



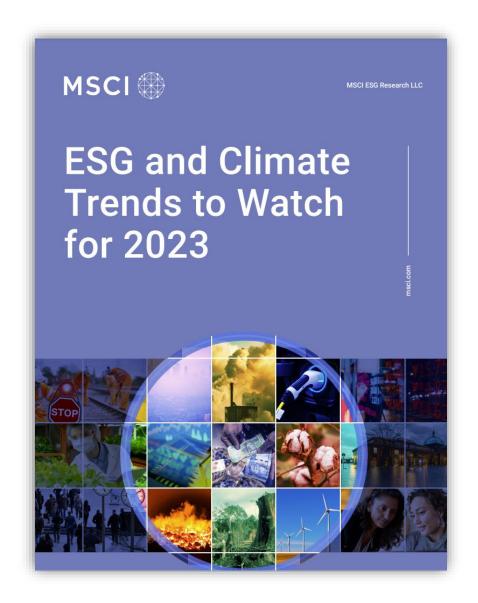
2023 ESG & CLIMATE TRENDS TO WATCH - THE APAC VIEW

Presenters:

Miranda Carr, Executive Director, Global Head, Applied ESG & Climate Research, MSCl Chitra Hepburn, Managing Director and Head of ESG and Climate, APAC, MSCl Sivananth Ramachandran, CFA, Director of Capital Markets Policy, India, CFA Institute



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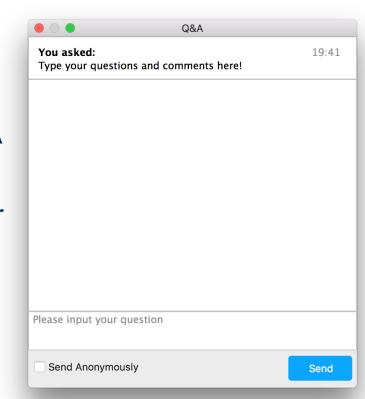
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HOUSEKEEPING

- Today's webinar is scheduled for 60 minutes including Q&A
- All participants are muted throughout the webinar
- We welcome comments via the Chat button and questions via the Q&A button on your screen.
- This webinar will be recorded and be made available to view soon after the presentation concludes today
- The main presentation will be uploaded onto <u>CFA Institute Asia-Pacific Research Exchange (ARX, www.arx.cfa)</u>



FIRESIDE CHAT

Chitra Hepburn

Managing Director and Head of ESG and Climate, APAC, MSCI



PRESENTATION

Miranda Carr

Executive Director, Global Head, Applied ESG & Climate Research, MSCI





MSCI ESG & Climate Trends to Watch for 2023



ESG & Climate Trends to Watch for 2023

"There's a lot going on around the world. And it is shaping both the investment environment and the challenges and opportunities facing companies."















Climate Governance

Workforce

Investment

Regulation

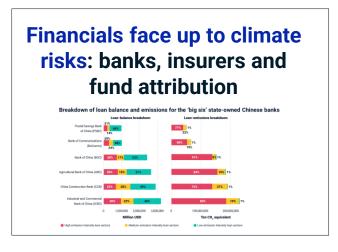
Biodiversity

Supply chain

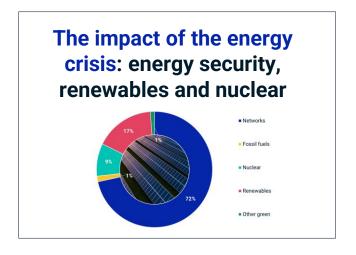
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Spotlight trends













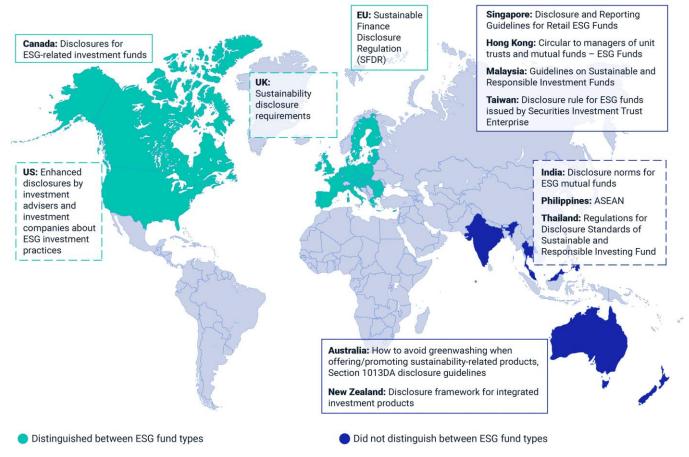
Financials face up to climate risks

Regulators turn their gaze to ESG funds





Jurisdictions with active and proposed regulations or guidelines for ESG funds





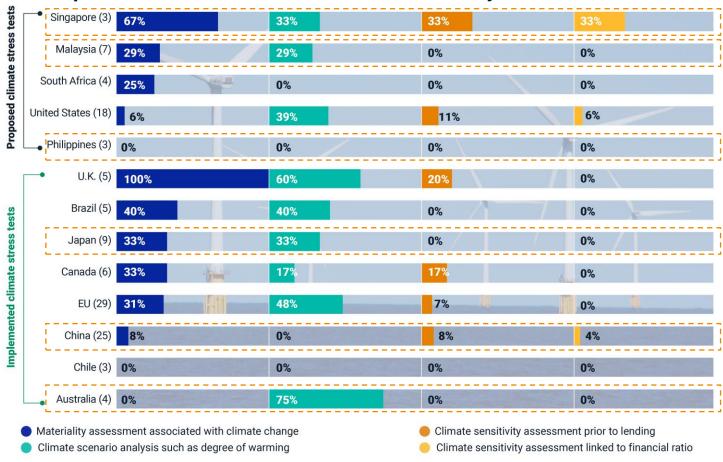
Note: Solid text boxes represent regulations in force, while dashed boxes represent proposed or planned regulations. List of jurisdictions with regulations or guidelines proposed or in force for ESG funds: U.S. (proposed); Canada; EU; U.K. (planned); Singapore; India (proposed); Hong Kong; Australia (including Section 1013DA); Malaysia; New Zealand; Philippines (proposed); Thailand (proposed); Taiwan. Data as of Oct. 12, 2022.

Will banks be ready for climate stress test regulations?





Banks' performance on disclosed climate risk analysis indicators





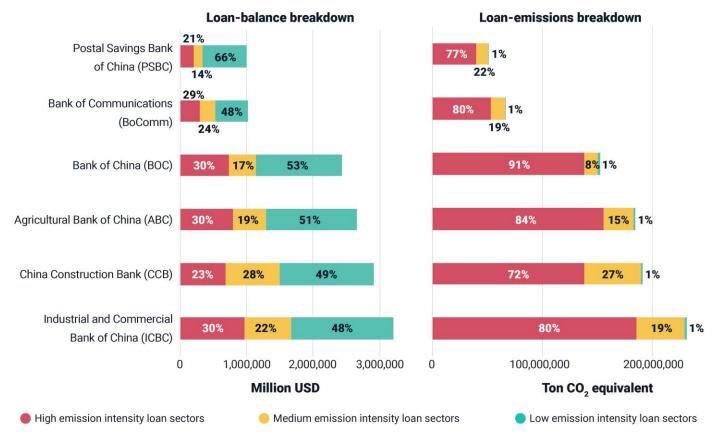
Note: Y-axis indicates jurisdiction (number of banks included in analysis shown in brackets). The exhibit shows the number of banks disclosed as having conducted climate-risk analysis in each of the four categories in each selected jurisdiction. The EU includes multiple member states, many of which have also announced regulatory climate stress tests. Analysis includes banking-industry constituents of the MSCI ACWI Index as of Oct. 30, 2022. The banking industry is defined according to the Global Industry Classification Standard (GICS®), which is the industry-classification standard jointly developed by MSCI and S&P Global Market Intelligence.

Information Classification: GENERAL

Pulling back the veil on banks' loan emissions



Breakdown of loan balance and emissions for the 'big six' state-owned Chinese banks





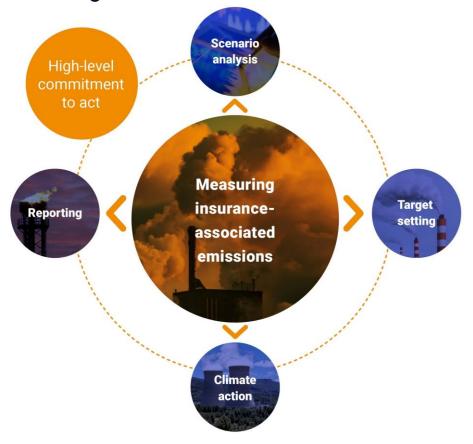
Note: Emission data is calculated using GHG-emissions intensity (Scope 1 and 2) by loan sector using the MSCI Total Portfolio Footprinting methodology (quality score of 5). Emissions data includes both required (known use of proceeds) and optional (unknown use of proceeds). In this analysis, high-emission-intensity loan sectors are defined as those with >100 tons CO2 equivalent/USD 1 million, which include utilities, oil, gas & consumable fuels, metals & mining, transportation and manufacturing. Medium-emission-intensity loan sectors are defined as those with 10-100 tons CO2 equivalent/ USD 1 million, which include commercial-other, wholesale, hotels, restaurants and leisure, telecommunication services, information technology and commercial and professional services. Low-emission-intensity loan sectors defined as those with < 10 tons CO2 equivalent/USD 1 million, which include real estate, services, financials, credit card, consumer, retail-other and mortgage. Data as of Oct. 13, 2022.

Source: MSCI ESG Research Information Classification: GENERAL

Insurance emissions: the actuarial revolution has begun



Measuring insurance-associated emissions as the foundation for other initiatives



Source: MSCI ESG Research (adapted from PCAF)

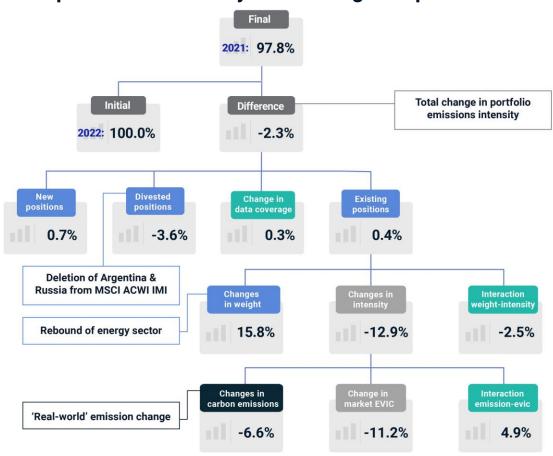


Emissions attribution could help keep portfolios aligned with net-zero





Example attribution analysis of changes in portfolio emissions intensity





Note: This analysis is performed on a hypothetical basket of issuers that is based on the MSCI ACWI Investable Market Index from April 30, 2021, to April 29, 2022. The diagram is illustrative only and does not constitute any form of investment advice or actual index performance.

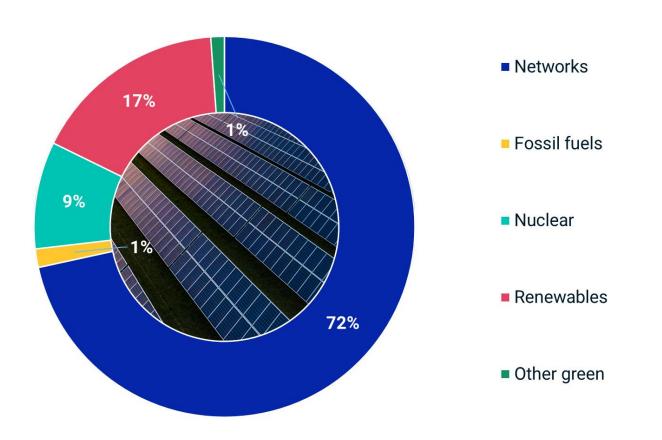


The impact of the energy crisis

Energy crisis, Ukraine war driving fossil fuel agenda, but don't rule out renewables



Networks and renewables dominate capex plans of major utilities in APAC





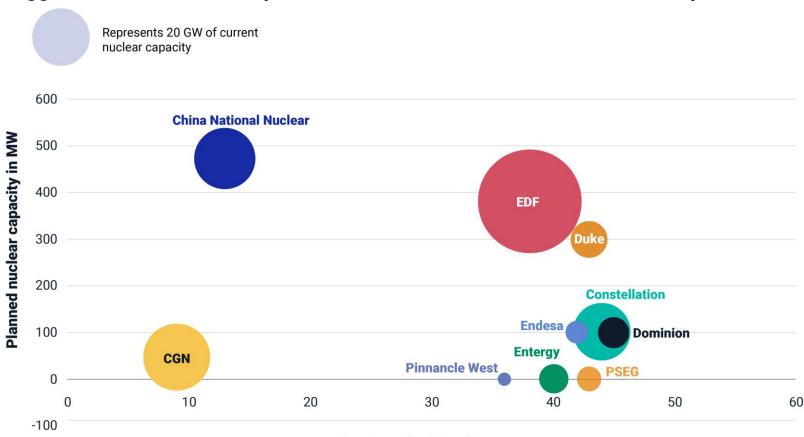
Note: Data for 60 APAC-based power-generating constituents of the MSCI APAC IMI with a breakdown of capital expenditure plans recorded in the MSCI ESG & climate database, as of Jan. 13, 2023. Data is for the latest available year by company (2020 or 2021).

Nuclear energy contemplates a comeback





Biggest earners in nuclear power show clear differences in current and planned fleet capacity







Note: The top 10 constituents of the MSCI ACWI Investable Market Index in terms of estimated percentage of revenue from nuclear power generation. Planned nuclear capacity refers to nuclear projects that are announced or under construction but not yet operational. Bubble labels and size correspond to each company's current installed nuclear capacity in gigawatts. Data as of Oct. 13, 2022.



Innovations in the supply chain

Cutting deforestation: Market restrictions get real

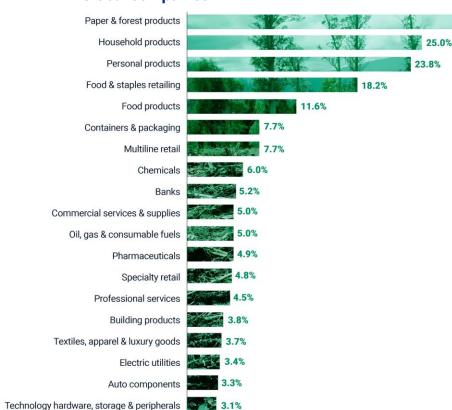






Paper and forest-products companies lead, but deforestation policies remain thin on the ground

Global companies



APAC companies





Note: Share of companies within selected industries of the MSCI ACWI Index that have disclosed a deforestation policy; industries included where at least 2% of the peers have disclosed a policy. Data as of Oct. 12, 2022. APAC companies are constituents of the MSCI ACWI Index based in the Australian, Indian, Indonesian, Malaysian, Philippines, New Zealand, Hong Kong and mainland China, Taiwanese, Japan, South Korean, Singapore, and Thailand markets.

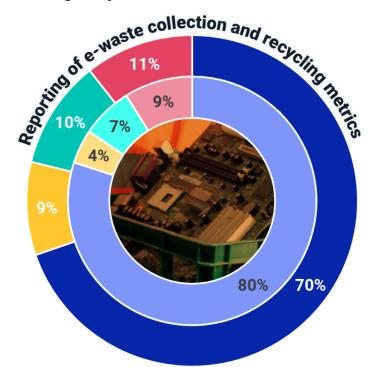
Source: MSCI ESG Research

Mining old electronics to fuel new energy tech

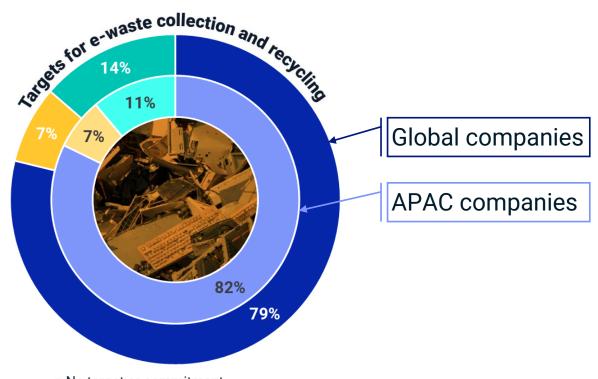




A long way off from a circular economy for metal



- No disclosure
- Evidence of recycling efforts, but no quantitative metrics
- Quantitative metrics, but outdated
- Quantitative and up-to-date metrics



- No target or commitment
- General commitment, no target
- Targets in place but no details of progress



Note: Analysis includes 68 technology-hardware and household durable constituents of the MSCI ACWI Index and 45 of the MSCI APAC Index, as of Sept. 27, 2022. Based on the public disclosure of these companies (e.g., annual reports and 10-Ks), we analyzed the differences in the reporting of e-waste collection and recycling metrics, as well as any targets related to these collection and recycling efforts.

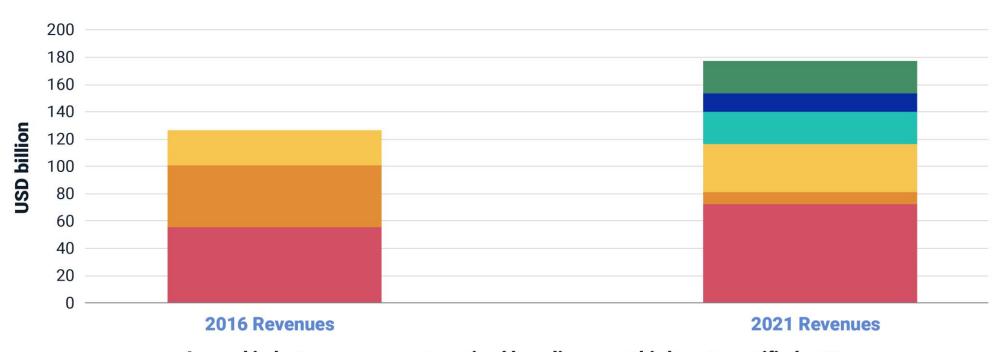
Source: MSCI ESG Research

Cotton's crunch point and the future of fiber

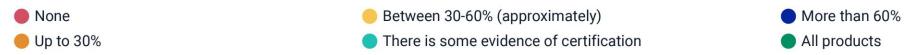




Apparel retailers increasingly relied on third-party certification for responsible cotton



Apparel industry revenues categorized by reliance on third-party certified cotton



Note: Data is based on apparel retail constituents of the MSCI ACWI Index, as of Oct. 21, 2022.



Source: Refinitiv, MSCI ESG Research



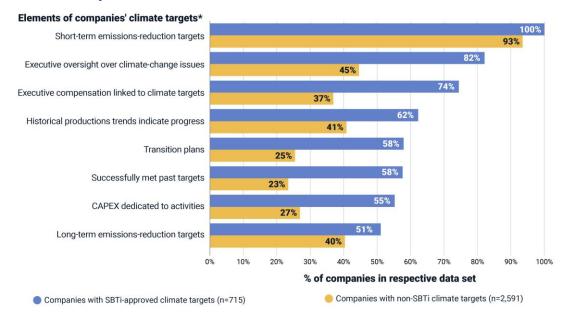
ESG in action

Net-zero: Companies are aiming high, but are their strategies practical?

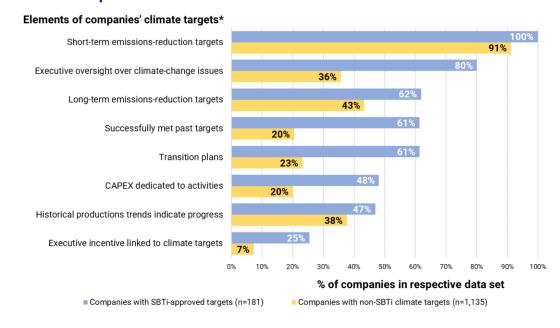


Credibility assessments of constituents of the MSCI ACWI IMI with climate targets

Global companies



APAC companies





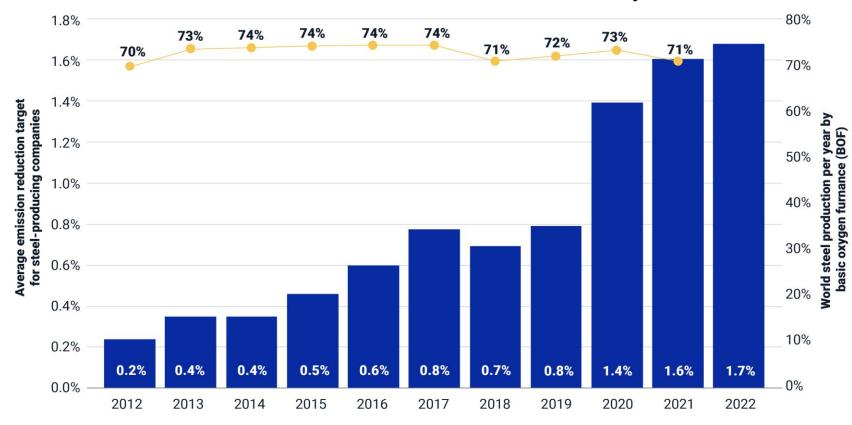
Note: For the 3,306 constituents of the MSCI ACWI IMI and the 1,316 constituents of the MSCI APAC IMI with climate targets, as of October 2022. * GFANZ portfolio-alignment measurements — credibility indicators and CDP data metrics. CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

Source: CDP, MSCI ESG Research

Turning steel green(er) with blast furnace upgrades



Increased carbon-reduction commitments from the steel industry



- Average annual scope 1&2 carbon reduction target for steel-producing constituents of MSCI ACWI Index
- Percentage of global steel production that used blast furnaces



Note: Peer set consisted of steel-producing constituents of the MSCI ACWI Index steel GICS sub-industry (n=33), as of Oct. 21, 2022. Target data refers to average annual carbon-reduction target for these companies, specifically the most aggressive Scope 1 & 2 targets for each company, assuming linear reductions.

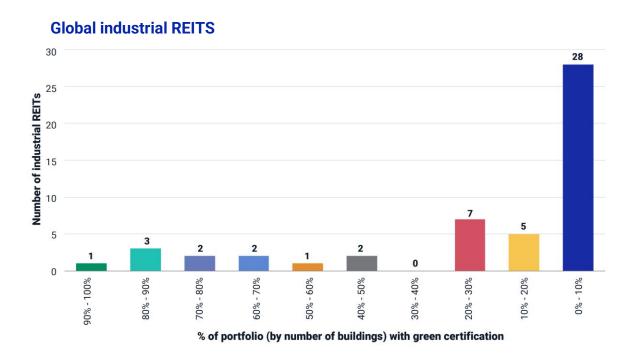
Source: MSCI ESG Research Information Classification: GENERAL

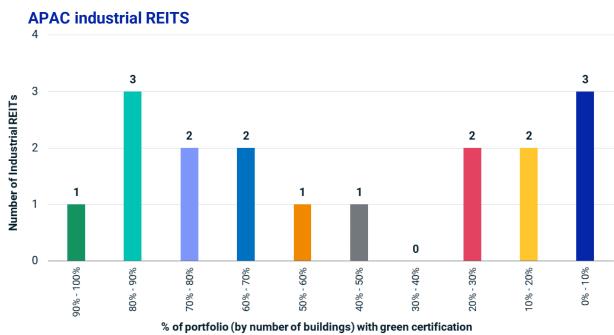
Greening industrial real estate, one warehouse at a time



Most industrial REITs globally had few or no green-certified buildings in their portfolio...

...but the majority of industrial REITS in APAC do







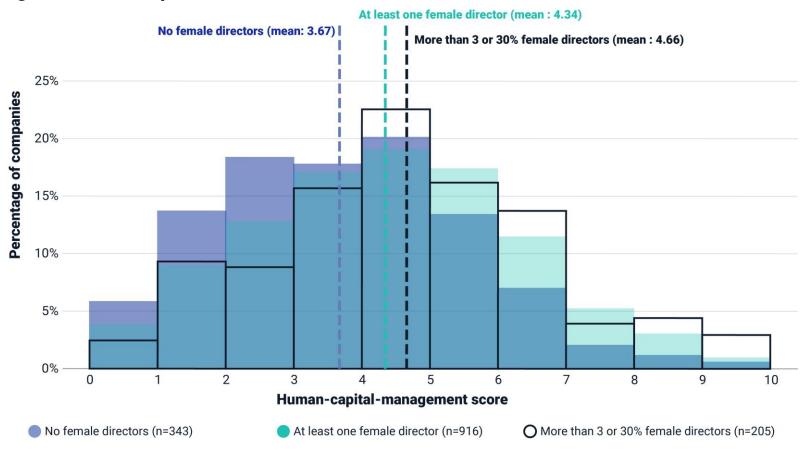
Note: Data reflects the proportion of green-certified buildings (e.g. LEED, BREEAM) in the portfolios of industrial REIT companies that were within MSCI's ESG Ratings coverage, as of Oct. 18, 2022. The percentage values refer to the proportion of a company's portfolio (by number of buildings) with a green certification. APAC markets comprise Japan, Australia, New Zealand and Singapore.

As Asian companies add female directors, human capital could benefit





Human-capital management at companies with female directors





Note: Among the constituents of the MSCI Emerging Markets IMI, we selected APAC companies with Labor Management or Human Capital Development as a weighted key issue: China (n=529), India (n=139), Indonesia (n=29), South Korea (n=328), Malaysia (n=65), Philippines (n=21), Taiwan (n=103) and Thailand (n=45). The MSCI Emerging Markets IMI (n=3064) captures large- and mid- and small-cap representation across 24 emerging markets.

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2023 ESG & Climate Trends to Watch – The APAC View



Miranda Carr
Executive Director,
Global Head,
Applied ESG & Climate Research,
MSCI



Sivananth
Ramachandran, CFA
Director, Capital Markets
Policy, India,
CFA Institute

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