

Bloomberg MSCI Global Corporate Fallen Angels Paris-Aligned Index

The Bloomberg MSCI Global Corporate Fallen Angels Paris-Aligned Index is 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 standard [Bloomberg Global Corporate Fallen Angels Index](#), followed by an annual 7% decarbonization trajectory of both measures. The index uses an optimization approach to select and weight each security. To be included, securities must be rated high yield with a minimum credit rating of B3/B-. Additionally, the security must have been assigned an investment-grade rating either at issuance, or at some point since issuance. The index excludes emerging market issuers and limits the exposure of each developed market issuer to a market cap weight of 4.5%. The index negatively screens issuers that are involved in business activities that are restricted per Article 12 of the Delegated Acts, or that inconsistent with certain values-based business involvement criteria including activities related to nuclear weapons and civilian firearms. The index was created in March 2023, with history backfilled to June, 2020.

Rules for Inclusion

Sector	Corporate (industrial, utility, and financial institutions) issuers only.
Eligible Currencies	Principal and interest must be denominated in either USD, EUR, GBP, CHF, SEK, DKK, and NOK.
Eligible Countries	Emerging market issuers are excluded.
Quality	<ul style="list-style-type: none"> Securities must carry a high yield rating between B3/B- and BA1/BB+. Securities must have been assigned an investment-grade index rating either at issuance or at some point since issuance. Ratings are assigned 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: 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	<p>Fixed minimum issue sizes are set for all local currency minimums:</p> <ul style="list-style-type: none"> USD, EUR, GBP, CHF: 150mn. SEK: 1bn DKK, NOK: 500mn
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 one year until final maturity, regardless of optionality. • 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 perpetual bonds are not included. 	
Market of Issue	Publicly issued in the global or regional markets.	
Taxability	Only fully taxable issues are eligible.	
Seniority of Debt	Senior and subordinated issues are included.	
Security Types	Included	Excluded
	<ul style="list-style-type: none"> • Bullet, puttable, sinkable/amortizing and callable bonds • Original issue zero coupon • Underwritten MTN • Fixed-rate and fixed-to-floating (including fixed-to-variable) capital securities 	<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 Absolute GHG Emissions	<ul style="list-style-type: none"> • The index excludes issuers where MSCI does not have reported or estimated Scope 1, 2 and 3 absolute GHG emissions data. <ul style="list-style-type: none"> ◦ Where an issuer has only Scope 1 and 2 absolute GHG emissions data, but no Scope 3 data, the issuer will be excluded. • The index excludes issuers that are not covered by MSCI's Carbon Metrics.
MSCI Business Involvement Screens	<p>The index excludes issuers involved in the following business lines/activities per Article 12 of the EU Delegated Acts:</p> <ul style="list-style-type: none"> • Controversial Weapons <ul style="list-style-type: none"> ◦ Cluster Munitions ◦ Landmines ◦ Depleted Uranium ◦ Biological/Chemical Weapons ◦ Blinding Lasers ◦ Non-Detectable Fragments ◦ Incendiary • Tobacco Producers

- UNGC Violations
- Environment Controversy Score of 0 or 1
- Thermal Coal revenue > 0% (this index goes further than the Delegated Acts which require the Thermal Coal revenue threshold to be greater than or equal to 1%)
- Oil & Gas revenue >= 10%
- Power Generation revenue >= 50%

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

- Nuclear Weapons
- Civilian Firearms
- Adult Entertainment
- Alcohol
- Cannabis
- Conventional Weapons revenue >= 5%
- Weapons Systems/Components/Support Systems/Services revenue >= 15%

The index excludes issuers that are not in compliance with the International Labor Organization's fundamental principles.

MSCI ESG Controversies Starting from April 2023, the index excludes any issuer with a "Red" MSCI ESG Controversies score (equal to 0), or issuers that are not covered by MSCI's ESG Controversy research. MSCI ESG Controversies measure an Issuer's involvement in major ESG controversies and how well they adhere to international norms and principles (see page 11 of [ESG Methodology](#)).

Optimization Constraints and Calculations

Overview

- All qualifying securities are selected from the Bloomberg Global Corporate Fallen Angels Index ("Parent Index")
- An optimizer is used, as described in the Bloomberg MSCI Fixed Income Paris-Aligned Optimization Methodology Supplement, to weight each Constituent in the Index.
 - The optimizer runs once per month to calculate notional positions of each Constituent
 - This process will not impact bond prices and other security-level analytics

Determination Date

The fifth last business day of each month.

Objective Function

Absolute Deviations from the Target Universe

- The optimizer seeks to minimize the total of the absolute differences between the optimized weight of each Constituent and its weight in the Parent Index

Weight Bounds

With respect to each Determination Date d , the Upper and Lower Weight Bounds of each Constituent i is determined as follows:

If Constituent i is an Excluded Constituent:

$$\begin{aligned} ub_d^i &= 0\% \\ lb_d^i &= 0\% \end{aligned}$$

Else:

$$ub_a^i = \begin{cases} \min(1\%, 10 \times b_a^i) & \text{if } mv_a^i \leq \$500\text{MM} \\ \min(1\%, 20 \times b_a^i) & \text{otherwise} \end{cases}$$

$$lb_a^i = \min(0.1\%, 0.5 \times b_a^i)$$

Where:

ub_a^i and lb_a^i mean the Upper and Lower Weight Bounds respectively for Constituent i ;

b_a^i means the Parent Index Weight of Constituent i on Determination Date d ; and

mv_a^i means the Market Value of Constituent i .

Credit Clusters

- BB+ (BA1), BB (BA2), BB- (BA3), B+ (B1), B (B2), B- (B3)

Optimization Constraints

Constraint	Parameter	Value
Budget <i>Weights add up to 100%</i>	Sum	100%
Turnover from Current <i>Two-way turnover does not exceed 2%</i>	Max	2%
Decarbonisation Trajectory <i>Reduction in weighted average of GHG emissions of at least 50% from the Parent Index, and a minimum annual reduction of 7% relative to the absolute GHG emissions at Base Date.</i>	Carbon Measure	MSCI Absolute GHG Emissions
	Coefficient	50%
	Decay	0.93
	Periods	12
Green Revenue <i>Weighted average of Green Revenue must exceed that of the Parent Index</i>	Coefficient	1.0001
Yield to Worst (YTW) <i>Yield To Worst must be greater than or equal to the Parent Index</i>	Type	Relative Value to Parent
	Lower	0
	Min	$-\infty$
	Upper	∞
	Max	∞
Option Adjusted Duration (OAD) <i>Option Adjusted Duration must be within 3 months of the Parent Index</i>	Type	Relative Value to Parent
	Lower	0.25
	Min	0
	Upper	0.25
	Max	∞
Sector <i>The weight of each BCLASS 3 sector, other than Energy, must be within 5% of its weight in the Parent Index</i>	Type	Relative Value to Parent
	Selection	Excluding
	Exclude	Energy
	Lower	5%
	Min	0%
	Upper	5%
	Max	100%
Credit <i>Each Credit Cluster must be within 5% of its weight in the Parent Index</i>	Type	Relative Value to Parent
	Selection	Excluding
	Exclude	n/a
	Lower	5%
	Min	0%
	Upper	5%
	Max	100%
Ticker <i>The weight of each Ticker must be within 2% of its weight in the Parent Index, and must not exceed 4.5%</i>	Type	Relative Value to Parent
	Selection	Excluding
	Exclude	n/a
	Lower	2%
	Min	0%
	Upper	2%

Max

4.5%

Constraint Relaxation Process

If no solution is found for the Optimization Problem, the , the Turnover from Current constraint is iteratively relaxed according to the following process until either a solution is found, or the relaxation process is exhausted.

On each iteration, the Constraint Parameter 'Max' is increased by increments of 0.2%. If the value of Constraint Parameter 'Max' is less than or equal to the turnover of the Parent Index + 6%, then an attempt to solve the Optimization Problem is performed. Otherwise, the Constraint Parameter 'Max' is set to equal the turnover of the Parent Index + 6% and an attempt to solve the Optimization Problem is performed.

The relaxation process completes when either a solution is found, or an attempt to solve the Optimization Problem with the Turnover Constraint Parameter 'Max' set to the turnover of the Parent Index + 6% has been performed.

GHG Emission Trajectory Base Date

The index Base Date is set to June 30, 2020.

Parent Index Methodology

Refer to the Bloomberg Global Corporate Fallen Angels Index ("Parent Index") [methodology](#). Index ID I37587US Index - Total Return USD Unhedged.

Paris-Aligned Benchmark Methodology

This factsheet should be read in conjunction with the following documents:

- Bloomberg MSCI Fixed Income Paris-Aligned Methodology, available on our [website](#).
- Bloomberg MSCI Fixed Income Paris-Aligned Optimization Methodology Supplement, available on our [website](#).

Rebalancing Rules**Frequency**

The composition of the index is rebalanced on the fifth last business day of each month and represents the fixed set of bonds on which index returns are calculated for the next month. Qualifying securities issued after the index has been rebalanced, but before month-end, will not be included in the index until the next rebalance.

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. 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 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 (the fifth last business day of each month), qualify for inclusion in the index if required security reference information and pricing are readily available. Securities issued/announced after the month-end rebalancing date will not be included in the index until the following month.

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	Prices are snapped at the following times: <ul style="list-style-type: none"> • USD denominated bonds: 4pm (New York time) starting from January 14, 2021 and onwards, and 3pm (New York time) prior to January 14, 2021. • Pan-European currency bonds: 4:15pm (London time); 4pm (London time) for CHF-denominated securities. • If the last day of the month is 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 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 Global Corporate Fallen Angels 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®	<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.
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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

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- 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 Ticker

I37640US: Total Return USD Unhedged

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