

MSCI ESG Ratings Methodology: Responsible Investment Key Issue

MSCI ESG Research LLC

October 2023



Contents

Introduction	3
Risks associated with this Key Issue	4
Responsible Investment Key Issue Score	4
Responsible Investment Management Score	4
Management Score category: ESG Integration Score	5
Management Score category: Engagement Score	7
Controversies	8
Responsible Investment Exposure Score	8
Business Exposure Score	9
Business Segment Exposure Scores	10
Company-Specific Exposure Score	10
Data Sources	11



Introduction

This document provides essential information on the components of the Responsible Investment Key Issue to enable users of ESG Ratings to understand how our outputs are determined. Responsible Investment is a Key Issue in the Social Pillar of the MSCI ESG Ratings model. Companies are evaluated on their integration of environmental, social and governance considerations in the management of their own assets or the assets they manage on behalf of others.

For additional details on the MSCI ESG Ratings Model, refer to Section 2, Data, ratings and scores, of "ESG Ratings Methodology."

Exhibit 1: MSCI ESG Key Issue hierarchy

3 Pillars	10 Themes	33 ESG Key Issues
	Climate Change	Carbon Emissions
		Climate Change Vulnerability
		Financing Environmental Impact
		Product Carbon Footprint
	Natural Capital	Biodiversity & Land Use
		Raw Material Sourcing
Environmental		Water Stress
	Pollution & Waste	Electronic Waste
		Packaging Material & Waste
		Toxic Emissions & Waste
	Environmental Opportunities	Opportunities in Clean Tech
		Opportunities in Green Building
		Opportunities in Renewable Energy
Human Capit	Human Canital	Health & Safety
		Human Capital Development
	Tiuman Capitai	Labor Management
		Supply Chain Labor Standards
		Chemical Safety
		Consumer Financial Protection
Social	Product Liability	Privacy & Data Security
Social		Product Safety & Quality
		Responsible Investment
	Stakeholder Opposition	Community Relations
		Controversial Sourcing
		Access to Finance
	Social Opportunities	Access to Health Care
		Opportunities in Nutrition & Health



3 Pillars	10 Themes	33 ESG Key Issues
Corporate Governance Governance Corporate Behavior	Corporato Covernones	Board
		Pay
	Ownership & Control	
		Accounting
	Corporato Pobavior	Business Ethics
	Corporate Bellavior	Tax Transparency

Risks associated with this Key Issue

- Lower security values due to unmitigated or overlooked ESG risks.
- Client attrition due to mismanagement of investment risk.
- Higher returns from ESG investments.

Responsible Investment Key Issue Score

The Responsible Investment Key Issue Score evaluates the company's level of exposure to, and management of, risks on this Key Issue. The Key Issue Score is based on the Exposure Score and the Management Score using the formula below. The Exposure Score and the Management Score are combined such that a higher level of exposure requires a higher level of demonstrated management capability in order to achieve the same overall Key Issue Score.

$$KI_i = 7 - (\max(EXP_i, 2) - MGMT_i)$$

Where:

- *KI_i* is the Key Issue Score for company *i*.
- *EXP_i* is the Exposure Score for company *i*.
- *MGMT_i* is the Management Score for company *i*.

Responsible Investment Management Score

The Responsible Investment Management Score evaluates the company's ability to manage its exposure to risks on this Key Issue. It is based on an average of the scores associated with each of the Management Score categories listed below,



modified by Controversies. These scores are derived from data points that are scored on a 0-10 scale, with 10 corresponding to best practice and 0 corresponding to lack of management. Refer to Section 3.3, Analyzing risk management, of "ESG Ratings Methodology" for additional details. Sources are company disclosures except where otherwise indicated. The following formula is used to calculate the Responsible Investment Management Score - Excluding Controversies:

$$MGMT_{REI,i} = \frac{EIS_{REI,i} + ENG_{REI,i}}{2}$$

Where:

- MGMT_{REI,i} is the Responsible Investment Management Score Excluding Controversies for company i.
- *EIS*_{REI,i} is the ESG Integration Score for company *i*.
- *ENG_{REI,i}* is the Engagement Score for company *i*.

The following data points, without constituting an exhaustive list, are representative of the inputs to the Management Score and are used in the Management Score calculation:

Management Score category: ESG Integration Score

 Dedicated ESG analysts responsible for analyzing ESG issues in investment process.

Definition: Indicates whether the company has a dedicated individual or team responsible for analyzing ESG issues or if the company provides ESG training to investment analysts.

• Responsible investment policy to incorporate ESG considerations.

Definition: Indicates whether the company has policies and procedures addressing ESG considerations in the investment process.

• Signatory or participant at Social Investment Forum (SIF).

Definition: Indicates whether the company is a signatory or participant at the Social Investment Forum (SIF).



 Signatory or participant at the Institutional Investors Group on Climate Change (IIGCC).

Definition: Indicates whether the company is a signatory or participant at the Institutional Investor Group on Climate Change (IIGCC).

Signatory or participant at the Investor Group on Climate Change (IGCC).

Definition: Indicates whether the company is a signatory or participant at the Investor Group on Climate Change (IGCC).

Signatory or participant at the Investor Network on Climate Risk (INCR).

Definition: Indicates whether the company is a signatory or participant at the Investor Network on Climate Risk (INCR).

• Signatory to the Principles for Responsible Investment (PRI).

Definition: Indicates whether the company is a signatory to the Principles for Responsible Investment (PRI).

Signatory or participant at other responsible investing initiative.

Definition: Indicates whether the company is a signatory or participant at any responsible investing initiative besides the PRI IGCC, IIGCC, INCR, or SIF.

Extent of ESG integration into corporate fixed income investments.

Definition: The extent to which ESG factors are integrated into the investment process for corporate fixed income securities. Best practice is for the company to integrate ESG factors into the investment process across all funds and investments.

Extent of ESG integration into non-corporate fixed income investments.

Definition: The extent to which ESG factors are integrated into the investment process for non-corporate fixed income securities, including government bonds, treasuries and securitized products. Best practice is for



the company to integrate ESG factors into the investment process across all funds and investments.

Extent of ESG integration into hedge funds and alternative investments.

Definition: The extent to which ESG factors are integrated into the investment process for hedge funds and other alternative investments. Best practice is for the company to integrate ESG factors into the investment process across all funds and investments.

• Extent of ESG integration into listed equity investments.

Definition: The extent to which ESG factors are integrated into the investment process for listed equities. Best practice is for the company to integrate ESG factors into the investment process across all funds and investments.

Extent of ESG integration into private equity investments.

Definition: The extent to which ESG factors are integrated into the investment process for private equity. Best practice is for the company to integrate ESG factors into the investment process across all funds and investments.

Extent of ESG integration into real estate investments.

Definition: The extent to which ESG factors are integrated into the investment process for real estate. Best practice is for the company to integrate ESG factors into the investment process across all funds and investments.

Management Score category: Engagement Score

· Dedicated staff responsible for ESG engagement.

Definition: Indicates whether the company has a dedicated individual or team responsible for monitoring and implementing its ESG engagement policies.



 Detailed engagement policy that addresses environmental, social and governance issues.

Definition: Indicates whether the company has a detailed engagement policy that addresses environmental, social and governance issues.

Controversies

A controversy deduction ranging from 0 to 5 points is subtracted from the overall Management Score, based on the severity and type of controversies facing the company on this Key Issue. The following categories of controversies are used in the assessment:

Controversial investments.

For more details on how controversies are included in the MSCI ESG Ratings model, refer to Section 3.3.2, Controversies cases, of "ESG Ratings Methodology."

Responsible Investment Exposure Score

The Responsible Investment Exposure Score evaluates the company's exposure to risks on this Key Issue. It is based on the average of the Business and Company-Specific Exposure Scores. The Business Exposure Score and Company-Specific Exposure Score are scored on a 0-10 scale, with 10 corresponding to the highest risk and 0 corresponding to the lowest risk. Refer to Section 3.2, Analyzing risk exposure, of "ESG Ratings Methodology" for additional details. The following formula is used in the Exposure Score calculation:

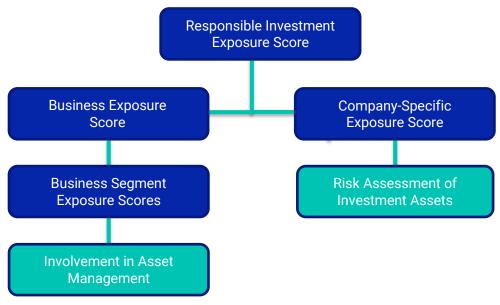
$$EXP_{REI,i} = \frac{\left(BUS_{REI,i} + COM_{REI,i}\right)}{2}$$

Where:

- $EXP_{REI,i}$ is the Responsible Investment Exposure Score of company i.
- BUS_{RELi} is the Business Exposure Score of company i.
- $COM_{REI,i}$ is the Company-Specific Exposure Score of company i.







Business Exposure Score

The Business Exposure Score is a weighted average of the Business Segment Exposure Scores of a company's business segments. Scores are weighted by the proportion of a company's total revenue from each business segment, using the following formula to calculate the Business Exposure Score:

$$BUS_{REI,i} = \sum_{j=1}^{n_i} w_{Revenue,i,j} BSE_{REI,j}$$

Where:

- $BSE_{REI,j}$ is the Business Segment Exposure Score for business segment j.
- $w_{Revenue\ i,j}$ is the weight of business segment j for company i based on the contribution to total company revenue.
- n_i is the number of business segments of company i.



Business Segment Exposure Scores

The Business Segment Exposure Score of a business segment is based on a mapping of the business segment as disclosed by the company to a corresponding business activity. MSCI ESG Research uses the Standard Industrial Classification (SIC) system along with industry-specific adjustments to define business activities. The score associated with a business activity is used to calculate a Business Segment Exposure Score. Each business activity score is determined by a qualitative assessment of whether a business activity has a core involvement in asset management and investment activities (property and casualty insurance, life and health insurance, asset management, investment bank and brokerage, or other). Business activities where companies are involved in managing their own investment assets, manage investment assets on behalf of their clients, or both get a higher Business Segment Exposure Score.

Company-Specific Exposure Score

The Company-Specific Exposure Score is determined by a risk assessment of the investment assets owned and managed by a company. It is calculated as follows:

$$COM_{REI,i} = \sum\nolimits_{k = 1}^{{n_i}} {P{P_{k,i}} * IA{R_k} * {M_{{k_{x,y,z}},i}}}$$

Where:

- $COM_{REI,i}$ is the Company-Specific Exposure Score for company i.
- $PP_{k,i}$ is the Portfolio percentage of company i's exposure to investment asset type k (both proprietary and client investments)
- IAR_k is the investment asset type risk for asset type k
- $\mathit{M}_{k_{x,y,z},i}$ is a multiplier specific to the investment in asset type k by company ibased on the factors x, y, z detailed below.
 - \circ x Whether a majority of investments are in developed or emerging markets.
 - y Whether a majority of assets under management are proprietary, managed on behalf of clients, or hybrid.
 - o z Whether a majority of investments follow an active or passive investment strategy.



For companies where the breakdown of investment exposure by asset type is unknown, the Company-Specific Exposure Score is assigned as an industry-average score specific to the ESG Ratings industry of the company.

The multiplier $M_{k_{x,y,z},i}$ has the effect of increasing the Company-Specific Exposure Scores from 0% to +40% on each asset type, based on the company's majority market, ownership of investment assets, and investment strategy.

The investment asset type risk is evaluated by qualitative assessments of the liquidity risk, volatility risk and transaction cost for a given investment asset type. These factors are scored on a 0-10 scale, where a score of 10 indicates the highest risk and 0 indicates the lowest risk.

$$IAR_k = \frac{LR_k + VR_k + TC_k}{3}$$

Where:

- LR_k is the liquidity risk for the asset type k
- VR_k is the volatility risk for the asset type k
- TC_k is the transaction cost for the asset type k

Data Sources

The following sources are used to determine the Responsible Investment Exposure Score:

MSCI ESG Research, Refinitiv, company disclosures.



Contact us

msci.com/contact-us

AMERICAS

United States + 1 888 588 4567 *
Canada + 1 416 687 6270
Brazil + 55 11 4040 7830
Mexico + 52 81 1253 4020

EUROPE, MIDDLE EAST & AFRICA

 South Africa
 + 27 21 673 0103

 Germany
 + 49 69 133 859 00

 Switzerland
 + 41 22 817 9777

 United Kingdom
 + 44 20 7618 2222

 Italy
 + 39 02 5849 0415

 France
 + 33 17 6769 810

ASIA PACIFIC

* toll-free

China +862161326611 +852 2844 9333 Hong Kong India + 91 22 6784 9160 1800818185 * Malaysia South Korea +827047694231 Singapore + 65 67011177 Australia +612 9033 9333 Taiwan 008 0112 7513 * Thailand 0018 0015 6207 7181 * +81345790333 Japan

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 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 researchenhanced 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

Т

his 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. All rights in the Information are reserved by MSCI and/or its Information Providers.

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 may include "Signals," defined as quantitative attributes or the product of methods or formulas that describe or are derived from calculations using historical data. Neither these Signals nor any description of historical data are intended to provide investment advice or a recommendation to make (or refrain from making) any investment decision or asset allocation and should not be relied upon as such. Signals are inherently backward-looking because of their use of historical data, and they are not intended to predict the future. The relevance, correlations and accuracy of Signals frequently will change materially.

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. The calculation of indexes and index returns may deviate from the stated methodology. 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 filings on the Investor Relations section of msci.com.

MSCI ESG Research LLC is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc. 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 a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such, provided that applicable products or services from MSCI ESG Research may constitute investment advice. 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. MSCI ESG and climate ratings, research and data are produced by MSCI ESG Research LLC, a subsidiary of MSCI Inc. MSCI ESG Indexes, Analytics and Real Estate are products of MSCI Inc. that utilize information from MSCI ESG Research LLC. MSCI Indexes are administered by MSCI Limited (UK).

Please note that the issuers mentioned in MSCI ESG Research materials sometimes have commercial relationships with MSCI ESG Research and/or MSCI Inc. (collectively, "MSCI") and that these relationships create potential conflicts of interest. In some cases, the issuers or their affiliates purchase research or other products or services from one or more MSCI affiliates. In other cases, MSCI ESG Research rates financial products such as mutual funds or ETFs that are managed by MSCI's clients or their affiliates, or are based on MSCI Inc. Indexes. In addition, constituents in MSCI Inc. equity indexes include companies that subscribe to MSCI products or services. In some cases, MSCI clients pay fees based in whole or part on the assets they manage. MSCI ESG Research has taken a number of steps to mitigate potential conflicts of interest and safeguard the integrity and independence of its research and ratings. More information about these conflict mitigation measures is available in our Form ADV, available at https://adviserinfo.sec.gov/firm/summary/169222.



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 S&P Global Market Intelligence. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and S&P Global Market Intelligence.

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.

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