaction in a security issued 6 months ago adds a transaction cost of 0.5%. Tradeoff value: 5.
- Active Total Risk, as calculated by the Bloomberg multi-factor fixed income risk model, must be within 0.5 or 50bps of the Parent Index. This is an annualized measure. Trade-off value: 0.01.
- The normalized average R-Factor Score of the index, defined as the average R-Factor Score divided by the Parent Index average times 100, must be at least 120. Trade-off value: 0.1.
- The total weight of all securities issued within the past three years, as measured by years from dated date, must be greater than or equal to the Parent Index. Trade-off value: 0.1.
- Bloomberg Class 2 sector weights must be within 100bps of the Parent Index. Trade-off value: 0.1.
- Bloomberg Index Rating weights (Baa, A, Aa, Aaa) must be within 300bps of the Parent Index. Tradeoff value: 0.5.
- Individual security weights must be less than 15 times their weight in the Parent Index or 100bps, whichever is less. Hard Constraint.
- Eligible issuer (ticker) weights must be within 50bps of their weight in the Parent Index. Hard Constraint.
- Securities with R-Factors greater than or equal to the Parent Index average R-Factor, and that also meet all controversial business screens, have a minimum market value weight equal to their Parent Index weight. Hard Constraint.
- Monthly index turnover must be less than 4%. Trade-off value: 0.1.
- Only long positions are allowed.
- All cash that enters the index intramonth is completely reinvested into next month's index at the next rebalancing date.
- On each rebalancing date, cash has a 0% weight.

Controversial Business Exclusions

Issuers are excluded from the index for the following reasons:

Extreme Even Controversies	t Companies included within Category 5 (Extremely Severe Controversies).
Controversial Weapons	All 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.
UNGC Violations	Companies that have breached a principle of the UN Global Compact.
Civilian Firearms	All 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.

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	All companies deriving 5% or more of their revenue from the extraction of thermal coal or from generating electricity from thermal coal.
Oil Sands Extraction	All companies deriving 10% or more of their revenue from the extraction of oil sands.
Artic Oil and Gas Exploration	All companies deriving 10% or more of their revenue from oil and gas exploration and extraction in the Artic.
Tobacco Companies	All 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.

Unscored Issuers

Issuers without R-Factor scores are excluded from the index.

Turnover

- Unlike standard rules-based indices, past index holdings will directly impact which securities are chosen for
 index inclusion in the present and future. This is because one of the constraints and objectives of the
 optimization process is to limit monthly index turnover. The optimizer sets a 4% turnover soft constraint each
 month. Trade-off value: 0.1.
- All historical and live optimizations use the Bloomberg PORT Optimizer. The index contents are rebalanced monthly, and because there is a turnover constraint, the previous month's holdings will affect the next month's results. To produce the backtested results, the portfolio in PORT is updated intramonth using corporate actions sourced from the Bloomberg PORT database. The methodology used by this database differs from the methodology employed by the Bloomberg index platform. The two approaches differ in the handling of called bonds and bonds that make principal payments (full or partial) or coupon payments on or near month-end. The Bloomberg database the PORT Optimizer currently uses removes securities from the portfolio that were called or were matured on or near month-end without a corresponding update to the cash position. Also, partial principal or coupon payments made on or near month-end may not be fully accounted for in the backtested results. The live index uses corporate action updates sourced from the index production system, which means cash from these corporate actions contributes to optimization rebalances.

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R-Factor (Responsibility Factor)

State Street Global Advisors has built a new ESG platform (or data architecture) that systematically integrates best-in-class data from 4 global data providers. To help clients make better sense of this staggering amount of data and allow for decision-ready insights, they have created a scoring model that systematically harnesses hundreds of metrics and leverages the investment teams' expertise – including sustainable investing, data science, statistics, quantitative modeling, and asset stewardship. This new approach to ESG scoring captures the full spectrum of "financially material" metrics to isolate long-term sustainability drivers of value across environmental, human capital, social capital, business model, leadership and corporate governance dimensions. The scoring methodology systematically integrates best-in-class data, transparent sustainability framework, financial materiality across industries and corporate governance standards to define one "responsibility factor" ("R-Factor") score for every company.

To learn more about the R-Factor:

- www.ssga.com/global/en/our-insights/viewpoints/r-factor.html
- www.ssga.com/investment-topics/environmental-social-governance/2019/04/inst-r-factor-reinventing-esg-through-scoringsystem.pdf

Sustainability Accounting Standards Board (SASB®)

At the core of R-Factor scores is a mapping algorithm that uses metrics that are "financially material" across 77 industries and 17 regulatory regimes. The methodology was designed around a transparent analytical framework and standards – the Sustainability Accounting Standards Board (SASB). The SASB framework is fully transparent and publicly available for all institutional and retail investors. SASB standards were developed to enable businesses around the world to identity, manage and communicate financially material sustainability information to their investors. It is the first ERSFG disclosure framework that focuses on financial materiality at the corporate level

To learn more about SASB:

www.sasb.org

Rebalancing Rules

Frequency	The composition of the index is rebalanced at each month-end and represents the fixed set of bonds on which index returns are calculated for the next month.
Index Changes	During the month, indicative changes to securities (credit rating change, sector reclassification, amount outstanding changes, corporate actions, and ticker changes) are reflected daily. These changes will affect the composition of the index at month-end only – when the index is next rebalanced.
Reinvestment of Cash Flows	Intra-month cash flows from interest and principal payments contribute to monthly index returns but are not reinvested at a short-term reinvestment rate between rebalance dates. At each rebalancing, cash is effectively reinvested into the returns universe for the following month, thus index results over two or more months reflect monthly compounding.
New Issues	Qualifying securities that enter the Projected Universe of the Parent Index by the fourth to last business day of the month (T-3) are considered for inclusion. Prior to December 1, 2021, qualifying securities that entered the Projected Universe of the Parent Index on month-end were considered for inclusion.

Pricing and Related Issues

Sources & Frequency	All bonds in the index are priced daily using Bloomberg's evaluated pricing service, BVAL.
Pricing Quotes	Bonds are quoted as a percentage of par.
Timing	• 4:15 p.m. (London time) each day.
	• On early market closes, prices are taken as of 12:15 p.m. (London time) unless otherwise noted.
	 If the last business day of the month is a UK holiday and European markets remain open, European securities will use month-end prices.
Bid or Offer Side	Bonds in the index are priced on the bid side.
	• The initial price for new corporate issues entering the index is the offer side; after the first month, the bic price is used.
Settlement Assumptions	T+1 calendar day settlement basis for all bonds. At month-end, settlement is assumed to be the first calendar day of the following month, even if the last business day is not the last day of the month, to allow for one ful month of accrued interest to be calculated.
Verification	Daily price moves for each security are analyzed by the index pricing team to identify outliers. Index users may also challenge price levels, which are then reviewed and updated as needed using input from various sources.
Currency Hedging	Returns hedged to various non-EUR currencies are published for the Bloomberg SASB Euro Corporate 0-3 year ESG Ex-Controversies Select Index. The indices' FX hedging methodology takes rolling one-month forward contracts that are reset at the end of each month and hedges each non-reporting currency-denominated bond in the index into the reporting currency terms. No adjustment is made to the hedge during the month to account for price movements of constituent securities in the returns universe of the index.
Calendar	The Euro Corporate Index follows the UK bond market holiday schedule. For month-end dates, the Europear calendar may also be employed in the event a UK holiday falls on a month-end date but European markets remain open.

Accessing Index Data

Bloomhera Indices Website	
Bloomberg Indices Website (www.bloomberg.com/professional/product/indices)	projected index universe, including membership information, aggregated characteristics and returns, and historical data. The index website makes available limited index information, including: Index methodology and factsheets Current performance numbers for select indices
Data Distribution	 Index subscribers may choose to receive index data in files. Files may include: Index-level and/or constituent-level returns and characteristics for any indices Automatic delivery of files via email or SFTP following the completion of the index production process after market close Index data is also available via authorized redistributors
Index Ticker	I36753US: Bloomberg SASB Euro Corporate 0-3 year ESG Ex-Controversies Select Index

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