

MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index Methodology

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1 MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index (the 'Index') aims to represent the performance of a set of companies from MSCI ACWI IMI that are associated with positive contribution to SDG 12¹ through their products or services, as defined using the following measures:

- Alternative Energy
- Energy Efficiency
- Green Building
- Sustainable Water
- Pollution Prevention
- Sustainable Agriculture

The Index also supplements these measures by selecting companies that help enable the transition to a circular economy, which are measured by the following key issues:

- Water Stress
- Biodiversity & Land Use
- Raw Material Sourcing
- Toxic Emissions & Waste
- Packaging Material & Waste
- Electronic Waste

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index also applies a set of exclusions criteria to screen companies with business activities that are not considered to be aligned with the overall objective of ensuring sustainable consumption and production patterns, as well as any of the other 16 SDGs. The Index utilizes a combination of weighting strategies at both security and component levels, as well as applies a minimum weight filter and issuer capping.

¹ SDG 12 refers to one of the 17 United Nations Sustainable Development Goals, as part of the 2030 Agenda for Sustainable Development, which aims to ensure sustainable consumption and production patterns. (<https://sdgs.un.org/goals/goal12>)

2 MSCI ESG Research

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index uses company ratings and research provided by MSCI ESG Research LLC. In particular, the Index uses the following MSCI ESG Research products: MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG 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-investing>.

2.1 MSCI Impact Solutions: Sustainable Impact Metrics

MSCI Impact Solutions’ Sustainable Impact Metrics is designed to identify companies that derive revenue from products or services with positive impact on society and the environment. The Sustainable Impact Metrics are comprised of six Environmental Impact categories and seven Social Impact categories arranged by theme.

MSCI Sustainable Impact Taxonomy

Pillar	Themes	Categories
Environmental Impact	Climate Change	1. Alternative energy 2. Energy efficiency 3. Green building
	Natural capital	4. Sustainable water 5. Pollution prevention 6. Sustainable agriculture
Social Impact	Basic needs	7. Nutrition 8. Major Disease Treatment 9. Sanitation 10. Affordable Real Estate
	Empowerment	11. SME Finance 12. Education 13. Connectivity – Digital divide

Under each of the actionable environmental and social impact themes, MSCI ESG Research has identified specific categories of products and services that it has determined companies can offer as potential solutions to environmental and social challenges.

More detailed taxonomy for each category can be found in Section 2.4 of the MSCI ACWI Sustainable Impact Index Methodology available at <https://www.msci.com/index-methodology>.

2.2 MSCI Impact Solutions: SDG Alignment

MSCI Impact Solutions' SDG Alignment is designed to provide a holistic view of companies' net contribution – both positive and negative – towards addressing each of the 17 UN Sustainable Development Goals (SDGs). SDG Alignment assessments and scores include analysis of companies' operations, products and services, policies, and practices and their net contribution – positive and adverse – to addressing key global challenges.

The MSCI SDG Alignment framework provides 17 SDG Net Alignment scores and 17 SDG Net Alignment assessments (including Strongly Aligned, Aligned, Neutral, Misaligned and Strongly Misaligned) for each of the 17 global goals. In addition, the model offers assessments and scores for two dimensions, product alignment and operation alignment, for each company and for each of the 17 goals.

For more details on MSCI Impact Solutions including MSCI SDG Alignment, please refer to <https://www.msci.com/our-solutions/esg-investing/impact-solutions>.

2.3 MSCI ESG Ratings

MSCI ESG Ratings provides research, data, 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, as well as underlying data and metrics used to compile the scores and ratings.

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

2.4 MSCI ESG Controversies

MSCI ESG Controversies (formerly known as MSCI Impact Monitor) 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, please refer to <https://www.msci.com/documents/10199/acbe7c8a-a4e4-49de-9cf8-5e957245b86b>.

2.5 MSCI ESG Business Involvement Screening Research

MSCI ESG Business Involvement Screening Research (BISR) aims to enable institutional investors to manage environmental, social and governance (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.

2.6 MSCI Climate Change Metrics

MSCI Climate Change Metrics provides climate data & tools to support investors integrating climate risk & opportunities into their investment strategy and processes. It supports investors seeking to achieve a range of objectives, including measuring and reporting on climate risk exposure, implementing low carbon and fossil fuel-free strategies, align with temperature pathways and factoring climate change research into their risk management processes, in particular through climate scenario analysis for both transition and physical risks.

The dataset spans across the four dimensions of a climate strategy: transition risks, green opportunities, physical risks and 1.5° alignment.

For more details on MSCI Climate Change Metrics, please refer to <https://www.msci.com/climate-solutions>.

3 Constructing the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index

3.1 Selection Universe

The underlying universe for the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index is defined by the constituents of the MSCI ACWI Investable Market Indexes (IMI, the 'Parent Index'), from which three separate universes of stocks are constructed (as described in sections 3.2 to 3.4).

3.2 Filtered Universe

3.2.1 ESG Filter

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index uses MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research, MSCI Climate Change Metrics, and MSCI Impact Solutions' SDG Alignment to determine eligibility. The exclusions filters are as follows:

- Controversial Weapons
- Nuclear Weapons
- Conventional Weapons
- Civilian Firearms
- Tobacco
- Thermal Coal Mining
- Thermal Coal-based Power Generation
- Oil Sands Extraction
- UN Global Compact Violations
- ESG Controversies Score
- ESG Ratings
- SDG Net Alignment

Please refer to Appendix 1 for details on these criteria.

3.2.2 Country filter

Securities listed on local exchanges in any of the below select countries² are excluded from the final index:

- India
- Saudi Arabia
- Kuwait
- Pakistan
- Egypt

3.3 SDG Impact Universe

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index uses MSCI Impact Solutions' Sustainable Impact Metrics to identify companies that have exposure to products and services that aim to contribute to the UN Sustainable Development Goal 12 – Responsible Consumption and Production. Companies in the Filtered Universe that have an aggregated revenue of 50% or more from the following categories ('SDG Revenue') are included in the SDG Impact Universe:

- Alternative Energy
- Energy Efficiency
- Green Building
- Sustainable Water
- Pollution Prevention
- Sustainable Agriculture

3.4 SDG Thematic Universe

The SDG Thematic Universe is constructed by selecting companies in the Filtered Universe (Section 3.2) that are not part of the SDG Impact Universe (Section 3.3) and are assessed as helping enable the transition to a circular economy (Section 3.4.1).

3.4.1 "Circular Transition" Universe

The Circular Transition Universe uses MSCI ESG Ratings' key issue management scores to identify companies that have better management strategies to protect natural resources and/or address waste issues relative to their sector peers. It is

² If securities listed in Kazakhstan, Kenya, Ukraine, Russia, or Vietnam are added to MSCI ACWI IMI, they will be excluded from these indexes

constructed by selecting stocks in the top 10% of MSCI ACWI IMI based on their Sector-Relative Management Score (SRMS), which is computed using the following key issue management scores:

- Water Stress
- Biodiversity & Land Use
- Raw Material Sourcing³
- Toxic Emissions & Waste
- Packaging Material & Waste
- Electronic Waste

Please refer to Appendix 2 detailing the computation steps.

3.4.2 Thematic selection criteria

The following additional screens are applied to the Circular Transition Universe, as outlined in Section 3.4.1:

- **SDG Revenue**
Companies that do not have any revenue from products, services, and projects that contribute to SDG 12 are excluded from the SDG Thematic Universe.
- **Key Issue Management Score**
Companies belonging to the bottom 50% on any of the six key issue management scores⁴ are excluded from the SDG Thematic Universe.

3.5 Weighting Scheme

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index constituents that are determined to be part of the SDG Impact and SDG Thematic universes are weighted as follows:

³ There is no single management score for the Raw Material Sourcing Key Issue, as the underlying data incorporates six raw materials. As a result, the Raw Material Sourcing Key Issue Score is used in lieu of the management score.

⁴ The exclusion is applied on each key issue, excluding the bottom 50% score for key issue 1, bottom 50% score for key issue 2, and so forth. The bottom 50% per key issue management score is calculated from companies in MSCI ACWI IMI with more than 5% weight assigned to the respective key issue.

3.5.1 Security Weighting

- **SDG Impact Universe**
Securities that meet the selection criteria outlined in Section 3.3 are weighted by the product of the aggregated SDG Revenue and their free float-adjusted market capitalization. The weights are then normalized to sum to 100%.
- **SDG Thematic Universe**
Securities that meet the selection criteria outlined in Section 3.4 are weighted in proportion of their free float-adjusted market capitalization. The weights are then normalized to sum to 100%.

3.5.2 Component Weighting

Each component is scaled down to the following proportion:

Component	Component Weight
SDG Impact	75%
SDG Thematic	25%

3.5.3 Minimum Weight Filter

The combined index applies a filter whereby each newly added constituent's weight is held at a minimum threshold of 2 basis points, whereas an existing constituent can be retained in the Index at a minimum threshold of 1 basis point. Securities that do not meet the threshold specified are deleted from the final index.

3.5.4 Issuer Capping

The maximum weight of any issuer in the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index is then capped at 4.5% in accordance with the MSCI Capped Indexes methodology⁵. The excess weight of the capped issuers is distributed among the remaining constituents in proportion of their existing weights in the Index⁶.

⁵ Please refer to the MSCI Capped Indexes methodology at www.msci.com/index-methodology

⁶ Issuer capping may result in a drift in the component weights.

4 Maintaining the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index

4.1 Semi-Annual Index Review

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index is reviewed on a semi-annual basis, as of the close of the last business day of May and November, coinciding with the May and November Semi-Annual Index Reviews of the Parent Index. The pro forma index is generally announced nine business days before the effective date.

As a rule, MSCI uses MSCI ESG Research data (including MSCI Impact Solutions, MSCI ESG Ratings, MSCI ESG Controversies, MSCI Business Involvement Screening Research, and MSCI Climate Change Metrics) as of the end of the month preceding the Index Reviews for the rebalancing of the Index. For some securities, such data may not be published by MSCI ESG Research by the end of the month preceding the Index Review. For such securities, MSCI will use ESG data published after the end of month, when available, for the rebalancing of the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index.

At each Semi-Annual Index Review, the Filtered, SDG Impact, and SDG Thematic universes are updated based on the criteria outlined in sections 3.2 to 3.4.

4.2 Quarterly Index Reviews

The MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index is also reviewed on a quarterly basis to coincide with the regular Index Reviews of the Parent Indexes. The changes are implemented at the end of February and August. The pro forma indexes are generally announced nine business days before the effective date.

At the Quarterly Index Reviews, the Index is not reconstructed. However, the issuer capping rule described in Section 3.5.4 is applied.

4.3 Ongoing Event-Related Maintenance

The general treatment of corporate events in the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index aims to minimize turnover outside of Index Reviews. The methodology aims to appropriately represent an investor's participation in an event based on relevant deal terms and pre-event weighting of the index constituents that are involved. Further, changes in index market capitalization that occur as a result of corporate event implementation will be offset by a corresponding change in the Variable Weighting Factor (VWF) of the constituent.

The following section briefly describes the treatment of common corporate events within the Index.

No new securities will be added (except where noted below) to the Index between Index Reviews. Parent Index deletions will be reflected simultaneously.

There are no deletions from the MSCI ACWI IMI SDG 12 Responsible Consumption and Production Select Index between Index Reviews on account of a security becoming ineligible because of reduced SDG revenue falling below the threshold, decrease in MSCI ESG Controversies Score, change in SDG Alignment assessment, and/or change in business involvement.

EVENT TYPE	EVENT DETAILS
New additions to the Parent Index	A new security added to the Parent Index (such as IPO and other early inclusions) will not be added to the index.
Spin-Offs	All securities created as a result of the spin-off of an existing Index constituent will be added to the Index at the time of event implementation if the spin-off security is also added to the Parent Index. Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.
Merger/Acquisition	<p>For Mergers and Acquisitions, the acquirer's post event weight will account for the proportionate amount of shares involved in deal consideration, while cash proceeds will be invested across the Index.</p> <p>If an existing Index constituent is acquired by a non-Index constituent, the existing constituent will be deleted from the Index and the acquiring non-constituent will not be added to the Index.</p>
Changes in Security Characteristics	A security will continue to be an Index constituent if there are changes in characteristics (country, sector, size segment, etc.). Reevaluation for continued inclusion in the Index will occur at the subsequent Index Review.

Further detail and illustration regarding specific treatment of corporate events relevant to this Index can be found in the MSCI Corporate Events Methodology.

The MSCI Corporate Events methodology book is available at:
<https://www.msci.com/index-methodology>.

Appendix 1: ESG Exclusions Criteria

Companies are excluded based on the following MSCI Business Involvement Screening Research, MSCI Climate Change Metrics, MSCI ESG Controversies, MSCI ESG Ratings and MSCI SDG Alignment filters:

- **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), as defined by the methodology of the MSCI Global Ex-Controversial Weapons Indexes available at <https://www.msci.com/index-methodology>

- **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

- **Conventional Weapons**

- All companies deriving 5% or more revenue from the production of conventional weapons
- All companies deriving 10% or more aggregate revenue from weapons systems, components, and support systems and services

- **Civilian Firearms**

- All companies 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
- All 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

- **Tobacco**

- All companies that manufacture tobacco products, such as cigars, blunts, cigarettes, e-cigarettes, inhalers, beedis, kreteks, smokeless tobacco, snuff, snus, dissolvable and chewing tobacco. This category also covers companies that grow or process raw tobacco leaves
- All companies deriving 5% or more aggregate revenue from the production, distribution, retail, supply, and licensing of tobacco-related products

- **Thermal Coal Mining**

- All companies deriving 5% or more revenue (either reported or estimated) 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

- **Thermal Coal-based Power Generation**

- All companies deriving 5% or more revenue (either reported or estimated) from the thermal coal-based power generation

- **Oil Sands Extraction**

- All companies deriving 5% or more revenue (either reported or estimated) from oil sands extraction for a set of companies that own

oil sands reserves and disclose evidence of deriving revenue from oil sands extraction. It does not cover revenue from non-extraction activities (e.g. exploration, surveying, processing, refining); ownership of oil sands reserves with no associated extraction revenues; revenue from intra-company sales

- **United Nations Global Compact Compliance**
 - All companies that fail to comply with the United Nations Global Compact principles
- **ESG Controversies Score**
 - All companies that are involved in environmental, social, and/or governance controversies assessed as Red Flags (Score of 0 or those with very severe controversies)
- **ESG Ratings**
 - All companies assessed as having an MSCI ESG Rating of 'B' and 'CCC'
- **SDG Net Alignment**
 - All companies that are assessed as Strongly Misaligned and Misaligned on their Net Alignment to any of the 17 SDGs

Note on Unrated Securities or Securities with Missing Coverage:

Companies that are not assessed on MSCI ESG Research's ESG Controversies, ESG Ratings, and SDG Alignment are excluded from the final universe.

Appendix 2: Sector-Relative Management Score (SRMS) Calculation

Companies are selected based on their SRMS. The calculation steps are as follows:

1. An average management score (AMS) is calculated for companies in MSCI ACWI IMI using management scores based on the identified key issues, granted that they meet the following conditions:
 - Companies are assessed on any of the identified key issues listed in Section 1.4.
 - Companies have corresponding key issue weights greater than 5%.

The calculation of AMS will consider the applicable number of key issues, meaning a company with two relevant scores are divided by two, for example.

2. The SRMS is calculated for companies that are identified in Step 1 by dividing the AMS by the corresponding highest (maximum) AMS based on their GICS®⁷ Sector.

Exception clause: A GICS® Sector with a maximum AMS below 5 is excluded from scope, which in turn, results in the exclusion of all companies belonging to the excluded sector, from the calculation of SRMS

⁷ GICS, the global industry classification standard, jointly developed by MSCI Inc. and S&P Global.

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