MSCI ESG Fund
Ratings Summary

MSCI ESG Research LLC

April 2020
Contents

1 Executive Summary 4

1.1 Product Features 4

1.1.1 MSCI ESG Fund Ratings (AAA-CCC) 4

1.1.2 Fund ESG Quality Score & E, S, G Scores (0-10) 4

1.1.3 Percentile Rank 4

1.1.4 Over 200 ESG Metrics 4

1.1.5 Fund Ratings Reports 5

1.1.6 Fund Ratings Badge 6

2 Methodology 7

2.1 MSCI ESG Fund Ratings Inclusion Criteria 7

2.2 ESG Fund Rating 8

2.3 Fund ESG Quality Score 9

2.4 Peer Group Percentiles 11

2.5 Global Percentiles 12

2.6 Supplemental Fund Metrics 12

2.6.1 Weighted Average Carbon Intensity 12

2.6.2 Green Revenues 12

2.6.3 Brown Revenues 12

2.6.4 Board Independence 13

2.6.5 Board Diversity 13

2.6.6 UNGC Violations 13

2.6.7 Very Severe Controversies (OECD Guidelines) 13

2.6.8 Controversial Weapons 13

2.6.9 Tobacco 13

2.7 Revenue Exposure to Sustainable Impact Solutions (%) 13

2.8 Treatment of Multi Asset Classes 14
2.9 Treatment of Short Positions 14

3 Appendices 15

Appendix 1: MSCI ESG Ratings Coverage 15
Appendix 2: Eligible Asset Types 16
Appendix 3: Excluded Asset Types 17
1 Executive Summary

This document is a summary of the MSCI ESG Fund Ratings methodology. We leverage MSCI ESG Ratings for over 7,500 companies (13,000 total issuers including subsidiaries) and more than 600,000 equity and fixed income securities globally to create ESG scores and metrics for approximately 36,000 multi-asset class Mutual Funds and ETFs globally (as of April 1, 2020). MSCI ESG Fund Ratings aims to provide fund-level transparency to help clients better understand and measure the ESG characteristics of the total portfolio, and rank or screen funds based on a diverse set of ESG exposure categories.

1.1 Product Features

MSCI ESG Fund Ratings clients receive access to a data feed of approximately 36,000 funds in the coverage universe.

MSCI ESG Fund Ratings (AAA-CCC)

The MSCI ESG Fund Ratings is designed to assess the resilience of a fund’s aggregate holdings to long term ESG risks and opportunities. Highly rated funds consist of issuers with leading or improving management of key ESG risks.

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 fund-level ESG score based on the fund’s underlying holdings.

Percentile Rank

We also provide Global and Peer Group Percentile Ranks (0-100), which are calculated using fund-level “ESG Quality Scores” and the Lipper Global Classification for a definition of peer groups.

Over 200 ESG Metrics

Clients also have access to over 200 fund metrics to evaluate the ESG attributes of their funds. The attributes fall into three categories: sustainable impact, values alignment and risks.

---

1 Available on MSCI ESG Manager with subscription.
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 are designed to help investors screen for investments that align with ethical, religious, or political values. May be used by values-based investors with a preference to avoid businesses involved in areas such as tobacco, weapons manufacturing, or human rights violations.

Exposure to ESG risks metrics aim 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.

Fund Ratings Reports

The MSCI ESG Fund Ratings Report highlights fund exposure to over 200 metrics organized under three themes: Values Alignment, Sustainable Impact and ESG Risks.
The updated report includes the following features:

- Indicates the top-level ESG Fund Rating as well as the Fund ESG Quality Score (0-10 scale) and fund peer group average for comparison purposes
- Highlights fund exposure to over 200 metrics organized under three themes: Values Alignment, Sustainable Impact and ESG Risks.
- Identifies the top 10 fund holdings with details on Sustainable Impact Solutions revenue, Fossil Fuel ownership, SRI Exclusion, and Carbon Intensity
- Showcases the fund holdings’ ESG Fund Rating Distribution and the ESG Fund Rating momentum trend, either positive or negative, over time
- Provides the fund Weighted Average Carbon Intensity compared to the Peer Group Average and five MSCI Indexes.

### 1.1.1 Fund Ratings Badge

MSCI ESG Fund Ratings Badges are awarded to funds with qualifying ratings. Separate badges are available for meeting the requirements of Peer Rank Top 10%, Peer Rank Top 20%, Global Rank Top 10%, and Global Rank Top 20%.

MSCI ESG Research grants asset managers permission to use the MSCI ESG Fund Ratings 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.
2 Methodology

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

1. 65% of the fund’s gross weight must come from covered securities.
   a. 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. The absolute values of 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 2 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 ESG Coverage Calculation Example

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

Where MSCI ESG Research provides fund metrics for funds excluded from MSCI ESG Fund Ratings due to falling below the 65% inclusion threshold, these metrics will only be based upon covered holdings in the fund. As a result, they may not fully represent the fund’s ESG performance given the lack of coverage.
2.2 ESG Fund Rating

The top level rating, the "Fund ESG Rating", is designed to assess the resilience of a fund’s aggregate holdings to long term ESG risks. Highly rated funds consist of issuers with leading or improving management of key ESG risks.

<table>
<thead>
<tr>
<th>ESG FUND RATINGS</th>
<th>WHAT IT MEANS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAA</td>
<td>LEADER</td>
</tr>
<tr>
<td></td>
<td>The companies that the fund invests in tend to show strong and/or improving management of financially relevant environmental, social and governance issues. These companies may be more resilient to disruptions arising from ESG events.</td>
</tr>
<tr>
<td>AA</td>
<td>AVERAGE</td>
</tr>
<tr>
<td></td>
<td>The fund invests in companies that tend to show average management of ESG issues, or in a mix of companies with both above-average and below-average ESG risk management.</td>
</tr>
<tr>
<td>A</td>
<td>LAGGARD</td>
</tr>
<tr>
<td></td>
<td>The fund is mostly exposed to companies that do not demonstrate adequate management of the ESG risks that they face or show worsening management of these issues. These companies may be more vulnerable to disruptions arising from ESG events.</td>
</tr>
<tr>
<td>BBB</td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
<tr>
<td>CCC</td>
<td></td>
</tr>
</tbody>
</table>

The Fund ESG Rating is calculated as a direct mapping of “Fund ESG Quality Score” to letter rating categories.
2.3 Fund ESG Quality Score

The “Fund ESG Quality Score” assesses the resilience of a fund’s aggregate holdings to long term ESG risks. Highly rated funds consist of issuers with leading or improving management of key ESG risks, based on a granular breakdown of each issuer’s business: its core product or business segments, the locations of its assets or revenues, and other relevant measures such as outsourced production. The “Fund ESG Quality Score” is provided on a 0-10 score, with 0 and 10 being the respective lowest and highest possible fund scores.

The “Fund ESG Quality Score” is assessed using the underlying holding’s “Overall ESG Scores”, “Overall ESG Ratings”, and “Overall ESG Rating Trends”. It is calculated in a series of 3 steps.

**Step 1:** Calculate the “Fund Weighted Average ESG Score” of the underlying holding’s “Overall ESG Scores”. The Overall ESG Scores represent either the ESG Ratings Final Industry-Adjusted Score or Government Adjusted ESG Score of the issuer depending on its asset classification. Methodology for the issuer level scores are available in the MSCI ESG Ratings Methodology document. The table below demonstrates how the “Fund Weighted Average ESG 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 to calculate the “Fund Weighted Average ESG Score” of 6.6.

*Appearance of overlap in the score ranges is due to rounding. Every possible score falls within the range of only one letter rating. The 0 to 10 scale is divided into 7 equal parts, each corresponding to a letter rating.

<table>
<thead>
<tr>
<th>Fund ESG Quality Score</th>
<th>Fund ESG Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.6* - 10.0</td>
<td>AAA</td>
</tr>
<tr>
<td>7.1 - 8.6</td>
<td>AA</td>
</tr>
<tr>
<td>5.7 - 7.1</td>
<td>A</td>
</tr>
<tr>
<td>4.3 - 5.7</td>
<td>BBB</td>
</tr>
<tr>
<td>2.9 - 4.3</td>
<td>BB</td>
</tr>
<tr>
<td>1.4 - 2.9</td>
<td>B</td>
</tr>
<tr>
<td>0.0 - 1.4</td>
<td>CCC</td>
</tr>
</tbody>
</table>

---

2 This is detailed in the ESH Fund Ratings Methodology, available on MSCI ESG Manager with subscription.
Step 1 Example

<table>
<thead>
<tr>
<th>Weight</th>
<th>ESG Score</th>
<th>ESG Rating</th>
<th>ESG Rating Trend</th>
<th>Normalized Weight</th>
<th>Normalized Weight x Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security A</td>
<td>20%</td>
<td>2.5</td>
<td>B</td>
<td>0</td>
<td>25%</td>
</tr>
<tr>
<td>Security B</td>
<td>40%</td>
<td>7.0</td>
<td>A</td>
<td>0</td>
<td>50%</td>
</tr>
<tr>
<td>Security C</td>
<td>8%</td>
<td>8.0</td>
<td>AA</td>
<td>-1</td>
<td>10%</td>
</tr>
<tr>
<td>Security D</td>
<td>12%</td>
<td>6.0</td>
<td>A</td>
<td>1</td>
<td>15%</td>
</tr>
<tr>
<td>Security E</td>
<td>20%</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>5.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Step 2:** Calculate adjustment % based on fund exposure to “Fund ESG Laggards (%),” “Fund ESG Trend Negative (%),” and “Fund ESG Trend Positive (%),”


**Step 2 Example**

<table>
<thead>
<tr>
<th>Fund Factors</th>
<th>Fund Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund ESG Trend Positive</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Minus</strong> Fund ESG Laggards</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Minus</strong> Fund ESG Trend Negative</td>
<td>8%</td>
</tr>
<tr>
<td>= Adjustment %</td>
<td>-16%</td>
</tr>
</tbody>
</table>

**Step 3:** Multiply the “Fund Weighted Average ESG Score” by (1 + Adjustment %)

**Step 3 Example**

<table>
<thead>
<tr>
<th>Fund Factors</th>
<th>Fund Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fund Weighted Average ESG Score</td>
<td>5.83</td>
</tr>
<tr>
<td>X Adjustment %</td>
<td>-16%</td>
</tr>
<tr>
<td>= ESG Quality Score</td>
<td>4.89</td>
</tr>
</tbody>
</table>
### Calculation Table

<table>
<thead>
<tr>
<th></th>
<th>Sample Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted Average ESG Score</td>
<td>5.83</td>
</tr>
<tr>
<td>Adjustment</td>
<td></td>
</tr>
<tr>
<td>(+) Fund ESG Trend Positive</td>
<td>12.00%</td>
</tr>
<tr>
<td>(-) Fund ESG Trend Negative</td>
<td>8.00%</td>
</tr>
<tr>
<td>(-) Fund ESG Laggards</td>
<td>20.00%</td>
</tr>
<tr>
<td>ESG Score Adjustment</td>
<td>-16.00%</td>
</tr>
<tr>
<td>Fund ESG Score Adjustment</td>
<td>-0.93</td>
</tr>
<tr>
<td>ESG Quality Score</td>
<td>4.89</td>
</tr>
<tr>
<td>ESG Fund Rating</td>
<td>BBB</td>
</tr>
</tbody>
</table>

#### 2.4 Peer Group Percentiles

Each fund’s “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 Quality Score” equal to, or lower than, the fund’s “ESG Quality Score”.

![Fund ESG Quality Score](image1)

![Peer Group Percentile Ranking](image2)
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.

2.5 Global Percentiles

Every fund included in MSCI ESG Fund Ratings receives a "Fund ESG Quality Score – Global Percentile". The Global Percentile notes the percentage of funds, covered by MSCI ESG Fund Ratings, 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.

Supplemental Fund Metrics

Metrics are included to provide investors a) measurements of positive and negative impacts of the investment on the environment and society and b) to enable European investors subject to the Regulation (EU) 2016/2011 to align reporting with EU regulation to assess funds.

Weighted Average Carbon Intensity

The Weighted Average Carbon Intensity measures the carbon intensity of the fund’s holdings. The figure is the sum of security weight (normalized for corporate positions only) multiplied by the security Carbon Intensity. The Weighted Average Carbon Intensity is grouped by the level of intensity Very High – Very Low.

Green Revenues

Fund exposure to Green Revenues is the weighted average of each issuer’s percent of revenue generated by goods and services, including alternative energy, energy efficiency, green building, pollution prevention and sustainable water.

Brown Revenues

Fund exposure to Brown Revenues is the weighted average of each issuer’s percent of revenue generated from thermal coal extraction, unconventional and conventional oil and gas extraction, oil refining, as well as revenue from thermal coal-based power
generation, liquid fuel based power generation or natural gas-based power generation.

Board Independence

Weighted average percentage of issuers in the fund that have an independent board of directors.

Board Diversity

Weighted average percentage of women on the board of the fund’s holdings.

UNGC Violations

Sum of the weight of issuers in the fund that are in violation of the UN Global Compact principles according to MSCI ESG Research methodology.

Very Severe Controversies (OECD Guidelines)

Sum of the weight of issuers in the fund that are facing one or more very severe controversies related to the environment, product quality, human rights, labor rights and governance per MSCI ESG Controversies methodology.

Controversial Weapons

Sum of the weight of issuers in the fund that have any tie to landmines, cluster munitions, biological, chemical, depleted uranium, or nuclear weapons.

Tobacco

Sum of the weight of the issuers in the fund that are tobacco producers that derive =>5%, as well as tobacco distributors, suppliers, and retailers if the combined revenue is => 15% of total revenues.

2.6 Revenue Exposure to Sustainable Impact Solutions (%)

A weighted average of each issuer’s percent of revenue generated from Sustainable Impact Solutions goods and services with positive impact on the society and the environment. Sustainable Impact Solutions include revenue from goods and services contributing to one or more of the following themes: Climate Change, Natural Capital, Basic Needs and Empowerment. 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.

2.7 Treatment of Multi Asset Classes

Cash holdings and other asset types are removed prior to calculating Fund ESG Coverage (%).

Cash is removed because it is outside the scope of ESG relevancy. Including it in the coverage figure would lead to the undesired result of funds failing to meet the coverage threshold due to cash allocations. The weight of cash is included in all metrics that measure exposure to specific criteria (e.g. Tobacco, Fossil Fuel Reserves, ESG Laggards, etc.). Excluding cash from exposure metrics would generate overstated results.

Issuer analysis is mapped to both a bond and to a derivative based on that bond, to the extent possible. In cases where there is exposure to multiple underlying issuers, such as index futures analysis is not mapped.

Specific details regarding included and excluded asset types are in Appendix 3.

2.8 Treatment of Short Positions

When calculating “Fund ESG Coverage (%)”, short positions are always treated as uncovered, even if held as a security of an issuer within ESG coverage. By including the absolute value of 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 MSCI ESG Fund Ratings results. This is because the interpretation of short positions, from an ESG perspective, varies widely based on use case and the specific metric being considered.
Appendices

Appendix 1: MSCI ESG Ratings Coverage

The ESG Ratings coverage universe includes over 7,500 companies (13,000 total issuers including subsidiaries) and more than 600,000 equity and fixed income securities globally. As of April 2020, the coverage universe is comprised of:

- MSCI World Index
- MSCI Emerging Markets Index
- MSCI US Investible Market Index (IMI)
- MSCI Canada IMI+
- MSCI Europe IMI+
- MSCI UK IMI+
- MSCI Nordic IMI+
- MSCI Australia IMI+
- MSCI South Africa IMI
- MSCI EFM Africa
- MSCI Japan IMI
- MSCI China A International
- MSCI Hong Kong IMI
- MSCI Malaysia IMI
- MSCI Singapore IMI
- MSCI World IMI
- MSCI Emerging Markets IMI
- MSCI Australia 200
- MSCI Switzerland IMI+
- MSCI Mexico IMI
- MSCI Chile IMI
- MSCI Brazil IMI
- MSCI China A
- MSCI IMI ACWI
- MSCI ESG Ratings covers over 85% of market value of a widely used global fixed income benchmark, including:
  - Approximately 95% of the corporate investment grade (listed and non-listed)
  - Approximately 95% of the covered bonds
  - Approximately 99% of the treasuries/Sovereign**
  - Approximately 91% of the government related (ex-Sovereign)*
  - Approximately 85% of global high yield
Appendix 2: Eligible Asset Types

MSCI ESG Research generally conducts ESG assessments at the 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 MSCI ESG Fund Ratings analysis:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Depository Receipt</th>
<th>Equity Future</th>
<th>Equity Option</th>
<th>Equity Warrant</th>
<th>Global Depository Receipt</th>
<th>Government Debt</th>
<th>International Depository Receipt</th>
<th>Limited Partnership</th>
<th>Loan</th>
<th>Municipal bond</th>
<th>Option on Future</th>
<th>Preference Shares</th>
<th>Preferred Security</th>
<th>Provincial Bond</th>
<th>Real Estate Invst. Trust</th>
<th>Tracking Instrument</th>
<th>Treasury Bill</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Depository Receipt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank Loan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bond Future</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common Shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convertible Bond</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convertible Note</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Debt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Cash Equivalent</td>
<td>FX Forward</td>
</tr>
<tr>
<td>Cash 120 days</td>
<td>Cash Options</td>
<td>Interest Rate Swap</td>
</tr>
<tr>
<td>Cash 30 days</td>
<td>Currency</td>
<td>Time/Term Deposit</td>
</tr>
<tr>
<td>Cash 60 days</td>
<td>Currency Future</td>
<td></td>
</tr>
<tr>
<td>Cash 90 days</td>
<td>Foreign Exchange</td>
<td></td>
</tr>
</tbody>
</table>
Contact us
esgclientservice@msci.com

AMERICAS
Americas 1 888 588 4567 *
Atlanta + 1 404 551 3212
Boston + 1 617 532 0920
Chicago + 1 312 675 0545
Monterrey + 52 81 1253 4020
New York + 1 212 804 3901
San Francisco + 1 415 836 8800
São Paulo + 55 11 3706 1360
Toronto + 1 416 628 1007

EUROPE, MIDDLE EAST & AFRICA
Cape Town + 27 21 673 0100
Frankfurt + 49 69 133 859 00
Geneva + 41 22 817 9777
London + 44 20 7618 2222
Milan + 39 02 5849 0415
Paris 0800 91 59 17 *

ASIA PACIFIC
China North 10800 852 1032 *
China South 10800 152 1032 *
Hong Kong + 852 2844 9333
Mumbai + 91 22 6784 9160
Seoul 00798 8521 3392 *
Singapore 800 852 3749 *
Sydney + 61 2 9033 9333
Taipei 008 0112 7513 *
Thailand 0018 0015 6207 7181 *
Tokyo + 81 3 5290 1555

* = toll free

ABOUT MSCI
MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process.

About MSCI ESG Research
Products and Services
MSCI ESG Research products and services are provided by MSCI ESG Research LLC, and are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research LLC. are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc.

To learn more, please visit www.msci.com.
Notice and disclaimer

This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. or its subsidiaries (collectively, "MSCI"), or MSCI's licensors, direct or indirect suppliers or any third party involved in making or compiling any Information (collectively, with MSCI, the "Information Providers") and is provided for informational purposes only. The Information may not be modified, reverse-engineered, reproduced or redisseminated in whole or in part without prior written permission from MSCI.

The Information may not be used to create derivative works or to verify or correct other data or information. For example (but without limitation), the Information may not be used to create indexes, databases, risk models, analytics, software, or in connection with the issuing, offering, sponsoring, managing or marketing of any securities, portfolios, financial products or other investment vehicles utilizing or based on, linked to, tracking or otherwise derived from the Information or any other MSCI data, information, products or services.

The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information. NONE OF THE INFORMATION PROVIDERS MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, EACH INFORMATION PROVIDER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.

Without limiting any of the foregoing and to the maximum extent permitted by applicable law, in no event shall any Information Provider have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited, including without limitation (as applicable), any liability for death or personal injury to the extent that such injury results from the negligence or willful default of itself, its servants, agents or sub-contractors.

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.

The Information should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. All Information is impersonal and not tailored to the needs of any person, entity or group of persons.

None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), any security, financial product or other investment vehicle or any trading strategy.

It is not possible to invest directly in an index. Exposure to an asset class or trading strategy or other category represented by an index is only available through third party investable instruments (if any) based on that index. MSCI does not issue, sponsor, endorse, market, offer, review or otherwise express any opinion regarding any fund, ETF, derivative or other security, investment, financial product or trading strategy that is based on, linked to or seeks to provide an investment return related to the performance of any MSCI index (collectively, "Index Linked Investments"). MSCI makes no assurance that any Index Linked Investments will accurately track index performance or provide positive investment returns. MSCI Inc. is not an investment adviser or fiduciary and MSCI makes no representation regarding the advisability of investing in any Index Linked Investments.

Index returns do not represent the results of actual trading of investible assets/securities. MSCI maintains and calculates indexes, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the index or Index Linked Investments. The imposition of these fees and charges would cause the performance of an Index Linked Investment to be different than the MSCI index performance.

The Information may contain back tested data. Back-tested performance is not actual performance, but is hypothetical. There are frequently material differences between back tested performance results and actual results subsequently achieved by any investment strategy.

Constituents of MSCI equity indexes are listed companies, which are included in or excluded from the indexes according to the application of the relevant index methodologies. Accordingly, constituents in MSCI equity indexes may include MSCI Inc., clients of MSCI or suppliers to MSCI. Inclusion of a security within an MSCI index is not a recommendation by MSCI to buy, sell, or hold such security, nor is it considered to be investment advice.

Data and information produced by various affiliates of MSCI Inc., including MSCI ESG Research LLC and Barra LLC, may be used in calculating certain MSCI indexes. More information can be found in the relevant index methodologies on www.msci.com.

MSCI receives compensation in connection with licensing its indexes to third parties. MSCI Inc.’s revenue includes fees based on assets in Index Linked Investments. Information can be found in MSCI Inc.’s company fillings on the Investor Relations section of www.msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. Except with respect to any applicable products or services from MSCI ESG Research, neither MSCI nor any of its products or services recommends, endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies and MSCI’s products or services are not intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Issuers mentioned or included in any MSCI ESG Research materials may include MSCI Inc., clients of MSCI or suppliers to MSCI, and may also purchase research or other products or services from MSCI ESG Research. MSCI ESG Research materials, including materials utilized in any MSCI ESG Indexes or other products, have not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body.

Any use of or access to products, services or information of MSCI requires a license from MSCI. MSCI, Barra, RiskMetrics, IPD and other MSCI brands and product names are the trademarks, service marks, or registered trademarks of MSCI or its subsidiaries in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor’s. “Global Industry Classification Standard (GICS)” is a service mark of MSCI and Standard & Poor’s.

MIFID2/MIFIR notice: MSCI ESG Research LLC does not distribute or act as an intermediary for financial instruments or structured deposits, nor does it deal on its own account, provide execution services for others or manage client accounts. No MSCI ESG Research product or service supports, promotes or is intended to support or promote any such activity. MSCI ESG Research is an independent provider of ESG data, reports and ratings based on published methodologies and available to clients on a subscription basis. We do not provide custom or one-off ratings or recommendations of securities or other financial instruments upon request.

Privacy notice: For information about how MSCI ESG Research LLC collects and uses personal data concerning officers and directors, please refer to our Privacy Notice at https://www.msci.com/privacy-pledge.