

Bloomberg MSCI Euro Aggregate Sustainable and Green Bond SRI Index

The Bloomberg MSCI Euro Aggregate Sustainable and Green Bond SRI Index tracks Euro-denominated investment grade treasury, government-related, corporate and securitized fixed-rate bonds. The index follows the Bloomberg Euro Aggregate index eligibility criteria. Prior to January 2018, the index follows the rules of the flagship Euro Aggregate Index. From January 2018, the index includes issuers with MSCI ESG Ratings of BBB or higher and negatively screens issuers that are involved in business activities that are restricted because they are inconsistent with certain values-based business involvement criteria and those issuers with a “red” MSCI ESG Controversy Score. The index is tilted to allocate at least 10% of the market value to securities classified as Green Bonds, and allocate the remaining percentage towards non-Green Bond eligible Euro Aggregate securities. Additionally, the index is rebalanced monthly to match the maturity and sector exposures in the Euro Aggregate Index. The index was created in February 2022, with index history backfilled to January 1, 2016.

Rules for Inclusion: Fixed Income Criteria

Sector	Treasury, corporate, government-related, and securitized bonds are included.
Eligible Currencies	Principal and coupon must be denominated in EUR.
Quality	<p>Securities must be rated investment grade (Baa3/BBB-/BBB- or higher) using the middle rating of Moody's, S&P and Fitch; when a rating from only two agencies is available, the lower is used; when only one agency rates a bond, that rating is used. In cases where explicit bond level ratings may not be available, other sources may be used to classify securities by credit quality:</p> <ul style="list-style-type: none"> Local currency treasury and hard currency sovereign issues are classified using the middle issuer-level local currency and hard currency debt ratings from each agency for all outstanding bonds, even if bond-level ratings are available. 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. German Pfandbriefe are assigned ratings that are one full rating category above the issuer's unsecured debt.
Amount Outstanding	EUR 300mn minimum par amount outstanding.
Coupon	<ul style="list-style-type: none"> Fixed-rate coupon. 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	<ul style="list-style-type: none"> At least one year until final maturity, regardless of optionality. CMBS and ABS must have a remaining average life of at least one year.

- Bonds that convert from fixed to floating rate, including fixed-to-float perpetuals, will exit the index before converting to floating-rate. Fixed-rate perpetual bonds are not included.

Taxability

- Only fully taxable issues are eligible.
- Build America Bonds (BABs) with the tax credit to the issuer are eligible; those with tax credits issued to Investors are considered tax exempt.
- Dividend Received Deduction (DRD) and Qualified Dividend Income (QDI) eligible securities are excluded.

Market of Issue

Publicly issued in the global and regional markets.

Seniority of Debt

Senior and subordinated issues are included.

Security Types**Included**

- Bullet, puttable, sinkable/amortizing and callable bonds
- Taxable municipal securities, including Build America Bonds (BABs)
- Original issue zero coupon bonds
- Bonds issued through underwritten MTN programs
- Enhanced equipment trust certificates (EETC)
- Certificates of deposit
- Fixed-rate and fixed-to-float (including fixed-to-variable) capital securities
- Loan participation notes
- US Agency CMBS (as of July 1, 2014)
- Malaysian government Sukuk (as of April 1, 2015)

Excluded

- Contingent capital securities, including traditional CoCos and contingent write-down securities, with explicit capital ratio or solvency/balance sheet-based triggers
- Bonds with equity type features (e.g., warrants, convertibles, preferreds, DRD/QDI-eligible issues)
- Inflation-linked bonds, floating-rate issues
- Fixed-rate perpetuals
- Tax-exempt municipal securities
- Private placements, retail bonds
- Sinkable Russian OFZ bonds issued prior to 2009
- USD25/USD50 par bonds
- Structured notes, pass-through certificates
- Non-ERISA eligible CMBS
- US agency MBS hybrid ARMs
- Formosa bonds (as of April 1, 2017)

Illiquid securities where reliable pricing is unavailable

Environment, Social and Governance (ESG) Rules

MSCI ESG Rating

Starting from January 2018 for non-Green Bonds:

- Securities from sectors with ratings (Corporate, Covered Bonds, Agency and Supranationals) must have an MSCI ESG Rating of BBB or higher.
- Unrated issuers from sectors with ratings (Corporate, Covered Bonds, Agency and Supranationals) are excluded.
- Prior to April 2021, ratings were applied at the ticker level. Every bond within the same ticker had the same MSCI ESG Rating.
- MSCI ESG Ratings are generally updated annually, but may be reviewed more frequently as needed.

Business Involvement Screens

Starting from January 2018, the index excludes issuers involved in business lines/activities as per the standard Bloomberg MSCI SRI screen:

- Alcohol
- Tobacco
- Gambling
- Adult Entertainment
- Genetically Modified Organisms (GMO)
- Nuclear Power
- Civilian Firearms
- Conventional Weapons
- Nuclear Weapons
- Controversial Weapons
 - Landmine Manufacturing
 - Cluster Bomb Manufacturing
 - Depleted Uranium Weapons
 - Chemical and Biological Weapons Components
- Thermal Coal
- Fossil Fuels

Starting from January 2018, the Green Bond component of the index does not exclude issuers involved in Nuclear Power, Thermal Coal, or Fossil Fuel activities (defined as per the standard Bloomberg MSCI screen).

From September 2020 until September 2021, the Euro Aggregate (ex-Green Bonds) component of the index additionally excluded issuers with greater than 5% revenue from the business activities related to:

- Thermal Coal
- Generation of Thermal Coal
- Oil Sands

Involvement is defined for each restricted activity and may be based on % of revenue, total revenue, or any tie regardless of revenue (see Figures 7-8 on pages 14-16 for standard screen threshold in ESG Methodology on the [Bloomberg Terminal](#) or on the [website](#)).

MSCI ESG Controversies Starting from January 2018, the index excludes any issuer with a “Red” MSCI ESG Controversies score (equal to 0), and non-Green bond corporates that are not covered by MSCI’s ESG Controversy research. MSCI ESG controversy measures an Issuer’s involvement in major ESG controversies and how well they adhere to international norms and principles.

UN Sanctions (broad arms embargo) From January 2018, based on the UN broad arms embargo sanctions, Treasury, Sovereign, and Local Authority debt from the following countries is excluded: Central African Republic, Kyrgyzstan, Iran, Iraq, Lebanon, Libya, North Korea, Somalia, Sudan, Yemen.

The list of countries ineligible for the index due to the above sanctions is reviewed on an annual basis.

Taxonomy: Green Bond Qualification and Classification

Overview

- Green bonds are fixed income securities in which the proceeds will be exclusively and formally applied to projects or activities that promote climate or other environmental sustainability purposes through their use of proceeds.
- Starting from January 2018, for the Euro Aggregate Sustainable and Green Bond SRI Index, securities are independently evaluated by MSCI ESG Research along four dimensions to determine whether they should be classified as a green bond. These eligibility criteria reflect themes articulated in the Green Bond Principles and require commitments about a bond’s:
 - o Stated use of proceeds;
 - o Process for green project evaluation and selection;
 - o Process for management of proceeds; and
 - o Commitment to ongoing reporting of the environmental performance of the use of proceeds.
- Both self-labeled green bonds and unlabeled bonds will be evaluated using these criteria for potential index inclusion. So long as projects fall within an eligible MSCI ESG Research green bond category and there is sufficient transparency on the use of proceeds, a bond will be considered for the index even if it is not explicitly marketed as green.
- Meeting all four criteria is required for bonds issued after the publication of the Green Bond Principles in 2014. Green bonds issued prior to 2014 that are widely accepted by investors as green bonds may still qualify for the index, even if all four principles are not satisfied, since no formal guidelines were available to issuers at the time of issuance.

Stated Use of Proceeds

- Use of proceeds and project bonds are considered eligible if the use of proceeds falls within at least one of six eligible environmental categories defined by MSCI ESG Research (alternative energy, energy efficiency, pollution prevention and control, sustainable water, green building, and climate adaption). In cases where project categories do not overlap entirely, MSCI ESG Research will consider bonds eligible if at least 90% of the projected use of proceeds falls within eligible categories.
- Until Dec 1, 2019, general purpose bonds were considered eligible if the issuer was considered pure-play. A pure-play issuer is defined as a legal entity with greater than 90% of activities (as measured by revenues) within one or more of the eligible environmental categories, except where proceeds are explicitly used to finance another company’s operations (e.g., through payment of a dividend to a non-pure-play parent company). Post Dec 1, 2019, general purpose bonds by pure-play issuers need to meet all the four principles of the Bloomberg MSCI Green Bond Index in order to be eligible for the Index. General purpose bonds by pure-play issuers that were a part of the Index prior to Dec 1, 2019 have been grandfathered in the Index.
- The six eligible environmental categories defined by MSCI ESG Research are listed below.
 - o Alternative Energy

- o Energy Efficiency
- o Pollution Prevention and Control
- o Sustainable Water
- o Green Building
- o Climate Adaptation
- These categories are not mutually exclusive – a bond may fall into one or more of the categories.
- Other environmental activities that do not fit into these categories, including sustainable forestry/afforestation may also be candidates for inclusion based on evaluations by MSCI ESG Research.

Process for Green Project Selection

- Bonds are considered eligible if the issuer clearly delineates the specific criteria and process for determining eligible projects or investments in the bond prospectus or supporting documentation (e.g., green bond supplement, website, investor presentation).
- Project criteria must outline either specific projects or the specific categories of activities to be financed. Examples of eligible criteria include “Alta Wind acquisition” or “installation of wind turbines, production of photovoltaic cells, and rehabilitation of municipal water infrastructure to reduce waste water discharge.” Examples of non-eligible criteria include “green initiatives and other projects that contribute to environmental sustainability” without further definition.
- A second-party opinion is not sufficient in the absence of clearly defined processes and criteria for project selection.

Management of Proceeds

- A formal process to ring-fence net proceeds to the eligible use of proceeds must be disclosed in the bond prospectus or supporting documentation (as defined above). Eligible mechanisms to ring-fence net proceeds include:
 - o Direct recourse to eligible revenues or assets (e.g., a green securitized bond, green project bond, or green revenue bond);
 - o Creation of a separate legal entity;
 - o Creation of a sub-portfolio linked to the issuer’s investment operations for eligible projects;
 - o Other auditable mechanism whereby the balance of tracked proceeds is reduced periodically by amounts matching investments made in eligible projects during that period.
- Third-party verification by an external auditor is preferred but not required.

Ongoing Reporting

- At issuance, issuers of index eligible green bonds must either report on projects financed by the bonds’ proceeds, or commit to doing so within one year. This reporting obligation will continue until bond proceeds have been fully dispersed or for the life of the bond, as circumstances necessitate. For reporting to be considered eligible, it must include one or more of the following:
 - o A list of specific projects/investments, including amount disbursed to each individual project;
 - o Aggregate project/investment categories, including amount disbursed to each project type;
 - o Quantitative or qualitative reporting on the environmental impact of the project pool (e.g., greenhouse gas emissions savings, reduction in water consumption, increased energy efficiency per unit of output, etc.).
- MSCI ESG Research reserves an additional three months beyond the 12-month deadline to review an issuer’s green bond report. This allows time for the green bond report to be located and contact to be made with the issuer in case any questions or issues are raised.
- If an issuer has not published a report within 15 months of issuance, or 15 months of the prior use of proceeds report, it will be flagged as “On Watch” in the next monthly green bond technical

note, with details provided in the note regarding the timing and process for removal of the bond from the index.

- If the issuer has not published a report within 18 months from issuance or the last annual report, its bond(s) will be removed from the index upon the next index rebalance. Furthermore, the bond(s) will be considered permanently ineligible for the index.

Rebalancing Rules

Rebalancing of the Index

Starting from January 2018, the Bloomberg MSCI Euro Aggregate Sustainable and Green Bond SRI Index is composed of 2 sub-components: securities classified as Green Bonds, and securities not classified as Green Bonds. The index's weights between the 2 components are designed such that there is a minimum 10% allocation to Green Bonds. The tilt toward Green Bonds is defined as: Minimum weight = Max (10%, 2 x Base Market Value weight).

- The index is rebalanced such that it follows the sector and maturity composition of the Euro Aggregate Index. The Euro Aggregate Index is divided into 12 buckets, based on a combination of sector and maturity as of the previous month-end. The breakdowns include: three BCLASS 1 sectors (Corporate, Securitized, Treasury + Government-Related), and four maturity partitions (1-5, 5-10, 10-15, and 15+). The index's weights are distributed such that each of the 12 buckets has the same market value percentage weight as the Euro Aggregate index, after the application of the "minimum weight" criteria applied to Green bonds.
- These bucket weights are calculated as of the prior month-end, and applied to the Projected Universe of the Euro Aggregate Sustainable and Green Bond SRI Index in the current month. The weights then remain fixed in the Returns Universe for the duration of the next month until the next rebalance.
- Prior to January 2018, the index followed the rules of the standard Euro Aggregate index.

Minimum ESG Exclusions

From 1 March 2022, the following criteria will be applied. On the last business day before month end, using the Forward Universe of the previous day, after applying the Non-ESG criteria rules for inclusion, defined above, and additionally removing any non-ESG rated bonds, the number of issuers for the eligible universe are defined.

If, after having additionally applied the ESG selection criteria above, less than 20% of the total number of issuers in the eligible universe are excluded, then the eligible issuers are ranked in the order below, according to the following criteria¹:

- MSCI ESG Rating score (higher Ticker ESG Rating score preferred to remain in the index)
- MSCI ESG Controversies score (higher Ticker Controversies score preferred to remain in the index)

Then based on this ranking, issuers will be excluded from the index, until the number of excluded issuers is higher than 20% of the eligible universe total number of issuers. If, more than one issuer has the same ESG Rating and Controversy score and is required to be removed to reach the 20% threshold, then all issuers with the same ESG Rating and Controversy score are removed.

Frequency

For each index, Bloomberg maintains two universes of securities: the Returns (Backward) and the Projected (Forward) Universes. The composition of the Returns Universe is rebalanced at each month-end and represents the fixed set of bonds on which index returns are calculated for the next month. The Projected Universe is a forward-looking projection that changes daily to reflect issues dropping out of and entering the index but is not used for return calculations. On the last business day of the month (the rebalancing date), the composition of the latest Projected Universe becomes the Returns Universe for the following month.

¹ Securities from the Treasury, Sovereign, or Local Authority sectors are excluded from the ranking procedure.

- The formal list of green bonds evaluated and identified by MSCI ESG Research is updated on the 25th calendar day of each month. MSCI evaluations must be completed by the evaluation date to qualify for inclusion at the next index rebalancing.
- The Euro Aggregate Sustainable SRI Green Bond Index is rebalanced on the last business day of each month. New issues will not be added to the Projected Universe until after the Green Bond Evaluation Date.

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 in the Projected and Returns Universe of the index. These changes may cause bonds to enter or fall out of the Projected Universe of the index on a daily basis, but will affect the composition of the Returns Universe 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 so that index results over two or more months reflect monthly compounding.

New Issues

Qualifying securities issued, but not necessarily settled on or before the month-end rebalancing date, qualify for inclusion in the following month's index if the required security reference information and pricing are readily available.

Pricing and Related Issues

Sources & Frequency

All index-eligible bonds are priced on a daily basis by Bloomberg's evaluated pricing service, BVAL.

Timing

- 4:15pm (London time)
- On early market closes, prices are taken as of 12:00pm (London time), unless otherwise noted.
- If the last business day of the month is a UK holiday, prices from the previous business day are used.

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 bid price is used. Euro treasury bonds use mid prices.

Settlement Assumptions

- T+1 calendar day settlement basis
- 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 full 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.

Currency Hedging

Returns hedged to various currencies are published for multi-currency indices. 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 Aggregate Sustainable and Green Bond SRI Index follows the UK bond market holiday schedule. For month-end updates, the European calendar may also be employed in the event a UK holiday falls on a month-end date but European markets remain open.

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Index Ticker

I36856EU: Total Return EUR Unhedged

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