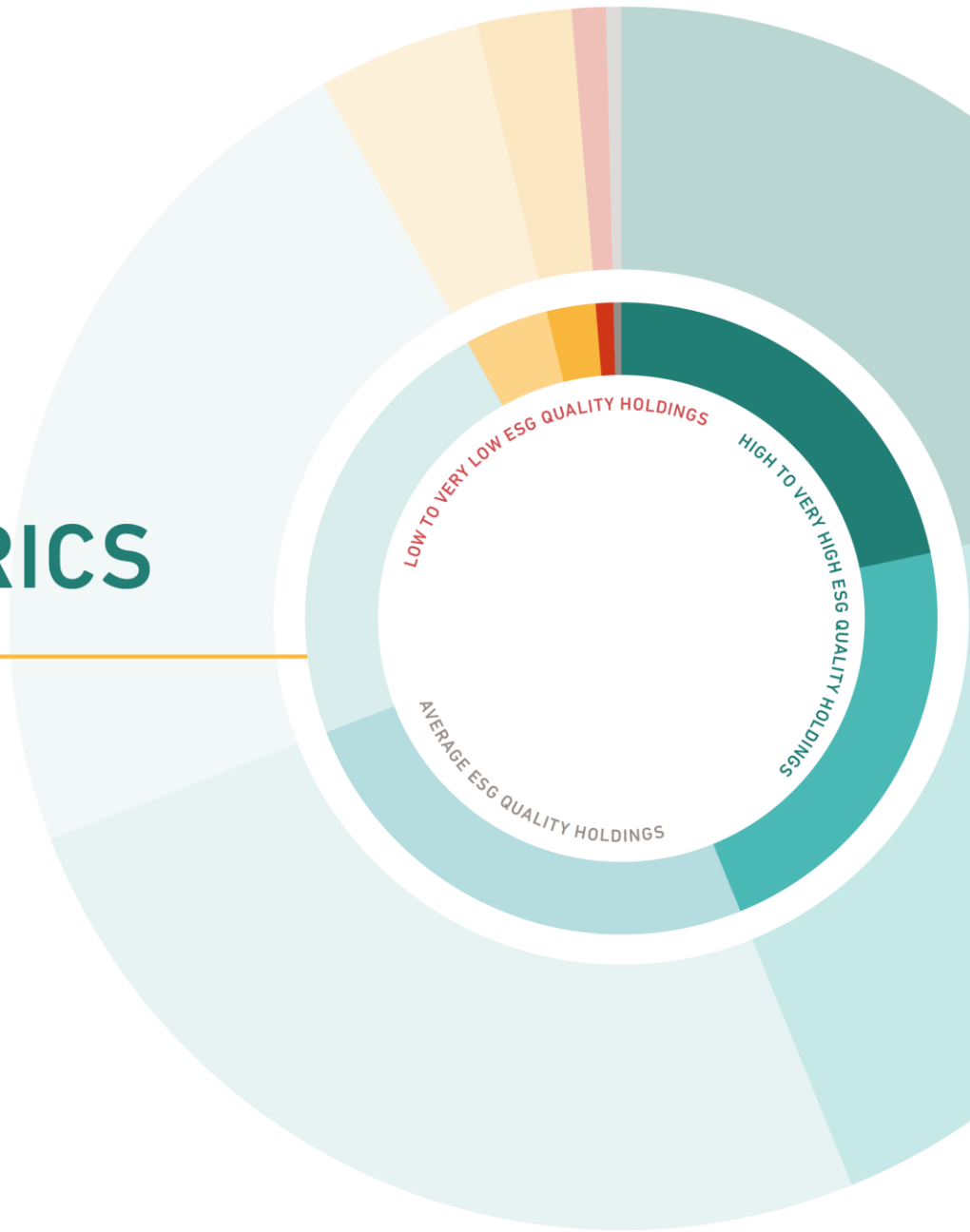


# MSCI ESG FUND METRICS

## Methodology

Executive Summary

May 2017



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# 1 EXECUTIVE SUMMARY

MSCI ESG Research leverages our MSCI ESG Ratings and research coverage to create ESG scores and metrics for approximately 24,000 multi-asset class Mutual Funds and ETFs globally. MSCI ESG Fund Metrics aims to provide fund-level transparency to help clients better understand and measure the environmental, social and governance characteristics of a portfolio, and rank or screen funds based on a diverse set of ESG exposure categories.

This document is only a summary meant to provide an overview of the MSCI ESG Fund Metrics Methodology. It does not include certain important details included in the Methodology and should not be relied upon for interpretation of any rules or calculations. If there are any statements in this summary that conflict with anything in the Methodology document, the Methodology will control. You should read the full methodology mentioned above before making any decisions, including with respect to subscription to or implementation of any MSCI ESG Research product.

## 1.1 MSCI’S APPROACH TO FUND METRICS

**HIGH COVERAGE THRESHOLDS: 65%**



To provide a high confidence assessment in a fund’s overall ESG score, we require 65% or more coverage of the fund’s underlying holdings. We rate over 23,000 mutual funds and ETFs.

**STRONG METHODOLOGY**



MSCI ESG Research works with 47 of the top 50 global asset managers<sup>1</sup>. We employ a quantitatively driven methodology to consider the most material, industry-specific ESG issues.

**BREADTH OF TOPICS**



We provide over 100 scores and metrics to cater for a diverse set of clients needs and beliefs. One size does not fit all<sup>2</sup>.

**BROAD COVERAGE OF EQUITY AND FIXED INCOME ISSUERS**



We rate over 6,400 companies (11,800 total issuers) and more than 400,000 equity and fixed income securities globally<sup>3</sup>.

To learn more about MSCI ESG Research visit: <https://www.msci.com/esg-integration>

## 1.2 MSCI ESG FUND METRICS FEATURES

MSCI ESG Fund Metrics clients receive access to a data feed of approximately 24,000 funds in the coverage universe.

### 1.2.1 OVERALL FUND ESG QUALITY SCORE & E, S, G SCORES (0-10)

Each fund in the coverage universe will receive an overall Fund ESG Quality Score (0-10) as well as an Environmental, Social and Governance score (0-10). The overall Fund ESG Quality Score aggregates issuer-level ESG scores to provide investors with an indication of the overall ESG quality of a fund’s underlying holdings.

**1.2.2 PERCENTILE RANK (0-100)**

The percentile rank is a relative rank that measures how a fund’s score ranks relative to other funds in the same peer group. The percentile figure represents the percentage of funds in a fund’s peer group with an ESG Score at, or lower than, the fund’s ESG Score. Fund Peer groups are based on the Lipper Global Classification. A global percentile rank is also available.

**1.2.3 OVER 100 METRICS**

MSCI ESG Fund Metrics offers over 100 Fund Metrics for evaluating the ESG attributes of a portfolio. These metrics fall into three categories: sustainable impact, values alignment and exposure to ESG risk. The metrics included in the METHDOLOGY section in this document are a subset of data that are available on several public facing websites:

**Sustainable Impact;**  
fund exposure to companies that address core environmental & social challenges

**Values Alignment;**  
screens funds for investments that align with ethical, religious or political values

**Risk; understand**  
fund exposure to ESG-related risks

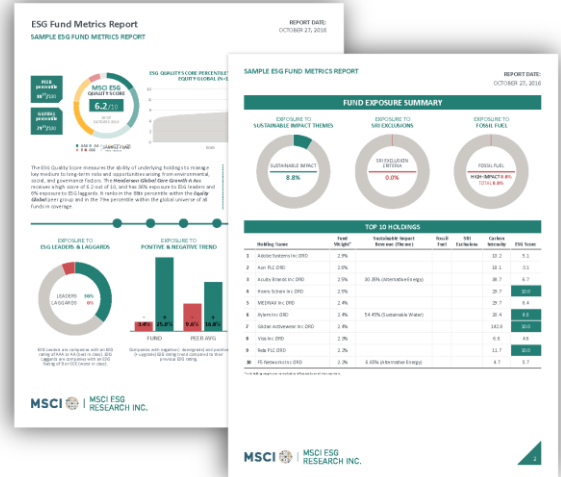


- **Sustainable Impact:** metrics to help investors measure fund exposure to publicly traded companies addressing core environmental and social challenges. May be used by impact-based investors with a preference to capture measurable social returns per dollar invested including clean technology exposure, community building, or access to healthcare.
- **Values alignment:** metrics help investors screen for investments that align with ethical, religious, or political value. May be used by values-based investors with a preference to avoid businesses involved in tobacco, weapons manufacturing, or human rights violations.
- **Exposure to ESG Risks:** metrics to help investors understand fund exposure to ESG-related risks. May be used by long-horizon investors with a goal of limiting potential financial costs connected with issues like water scarcity, or carbon regulations.

**1.2.4 FUND METRICS REPORTS**

The MSCI ESG Fund Metrics Report highlights fund exposure to over 100 metrics organized under three themes: Values Alignment, Sustainable Impact and ESG Risks.

- Includes top 10 holdings of the fund across the following indicators: Sustainable Impact Solutions revenue, Fossil Fuel ownership, SRI Exclusion Criteria, and Carbon Intensity
- Fund ESG Quality Score and peer group average
- Fund Holdings Rating Distribution and Trend
- Fund Carbon Intensity compared against Peer Group Average and five MSCI Equity Indexes.



**1.2.5 FUND METRICS ESG QUALITY BADGE**

MSCI ESG Fund Quality Badges are awarded to funds with qualifying ESG Quality Scores. Separate badges are available for meeting the requirements of Peer Rank Top 10% and Global Rank Top 10%.

MSCI ESG Research grants asset managers permission to use the MSCI ESG Fund Metrics Badge associated with their funds in public facing fund related documents or web pages. Users are required to sign a no cost license with terms and conditions of use and required disclosures.

For more information please contact ESG Client Service at [esgclientservice@msci.com](mailto:esgclientservice@msci.com).



## 2 MSCI ESG RESEARCH PRODUCTS

The research and data behind scoring and analyzing portfolios, mutual funds and ETFs include:

Product	Description & Coverage Universe
<p><b>MSCI ESG Ratings</b></p>	<p>From natural resource scarcity to changing governance standards, from global workforce management to the evolving regulatory landscape, ESG factors can impact the long-term risk and return profile of investment portfolios. MSCI ESG Ratings are designed to help investors understand ESG risks and opportunities and integrate financially relevant ESG factors into the portfolio construction and management process. Companies, countries, and selected government entities are scored on a 0-10 scale relative to the standards and performance of their industry peers.</p> <p>MSCI ESG Ratings covers more than 6,400 companies (11,800 total issuers, including subsidiaries) and more than 400,000 equity and fixed income securities globally.</p>
<p><b>MSCI ESG Sustainable Impact Metrics</b></p>	<p>MSCI ESG Sustainable Impact Metrics covers approximately 8,500 publicly traded companies that generate revenue from Environmental Impact themes such as Alternative Energy, Energy Efficiency, Green Building, Sustainable Water, and Pollution Prevention.</p> <p>In addition, the product covers approximately 2,500 publicly traded companies that generate revenue from Social Impact Themes such as Nutritious Products, Sanitation, Affordable Housing, Major Diseases, Social Finance, and Education.</p>
<p><b>MSCI ESG Carbon Metrics</b></p>	<p>MSCI ESG Carbon Metrics provides oil, gas and coal reserves and emissions data to institutional investors looking to identify exposure to carbon asset risk posed by ‘stranded assets’.</p> <p>MSCI ESG Carbon Metrics covers approximately 8,500 publicly traded companies plus bond-issuing subsidiaries.</p>
<p><b>MSCI ESG Controversies &amp; Norms Screening</b></p>	<p>MSCI ESG Controversies provides timely information and ongoing tracking on company involvement in major ESG controversies, allowing institutional investors to identify company compliance with international norms and principles, and assess company performance with respect to these norms and principles.</p>

	<p>MSCI ESG Controversies covers approximately 8,500 publicly traded companies plus bond-issuing subsidiaries.</p>
<p><b>MSCI ESG Business Involvement Screening</b></p>	<p>MSCI ESG Business Involvement Screening Research is a screening service that enables institutional investors to manage ESG standards and restrictions reliably and efficiently. Managers, advisors and asset owners can access screening research through the online MSCI ESG Manager platform or a data feed to satisfy client investment guidelines, implement client mandates, and to manage potential ESG portfolio risks.</p> <p>MSCI ESG Business Involvement Screening Research covers all global equity issuers plus and more than 500,000 Fixed Income Securities including selected bond-issuing subsidiaries, selected corporate bond issuers, and selected government-owned entities that operate as corporations.</p>

### 3 METHODOLOGY

#### 3.1 FUND COVERAGE

MSCI ESG Fund Metrics holdings data is sourced from Lipper. To be included in MSCI ESG Fund Metrics, a fund must pass the following three criteria:

1. 65% of the fund’s gross weight must come from covered securities.
  - a. The coverage universe for issuers consists of MSCI ESG Ratings (over 6,400 companies and more than 400,000 equity and fixed income securities globally). See Appendix 1 for a detailed description of MSCI ESG Ratings coverage.
  - b. Cash positions and other asset types not relevant for ESG analysis are removed prior to calculating a fund’s gross weight. See Appendix 3 for a full listing of excluded asset types.
  - c. Short positions are included in a fund’s gross weight calculation, but are treated as uncovered for ESG data.
  - d. Security asset type must have recourse to the rated issuer. See Appendix 3 for a list of eligible asset types.
2. Fund holdings date must be less than one year old.
3. Fund must have at least ten securities.

#### Fund Coverage Calculation Example

	Market Value	Fund Weight	Absolute Market Value	Gross Weight	ESG Rated	Contributes towards Fund Metrics Coverage	Covered Weight
Security A	400	50%	400	40%	Yes	Yes	40%
Security B	400	50%	400	40%	Yes	Yes	40%
Security C	100	13%	100	10%	No	No. Security not covered by ESG Ratings	0%
Security D	-100	-13%	100	10%	Yes	No. Security held as a short position	0%
<b>Total</b>	<b>800</b>	<b>100%</b>	<b>1,000</b>	<b>100%</b>			<b>80%</b>

As of March 1, 2016, there were over 70,000 equity, fixed income, and mixed asset class mutual funds and ETFs in the Lipper universe. Approximately 24,000 passed all necessary criteria to be included in Fund Metrics.

- 1) **Percentage Sum** – Metrics calculated using Percentage Sum show the percent of the fund that meets the criteria for the metric being measured. The percentage represents a minimum value, as there may be uncovered securities that are also True. For instance, a Predatory Lending % of 10% means that 10% of the weight of the fund comes from issuers with identified ties to Predatory Lending. The actual percentage may be higher if



the fund holds companies involved in Predatory Lending that are outside of the product’s coverage universe.

Percentage Sum Calculation Example

	Fund Weight	Predatory Lending	Predatory Lending %
Security A	40%	No	-
Security B	30%	No	-
Security C	20%	Yes	20%
Security D	10%	Uncovered	-
			<b>20%</b>

### 3.2 OVERALL FUND ESG QUALITY SCORE

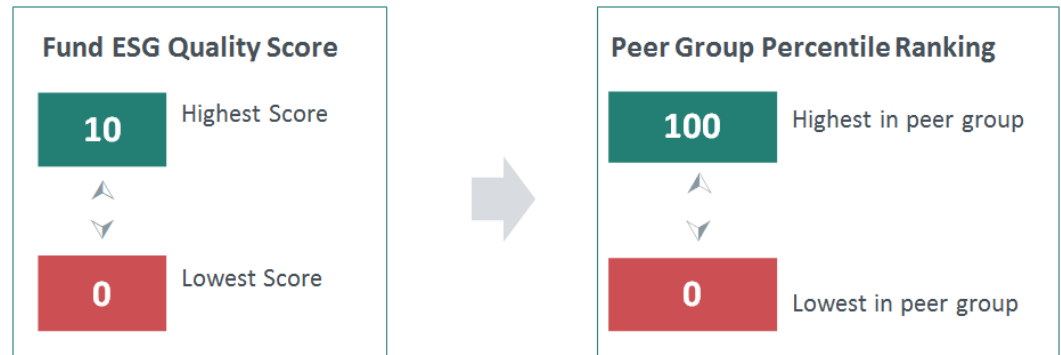
The top level fund factor is the Fund ESG Quality Score, and is calculated as the weighted average of the underlying holding’s Overall ESG Scores. The factor is provided on a 0-10 score, with 0 and 10 being the respective lowest and highest possible fund scores.

The table below demonstrates how the Fund ESG Quality Score is calculated. Note that in this example, Security E does not have an ESG Score. Security E is therefore “dropped” from analysis, and the weights of the remaining securities are normalized to 100%. The normalized weights and ESG Scores are then used in a weighted average calculation to determine the Fund ESG Quality Score of 6.6.

	Weight	ESG Score	Normalized Weight	Normalized Weight x Score
Security A	20%	4.0	25%	1.0
Security B	40%	8.0	50%	4.0
Security C	8%	7.0	10%	0.7
Security D	12%	6.0	15%	0.9
Security E	20%	N/A	0%	N/A
<b>Total</b>	<b>100%</b>		<b>100%</b>	<b>6.6</b>

### 3.3 PEER GROUP PERCENTILE RANK

Each fund’s overall ESG Quality Score is also shown as a percentile in its peer group. The Fund ESG Quality Score – Peer Percentile represents the percentage of funds in a fund’s peer group with an ESG Score equal to, or lower than, the fund’s ESG Score.



The peer groups are defined using the Lipper Global Classification Scheme. The following criteria must be met for a fund to receive a Fund ESG Quality Score – Peer Percentile:

- 1) The fund must be categorized by the Lipper Global Classification scheme.
- 2) The peer group must contain at least 30 funds.
- 3) The standard deviation of the Fund ESG Quality Score within the peer group must be greater than, or equal to, 0.1.

The Lipper Global Classification Scheme is detailed in Appendix 4.

### 3.4 GLOBAL PERCENTILE RANK

Every fund included in Fund Metrics receives a Fund ESG Quality Score – Global Percentile. The Global Percentile notes the percentage of funds, covered by Fund Metrics, with a score lower than, or equal to, a fund’s ESG Quality Score. Considered in conjunction, the Global and Peer Percentiles position a fund from both an absolute (product-wide) and relative (peer category) perspective.

### 3.5 WEIGHTED AVERAGE CARBON INTENSITY

The Weighted Average Carbon Intensity (tCO<sub>2</sub>e / \$M sales) measures a fund's exposure to carbon intensive companies. The figure is the sum of security weight (normalized for corporate positions only) multiplied by the security Carbon Intensity.

**Calculation Type:** Weighted Average

### 3.6 REVENUE EXPOSURE TO SUSTAINABLE IMPACT SOLUTIONS (%)

A portfolio’s exposure to Sustainable Impact Solutions is the portfolio weighted average of each company’s percent of revenue generated by Sustainable Impact Solutions goods and services. Additionally, Sustainable Impact Solutions revenue from companies with negative externalities is excluded. Negative externalities refer to very severe and severe ESG controversies, ESG Ratings

of CCC and B, direct involvement in predatory lending, involvement in controversial weapons, more than 5% revenue from conventional weapons or firearms, and more than 10% revenue from alcohol or tobacco production.

**Calculation Type:** Weighted Average

### 3.7 SRI SCREENING CRITERIA EXPOSURE (%)

The percentage of portfolio's market value exposed to companies flagged for one or more standard SRI exclusion factors (alcohol, civilian firearms, gambling, weapons, cluster bombs, landmines, nuclear power, GMOs, and tobacco).

**Calculation Type:** Percentage Sum

### 3.8 TREATMENT OF CASH

Cash holdings (and other asset types listed in Appendix 3) are removed prior to calculating both fund coverage and fund ESG results. Weights of the remaining positions are normalized to 100%. Cash is removed because it is ineligible for ESG analysis. Including it may generate misleading results by showing an artificially low percentage of a fund as having exposure to the factor being measured.

### 3.9 TREATMENT OF SHORT POSITIONS

When calculating fund coverage, short positions are always treated as uncovered, even if held as a security of an issuer within ESG coverage. By including short positions in the uncovered portion of a fund, the coverage % will not overstate ESG coverage.

Although short positions are included in the gross value when calculating coverage, they are removed prior to calculating the rest of the Fund Metrics results. This is because the interpretation of short positions, from an ESG perspective, varies widely based on use case and the specific factor being considered.

## 4 APPENDICES

### APPENDIX 1: MSCI ESG RATINGS COVERAGE

The ESG Ratings coverage universe includes over 6,400 companies (11,800 total issuers including subsidiaries) and more than 400,000 equity and fixed income securities globally. As of March 2016 the coverage universe is comprised of:

- MSCI World Index
- MSCI Emerging Markets Index
- MSCI US Investable Market Index (IMI)
- MSCI UK IMI
- MSCI Nordic IMI
- MSCI Australia IMI
- MSCI South Africa IMI
- MSCI Canada IMI
- Fixed Income: ESG Ratings coverage of over 84% of the market value of a widely used global fixed income benchmark, including:
  - Approximately 99% of the Treasuries/Sovereign (198 countries, including all that issue bonds)
  - Approximately 85% of the government related (ex-Sovereign)
  - Approximately 90% of the corporate investment grade (listed and non-listed)
  - Approximately 90% of the covered bonds

### APPENDIX 2: ELIGIBLE ASSET TYPES

ESG assessments are generally done at the company or issuer level. Where an asset has exposure to an underlying issuer, we attempt to map the ESG characteristics of that issuer. For instance, we would map issuer analysis to both a bond and to a derivative based on that bond, to the extent possible. We do not, however, map in cases where there is exposure to multiple underlying issuers, such as index futures. Following is a list of asset types that are eligible for ESG coverage. Asset types outside of this list are not included in Fund Metrics analysis:

Asset Type		
Agency Security	Equity Option	Preferred Security
American Depository Receipt	Equity Warrant	Provincial Bond
Bank Loan	Global Depository Receipt	Real Estate Invst. Trust
Bond Future	Government Debt	Rights
Certificate	International Depository Receipt	Supranational
Commercial Paper	Limited Partnership	Tracking Instrument
Common Shares	Loan	Treasury Bill
Corporate Debt	Municipal Bond	Units
Depository Receipt	Option on Future	
Equity Future	Preference Shares	

### APPENDIX 3: EXCLUDED ASSET TYPES

Some asset types are out of scope for ESG analysis. They are removed from a fund’s holdings, prior to calculating both coverage and ESG analysis, so that the results are reflective only of the portion of the fund relevant to ESG considerations. Following is a list of asset types that are removed prior to calculating fund results:

Asset Type		
Cash	Cash Equivalent	FX Forward
Cash 120 days	Cash Options	Interest Rate Swap
Cash 30 days	Currency	Time / Term Deposit
Cash 60 days	Currency Future	
Cash 90 days	Foreign Exchange	

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Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

MSCI serves 97 of the top 100 largest money managers, according to the most recent P&I ranking.

For more information, visit us at [www.msci.com](http://www.msci.com).

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