

**METHODOLOGY BOOK FOR:**

- **MSCI USD IG LIQUID SRI SUSTAINABLE CORPORATE BOND INDEX**
- **MSCI EUR IG SRI SUSTAINABLE EX FOSSIL FUEL (1-3Y) CORPORATE BOND INDEX**
- **MSCI EUR IG SRI SUSTAINABLE EX FOSSIL FUEL CORPORATE BOND INDEX**
- **MSCI USD HY SRI SUSTAINABLE CORPORATE BOND INDEX**
- **MSCI EUR HY SRI SUSTAINABLE CORPORATE BOND INDEX**

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## 1 General Methodology Overview

The MSCI USD IG Liquid SRI Sustainable Corporate Bond Index, MSCI USD HY SRI Sustainable Corporate Bond Index, MSCI EUR IG SRI Sustainable ex Fossil Fuel Corporate Bond Index, MSCI EUR IG SRI Sustainable ex Fossil Fuel (1-3Y) Corporate Bond Index and MSCI EUR HY SRI Sustainable Corporate Bond Index (the 'Indexes') are market value-weighted and are constructed over an issuance weighted universe of corporate bonds, which are defined by applying various selection criteria, such as security type, credit rating, bond size, maturity, country of domicile.

The Indexes aim to represent the performance of companies that are consistent with specific values-based business involvement criteria and at the same time have a relatively better Environmental, Social and Governance ("ESG") profile vs. the relevant underlying issuance-weighted parent index. The index includes issuers with MSCI ESG Rating of BBB or higher and negatively screens out issuers that are involved in red flag controversies or in business activities like Alcohol, Civilian Firearms, Gambling, Nuclear Weapons, Controversial Weapons, Conventional Weapons, Nuclear Power, Tobacco, Adult Entertainment, Genetic Engineering, Thermal Coal and Fossil Fuels.

## 2 MSCI ESG Research

The Indexes use company ratings and research provided by MSCI ESG Research LLC. In particular, these indexes use the following MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research and MSCI Climate Change Metrics.

For details on MSCI ESG Research’s full suite of ESG products, please refer to: <https://www.msci.com/esg-integration>

### 2.1 MSCI ESG Ratings

MSCI ESG Ratings provides research, analysis and ratings of how well companies manage environmental, social and governance risks and opportunities.

MSCI ESG Ratings provides an overall company ESG rating - a seven-point scale from ‘AAA’ to ‘CCC’. In addition, the product provides scores and percentiles indicating how well a company manages each key issue relative to industry peers.

For more details on MSCI ESG Ratings, please refer to: <https://www.msci.com/esg-ratings>.

### 2.2 MSCI ESG Controversies

MSCI ESG Controversies provides assessments of controversies concerning the negative environmental, social, and/or governance impact of company operations, products and services. The evaluation framework used in MSCI ESG Controversies is designed to be consistent with international norms represented by the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the UN Global Compact. MSCI ESG Controversies Score falls on a 0-10 scale, with “0” being the most severe controversy.

For more details on MSCI ESG Controversies Score, please refer to: <https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>.

### 2.3 MSCI ESG Business Involvement Screening Research

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage ESG standards and restrictions reliably and efficiently.

For more details on MSCI ESG Business Involvement Screening Research, please refer to [http://www.msci.com/resources/factsheets/MSCI\\_ESG\\_BISR.pdf](http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf).

## 2.4 MSCI Climate Change Metrics

MSCI Climate Change Metrics are designed to support investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, and factoring climate change research into their risk management processes. It provides Carbon Emissions, Fossil Fuel exposure, environmental impact (i.e., clean technology) data and screens, as well as climate-related risk exposure and management assessment on companies such as Low Carbon Transition scores and categories.

For more details on MSCI Climate Change Metrics, please refer to:

<https://www.msci.com/climate-change-solutions>.

### 3 Index Construction Methodology

The Indexes are constructed over issuance weighted parent indexes ('Parent Indexes') as noted below:

| Index  | Parent Index                                |
|--|---|
| MSCI USD IG Liquid SRI Sustainable Corporate Bond Index                | MSCI USD IG Corporate Bond Index            |
| MSCI USD HY SRI Sustainable Corporate Bond Index                       | MSCI USD HY 500 Custom Corporate Bond Index |
| MSCI EUR IG SRI Sustainable ex Fossil Fuel Corporate Bond Index        | MSCI EUR IG 500 Custom Corporate Bond Index |
| MSCI EUR IG SRI Sustainable ex Fossil Fuel (1-3Y) Corporate Bond Index | MSCI EUR IG 500 Custom Corporate Bond Index |
| MSCI EUR HY SRI Sustainable Corporate Bond Index                       | MSCI EUR HY 250 Custom Corporate Bond Index |

#### 3.1 Defining the Parent Index

##### 3.1.1 General Guidelines

The Parent Indexes are constructed from a universe of corporate bonds denominated in USD and EUR.

Index eligible bonds are selected by applying the following criteria<sup>1</sup>.

Security Type:

| Eligible Security Types          | Ineligible Security Types  |
|----------------------------------|----------------------------|
| Corporate Debt only <sup>2</sup> | Floating Rate Coupon Bonds |
| Senior and Subordinated Issues   | Zero Coupon Bonds          |
| Puttable and Callable Bonds      | Inflation Protected Bonds  |
| Bullet Bonds                     | Perpetual Bonds            |

<sup>1</sup> MSCI leverages the GICS® sector classification framework for construction of the respective Parent Indexes. Please refer to MSCI GICS Methodology for details. The GICS methodology is available at: [www.msci.com/GICS](http://www.msci.com/GICS)

<sup>2</sup> Corporate issuers classified as government owned as per MSCI data vendors are excluded from the Indexes. Each corporate issuer eligible for Index inclusion will have a GICS code assigned to it.

| Eligible Security Types   | Ineligible Security Types         |
|---|-----------------------------------|
| Bonds with Step-up / Step-down Coupons  | Bonds with sinking fund provision |
| USD denominated indexes include 144A bonds <sup>3</sup> while EUR denominated indexes include RegS bonds  | Private Placements                |
| Fixed to Floating Rate Bonds are eligible for inclusion during their fixed rate term only. They are excluded 1 year prior to the conversion date as measured from the effective date of Index rebalancing <sup>4</sup> (Rebalancing Date) | Dual Currency Bonds               |
|   | Strips (IO/PO)                    |
|   | PIKs and Hybrids <sup>5</sup>     |

**Credit Rating:** Eligible Index constituents must be rated either by S&P or Moody’s. For bonds that are rated by both S&P and Moody’s, the lower rating will be used to determine the index inclusion criteria.

The table below summarizes higher and lower rating thresholds for Investment Grade (IG), Corporate Bond Indexes and High Yield (HY) Corporate Bond Indexes.

|           | S&P Rating              |                        | Moody’s Rating          |                        |
|-----------|-------------------------|------------------------|-------------------------|------------------------|
|           | Higher Rating Threshold | Lower Rating Threshold | Higher Rating Threshold | Lower Rating Threshold |
| <b>IG</b> | AAA                     | BBB-                   | Aaa                     | Baa3                   |
| <b>HY</b> | BB+                     | CC                     | Ba1                     | Ca                     |

**Issuer Country of Domicile:** Eligible Index constituents must belong to issuers domiciled in the Developed Market universe as described in Appendix I of this document.

**Maturity:** Eligible Index constituents must have a maturity greater than or equal to 1 year as measured from the Rebalancing Date. New additions to the index must have

<sup>3</sup> The MSCI USD IG Corporate Bond Index only includes 144a bonds with registration rights, whereas the MSCI USD HY 500 Custom Corporate Bond Index includes both 144a bonds with registration rights and 144a bonds without registration rights.

<sup>4</sup> See section 4 “Index Rebalancing & Maintenance” for more details on Rebalancing Dates.

<sup>5</sup> Equity linked hybrid bonds are ineligible (e.g. - convertible bonds, warrants, preferred shares etc.)

a maturity greater than or equal to 1 ½ years as measured from the Rebalancing Date.

**Corporate Event:** Eligible Index constituents must not have any known corporate events which will result in notional amount outstanding of the bond falling below the minimum bond size criteria over the next 1 month as measured from the Rebalancing Date.

**Pricing:** MSCI uses bid side pricing from its data vendors. Securities included in the index are priced to par. Securities not priced by the designated pricing source are ineligible for index inclusion. If an index constituent is no longer priced (intra-rebalancing) by the pricing source or the price is unavailable, then last available price is used for index calculation.

**Size:** At rebalancing, eligible index constituents must have a notional amount outstanding greater than or equal to the thresholds tabulated below.

| Index  | Security Size Threshold | Issuer Size Threshold |
|--|-------------------------|-----------------------|
| <b>MSCI USD IG Corporate Bond Index</b>            | USD 750 million         | USD 2 billion         |
| <b>MSCI USD HY 500 Custom Corporate Bond Index</b> | USD 500 million         | -                     |
| <b>MSCI EUR IG 500 Custom Corporate Bond Index</b> | EUR 500 million         | -                     |
| <b>MSCI EUR HY 250 Custom Corporate Bond Index</b> | EUR 250 million         | -                     |



## 3.2 Defining the Indexes

The Indexes are constructed by applying the following steps on the Parent Indexes –

### 3.2.1 ESG Screening

The Eligible Universe is constructed by excluding securities based on the following criteria. MSCI applies these exclusions based on the data provided by MSCI ESG Research at the time of the Index rebalancing.

#### ESG Ratings Eligibility

Eligible Index constituents must have an MSCI ESG Rating of ‘BBB’ or above.

#### ESG Controversies Score Eligibility

Eligible Index constituents are required to have an MSCI ESG Controversies Score of 1 or above.

#### Controversial Business Involvement Criteria

The MSCI SRI criteria uses MSCI ESG Business Involvement Screening Research and MSCI Climate Change Metrics to identify companies that are involved in the following business activities. Please refer to Appendix II for details on the screening criteria

- Controversial Weapons
- Civilian Firearms
- Nuclear Weapons
- Tobacco
- Adult Entertainment
- Alcohol
- Conventional Weapons
- Gambling
- Genetically Modified Organisms
- Nuclear Power
- Fossil Fuel Reserves Ownership
- Thermal Coal

The following criteria is only applicable to the MSCI EUR IG SRI Sustainable ex Fossil Fuel Corporate Bond Index and MSCI EUR IG SRI Sustainable ex Fossil Fuel (1-3Y) Corporate Bond Index.

#### Fossil Fuel Exclusion Criteria

The MSCI EUR IG SRI Sustainable ex Fossil Fuel Corporate Bond Index and MSCI EUR IG SRI Sustainable ex Fossil Fuel (1-3Y) Corporate Bond Index uses the MSCI ESG Climate Change Metrics to identify and exclude companies with fossil fuel reserves. Please refer to Appendix II for details on this screening criteria.

In addition to ESG-based screens, a maturity screen is applied to construct the MSCI EUR IG SRI Sustainable ex Fossil Fuel (1-3Y) Corporate Bond Index.

All eligible constituents in this Index must have a maturity greater than or equal to 1 year and less than or equal to 3 years, as measured from the Rebalancing Date.

#### **3.2.2 Time from Issuance Constraint**

For the investment grade indexes, all eligible constituents must have time from issuance less than or equal to five years, as measured on the Rebalancing Date.

### **3.3 Weighting Scheme**

Eligible Index constituents are weighted based on their market value.

## 4 Index Rebalancing & Maintenance

### 4.1 Monthly Index Reviews

The Indexes are rebalanced **monthly**, coinciding with the monthly index rebalancing of the Parent Indexes. The pro-forma Indexes are in general announced **three** business days before the effective date of rebalancing or Rebalancing Date (first business day of the month).

In general, MSCI uses the latest available MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores, MSCI Business Involvement Screening Research and MSCI Climate Change Metrics) for the rebalancing of the MSCI Indexes.

At each Monthly Index Review, the Eligible Universe is updated, and the composition of the Index is re-assessed. Any inclusion or exclusion criteria satisfied for a given security in the universe, after the cut-off date (T-3), will generally become effective at the following monthly rebalancing; should conditions remain unchanged.

Any cash that accrues within the Index in each month is re-invested on a pro-rata basis across the Index constituents, on the effective date of rebalancing. In essence, cash in the Index is removed on rebalancing and the opening Index on the Rebalancing Date starts with zero accrued cash balance.

For further information on index total return calculation and corporate events handling please refer to the MSCI Fixed Income Index Calculation Methodology<sup>6</sup>.

For the holiday calendar used in the indexes, please refer to the MSCI Fixed Income Data Methodology<sup>7</sup>.

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<sup>6</sup> MSCI Fixed Income Index Calculation Methodology - [www.msci.com/index-methodology](http://www.msci.com/index-methodology)

<sup>7</sup> MSCI Fixed Income Data Methodology - [www.msci.com/index-methodology](http://www.msci.com/index-methodology)

## Appendix I: List of developed market countries

|           |                          |
|-----------|--------------------------|
| Australia | Japan                    |
| Austria   | Luxembourg <sup>8</sup>  |
| Belgium   | Netherlands              |
| Canada    | New Zealand              |
| Denmark   | Norway                   |
| Finland   | Portugal                 |
| France    | Singapore                |
| Germany   | Spain                    |
| Hong Kong | Sweden                   |
| Ireland   | Switzerland              |
| Israel    | United Kingdom           |
| Italy     | United States of America |

<sup>8</sup> Luxembourg is considered a part of the developed markets universe for both fixed income and equity asset classes. In MSCI Equity Indexes, (e.g., MSCI World Index) Luxembourg is not included, because its equity market size fails to clear the minimum inclusion criteria as per MSCI Global Investable Market Indexes (GIMI) methodology.

## Appendix II: Business Involvement Screening Criteria

### Controversial Business Involvement Criteria

- **Alcohol**
  - All companies either deriving 5% or more revenue from the production of alcohol related products, or deriving 15% or more aggregate revenue from the production, distribution, retail, and supply of alcohol related products
- **Civilian Firearms**
  - All companies either classified as “Producer” of firearms and small arms ammunitions for civilian markets. It does not include companies that cater to the military, government, and law enforcement markets, or companies deriving 5% or more aggregate revenue from the production and distribution (wholesale or retail) of firearms or small arms ammunition intended for civilian use
- **Gambling**
  - All companies either deriving 5% or more revenue from ownership of operation of gambling related business activities or deriving 15% or more aggregate revenue from gambling related business activities
- **Nuclear Weapons**
  - All companies that manufacture nuclear warheads and/or whole nuclear missiles
  - All companies that manufacture components that were developed or are significantly modified for exclusive use in nuclear weapons (warheads and missiles)
  - All companies that manufacture or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons
  - All companies that provide auxiliary services related to nuclear weapons
  - All companies that manufacture components that were not developed or not significantly modified for exclusive use in nuclear weapons (warheads and missiles) but can be used in nuclear weapons
  - All companies that manufacture or assemble delivery platforms that were not developed or not significantly modified for the exclusive delivery of nuclear weapons but have the capability to deliver nuclear weapons
  - All companies that manufacture components for nuclear-exclusive delivery platforms

- **Controversial Weapons**
  - All companies with any tie to Controversial Weapons (cluster munitions, landmines, depleted uranium weapons, biological/chemical weapons, blinding lasers, non-detectable fragments and incendiary weapons)
- **Conventional Weapons**
  - All companies either deriving 5% or more revenue from the production of conventional weapons and components, or deriving 15% or more aggregate revenue from weapons systems, components, and support systems and services
- **Nuclear Power**
  - All companies generating 5% or more of their total electricity from nuclear power in a given year
  - All companies that have 5% or more of installed capacity attributed to nuclear sources in a given fiscal year
  - All companies deriving 15% or more aggregate revenue from nuclear power activities
- **Tobacco**
  - All companies either classified as a “Producer” or deriving 5% or more of their aggregate revenue from the production, distribution, retail, supply, and licensing of tobacco related products
- **Adult Entertainment**
  - Excludes all companies either deriving 5% or more revenue from the production of adult entertainment materials, or deriving 15% or more aggregate revenue from the production, distribution, and retail of adult entertainment materials
- **Genetically Modified Organisms (GMO)**
  - All companies deriving 5% or more revenue from activities like genetically modifying plants, such as seeds and crops, and other organisms intended for agricultural use or human consumption
- **Fossil Fuel Reserves Ownership**
  - All companies with evidence of owning proven & probable coal reserves and/or proven oil and natural gas reserves used for energy purposes.
- **Thermal Coal**
  - All companies deriving any revenue (either reported or estimated) from thermal coal mining or unconventional oil and gas extraction.

- **Thermal Coal Mining**
  - Revenue from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. It does not cover revenue from metallurgical coal; coal mined for internal power generation (e.g. in the case of vertically integrated power producers); intra-company sales of mined thermal coal; and revenue from coal trading
- **Unconventional Oil & Gas Extraction**
  - Revenue from oil sands, oil shale (kerogen-rich deposits), shale gas, shale oil, coal seam gas, and coal bed methane. It does not cover all types of conventional oil and gas production including Arctic onshore/offshore, deep water, shallow water and other onshore/offshore
- **Thermal Power**
  - All companies deriving 5% or more revenue (either reported or estimated) from thermal coal-based power generation

**Fossil Fuel Exclusion Screening Criteria**

The screen identifies companies with an industry tie to fossil fuels (thermal coal, oil and gas), in particular fossil fuel reserve ownership, related revenues from fossil fuel exposure and power generation. The screen does not flag companies providing evidence of owning metallurgical coal reserves.

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