

MSCI Labeled Bond and Loan Assessment Methodology

MSCI ESG Research

April 2025

Contents

Introduction	3
Overview of green, social and sustainability bonds and loans	3
Labeled bond and loan assessment methodology	4
Data sources and treatment of insufficient data	5
Use of proceeds	5
Process for project evaluation and selection	6
Management of proceeds	7
Ongoing reporting	7
Coverage, evaluation process and methodology updates	10
Appendix I: Use of proceeds categories	12
Green	12
Social	17
Target demographics	19
Appendix II: Relationship between the use of proceeds categories to the EU Paris	
Aligned Benchmark exclusion criteria	21
Notes on use of proceeds	24
Notes on PAB Exclusion criteria	24
Appendix III: Chronology of methodology updates	26

Introduction

This methodology document outlines MSCI ESG Research’s approach to determine an instrument’s eligibility to be labeled as:

- Green;
- Social; or
- Sustainability.

Such labeled bonds and loans are instruments whose proceeds have a clear net positive environmental and/or social impact.¹ MSCI ESG Research’s approach is intended to provide clear criteria to define such instruments. This methodology is subject to change based on the evolving areas for use of proceeds, changes in regulatory requirements and standard definitions.

Overview of green, social and sustainability bonds and loans

Proceeds

The proceeds of labeled bonds and loans are exclusively and formally applied to projects or activities that:

- Promote the transition to a low-carbon economy or other environmental sustainability purposes, i.e., **Green**.
- Aim to address or mitigate a specific social issue and/or seek to achieve a positive social outcome, especially, but not exclusively, for a target population, i.e., **Social**.
- Meet both the Green and Social criteria above, i.e., **Sustainability**.

For bond instruments, “proceeds” shall mean net proceeds, i.e., all proceeds minus the cost of issuance of bonds, or an equivalent amount. Loans include syndicated loans and revolving credit facilities.

Nomenclature

There are differing naming conventions used for bonds and loans in our coverage universe. Self-labeled green, social or sustainability bonds and self-labeled green, social or sustainability loans are evaluated using MSCI ESG Research’s criteria to identify bonds and loans that may have a positive environmental and/or social benefit.²

For example:

- Green bonds and green loans can be issued under a sustainability bond/loan framework or may be called “climate mitigation bonds/loans,” “blue bonds/loans,” “transition bonds/loans” or other similar nomenclatures.

¹ Sustainability-linked bonds and loans, where the coupon of general-purpose bonds and loans is linked to sustainability performance, are outside the scope of this methodology, which is proceeds focused.

² This includes standard use of proceeds bonds, revenue bonds, project bonds and secured bonds.

- Social bonds and social loans can be issued under a sustainability bond/loan framework or may be called “positive impact bonds/loans,” “healthcare bonds/loans” or other similar nomenclatures.
- Sustainability bonds and sustainability loans can be issued under a sustainable bond/loan framework, Sustainable Development Goals (SDG) bond/loan framework or other similar nomenclatures.

Post-issuance labeling

In cases where issuers label a bond as green, social or sustainability after the issuance of that bond, MSCI ESG Research considers the bond to be eligible for assessment only where the labelling occurs within three months of issuance, and is made available in the public documentation within this three-month timeframe.

Labeled bond and loan assessment methodology

We independently evaluate bonds and loans along four dimensions to determine whether an instrument meets the requirements for the labeling. The evaluation criteria of the MSCI ESG Research labeled bond and loan methodologies are intended to reflect themes articulated in principles administered by the International Capital Market Association (ICMA) and the Loan Market Association (LMA).³

Figure 1: Labeled bond and loan principles

Instrument:	Bonds	Loans
Administered by	ICMA	LMA
Green	Green Bond Principles ⁴	Green Loan Principles ⁵
Social	Social Bond Principles ⁶	Social Loan Principles ⁷
Sustainability	Sustainability Bond Guidelines ⁸	n/a ⁹

³ The “green” component of this methodology is called the MSCI Green Bond and Green Loan Assessment Methodology, the “social” component is called the MSCI Social Bond and Social Loan Assessment Methodology and the “sustainability” component is called the MSCI Sustainability Bond and Sustainability Loan Assessment Methodology.

⁴ International Capital Market Association (ICMA), *The Green Bond Principles* (GBP) 2021 (with June 2022 Appendix I)

⁵ The Green Loan Principles 2023 have similar definitions of Principle 1, i.e., eligible Use of Proceeds, as the Green Bond Principles 2021

⁶ International Capital Market Association (ICMA), *The Social Bond Principles* (SBP) 2023

⁷ The Social Loan Principles 2023 have similar definitions of Principle 1, i.e. eligible Use of Proceeds, as the Social Bond Principles 2023

⁸ International Capital Market Association (ICMA), *The Sustainability Bond Guidelines* (SBG) 2021, June 2021.

⁹ As of December 2024, LMA has not published sustainability loan principles.

Data sources and treatment of insufficient data

Data sources used for MSCI Labeled Bond and Loan Assessment are bond- or loan-related documentation provided by labeled bond issuers or labeled loan borrowers, which can include, but is not limited to, the relevant labeled bond or loan framework, investor presentation, prospectus or website. Data quality checks are conducted on all data prior to publication.

For each type of labeled instrument, MSCI ESG Research requires clarity about the instrument's:

1. Stated use of proceeds;
2. Process for project evaluation and selection;
3. Process for management of proceeds; and
4. Commitment to ongoing reporting.

Green bonds issued prior to the launch of the ICMA's Green Bond Principles in 2014 are subject only to the use of proceeds criterion above.

Inadequate information on the issuer's labeled bond program results in a bond being considered "Under Review." If, after three months of being "Under Review,"¹⁰ MSCI ESG Research still lacks sufficient information to determine bond eligibility, the bond is considered permanently ineligible for assessment. Once MSCI ESG Research has published its labeled bond assessment, we do not revise this assessment if the issuer modifies/updates its planned use of proceeds allocation.

Use of proceeds

Use of proceeds categories and the eligibility and ineligibility criteria within each category consider relevant market standards and norms. These are set out in Appendix I.

Minimum use of proceeds requirements:

- 100% of proceeds to projects with a positive benefit;
- At least 90% of the proceeds allocated to the eligible use of proceeds categories;
- Zero amounts allocated to controversial weapons-, tobacco- and coal-related projects, as detailed in Figure 2.

In cases where there is insufficient data on funding allocated to each category in the bond framework, making it difficult to confirm that 90% of proceeds are allocated to eligible green categories, MSCI ESG Research contacts the issuer to get the clarification needed. Where such communication fails (e.g., the issuer does not respond), we make the following assumptions:

1. Bond proceeds are assumed to be allocated as per the issuer's existing relevant project pool (e.g., for a self-labeled green bond, MSCI ESG Research considers the green project pool; for a self-labeled social bond, we consider the social project pool), if such data is publicly

¹⁰ Note that the "under review" period was historically six months but was reduced to three months from October 1, 2024 onwards. An extension of one month may be provided in cases where the issuer needs some time and commits to MSCI ESG Research to providing the information required within the extended time frame. If and when this methodology is undergoing a client consultation for an update, MSCI ESG Research will provide an extension beyond the three month period so that bonds can be assessed as per the updated methodology, once the consultation is concluded and results are announced.

available. MSCI ESG Research assumes that proceeds are allocated to a relevant project pool, not per the issuer's previous similarly labeled bond, if any.

2. Proceeds are allocated in equal proportion between each of the funded categories.

Note: A bond with a swap of a green bond identifier, i.e., a swap of an International Securities Identification Number (ISIN) with another ISIN, is eligible, provided the bond with the new ISIN follows the green bond framework of the original bond. The issuer may change the ISIN for different reasons, but as long as the bond with the new ISIN follows the original green bond framework, a bond that has undergone this process is eligible.

Figure 2: Use of proceeds requirements (all three must be met)

% of Proceeds	Green	Social	Sustainability
100%	Should have positive environmental benefits, i.e., intended to facilitate sustainable economic growth with more efficient resource management and reduced greenhouse gas (GHG) and toxic emissions.	Should have positive social benefits, i.e., intended to address essential needs of a defined target demographic to facilitate economic and social inclusion.	Should have both positive environmental and social benefits.
>90%	Allocated to one or more of the seven eligible green categories defined by MSCI ESG Research (alternative energy, pollution prevention and control, sustainable water, green building, climate adaptation, and other environmental). ¹¹	1. Allocated to one or more of the eight eligible social need categories defined by MSCI ESG Research (food security, healthcare, real estate, access to finance, education, basic infrastructure, employment generation, and other social). ¹² 2. Proceeds must benefit an eligible target demographic.	Allocated to one or more of the eligible green categories <u>and</u> to one or more of the eligible social need categories (while also meeting the targeted demographic requirement).
Zero	Funding to: <ul style="list-style-type: none"> Manufacturing of controversial weapons (including cluster munitions, landmines, biological/chemical weapons, depleted uranium weapons, blinding laser weapons, incendiary weapons, and/or non-detectable fragments), or Agriculture for tobacco or manufacturing of tobacco-based products, or Coal exploration, mining, extraction, distribution or refining or coal-based energy generation 		

Process for project evaluation and selection

MSCI ESG Research must find evidence that the labeled bond issuer or labeled loan borrower clearly delineated:

^{11, 12} For detailed criteria, please refer to Appendix I.

- For green bonds and loans, the environmental objectives of the projects being funded, for social bonds and loans, the social objectives of the projects being funded and for sustainability bonds and loans, the environmental and social objectives of the projects being funded.
- The specific criteria and process for determining eligible projects or investments in the bond- or loan-related documentation, which can include, but is not limited to, the relevant labeled bond or loan framework, investor presentation or website.
- The processes by which it identifies and manages perceived environmental and social risks associated with relevant projects or investments.

Management of proceeds

MSCI ESG Research must find evidence of the following:

Loans

For labeled loans, a formal process to track allocation of proceeds raised to the eligible use of proceeds must be disclosed in the documentation.

Where a labeled loan takes the form of one or more tranches of a loan facility, each tranche must be clearly designated, with the proceeds of individual tranches credited to a separate account or tracked by the borrower in an appropriate manner.

Bonds

For labeled bonds, a formal process to apply proceeds raised, or an amount equal to proceeds raised, to the eligible use of proceeds must be disclosed in the bond prospectus or supporting documentation.

Eligible mechanisms to apply proceeds raised, or an amount equal to proceeds raised, include:

- Creation of a separate legal entity;
- Creation of a sub-portfolio linked to the issuer's investment operations for eligible projects; or
- Another auditable mechanism whereby the balance of tracked proceeds is reduced periodically by amounts matching investments made in eligible projects during that period.

The issuer should make known to investors the intended types of temporary placement for the balance of unallocated proceeds.

The proceeds of labeled bonds and loans can be managed per bond (bond by bond approach) or on an aggregated basis for multiple labeled bonds of the same type (e.g., portfolio approach towards all green bonds of the issuer).

Ongoing reporting

MSCI ESG Research must find evidence of the following:

Requirements for issuers/borrowers

At issuance, the labeled bond issuer or labeled loan borrower must either provide a report on the application of the proceeds raised or state its commitment to report on application of proceeds within one year of issuance.

The labeled bond issuer or labeled loan borrower must further report, on at least an annual basis, thereafter for the life of the bond or loan, or until proceeds have been fully disbursed, whichever is earlier.

After the full allocation of proceeds, labeled bond issuers or labeled loan borrowers must report on a systematic, regular basis in case of any material developments that impact funding to eligible projects.

Reporting must include one or more of the following:

- A list of specific projects/investments, including the amounts disbursed to each individual project; or
- Aggregate project/investment categories, including the amounts disbursed to each project type.

Labeled bond issuers and labeled loan borrowers can report on an individual bond level or with an aggregated portfolio approach.

MSCI ESG Research assessment process

MSCI ESG Research reviews adherence to the annual reporting requirements, including the confirmation of whether the use of proceeds continues to meet the eligibility criteria. If MSCI ESG Research's methodology has been updated between issuance and the annual green bond report of the issuer, MSCI ESG Research will apply the updated methodology to assess the annual report.

Use of proceeds: MSCI ESG Research evaluates, typically annually, the amounts disbursed to each project or project type and assesses whether the proceeds continue to meet the requirements set out in Figure 2, above. Where the reported use of proceeds deviates from the use of proceeds requirements in Figure 2, the bond or loan will no longer be considered to meet the labeled bond or loan criteria.

Availability of reporting: Starting one year from issuance of the labeled bond or initiation of the labeled loan, or one year since the previous annual reporting date, MSCI ESG Research reviews reporting, where available. If the required reporting is not available three months after the reporting due date, the labeled bond or labeled loan is assessed as On Watch. If the required reporting is not available six months after the reporting due date, the bond or loan will no longer be considered to meet the labeled bond or loan criteria, and is considered permanently ineligible.

Figure 3: Availability of reporting

Months*	Reporting Status
12	Annual Report due for publication
15¹³	If reporting not available, assessed as On Watch by MSCI ESG Research
18¹⁴	If reporting still not available, the labeled bond or loan is no longer considered to meet the labeled bond or loan criteria due to lack of transparency, as per MSCI ESG Research's assessment.

*Note: * Since issuance of the bond or initiation of the loan or since the previous annual reporting date.*

¹³ This allows time for contact with the issuer or borrower in case any questions or issues are raised. This is necessary since labeled bond and labeled loan reporting is not yet standardized, and reports are not always available through standard financial reporting channels.

¹⁴ In a few cases, bond issuers reach out to MSCI ESG Research stating that they need a little more time than 18 months to release an annual green bond report. In such cases, if the reason for delay is reasonable, we typically accept a delay provided the issuer provides a committed timeline for its green bond reporting and follows through with the publication of its report within the time frame committed. Note that this timeframe should not be beyond six months of the 18 month period.

Coverage, evaluation process and methodology updates

Coverage universe

The coverage universe of MSCI Labeled Bond and Loan Assessment includes:

Criterion 1. all bonds that are part of the Bloomberg MSCI Green Bond Index and

Criterion 2. bonds that meet MSCI ESG Research's minimum size for the currencies criteria, detailed below:

- 300 million: USD, EUR, CHF, AUD.
- 150 million: CAD.
- 200 million: GBP.
- 35 billion: JPY.
- 1 billion: RON, PEN.
- 2 billion: DKK, NOK, PLN, ILS, HKD, MYR.
- 2.5 billion: SEK.
- 5 billion: CNY.
- 10 billion: MXN, CZK, THB.
- 20 billion: RUB.
- 500 million: NZD, SGD.
- 100 billion: CLP.
- 200 billion: HUF.
- 500 billion: KRW.
- 1 trillion: COP.
- 2 trillion: IDR.

For criterion 2 above, note that:

- a. asset backed securities (ABS), collateralized debt obligation (CDO), commercial mortgage-backed securities (CMBS), collateralized mortgage obligation (CMO), mortgage-backed securities (MBS) and US municipal bonds (Munis) are excluded from the coverage universe.
- b. Bonds with fixed-income characteristics rendering the bond status to be inactive, such as the ones listed below, are not in the coverage universe:
 - Matured.
 - Called.
 - Converted or exchanged.
 - Funged.
 - Cancelled.
 - Repaid before maturity.
 - Repurchased.
 - Tendered.

- Bonds without an ISIN or Committee on Uniform Securities Identification Procedures (CUSIP) number as an identifier.

Criterion 3. The coverage universe of MSCI Labeled Bond and Loan Assessment also includes bonds and loans for which MSCI ESG Research is contractually bound to provide a Second Party Opinion on annual labeled bond or labeled loan reporting.

Evaluation process

All assessments are conducted by an analyst and are subsequently reviewed by a designated reviewer to ensure the accuracy and consistency of methodology application. All analysts and reviewers are ESG Analytical Personnel.

MSCI ESG Research has established the Green and Social Instruments Methodology Committee (GSIMC) as the escalation body for complex methodology application cases. Reviewers may escalate cases to the GSIMC. The GSIMC may further escalate cases, or analysts may challenge decisions of the GSIMC, to the ESG Assessment Committee (EAC) which is MSCI ESG Research's oversight body for methodology application.

Methodology update process

The ESG Methodology Committee (EMC) presides over the development and review of all ESG Research methodologies. MSCI Labeled Bond and Loan Assessment Methodology is reviewed on an ongoing basis by the EMC, typically at least annually. All methodology update proposals are subject to market consultation prior to approval for implementation by the EMC.

Appendix I: Use of proceeds categories

Green

Category	Eligible	Ineligible
Alternative energy	<p>Investments in products, services, manufacturing or infrastructure projects that support the development or delivery of renewable energy and alternative fuels, including:</p> <ul style="list-style-type: none"> • Generation, transmission, and distribution of energy from renewable sources including wind, solar, geothermal, run of the river hydropower plants without an artificial reservoir, small-scale hydro (25 MW),¹⁵ large-scale hydro (subject to additional sustainability criteria, as noted below), and wave and tidal energy. • Energy generation from bioenergy (including solid biomass, bioliquid and biogas) is eligible if both of the following criteria are met: <ul style="list-style-type: none"> a. Lifecycle GHG emissions from the generation of electricity or heating/cooling are lower than 100 g CO₂e/kWh (or 28 g CO₂e/MJ), and b. Bioenergy is produced from waste, including agriculture and forestry waste, municipal solid waste (sewage sludge and food waste), industrial waste (e.g., paper and pulp industry waste) and landfill gas. All other feedstocks must comply with at least one of the third-party certifications listed below: <ul style="list-style-type: none"> i. Roundtable on Sustainable Biomass (RSB) ii. Forest Stewardship Council (FSC) iii. Programme for the Endorsement of Forest Certification (PEFC) iv. Round Table on Responsible Soy (RTRS) v. International Sustainability and Carbon Certification (ISCC) plus vi. Biomass Biofuel Sustainability Voluntary Scheme (2BSvs) vii. Bonsucro viii. Other equivalent certifications determined on a case-by-case basis by MSCI ESG Research • Manufacturing of biofuels for use in transport including road, aviation and shipping is eligible if all the following criteria are met: <ul style="list-style-type: none"> a. Biofuels are produced from waste, including agriculture and forestry waste, municipal solid waste (sewage sludge and food waste) and industrial waste (e.g., paper and pulp industry waste). All other feedstocks, including first generation feedstocks, must comply with any one of the above listed third-party certifications for bioenergy generation, and b. Use of certified or non-certified virgin palm oil as a feedstock is excluded. Feedstock derived from waste or used palm oil is eligible • Hydrogen production is eligible if it complies with any of the following processes: 	<ul style="list-style-type: none"> • Funding to Renewable Energy Certificates (REC) is ineligible, as is funding to Guarantees of Origin • Funding to mining or extractive technologies or processes • Power purchase agreements (PPAs) for renewable energy are eligible only if they are associated with construction of a new renewable energy plant, else they are ineligible.

¹⁵ Small hydro is formally defined as including projects that fall below the thresholds set by the International Commission on Large Dams (ICOLD), which require that dams be below 15 meters in height (Source: "Constitution Status," ICOLD/CIGB, July 2011). MSCI ESG Research defines dams under 25 MW in capacity as "small," as capacity is used as a proxy for size where detailed information is not available. Large hydro is defined as all projects exceeding the small hydro thresholds.

Category	Eligible	Ineligible
	<ul style="list-style-type: none"> a. Green hydrogen production, where the renewable energy used for electrolysis meets MSCI eligibility criteria for electricity generation from renewable energy, or b. Hydrogen production using grid electricity, where the grid meets MSCI eligibility criteria for electricity transmission and distribution (T&D) grids, or c. Hydrogen production through the gasification of biomass, provided the biomass used meets MSCI eligibility criteria for feedstocks used in bioenergy generation. <p>Blue and grey hydrogen i.e., hydrogen derived from fossil fuels, is ineligible.</p> <ul style="list-style-type: none"> • Transport of hydrogen and biogas is eligible if all the following criteria are met: <ul style="list-style-type: none"> a. Construction or operation of transmission and distribution networks dedicated to all types of hydrogen and/or biogas, and b. Pipelines do not transport hydrogen/biogas blended with fossil gas • Storage of hydrogen: Construction or operation of hydrogen storage facilities, as well as conversion of existing underground gas storage facilities into facilities dedicated to all types of hydrogen storage, is eligible • Retrofit of gas pipelines to transport hydrogen and biogas is eligible if both of the following criteria are met: <ul style="list-style-type: none"> a. The retrofitted pipeline will be dedicated to transport of hydrogen (all types) and/or biogas, and b. The pipeline is currently not used to transport any fossil gas • Manufacturing of hydrogen-based fuel cells is eligible • Energy generation using hydrogen is eligible if the hydrogen used meets the MSCI eligibility criteria for hydrogen production as specified above. • Due to their potential negative environmental and social externalities (e.g., potential damage to biodiversity due to construction of an embankment or potential displacement of local communities due to the same) large-scale hydroelectric projects are only considered as “green” if they satisfy both of the following criteria: <ul style="list-style-type: none"> a. Power density is above 5 W/m² or the lifecycle GHG emissions are below 100 g CO₂e/kWh, and b. Adhere to at least one of the sustainability guidelines listed below for hydropower plants: <ul style="list-style-type: none"> i. IFC Performance Standards¹⁶ ii. Equator Principles¹⁷ iii. Certification from the Hydropower Sustainability Alliance¹⁸ iv. Published assessment report with a score of 3 or above (i.e., aligned with “Good Practices”) on all relevant pillars of the Hydropower Sustainability Assessment Protocol (HSAP)¹⁹ 	

¹⁶ “Performance Standards on Environmental and Social Sustainability” International Finance Corporation. January 1, 2012.

¹⁷ “Equator Principles, EP4,” The Equator Principles, July 2020.

¹⁸ “Hydropower Sustainability Standard,” Hydropower Sustainability Alliance, October 2023.

¹⁹ “Hydropower Sustainability Assessment Protocol, Background Document,” International Hydropower Association, May 2020.



Category	Eligible	Ineligible
	<ul style="list-style-type: none"> v. Other equivalent standards determined on a case-by-case basis by MSCI ESG Research • Construction and/or operation of electric T&D lines if one of the following conditions are met: <ul style="list-style-type: none"> a. The electric transmission or distribution project connects eligible low carbon electricity projects to the transmission or distribution grid.²⁰ Microgrids running on low carbon electricity are eligible. b. Expansion or operation of electric transmission or distribution systems, where: <ul style="list-style-type: none"> i. Over 67% of newly added energy capacity over the past five years rolling period is from eligible forms of low carbon energy OR ii. Over 67% electricity flowing through it is eligible low carbon electricity over the past five-year rolling period. c. The transmission or distribution line forecasts supply and demand and has systems to transfer excess power generated to deficit areas. This includes interconnectors connecting two transmission systems provided one of the systems is compliant with points 1b(i) and 1b(ii). d. Smart grid, including demand side management projects, installation of smart meters and sensors, measurement tools and automation systems that assist in integrating renewable electricity in the grid. 	
Energy efficiency	<p>Investments in products, services, infrastructure, or technologies that proactively address the growing global demand for energy while minimizing effects on the environment, including:</p> <ul style="list-style-type: none"> • Infrastructure, technology, and systems that increase the efficiency of power management, power distribution (including electric district heating and cooling systems, advanced conductors and superconductors), power storage (e.g., batteries to store excess renewable electricity) and demand-side management (e.g., smart meters, smart grid). • Refurbishments in existing hydropower plants aimed at improving energy efficiency are eligible if they do not result in an increase in size of the reservoir. • Pumped storage hydroelectric projects that meet either of the following criteria: <ul style="list-style-type: none"> a. Closed-loop pumped storage hydropower plants, or b. Open-loop pumped storage hydropower plants if they meet any one of the sustainability guidelines listed above for electricity generation from hydropower plants. • Technologies and systems focused on reducing fuel consumption of transport vehicles and industrial operations (e.g., hybrid/electric vehicles, bicycles). • Sustainable transportation infrastructure including mass transit, public transportation fleets, freight rail and related infrastructure (provided the rail is not dedicated to fossil fuel transport), electric vehicle charging infrastructure, electric ship charging infrastructure, electric bicycle charging infrastructure, vehicle to grid systems. • Heating, ventilation and air conditioning (HVAC) equipment and systems, architectural glass, efficient lighting, insulation, building automation and 	<ul style="list-style-type: none"> • Energy efficiency in fossil fuel-based energy generation. • Energy efficiency audits by electric T&D companies

²⁰ Low carbon implies eligible technologies under the alternative energy category, defined above.



Category	Eligible	Ineligible
	<p>controls, electric heat pumps and devices and systems designed to be utilized in the design and construction of environmentally sustainable buildings.</p> <ul style="list-style-type: none"> Manufacturing of cement is eligible if all the below criteria are met: <ul style="list-style-type: none"> Production facilities meet the following GHG emissions thresholds: <ul style="list-style-type: none"> For clinker - Production of grey cement clinker is eligible if the GHG emissions are lower than 0.722 t CO₂e per ton of grey cement clinker For cement - Production of cement from grey clinker or alternative hydraulic binder is eligible if the GHG emissions from the clinker and cement or alternative binder production are lower than 0.469 t CO₂e per ton of cement or alternative binder manufactured, and If carbon capture and storage is used, it should meet MSCI criteria for transport and storage of CO₂. Manufacturing of steel is eligible if any of the following criteria are met: <ul style="list-style-type: none"> Steel production in an electric arc furnace (EAF) is eligible, provided it meets any one of the following requirements: <ul style="list-style-type: none"> 70% scrap/recycled steel is used as raw material Iron used in the EAF is reduced with MSCI-eligible hydrogen Electric furnace is 100% powered by MSCI-eligible renewable energy or MSCI-eligible electricity T&D grid, provided coal is not used as a reducing agent for iron ore Steel production using the molten oxide electrolysis process is eligible if the electricity used for electrolysis is derived from MSCI-eligible renewable energy sources or MSCI-eligible electricity T&D grid. Note: Steel production using a blast furnace is ineligible due to its reliance on fossil fuels both as raw materials and as a heating agent. 	
Pollution prevention and control	<p>Products, services, or projects that support pollution prevention, waste minimization, or recycling as a means of alleviating the burden of unsustainable waste generation, including:</p> <ul style="list-style-type: none"> Technologies, systems, and projects that aim to reduce air pollution (e.g., environmental IT, conventional pollution control systems, direct air carbon capture, sulfur hexafluoride-free insulation). Projects to salvage, use, reuse, and recycle post-consumer waste products, including composting of organic waste. Waste treatment and environmental remediation projects, including land treatment and brownfield cleanup, soil washing, chemical oxidation, bioremediation. Note that this is only valid where the issuer itself or any of its subsidiaries (majority or minority owned) or partner firms are not responsible for the contamination that has occurred. Sustainable alternative materials such as raw materials, low- volatile organic compound paints and adhesives used in the construction of green buildings. Transport of CO₂ is eligible if all the following criteria are met: <ul style="list-style-type: none"> The CO₂ transported from the installation where it is captured to the injection point does not lead to CO₂ leakages above 0.5% of the mass of CO₂ transported. 	<ul style="list-style-type: none"> Landfill or incineration waste treatment projects without a specific waste-to-energy component. Replacement of polychlorinated biphenyls in electric transformers



Category	Eligible	Ineligible
	<ul style="list-style-type: none"> ii. The CO₂ is delivered to a permanent CO₂ storage site that meets the criteria for underground geological storage of CO₂ set out in the criteria for Storage of CO₂ in this methodology. iii. Appropriate leak detection systems are applied, and a monitoring plan is in place, with the report verified by an independent third party. <p>Note: Investments directed towards carbon capture are eligible if the activity associated with point source capture of CO₂ is eligible as per the MSCI Methodology. Currently, eligible activities include the manufacturing of cement, steel, and bioenergy generation.</p> <p>Operation of a permanent CO₂ storage facility is eligible if the facility complies with the requirements and recommendations of ISO 27914:2017 for the geological storage of CO₂</p>	
Sustainable water	<p>Products, services, and projects that attempt to resolve water scarcity and water quality issues, such as:</p> <ul style="list-style-type: none"> Infrastructure and engineering projects that develop new or repair existing water and sanitation pipelines, including equipment and technology providers, resulting in improved water use efficiency. Note that all large dams (i.e., above 15 meters in height) for water storage need to have a stated commitment to meet the requirements outlined by all eight IFC Performance Standards.²¹ Technologies and products that reduce, reuse, or recycle water as a means of conservation (e.g., smart metering devices, low-flow equipment, and rainwater harvesting systems). Materials, equipment, technologies, and services that filter or chemically treat wastewater for consumer or industrial use, including desalination. Investments in protection of land, forests, and other vegetation in the upper watershed as a means to improve the quality of water bodies and groundwater recharge areas. 	<ul style="list-style-type: none"> Distribution of water, including drinking water, without measurable improvements to water quality, water efficiency, or climate change resilience components.
Green building	<p>Design, construction, redevelopment, retrofitting, or acquisition of green-certified properties – subject to local green building criteria, including:</p> <ul style="list-style-type: none"> Properties that are certified as green based on the local country's environmental performance standard (e.g., based on Energy Star, NABERS Rating of over 3, or equivalent) or environmental design standards (e.g., LEED Certified, BREEAM, NZEB, Passive house or local equivalent). Properties that rank in the top 15% on energy efficiency measures relative to same-sector properties within the local market (e.g., top 15% of buildings on energy efficiency in a specific city, district, state or country). The issuer must demonstrate that the buildings fall within the top 15% in energy efficiency in the same sector (e.g., residential, commercial buildings) in the local market. Mortgage-backed securities and bonds that fund real estate properties that achieve a minimum 30% improvement in energy efficiency compared to baseline performance prior to the renovations and other capital improvements funded through the use of proceeds 	
Climate adaptation	<p>Projects that reduce the vulnerability of social or environmental systems to the effects of risks related to climate change by maintaining or increasing adaptive</p>	

²¹ "Performance Standards on Environmental and Social Sustainability." International Finance Corporation. January 1, 2012.

Category	Eligible	Ineligible
	<p>capacity, reducing sensitivity to climate change or increasing climate resilience, including:</p> <ul style="list-style-type: none"> • Flood protection (e.g., flood defenses, waterway management, pumping stations and drainage improvement), • Food security and stress-resilient agricultural systems, • Reforestation and watershed management, • Climate resiliency services (e.g., modernization of meteorological systems and catastrophe risk insurance). • Reduction of wildfire risks by undergrounding transmission and distribution lines, using improved sensors and forecasting to de-energize grids in a timely manner in case of wildfires or infrastructure hardening. 	
Other environmental	<p>This category includes environmental activities and projects that are not covered in the six categories described above.</p> <p>These activities and projects include, but are not limited to:</p> <ul style="list-style-type: none"> • the protection and conservation of biodiversity, • sustainable forestry and afforestation projects, and • sustainable agricultural projects. 	

Note that:

- i. Funding to research and development for the categories described above is eligible.
- ii. Mining and extraction are ineligible for any material (e.g., coal mining, metals mining is ineligible).
- iii. Sourcing of sustainable materials or waste materials is not eligible unless this material is used for an eligible manufacturing project. For example, purchase of scrap steel is not eligible, unless the steel would be used in an eligible manufacturing process.

Social

Category	Eligible	Ineligible
Food security	<ul style="list-style-type: none"> • Products, services or infrastructure projects that support the delivery of basic food, as defined by Choices International Foundation. • Assistance provided to improve agricultural efficiency, agricultural supply chain and prevent food wastage. 	<ul style="list-style-type: none"> • Delivery of confectionery items, tobacco, alcohol and gourmet food.
Healthcare	<p>Products, services or infrastructure projects that support the development or delivery of the following, based on need of the target population, patient or consumer:</p> <ul style="list-style-type: none"> • Medical infrastructure like clinics, dispensaries and hospitals. • Medical equipment. • Pharmaceutical products. • Training of hospital staff and welfare workers. 	<ul style="list-style-type: none"> • Beauty products and high-end cosmetic procedures, controversial clinical trials (e.g., clinical trials that do not commit to the World Medical

Category	Eligible	Ineligible
		Association Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects, or adhere to the International Conference on Harmonization (ICH) Good Clinical Practice), and excludes clinical trials that fail to include informed consent in ethical clinical trial procedures.
Affordable real estate	<p>Products, services or infrastructure projects that support the development or delivery of:</p> <ul style="list-style-type: none"> Affordable or social housing units for sale or rent, including apartments, stand-alone houses or commercial real estate for micro, small and medium enterprises (MSMEs). Funding to social housing associations designated by the government. 	<ul style="list-style-type: none"> Holiday homes, luxury homes and commercial spaces for corporate or luxury use.
Access to finance	<ul style="list-style-type: none"> Products, services or infrastructure projects that support the development or delivery of finance to MSMEs. Funding to social enterprises, as defined by national or regional regulations. Microfinance to individuals or communities for promoting entrepreneurship or education. Microfinance to small offices/home offices is also eligible. 	<ul style="list-style-type: none"> Predatory lending practices like payday loans, installment loans, pawn loans, title loans, tax refund anticipation loans and doorstep loans.
Education	<p>Products, services or infrastructure projects that support the development or delivery of:</p> <ul style="list-style-type: none"> Primary school, secondary school, college- and university-related products and services, including residential facilities for such establishments. Technical/vocational training centers and programs. Support for professional certification programs. Financial literacy programs. 	<ul style="list-style-type: none"> All non-educational content and any product or service that does not contain educational content used in

Category	Eligible	Ineligible
	<ul style="list-style-type: none"> Training for teachers and related staff. 	a school or college environment. For example, exclusions include general literature, illustrated books, newspapers and magazines, TV programs, software product-related training courses and employee training.
Basic infrastructure	Products, services or infrastructure projects that support the development or delivery of basic infrastructure such as: <ul style="list-style-type: none"> Public roads and bridges. Public transport infrastructure like public buses, subways, etc. Drinking water distribution and sanitation. Electricity distribution infrastructure. Digital infrastructure. 	<ul style="list-style-type: none"> Roads, airports, ports for luxury use such as cruises and digital home infrastructure like modems and cell phones.
Employment generation	<ul style="list-style-type: none"> Employment generation initiatives by government or not-for-profit sectors. This includes support provided to companies for job creation and employee retention. Support for MSMEs as vendors or business partners. Training initiatives to increase employability. 	<ul style="list-style-type: none"> Excludes corporations that provide employment to serve their business needs, casinos, for-profit prisons, or weapons manufacturing.
Other social	This includes categories not covered above, particularly regarding government spending, such as: <ul style="list-style-type: none"> Payment of Social Security. Replacement income to people who have lost their jobs. Provision of health insurance to the populace. 	<ul style="list-style-type: none"> Generic categories like "socio-economic advancement."

Target demographics

Based on the Social Bond Principles, MSCI ESG Research determines eligible target demographics as:

- Underserved persons, owing to a lack of access to essential goods and services. This includes

rural communities that do not have access to basic infrastructure.

- Unemployed people.
- People and communities displaced by natural disasters.
- Low- or middle-income persons, families or households.
- Least Developed Countries, as defined by the United Nations.
- Low-income countries as defined by the World Bank.
- Micro, small and medium enterprises as classified by the local or national regulations.
- The elderly (over 65 years of age), including retirees.
- People with disabilities.
- Migrants and/or displaced persons.
- Racial, ethnic and other minorities or marginalized genders.
- Marginalized farmers, or farmers that lack access to markets.
- Other excluded and/or marginalized populations and/or communities.
- In cases where government entities are developing infrastructure for healthcare or education that is accessible to the entire population of the region, the target population can be the general public.

Appendix II: Relationship between the use of proceeds categories to the EU Paris Aligned Benchmark exclusion criteria²²

In May 2024, the European Securities and Markets Authority (ESMA) put forth guidelines on funds' names using ESG or sustainability-related terms (the Guidelines) and introduced new requirements for fund managers in the EU with the objective of ensuring the protection of end investors against "unsubstantiated or exaggerated sustainability claims in fund names," and to provide asset managers with "clear and measurable criteria."²³ Part of the new requirements is an application of criteria laid out in article 12(1) of the Climate Benchmarks regulation – also referred to as Paris-aligned Benchmark (PAB) exclusions.²⁴ In December 2024, ESMA clarified how these should apply to green bonds in the context of the Guidelines.²⁵

- (1) bonds designated as "European Green Bonds" (EUGB) do not need to apply the EU PAB exclusion criteria at an issuer or bond level.
- (2) Other self-labelled green bonds that are not designated as European Green Bonds need to apply the PAB exclusions on a look-through basis to the economic activities financed by such instruments.

As regards the latter, MSCI ESG Research's approach to apply the EU PAB exclusion criteria to other self-labelled green bonds is detailed below:

Paris Aligned Benchmark exclusion criteria at a use-of-proceeds level	MSCI Green Bond and Green Loan Assessment methodology use-of-proceeds criteria	Impact analysis: Is there any bond funding these within the bonds that have been marked eligible under the MSCI Green Bond and Green Loan Assessment Methodology prior to February 1, 2025?
(a) involvement in any activities related to controversial weapons	Over 0% funding to manufacturing of controversial weapons (including cluster munitions, landmines, biological/chemical weapons,	No

²² This indicative mapping is provided to help illustrate how standard MSCI ESG & Climate data points may identify indicators associated with the regulatory EU Paris Aligned Benchmark (PAB) exclusion criteria, as defined by the ESMA Guidelines on funds' names using ESG or sustainability-related terms. The information is provided "as is" and does not constitute legal advice or binding interpretations of the EU Paris Aligned Benchmark (PAB) exclusion criteria. MSCI's mapping to the indicators are based on assumptions and ongoing client feedback.

This document aims to help clients seeking alignment with the ESMA Guidelines on funds' names using ESG or sustainability-related terms and the related Q&A released by ESMA on December 13, 2024 for green bonds by mapping MSCI ESG Research LLC data points to the corresponding initiative frameworks."

²³ *Final Report Guidelines on funds' names using ESG or sustainability-related terms*, European Securities and Markets Authority, released May 14, 2024. Final version in all official languages was published on August 21, 2024.

²⁴ "Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks."

²⁵ *Guidelines on Fund Names*, ESMA_QA_2368, December 12, 2024.



	depleted uranium weapons, blinding laser weapons, incendiary weapons, and/or non-detectable fragments) is ineligible.	
(b) involvement in the cultivation and production of tobacco	Over 0% funding to agriculture for tobacco or manufacturing of tobacco-based products is ineligible.	No
(c) Companies that benchmark administrators find in violation of the United Nations Global Compact (UNGC) principles or the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises;	Criterion (c) is evaluated at the company level, rather than the individual bond level. See below for details	N/A
(d) 1 % or more of proceeds applied to exploration, mining, extraction, distribution or refining of hard coal and lignite	Over 0% funding to coal exploration, mining, extraction, distribution or refining is ineligible.	No
(e) 10 % or more of proceeds applied to the exploration, extraction, distribution or refining of oil fuels	Over 10% funding to any category that is not in the list of eligible projects in the methodology is ineligible. Exploration, extraction, distribution or refining of oil fuels is not in the list of eligible projects and hence over 10% funding to it is ineligible.	No
(f) 50 % or more of proceeds applied to the exploration, extraction, manufacturing or distribution of gaseous fuels	Over 10% funding to any category that is not in the list of eligible projects in the methodology is ineligible. Exploration, extraction, manufacturing or distribution of gaseous fossil fuels is not in the list	No



	of eligible projects and hence over 10% funding to it is ineligible.	
(g) 50 % or more of proceeds applied to electricity generation with a GHG intensity of more than 100 g CO ₂ e/kWh	<p>Low-emissions technologies like solar, wind, geothermal, and ocean energy are eligible to the methodology. For hydropower or biomass-based energy, MSCI ESG Research updated the methodology on February 1, 2025, to place a cap on their emissions to 100 g CO₂e/kWh. Prior to February 1, 2025, hydropower and biomass were eligible if they met the IFC Performance Standards and used sustainable fuel, respectively, but they did not have an emissions cap.</p> <p>Since 2015, over 10% funding to higher emission technologies like electricity generation from coal and oil are ineligible to the methodology (unless oil is used sparingly as a backup for renewable energy). In February 2023, MSCI ESG Research modified the methodology to consider anything over 0% funding to coal based power generation to be ineligible. Natural gas-based cogeneration was eligible to the methodology prior to February 1, 2025, but is not eligible anymore.</p>	<p>Yes – there are few bonds eligible under the MSCI Green Bond and Green Loan Assessment Methodology that may be funding hydropower or biomass-based electricity with emissions over 100 g CO₂e/kWh. Since MSCI ESG Research did not have the emissions threshold criteria prior to February 1, 2025, we cannot be sure that all the existing projects funded via green bonds proceeds meet the 100 g CO₂e/kWh threshold. However, it is a reasonable assumption to make that renewable electricity, including hydropower and biomass, in most cases, meets the 100 g CO₂e/kWh threshold.²⁶</p> <p>There is no bond with over 10% proceeds funding coal- , oil- or natural gas- based power generation.</p>

²⁶ Based on life cycle emissions provided in “IPCC Special Report on Renewable Energy Sources and Climate Change mitigation (SRREN), 2011.”

Notes on use of proceeds

MSCI ESG Research's eligible use of proceeds categories, while broadly aligned with the Paris Aligned Benchmark exclusion criteria, have the following differences:

1. The EU PAB criteria require that "any activity" linked to controversial weapons is excluded. However, that is difficult to do since green bonds do fund rail transport which may carry controversial weapons, or green buildings which may have an office of a controversial weapons company. MSCI ESG Research does not have the data to exclude these aspects. Hence, only manufacturing of controversial weapons is excluded in the MSCI eligible use of proceeds criteria.
2. The EU PAB criteria consider distribution of coal, oil or gas to be ineligible (with a 1% threshold for coal, 10% for oil and 50% for gas). Some of our clients interpret "distribution" to include "transport" of the fuel as well, and some do not interpret "distribution" to include "transport" of the fuel. For clients that interpret "distribution" to include transport of the fuel, the following clarifications are provided:
 - a. The MSCI eligible use of proceeds criteria do not consider funding to oil or gas pipelines to be eligible.
 - b. freight rail dedicated to any type of fossil fuel (e.g., a rail line from a coal mine to a coal plant, or a line from a port to a refinery) is ineligible.
 - c. However, MSCI ESG Research cannot check if freight rail funded by green bonds does not carry fossil fuels at all, but anything dedicated to fossil fuels is ineligible.
3. The EU PAB criteria apply a 50% threshold for exclusion of gaseous fossil fuel related activities. However, the MSCI eligible use of proceeds criteria applies a stricter 10% threshold instead.

Notes on PAB Exclusion criteria

Criterion (c) of the PAB exclusion criteria is evaluated at the issuer level, rather than the individual bond level.

Based on the Guidelines, MSCI ESG Research provides a factor (GB_EU_PAB_EXCLUSION_ALIGNED) indicating whether a green bond is aligned with the EU PAB exclusion criteria. Criterion (c) is considered met if this factor is evaluated as "True".

This factor takes into consideration the requirement that "companies that benchmark administrators find in violation of the United Nations Global Compact (UNGC) principles or the Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises" are in violation of the EU PAB exclusion criteria. The factor considers green bonds to be aligned with the EU PAB exclusion criteria if either of the following are true:

1. The green bond is aligned with the EU Green Bond Standard as verified by a third-party ESMA-registered verifier; or
2. The green bond is aligned with the MSCI Green Bond and Green Loan Assessment Methodology and the green bond issuer does not have a "Fail" signal under the OECD

Alignment factor. This factor is assessed under the MSCI ESG Controversies and Global Norms Methodology.²⁷

The “OECD Alignment” (OECD_ALIGNMENT) data point provides an assessment of companies based on any alleged involvement in ESG Controversies that potentially conflict with the recommendations of the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprise. A three-point scale is applied, based on the Severity of specific cases in which a company is implicated, if any. The scale values are “Fail”, “Watch List”, or “Pass.”

Under our EU PAB factor, any company with a “Fail” evaluation is excluded. This evaluation corresponds to allegations of direct involvement in one or more unresolved Very Severe controversies (per MSCI ESG Controversies methodology) in areas covered by the OECD Guidelines. Note that companies that are not in coverage of the controversies signal do not get a “Fail” signal and hence are considered to pass the PAB exclusion criteria for OECD alignment.

MSCI ESG Research has also reviewed and developed a screen for the UN Global Compact (UNGC). However, given the narrower scope of the UNGC, all controversies that are applicable to the UNGC Alignment screen are also applicable to the OECD Alignment screen and hence the OECD Alignment screen is used here.

²⁷ For more information on the mapping of MSCI ESG Controversies categories with these global norms and thresholds applied, please refer to the MSCI ESG Controversies and Global Norms methodology.

Appendix III: Chronology of methodology updates

This section provides a chronology of major updates to the MSCI Labeled Bond and Loan Assessment Methodology.

September 2014: MSCI ESG Research developed the MSCI green bond assessment criteria in line with the Green Bond Principles administered by ICMA, for the Bloomberg MSCI Green Bond Index (then the Barclays MSCI Green Bond Index).

June 2016: MSCI ESG Research added the following as eligible use of proceeds:

- Large hydropower.
- Pumped storage hydropower.
- Climate adaptation.

December 2019: MSCI ESG Research updated the eligibility criteria for the following use of proceeds:

- Green mortgage-backed securities.
- Pure-play bonds.
- Biomass-based power generation.
- Large dams (i.e., dams above 15 meters in height) for storage for sustainable water projects.
- Energy efficiency projects for fossil fuel-based energy generation.

February 2020: The stand-alone MSCI Green Bond Assessment Methodology was launched.

April 2021: MSCI ESG Research added the following as eligible use of proceeds:

- Freight rail infrastructure.

August 2021: The stand-alone MSCI Green Bond and Green Loan Assessment Methodology was launched, and MSCI ESG Research updated the eligibility criteria for the management of proceeds to be in line with the updated Green Bond Principles by ICMA.

February 2022: The MSCI Social Bond and Social Loan Assessment Methodology was launched, based on the Social Bond Principles administered by ICMA and Social Loan Principles by LMA.

January 2023: The MSCI Sustainability Bond and Sustainability Loan Assessment Methodology was launched, based on the Sustainability Bond Guidelines by ICMA.

February 2023: MSCI ESG Research updated the use-of-proceeds criteria of all of the above stand-alone methodology documents to include the following:

- 100% funding to relevant projects (i.e., for the MSCI Green Bond and Green Loan Assessment Methodology, 100% of proceeds need to be allocated to projects with some environmental benefits. For the MSCI Social Bond and Social Loan Assessment Methodology, 100% of proceeds need to be allocated to projects with some social benefits. For the MSCI Sustainability Bond and Sustainability Loan Assessment Methodology, 100% of proceeds need to be allocated to projects with some sustainability benefits.).
- Explicit exclusion criteria for coal, controversial weapons and tobacco introduced.

MSCI ESG Research updated the eligibility criteria for process for project evaluation and selection to include the following:

- Sustainability objectives and risks of the proceeds.

MSCI ESG Research updated the eligibility criteria for management of proceeds to include the following:

- Temporary placement of unallocated proceeds.

March 2023: The following methodology documents were consolidated to create the MSCI Labeled Bond and Loan Assessment Methodology document, and the individual methodology documents were decommissioned:

- MSCI Green Bond and Green Loan Assessment Methodology.

- MSCI Social Bond and Social Loan Assessment Methodology.
- MSCI Sustainability Bond and Sustainability Loan Assessment Methodology.

December 2023: MSCI ESG Research updated the eligibility criteria for the following use of proceeds:

- Electric transmission and distribution.

February 2025: MSCI ESG Research updated the eligibility criteria for the following use of proceeds:

- Hydropower.
- Bioenergy.
- Hydrogen.
- Natural gas-based co-generation

MSCI ESG Research added the following as eligible use of proceeds:

- Manufacturing of cement.
- Manufacturing of steel.
- Transport and storage of carbon dioxide.

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

China	+ 86 21 61326611
Hong Kong	+ 852 2844 9333
India	+ 91 22 6784 9160
Malaysia	1800818185 *
South Korea	+ 82 70 4769 4231
Singapore	+ 65 67011177
Australia	+ 612 9033 9333
Taiwan	008 0112 7513 *
Thailand	0018 0015 6207 7181 *
Japan	+ 81 3 4579 0333

* toll-free

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 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 is research for informational purposes only and is intended for institutional professionals with the analytical resources and tools necessary to interpret any performance information. Nothing herein is intended to promote or recommend any product, tool or service.

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 disseminated 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) and MSCI Deutschland GmbH.

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>.