MSCI ESG Ratings Methodology: Opportunities in Green Building Key Issue

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Contents

Introduction

This document provides essential information on the components of the Opportunities in Green Building Key Issue to enable users of ESG Ratings to understand how our outputs are determined. Opportunities in Green Building is a Key Issue in the Environmental Pillar of the MSCI ESG Ratings model. Companies are evaluated based on the resource consumption and carbon intensity of their property assets, their potential exposure to environmental building regulations and their efforts to improve the environmental performance of their real estate assets.

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
Environmental	Climate Change	Carbon Emissions
		Climate Change Vulnerability
		Financing Environmental Impact
		Product Carbon Footprint
	Natural Capital	Biodiversity & Land Use
		Raw Material Sourcing
		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
Social	Human Capital	Health & Safety
		Human Capital Development
		Labor Management
		Supply Chain Labor Standards
	Product Liability	Chemical Safety
		Consumer Financial Protection
		Privacy & Data Security
		Product Safety & Quality
		Responsible Investment
	Stakeholder Opposition	Community Relations
		Controversial Sourcing
	Social Opportunities	Access to Finance
		Access to Health Care
		Opportunities in Nutrition & Health

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

Opportunities associated with this Key Issue

- Increased access to markets created by regulatory reforms and incentives.

- Increased revenue from capturing changing tenant demand.

- Increased market share in specific market segments due to early-mover advantage.

Opportunities in Green Building Key Issue Score

The Opportunities in Green Building Key Issue Score evaluates the company's level of exposure to, and management of, opportunities 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 the Exposure Score determines the weight placed on the Management Score, ranging from 50% (when the Exposure Score is equal to zero) to 100% (when the Exposure Score is equal to 10).

$$KI_i = \left(\left(\frac{EXP_i}{20} + 0.5 \right) * MGMT_i \right) + \left(\left(0.5 - \frac{EXP_i}{20} \right) * 5 \right)$$

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.

Opportunities in Green Building Management Score

The Opportunities in Green Building Management Score evaluates the company's ability to manage its exposure to opportunities on this Key Issue. It is based on an average of the scores associated with each of the Management Score categories listed below. 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 Opportunities in Green Building Management Score - Excluding Controversies:

$$MGMT_{OGB,i} = \frac{PRA_{OGB,i} + PERF_{OGB,i}}{2}$$

Where:

- $MGMT_{OGB,i}$ is the Opportunities in Green Building Management Score - Excluding Controversies for company i.

- $PRA_{OGB,i}$ is the Practices Score for company i.

- $PERF_{OGB,i}$ is the Performance 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: Practices Score

- **Extent of green building certification commitments in portfolio or development pipeline.**

  Definition: The portion of the company's portfolio or development projects that are covered by its green building commitments. Applies to real estate companies only.

- **Level of green building commitment relative to national standards.**

  Definition: The level of green building certification the company has achieved for its refurbishments and new developments, relative to national standards. Applies to real estate companies only.

- **Environmental quality improvements other than green building certification.**

  Definition: Assesses the extent of the company's initiatives to improve the environmental performance of its properties, including through waste reduction, water initiatives and energy efficiency. Expressed as a 0-10 score, where 10 indicates exceptional efforts.

- **Extent of commercial arrangements to improve or maintain property environmental performance.**

  Definition: Indicates whether the company provides evidence of implementing commercial agreements to incentivize tenants and property managers to improve property environmental performance. Applies to real estate companies only.

- **Use of green or triple-net leases.**

  Definition: Indicates whether the company provides evidence of implementing green leases or triple-net leases in its tenancies. Applies to real estate companies only.

- **Green certification commitments related to greenfield developments.**

  Definition: The company's green building strategy for greenfield sites, including whether there is a clear statement on avoiding greenfield sites, the company only develops green-certified properties on greenfield developments, or we found no evidence of green certification for greenfield developments. Applies to real estate companies only.

- **Evidence of flexible or mixed-use properties in portfolio.**

  Definition: Indicates whether the company provides evidence of flexible or mixed-use properties in its property portfolio. Applies to real estate companies only.

- **Evidence of redevelopment projects on brownfield contaminated sites.**

  Definition: This indicator describes whether the company provides evidence of having redeveloped or invested in properties on previously contaminated sites that needed to be remediated. Applies to real estate companies only.

- **Evidence of urban revitalization developments.**

  Definition: The level of urban redevelopment that the company undertakes. Best practice is evidence of initiatives aimed at improving community engagement or the quality of the physical urban environment beyond a single building or plot of land, especially in neighborhoods with economic or social needs. Applies to real estate companies only.

Management Score category: Performance Score

Assesses the company's performance on opportunities in green building metrics (including percentage of green-certified buildings and space, carbon emissions and water consumption) relative to its peers. Expressed as a 0-10 score, where 10 indicates the highest level of performance.

Representative performance metrics:

- Percentage of green certified buildings in portfolio (by number of buildings).

- Percentage of green-certified space in portfolio (by area, e.g., millions of square feet).

- Carbon emissions.

- Water consumption.

Opportunities in Green Building Exposure Score

The Opportunities in Green Building Exposure Score evaluates the company's exposure to opportunities on this Key Issue. It is based on the Business and Geographic Exposure Scores. The Geographic Exposure Score functions as a multiplier on the Business Exposure Score, with an impact ranging from -50% to +50%. The Business and Geographic Exposure Scores are scored on a 0-10 scale, with 10 corresponding to the highest opportunity and 0 corresponding to the lowest opportunity. 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:
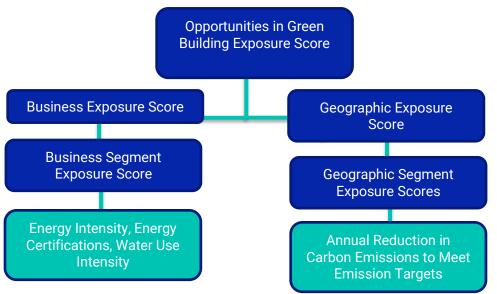
$$EXP_{OGB,i} = BUS_{OGB,i}(1 + 0.1(GEO_{OGB,i} - 5))$$

Where:

- $EXP_{OGB,i}$ is the Opportunities in Green Building Exposure Score of company i.

- $BUS_{OGB,i}$ is the Business Exposure Score of company i.

- $GEO_{OGB,i}$ is the Geographic Exposure Score of company i.

Exhibit 2: Exposure Score components

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 in each business segment, using the following formula to calculate the Business Exposure Score:

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

Where:

- $BSE_{OGB,j}$ 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 Score

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 weighted average of the Energy Use Intensity Score, Energy Certification Score and Water Use Intensity Score of the activity.

$$BSE_{OGB,j} = 0.5EC_j + 0.4EUI_j + 0.1WUI_j$$

Where:

- EC_j is the Energy Certification Score for business activity j.

- EUI_j is the Energy Use Intensity Score for business activity j.

- WUI_j is the Water Use Intensity Score for business activity j.

The Energy Certification Score for a given business activity is based on the proportion of total building area that is certified to the ENERGY STAR certification for buildings. The Energy Use Intensity Score is based on the aggregate energy use intensity for each business activity in thousands of British thermal units per square foot. The Water Use Intensity Score is based on the volume of water used for each business activity in gallons per square foot. A score of 10 indicates the highest opportunity.

Geographic Exposure Score

The Geographic Exposure Score is a weighted average of the Geographic Segment Exposure Scores of the countries and regions in which a company operates. Scores are weighted by the proportion of a company's total revenue in each geographic segment through the following equation:

$$GEO_{OGB,i} = \sum_{r=1}^{n_i} w_{Revenue,i,r} GSE_{OGB,r}$$

Where:

- $GSE_{OGB,r}$ is the Geographic Segment Exposure Score of region r.
- $w_{Revenue,i,r}$ is the weight of total revenue in region r for company i.
- n_i is the number of geographic segments for company i.

For geographic segments disclosed as regions (example: Asia Pacific), a nominal GDP-weighted country aggregation is used to calculate region-level scores, using the following equation:

$$GSE_{OGB,r} = \sum_{c=1}^{n_r} w_{GDP,r,c} GSE_{OGB,c}$$

Where:

- $GSE_{OGB,c}$ is the Geographic Segment Exposure Score of country c.
- $w_{GDP,r,c}$ is the specific weight of country c within region r.

Geographic Segment Exposure Scores

Countries with strengthening energy and climate change regulations influence the adoption of green buildings.Therefore, the Geographic Segment Exposure Score for a country is determined by the reduction in greenhouse gas emissions required per year to meet its publicly disclosed greenhouse gas emissions targets.

$$GSE_{OGB,c} = AER_c$$

Where:

- AER_c is the Annual Emissions Reduction Score of the country c.

If achieving the greenhouse gas emissions target of a country is contingent on external support, then the exposure is reduced by half:

$$GSE_{OGB,c} = \frac{AER_c}{2}$$

Where:

- $GSE_{OGB,c}$ is the Opportunities in Green Building Geographic Segment Exposure Score for country c.

Data Sources

The following sources are used to determine the Opportunities in Green Building Exposure Score:

Department of Energy; ENERGY STAR Portfolio Manager, Environmental Protection Agency; Refinitiv; MSCI ESG Research; company disclosures.

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