

MSCI ACWI Sustainable Impact Index Methodology

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Contents	1	Introduction	3
	2	MSCI ESG Research	4
	2.1	MSCI ESG Ratings	4
	2.2	MSCI ESG Controversies	4
	2.3	MSCI ESG Business Involvement Screening Research	4
	2.4	MSCI Sustainable Impact Metrics	5
	2.4.1	MSCI Sustainable Impact Metrics Categories	5
	3	Index Construction Methodology	16
	3.1	Defining the Parent Index	16
	3.2	Security Selection	16
	3.2.1	Sustainable Impact Sales Percentage	16
	3.2.2	Minimum ESG Standards	16
	3.2.3	Minimum Number of Issuers	17
	3.3	Weighting Scheme	18
	4	Maintaining the MSCI ACWI Sustainable Impact Index	19
	4.1	Quarterly Index Reviews	19
	4.2	Minimum Number of Issuers	19
	4.3	Monthly Updates on Basis of Controversies	19
	4.4	Ongoing Event Related Changes	20
		Appendix I: Definition of Controversy Severity	22
		Appendix II: Definition of Controversial Activities	23

1 Introduction

The MSCI ACWI Sustainable Impact Index (“Index”) is designed to identify listed companies whose core business addresses at least one of the world’s social and environmental challenges, as defined by the United Nations Sustainable Development Goals (UN SDGs). The Index selects companies that contribute to the SDGs through the provision of products and services that can help address some of these challenges and meet minimum ESG standards for their operations.

2 MSCI ESG Research

The Index uses company ratings and research provided by MSCI ESG Research LLC. In particular, the Index uses the following four MSCI ESG Research products: MSCI ESG Ratings, MSCI ESG Controversies, MSCI ESG Business Involvement Screening Research and MSCI ESG Sustainable Impact 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 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>

2.2 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>

2.3 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

2.4 MSCI SUSTAINABLE IMPACT METRICS

MSCI 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 Metrics Taxonomy

Pillar	Themes	Categories
Environmental Impact	Climate Change	<ol style="list-style-type: none"> 1. Alternative energy 2. Energy efficiency 3. Green building
	Natural Capital	<ol style="list-style-type: none"> 4. Sustainable water 5. Pollution prevention and control 6. Sustainable agriculture
Social Impact	Basic needs	<ol style="list-style-type: none"> 7. Nutrition 8. Major disease treatments 9. Sanitation 10. Affordable real estate
	Empowerment	<ol style="list-style-type: none"> 11. SME finance 12. Education 13. Connectivity - Digital divide

Under each of the actionable social and environmental 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.

2.4.1 MSCI SUSTAINABLE IMPACT METRICS CATEGORIES

Alternative Energy

This category includes products and services that support the transmission, distribution and generation of renewable energy and alternative fuels to reduce carbon and pollutant emissions in supporting affordable and clean energy to combat climate change.

Inclusions

- Renewable energy sources include wind, solar, geothermal, biomass, small scale hydro (25 MW), waste-to-energy and wave tidal.
- Alternative energy sources include biodiesel, biogas and cellulosic ethanol.
- Other alternative energy technologies include batteries & energy storage devices for alternative energy and fuel cells.

Examples of and services typically included under the Alternative Energy category

Products	Services
<ul style="list-style-type: none"> • Solar panels • Solar inverters • Wind mills • Wind Towers • Biofuel • Geothermal turbines • Tidal Turbines • Batteries supporting renewable energy 	<ul style="list-style-type: none"> • Electricity generation from geothermal power • Electricity generated from photovoltaic power plants • Construction of biomass plants • Transmission and distribution of renewable energy • Construction of waste incineration plants that generate electricity

Source: MSCI ESG Research

Energy Efficiency

This category includes products and services that support the maximization of productivity in labor, transportation, power and domestic applications with minimal energy consumption to ensure universal access to affordable, reliable and modern energy services.

Inclusions

- Products and services that improve business and industrial operations and IT systems include energy-efficient industrial automation and IT optimization services and infrastructure.
- Technologies and systems that increase the efficiency of power usage include demand-side management, smart grid, LED and CFL lighting, insulation, superconductors and batteries & energy storage devices for other sustainable applications.
- Products that focuses on help reduce fuel consumption and improve transport infrastructure include hybrid/electric vehicles, charging stations for hybrid/electric vehicles and improved traffic systems.

Examples of products and services typically included under the Energy Efficiency category

Products	Services
<ul style="list-style-type: none"> • Building automation • LED lightbulbs • Electric and hybrid vehicle units • Batteries for hybrid/electric vehicles • Solar and geothermal powered water heaters • Insulation building materials • Infrastructure as a Service (IaaS) • Platform as a Service (PaaS) 	<ul style="list-style-type: none"> • LED streetlight installation services • Railway installation and construction • Smart grid services • Installation of insulating materials for homes • Telematics services • Provider of electric/hybrid car rental services.

Source: MSCI ESG Research

Green Building

This includes design, construction, redevelopment, retrofitting, or acquisition of green-certified properties to promote mechanisms for raising capacity for effective climate change mitigation and adaptation.

Inclusions

- Ownership of properties, facilities and buildings designed and built according to environmental or sustainable standards and certified by third parties.
- Construction of green or sustainable properties, facilities or buildings, which may also include retrofitting or redevelopment of non-certified properties to comply with green building standards.
- Provision of consultancy services that aid in the green building certification of properties, facilities, or building.

Examples of green building certifications

Green building certifications
<ul style="list-style-type: none"> • LEED (United States) • BREEAM (United Kingdom) • Green Star (Australia) • Green Mark (Singapore) • Energy Star (United States) • Pearl Rating System for Estidama (United Arab Emirates) • MINERGIE (Switzerland) • Building-Housing Energy-Efficiency Labeling System (Japan) • BEAM (Hong Kong) • BEE (India) • BOMA (Canada) • CALENER (Spain) • CASBEE (Japan) • China Tree Star (China) • Development Bank Japan (Japan) • DGNB (Germany) • Green Building Index (Malaysia)

- **Green Garage Certification (United States)**
- **Green Globe (United States)**
- **Green Globes (Canada)**
- **Green Key (Denmark)**
- **Green Standard (Russia)**
- **Green Star (Australia)**
- **Green Star SA (South Africa)**
- **GRIHA (India)**
- **HQE (France)**
- **Homestar (New Zealand)**
- **IGBC (India)**
- **Living Building Challenge (United States)**
- **NABERS (Australia)**
- **Nordic Ecolabelling (Denmark, Finland, Iceland, Norway, Sweden)**
- **Qualiverde (Brazil)**
- **Superior Energy Performance (United States)**
- **Built Green (United States)**
- **GreenPoint (United States)**
- **Trakhees (United Arab Emirates)**

Source: MSCI ESG Research

Sustainable Water

This includes products, services, infrastructure projects and technologies that resolve water scarcity and water quality issues, through minimizing and monitoring current water demand, improving the quality and availability of water supply to improve resource management in both domestic and industrial use.

Inclusions

- Products and projects that aim to address water supply and access include water infrastructure projects and distribution, water recycling technologies and smart metering devices.
- Technologies and services that use alternative water sources include desalination and rainwater harvesting systems.
- Products that improve the water efficiency and drought resiliency of agricultural operations include drought resistant seeds.

Examples of products and services typically included under the Sustainable Water category

Products	Services
<ul style="list-style-type: none"> • Specialized wastewater treatment chemicals • Smart metering devices • Drought resistant seeds • Waste water filters 	<ul style="list-style-type: none"> • Desalination services • Maintenance of current water distribution infrastructure • Construction of wastewater plants • Construction of stormwater systems

- **Desalination equipment**

Source: MSCI ESG Research

Pollution Prevention & Control

This category includes products, services, infrastructure projects and technologies that reduces volume of waste materials through recycling, minimizes introduction of toxic substances, and offers remediation of existing contaminants such as heavy metals and organic pollutants in various environmental media to significantly address pollution in all levels and its negative effects.

Inclusions

- Technologies and systems that aim to reduce pollution include conventional pollution control devices.
- Services and infrastructure projects that address the growing waste problem and environmental pollutants include recycling, environmental remediation and waste treatment.
- Sustainable alternative materials for buildings and homes include low toxicity/VOC products.

Examples of products and services typically included under the Pollution Prevention & Control category

Products	Services
<ul style="list-style-type: none"> • Diesel exhaust fluid • Selective catalytic reduction units • Low VOC paints and coating materials • Recycling units 	<ul style="list-style-type: none"> • Remediation services • Recycling services • Hazardous waste treatment • Construction of carbon adsorbers and electrostatic precipitators • Oil spill removal

Source: MSCI ESG Research

Sustainable Agriculture

This category currently includes revenues from forest and agricultural products that meet environmental and organic certification requirements to address significantly biodiversity loss, pollution, land disturbance, and water overuse.

Inclusions

Production of agricultural and forestry products using certified sustainable or organic practices.

Examples of Sustainable Agriculture certifications

Sustainable agriculture certifications

- Bonsucro
- Roundtable for Responsible Soy
- Better Cotton Initiative
- Forest Stewardship Council
- Programme for the Endorsement of Forest Certification
- Sustainable Forest Initiative
- UTZ
- Rainforest Alliance
- Good Agricultural Practices
- Aqua Stewardship Council
- United States Department of Agriculture Organic
- National Association for Sustainable Agriculture Australia Organic
- Australian Forestry Standard
- Genesis GAP
- Best Aquaculture Practice
- Green Licenses
- India Organic Certified
- Malaysian Good Agricultural Practices

Nutrition

This category has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in addressing concerns of basic needs is through the provision of basic nutritious food products.

The aim of this category is to identify the percentage of revenues generated from the manufacture and sale of basic food products. This category includes products classified under the “basic products” category, as defined by Choices International¹, a science-based multi-stakeholder organization focused on nutrition.

According to Choices International, basic products refer to those products that contribute to the daily intake of essential nutrients while non basic are not needed to fulfill daily requirements. To qualify as “basic”, food products must also adhere to requirements laid out by Choices International regarding acceptable amounts of added sugars, salt, etc.

In 2019, Choices International provided a more specific guidance to qualifying nutritional content that includes sugar, sodium, and saturated fat content restrictions. These new criteria are now considered in addition to “basic” food definitions in the estimation of revenue for Nutrition category.

¹ For more information on Choices International refer to <http://www.choicesprogramme.org/public/criteria/international-product-criteria-2015-def.pdf>

Inclusions

Products found within basic product groups contribute significantly to the daily intakes of essential nutrients.

Examples of basic food products typically included under the Nutrition category

Basic food products

- Fruits and vegetables
- Beans and legumes
- Sources of carbohydrates
- Meat, fish, poultry, eggs, and meat substitutes
- Dairy products
- Oils, fats and fat-containing spreads
- Nuts
- Water
- Main meals such as salads, sandwiches, pizza, pasta/ rice/ noodles, etc.

Source: Choices International, MSCI ESG Research

Major Disease Treatments

Major Disease Treatments has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in addressing concerns of health is through the provision of products used to treat world's major diseases.

The aim of this category is to identify the percentage of revenues generated from the manufacture and sale of products used to treat the world's major diseases as defined by the World Health Organization (WHO).

Inclusions

Major diseases include those diseases with the highest daily adjusted life year (DALY)², collectively accounting for approximately 50% of global disease mortality, as well as orphan diseases³ and neglected tropical diseases⁴, which are underserved by research and treatment options.

² The WHO DALY represents the number of years of life lost due to poor health/disability and earlier death. The sum of these DALYs across the population represents the global burden of disease. More information on DALY can be found here: http://www.who.int/healthinfo/global_burden_disease/metrics_daly/en

³ Orphan drugs refer to treatments for orphan diseases which affect about 1 in 1500 people, as defined by the FDA. <http://www.fda.gov/ForIndustry/DevelopingProductsforRareDiseasesConditions/HowtoapplyforOrphanProductDesignation/default.htm>

⁴ More information on neglected diseases can be found here: http://www.who.int/neglected_diseases/diseases/en/

Examples of major diseases

Major diseases	Neglected diseases	Orphan diseases
<ul style="list-style-type: none"> Ischaemic heart disease Lower respiratory infections Stroke Preterm birth Complications Diarrheal diseases Chronic obstructive pulmonary disease Diabetes mellitus HIV/AIDS Tuberculosis Depressive disorders Cirrhosis of the liver Trachea, bronchus, lung cancers Malaria Kidney diseases Neonatal sepsis and infections Endocrine, blood, immune disorders Alzheimer disease and other dementias Asthma Migraine Anxiety disorders Meningitis Liver cancer Hepatitis B and C 	<ul style="list-style-type: none"> Buruli ulcer Chagas disease Dengue and Chikungunya Dracunculiasis (guinea-worm disease) Echinococcosis Foodborne trematodiasis Human African trypanosomiasis (sleeping sickness) Leishmaniasis Leprosy (Hansen's disease) Lymphatic filariasis Mycetoma, chromoblastomycosis and other deep mycoses Onchocerciasis (river blindness) Rabies Scabies and other ectoparasites Schistosomiasis Soil-transmitted helminthiasis Snakebite envenoming Taeniasis/Cysticercosis Trachoma Yaws (Endemic treponematoses) 	<ul style="list-style-type: none"> Gaucher's disease Pompe disease Hodgkin's lymphoma Multiple myeloma Fabry's disease Thrombocytopenia purpura Wilson's disease

Source: WHO, MSCI ESG Research

Products for the treatment of the major diseases of the world include drugs used for the treatment of these diseases and healthcare equipment used to help diagnose or treat patients with such diseases.

Examples of healthcare equipment for the treatment of major diseases

Healthcare equipment
<ul style="list-style-type: none"> Dialysis machine Cardiopulmonary equipment such as heart-lung machine, extracorporeal life support Stent Blood pressure monitor ECG machine Insulin pump

Source: MSCI ESG Research

Sanitation

Sanitation has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in addressing concerns of basic hygiene and sanitary needs is through the provision of sanitation products.

The aim of this category is to identify the percentage of revenues generated from the manufacture and sale of basic sanitation products.

Inclusion

Personal hygiene products for basic hygienic needs and not simply for beauty/cosmetic applications or luxurious use.

Examples of basic sanitary products typically included under the Sanitation category

Basic sanitary products

- Soaps and shampoos
- Oral care products such as toothbrush, toothpaste and toothpowder
- Sanitary napkins, toilet paper and tissues
- Adult or infant diapers
- Surface cleaners
- Laundry and dishwashing detergent
- Toilets
- Washbasins
- Faucets such as taps, shower heads, etc.
- Insect repellent for home use
- Water purifier

Affordable Real Estate

As per the United Nations Development Programme, making cities sustainable means creating career and business opportunities, safe and affordable housing, and building resilient societies and economies.

Affordable Real Estate has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in addressing concerns of sustainable communities is through the provision of affordably priced real estate.

The aim of this category is to identify the percentage of revenues generated from the lease or sale of affordable commercial and residential real estate properties.

Inclusions

- Affordable residential properties take the form of units devoted to being managed under social rent, homes affordably priced for the low-income segment, and residences for the elderly. It also includes affordable student housing.
- Affordable commercial properties include commercial spaces for Small and Medium Enterprises (SMEs) as these are typically found to be sold/ leased at a lower price point.

SME Finance

SME Finance has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in empowering underserved populations is through the provision of loans to small and medium sized enterprises.

The aim of this category is to identify the percentage of revenues generated from providing loans to micro, small and medium-sized enterprises.

Inclusions

Direct lending to micro, small and medium-sized enterprises (MSMEs).

Education

Education has been identified as a category deriving positive impact with the rationale that one of the ways in which companies can play a key role in empowering underserved populations is through the provision of education products and services.

The aim of this category is to identify the percentage of revenues generated from education-related products and services used in a school environment.

Inclusions

Products and services that ensure quality education at all levels.

Examples of products and services typically included under the Education category

Educational products and services

- Educational books
- Schools and institutes
- Professional courses and trainings that entail a certification
- Products and services in the domain of kindergarten, primary, secondary, undergraduate or postgraduate education
- Provider of tutoring services to students appearing for undergraduate or postgraduate examinations

- Provider of tutoring services, study material for non-degree exams such as TOEFL, GMAT, GRE, English language skills or other professional exams such as CFA.

Connectivity

This category currently includes companies that support telecommunication networks development to address the need for bridging digital divide and empowerment of underserved communities through better connectivity to information and communication. This new category currently includes access to internet communication but may be expanded in the future to address other types of infrastructure that enable societal connectivity.

The aim of this category is to identify the percentage of revenues generated from identified products and services that provide or support internet access for people in the Least Developed Countries (LDCs) as defined by the United Nations.

Inclusions

Products and services that help reduce digital divide in LDCs through development of telecommunications infrastructure.

Examples of products and services typically included under the Connectivity category

Connectivity products and services

- Internet service providers (ISPs): cable internet, DSL (digital subscriber line), fiber internet, BPL (broadband over power lines), satellite internet access, mobile broadband (3G+), WiMAX, and wireless internet service providers
- Telecommunication equipment provided to internet service providers including transceiver stations, transmission lines, multiplexers, digital switches, communication satellites, etc.
- Repair services for qualifying infrastructure/ service
- Ethernet spine switches

3 Index Construction Methodology

The MSCI ACWI Sustainable Impact Index (“Index”) is constructed using the following steps:

- Defining the Parent Index
- Security Selection
- Weighting Scheme

The steps mentioned above are defined in detail in the subsequent sections.

3.1 DEFINING THE PARENT INDEX

The Parent Index serves as the universe of eligible securities for the Index. The MSCI ACWI Sustainable Impact Indexes is constructed on the MSCI ACWI Index (“Parent Index”).

3.2 SECURITY SELECTION

To be eligible for inclusion in the Index, companies must meet all of the below criteria:

3.2.1 SUSTAINABLE IMPACT SALES PERCENTAGE

Companies must generate cumulatively at least 50% sales from one or more of the Sustainable Impact Metrics categories as defined by MSCI Sustainable Impact Metrics.

1. Alternative energy
2. Energy efficiency
3. Green building
4. Sustainable water
5. Pollution prevention and control
6. Sustainable Agriculture
7. Nutrition
8. Major disease treatments
9. Sanitation
10. Affordable Real Estate
11. SME Finance
12. Education
13. Connectivity – Digital divide

3.2.2 MINIMUM ESG STANDARDS

Companies must maintain all of the following minimum ESG standards:

1. **MSCI ESG Controversies:** Companies must not have faced ESG controversies as defined by an MSCI ESG Controversy Score of 0, 1 and 2 respectively (see Appendix I for more details on the definition of controversies)
2. **MSCI ESG Ratings:** Companies must have an MSCI ESG Rating greater or equal to BB
3. **Tobacco:** Companies must not generate more than 10% sales from tobacco production
4. **Alcohol:** Companies must not generate more than 10% sales from alcohol production
5. **Predatory lending:** Companies must not be involved in predatory lending practices. MSCI ESG Research defines involvement in lending practices as those companies that provide products and services associated with certain controversial lending activities and those companies that have been subject of alleged lending controversies
6. **Controversial Weapons:** Companies must not be involved in manufacture of Cluster munitions, Landmines, Blinding lasers, White phosphorus, Non-detectable fragments, Depleted uranium and Biological & chemical weapons
7. **Nuclear Weapons:** Companies must not be involved in manufacture of Nuclear weapons warheads & missiles, Intended use components, Nuclear exclusive delivery platforms and Nuclear weapons support services
8. **Conventional Weapons :** Companies must not generate more than 5% from conventional weapons and systems
9. **Civilian Firearms:** Companies must not be involved in manufacture of semi-automatic civilian firearms or should not generate more than 5% revenue from civilian firearms production

Definition of above mentioned controversial activities are available in Appendix II.

3.2.3 MINIMUM NUMBER OF ISSUERS

The Index is constructed with a minimum of 30 issuers. All securities from the issuer whose Sustainable Impact Sales Percentage is greater than 50% and meet minimum ESG standards as per 3.2.2 are included in the Index.

If the number of issuers selected is less than 30, remaining issuers are selected from those issuers that meet the minimum ESG Standards in decreasing order of Sustainable Impact Sales Percentage. If multiple eligible issuers have the same

Sustainable Impact Sales Percentage, then the issuer having a higher weight in the Parent Index is given a higher rank.

3.3 WEIGHTING SCHEME

Securities are weighted on the basis of sustainable impact dollar sales, which are adjusted to reflect the ratio of Parent Index market capitalization of security to total market capitalization of issuer as well as the ratio of number of shares of security to total number of shares of issuer. Sustainable impact dollar sales are computed using product of the trailing 12-month sales and the cumulative percentage of sales from the sustainable impact categories.

$$\text{Security Weight} = \left(\text{Sustainable impact sales \%} \times \text{Trailing 12 month sales} \right) \times \frac{\text{Parent Index market capitalization of security}}{\text{Total market capitalization of issuer}} \times \frac{\text{Number of shares of security}}{\text{Total number of shares of issuer}}$$

The above weights are then normalized to 100%.

Additionally, the maximum weight of any sector in the MSCI ACWI Sustainable Impact Index is capped at 20%, while the maximum weight of any issuer is capped at 4%. After applying both sector and issuer capping, excess weights are distributed among remaining sectors in proportion of their existing sector weights in the Index. Within sectors that are allocated excess weights, the weights are distributed among constituents within the sector while meeting the issuer capping requirements.

Notes:

- For Financials companies, where trailing 12-month sales is not available, net interest income would be used to calculate security weight. For companies where net interest income is unavailable, earnings (net income from the continuing operations) would be used.

For more details on the MSCI definition of sales and earnings, please refer to MSCI Fundamental Data methodology at <https://www.msci.com/index-methodology>.

- The security's Parent Index market capitalization is the security free float-adjusted market capitalization times the security Index Inclusion Factor (IIF). An IIF may be applied in the Parent Index to include a security at a fraction of its free float-adjusted market capitalization, for example in the case of multiple step inclusion of securities.
- The issuer's total market capitalization is the sum of the full market capitalization for all the issuer's securities included in the Parent Index.

4 Maintaining the MSCI ACWI Sustainable Impact Index

4.1 QUARTERLY INDEX REVIEWS

The MSCI ACWI Sustainable Impact Index is reviewed on a quarterly basis to coincide with the Quarterly Index Reviews of the Parent Index. The latest reported Sustainable Impact Sales percentage data would be used for the Index Review. Companies are evaluated for index eligibility as per security section rules defined in section 3.2. Existing constituents are retained in the index as long as they meet minimum ESG standards and their Sustainable Impact Sales percentage does not fall below 40%. Deletions from the Parent Index at the time of the Quarterly Index Reviews are simultaneously reflected in the Index.

Sector weights would be capped at 20% and issuer weights would be capped at 4% at each Quarterly Index Review.

The pro forma MSCI ACWI Sustainable Impact Index is generally announced nine business days before the effective date.

In general, MSCI uses MSCI ESG Research data (including MSCI ESG Ratings, MSCI ESG Controversies Scores and MSCI Business Involvement Screening Research) as of the end of the month preceding the Index Reviews. 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.

4.2 MINIMUM NUMBER OF ISSUERS

At each Quarterly Index Review, the Index is constructed with a minimum of 30 issuers.

If the number of issuers selected at a Quarterly Index Review as per the index rebalancing rules mentioned in section 4.1 is less than 30, remaining issuers are selected from those issuers that meet the minimum ESG Standards in decreasing order of Sustainable Impact Sales Percentage. If multiple eligible issuers have the same Sustainable Impact Sales Percentage, then the issuer having a higher weight in the Parent Index is given a higher rank.

4.3 MONTHLY UPDATES ON BASIS OF CONTROVERSIES

Index constituents would be reviewed on a monthly basis for the involvement in ESG controversies. Existing constituents would be deleted if they face controversies as defined by ESG controversy score of 0, 1 and 2. The pro forma index is generally announced nine business days before the first business day of the month.

4.4 ONGOING EVENT RELATED CHANGES

The general treatment of corporate events in the MSCI ACWI Sustainable Impact Indexes 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.

Additionally, if the frequency of Index Reviews in the Parent Index is greater than the frequency of Index Reviews in the MSCI ACWI Sustainable Impact Index, the changes made to the Parent Index during intermediate Index Reviews will be neutralized in the MSCI ACWI Sustainable Impact Index.

The following section briefly describes the treatment of common corporate events within the MSCI ACWI Sustainable Impact Indexes.

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

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. 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</p>

from the Index and the acquiring non-constituent will not be added to the Index.

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 book under the sections detailing the treatment of events in Capped Weighted and Non-Market Capitalization Weighted indexes.

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

Appendix I: Definition of Controversy Severity

Each controversy case is assessed for the severity of its impact on society or the environment and consequently rated Very Severe (reserved for ‘worst of the worst’ cases), Severe, Moderate, or Minor. To reach these assessments, each case is analyzed along two dimensions: nature of impact and scale of impact. For more details on MSCI ESG Controversies please refer to www.msci.com/documents/esg-controversies

Assessment of controversy severity: the severity matrix

		Nature of Impact			
		Very Serious (Death, disability, torture, enslavement, destruction of livelihood or traditional way of life)	Serious (Livelihood seriously impaired, interference with basic needs, child labor, displacement)	Medium (Minor impairment to livelihood, denial of opportunity, most labor disputes and violations)	Minimal (Potential denial of opportunity, potential violation of rights, procedural failings)
Scale of Impact	Extremely Widespread (1000+ people)	Very Severe	Very Severe	Severe	Moderate
	Extensive (25-999 people)	Very Severe	Severe	Moderate	Moderate
	Limited (10-24 people)	Severe	Moderate	Minor	Minor
	Low (<10 people)	Moderate	Moderate	Minor	Minor

Appendix II: Definition of Controversial Activities

Predatory lending

Predatory lending is defined as the “imposition of unfair and abusive loan terms on borrowers” by engaging in deception, fraud, or manipulation through aggressive sales tactics, and taking unfair advantage of a borrower’s lack of understanding about complicated transactions.

Examples of products and services associated with predatory lending include payday loans, installment loans, pawn loans, title loans, tax refund anticipation loans, doorstep loans, and check cashing.

Defense & Weapons:

The various types of involvement in defense and weapons are defined as below:

Types of Weapon	Definition
Cluster Munitions	Companies with any industry tie to cluster munitions.
Landmine	Companies that have any industry tie to the manufacture of landmines except for Safety, which is a positive indicator.
Blinding Lasers Weapons	Companies that manufacture weapons utilizing laser technology that causes permanent blindness to the target.
Incendiary Weapons	Companies that manufacture incendiary weapons using white phosphorus.
Non-Detectable Fragments	Companies that manufacture weapons that use non-detectable fragments to inflict injury to targets.
Depleted Uranium	Companies involved in the production of depleted uranium (DU) weapons, ammunition, and armor, including companies that manufacture armor piercing, fin stabilized, discarding sabot tracing rounds (APFSDS-T); Kinetic Energy Missiles made with DU penetrators; and DU-enhanced armor, including composite tank armor.
Biological-Chemical Components	Companies that manufacture key biological and chemical weapons components.

Types of Weapon	Definition
Biological-Chemical Systems	Companies that manufacture biological and chemical weapons, including weapons that use pathogens such as viruses, bacteria, and disease-causing biological agents, toxins, or chemical substances that have toxic properties to kill, injure, or incapacitate.
Nuclear Weapons - Warheads & Missiles	Companies that manufacture nuclear warheads and/or whole nuclear missiles. Includes assembly and integration of warhead and missile body. INCLUDES companies with contracts to operate/manage government-owned facilities that manufacture nuclear warheads and missiles.
Nuclear Weapons - Intended-use Components	Companies that manufacture components which were developed or are significantly modified for exclusive use in nuclear weapons (warheads and missiles). INCLUDES companies with contracts to operate/manage government-owned facilities that manufacture components for nuclear warheads and missiles, such as fissile materials, non-nuclear components, explosives, triggers and detonators, etc.
Nuclear Weapons – Exclusive Delivery Platforms	Companies that manufacture or assemble delivery platforms that were developed or significantly modified for the exclusive delivery of nuclear weapons.
Nuclear Weapons – Support Services	Companies that provide auxiliary services related to nuclear weapons, such as repairing and maintaining nuclear weapons, providing overhaul and upgrade services (including engineering), stockpiling and stewardship, R&D work, testing and simulations, etc. INCLUDES companies with contracts to operate/manage government-owned facilities that conduct R&D, testing, simulations, and other essential sciences on nuclear weapons.

Types of Weapon	Definition
Civilian Firearms – Semi – Automatic Producer	<p>Companies that manufacture firearms which automatically eject the cartridge case of a fired shot and load the next cartridge from the magazine allowing the gun user to fire one round of ammunition for every pull of the trigger.</p> <p>The research specifically targets semi-automatic firearms that possess cosmetic, ergonomic, or construction features of an assault rifle. For additional detail on specific features included, please refer to MSCI ESG Research’s Firearms Screen methodology.</p> <p>The research does not cover companies that cater to the military, government, and law enforcement markets.</p>
Conventional Weapons - Total Involvement	The recent-year percent of revenue, or maximum estimated percent, a company has derived from weapons systems, components, and support systems and services.
Civilian Firearms - Producer	The recent-year percent of revenue, or maximum estimated percent, a company has derived from manufacturing firearms and small arms ammunition for civilian markets.

For more details on controversial activities, please refer to the MSCI ESG Research’s Business Involvement Screening Research
http://www.msci.com/resources/factsheets/MSCI_ESG_BISR.pdf

The following sections have been modified as of May 2016:

Section 2.2: MSCI ESG Controversies

- Changes made to bring alignment with MSCI ESG Sustainable Impact Metrics

Section 2.4: MSCI ESG Sustainable Impact Metrics

- Changes made to bring alignment with MSCI ESG Sustainable Impact Metrics

Section 3.2.1: Sustainable Impact Sales Percentage

- Changes made to bring alignment with MSCI ESG Sustainable Impact Metrics

Section 3.2.2: Minimum ESG Standards

- Changes made to bring alignment with MSCI ESG Sustainable Impact Metrics

Section 3.2.2: Minimum ESG Standards

- Methodology enhancements due to changes in ESG Controversy Score calculation

Appendix II: Definition of Controversial Activities

- Methodology enhancements due to changes in ESG Controversy Score calculation

The following sections have been modified as of August 2016:

Section 4.1: Quarterly Index Reviews

- Same rules are applied for Quarterly and Annual Index Reviews so the Annual Index Review section was removed. The latest reported Sustainable Impact Sales percentage data would be used for all Quarterly Index Reviews
- Buffer rules have been added so that existing constituents continue to remain in the Index unless their Sustainable Impact Sales percentage falls below 40%

The following sections have been modified as of June 2017:

The details on the Corporate Events treatment are now included in Section 4.4.

The following sections have been modified as of September 2017:

Section 4.1: Quarterly Index Reviews

- Clarification on use of ESG data for securities whose data would be available after the end of the month preceding Index Review

The following sections have been modified as of May 2019:

Section 3.3: Weighting Scheme

- Clarification on the calculation of security weights, including the treatment of securities with Index Inclusion Factor (IIF) applied in the Parent Index

The following sections have been modified as of February 2020:

Section 2.4: MSCI Sustainable Impact Metrics

Section 3.2.1: Sustainable Impact Sales Percentage

- Addition of 'Sustainable Agriculture' and 'Connectivity – Digital Divide' as new Sustainable Impact categories

The following sections have been modified as of February 2021:

Section 2.4: MSCI Sustainable Impact Metrics

- Removed 'natural gas-powered combined heat and power' from the products and services included in the 'Alternative Energy' category
- Removed the list of exclusions for each category
- Removed section 2.4.2 'Research Process for MSCI Sustainable Impact Metrics'

The following sections have been modified as of February 2022:

Section 3.3: Weighting Scheme

- Reworded section 3.3 to clarify the capping process

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