Bloomberg Global Aggregate Green Social Sustainability Bond Index

The Bloomberg Global Aggregate Green Social Sustainability Bond Index offers investors an objective and robust measure of the global market for fixed income securities issued to fund projects with direct environmental and/or social benefits. The Index includes bonds from the flagship index which are classified as Green, Social, or Sustainability (as well as adhering to the Green Bond, Social Bond and Sustainability Bond Principles and Guidelines) by the Bloomberg Sustainable Finance Solutions Group ("SFS"). The Bloomberg Global Aggregate Green Social Sustainability Bond Index follows the same criteria as the flagship Bloomberg Global Aggregate Index, without the minimum 1 year maturity constraint. The index was created in October 2022, with index history backfilled to January 1, 2018.

For additional information regarding the flagship Bloomberg Global Aggregate, please refer to <u>Bloomberg Global Aggregate Index Methodology</u>. For additional resources regarding Bloomberg's Index offerings, please refer to the website.

Rules for Inclusion

Sector

Treasury, government-related, corporate, and securitized fixed-rate bonds

Eligible Currencies

- Principal and coupon must be denominated in one of the following eligible currencies:
 - o Americas: CAD, CLP, COP, MXN, PEN, USD
 - EMEA: CHF, CZK, DKK, EUR, GBP, HUF, ILS, NOK, PLN, RON, SEK
 - o Asian-Pacific: AUD, CNY, HKD, IDR, JPY, KRW, MYR, NZD, SGD, THB
- Eligible currencies will not necessarily have debt included in the index if no securities satisfy the inclusion rules.

New currency inclusion is reviewed annually through the index governance process. To be considered for inclusion, new currency candidates must be rated investment grade and sufficiently tradable, convertible and hedgeable for international investors.

Quality

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:

- 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 classify split-rated issuers properly.
- 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.

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For the Canadian Dollar market, DBRS is considered in addition to Moody's, S&P and
Fitch. When all four ratings agencies are available, the highest and lowest rating are
removed and the lower of the two remaining is used.

Coupon

- Fixed-rate coupon (including zero 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.

Country of Risk

Bonds with a Country of Risk equal to Russia or bonds denominated in Russian ruble were removed on April 1, 2022. See the Index Announcement <u>FI Implementation Update on Russian Sanctions</u> for more details.

Amount Outstanding

Fixed minimum issue sizes are set for all local currency markets:

150mn: CAD200mn: GBP

• 300mn: USD, EUR, CHF, AUD

500mn: NZD, SGD1bn: RON, PEN

2bn: DKK, NOK, PLN, ILS, HKD, MYR

2.5bn: SEK5bn: CNY*

• 10bn: MXN, CZK, THB

35bn: JPY100bn: CLP200bn: HUF500bn: KRWltrn: COP

2trn: IDR

*The minimum amount outstanding required for CNY-denominated treasury and policy bank debt is CNY 5bn. The total amount of index-eligible CNY debt will be phased into the Global Aggregate Index at 5% increments over a 20 month period starting April 1, 2019 until November 2020 when 100% of index-eligible debt will be reflected in the index.

Maturity

- Unlike other Bloomberg Aggregate Bond Indices, the Global Aggregate Green Social Sustainability Bond Indices does not have a 1- year minimum time to maturity and will hold bonds until final maturity. The inclusion of Green, Social and Sustainability Bonds to maturity within the indices is designed to accommodate this market practice by not forcing unwanted turnover.
- CMBS and ABS must have a remaining average life of at least one year.
- Securities falling under 1 year to maturity prior to 1 October 2022, are excluded.
- Bonds that convert from fixed to floating rate, including fixed-to-float perpetuals, will exit the index one year prior to conversion to floating rate. Fixed-rate perpetuals are not included.
- Sub-indices based on maturity are inclusive of lower bounds. Intermediate maturity bands include bonds with maturities of 1 to 9.9999 years. Long maturity bands include maturities of 10 years or greater.

Taxability

- Only fully taxable issues are eligible.
- Build America Bonds (BAB) 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

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

Seniority of Debt

Senior and subordinated issues are included.

Security Type

Included

- Bullet, putable, sinkable/amortizing and callable bonds
- Taxable municipal securities, including Build America Bonds (BAB)
- 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 (as of April 1, 2013)
- US agency CMBS (as of July 1, 2014)
- Malaysian government Sukuk (as of April 1, 2015)
- Covered bonds
- CNY treasury and policy bank debt as of April 1, 2019)

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 (eg, warrants, convertibles, preferreds, DRD/QDI-eligible issues)
- Tax-exempt municipal securities
- Inflation-linked bonds, floating-rate issues
- Fixed-rate perpetuals
- Private placements, retail bonds
- Sinkable Russian OFZ bonds issued prior to 2009
- USD 25/USD 50 par bonds
- Structured notes, pass-through certificates
- Non-ERISA eligible CMBS, US agency MBS hybrid ARMs
- Illiquid securities where reliable pricing is unavailable
- Formosa bonds

Green, Social & Sustainability Bonds Eligibility and Classification

Overview

Green, social and sustainability bonds are fixed income securities for which the proceeds will be applied entirely towards eligible green and/or social projects.

The Bloomberg Green, Social & Sustainability Bond Index includes securities that are reviewed by Bloomberg SFS to ensure they meet the minimum criteria to be classified appropriately. The criteria are reflective of the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines, which include:

- Use of proceeds
- Project selection process
- Management of proceeds
- Reporting

Securities are evaluated on the above criteria, regardless of whether they are labeled as green, social or sustainability. All four criteria are required to be met to be eligible for inclusion into the index. Second-party opinions (SPO) are recommended but not required for eligibility.

Use of proceeds

The issuer clearly outlines that the net bond proceeds will be entirely designated for market-accepted green and/or social activities (for eligible project categories see list below).

Project selection process

The issuer outlines the decision-making process it follows to determine the eligibility of projects in the bond documentation (prospectus, framework, investor presentation, offering circular etc.).

Management of proceeds

The net proceeds of the green, social or sustainability bond should be tracked by the issuer and attested to by a formal internal process.

Reporting

Issuers should commit to report on the projects financed, project performance and preferably the environmental and social impact at least once a year. For reporting to be considered eligible, the issuer must report on the impact of the projects financed (greenhouse gas emissions reductions etc.) or the allocation of funds to the individual projects or aggregated project categories. This reporting obligation will continue until the proceeds have been fully allocated or until maturity.

Additionally, at a minimum, all securities are reviewed on an annual basis to confirm the above reporting criteria. Bonds with proceeds that are not confirmed to be used for green and/or social purposes within 18 months of its last review will be moved from the index. Bonds with proceeds confirmed not to be used for green and/or social will also be removed from the index.

Bloomberg reserves an additional three months beyond the above mentioned 12 month period to locate and review the reports. If no report is available 15 months after issuance or the previous report, the security will be flagged as "Watchlist". If no report is available after 18 months, the security will be permanently removed from the index.

Securities included in the index prior to September 2022 have been reviewed based on the above methodology to ensure eligibility for the launch of the index, however, securities that left the Global Aggregate (parent index) prior to September 2022 are not subject to the ongoing reporting criteria. Municipal securities and USD-denominated ABS and CMBS are not subject to the ongoing reporting criteria.

For additional information regarding the Bloomberg Global Aggregate Green Social Sustainability Bond Index, please refer to Bloomberg Global Aggregate Green Social Sustainability Bond Index Methodology.

Please refer to the <u>Green Bonds on the Terminal Guide</u> as well as the <u>Social and Sustainability Bonds Guide</u> for additional information on how Bloomberg classifies bonds as Green, Social or Sustainability, or reach out to <u>newissues@bloomberg.net</u>

Rebalancing Rules

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 monthend 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.

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, except CHF-denominated bonds, which are priced by SIX, and JPY-denominated corporates, which are priced by Japan Securities Dealers Association (JSDA).

Timing

Prices are snapped at the following times:

- North American currency bonds: 4 p.m. (New York time); 4 p.m. (Toronto time) for CADdenominated securities. USD-denominated bonds prior to January 14, 2021 used 3p.m. New York time pricing snap.
- Pan-European currency bonds: 4:15 p.m. (London time); 4 p.m. (London time) for CHF-denominated securities.
- Asian currency bonds: 5 p.m. (Sydney time) for AUD-denominated and NZD-denominated securities; 3 p.m. (Tokyo time) for JPY-denominated securities; 5 p.m. (Shanghai time) for CNYdenominated securities; 5 p.m. (Tokyo time) for all other securities.
- If the last business day of the month is a public holiday in a major regional market, prices from the previous business day are used to price bonds in the particular market.

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.

Settlement Assumptions T+1 calendar day settlement basis for all bonds except MBS, which are priced for Public Securities Association (PSA) settlement in the following month and discounted back to same-day settlement. 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.

Calendar

The Bloomberg Global Aggregate Green Social Sustainability Bond Index is a global, multi-currency index that is generated every business day of the year except for January 1, the only holiday common to all regional calendars. During holidays observed by local markets, the index will still be generated using prices from the previous business day. FX rates are updated daily using WM Reuters 4pm (London) rates. FX forwards are also sourced from WM Company.

Accessing Index Data

Bloomberg Terminal®

Bloomberg benchmarks are the global standard for capital markets investors.

- INDE<GO> The Bloomberg Indices dashboard page, which contains daily, monthly, and year-to-date index returns for key indices from each index family as well as a link to index publications.
- IN<GO> The Bloomberg Index Browser displays the latest performance results and statistics for the indices as well as history. IN presents the indices that make up Bloomberg's global, multi-asset class index families into a hierarchical view, facilitating navigation and comparisons. The "My Indices" tab allows a user to focus on a set of favorite indices.
- DES<GO> The index description page provides transparency into an individual index including membership information, aggregated characteristics and returns, and historical performance.
- INP<GO> The Bloomberg Indices Publications page, which includes methodologies, factsheets, monthly reports, announcements and technical notes. A user may also subscribe to index publications via the "Actions" button.
- PORT<GO> Bloomberg's Portfolio & Risk Analytics solution includes tools to analyze the risk, return, and current structure of indices. Analyze the performance of a portfolio versus a benchmark or use models for performance attribution, tracking error analysis, value-at-risk, scenario analysis, and optimization.

Bloomberg Indices Website (www.bloomberg.com/ indices)

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
- Clients may receive standard files or may customize file contents
- Index data is also available via authorized redistributors

Index Tickers

See Table below:

Index Ticker	Index Name	Currency	Maturity	Sector
I37363US, I37375US, 37358EU, I37359US, I37361JP, 37907US, I37908US, I37909US, 37921US, I37922US, I379357US, 37923US, I37933US, I37929US, 37930EU, I37937US, I37938EU, I37924US, I37925US	Bloomberg Global Aggregate Green Social Sustainability Bond Index	USD, EUR, Ex-USD, Ex- JPY	0-3, 0-5, 0- 10, 1-3, 1-5, 1- 10, 10+	Corporate, Government, Treasury, Treasury & Gov-Related

I37364US, I37376US, I37379EU, I37360US, I37362JP, I37900US, I37901US, I37906US, I37916US, I37917US, I37372US, I37938US, I37934US, I37931US, I37932EU, I37939US, I37940EU, I37927US, I37928US	Bloomberg Global Aggregate Green Bond Index	USD, EUR, Ex-USD, Ex- JPY	0-3, 0-5, 0- 10, 1-3, 1-5, 1- 10, 10+	Corporate, Government, Treasury, Treasury & Gov-Related
I37365US, I37377US, I37380EU, I37382US, I37384JP, I37897US, I37898US, I37899US, I37913US, I37914US, I37373US, I37915US	Bloomberg Global Aggregate Social Bond Index	USD, EUR, Ex-USD, Ex- JPY	0-3, 0-5, 0- 10, 1-3, 1-5, 1- 10, 10+	Global
137356US, 137378US, 137381EU, 137383US, 137385JP, 137894US, 137895US, 137896US, 137910US, 137911US, 137374US, 137912US	Bloomberg Global Aggregate Sustainability Bond Index	USD, EUR, Ex-USD, Ex- JPY	0-3, 0-5, 0- 10, 1-3, 1-5, 1- 10, 10+	Global

Eligible Green and Social Project Categories

	Category	Subcategory
	Renewable Energy	Solar
		Wind
		Hydro
		Geothermal
		Bioenergy
		Waste-to-energy
		Tidal
		Other
	Energy Efficiency	Energy storage
		Digital energy (buildings, industry, LED and smart lighting)
	Energy Efficiency	Energy storage
		Digital energy (buildings, industry, LED and smart lighting)
	Green Buildings	New LEED
		Energy Star
		Energy infrastructure
GREEN	Clean Transportation	Electric
OKLLIN		Hybrid
		Public
		Rail
		Non-motorized
		Multi-modal transportation
		Infrastructure (for clean energy vehicles and reduction of harmful emissions)
	Sustainable Water	Clean infrastructure
		Plumbing system
	Pollution Control	Wastewater treatment
		Greenhouse gas control
		Soil remediation

		Recycling
		Remanufactured products
	Biodiversity	Environmental protection
	Agriculture Forestry	Forestry management
		Reforestation
		Afforestation
	Climate Change Adaptation	Information support (climate observation and early warning systems)
	Eco-Efficient Technology	Eco-friendly products
	Affordable Basic Infrastructure	Clean drinking water
		Sewers
		Sanitation
		Transport
		Energy
	Access to Essential Services	Health
SOCIAL		Education and vocational training
		Healthcare
		Financing and financial services
	Affordable Housing	N/A
	Employment Generation	N/A
	Food Security	N/A
	Socioeconomic (advancement and empowerment)	N/A

Index Licensing

Bloomberg requires index data licenses for services and products linked to the Indices

- Index or Constituent-Level Redistribution
- Exchange Traded Notes (ETNs)
- OTC Derivative Products

- Bond Pricing Service
- Index-Linked Insurance Products
- Custom Index Solutions
- Exchange Traded Funds (ETFs)
- Mutual Funds
- Separately Managed Accounts (SMAs)

Version History

Date	Update	
September 2023	Publication in new format	

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