

Bloomberg MSCI USD Liquid Investment Grade Corporate SRI PAB Index

The Bloomberg MSCI USD Liquid Investment Grade Corporate SRI PAB Index is a subset of the Bloomberg USD Liquid Corporate Index. It is a fixed-rate, investment-grade corporate bond benchmark that applies additional ESG criteria for security eligibility. To be included, bonds must have at least 3 years remaining until maturity along with a minimum par amount outstanding of USD750mn. 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. Additionally, issuers with a "Red" MSCI ESG Controversy Score are also excluded. The index limits issuer exposure to a maximum of 2% and is adjusted to be maturity neutral to the Bloomberg US Aggregate Corporate 3+ Year Index.

From November 2022, the index is additionally designed to meet the minimum standards of the EU Paris-Aligned Benchmark (PAB) label. The index sets an initial 50% decarbonization of absolute GHG emissions relative to the Bloomberg USD Liquid Corporate Index, followed by an annual 7% decarbonization trajectory. To be included, the index negatively screens issuers that are involved in business activities that are restricted per Article 12 of the Delegated Acts.

The index was created in March 2020, with history backfilled to January, 2014.

Rules for Inclusion

Sector	Corporate (industrial, utility, and financial institutions) issuers only.
Eligible Currencies	Principal and interest must be denominated in USD.
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"> Expected ratings at issuance may be used to promote 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	USD750mn 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 step-up coupons and those that change according to a predetermined schedule are also eligible.
Maturity	<ul style="list-style-type: none"> At least 3 years remaining until final maturity, regardless of optionality.
Market of Issue	Publicly issued in the global or regional markets. 144A securities that do not also have a Reg-S tranche are excluded.
Taxability	Only fully taxable issues are eligible.

Seniority of Debt	Senior and subordinated issues are included.	
Security Types	<p>Included</p> <ul style="list-style-type: none"> • Bullet, putable, sinkable/amortizing and callable bonds • Original issue zero coupon • Underwritten MTN • Fixed-rate and fixed-to-floating (including fixed-to-variable) capital securities 	<p>Excluded</p> <ul style="list-style-type: none"> • Treasuries, government-related, securitized, and covered bonds • Contingent capital securities, including traditional CoCos and contingent write-down securities • Bonds with equity type features (e.g. warrants, convertibles, preferreds) • Inflation-linked bonds, floating-rate issues • Fixed-rate perpetuals • Private placements, retail bonds • Structured notes, pass-through certificates • Illiquid securities with no available pricing

Environment, Social and Governance (ESG) Rules

MSCI ESG Rating	<p>The following criteria apply:</p> <ul style="list-style-type: none"> • Securities must have an MSCI ESG Rating of BBB or higher. • Unrated issuers from sectors with ratings 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. From April 2021, MSCI ESG data is applied at the bond level. • MSCI ESG ratings are generally updated annually but may be reviewed more frequently as needed.
MSCI Business Involvement Screens	<p>The index excludes issuers involved in the following business lines/activities as per the standard Bloomberg MSCI SRI screen:</p> <ul style="list-style-type: none"> • Alcohol • Tobacco • Gambling • Adult Entertainment • Genetically Modified Organisms (GMO) • Nuclear Power • Nuclear Weapons • Civilian Firearms • Controversial Weapons <ul style="list-style-type: none"> ◦ Cluster Munitions ◦ Landmines ◦ Depleted Uranium ◦ Biological/Chemical Weapons

- Blinding Lasers
- Non-Detectable Fragments
- Incendiary
- Thermal Coal
- Unconventional Oil & Gas
- Generation of Thermal Coal
- Fossil Fuel Reserves

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](#)).

From December 2020 until September 2021

The index additionally excludes issuers that MSCI define as being involved in, or having a percentage of revenue from, business activities related to:

- Generation of 10% or more power production or installed capacity based on Thermal Coal
- Generation of 30% or more power production or installed capacity based on Oil & Gas
- Generation of 30% or more power production or installed capacity based on Nuclear Power
- Generation of Thermal Coal revenue greater than or equal to 5%
- Thermal Coal revenue greater than 0%
- Unconventional Oil & Gas revenue greater than 0%
- Nuclear Power revenue greater than or equal to 30%
- Conventional Oil & Gas revenue greater than 0% of total revenue with less than 40% of the total revenue being derived from alternative energy
- Fossil Fuel Reserves
- Tobacco revenue greater than or equal to 10%
- Controversial Weapons
- Nuclear Weapons
- Weapons systems/components/support systems/services revenue greater than or equal to 10%

From September 2021

The index additionally excludes issuers that MSCI define as being involved in, or having a percentage of revenue from, business activities related to:

- Generation of 10% or more power production or installed capacity based on Thermal Coal
- Generation of 30% or more power production or installed capacity based on Oil & Gas
- Conventional Oil & Gas revenue greater than 0% of total revenue with less than 40% of the total revenue being derived from alternative energy
- Fossil Fuel Reserves
- Weapons systems/components/support systems/services revenue greater than or equal to 10%

From March 2022

The index additionally excludes issuers that derive greater than or equal to 5% of revenue from business activities related to:

- Weapons systems/components/support systems/services

From November 2022

The index will exclude issuers not captured by the above exclusion criteria that are involved in the following business lines/activities per Article 12 of the EU Delegated Acts:

- Oil & Gas revenue greater than or equal to 10%
- UNGC Violations
- Environment Controversy Score of 0 or 1

MSCI Emissions and Carbon Intensity

From November 2022, the index excludes issuers where MSCI does not have:

- Reported or estimated Scope 1, 2 and 3 absolute GHG emissions data
- Reported or estimated Scope 1, 2 and 3 carbon intensity (sales) data

Note: where an issuer has only Scope 1 and 2 absolute GHG emissions or carbon intensity (sales) data, but no Scope 3 data, the issuer will be excluded.

MSCI ESG Controversies Screens

Excludes any issuer with a "Red" MSCI ESG Controversy Score (equal to zero), which measures an issuer's involvement in major ESG controversies and how well they adhere to international norms and principles. (See pages 9-11 of the [Bloomberg MSCI ESG Fixed Income Methodology](#)).

Paris-Aligned Benchmark Methodology

This factsheet should be read in conjunction with the Bloomberg MSCI Fixed Income Paris-Aligned Methodology, available on our [website](#).

Semi-annual Emissions Rebalance Process**GHG Emission Trajectory Base Date**

The index Base Date is set to May 31, 2022.

Index Transition Date

From October 31, 2022, the Projected universe of the index transitioned to meet the minimum standards of the EU Paris-Aligned Benchmark (PAB) label, with the changes affected in the Returns Universe from November 2022.

Emissions Exclusion Process

Effective from November 2022, the semi-annual emissions exclusion process is run on the fifth last business day prior to the May and November month-ends. The process establishes the issuers that should be excluded from the index to maintain compliance with the minimum standards of the EU Paris-Aligned Benchmark (PAB) label.

- Total absolute GHG emissions as of the previous close are calculated for the Bloomberg USD Corporate 3+ Year index ("Parent") and for the Bloomberg MSCI USD Liquid Investment Grade Corporate SRI PAB index ("PAB")
- Issuers in the PAB index are ranked in descending order based on their total absolute GHG emissions
- Based on this ranking, if necessary, issuers with the highest absolute GHG emissions values are excluded from the PAB index until the following conditions are satisfied:
 - Weighted average absolute GHG emissions of the PAB index are 50% or lower than the emissions of the Parent index; and
 - Weighted average absolute GHG emissions of the PAB index are at least meeting the minimum annual reduction relative to the absolute GHG emissions of the Parent index at the Trajectory Base Date.

Rebalancing Rules & Application of Optimized Ticker Weights to Qualifying Securities

Minimum ESG Exclusions

From February 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 criteria:

- MSCI ESG Rating score (higher Ticker ESG Rating score preferred to remain in the index)
- MSCI ESG Controversy Score (higher Ticker Controversy 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 or ESG Controversy Score and is required to be removed to reach the 20% threshold, then all issuers with the same ESG Rating and ESG Controversy Score are removed.

Issuer Capping Methodology

Issuers that exceed 2% of the market value of the uncapped Bloomberg MSCI USD Liquid Investment Grade Corporate SRI PAB index are limited to 2%. The excess market value over the 2% cap is redistributed on a pro rata basis to all other bonds in the index under the 2% cap. The process is repeated until no issuer exceeds the 2% cap. For example, if an issuer represents 3% of the uncapped index, it will have 1% of the index's market value redistributed to each bond on a pro rata basis. The 2% issuer cap is applied each month as the index is rebalanced.

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 an 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, ticker changes, etc.) are reflected daily in both 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, however, 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/announced, but not necessarily settled, on or before the month-end rebalancing date, qualify for inclusion in the following month's index if 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.

Pricing Quotes

Bonds are quoted as a percentage of par.

Timing	<ul style="list-style-type: none"> • 4:00pm (New York time). • On early market closes, prices are taken as of 1:00pm (New York time), unless otherwise noted. • If the last business day of the month is a US 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.
Settlement Assumptions	<ul style="list-style-type: none"> • 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. Index users may also challenge price levels, which are then reviewed and updated as needed.
Calendar	The Bloomberg MSCI USD Liquid Investment Grade Corporate SRI PAB Index follows the US bond market holiday schedule.

Accessing Index Data

Bloomberg Terminal®	<p>Bloomberg benchmarks are the global standard for capital markets investors.</p> <ul style="list-style-type: none"> • 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)	<p>The index website makes available limited index information including:</p> <ul style="list-style-type: none"> • Index methodology and factsheets • Current performance numbers for select indices

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Index subscribers may choose to receive index data in files. Files may include:

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- 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 Ticker

I35461US: Total Return USD Unhedged

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