Horizons

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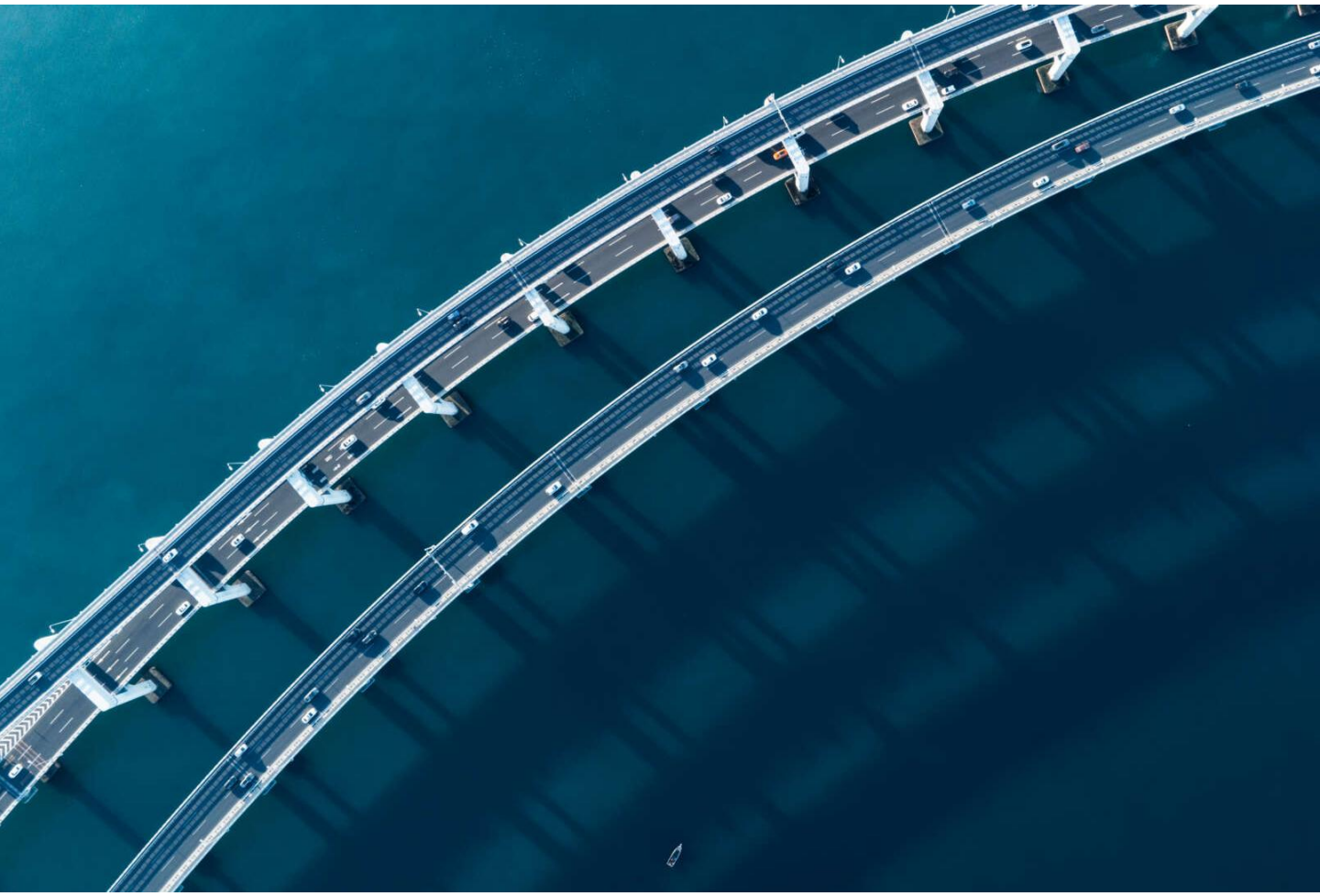
Sustainable1

Where Capital Flows, Sustainability Anchors: A Comprehensive Analysis of Sustainability Performance and Global Sustainable Fund Investment across TWSE-Listed Companies



TAIWAN STOCK EXCHANGE

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Overview and research subject

Taiwan's equity market attracts global investors, anchors critical technology supply chains, and faces growing pressure from sustainability-focused capital allocation. Global sustainable fund assets under management reached $4.13 trillion at year-end 2025, up 16.3% year over year despite regulatory headwinds. Investors evaluating companies through a sustainability lens have expanded materially.

For Taiwan Stock Exchange (TWSE)-listed companies, many occupying globally significant positions in semiconductors, hardware and component manufacturing, sustainability factors now influence access to global capital. Taiwan's Financial Supervisory Commission (FSC) is implementing a phased roadmap for mandatory sustainability disclosure by listed companies. The FSC requires specified categories of listed companies to disclose climate-related information and has announced plans to adopt IFRS Sustainability Disclosure Standards (IFRS S1 and S2), with implementation timelines varying based on company characteristics. TWSE has established the Corporate Governance section on its Market Observation Post System to centralize environmental, social and governance-related disclosures. TWSE has introduced sustainability indexes and provided guidance to listed companies on sustainability reporting practices. As global sustainable investors allocating capital to TWSE-listed companies increasingly prioritize granular, comparable sustainability data that enables cross-border benchmarking, a key question emerges: Which sustainability themes shape allocation decisions, and how do TWSE companies' disclosure practices and performance compare to global and emerging-market peers under consistent methodology?

This research uses a three-part analytical structure linking capital allocation evidence to sustainability performance evidence. Capital allocation evidence includes fund holdings, assets under management exposure, fund types, allocation concentration and sustainability themes embedded in fund profiles. Sustainability performance evidence includes S&P Global Corporate Sustainability Assessment (CSA) Scores, CSA datapoint-level behavior, transparency indicators and benchmark positioning relative to best-in-class performance.

This paper examines sustainability-driven capital flows to TWSE-listed equities by reading fund-level evidence alongside company-level performance and disclosure evidence. Neither lens alone suffices to guide company strategy or investor engagement. The paper delivers data-driven insights to TWSE-listed companies, Taiwanese capital market participants and global investors.

Linking capital flow to corporate sustainability performance

This research analyzes 812 global sustainable funds allocating capital to TWSE-listed companies, using June 2026 fund holdings data and 2025 CSA methodology. The study profiles the global sustainable fund landscape investing in Taiwan equities, covering fund classification (active, passive and specialty categories), geographic and sector distribution.

As of June 2026, sustainable funds held positions in 760 of the 1,057 TWSE-listed companies. Excluding Taiwan Semiconductor Manufacturing Co. Ltd. (TSMC), 656 funds (81%) held at least one other TWSE-listed issuer, demonstrating that sustainable fund exposure extends well beyond Taiwan's largest company, although TSMC remains a significant anchor within the overall exposure profile. For detailed fund-level analysis, including assets under management concentration and geographic and sector distribution, refer to Section 1.

The analysis identifies sustainability themes that influence investment decisions and maps these priorities to the S&P Global CSA methodology, linking investor themes to relevant CSA criteria and topics in Section 2.

The CSA methodology is a scoring framework that evaluates corporate sustainability performance on a 0-100 scale across financially material ESG factors. The CSA applies industry-specific materiality frameworks, ensuring that companies are assessed on the sustainability dimensions most relevant to their sectors. For additional information on the CSA methodology, refer to page 8 or visit here.

IFRS = International Financial Reporting Standards.
Sources: Morgan Stanley Institute for Sustainable Investing, Global Sustainable Fund Performance: H2 2025; Morningstar, Global Sustainable Fund Flows: Q1 2026 in Review; S&P Global, Measuring Intangibles; Press Release-The FSC issued the "Regulations Governing Information to be Published in Annual Reports of Public Companies" to enhance the comparability of sustainability-related financial information, strengthen investor confidence, and attract sustainable capital-Financial Supervisory Commission; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights; Corporate Sustainability Assessment (CSA) | S&P Global; Dow Jones Best-in-Class World Index

The analysis uses CSA Scores available for 457 of 1,057 TWSE-listed companies (43%) through either public assessment or survey response to benchmark Taiwan issuers against constituents of the Dow Jones Best-in-Class World Index and Dow Jones Best-in-Class Emerging Markets Index. These indices represent the top-performing 10% of companies globally in each industry based on CSA scores, providing a rigorous standard for comparison. The benchmarking reveals areas of relative strength and disclosure gaps, showing how TWSE-listed companies compare to global sustainability leaders across the focus topics. Comparative analysis and data visualizations appear in Section 3.

Section 1 Global sustainable fund participation in Taiwan Stock Exchange equities

Analysis of global sustainable fund holdings in TWSE equities, segmented by fund metrics, classification, regional origin, sector concentration, and sustainability themes.

This section quantifies and profiles global sustainable funds holding investments in TWSE issuers as of June 11, 2026, based on S&P Global Market Intelligence data. The section examines the concentration of those allocations and segments fund participation across several dimensions:

- **Fund-level metrics**: Number of sustainable funds with TWSE exposure, aggregate assets under management allocated to TWSE issuers, average and median position sizes, and concentration of holdings at issuer and sector levels.
- **Fund classification**: Distinction between actively managed and passive funds.
- **Regional origin of funds**: Funds domiciled in Europe, Asia-Pacific, and North America, ranked by aggregate TWSE investment. European funds hold the largest allocation.
- **Sector and issuer concentration**: Sector-level exposure within TWSE allocations, analyzed using the 11 Global Industry Classification Standard (GICS) sector groups.
- **Investor priorities**: Top sustainability priority areas identified through analysis of leading active and passive fund profiles using S&P Global Market Intelligence's proprietary platform. These priorities are based on their frequency of appearance in funds' public documents and are mapped to CSA methodology criteria in the following section. Note that fund priorities may not fully align with CSA criteria due to different methodological approaches.

Section 2 From fund priorities to performance metrics

Mapping of sustainability priorities from global funds investing in Taiwan against S&P Global CSA criteria to create a standardized performance analysis framework.

This section transitions from capital-allocation evidence to sustainability-performance evidence, based on the S&P Global CSA methodology. The CSA evaluates companies across ESG dimensions using industry-specific criteria.

Building on the analyzed fund universe and identified investor priorities in Section 1, the analysis produces a structured mapping of six common sustainability priorities observed among leading active and passive global sustainable funds with exposure to TWSE-listed companies against seven relevant CSA 2025 criteria. The output organizes investor-priority evidence into a standardized sustainability-performance framework. Fund holdings reflect investment decisions based on multiple factors; this analysis provides a methodological basis for linking investor-relevant sustainability themes with CSA-aligned disclosure and performance criteria

This framework enables comparison of investor expectations with company disclosures and underpins the issuer-level analysis in Section 3.

Section 3 Performance analysis and benchmarking Taiwan against sustainability leaders

Benchmarking analysis of TWSE companies' CSA performance against Emerging Markets and Global Best-in-Class peers from Dow Jones Sustainability Indices*, identifying competitive strengths and improvement areas.*

This section analyzes the score-level performance of 457 TWSE-listed companies assessed in CSA 2025 on seven priority CSA topics and benchmarks these companies against two reference universes: the Dow Jones Best-in-Class World Index (DJBIC World) and the Dow Jones Best-in-Class Emerging Markets Index (DJBIC Emerging Markets). Companies without CSA scores are excluded from this analysis.

Why DJBIC universes?

DJBIC indices use S&P Global Sustainability Scores from the CSA and represent top-tier industry performers on sustainability. They provide methodologically consistent, investor-recognized benchmarks for developed and emerging market sustainability leadership. Taiwan is classified as an emerging market in global index methodologies, making DJBIC Emerging Markets the directly comparable peer group, while DJBIC World represents global best-in-class performance.

Analysis Structure

The analysis examines performance across seven mapped CSA topics at two levels:

- **Criteria score level**: Performance analysis and comparison of TWSE issuer CSA score distribution in specific CSA priority criteria against DJBIC World and DJBIC Emerging Markets average scores.
- **Datapoint performance level**: Performance in specific datapoints within relevant criteria where TWSE issuers cluster above or below DJBIC performance aggregates.

Gap diagnosis

The benchmarking will distinguish between:

- **Competitive strengths**: Aspects where TWSE issuers match or exceed DJBIC peer performance.
- **Areas for improvement**: Aspects where TWSE issuers lag DJBIC benchmarks.

The analysis concludes with a summary of strengths and improvement areas for TWSE-listed companies relative to CSA methodology, providing context for engagement with global sustainable fund expectations.

Summary of paper structure

The following table summarizes the three-section design of the paper:

Section	Central questions
Section 1: Global Sustainable Fund Participation in TWSE Equities	Which global sustainable funds invest in TWSE issuers? What are their profiles, allocation sizes, and top sustainability priorities?
Section 2: Methodology Alignment	How do fund sustainability priorities map to CSA criteria?
Section 3: Performance analysis and Benchmarking	How do TWSE-listed companies perform on priority CSA criteria compared to DJBIC World and DJBIC Emerging Markets constituents? Where do strengths and gaps emerge?

Sources: S&P Global Corporate Sustainability Assessment; Dow Jones Best-in-Class World Index; S&P Global Market Intelligence; S&P Global User Guide: S&P Global ESG Scores and Raw Data — Overview

Methodological Considerations

Methodological framework covering 1,057 TWSE issuers with fund data as of June 2026 and CSA performance analysis of 457 assessed companies.

- **Issuer coverage and data sources:** Section 1 analysis covers 1,057 companies listed on the Taiwan Stock Exchange as of May 2026, sourced from S&P Global Market Intelligence platform. A subset of these companies (760) have an investment from at least one Sustainable Fund, based on public ownership data, where a Sustainable Fund is defined as investment fund that incorporates environmental, social, and governance considerations or sustainability-related objectives into their investment approach, either through ESG integration, screening, thematic exposure, impact orientation, or other sustainability-focused strategies. Section 3 performance analysis and benchmarking examines the 457 TWSE issuers assessed in the 2025 Corporate Sustainability Assessment (CSA). Fund holdings data reflects positions as of June 11, 2026, sourced from S&P Global Market Intelligence. Taiwan's equity markets comprise the Taiwan Stock Exchange (TWSE) and Taipei Exchange (TPEx). This research focuses exclusively on 1,057 TWSE-listed companies as of May 2026.

- **Assessment methodology:** Performance analysis and benchmarking uses the S&P Global CSA methodology. The CSA evaluates companies through a combination of survey responses submitted by participating companies and public information assessment. CSA scores reflect company performance on material sustainability topics specific to each industry, assessed annually.

- **Alignment considerations:** Investor priorities identified in Section 1 may not fully align with CSA criteria due to different methodological approaches. For Section 3 analysis, non-CSA assessed companies have been excluded. Of the 1,057 TWSE issuers as of May 2026, 457 CSA-assessed issuers have been included in the analysis.

- **Data timing:** Fund holdings represent public ownership positions as of June 11, 2026. CSA 2025 scores reflect assessments conducted in 2025 based on 2024 corporate disclosures. CSA data of TWSE issuers is as of May 2026. These timing differences reflect standard market data availability and assessment cycles.

Source: CSA Methodology, Measuring Sustainability Performance, CSA 2026

Analytical Approach

Approach for selecting sustainable funds and identifying their sustainability priorities

The selection of sustainable funds and their sustainability priorities was informed by both quantitative and qualitative reviews conducted by sustainability specialists using information available through S&P Global Market Intelligence proprietary tools and methodologies. The approach combined fund-level holdings analysis with expert review of investor sustainability themes, creating a link between sustainable investor preferences and the CSA topics used in the report.

Phase 1: Selection of sustainable funds

- Extraction of data related to sustainability-focused investors (based on Morningstar Sustainalytics fund classifications) with positions in at least one TWSE-listed company using S&P Global Market Intelligence proprietary tools and workflows.
- Further segregation of funds using indicators such as aggregate holdings, share quantities, ownership measures, market capitalization characteristics and industry classifications to identify the sustainable investor universe with relevant exposure to TWSE-listed companies.



Phase 2: Selection of sustainable funds' ESG priorities

- From the broader fund universe, the most relevant funds were selected based on investment scale and market relevance using key indicators such as count of securities held, aggregate value of securities held and equity assets under management.
- For the selected funds, sustainability-focused themes emphasized by the investors were researched and reviewed using S&P MI Capital Access platform.
- ESG priorities were screened from Capital Access based on their frequency of appearance in investors' public documents.
- These themes were consolidated into a focused set of investor-relevant sustainability priorities and mapped to the relevant CSA topics for further analysis in this report.

Note: TSMC represents a large share of sustainable fund holdings. Therefore, selected investment insights are presented both including and excluding TSMC to provide a more balanced view of the broader TWSE issuer landscape.

About Capital Access

Capital Access is S&P Global Market Intelligence's investor relations and workflow platform, designed to support ownership analysis, investor targeting, engagement tracking and investor research. The platform draws on extensive global ownership, institutional and contact data to help analyze shareholder bases, identify target investors and support engagement planning. For more information on the Capital Access platform, please click here.

Source: https://www.spglobal.com/market-intelligence/en/solutions/products/capital-access#features.

Measuring sustainability performance

At S&P Global Sustainability Research, we recognize that financial analysis is incomplete if it ignores material extra-financial factors. Sustainability trends such as resource scarcity, climate change or an aging population continuously reshape a company's competitive environment. We view that companies that can adapt to such challenges in material topics through innovation, quality and productivity enhance their ability to generate long-term enterprise value.

S&P Global Sustainable1 defines a sustainability issue as material if it presents a significant impact on society or the environment and a significant impact on the company's value drivers, competitive positioning and long-term shareholder value creation. The S&P Global CSA was developed more than 20 years ago to identify companies that are better equipped to recognize and respond to emerging sustainability opportunities and challenges presented by global and industry trends.

Main objective of the S&P Global CSA

The CSA evaluates a company's awareness of global sustainability trends and its management of ESG opportunities and challenges. The CSA provides a comprehensive framework for assessing ESG performance, enabling companies to identify improvement areas and align their strategies with best practices. The CSA not only helps companies focus on sustainability issues that are more directly linked to their success as a business, but it also provides results that are particularly relevant for investors for evaluation.

Double Materiality Analysis as starting point for the CSA

The double materiality analysis helps identify the sustainability factors that drive social and environmental impact as well as business value. Close attention is paid to the interrelation between external impact and internal impact on enterprise value creation. Over time, external impacts on society and the environment translate into internal impacts on a company itself, including its financial value drivers. These impacts may be positive or negative, direct or indirect, including ripple effects through the value chain, upstream or downstream.

The materiality analysis considers global megatrends and industry-specific value drivers that contextualize company performance. It leverages quantitative research and data sources and pays attention to both risks and opportunities closely associated with financial performance in the short, medium and long term.

Focus of S&P Global ESG Research

In line with S&P Global Sustainability Research that material nonfinancial factors contribute to better-informed investment decisions, the methodology focuses on long-term sustainability factors that are relevant to each industry, material to the company's financial performance and under-researched in conventional financial analysis.

Sources: S&P Global Sustainable1; CSA Methodology, Measuring Sustainability Performance, CSA 2026

Within each criterion, CSA experts look for evidence of a company's awareness of sustainability issues and for indications that it has implemented strategies to address them. The experts also evaluate the company's progress in implementing such strategies as well as the quality of its reporting on these issues. Therefore, the questions within each criterion are structured to capture and evaluate the following elements:

- Awareness of the importance of these factors to its financial success
- Determination of the potential impact in business value as well as social and environmental impact
- Implementation of strategies to manage these sustainability risks or to capitalize on related opportunities in a manner that is consistent with its business models
- Measurement of results in relation to stated key performance indicators to evaluate the effectiveness of its sustainability strategy
- Validation or external audit of stated results
- Transparent communication of its corporate sustainability strategies and the extent to which stated targets have been met

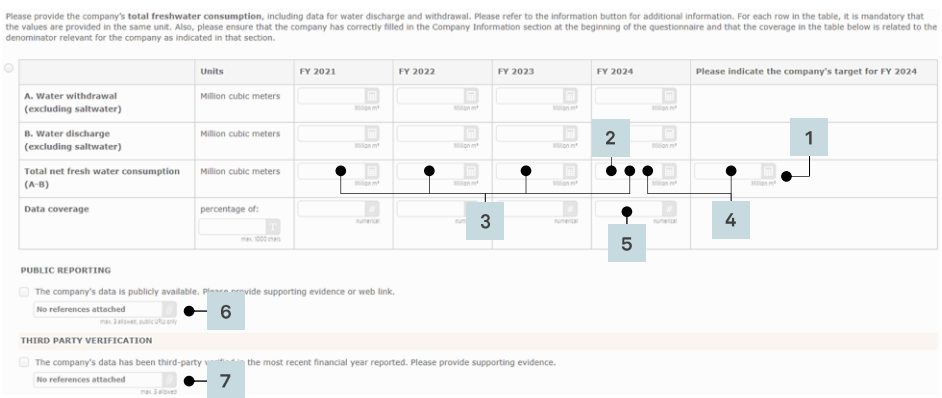
This framework for evaluating corporate sustainability performance enables S&P Global Sustainability Research to develop a more robust understanding of a company's quality of management.

Example of data collection in the CSA

A consistent, rule-based methodology allows S&P Global CSA analysts to check, analyze and validate data points submitted by a company. The number of data points collected and validated for each company is, on average, 1,000. A data point is information collected in the CSA. Below is an example of the list of data points collected and validated for Water Consumption in the CSA.

11 Data Points Validated According to the CSA Methodology

1	Setting targets
2	Performance in quintile
3	Historical trend (normalized with denominator)
4	Performance against a target
5	Coverage
6	Supporting documents
7	External verification



In the example above, data points collected include, among others, water withdrawal and total net freshwater consumption over the past four four comparator years, target set for freshwater consumption, coverage (perimeter considered) for the water consumption data, information on where the information can be found in the public domain and if the data provided is verified by a third party. Once this information is validated by CSA analysts, it can be used for analytical and benchmarking (industry peer comparison) purposes. For additional information on the CSA, visit here.

Sources: CSA Methodology, Measuring Sustainability Performance, CSA 2026; S&P Global Sustainable1

Guide to read the bar charts and box plots

1. Understanding the Axes

Y-Axis (Vertical Axis)

- Represents the percentage of issuers that fulfil the specified requirement (e.g., disclosing Scope 1 carbon dioxide (greenhouse gas) emissions). Values range from 0% at the bottom to 100% at the top.
- Each bar's height corresponds to the proportion of companies meeting the requirement out of the total companies in the selected group.

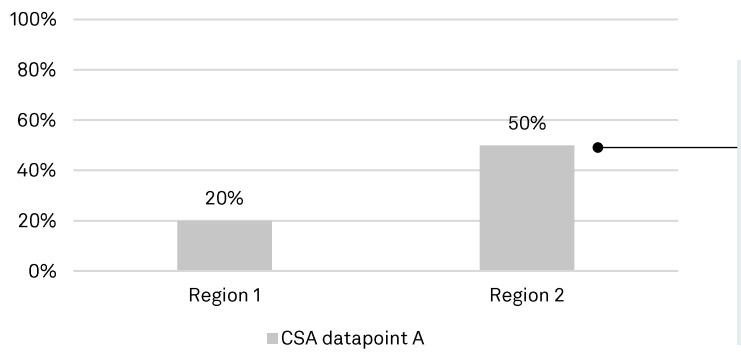
X-Axis (Horizontal Axis)

- Displays different categories representing a breakdown of companies by industry and selected peer group.
- This axis helps readers compare how different groups perform relative to the requirement.

2. Interpreting the Bar Height

- The taller the bar, the higher the percentage of issuers in that group fulfilling the requirement.
- Readers can easily see which categories (industry or issuer group) have higher or lower percentages of companies fulfilling the requirement by comparing bar heights.

A sample bar chart to illustrate these points:



Key Observations
Region 2 has a higher value than Region 1.

CSA Expectations
This section mentions what CSA considers good practices.

Stakeholder Expectations
What the stakeholders expect companies to have in place and disclose in public.

Guide to read the bar charts and box plots

1. Understanding the Axes

Y-Axis (Vertical Axis)

- Represents the value of the selected datapoint disclosed by companies (e.g., women's share in all management positions).
- Values increase from bottom to top, allowing readers to compare performance or disclosure levels across different groups.

X-Axis (Horizontal Axis)

- Displays different categories, such as industry sectors and peer groups.
- This axis allows comparison of how the selected metric varies across different groups of companies.

2. Interpreting the box plot comments

Each box plot visualizes the distribution of the selected metric within a group:

Minimum (Lower Whisker Endpoint)
The lowest observed value (excluding outliers) for the metric in that group.

First Quartile (Q1 — Bottom of Box)
25% of companies in the group have values below this level.

Median (Middle Line in Box)
Half of the companies fall below this value and half above. It represents the midpoint of the data.

Third Quartile (Q3 — Top of Box)
75% of companies have metric values below this level.

Maximum (Upper Whisker Endpoint)
The highest observed value (excluding outliers) for the metric in that group.

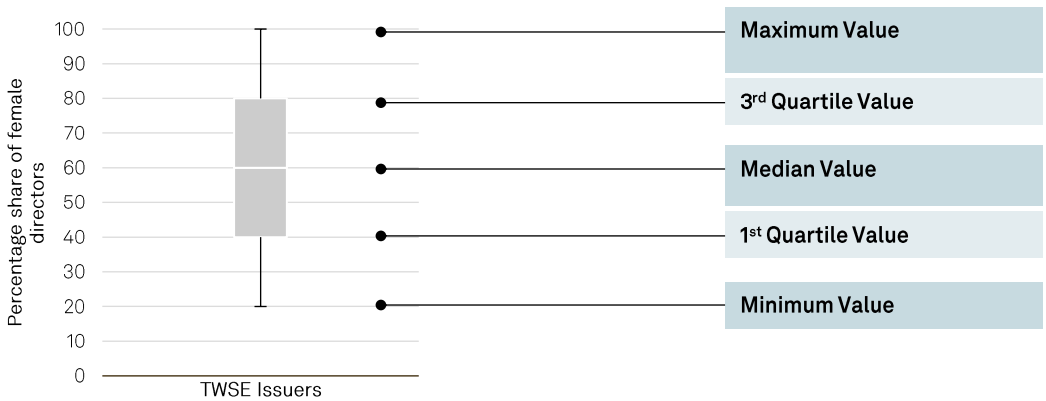
Box Height (Interquartile Range, or IQR)
A taller box indicates a wider spread of values among the middle 50% of companies. A shorter box suggests more consistency within the group.

Median Line Position
Helps assess where most companies in the group are concentrated. If the median is closer to the bottom or top of the box, the data may be skewed.

Whiskers
Whiskers show the range of typical values.

Outliers
Points outside the whiskers (if shown) are considered outliers. These are the values that differ significantly from other observations in the dataset.

A sample box plots to illustrate these points:



Research universe

The research universe for this report comprises a set of TWSE constituents, mapped against the universe of companies assessed under the S&P Global CSA methodology. For companies included in this matched universe, CSA-based data serves as the primary source of sustainability-related insights used throughout the report.

This universe includes two categories of TWSE issuers assessed in CSA 2025:

1. **Survey respondents:** Companies that actively participate in the CSA by completing the detailed survey covering a broad range of ESG topics.
2. **Public assessments:** Companies evaluated by S&P Global based on publicly available information when they do not directly participate in the CSA survey.

Based on this mapping, a total of 457 TWSE issuers were identified as either CSA survey respondents or publicly assessed companies. These companies form the basis for the sustainability-related analysis presented in this report.

Coverage of score trend analysis

The six-year score performance analysis compares TWSE issuers with DJBIC World, DJBIC Emerging Markets and TWSE Top Decile (representing the top 10% of TWSE issuers by total CSA score) across CSA topics. The analysis is based on companies covered in each CSA methodology year from 2020 to 2025. Consequently, the number of TWSE issuers and other group issuers included may vary annually depending on CSA coverage. This should be considered when interpreting year-over-year movements and benchmark comparisons. Company counts for each year are provided in this section to ensure transparency regarding the analytical coverage underlying the score trend charts.

Number of issuers included in score analysis, as of May 2026

Issuer Group	CSA 2020	CSA 2021	CSA 2022	CSA 2023	CSA 2024	CSA 2025
TWSE	433	433	443	443	452	457
TWSE Top Decile	43	43	44	44	45	46
DJBIC World	322	324	334	320	318	316
DJBIC Emerging Markets	98	109	110	105	113	114

To provide additional insight into score performance by company size, TWSE issuers are also grouped by market capitalization using the following tiers, along with the number of issuers included in the CSA 2025 score analysis:

Mega Cap: above USD 50 billion market capitalization

Large Cap: above USD 10 billion and up to USD 50 billion market capitalization

Mid Cap: above USD 2 billion and up to USD 10 billion market capitalization

Small Cap: above USD 250 million and up to USD 2 billion market capitalization

Micro Cap: USD 250 million or below market capitalization

Issuer Group	Mega Cap	Large Cap	Mid Cap	Small Cap	Micro Cap
TWSE	8	46	93	258	52
TWSE Top Decile	4	22	15	5	0

Source: S&P Sustainable1 CSA 2020-2025

Benchmarking groups

To support comparative performance analysis, the sustainability insights for TWSE issuers are benchmarked against three reference groups: DJBIC World, DJBIC Emerging Markets and TWSE Top Decile. These benchmark groups provide context for assessing relative strengths, identifying gaps and evaluating progress over time.

In addition, TWSE issuers classified in the technology segment are further broken down into three IT industries, semiconductors and semiconductor equipment, software and services, and technology hardware and equipment to provide a more granular view of sustainability performance across Taiwan's most relevant technology segments.

Number of issuers included for benchmarking, as of May 2026

Issuer Group	Publicly Assessed Issuers (CSA 2025)	Survey Respondents (CSA 2025)	Total Issuers considered for Benchmarking (CSA 2025)
TWSE	319	138	457
TWSE Top Decile	0	46	46
DJBIC World	10	306	316
DJBIC Emerging Markets	0	114	114

Selection of DJBIC indices

DJBIC World and DJBIC Emerging Markets are selected as benchmark groups because they track companies that demonstrate strong ESG performance relative to their industry peers, with the CSA serving as a key input in their evaluation.

- The DJBIC World Index tracks the performance of the top 10% of the 2,500 largest companies in the S&P Global Broad Market Index that lead their industries in sustainability performance.
- The DJBIC Emerging Markets Index tracks the performance of the top 10% of the 800 largest emerging markets companies in the S&P Global Broad Market Index that lead their industries in sustainability performance.

These indexes provide relevant reference points for understanding how TWSE issuers compare with leading companies globally and across emerging markets.

Selection of TWSE top decile

TWSE Top Decile has been selected as an additional reference group to provide an internal benchmark based on leading sustainability performance within TWSE Issuers. The group consists of the top 10% of TWSE Issuers ranked by total CSA score. The composition of TWSE Top Decile is recalculated annually based on each year's total CSA scores, reflecting evolving sustainability performance across TWSE Issuers.

This enables comparison between the broader TWSE issuers and leading sustainability performers within Taiwan. The approach aligns with the DJBIC World and Emerging Market indices, which also use a top-10% selection method. However, while both groups apply a top-10% selection concept, their selection universes and ranking methodologies differ.

A detailed list of TWSE Top Decile constituents with their total CSA scores is provided on the following page.

Constituents of TWSE top decile

No.	Company	GICS Level 1 Sectors	CSA 2025 Total Score (As of May 31, 2026)
1	Far EasTone Telecommunications Co. Ltd.	Communication Services	96
2	United Microelectronics Corp.	Information Technology	95
3	TS Financial Holding Co. Ltd.	Financials	94
4	Mega Financial Holding Co. Ltd.	Financials	94
5	E.SUN Financial Holding Co. Ltd.	Financials	93
6	Chunghwa Telecom Co. Ltd.	Communication Services	93
7	KGI Financial Holding Co. Ltd.	Financials	92
8	O-Bank Co. Ltd.	Financials	92
9	Taiwan Mobile Co. Ltd.	Communication Services	92
10	First Financial Holding Co. Ltd.	Financials	92
11	Wistron Corp.	Information Technology	92
12	Taiwan Cooperative Financial Holding Co. Ltd.	Financials	91
13	SinoPac Financial Holdings Co. Ltd.	Financials	91
14	Chang Hwa Commercial Bank Ltd.	Financials	91
15	Lite-On Technology Corp.	Information Technology	91
16	ASE Technology Holding Co. Ltd.	Information Technology	90
17	CTBC Financial Holding Co. Ltd.	Financials	90
18	The Shanghai Commercial & Savings Bank Ltd.	Financials	90
19	Fubon Financial Holding Co. Ltd.	Financials	89
20	Qisda Corp.	Information Technology	89
21	Advantech Co. Ltd.	Information Technology	89
22	Yuanta Financial Holding Co. Ltd.	Financials	89
23	Chailease Holding Co. Ltd.	Financials	89
24	Cathay Financial Holding Co. Ltd.	Financials	89
25	CTCI Corp.	Industrials	89

Note: The companies are ordered from highest to lowest total score; the order of companies with the same score does not indicate ranking.

Constituents of TWSE top decile (Continued)

No.	Company	GICS Level 1 Sectors	CSA 2025 Total Score (As of May 31, 2026)
26	Compal Electronics Inc.	Information Technology	89
27	Taiwan Business Bank Ltd.	Financials	88
28	Zhen Ding Technology Holding Ltd.	Information Technology	88
29	Delta Electronics Inc.	Information Technology	87
30	China Airlines Ltd.	Industrials	87
31	President Chain Store Corp.	Consumer Staples	86
32	AUO Corp.	Information Technology	85
33	Acer Incorp.	Information Technology	85
34	China Steel Corp.	Materials	85
35	Taiwan Semiconductor Manufacturing Co. Ltd.	Information Technology	84
36	Diamond Biofund Inc.	Financials	84
37	EVA Airways Corp.	Industrials	84
38	Hiwin Technologies Corp.	Industrials	83
39	Nan Pao Resins Chemical Co. Ltd.	Materials	83
40	Wiwynn Corp.	Information Technology	82
41	Nanya Technology Corp.	Information Technology	82
42	TCC Group Holdings Co. Ltd.	Materials	82
43	Winbond Electronics Corp.	Information Technology	82
44	Innolux Corp.	Information Technology	81
45	Powerchip Semiconductor Manufacturing Corp.	Information Technology	81
46	TECO Electric & Machinery Co. Ltd.	Industrials	80

Note: The companies are ordered from highest to lowest total score; the order of companies with the same score does not indicate ranking.

Selection of Technology Industries

The three IT industry groups, semiconductors and semiconductor equipment, software and services, and technology hardware and equipment as per GICS level 2 classification, are presented separately in the sustainability-related insights because of their importance within the TWSE universe. Their inclusion reflects both the relatively high share of sustainable fund investment they attract[1] and their stronger representation among TWSE companies assessed under the CSA[2].

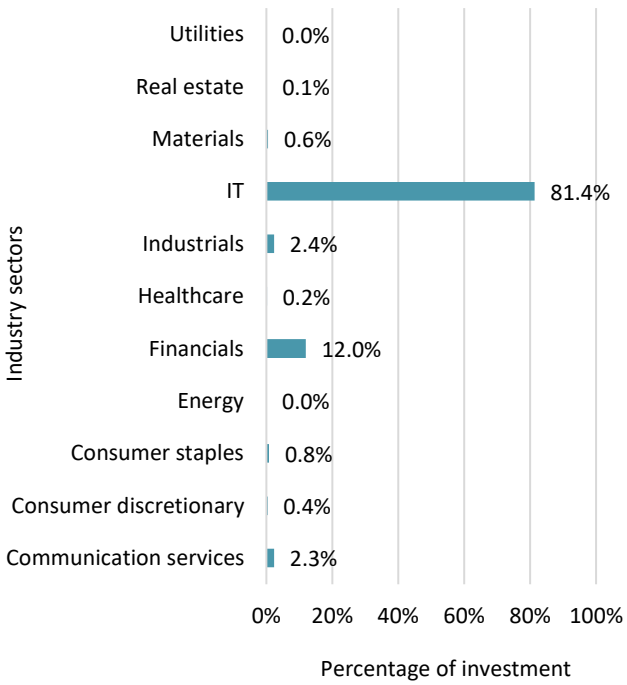
Presenting these industries separately provides additional context on how sustainability performance varies across Taiwan's core technology value chain and highlights areas that are particularly relevant to sustainability-focused investors.

Breakdown of companies by TWSE technology industries issuers, as of May 2026

Technology Group	Publicly Assessed Issuers (CSA 2025)	Survey Respondents (CSA 2025)	Total Issuers considered for Benchmarking (CSA 2025)
TWSE Semiconductors & Semiconductor Equipment	48	17	65
TWSE Software & Services	0	3	3
TWSE Technology Hardware & Equipment	76	42	118

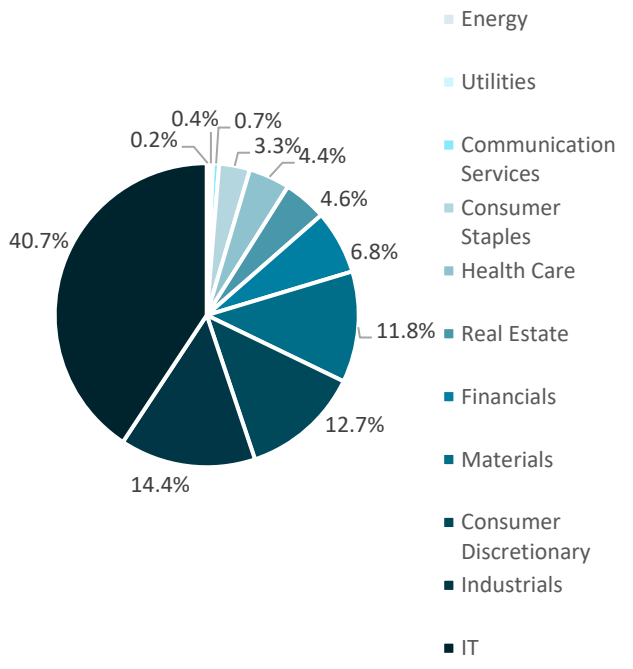
1. Sustainable funds distribution by GICS level 1 sector, as of June 2026

Percentage of sustainable investments by sustainability-focused investors in each sector of TWSE



2. Breakdown of TWSE issuers assessed under CSA by GICS level 1 sector classification, as of May 2026

Percentage of TWSE issuers assessed in CSA 2025 methodology

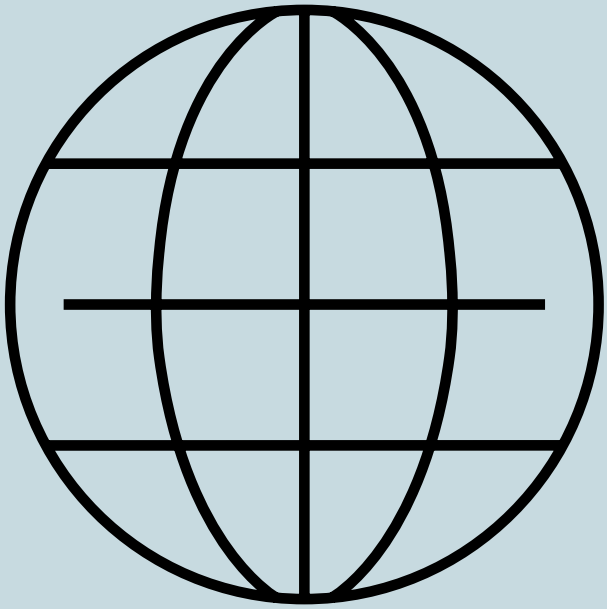


Please read the chart clockwise to identify the sector.

Sources: S&P Sustainable1 CSA 2025; S&P Global Market Intelligence.

Section 1

Global Sustainable Fund Participation in TWSE Equities



Global Sustainable Fund Participation in TWSE Equities

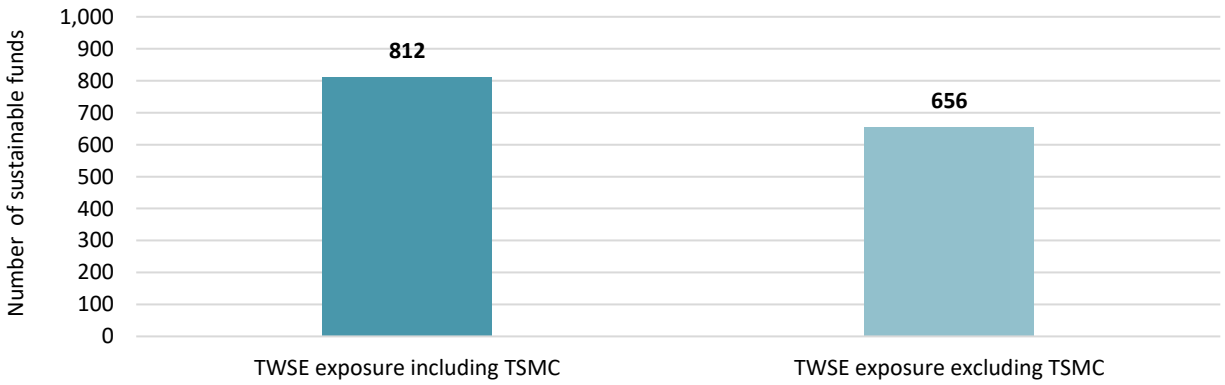
The first section examines how global sustainable funds allocate capital to Taiwan Stock Exchange-listed companies. Using S&P Global Market Intelligence public ownership data as of June 11, 2026, the analysis covers 812 sustainable funds that held positions in TWSE issuers.

Sustainable fund participation is evaluated across several indicators: fund-level metrics including assets under management and position concentration; fund classification distinguishing active from passive management; regional origin showing allocations from Europe, Asia-Pacific and North America; sector exposure using the 11 GICS groups; and sustainability priorities identified from the publicly disclosed sustainability themes of top sustainable funds investing in TWSE issuers. The section concludes by identifying the most frequently disclosed sustainability themes by global sustainable investors.

Participation Breadth

Participation breadth counts the number of sustainable funds holding positions in at least one TWSE issuer. Calculated across 1,057 listed companies, the participation breadth is presented with and without TSMC to distinguish broad market participation from concentration in Taiwan's dominant issuer. Breaking down results by active and passive funds reveal how different investment approaches shape participation across the TWSE universe.

Sustainable Funds holding at least One TWSE Issuer



Key takeaways

81% of TWSE-exposed funds hold at least one TWSE issuer other than TSMC

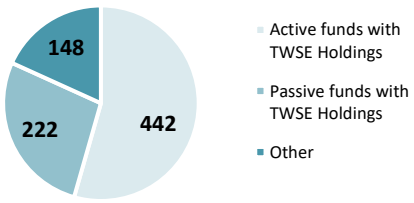
→ Sustainable funds held positions in TWSE-listed companies across 812 funds. Excluding TSMC, 656 funds (81%) held at least one other TWSE-listed company, demonstrating that sustainable fund exposure extends beyond Taiwan's largest issuer, although TSMC remains an important anchor within the overall exposure profile.

As of June 11, 2026.
Sustainable funds are investment funds that incorporate ESG considerations or sustainability-related objectives into their investment approach, either through ESG integration, screening, thematic exposure, impact orientation or other sustainability-focused strategies.
Source: S&P Global Market Intelligence

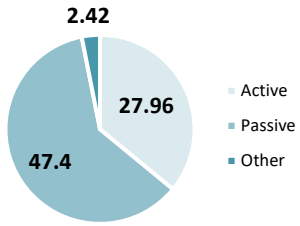
Global Sustainable Fund Participation in TWSE Equities

Fund Classification: by orientation and style

Number of funds



Total investment in TWSE issuers (US$B)



Fund management style	Number of funds
Aggressive Growth	13
Deep Value	8
Growth At Reasonable Price (GARP)	41
Growth	82
Index	208
Specialty	255
Value	35
Yield	22
Other	148
Total Sustainable Funds	812

Key takeaways

→ Fund classification and management style:

- Among sustainable funds exposed to TWSE issuers, the largest categories by fund count are Specialty (255 funds) and Index (208 funds), together accounting for approximately 70% of classified funds excluding other fund management style. Other notable categories include Growth (82 funds), GARP (41 funds), Value (35 funds), Yield (22 funds), Aggressive Growth (13 funds) and Deep Value (8 funds).
- Of the 812 funds, 442 are actively managed (54%), 222 are passive (27%), and 148 follow other orientation (18%).

→ Investment concentration:

- Despite representing roughly half the number of active funds, passive funds account for the largest share of invested assets in TWSE issuers approximately $47.4 billion (61% of total). The amount invested by active funds in shares of Taiwan-listed companies is US$27.96 billion (36%), demonstrating that passive strategies dominate by invested amount while active strategies lead by fund count.

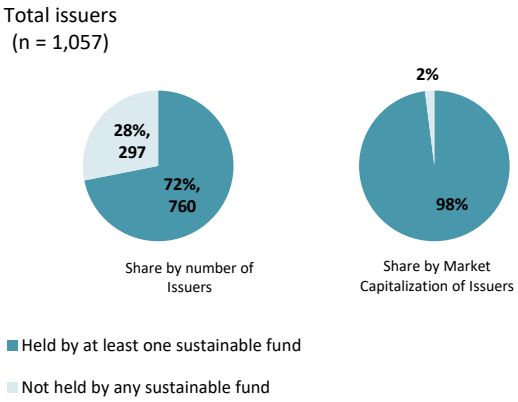
Sustainable fund exposure across TWSE Issuers

The indicators in this section show how sustainable fund holdings are distributed across TWSE issuers and where gaps remain. Issuer coverage reveals how many TWSE-listed companies attract sustainable fund investment. Market-cap coverage shows whether this exposure reflects the Taiwan equity market's value distribution or concentrates in specific segments. Holder concentration identifies whether holdings spread broadly or cluster among select issuers. Together, these metrics clarify the reach of sustainable funds across TWSE equities, particularly for smaller companies and underrepresented sectors, without implying investment merit.

As of June 11, 2026.
Source: S&P Global Market Intelligence

Global Sustainable Fund Participation in TWSE Equities

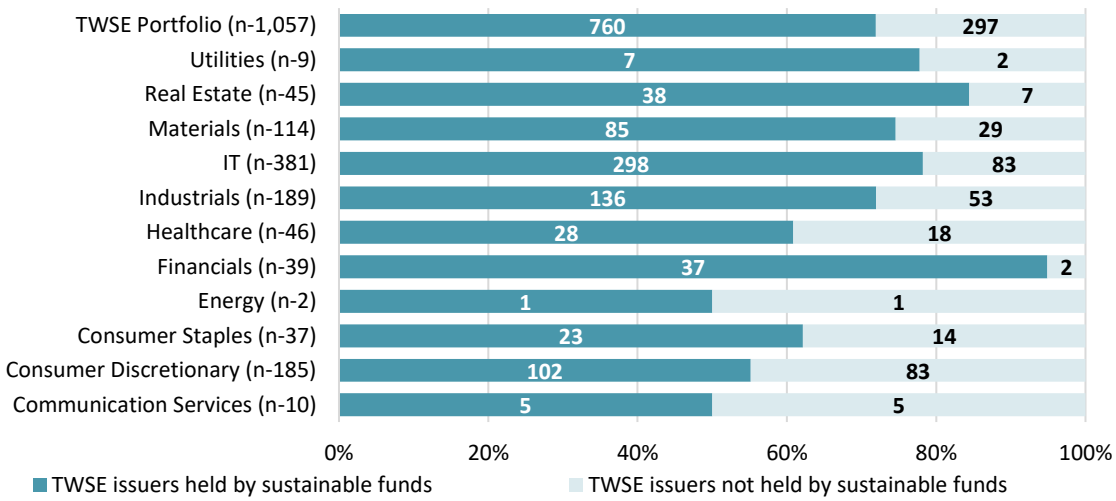
Share of TWSE-listed companies held by at least one Sustainable Fund



Key takeaways

- Sustainable funds held 760 of 1,057 TWSE issuers (72%), representing 98% of total market capitalization.
- The 297 companies without sustainable fund holdings account for only 2% of market capitalization, indicating that coverage gaps concentrate among smaller issuers.

Breakdown of investee companies by sector



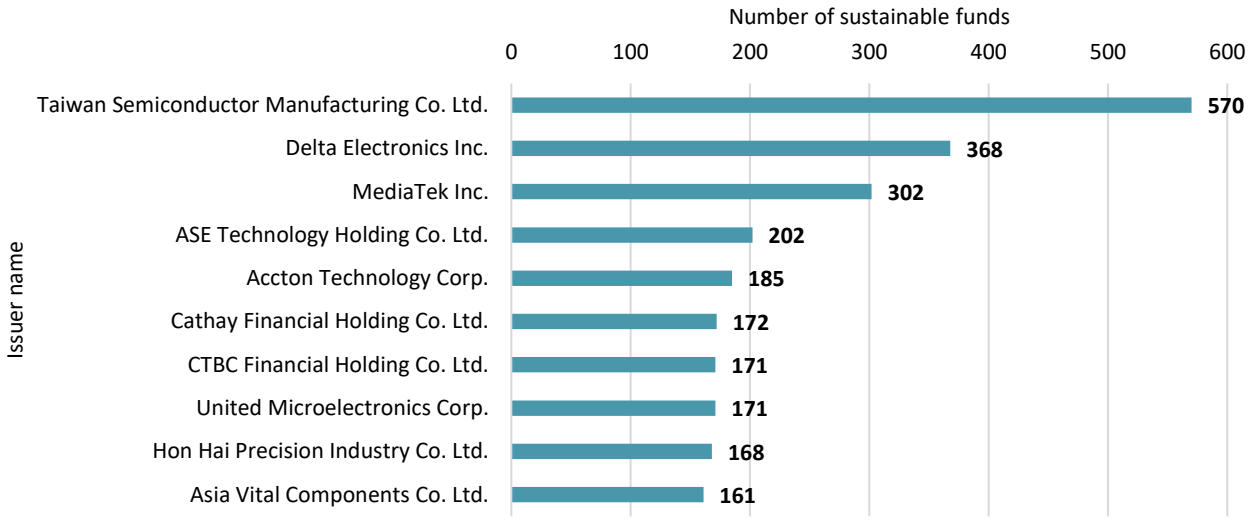
Key takeaways

- Market-cap coverage consistently exceeds issuer-count coverage across all sectors, indicating sustainable fund preference for larger companies
- Four sectors exceeded 75% issuer coverage: Financials (95%), Real Estate (84%), Information Technology (78%) and Utilities (78%). Each captured over 90% of sector market capitalization.
- Three sectors fell below the 72% TWSE average: Consumer Discretionary (55%), Healthcare (61%) and Consumer Staples (62%). Despite lower issuer reach, these sectors achieved 84-95% market-cap coverage, showing strong concentration in dominant issuers.
- Consumer Discretionary and IT had the most not-held companies (83 each), though these represent primarily smaller issuers by market value.

As of June 11, 2026.
Sectors are classified according to the GICS.
Source: S&P Global Market Intelligence

Fund concentration

Top 10 TWSE Issuers by sustainable fund ownership



Sector distribution among the top 10 TWSE Issuers

Industry Sector	Top 10 TWSE Issuer
Financials	2
IT	8

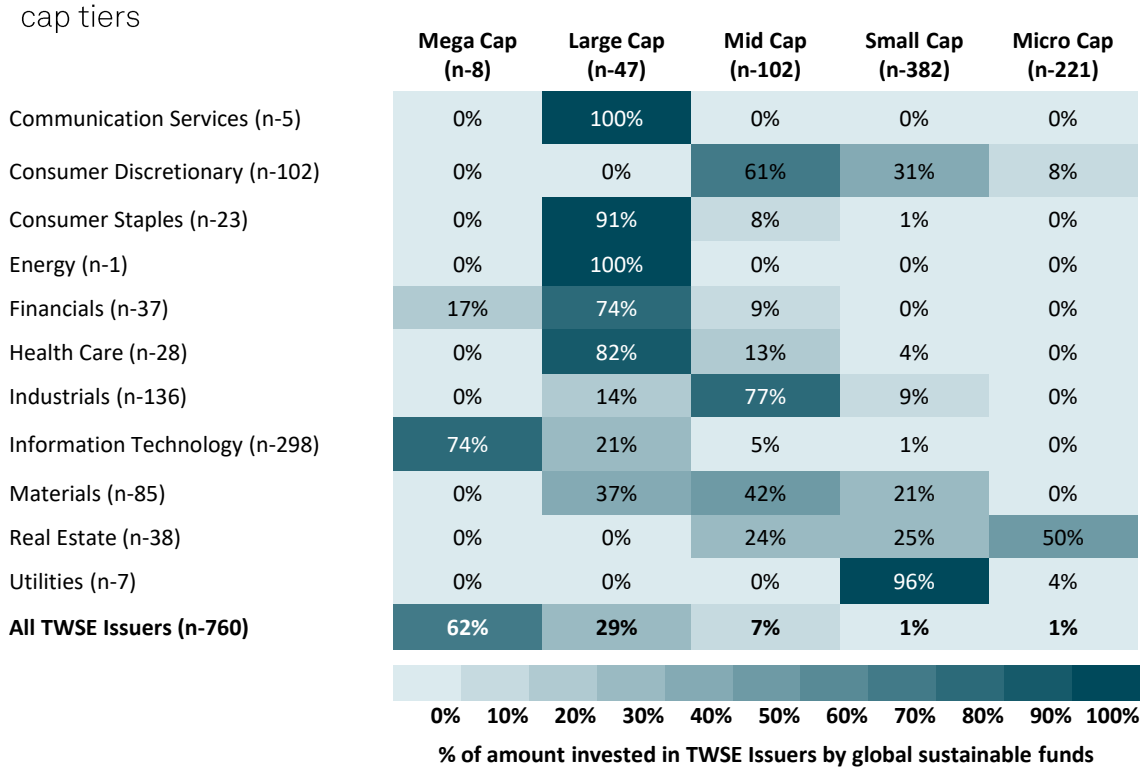
Key takeaways

- TSMC was the most widely held TWSE issuer among sustainable funds, with 570 sustainable fund holders compared with eight for the median TWSE company, reinforcing its role as a central anchor for Taiwan exposure.
- The top 10 most widely held TWSE issuers collectively accounted for 16% of all sustainable fund positions and represent the largest companies by market capitalization. These issuers are predominantly from IT (eight companies, 80%) and Financials (two companies, 20%).
- Sustainable fund holder concentration is highest among larger, more visible companies, indicating that broad issuer reach across 760 TWSE-listed companies coexists with significant concentration in selected sectors, particularly IT and Financials.

As of June 11, 2026.
"Widely held" TWSE issuers refer to TWSE-listed issuers ranked by the number of sustainable funds holding the issuer. In this analysis, the "most widely held" issuers are the top 10 TWSE companies by sustainable fund holder count.
Source: S&P Global Market Intelligence

Market cap profile of TWSE issuers in global Sustainable Funds

Sustainable investment distribution of 760 held issuers across 11 GICS sectors and 5 market cap tiers



Market-Cap Tier	Threshold
Mega Cap	> USD 50B
Large Cap	> USD 10B to ≤ USD 50B
Mid Cap	> USD 2B to ≤ USD 10B
Small Cap	> USD 250M to ≤ USD 2B
Micro Cap	≤ USD 250M

Note: Market-cap tiers are based on company market capitalization in USD as of June 11, 2026.
Market Cap classification standard used is as defined in S&P MI Capital Access.

Key Takeaways

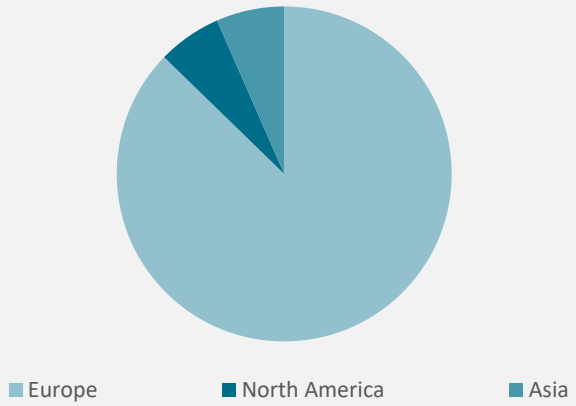
- Small-cap (382) and micro-cap (221) issuers represent 79% of TWSE Issuers held but only 2% of total investment, demonstrating the concentration of sustainable fund assets in larger companies. Excluding TSMC, small- and micro-cap issuers represent 2% of total investment.
- Mega- and large-cap companies are concentrated in Information Technology (34 issuers), Financials (12), Communication Services (3) and Energy (1).
- Information Technology has the broadest market-cap spread across all five tiers, but its 214 small- and micro-cap issuers attract just 0.57% of sector investment. Financials show more balanced distribution with stronger mid- and large-cap representation.
- Four sectors, Consumer Discretionary (94 issuers), Health Care (26), Materials (77) and Real Estate (36), are dominated by small- and micro-cap companies. Investment concentration in these smaller issuers varies: Real Estate (76% of sector investment), Consumer Discretionary (39%), Materials (21%) and Health Care (5%).
- Issuer count does not reflect investment weight. Large-cap representation depth varies significantly across sectors.

Note: Market-cap classifications are based on company market capitalization data as of 11 June 2026.
Source: S&P Global Market Intelligence data. Data as of June 11, 2026

Domicile of major Sustainable Funds investing in TWSE issuers: active vs. passive

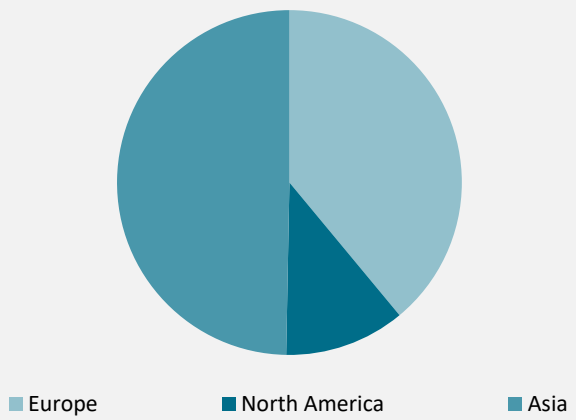
This section describes the regional breakdown of top 10 active and passive sustainable funds with the largest investments in TWSE issuers.

Geographical breakdown of Top 10 active funds by investment



Total investment from top 10 active funds: US$8.29 B

Geographical breakdown of Top 10 passive funds by investment



Total investment from top 10 passive funds: US$27.49 B

Key takeaways

Passive funds dominate investment in TWSE Issuers, with the top 10 holding US$27.49 billion compared to US$8.29 billion for active funds, while regional domicile patterns differ significantly between the two categories.

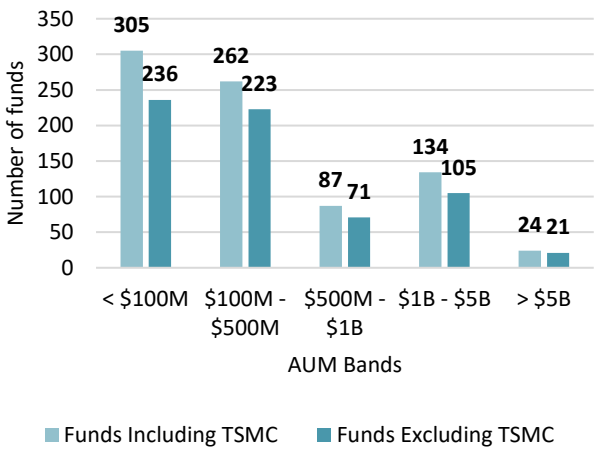
- Top 10 passive funds hold US$27.49 billion in TWSE Issuers, more than three times the US$8.29 billion held by top 10 active funds. The combined investment across both categories totals US$35.78 billion.
- Active funds show a Europe-concentrated domicile profile, while passive funds demonstrate broader geographic distribution with Asia as the leading domicile region.

As of June 11, 2026.
Source: S&P Global Market Intelligence

AUM of all Sustainable Funds investing in Taiwan Issuers

The indicators below categorize sustainable funds by assets under management and assess portfolio concentration with and without TSMC holdings. This provides a view of the capital base and composition of funds with TWSE exposure.

AUM distribution of sustainable funds investing in TWSE Issuers



Key takeaways

- Sustainable funds with TWSE exposure were concentrated in smaller and midsized AUM bands. Funds below US$500 million accounted for approximately 70% of TWSE-exposed funds, both including and excluding TSMC, while funds above US$1 billion represented approximately 19% in both scenarios.
- The AUM distribution remained broadly stable after excluding TSMC, suggesting that exposure to TWSE issuers beyond TSMC is not limited to the largest sustainable funds and does not materially change the overall equity AUM profile of funds with TWSE exposure.

Fund-level concentration of investment in TWSE Issuers

Category	Including TSMC	Excluding TSMC
Total sustainable fund investment in TWSE issuers	US$77.78B	US$44.89B
Top 10 funds' invested amount *(Irrespective of fund orientation as active or passive)*	US$27.65B	US$19.49B
Top 10 share of total investments	35.55%	43.42%
Top fund invested amount	US$12.38B	US$12.38B
Top fund share of total	15.92%	27.58%

The top 10 funds are ranked by total TWSE investment value, and the majority employ passive investment strategies.

Key takeaways

After excluding TSMC, the remaining investment amount is more concentrated among the top 10 funds.

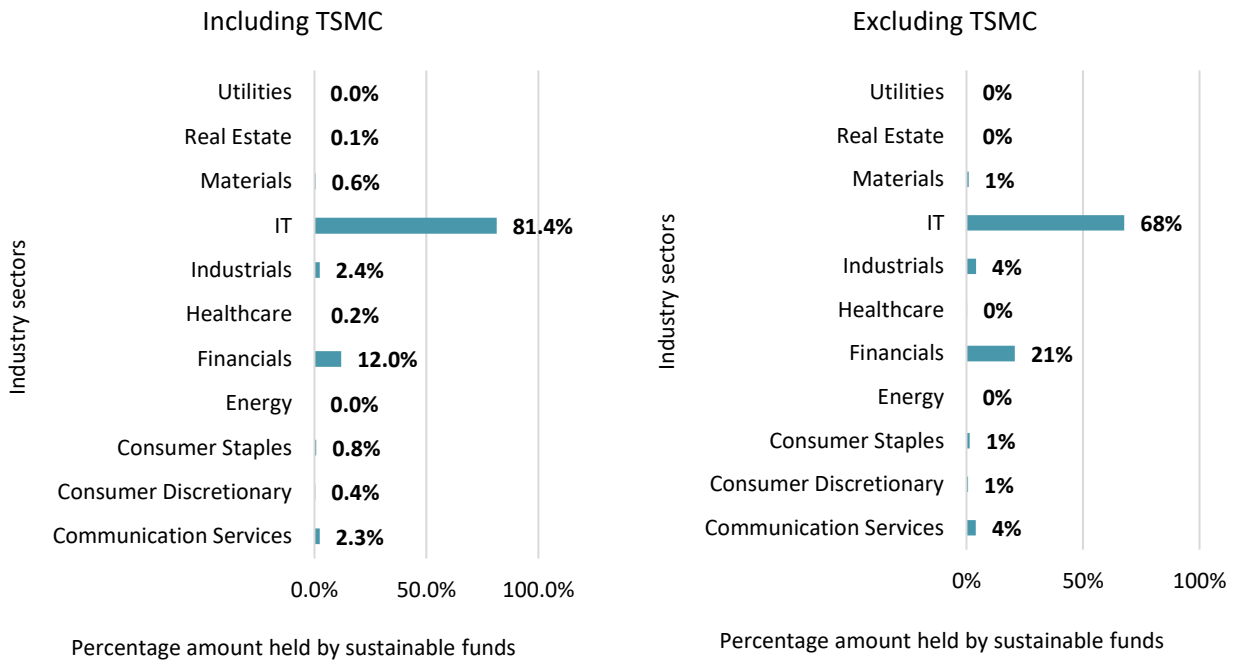
- Total sustainable fund investment in TWSE issuers declined from US$77.78 billion to US$44.89 billion after excluding TSMC, reflecting TSMC's material role in aggregate investment value. The top 10 funds' share increased from 35.55% to 43.42%, indicating that the remaining non-TSMC TWSE investment base is more concentrated among leading funds.
- The largest fund's invested amount remained unchanged at US$12.38 billion, while its share rose from 15.92% to 27.58% owing to the smaller excluding-TSMC investment base.
- The top 10 funds' invested amount declined by approximately 30%, compared with a 42% decline in total investment value, suggesting that the top 10 fund group was less affected by TSMC exclusion than the broader investment base.

As of June 11, 2026.
Source: S&P Global Market Intelligence

Industry profile of Sustainable Funds investing in Taiwan Issuers

The chart below maps sustainable fund-held TWSE issuers to the S&P Global CSA industry classification. It examines which industries are most widely represented among sustainability-focused investors under the CSA methodology, which is used as the basis of analysis in subsequent sections.

Industry-level analysis of sustainable funds investing based on CSA industry classification



Key takeaways

Removing TSMC shifts sector weights but does not diversify Taiwan's sustainable investment.

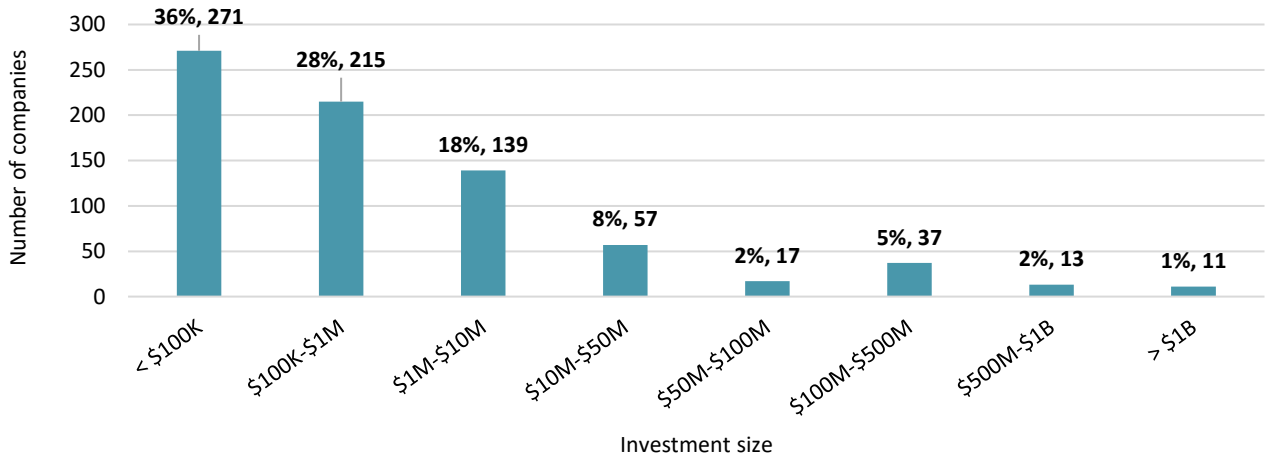
- IT dominates but declines: IT accounts for 81% of sustainable fund investment with TSMC, dropping to 68% without. Financials rises from 12% to 21%, narrowing the IT-to-Financials ratio from 6.8x to 3.2x.
- Concentration persists in two sectors: Combined, IT and Financials represent 93% of investment with TSMC and 89% without, indicating limited diversification beyond these two industries.
- Modest gains for mid-tier sectors: Industrials and Communication Services each rise to 4% excluding TSMC, while most other sectors remain at 1% or below.
- Rebalancing, not diversification: Excluding TSMC shifts relative weights, particularly boosting Financials, but does not materially broaden investment across the wider sector universe.

As of June 11, 2026.
Source: S&P Global Market Intelligence

Typical investment size per TWSE Issuer

This indicator shows the distribution of sustainable fund investment across TWSE companies, revealing whether funds make large concentrated bets or smaller distributed positions.

Distribution of TWSE investee companies by sustainable fund investment size



Investment size summary metrics

Metric	Including TSMC	Excluding TSMC
Average	US$102.3M	US$59.1M
Median	US$289,000	US$286,000

Key takeaways

Investment is highly concentrated: While most held issuers receive less than US$1 million in aggregate sustainable fund capital, a small number of large positions account for the majority of total investment value.

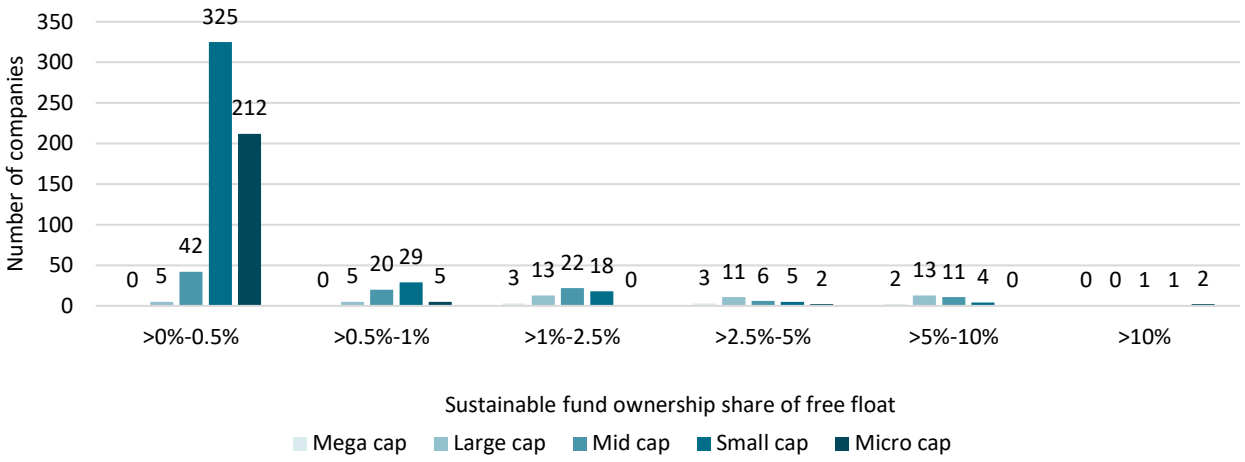
- Most holdings are small: Of the 760 held companies, 486 (64%) have aggregate sustainable fund investment below US$1 million, with 36% (271 companies) receiving less than US$100,000. Only 8% (61 companies) exceed US$100 million in aggregate investment.
- Highly skewed distribution: The average investment per company is US$102.3 million, but the median is just US$289,000 - a 350x difference indicating that a small number of large positions dominate the total investment value.
- TSMC drives the skew: Excluding TSMC reduces the average investment by 42% (from US$102.3 million to US$59.1 million) while the median remains virtually unchanged (US$289,000 to US$286,000), confirming that concentration occurs at the top of the distribution while typical position sizes stay small.

As of June 11, 2026.
Source: S&P Global Market Intelligence

Free float ownership by Sustainable Funds

This indicator measures the aggregate percentage of each TWSE company's free float held by sustainable funds, revealing ownership concentration patterns across different market-cap segments.

Issuer-level aggregated ownership: Aggregate company-level holdings as a proportion of free float



Market-Cap Segment	Average % Free Float Held
Mega Cap	3.90%
Large Cap	3.50%
Midcap	1.70%
Small Cap	0.40%
Micro Cap	0.30%

Key takeaways

Sustainable fund ownership concentrates in larger companies: While 77% of held issuers are owned at less than 0.5% of free float, predominantly small and micro-cap companies, higher ownership levels cluster among mega, large and midcap issuers.

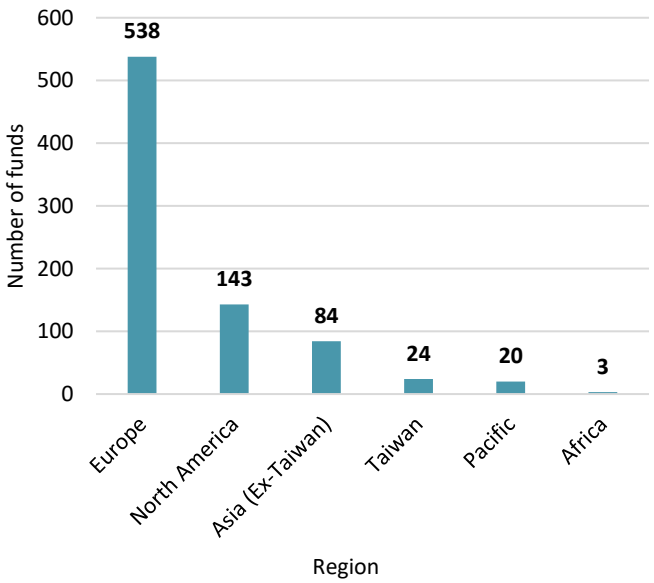
- Low ownership dominates: Of 760 held companies (77%), 584 have sustainable fund ownership below 0.5% of free float, with small- and micro-cap issuers accounting for 537 of these 584 companies (92%).
- Market cap drives ownership depth: Mega- and large-cap companies average 3.9% and 3.5% sustainable fund ownership, respectively, compared with 0.4% for small-caps and 0.3% for micro-caps. Among the 117 companies held above 1% of free float, 85 (73%) are mega-, large- or midcap issuers.
- Concentrated high ownership is rare: Only 30 companies are between 5% to 10% of sustainable fund ownership (2 Mega cap, 13 large-cap, 11 midcap, 4 small cap), and just four companies exceed 10%, indicating that substantial ownership positions remain issuer-specific rather than systematic.

As of June 11, 2026.
Source: S&P Global Market Intelligence

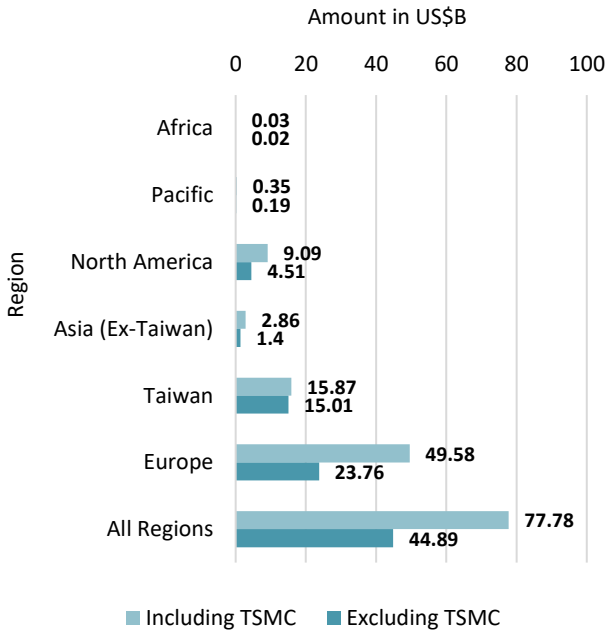
Fund Domicile Analysis

This section examines the geographic distribution of sustainable funds investing in TWSE equities, comparing fund count with investment value to reveal regional capital intensity patterns.

Fund count by domicile



Amount of investment value by domicile



Key takeaways

Europe leads with 538 funds (66%) and US$49.58 billion in TWSE investment, but Taiwan's investment share rises from 20% to 33% when TSMC is excluded, demonstrating higher capital intensity relative to its 24-fund base.

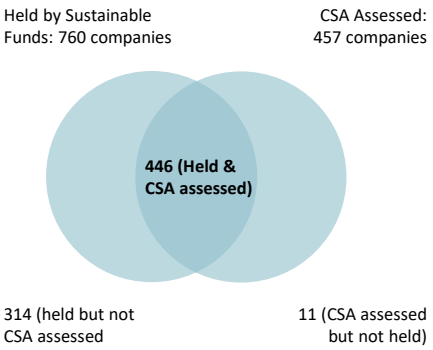
- Europe leads, but Asia including Taiwan concentrates capital: Europe's 538 funds hold US$49.58 billion in TWSE equities (US$23.76 billion excluding TSMC), Taiwan, with 24 funds, hold US$15.87 billion (US$15.01 billion excluding TSMC), demonstrating Taiwan's higher investment per fund. By contrast, Asia (excluding Taiwan) has 84 funds holding US$2.86 billion (US$1.40 billion excluding TSMC). North America's 143 funds hold just US$9.09 billion (US$4.51 billion excluding TSMC), showing that fund count does not determine investment scale.
- TSMC exclusion shifts regional balance: Removing TSMC reduces Europe's investment by 52% and North America's by 50%, but Taiwan's by only 5%. This narrows Europe's share from 64% to 53% while boosting Taiwan's from 20% to 33%, revealing broader exposure across TWSE issuers beyond Taiwan's largest company. Asia (excluding Taiwan) also shows a smaller absolute allocation and remains less concentrated in value terms than both Europe and Taiwan.

As of June 11, 2026.
Source: S&P Global Market Intelligence

CSA 2025 Assessment Status of TWSE Issuers

CSA coverage breakdown and CSA score performance for TWSE Issuers

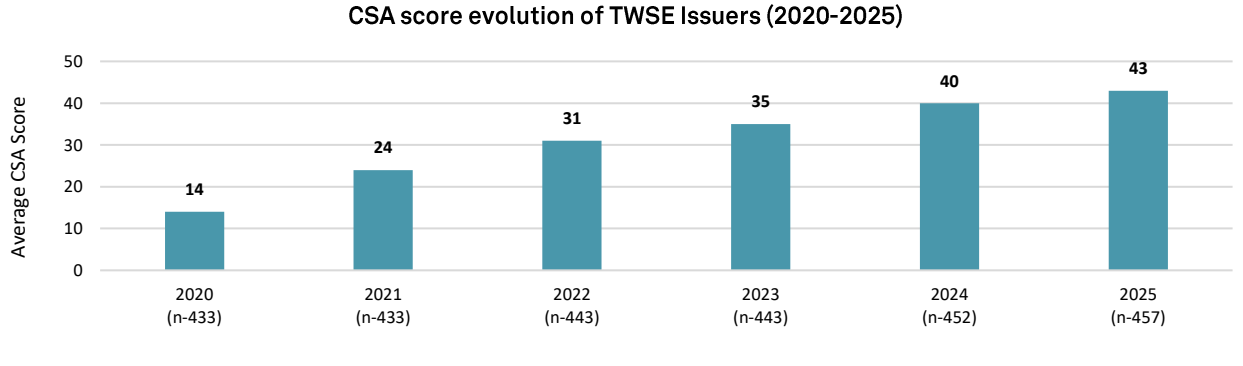
The breakdown identifies TWSE issuers assessed under the 2025 S&P Global CSA methodology, distinguishing between survey respondents and companies assessed from publicly reported information. The CSA-assessed issuers form the primary universe for sustainability performance analysis in Section 3.



Issuer breakdown by assessment type: Public assessment vs Survey respondent

Assessment Type	Held by Sustainable Funds	Total CSA-Assessed Companies	% Held by Sustainable Funds
Public Assessment	310	319	97%
Survey Respondent	136	138	99%
Total CSA-Assessed	446	457	98%

CSA-assessed companies include Public Assessments and CSA Survey Respondents.
"Held" refers to TWSE-listed companies held by at least one sustainable fund.



Key takeaways

CSA coverage is substantially higher among sustainable fund-held companies: 59% (446 of 760) have CSA scores compared with 43% (457 of 1,057) across the full TWSE universe, with nearly all CSA-assessed companies (98%) held by at least one sustainable fund.

- Sustainable funds concentrate in CSA-covered companies: Of 760 fund-held TWSE companies (59%), 446 have CSA scores, significantly exceeding the 43% coverage rate across the full 1,057-company TWSE universe. This indicates that, among companies held by sustainable funds, a higher proportion have CSA score data.
- CSA-assessed companies attract sustainable fund investment: Of the 457 CSA-assessed TWSE companies, 98% are held by at least one sustainable fund (446 companies), including 97% of publicly assessed companies (310 of 319) and 99% of survey respondents (136 of 138).
- Coverage gaps concentrate among non-held and smaller companies: Of the 297 companies not held by sustainable funds, 96% (286 companies) lack a CSA assessment. Among the 314 fund-held companies without CSA scores (41% of held universe), the gap concentrates primarily in small- and micro-cap segments.
- Average CSA total scores for TWSE issuers improved consistently from 2020 to 2025. The six-year trend shows year-over-year increases in aggregate scores across the assessed companies.

CSA data as of May 31, 2026 and Fund holding data as of June 11, 2026
CSA stands for S&P Global's Corporate Sustainability Assessment Methodology, which is an in-depth evaluation of corporate sustainability performance. For more details, please visit Corporate Sustainability Assessment (CSA) | S&P Global.
Source: S&P Global Market Intelligence

Identifying the Sustainability Priorities of Global Sustainable Investors in TWSE-listed Issuers

To identify the sustainability priorities most commonly emphasized by global sustainable investors in TWSE-listed companies, we analyzed public documents from top-holding active and passive sustainable funds using S&P Global Market Intelligence data and proprietary analytical tools. Sources included fund prospectuses, reports, stewardship disclosures and, for passive strategies, index methodology documentation.

Six sustainability themes appear most frequently, ranked by topic occurrence across top 20 active and passive sustainable fund documents:

1
Climate action
Emissions reduction, climate risk management, transition planning

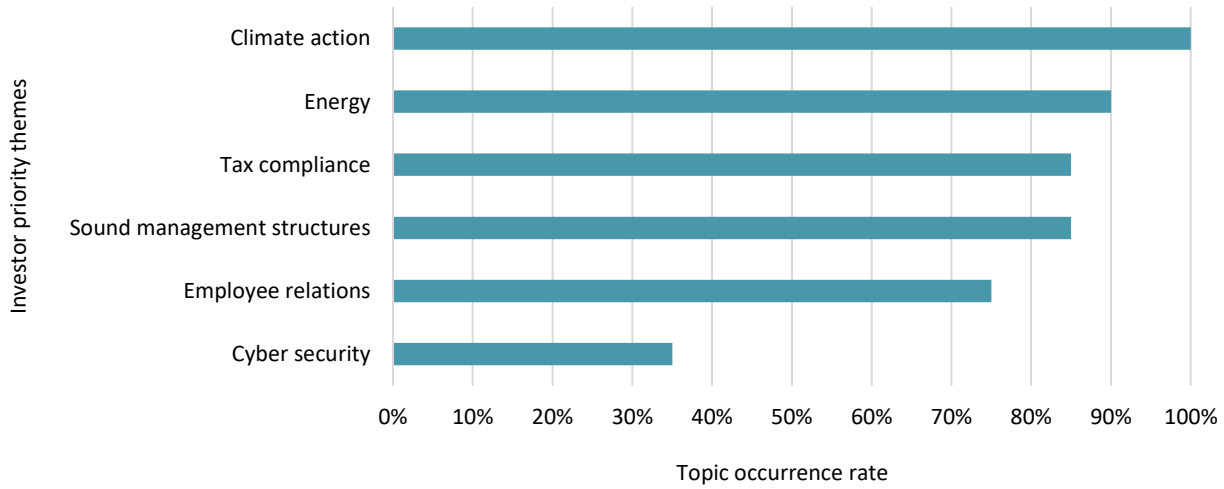
2
Energy
Renewable energy adoption, energy efficiency, energy transition

3
Tax compliance
Tax transparency, responsible tax practices, governance

4
Sound management structures
Board effectiveness, governance quality, oversight

5
Employee relations
Labor practices, workforce engagement, human capital

6
Cyber security
Data protection, cybersecurity risk management, digital resilience

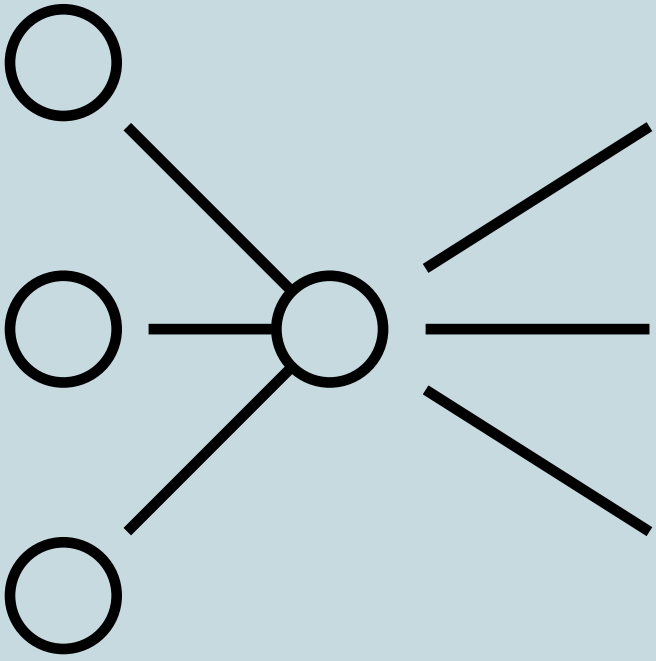


Bridging investor priorities to performance analysis: Section 2 maps these investor-reported themes to corresponding topics within the S&P Global CSA 2025 framework. This mapping enables Section 3's company-level benchmarking, comparing TWSE issuers' CSA performance against Emerging Markets and Global Best-in-Class peers from Dow Jones Best-in-Class Indices (DJBIC). While conceptually aligned, investor priorities and CSA topics may differ in scope and terminology due to methodological variations.

As of June 11, 2026.
Source: S&P Global Market Intelligence

Section 2

Mapping of Sustainable Funds' top ESG Priorities to S&P Global Corporate Sustainability Assessment (CSA)



Mapping sustainable funds' top ESG priorities to S&P Global CSA

Highlighting the ESG factors that can play a critical role in investors' decision-making processes

	Investor priorities	Topics related to the priority	CSA focus
Governance	Sound management structures	**Corporate governance**	▪ Board independence ▪ Board diversity policy ▪ Board gender diversity ▪ CEO compensation - Long-term performance alignment
Governance	Tax compliance	**Tax strategy**	▪ Tax strategy and governance ▪ Tax reporting
Governance	Cyber security	**Information security**	▪ Information security policy ▪ Information security management programs ▪ Information security governance
Environmental	Climate action	**Climate strategy**	▪ Scope 1 GHG emissions ▪ Scope 2 GHG emissions ▪ Scope 3 GHG emissions ▪ Physical climate risk adaptation ▪ Net-zero commitment
Environmental	Energy	**Energy**	▪ Energy management programs ▪ Energy consumption
Social	Employee relations	**Labor practices**	▪ Labor practices commitment ▪ Labor practices programs ▪ Gender pay indicators
Social		**Human capital management**	▪ Employee development programs ▪ Employee support programs ▪ Trend of employee wellbeing

This study maps six key ESG issues identified in publicly available sustainability fund documents to seven CSA assessment criteria. It then analyzes the management practices, disclosures, and assessment performance of Taiwan-listed companies and compares them with constituent companies of the Dow Jones Best-in-Class World Index and the Dow Jones Best-in-Class Emerging Markets Index.

The following sections build on the investor priority mapping by examining each theme in more detail. For each investor priority, the analysis explains why the topic matters from a risk-return perspective and how it is supported by a materiality approach that considers both enterprise value creation and broader external impacts. Each CSA topic is linked to risks and opportunities relevant to enterprise value creation, and this connection is reflected in the introductory pages used in Section 3 to explain both the materiality of the topic and the CSA approach. This enables investors to evaluate how companies address the sustainability issues included in their asset allocation and company assessment frameworks, and to benchmark corporate performance on relevant ESG topics. This approach also supports companies' investor relations teams in shaping their investors' outreach on ESG topics.

Source: CSA_Measuring_Sustainability_Performance.pdf

Sound management structures

Captured in the CSA through: Corporate Governance

Why governance matters

Corporate governance is the system through which companies are directed, controlled and held accountable. Built on four pillars — accountability, transparency, fairness and responsibility — it creates the framework for managing companies responsibly and ethically for the long-term benefit of shareholders and all stakeholders.

Strong governance affects the cost of capital, protects investors, supports long-term value creation and underpins capital market integrity. When investors describe a company as having sound management, they mean the board is competent, internal controls are effective, financial and nonfinancial information is reliable, and minority shareholder rights are respected.

Why Taiwan investors care

Governance serves as the foundation that makes environmental and social commitments credible. Sustainable investors, including ESG-integrated funds, SFDR Article 8 and Article 9 funds, and stewardship-oriented asset owners, rely on sound governance to trust ESG data used in financial modeling, asset allocation and investment decisions.

For Taiwan, governance takes on heightened importance. The market's export-oriented economy, strong presence in globally integrated industries, substantial foreign investor participation and historically concentrated ownership structures amplify the need for independent oversight, minority shareholder protection and transparent compensation practices. Regulatory developments reinforce these expectations. Taiwan's FSC and the TWSE have strengthened governance through Corporate Governance 3.0, the corporate governance evaluation system, enhanced annual report disclosures, mandatory compensation committees and board gender diversity requirements. Global frameworks - including the G20/OECD Principles of Corporate Governance, stewardship codes, ISSB disclosure standards and the EU Sustainable Finance Disclosure Regulation — have elevated investor expectations around board diversity, transparent policies and performance-linked executive pay.

How CSA captures sound management

The Governance & Economic Dimension of CSA includes the Corporate Governance criterion, which evaluates whether companies maintain independent board structures, support board diversity, and consider tenure and industry experience. The methodology also assesses integration of sustainability principles into performance-based executive compensation through appropriate financial and nonfinancial metrics.

CSA provides two distinct insights:

- **Criterion-level average scores** aggregate performance across all components into a single 0–100 score, enabling quick comparison of overall governance strength.
- **Datapoint-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement practices, allowing investors to benchmark transparency and identify leaders

Together, these metrics help investors understand where Taiwan companies stand on governance practices that matter most to capital markets.

SFDR = Sustainable Finance Disclosure Regulation; ISSB = International Sustainability Standards Board.
Sources: G20/OECD Principles of Corporate Governance 2023 (EN); Taiwan Exports YoY; TWSE - 2026/07/23 Trading Value of Foreign & Other Investors; Why Taiwan's family businesses still rule and why it matters; Corporate Governance 3.0 -Sustainable Development Roadmap; Corporate Governance Q & A - Remuneration Committee; FSC – Press release.

Tax compliance

Captured in the CSA through: Tax strategy

Why Tax strategy matters

Corporate tax strategy has evolved from a purely financial consideration to a governance and transparency issue. Multinational corporations historically used complex cross-border structures to allocate profits to low-tax jurisdictions, driven by legal interpretation, entity structuring and jurisdictional tax differences. Today, governments, investors and stakeholders view a company's tax posture as an indicator of governance quality, ethical conduct and long-term value creation. The stakes are significant. The Organisation for Economic Co-operation and Development estimates that base erosion and profit shifting practices reduce global corporate income tax revenues by US$100 billion-US$240 billion annually, equivalent to 4%-10% of worldwide corporate income tax revenues.
Taiwan's tax environment reflects this global shift. The implementation of Controlled Foreign Company rules from Jan. 1, 2023, the anti-avoidance framework under the Income Tax Act, an expanding double taxation agreement network and deep integration into global value chains mean Taiwanese firms operate within a tax environment shaped by both domestic anti-avoidance requirements and evolving international standards.

Why Taiwan investors care

Investors now assess tax strategy beyond effective tax rates, evaluating governance quality, transparency and the durability of after-tax earnings and cash flows. Global developments drive this broader perspective: the OECD/G20 Inclusive Framework's Pillar Two minimum tax rules, GRI 207, EU public country-by-country reporting and the Corporate Sustainability Reporting Directive with ESRS G1 emphasize transparent tax governance, economic substance and consistency between profits, people, assets and tax contributions across jurisdictions.

For TWSE issuers, these expectations carry weight. Taiwan's concentration in internationally active sectors, such as semiconductors, electronics and advanced manufacturing, means cross-border structures, supply chain complexity and operations spanning mainland China, Southeast Asia, the US and Europe heighten attention to transfer pricing, permanent establishment exposure, treaty interpretation and alignment between value creation and taxes paid. Taiwan's domestic tax framework reinforces these considerations. The Income Tax Act establishes a 20% statutory corporate income tax rate, complemented by the alternative minimum tax regime and incentives under the Statute for Industrial Innovation, which provides income tax credits for innovation-related research and development expenses. While these incentives may lower effective tax rates, they increase the importance of governance and transparency around tax strategy. Tax strategy serves as an indicator of governance, risk management and long-term resilience for Taiwanese companies in global capital markets.

How CSA captures tax compliance

The Governance and Economic Dimension of CSA includes the Tax Strategy criterion, which evaluates whether a company's tax policy or strategy is publicly available and addresses sensitive or high-risk tax issues clearly and sustainably. The criterion also assesses transparency of business as well as financial and tax information for each tax jurisdiction.

CSA provides two distinct insights:

- **Criterion-level average scores** aggregate performance across all components into a single 0-100 score, enabling comparison of overall tax transparency and governance.
- **Data point-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement practices under the tax strategy criterion, allowing investors to benchmark disclosure practices and identify transparency leaders.

Together, these metrics help investors evaluate how Taiwan companies approach tax governance and transparency relative to global expectations.

ESRS = European Sustainability Reporting Standards.
Sources: OECD; Laws & Regulations Database of The Republic of China (Taiwan); Ministry of Finance, R.O.C.; Deloitte – International Tax Taiwan (China) Highlights 2026; GRI; European Commission

Cyber security

Captured in the CSA through: Information security

Why cyber security matters

Cyber security protects critical data, systems and customer information in an increasingly digital world, strengthening trust, resilience and business continuity. Strong cyber security helps companies improve governance, reduce operational risks and create long-term value for stakeholders and capital markets.
As digital dependence grows, organizations face cyber incidents from malicious attacks, technical failures and human error. Impacts range from system downtime and theft of sensitive data to regulatory fines, litigation and third-party operational disruptions. The average cost of a data breach reached US$4.4 million in 2025, with potentially higher impacts for large corporations.
For companies listed on the TWSE, cyber security takes on heightened importance owing to Taiwan's industrial specialization and geopolitical threat environment. In 2025, Taiwan's critical infrastructure endured an average of 2.63 million cyber intrusion attempts daily, marking a 6% increase from the previous year. This environment directly impacts corporations, making cyber security both a company-level business risk and an issue with broader economic and national security relevance for TWSE-listed companies.

Why Taiwan investors care

Information and cyber security assessment has evolved beyond an operational IT issue to encompass governance quality, operational resilience and risk management. Global frameworks shape investor expectations: risk-based control frameworks, continuous monitoring, supply chain oversight, security-by-design and timely incident disclosure, as reflected in standards such as the NIST Cybersecurity Framework and ISO/IEC 27001.

For TWSE issuers, these considerations are relevant. Taiwan's highly digital and export-oriented economy, central role in global technology supply chains and concentration of listed companies in technology, electronics, semiconductors and manufacturing mean cyber incidents can lead to operational disruption, data theft, third-party interruptions, reputational damage and reduced confidence among customers and counterparties. Taiwan's regulatory framework reinforces these expectations. The Cyber Security Management Act, sector-specific cyber security requirements, critical infrastructure oversight, incident reporting obligations, outsourcing controls and data protection requirements under the Personal Data Protection Act establish comprehensive governance standards. Together, regulatory requirements and investor expectations position transparency and resilience as core determinants of long-term value for Taiwan companies.

How CSA captures cyber security

The Governance and Economic Dimension of CSA includes the Information Security criterion, which evaluates governance mechanisms by assessing whether companies have assigned responsibilities to the board and executives for overseeing information security issues. The criterion also assesses public reporting on policies or commitments to protect information security and whether relevant programs are established to fulfill those commitments.

CSA provides two distinct insights:

- **Criterion-level average scores** aggregate performance across all components into a single 0-100 score, enabling comparison of overall information security governance.
- **Data point-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement practices under the information security criterion, allowing investors to benchmark disclosure practices and identify governance leaders.

Together, these metrics help investors evaluate how Taiwan companies approach cyber security governance and transparency relative to global expectations.

Sources: S&P Global; DeepStrike - Data Breach Statistics 2025–2026; Laws & Regulations Database of The Republic of China (Taiwan); Chambers and Partners; The NIST Cybersecurity Framework (CSF) 2.0 6; International Organization for Standardization

Climate action

Captured in the CSA through: Climate strategy

Why climate strategy matters

Climate-related metrics reporting has evolved from a voluntary sustainability exercise to an essential input for investor analysis, capital allocation, stewardship, lending decisions and corporate valuation. While climate change affects most industries, the timing and financial impact differ by sector, geography, asset base, supply chain and business model.
Companies are developing strategies to address climate risks, including measuring and disclosing exposures and using scenario analysis to test resilience. Climate-related data and insights have become essential for investment decisions, serving investors, risk managers, corporations and governments. Stakeholder evaluation has grown more sophisticated, focusing on disclosure quality, data verification, emissions reduction targets and adaptation strategies for physical climate risks.

Why Taiwan investors care

Climate strategy has become a significant consideration for investors evaluating risk exposure, business resilience and preparedness for the transition to a lower-carbon economy. Physical risks, including flooding, heat stress, drought and severe weather, can disrupt operations, damage assets and interrupt supply chains. Transition risks may affect costs, capital expenditure requirements, market access and competitiveness as regulatory frameworks and customer expectations evolve.

Global regulatory and reporting developments shape investor expectations around climate disclosure. The EU Sustainable Finance Disclosure Regulation, Corporate Sustainability Reporting Directive and the ISSB's IFRS S2 standard have elevated expectations regarding disclosure of GHG emissions, climate-related risks and opportunities, transition planning and adaptation planning for physical climate risks.

For TWSE issuers, the stakes are high. Many companies operate in highly globalized manufacturing and technology sectors, where climate-related disruptions among suppliers, logistics networks and downstream customers can create operational and commercial risks even when a company's direct emissions are moderate. Taiwan's FSC roadmap for aligning listed companies with IFRS Sustainability Disclosure Standards signals a move toward more structured and internationally comparable climate-related disclosure. Climate strategy serves as an indicator of strategic preparedness and long-term resilience for Taiwan-listed companies.

How CSA captures climate action

The Environmental Dimension of CSA includes the Climate Strategy criterion, which evaluates how companies manage climate-related risks and opportunities through tracking of Scope 1, 2 and 3 emissions, including third-party verification, establishment of plans to adapt to physical climate risks and emission reduction targets.

CSA provides two distinct insights:

- **Criterion-level average scores** aggregate performance across all components into a single 0-100 score, enabling comparison of overall climate strategy performance.
- **Data point-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement practices under the climate strategy criterion, allowing investors to benchmark disclosure practices and identify climate transparency leaders.

Together, these metrics help investors evaluate how Taiwan companies approach climate strategy and disclosure relative to global expectations.

Sources: S&P Global TCFD Report 2025; CSA Methodology Handbook 2026; Commission proposes improvements to SFDR - Finance - European Commission; Corporate sustainability reporting - Finance - European Commission; FR04/2021 Report on Sustainability-related Issuer Disclosures; Press Release-The Financial Supervisory Commission (FSC) releases the roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards-Financial Supervisory Commission

Energy

Captured in the CSA through: Energy

Why energy matters

Energy has become a prominent business consideration as companies operate in an environment shaped by fuel price volatility, electricity demand growth, supply security concerns and the transition toward lower-carbon energy systems. These developments affect operating costs, production continuity, capital planning and competitiveness across sectors, making energy relevant beyond its traditional role as an operational efficiency issue.
Energy-related decisions are becoming more integrated with broader sustainability objectives, as companies face expectations to improve efficiency, manage reliance on conventional energy sources and expand use of renewable electricity. The focus has broadened from whether companies disclose energy consumption to how effectively they manage energy-related risks and opportunities through targets, programs, audits, innovation and verified data.

Why Taiwan investors care

Energy management has become central to understanding how companies manage cost pressures, operational resilience and the transition to a lower-carbon and more electricity-intensive economy. Energy markets remain exposed to volatility in fuel supply, electricity demand and transition-related capital needs, all of which affect costs, margins and long-term competitiveness.

For TWSE issuers, these considerations carry weight. Taiwan imported more than 94% from its energy demand of oil, natural gas and coal in 2024, while natural gas and coal accounted for roughly 43% and 40% of power generation, respectively. This underscores the market's dependence on imported fuels and the pressures associated with transitioning the electricity system. The issue is especially relevant for Taiwan's technology sectors, where high electricity intensity must align with customer and supply chain expectations around renewable electricity sourcing. This is occurring alongside broader growth in AI-related power demand. S&P Global Market Intelligence projects that hyperscaler and leased data center power demand will grow by 137% between 2024 and 2029, adding pressure to power systems in Asia-Pacific.

Taiwan's policy targets reinforce these dynamics: 20% renewable electricity by 2025 and 30% by 2030. The phased adoption of IFRS Sustainability Disclosure Standards for listed companies further supports disclosure expectations. Energy management serves as an indicator of resilience, transition readiness and long-term business competitiveness for TWSE issuers.

How CSA captures energy

The Environmental Dimension of CSA includes the Energy criterion, which evaluates how companies manage energy consumption, improve energy efficiency, increase the use of renewable energy and track and report energy performance to support long-term sustainability goals.

CSA provides two distinct insights:

- **Criterion-level average scores** aggregate performance across all components into a single 0-100 score, enabling comparison of overall energy management performance.
- **Data point-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement practices under the energy criterion, allowing investors to benchmark disclosure practices and identify energy management leaders.

Together, these metrics help investors evaluate how Taiwan companies approach energy management and disclosure relative to global expectations.

Sources: CSA Methodology Handbook 2026; Taiwan Analysis Brief; Can AI become net positive for net-zero? | S&P Global; Ministry of Economic Affairs – Taiwan; TWSE – Corporate Governance Center

Employee relations

Captured in the CSA through: Labor practices and human capital management

Why employee relations matter

Employee relations refers to how companies manage the quality and fairness of the employment relationship through policies, programs and practices affecting wages, working hours, overtime, equal remuneration, leave entitlements, employee development and worker support. Once considered primarily an internal human resources matter, employee relations are now associated with workforce stability, productivity, retention, innovation, competitive advantage and business growth.

This is relevant in a global context where labor conditions, fair pay, working time and access to worker protections face greater stakeholder scrutiny. The International Labour Organization notes that millions of workers worldwide continue to experience excessive working hours, inadequate wages and insufficient social protection, underscoring the importance of robust labor management practices and transparent disclosure.

Why Taiwan investors care

Employee relations have become central to understanding how companies manage workforce-related risks, support operational continuity and generate long-term business performance. For investors, weak employee relations can affect productivity, retention, absenteeism, workforce stability and legal or reputational exposure, all of which may influence operating performance and resilience.

Research indicates that low employee engagement costs the global economy US$10 trillion, or 9% of global GDP. The International Labour Organization has highlighted that psychosocial risks at work can impact mental health, productivity, absenteeism and staff turnover. Globally, investor attention to employee relations is reinforced by evolving labor, human capital and sustainability reporting expectations, including International Labour Organization principles and Global Reporting Initiative labor-related disclosure developments.

For TWSE issuers, employee relations are particularly important given Taiwan's concentration in export-oriented sectors, where business continuity and competitiveness depend on a stable, skilled workforce and consistent labor practices. This is critical as companies compete for scarce AI, digital and cross-disciplinary talent, while market trends, particularly in the technology sector, push employers toward more strategic human capital management, stronger foreign-talent integration, diversity and inclusion practices, and workforce upskilling.

Recent data shows that hiring pressure in Taiwan remains high, with 71% of employers reporting difficulty filling critical positions. In this environment, retaining existing employees is as important as attracting new talent, as strong employee relations help reduce turnover, preserve institutional knowledge, sustain productivity and protect execution capacity during periods of transformation and overseas expansion.

How CSA captures employee relations

The Social Dimension of CSA 2025 includes two criteria directly relevant to employee relations: labor practices and human capital management.

The labor practices criterion evaluates public disclosure of commitments and programs to protect labor rights and pay practices. The human capital management criterion assesses companies on employee development programs aimed at enhancing skills, as well as policies and initiatives that promote employee health and well-being.

CSA provides two distinct insights:

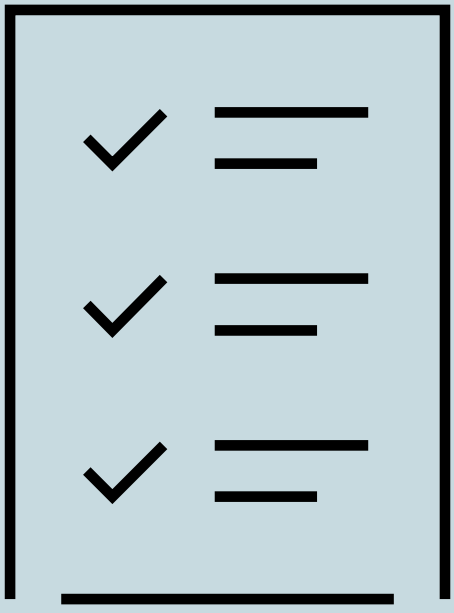
- **Criterion-level average scores** aggregate performance across all components into a single 0-100 score, enabling comparison of overall labor practices and human capital management performance.
- **Data point-level disclosure rates** reveal the proportion of assessed companies that publicly report specific information or implement measures under the labor practices and human capital management criteria, allowing investors to benchmark disclosure practices and identify workforce management leaders.

Together, these metrics help investors evaluate how Taiwan companies approach employee relations and disclosure relative to global expectations.

Sources: CSA Methodology Handbook 2026; GRI - Blueprint to advance transparency and accountability for labor impacts; GALLUP - State of the Global Workplace 2026; ILO - Tackling psychosocial risks at work; SIA - Taiwan firms struggle to hire as demand for talent surges

Section 3

CSA based Performance Analysis and Benchmarking



Corporate governance

Rationale

Corporate governance systems are designed to ensure that a company is managed in the interests of shareholders (including minority shareholders).

An appropriately constituted and effective board of directors serves as the cornerstone of sound corporate governance. The board is tasked with overseeing managerial performance, ensuring alignment with the corporation's established objectives, adhering to relevant laws and regulations, and safeguarding the rights and interests of shareholders.

CSA approach

- CSA frameworks assess the following aspects through this criterion:
  - Checks, balances and appropriate governance practices that enable the board of directors to have appropriate control and oversight responsibilities and accountability mechanisms.
  - Management incentives should be structured to ensure alignment between management's interests and those of shareholders.
  - Full transparency: All the information and practices related to corporate governance should be available in the public domain.

Aspects analyzed

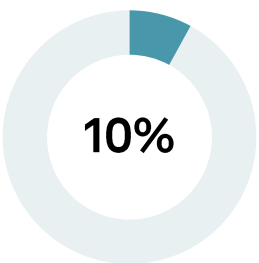
- Focus of the performance analysis and benchmarking included in the paper:
  - Board independence: Public disclosure of an independence statement for the board of directors
  - Board composition: Diversity policy, gender diversity
  - CEO compensation: Success metrics, long-term performance alignment

Understanding the materiality of the topic

Corporate governance refers to the system of rules, structures and processes used to direct a company. This is done in the interest of the corporation and its stakeholders, including its owners or shareholders. It implies particular duties, responsibilities and capacities of board directors and executive management. Good corporate governance practices promote accountability, responsibility and transparency. It encompasses systems of checks and balances, incentives for aligned behavior, policies for board composition and effectiveness.

Impact on enterprise value creation: Risk exposure, growth, profitability

CSA 2025 criterion average weight across the applicable CSA industries (62/62)



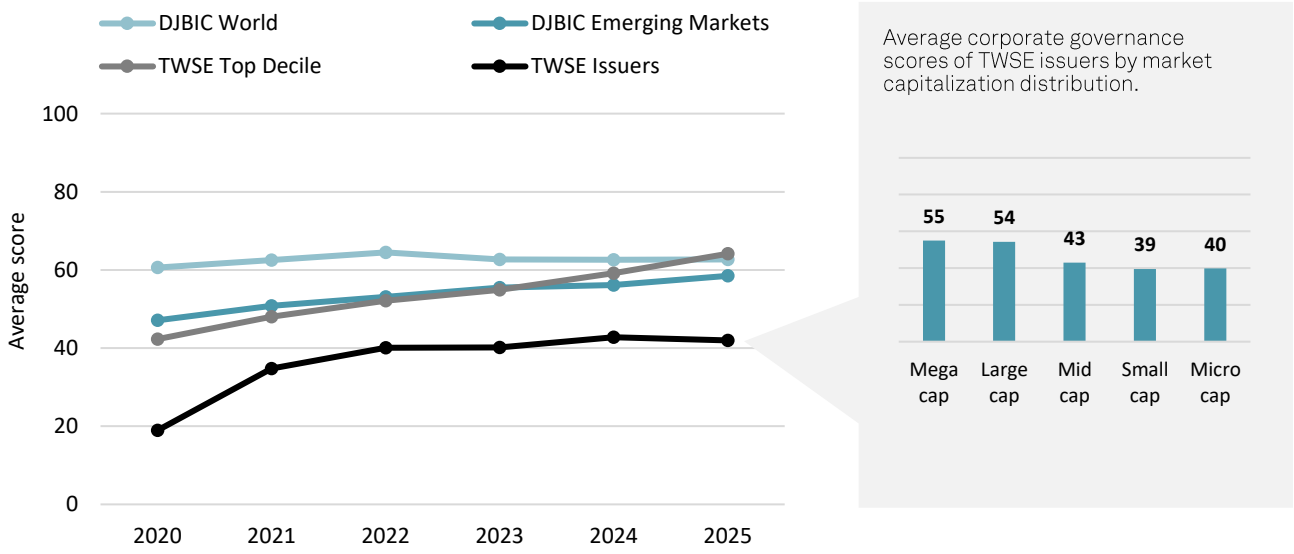
Sources: CSA Methodology Handbook; CSA Materiality Core Subjects

Corporate governance

Corporate governance CSA Score: Comparative performance review

The chart below compares the corporate governance criterion scores of Taiwan-listed companies assessed in each CSA year from 2020 to 2025, using constituent companies of the Dow Jones Best-in-Class World Index and the Dow Jones Best-in-Class Emerging Markets Index as benchmarks, and shows the average scores and trends for each group. Please refer to the rationale and CSA approach of this criterion on the previous page to understand the elements that drive the corporate governance score in CSA 2025. In particular, the criterion evaluates board structure, independence and composition; board diversity, tenure and industry experience; board accountability and alignment with shareholders' long-term interests (including transparency and structure of executive remuneration and management share ownership); ownership structure (including government and family representation); CEO-to-employee pay ratio; and ESG governance oversight.

6-year comparison of corporate governance average scores for TWSE issuers against global and emerging market benchmarks



Average corporate governance scores of TWSE issuers by market capitalization distribution.

What the data shows Steady progress of TWSE companies in corporate governance CSA score, but a gap remains with DJBIC Benchmarks.

Key observations

- TWSE companies have made substantial progress in corporate governance. Average scores rose from 19 in four comparator year 2020 to 42 in 2025, reflecting improved governance practices and disclosure quality.
- However, a gap remains. TWSE scores trail DJBIC World by 21 points (63 vs. 42) and DJBIC Emerging Markets by 16 points (58 vs. 42) in 2025.
- TWSE Top Decile companies scored 64 points in 2025, slightly exceeding DJBIC World (63 points) and surpassing DJBIC Emerging Markets by 6 points; a notable improvement from their 2020 baseline.
- The slight decline in TWSE Issuers' average score from 43 to 42 between four comparator years 2024 and 2025 after the score increased in the earlier period. Areas where TWSE Issuers continue to trail global benchmarks include board composition disclosure (diversity, tenure, industry experience), board accountability, executive remuneration transparency, ownership structures, and ESG governance oversight.

Data universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The score analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Corporate governance

Board independence

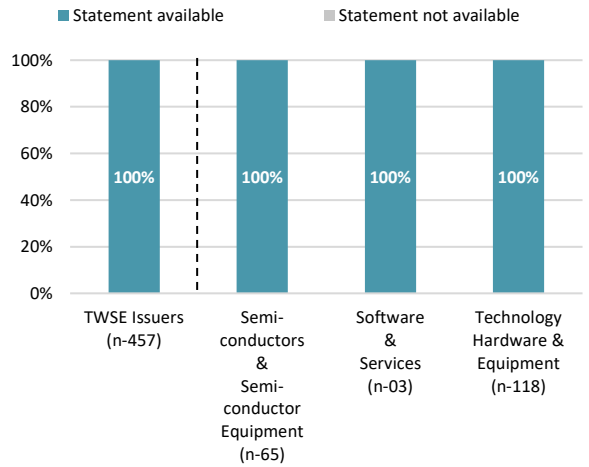
Rationale

An independent director is a member of the company's board of directors who is brought in from outside the organization. Independent directors can bring new insights and balance that improve the company's performance through their objective view of its health and operations. At times, they can also bring specific expertise from their experience and provide additional accountability.

Focus

Extent to which companies provide explicit statements on their definitions of board independence and the requirements they apply to independent directors.

Percentage of TWSE issuers with publicly available independence statement for the board of directors in the previous four comparator year – CSA 2025

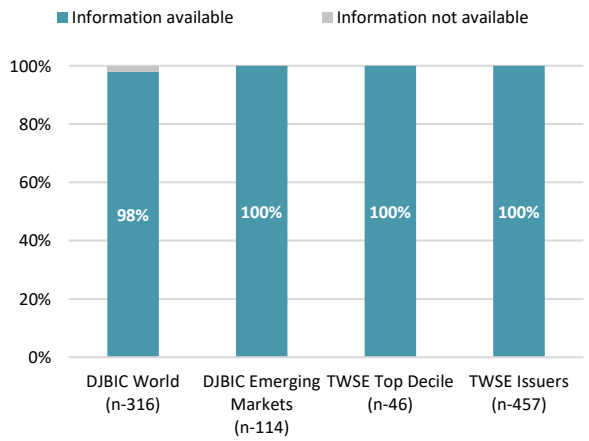


CSA expected practice	Public reporting on independence requirements, corporate governance code or a stock exchange rule that the company complies with.

Key observations

- All TWSE companies published board independence statements in four comparator year 2025. This includes complete coverage across major technology sectors: semiconductors and semiconductor equipment, software and services, and technology hardware and equipment.
- **CSA expectation:** Leading practice involves transparent disclosure of board independence criteria, whether based on regulatory requirements (corporate governance codes, stock exchange rules) or company-defined standards that demonstrate meaningful independence from management.
- **Stakeholder expectations**: Taiwan's corporate governance framework requires disclosure on independent directors, board structure and governance practices.

Percentage of issuers with publicly disclosed board independence statements in the previous four comparator year - CSA 2025, TWSE Issuers vs. DJBIC Benchmarks



CSA expected practice	Public reporting on independence requirements, corporate governance code or a stock exchange rule that the company complies with.

Key observations

- All TWSE companies (100%) published board independence statements in the four comparator year 2025, matching DJBIC Emerging Markets (100%) and exceeding DJBIC World (approximately 98%).
- Among the assessed Taiwan-listed companies included in this analysis, the disclosure rate for information related to board independence is 100%; however, the disclosure rate does not necessarily reflect the board's substantive level of independence
- **CSA expectation:** Leading practice involves transparent disclosure of board independence criteria, whether based on regulatory requirements (corporate governance codes, stock exchange rules) or company-defined standards that demonstrate meaningful independence from management.
- **Stakeholder Expectations:** Stock exchange requirements and national governance codes in these markets require companies to disclose board independence definitions and criteria publicly.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. The number of companies considered for the above analysis in each group is indicated by "n". For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; CSA Methodology Handbook; Taiwan Stock Exchange - Rules & Regulations Directory.

Corporate governance

Board diversity policy

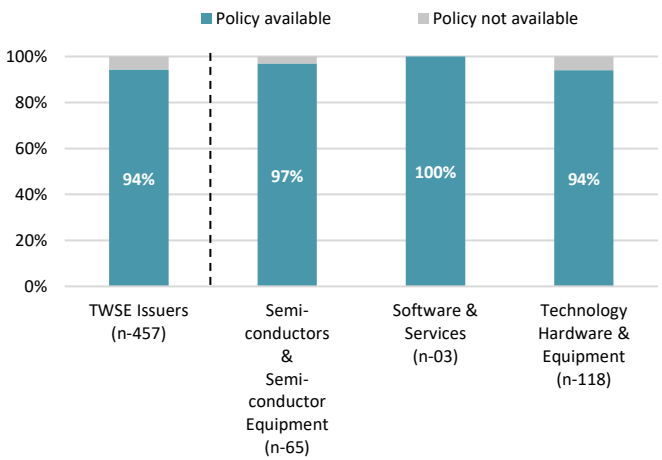
Rationale

Diversity adds value to the board through differences in perspectives and experience. Diverse boards will be able to assess problems from a broader point of view and are more likely to consider the best interests of all stakeholders. Furthermore, studies have shown a positive correlation between gender diversity on boards and companies' financial performance.

Focus

Policy on board diversity that clearly requires diversity factors such as gender, race, ethnicity, country of origin, nationality or cultural background in the board nomination process.

Percentage of TWSE issuers with publicly disclosed formal board diversity policies - CSA 2025



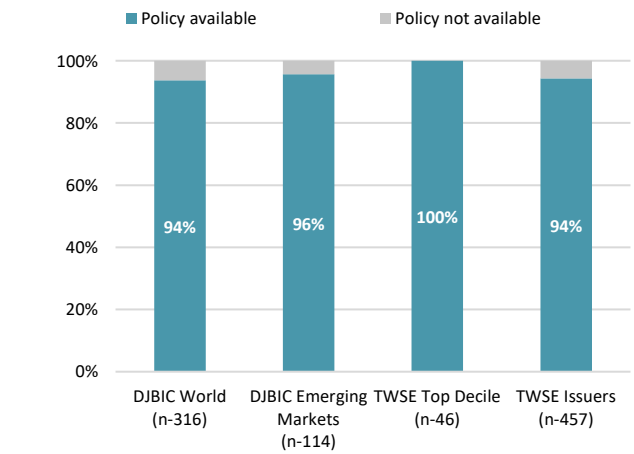
CSA expected practice

Public reporting on board nomination policy, covering diversity factors such as gender, race or ethnicity, nationality, country of origin, or cultural background.

Key observations

- Formal board diversity policies are publicly disclosed by 94% of TWSE issuers assessed.
- Disclosure rates are consistent across TWSE's technology sectors, including semiconductors and semiconductor equipment (97%), software and services (100%), and technology hardware and equipment (94%). This indicates that board diversity governance practices are established across Taiwan's listed market.
- **CSA expectation:** Leading practice involves board nomination policies that explicitly address multiple diversity criteria - such as gender, professional experience, ethnicity and geographic background - demonstrating commitment to diverse perspectives that enhance board effectiveness and stakeholder representation.

Percentage of issuers with publicly disclosed formal board diversity policies - CSA 2025, TWSE Issuers vs DJBIC Benchmarks



CSA expected practice

Public reporting on board nomination policy, covering diversity factors such as gender, race or ethnicity, nationality, country of origin, or cultural background.

Key observations

- The disclosure rate for board diversity policies among assessed Taiwan-listed companies is 94%, comparable to the global comparator group; whether these policies are reflected in board composition should still be assessed together with gender and other diversity indicators.
- The alignment with global benchmarks indicates that formal board diversity policies are an established governance practice among TWSE issuers.
- Board diversity policy adoption among TWSE issuers reflects local governance frameworks, including Financial Supervisory Commission (FSC) guidelines and global regulations, which emphasize board composition, diversity and transparent nomination practices as governance indicators.
- **CSA expectation:** Leading practice involves board nomination policies that explicitly address multiple diversity criteria - such as gender, professional experience, ethnicity and geographic background - demonstrating commitment to diverse perspectives that enhance board effectiveness and stakeholder representation.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; FSC Press release; OECD Corporate Governance Factbook 2025

Corporate governance

Board gender diversity

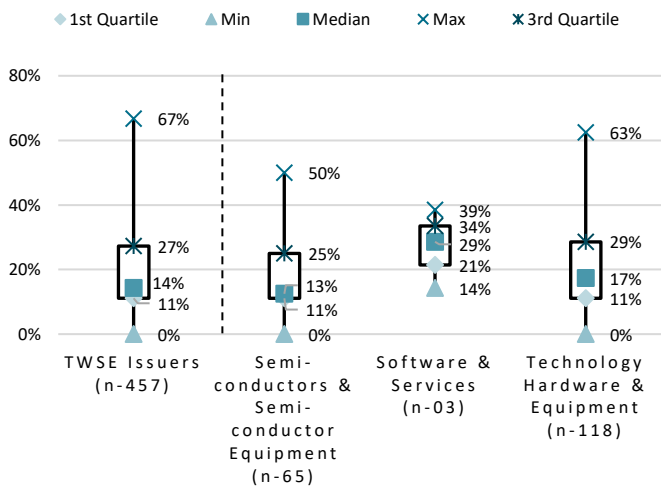
Rationale

Assess whether the board reflects the diversity of the workforce and marketplace, thereby ensuring that a variety of viewpoints are heard and factored into corporate decision-making. A commitment to diversity at all levels can help companies attract employees, create goodwill with consumers and better compete in diverse markets globally, which in turn benefits long-term shareholder value.

Focus

Public reporting of number of female directors on the board.

Female directors as a share of total board members - CSA 2025, TWSE Issuers



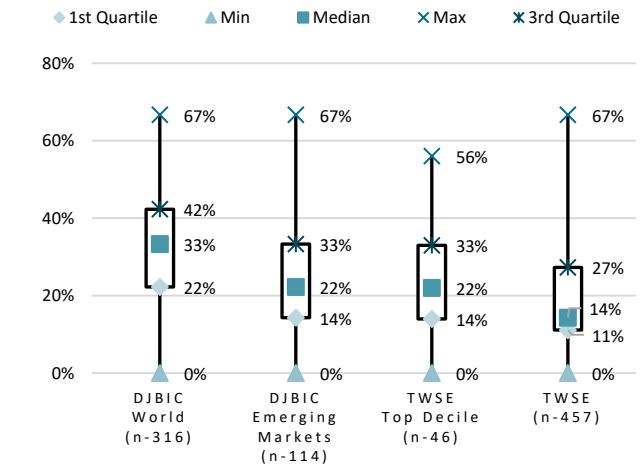
CSA expected practice	Balanced board composition in terms of gender.

Key observations

- The median share of female directors among TWSE issuers is 14%, with the lower quartile at 11%. Some companies report no female directors.
- Female board representation varies across TWSE technology sectors. Software and services companies report a median of 29% female directors, compared with 17% for technology hardware and equipment, and 13% for semiconductors and semiconductor equipment.
- Overall, the data suggests variation in how policy commitments are reflected in board composition across industries.
- **CSA expectation:** CSA 2025 leading practice typically shows women's representation between 40% and 60% of board seats, a range that demonstrates substantive participation in governance and decision-making, moving beyond token representation toward equitable board composition.

Note: The software & services group contains only three companies

Female directors as a share of total board members - CSA 2025, TWSE Issuers vs. DJBIC Benchmarks



CSA expected practice	Balanced board composition in terms of gender.

Key observations

- TWSE issuers report lower female board representation than global benchmarks across the distribution. The median share of female directors is 14% for TWSE Issuers, compared with 22% for DJBIC Emerging Markets and 33% for DJBIC World.
- The first quartile for TWSE is 11%, compared with 14% for DJBIC Emerging Markets and 22% for DJBIC World. The maximum reaches 67% across all three groups.
- TWSE Top Decile companies show stronger female board representation, with a median of 22%, matching DJBIC Emerging Markets, and a first quartile of 14%. However, both metrics remain below DJBIC World, which reports a first quartile of 22% and median of 33%.
- **CSA expectation:** CSA 2025 leading practice typically shows women's representation between 40% and 60% of board seats, a range that demonstrates substantive participation in governance and decision-making, moving beyond token representation toward equitable board composition.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Corporate governance

CEO compensation: Long-term performance alignment

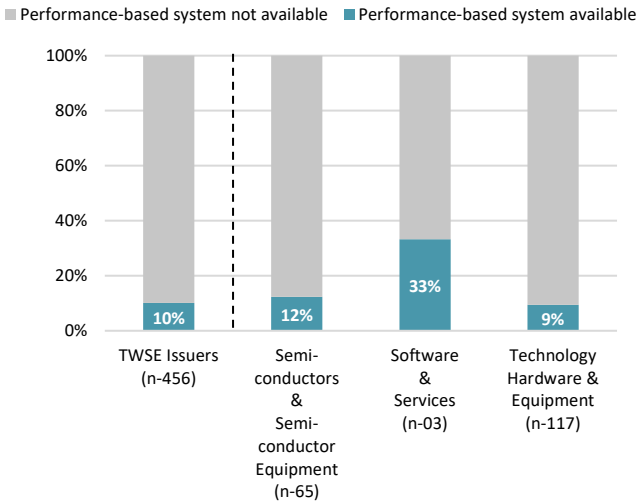
Rationale

The economic alignment of management with the long-term performance of the company is an essential component of executive compensation. This alignment can be achieved in several ways, including deferral of short-term compensation, time vesting and long-term performance periods.

Focus

Focus on time vesting and performance period used for determining the CEO's variable compensation and deferral of short-term bonus.

Percentage of TWSE issuers reporting on performance-based variable CEO compensation - CSA 2025

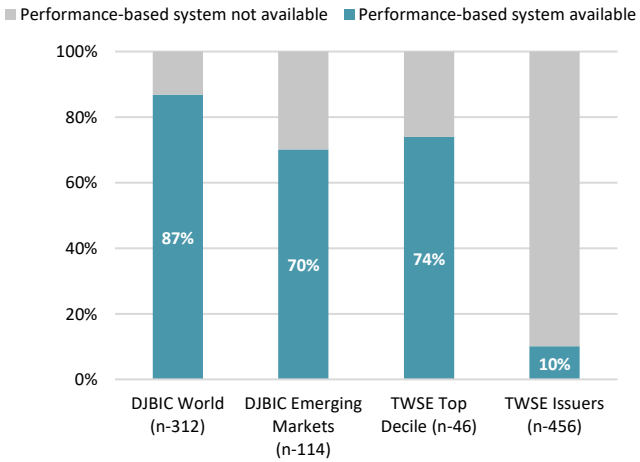


CSA expected practice	Public disclosure on the percentage of the short-term bonus paid in deferred shares, the longest performance period covered by the CEO compensation plan, the clawback provision and the longest time vesting period for CEO compensation.

Key observations

- 10% of TWSE issuers report CEO compensation aligned with long-term performance metrics.
- Rates vary by technology sector: semiconductors and semiconductor equipment (12%), technology hardware and equipment (9%), and software and services (33%).
- **CSA expectation:** Leading practice in CEO compensation involves structures that align executive incentives with long-term shareholder value: deferring substantial portions of short-term bonuses into equity, implementing multiyear performance and vesting periods (typically five years or longer), and establishing clawback mechanisms to recover compensation in cases of misconduct or material financial restatement.

Percentage of issuers reporting on performance-based variable CEO compensation - CSA 2025; TWSE Issuers vs. DJBIC Benchmarks



CSA expected practice	Public disclosure on the percentage of the short-term bonus paid in deferred shares, the longest performance period covered by the CEO compensation plan, the clawback provision and the longest time vesting period for CEO compensation.

Key observations

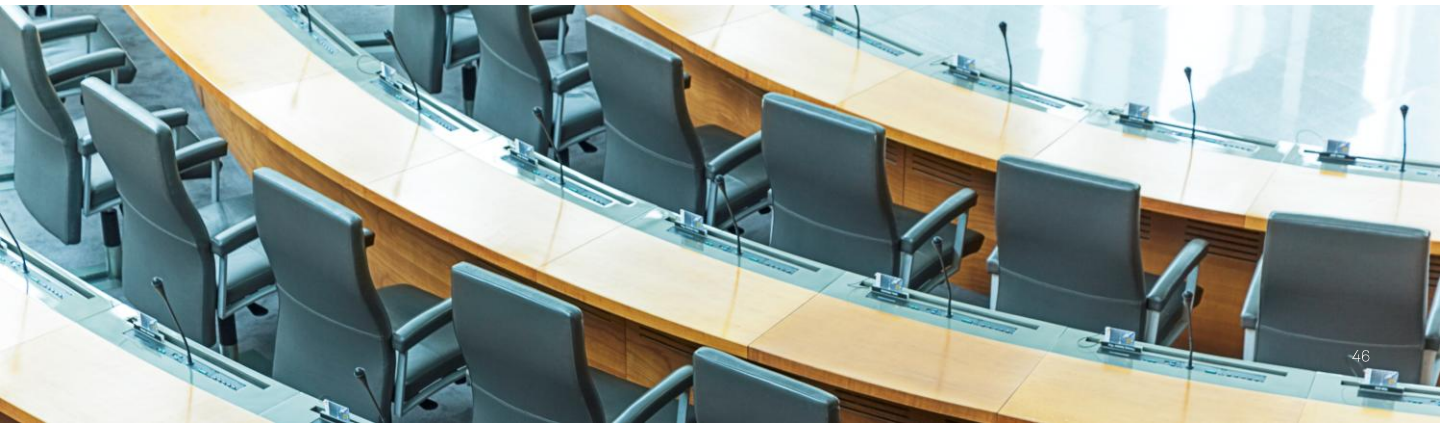
- 10% of TWSE Issuers report CEO compensation aligned with long-term performance, compared with 70% for DJBIC Emerging Markets and 87% for DJBIC World.
- TWSE Top Decile companies report significantly higher adoption, with 74% disclosing performance-based CEO compensation systems - exceeding DJBIC Emerging Markets (70%) and approaching DJBIC World levels (87%).
- **CSA expectation:** Leading practice in CEO compensation involves structures that align executive incentives with long-term shareholder value: deferring substantial portions of short-term bonuses into equity, implementing multiyear performance and vesting periods (typically five years or longer), and establishing clawback mechanisms to recover compensation in cases of misconduct or material financial restatement.
- **Stakeholder expectations:** TWSE's governance framework includes compensation committee requirements, including performance-based remuneration.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; TWSE Regulations Directory

Corporate governance performance summary

TWSE issuers show improved governance scores and strong policy disclosure, although female board representation and performance-based CEO compensation remain below global benchmarks.

- TWSE Issuers report improved corporate governance criterion scores in the CSA, rising from an average of 19 in four comparator year 2020 to 42 in four comparator year 2025.
- TWSE Top Decile companies scored 64 points in 2025, slightly exceeding DJBIC World (63 points) and surpassing DJBIC Emerging Markets (58 points).
- Policy disclosure for board diversity and board independence are established among TWSE Issuers. Board independence disclosure is reported by 100% of assessed companies, and board diversity policy disclosure reaches 94%, aligned with global benchmarks.
- Female board representation among TWSE Issuers (14% median) is below DJBIC Emerging Markets (22% median) and DJBIC World (33% median). TWSE Top Decile companies show stronger representation with a 22% median, matching DJBIC Emerging Markets but remaining below DJBIC World.
- Ten percent of TWSE Issuers report CEO compensation aligned with long-term performance, compared with 70% for DJBIC Emerging Markets and 87% for DJBIC World. Among the top 10% of TWSE companies, 74% disclose that CEO compensation is linked to long-term performance, exceeding the Dow Jones Best-in-Class Emerging Markets Index, but still 13 percentage points below the Dow Jones Best-in-Class World Index (87%).
- Disclosure of pre-defined financial metrics in CEO variable compensation is lower among TWSE issuers than global benchmarks.



Tax strategy

Rationale

Tax competition between tax territories has left room for companies to optimize their tax spending. While tax optimization has a positive impact on profitability, a too-aggressive tax strategy might not be sustainable in the medium to long term. First, there is a reputational risk because of increased public and regulatory scrutiny. Second, the relationship with the host country may be negatively impacted. This could result in approval delays or rejection of expansion projects or, in worst cases, companies risk losing their regulatory license to operate. Third, earnings might be impacted if the tax authorities decide to change tax regulations. Finally, economic development risk arises if governments receive inadequate tax receipts for funding local infrastructure or education.

CSA approach

- CSA frameworks assess the following aspects through this criterion:
  - Publicly available and group-wide tax policy, strategy or principles which indicate the company's approach toward taxation
  - Public reporting of key business, financial and tax information for each jurisdiction
  - Evaluates the sustainability of a company's tax rate within a global context, based on the reported tax rate and cash tax rate over the past two years.
  - Full transparency: All the information related to tax strategy should be available in the public domain.

Aspects analyzed

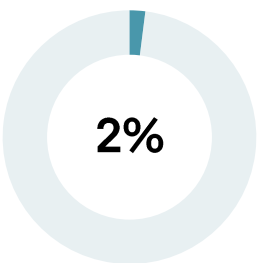
- Focus of the performance analysis and benchmarking included in the paper:
  - Public reporting on group-wide tax policy, strategy or principles that describe the approach toward taxation and commitments
  - Public reporting on key business, financial and tax information for each tax jurisdiction in which the company operates

Understanding the materiality of the topic

Tax strategy refers to an approach to governance, compliance and reporting with regard to tax-related norms and laws. Tax avoidance is a deliberate attempt to get out of an obligation to pay tax by entering into a artificial financial arrangements with little or no commercial substance. It is often characterized as obeying the letter but not the spirit of the law. Therefore, the issue also considers tax transparency and good tax governance. Relevant is the application of minimum tax rates, tax incentives, fair share taxation and the allocation of revenues and profits across jurisdictions.

Impact on enterprise value creation: Risk exposure, growth, profitability

CSA 2025 criterion average weight across the applicable CSA industries (44/62)



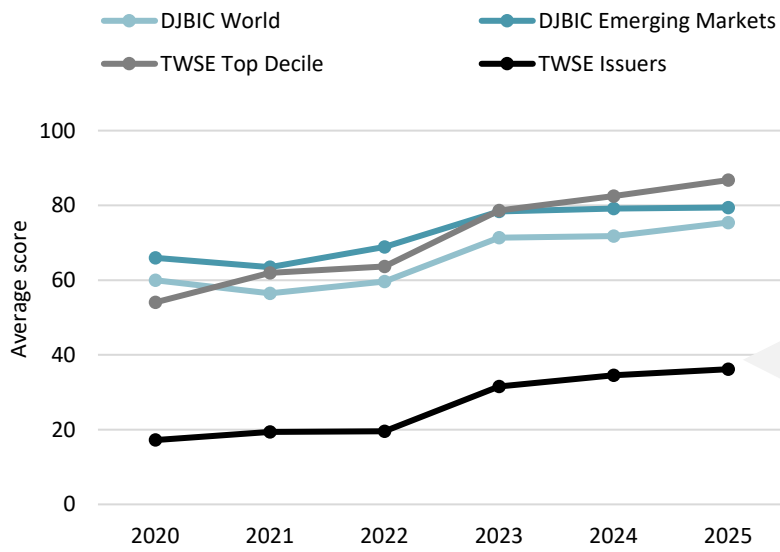
Sources: CSA Methodology Handbook; CSA Materiality Core Subjects

Tax strategy

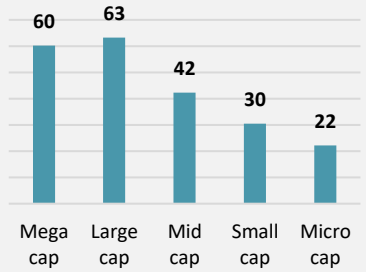
Tax strategy CSA score: Comparative performance review

The chart below compares tax strategy criterion scores for TWSE-listed issuers assessed under the CSA with benchmark peer groups represented by the DJBIC World and Emerging Markets cohorts over the past six years, showing relative performance and progression. Please refer to the rationale and CSA approach of this criterion on the previous page to understand the elements that drive the tax strategy score in CSA 2025. In particular, the scoring considers (i) the extent to which companies publicly report a group-wide tax policy, tax strategy or tax principles, including key commitments regarding their approach to taxation; (ii) the extent to which they provide public disclosure of material business and tax information for each tax jurisdiction in which they operate; and (iii) effective tax rate transparency, including explanations when the company's tax rate and/or cash tax rate is below the industry average.

6-year comparison of tax strategy average scores for TWSE issuers against global and emerging market benchmarks



Average tax strategy scores of TWSE issuers by market capitalization distribution.



What the data shows Gradual progress by TWSE companies in tax strategy CSA scores, although the gap with DJBIC benchmarks remains.

Key observations

- → Average tax strategy scores for TWSE issuers increased from 17 in 2020 to 36 in 2025, with most improvement occurring between 2022 and 2024.
- → DJBIC World and DJBIC Emerging Markets reported scores of 75 and 79, respectively, in 2025. TWSE scores are 39 points below DJBIC World and 43 points below DJBIC Emerging Markets.
- → TWSE Top Decile companies scored 87 points in 2025, exceeding both DJBIC Emerging Markets (79 points) and DJBIC World (75 points). This represents substantial progress from 54 points in 2020, demonstrating a 33-point improvement over the six-year period.
- → Additional focus and greater transparency on country-by-country tax reporting drove most of the improvement.

Data universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Tax strategy and governance

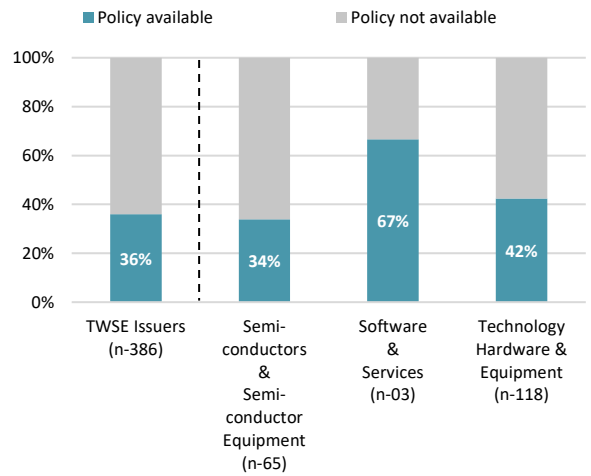
Rationale

The adoption of a formal tax policy serves to guide company practices and provide investors, regulators and other external stakeholders with an idea of the company's tax risk profile, against which practices and disclosures can be compared. An effective policy should be overseen by the board of directors, created in conjunction with relevant senior management, and regularly reviewed to ensure emerging risks are addressed.

Focus

Policy on tax strategy and governance that requires compliance with tax laws in all operating countries (in spirit and in letter), no value shifting to low-tax jurisdictions, no tax structures without commercial substance, transfer pricing based on the arm's length principle, and no use of secrecy jurisdictions or tax havens for tax avoidance. Further, the approval of tax policy by the board of directors.

Percentage of TWSE Issuers with publicly available tax strategy and governance policies — CSA 2025



CSA expected practice	Public reporting on groupwide tax policy on tax strategy and governance

Key observations

- Among the 386 assessed Taiwan companies to which this item applies, 36% have publicly disclosed tax strategy and governance policies. Disclosure rates by technology sector: software and services (67%), technology hardware and equipment (42%), and semiconductors and semiconductor equipment (34%).
- **CSA expectation**: Leading practice involves public disclosure of board-approved tax strategies that demonstrate responsible tax governance: commitment to full compliance with tax laws across operating jurisdictions, avoidance of artificial profit shifting to low-tax locations or tax havens, use of tax structures with genuine commercial substance, application of arm's length transfer pricing principles, and board-level oversight ensuring alignment with corporate values and stakeholder expectations.

Percentage of issuers with publicly available tax strategy and governance policies — CSA 2025, TWSE Issuers vs DJBIC Benchmarks



CSA expected practice	Public reporting on groupwide tax policy on tax strategy and governance

Key observations

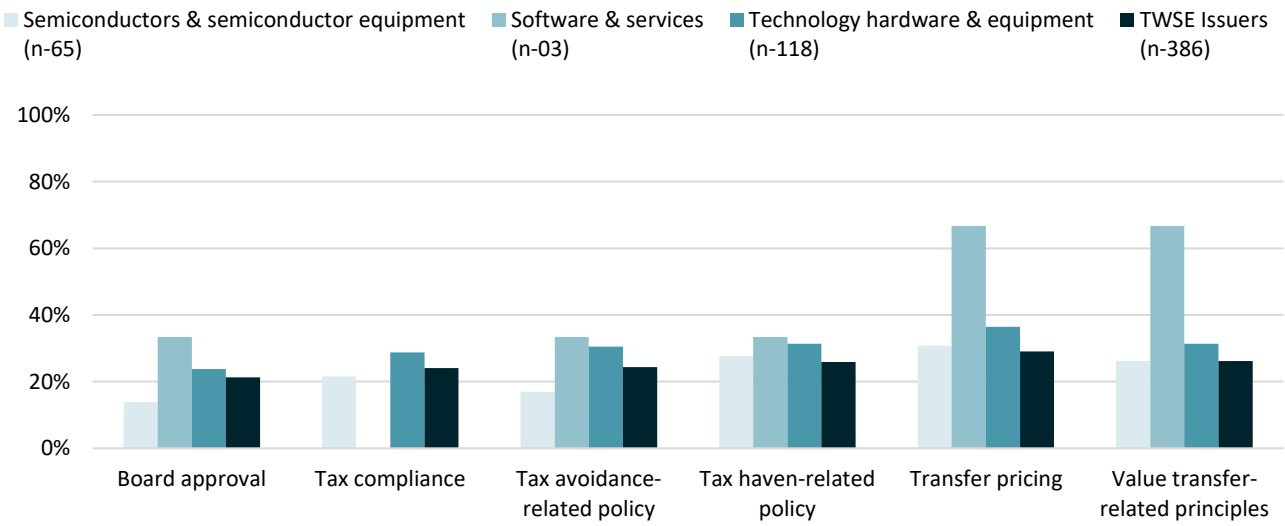
- Among the 386 assessed Taiwan companies to which this item applies, 36% have publicly disclosed tax strategy and governance policies, compared to 92% for DJBIC World and 91% for DJBIC Emerging Markets.
- All 41 TWSE Top Decile companies of the top 10% group to which this question applies demonstrate full adoption, with 100% publicly disclosing tax strategy and governance policies, exceeding global benchmarks.
- **CSA expectation:** Leading practice involves public disclosure of board-approved tax strategies that demonstrate responsible tax governance: commitment to full compliance with tax laws across operating jurisdictions, avoidance of artificial profit shifting to low-tax locations or tax havens, use of tax structures with genuine commercial substance, application of arm's length transfer pricing principles, and board-level oversight ensuring alignment with corporate values and stakeholder expectations.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Tax strategy

Tax governance disclosure by policy component

Percentage of TWSE issuers publicly disclosing elements of tax strategy and governance policies - CSA 2025, TWSE issuers and TWSE IT industry groups (Refer to the glossary for the definitions of these elements)



Definition:
- Board Approval - Tax policy approved by the board
- Tax Compliance - Compliance with the letter and spirit of tax laws
- Tax Avoidance-related Policy - Does not use tax-avoidance arrangements lacking commercial substance
- Tax Haven-related Policy - Does not use tax havens for tax avoidance
- Transfer Pricing - Transfer pricing follows the arm's-length principle
- Value Transfer-related Principles - Does not use artificial arrangements to transfer value to low-tax jurisdictions

CSA expected practice Public reporting on groupwide tax policy on tax strategy and governance

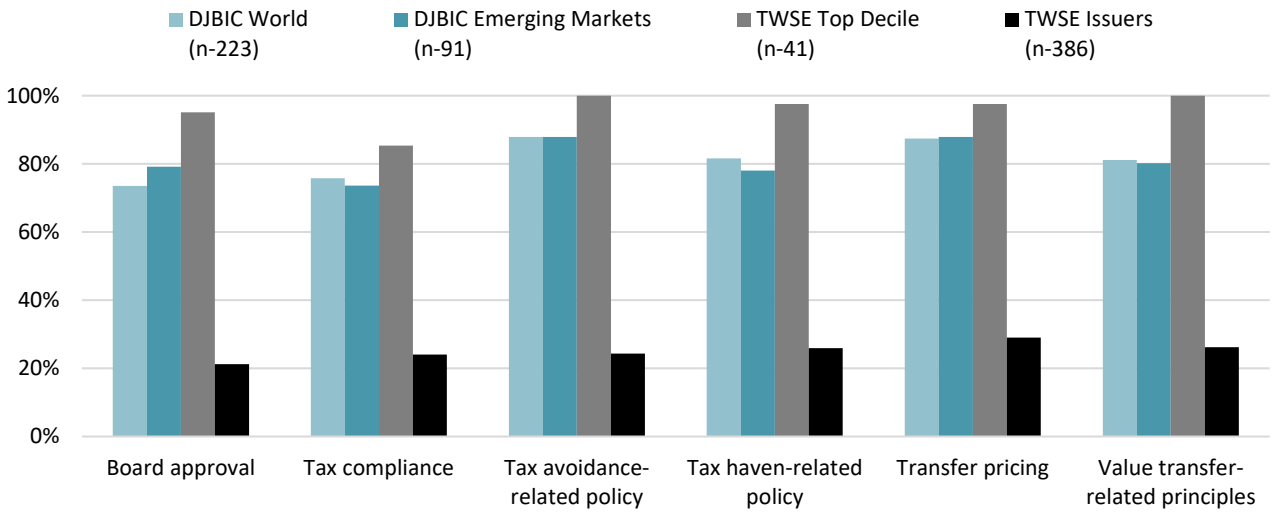
Key observations

- TWSE issuers report disclosure rates below 30% for most tax strategy policy elements. The most frequently disclosed elements are transfer pricing (29%), value transfer (26%) and tax havens (26%). Board approval reports the lowest disclosure rate (21%).
- Technology sector disclosure rates vary. Software and services reports 67% for both transfer pricing and value transfer, while semiconductors and semiconductor equipment reports lower rates, including board approval (14%), compliance (22%) and tax avoidance (17%).
- **CSA expectation**: Leading practice involves comprehensive public disclosure of tax policy components demonstrating responsible governance: commitment to full compliance with tax laws, avoidance of artificial profit shifting to low-tax locations or tax havens, use of commercially substantive tax structures, application of arm's length transfer pricing, and board-level approval and oversight. Companies demonstrating transparency typically disclose all relevant components rather than selective elements.

Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Tax strategy

Percentage of issuers publicly disclosing elements of tax strategy and governance policies - CSA 2025, TWSE Issuers vs. DJBIC Benchmarks (Refer to the glossary for the definitions of these elements)



Definition:
- Board Approval - Tax policy approved by the board
- Tax Compliance - Compliance with the letter and spirit of tax laws
- Tax Avoidance-related Policy - Does not use tax-avoidance arrangements lacking commercial substance
- Tax Haven-related Policy - Does not use tax havens for tax avoidance
- Transfer Pricing - Transfer pricing follows the arm's-length principle
- Value Transfer-related Principles - Does not use artificial arrangements to transfer value to low-tax jurisdictions

CSA expected practice	Public reporting on groupwide tax policy on tax strategy and governance

Key observations

- TWSE issuers report lower disclosure rate than DJBIC benchmarks across all elements of tax strategy and governance policies. The disclosure of board approval stands at 21% for TWSE issuers, compared with 74% for DJBIC World and 79% for DJBIC Emerging Markets, while transfer pricing disclosure reaches 29% for TWSE issuers versus 87% and 88% in the benchmark groups.
- TWSE Top Decile companies demonstrate substantially higher disclosure across all policy elements, with 95% reporting board approval and 98% disclosing transfer pricing practices. Disclosure of tax avoidance policies and value transfer principles reaches 100%, indicating comprehensive tax governance transparency among leading TWSE companies.
- **CSA expectation:** Leading practice involves comprehensive public disclosure of tax policy components demonstrating responsible governance: commitment to full compliance with tax laws, avoidance of artificial profit shifting to low-tax locations or tax havens, use of commercially substantive tax structures, application of arm's length transfer pricing, and board-level approval and oversight. Companies demonstrating transparency typically disclose all relevant components rather than selective elements.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Tax strategy

Tax reporting

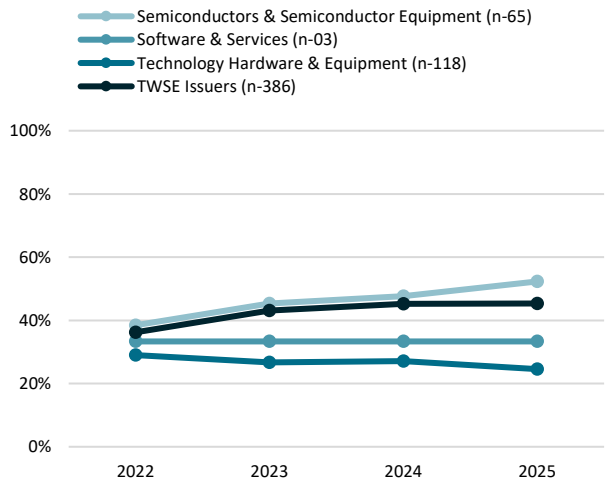
Rationale

Leading companies have realized that public reporting on their revenue, operating profits and tax on a country-by-country basis helps build trust in their corporation and complements reporting on their broader economic contribution. In combination with key information about the names and tax residence of all constituent entities, the main activities by tax jurisdiction and the average number of employees help investors better understand a company's tax profile and potential exposure to tax risks.

Focus

Public disclosure on key business, financial and tax information for each tax jurisdiction in which the company operates.

Percentage of TWSE issuers publicly disclosed key business, financial and tax information for each tax jurisdiction in the last four four comparator years: TWSE issuers and TWSE technology groups

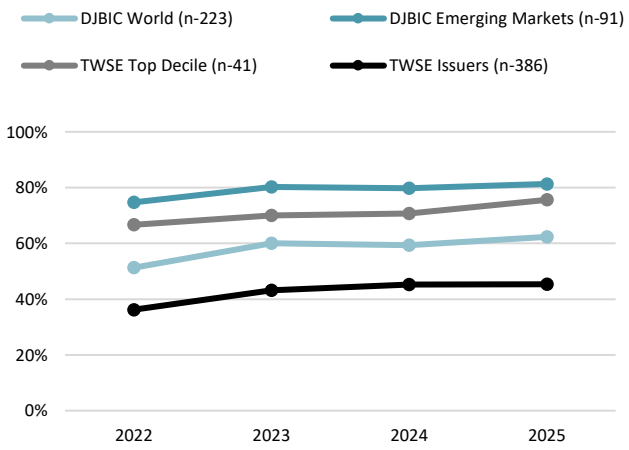


CSA expected practice	Public reporting on names of all the resident entities, primary activities, number of employees, revenue, profit (loss) before tax, income tax accrued (current year) and income tax paid for each tax jurisdiction

Key observations

- TWSE issuers report increased disclosure of business, financial and tax information by jurisdiction, rising from 36% in 2022 to 45% in 2025.
- Disclosure trends by technology sector. Semiconductors and semiconductor equipment increased from 38% (2022) to 52% (2025), technology hardware and equipment decreased from 29% (2022) to 25% (2025), and software and services remained at 33% throughout the period.
- **CSA expectation:** Leading practice involves transparent country-by-country tax reporting that discloses financial performance (revenue, profit, tax accrued and paid) alongside operational presence (entities, activities, workforce) for each jurisdiction, enabling investors and stakeholders to evaluate tax strategy implementation and jurisdictional tax contributions.

Percentage of issuers publicly disclosed key business, financial and tax information for each tax jurisdiction in the last four four comparator years: TWSE issuers and DJBIC Benchmarks



CSA expected practice	Public reporting on names of all the resident entities, primary activities, number of employees, revenue, profit (loss) before tax, income tax accrued (current year) and income tax paid for each tax jurisdiction

Key observations

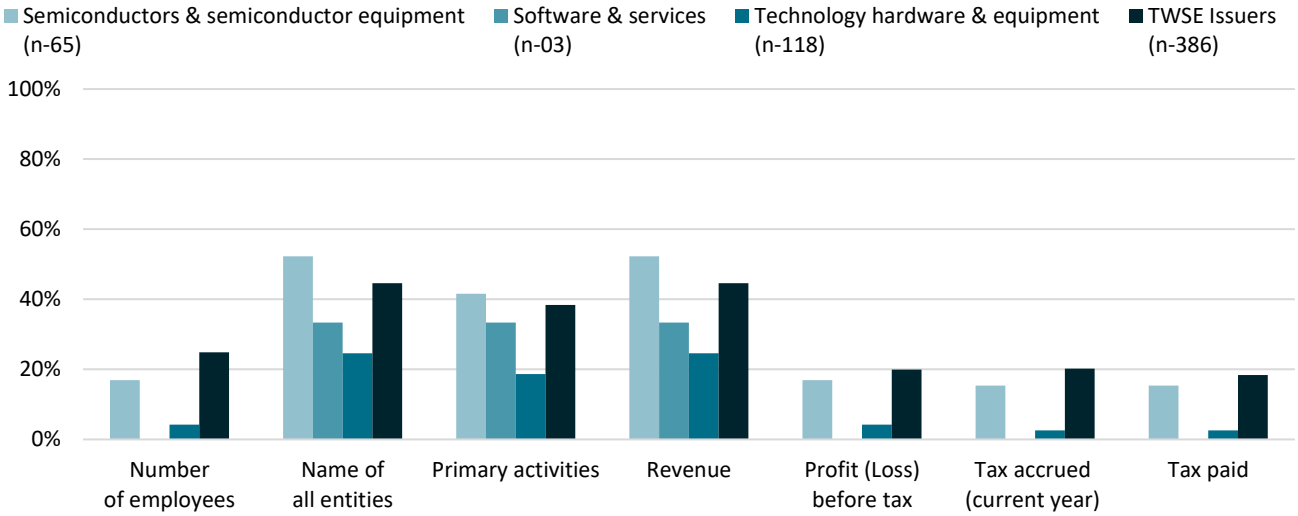
- TWSE issuers report 45% disclosure of business, financial and tax information by jurisdiction in 2025, up from 36% in 2022. DJBIC Emerging Markets reports 81%, and DJBIC World reports 62% in 2025.
- TWSE Top Decile companies report 76% disclosure in 2025, up from 67% in 2022, positioning between DJBIC World (62%) and DJBIC Emerging Markets (81%) benchmarks.
- **CSA expectation:** Leading practice involves transparent country-by-country tax reporting that discloses financial performance (revenue, profit, tax accrued and paid) alongside operational presence (entities, activities, workforce) for each jurisdiction, enabling investors and stakeholders to evaluate tax strategy implementation and jurisdictional tax contributions.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2022-2025.

Tax strategy

Tax jurisdiction reporting: Component analysis

Percentage of issuers publicly disclosed elements of key business, financial and tax information for each tax jurisdiction in CSA 2025: TWSE issuers and TWSE IT industry groups (Refer to the glossary for the definitions of these elements)



CSA expected practice	Public reporting on names of all the resident entities, primary activities, number of employees, revenue, profit (loss) before tax, income tax accrued (current year) and income tax paid for each tax jurisdiction

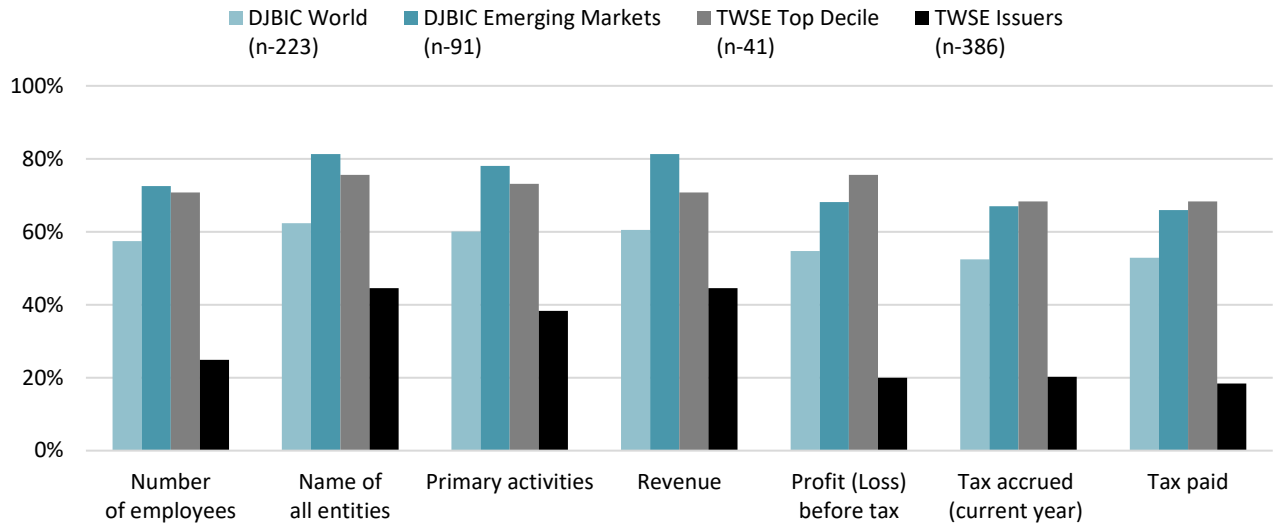
Key observations

- TWSE issuers report varying disclosure rates for country-by-country tax information elements. The most frequently disclosed elements are the name of all entities (45%), revenue (45%) and primary activities (38%). Lower disclosure rates are reported for the number of employees (25%), profit before tax (20%), tax accrued (20%) and tax paid (18%).
- Technology sector disclosure varies. Semiconductors and semiconductor equipment reports higher rates for entity names, revenue and primary activities, while technology hardware and equipment reports lower rates across most elements.
- **CSA expectation:** Leading practice involves comprehensive country-by-country reporting that discloses all key components, both financial metrics (revenue, profit, tax accrued and paid) and operational context (entities, activities, workforce), for each jurisdiction. Completeness across all disclosure elements demonstrates commitment to full tax transparency rather than selective reporting.

Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Tax strategy

Percentage of issuers publicly disclosed elements of key business, financial and tax information for each tax jurisdiction in CSA 2025: TWSE Issuers vs DJBIC Benchmarks (Refer to the glossary for the definitions of these elements)



CSA expected practice	Public reporting on names of all the resident entities, primary activities, number of employees, revenue, profit (loss) before tax, income tax accrued (current year) and income tax paid for each tax jurisdiction

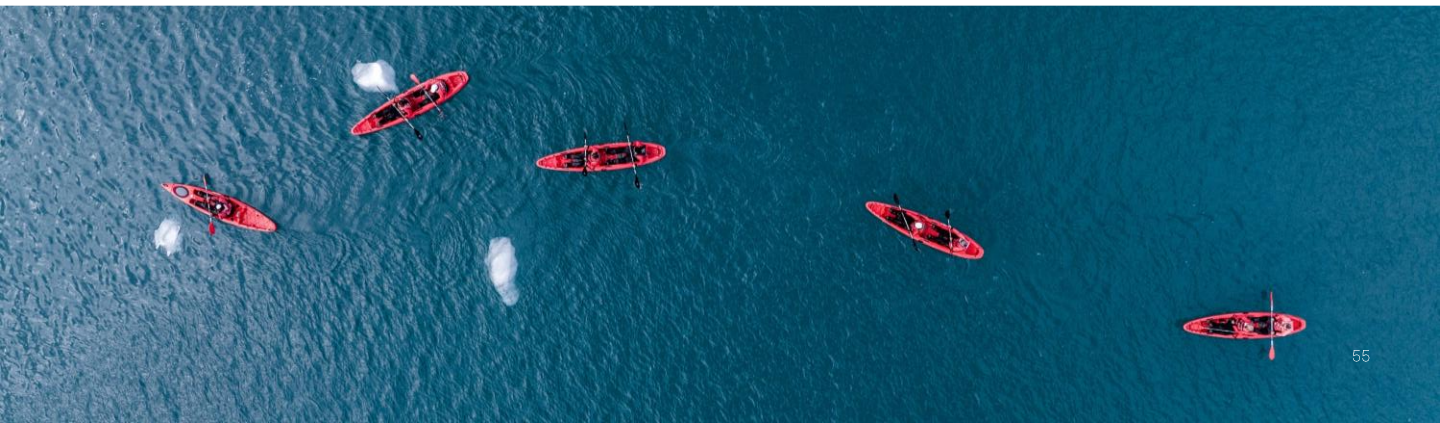
Key observations

- TWSE issuers report lower disclosure than DJBIC benchmarks across all jurisdictional tax information elements. For tax outcome metrics, TWSE reports profit before tax (20%), tax accrued (20%) and tax paid (18%), compared with 53%-55% for DJBIC World and 66%-68% for DJBIC Emerging Markets. For structural elements, TWSE reports the name of all entities (45%) and revenue (45%), below benchmark levels.
- For the top 10% group of assessed Taiwan-listed companies, disclosure rates for profit or loss before tax, current-year accrued income tax, and income tax actually paid range from 68% to 76%, all above the 53%–55% reported by the Dow Jones Best-in-Class World Index comparator group. Disclosure rates for employee numbers, names of group member entities, principal business activities, and revenue range from 71% to 76%.
- **CSA expectation:** Leading practice involves comprehensive country-by-country reporting that discloses all key components, both financial metrics (revenue, profit, tax accrued and paid) and operational context (entities, activities, workforce), for each jurisdiction. Completeness across all disclosure elements demonstrates commitment to full tax transparency rather than selective reporting.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

TWSE tax strategy scores improved from 17 to 36 (CSA 2020-25) but remain below DJBIC benchmarks, with tax policy and jurisdictional disclosure also below global levels

- In 2025, the average tax strategy scores were 75 for DJBIC World and 79 for DJBIC Emerging Markets. TWSE Top Decile companies scored 87 points in 2025, exceeding both global benchmarks and improving from 54 points in 2020.
- Tax policy disclosure: Of TWSE Issuers, 36% publicly disclose tax strategy and governance policies, compared with 92% for DJBIC World and 91% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% disclosure of tax strategy policies, with element-level disclosure ranging from 85% to 100% across all policy components. Disclosure of specific policy elements ranges 21%-29% among TWSE Issuers overall, compared with 74%-88% for DJBIC benchmarks.
- Jurisdictional tax reporting: TWSE Issuers' jurisdictional tax disclosure increased from 36% (2022) to 45% (2025), compared with 62% for DJBIC World and 81% for DJBIC Emerging Markets. TWSE Top Decile companies report 76% disclosure in 2025 (up from 67% in 2022), with element-level disclosure ranging from 68% to 76% across both tax outcome metrics and structural elements. Element-level disclosure ranges 18%-45% among TWSE Issuers overall, with lower rates for tax outcome metrics (profit before tax, tax accrued, tax paid) than structural elements (entity names, revenue).



Information security

Rationale

Over the past decade, the information-security incidents are becoming more frequent, and these incidents have made information security a critical concern across all sectors of the economy. The most prevalent risks usually arise from technical and procedural failures, human errors, malicious attacks, adverse weather events and natural disasters. Ineffective information security practices can impact a company internally through operational failures, loss or theft of sensitive information, fines and penalties, and externally through reputational damage, loss of operating licenses, and disruption of third-party operations. Moreover, increased attention from the public and regulators demonstrates the material significance of information security and its importance in protecting and enhancing company value creation.

CSA approach

CSA frameworks assess the following aspects through this criterion:

- This criterion emphasizes the organization's preparedness to prevent material information security incidents through effective governance, policies and programs, as well as its ability to respond appropriately in the event of such incidents.
- The approach focuses on:
  - Governance mechanisms regarding the oversight of information security activities
  - Public reporting of the information security policy highlighting key commitments.
  - Information security management programs that incorporate continuity plans, vulnerability analysis, audits, escalation process, training and breaches.
  - Full transparency: In accordance with the assessment requirements, publicly disclose information-security policies, governance structures, management measures, and relevant incident information

Aspects analyzed

Focus of the performance analysis and benchmarking included in the paper:

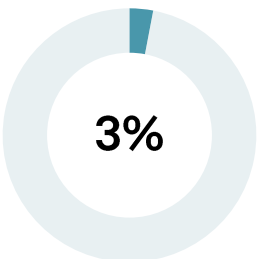
- Information security policy: Publicly available information security policy highlighting key commitments
- Information security management programs: Review whether the company has established systems and procedures for business-continuity planning, vulnerability assessments, audits, incident classification and escalation, training, and disclosure of information-security incidents
- Information security governance: Public disclosure of board and executive oversight of information security issues

Understanding the materiality of the topic

Information security addresses a company's ability to protect information systems and processes from cyber threats, data loss, service disruptions and misuse. It focuses on safeguarding the confidentiality, integrity and availability of information while ensuring that systems are developed and deployed safely and ethically. The topic covers governance structures, policies and programs that strengthen resilience, such as incident-response procedures, business continuity planning, vulnerability assessments and employee training.

Impact on enterprise value creation: Risk exposure, profitability

CSA 2025 criterion average weight across the applicable CSA industries (62/62)



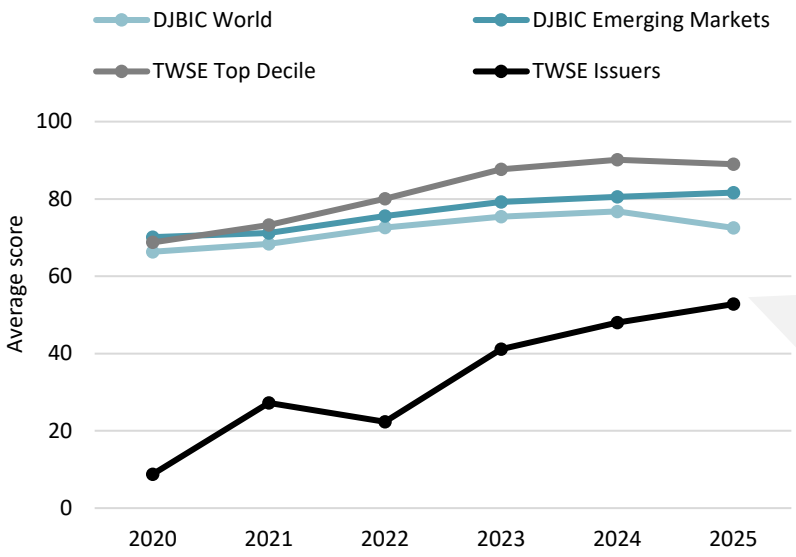
Sources: CSA Methodology Handbook; CSA Materiality Core Subjects

Information security

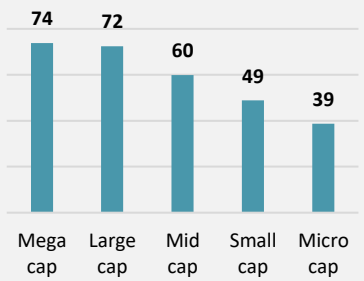
Information security CSA score: Comparative performance review

The chart compares information and cyber security criterion scores for TWSE-listed issuers with DJBIC World and Emerging Markets benchmarks from years 2020 to 2025.
The criterion evaluates information security governance (board and executive-level oversight), policy disclosure (covering continuous improvement, data protection and integrity, and monitoring and response mechanisms), and management programs (including continuity plans, vulnerability analysis, audits, escalation processes, awareness training, and breach disclosure).
Please refer to the rationale and CSA approach of this criterion on the previous page to identify what elements are included in the scoring of this criterion in CSA 2025.

6-year comparison of information security average scores for TWSE issuers against global and emerging market benchmarks



Average information security scores of TWSE Issuers by market capitalization distribution.



What the data shows Closing the gap with DJBIC Benchmarks

Key observations

- → Average information and cyber security scores for TWSE Issuers increased from 9 (CSA 2020) to 53 (CSA 2025), compared with 72 for DJBIC World and 82 for DJBIC Emerging Markets in 2025. TWSE Top Decile companies scored 89 points in 2025, exceeding both DJBIC World and DJBIC Emerging Markets, and improving from 69 points in 2020.
- → Most improvement for TWSE Issuers is occurring between 2022 and 2024.
- → Gap areas between TWSE Issuers and global benchmarks include information security governance, policy disclosure, management programs and breach disclosure practices.

Data universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Information security governance

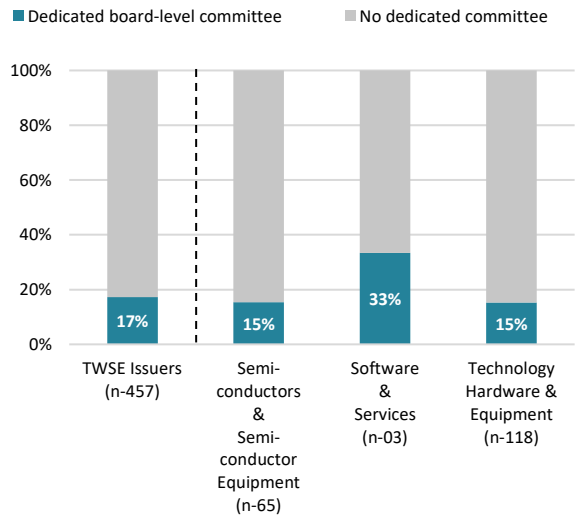
Rationale

All boards should have the ability to understand information security threats and assess management's capability of dealing with information security-related issues, according to the National Association of Corporate Directors. However, senior executives, like CISOs or CIOs, must also have the necessary leadership and operational and strategic skills to understand and face information security risks. An information security committee would encourage the board and executives to prioritize information security issues.

Focus

Public disclosure about board and executive level responsibility for overseeing information security issues.

TWSE issuers with board-level responsibility for information security oversight in CSA 2025 (%)

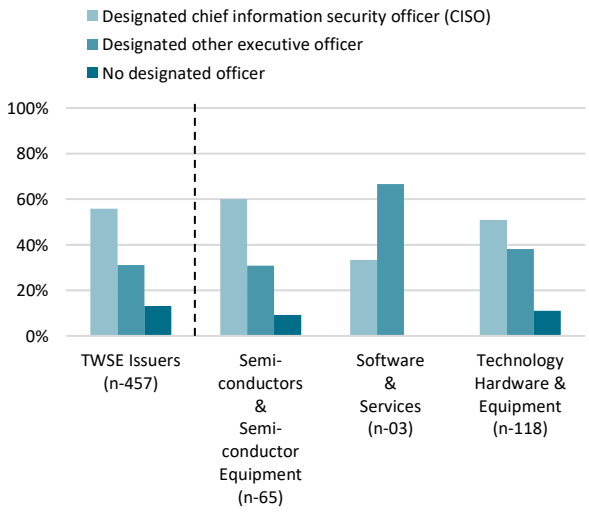


CSA expected practice	Public disclosure of the board-level information security committee or another board-level committee (e.g., risk committee) responsible for overseeing information security issues

Key observations

- Board-level oversight of information security through a dedicated committee is limited among TWSE issuers, with 17% reporting this governance structure in 2025.
- Technology sectors show varied adoption rates. Software and services companies lead at 33%, while semiconductors and semiconductor equipment (15%) and technology hardware and equipment (15%) show lower levels, indicating that formal board-level information security oversight has not been widely adopted across Taiwan's technology sectors.
- The data suggests that information security oversight may be embedded within existing audit or risk committees rather than managed through dedicated board-level structures.
- **CSA expectation**: Leading practice involves establishing board-level oversight of information security through dedicated committees or equivalent governance structures, ensuring cybersecurity risks receive strategic attention commensurate with their potential impact on business operations, data integrity and stakeholder trust.

TWSE Issuers with executive-level responsibility for information security oversight in CSA 2025 (%)



CSA expected practice	CISO or CTO/CIO/similar or CEO/COO/CRO/similar is appointed within the executive management team to oversee information security issues

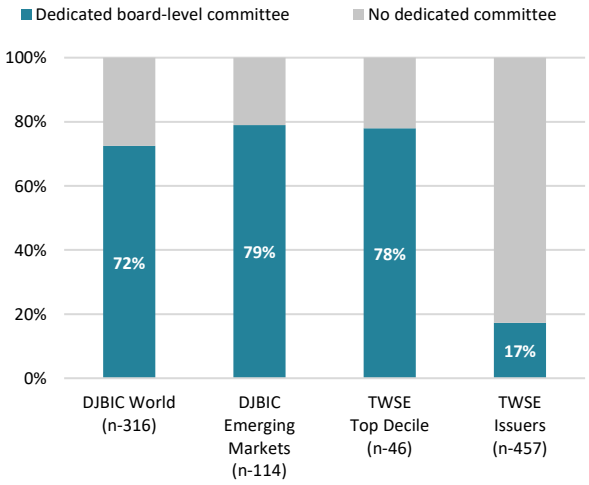
Key observations

- Among assessed Taiwan-listed companies, 56% designate a Chief Information Security Officer (CISO) to oversee information-security matters, 31% assign responsibility to another senior executive, and the remaining 13% are classified as having no designated relevant executive.
- Among technology sectors, the semiconductors and semiconductor equipment sector shows the highest share of designated CISOs at 60%, followed by technology hardware and equipment at 51% and software and services at 33%.
- Executive-level responsibility for information security is more widely reported than board-level oversight, reflecting information security's operational focus within TWSE issuers.
- **CSA expectation:** Leading practice involves appointing a CISO or equivalent executive role with dedicated cybersecurity responsibility at the senior management level, ensuring adequate authority, resources and direct access to leadership and the board for effective information security governance.

CISO = chief information security officer; CIO = chief information officer; CTO = chief technology officer; CRO = chief risk officer.
Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Information security

Issuers with board-level responsibility for information security oversight in CSA 2025 (%), TWSE Issuers vs. DJBIC Benchmarks

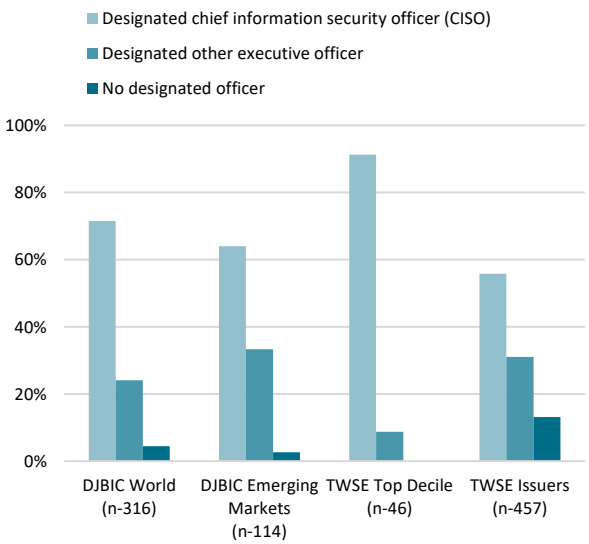


CSA expected practice	Public disclosure of the board-level information security committee or another board-level committee (e.g., risk committee) responsible for overseeing information security issues

Key observations

- The disclosure rate for board-level information-security oversight mechanisms among the top 10% of assessed Taiwan-listed companies is 78%, close to the 79% recorded by the Dow Jones Best-in-Class Emerging Markets Index comparator group. Regarding management responsibility, 91% designate a Chief Information Security Officer, while the remaining 9% assign responsibility to another senior executive.
- The lower adoption rate among TWSE Issuers overall may reflect a combination of factors, including varying company sizes, industry, governance maturity levels and disclosure practices. TWSE Top Decile performance demonstrates that leading Taiwan companies have established board-level information security oversight comparable to global standards.
- **CSA expectation:** Leading practice involves establishing board-level oversight of information security through dedicated committees or equivalent governance structures, ensuring cybersecurity risks receive strategic attention commensurate with their potential impact on business operations, data integrity and stakeholder trust.
- **Stakeholder expectations:** Evolving ESG evaluation and governance frameworks in Taiwan may contribute to a gradual shift toward clearer board accountability for material risks, including digital and information security.

Issuers with executive-level responsibility for information security oversight in CSA 2025 (%), TWSE Issuers vs. DJBIC Benchmarks



CSA expected practice	CISO or CTO/CIO/similar or CEO/COO/CRO/similar is appointed within the executive management team to oversee information security issues

Key observations

- TWSE Issuers show lower adoption of designated CISOs compared with global benchmarks, with 56% of TWSE Issuers reporting a designated CISO versus 72% for DJBIC World and 64% for DJBIC Emerging Markets. TWSE Top Decile companies report 91% CISO adoption, substantially exceeding all benchmarks.
- The share of TWSE Issuers assigning responsibility to another executive officer (31%) is comparable to DJBIC Emerging Markets (33%) and exceeds DJBIC World (24%), indicating that executive accountability for information security exists through varied organizational structures. TWSE Top Decile companies demonstrate full executive coverage, with 91% designating a CISO and 9% assigning responsibility to another executive officer, compared with 13% of TWSE Issuers overall reporting no designated executive officer (versus 4% for DJBIC World and 3% for DJBIC Emerging Markets).
- **CSA expectation:** Leading practice involves appointing a CISO or equivalent executive role with dedicated cybersecurity responsibility at the senior management level, ensuring adequate authority, resources and direct access to leadership and the board for effective information security governance.
- **Stakeholder expectations:** Evolving ESG evaluation and governance frameworks in Taiwan may contribute to a gradual shift toward clearer board accountability for material risks, including digital and information security.

Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025; The 2026 ESG Evaluation System

Information security

Information security policy

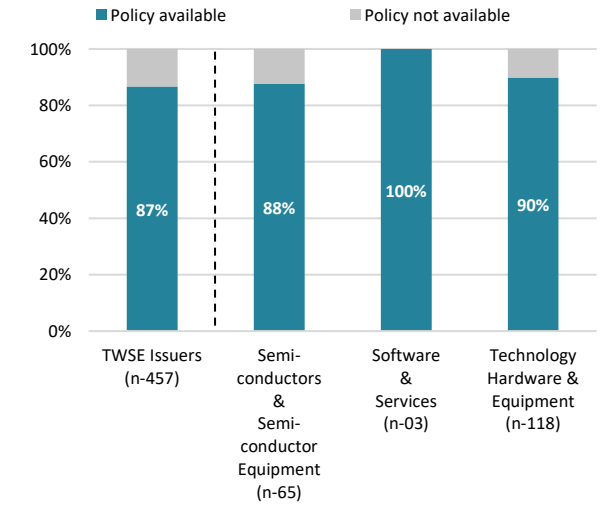
Rationale

The purpose of this question is to assess a company's commitment to managing information security risks through transparent public reporting. As the reliance on digital information grows, safeguarding data and ensuring the resilience of information systems have become critical factors in both corporate sustainability and risk management. Effective information security policies are essential to protect against cyber threats, data breaches and system vulnerabilities, which can impact not only a company's operations but also its reputation and long-term value generation.

Focus

Availability and public disclosure of the information security policy covering the improvement of information security systems, integrity and protection of data, monitoring and responding to threats and establishing individual responsibilities for the workforce and the requirements for third parties.

Percentage of TWSE Issuers publicly disclosing their information security policy - CSA 2025

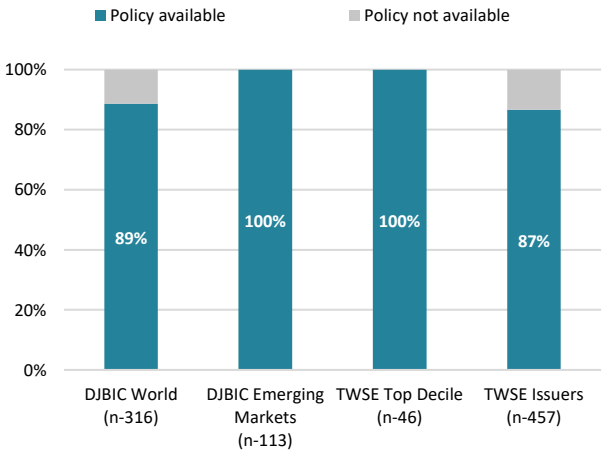


CSA expected practice	Public disclosure of either a stand-alone information security policy or a dedicated section in other documents

Key observations

- Public disclosure of information security policies is well established among TWSE issuers, with 87% reporting publicly available policies in 2025.
- Technology sectors show strong disclosure rates. Semiconductors and semiconductor equipment reports 88% disclosure, technology hardware and equipment reaches 90%, and software and services achieves 100%, indicating that formal information security policy disclosure is embedded within Taiwan's technology-related sectors.
- **CSA expectation:** Leading practice involves comprehensive information security policies that demonstrate systematic risk management across five critical areas: continuous improvement of security systems, data integrity and protection standards, proactive threat monitoring and incident response capabilities, clearly defined workforce responsibilities for security practices, and security requirements for third-party suppliers and business partners. Policy comprehensiveness signals organizational commitment to protecting stakeholder data and maintaining business resilience against evolving cyber threats.

Percentage of issuers publicly disclosing information security policy - CSA 2025, TWSE Issuers vs. DJBIC Benchmarks



CSA expected practice	Public disclosure of either a stand-alone information security policy or a dedicated section in other documents

Key observations

- TWSE Issuers report 87% information security policy disclosure, compared with 89% for DJBIC World and 100% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% disclosure, matching DJBIC Emerging Markets.
- **CSA expectation**: Leading practice involves comprehensive information security policies that demonstrate systematic risk management across five critical areas: continuous improvement of security systems, data integrity and protection standards, proactive threat monitoring and incident response capabilities, clearly defined workforce responsibilities for security practices, and security requirements for third-party suppliers and business partners. Policy comprehensiveness signals organizational commitment to protecting stakeholder data and maintaining business resilience against evolving cyber threats.
- **Stakeholder expectations:** Taiwan's local regulations and increased exposure to cyber risks may have encouraged companies to disclose their commitments to information security.

Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; Cyber Security Management Act

Information security

Information security management programs

Rationale

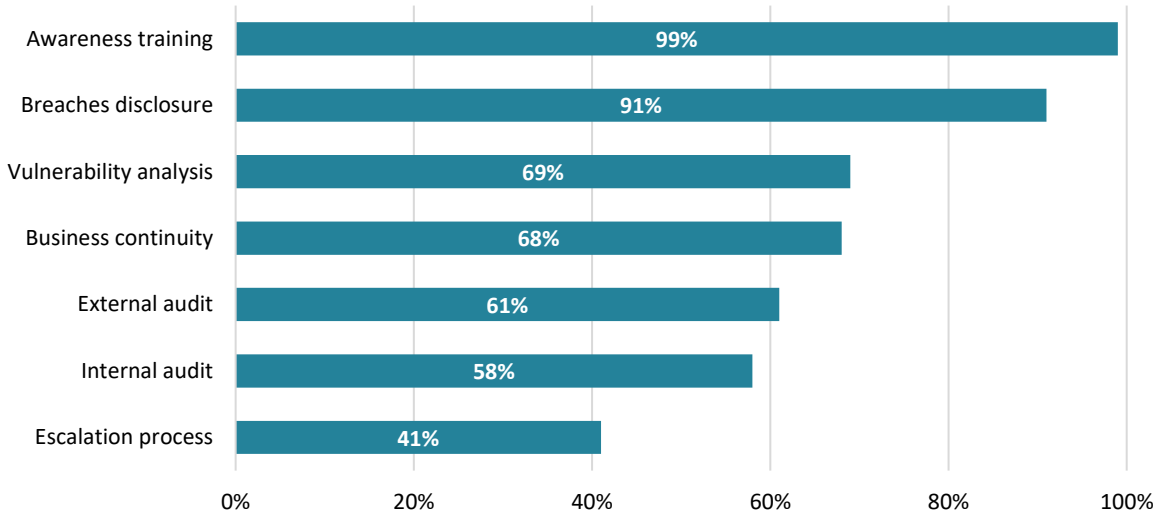
The information security threat landscape continues to grow and evolve, leveraging new and existing technologies to exploit vulnerabilities. Given the importance of technical and procedural capabilities in safeguarding systems and critical information, as well as responding to information security threats, companies across all sectors are encouraged to establish robust management programs to test and protect their information systems. These should include business continuity plans, vulnerability testing, internal and external audits and correcting employees' behaviors, which are critical to ensuring companies' long-term sustainability.

Focus

Availability of information security management programs includes:

- Continuity plans and vulnerability analysis
- Internal and external audits
- Escalation process and awareness training
- Reporting on the total number of breaches

Share of TWSE Issuers disclosing the elements of information security management programs - CSA 2025
(Refer to the glossary for the definitions of these elements)



CSA expected practice	Public disclosure of information security management programs

Key observations

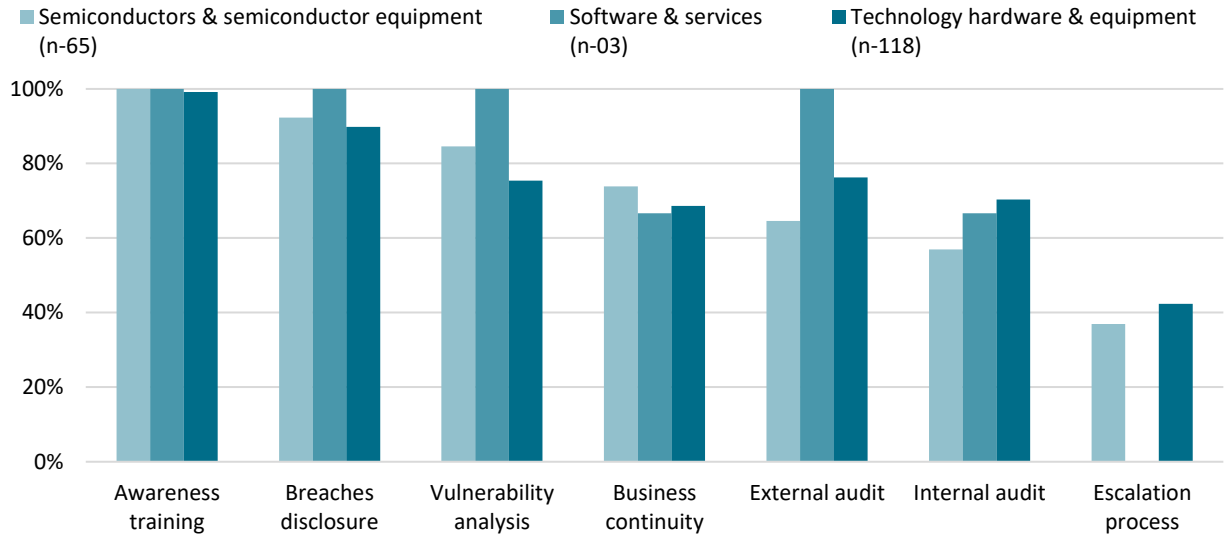
→ TWSE issuers report varying implementation rates for information security management program elements: awareness training (99%), breach disclosure (91%), vulnerability analysis (69%), business continuity (68%), external audit (61%), internal audit (58%) and escalation processes (41%).

→ **CSA expectation:** Leading practice involves comprehensive information security management programs addressing four key dimensions: **prevention and preparedness** (business continuity planning, vulnerability analysis, security awareness training); **detection and monitoring** (internal audits, incident reporting and escalation protocols); **transparency** (disclosure of breach incidents); and **independent verification** (external audits such as ISO 27001 certification). Comprehensive programs demonstrate a proactive, systematic approach to managing information security risks across their full lifecycle.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Information security

Share of TWSE Issuers disclosing the elements of information security management programs - CSA 2025, TWSE Technology industries (Refer to the glossary for the definitions of these elements)



CSA expected practice Public disclosure of information security management programs

Key observations

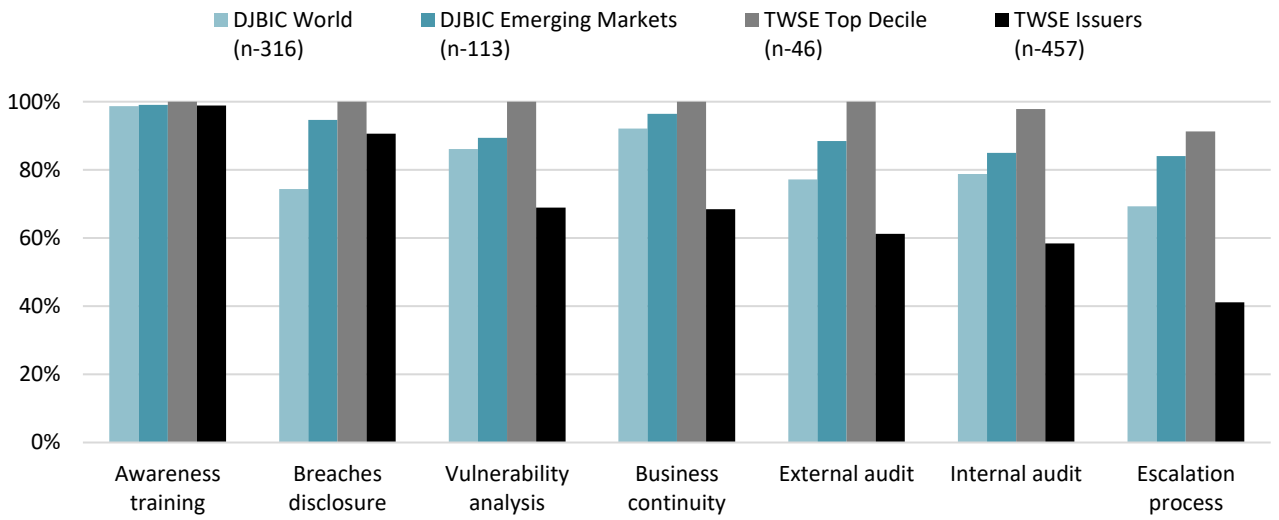
- Technology sector implementation rates for information security management programs: Awareness training is reported at near-universal levels, and breach disclosure remains high across all technology subsectors.
- The semiconductors and semiconductor equipment sector reports higher implementation rates for vulnerability analysis and business continuity. Technology hardware and equipment reports higher rates for external and internal audits.
- Escalation processes report the lowest implementation rates across technology subsectors.

- **CSA expectation:** Leading practice involves comprehensive information security management programs addressing four key dimensions: **prevention and preparedness** (business continuity planning, vulnerability analysis, security awareness training); **detection and monitoring** (internal audits, incident reporting and escalation protocols); **transparency** (disclosure of breach incidents); and **independent verification** (external audits such as ISO 27001 certification). Program maturity requires implementation across all dimensions rather than selective adoption of individual elements.

Data universe: All TWSE issuers that have been assessed in CSA 2025 are included in the scope of the above graph. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

Information security

Share of issuers disclosing the elements of information security management programs - CSA 2025, TWSE Issuers vs. DJBIC Benchmarks (Refer to the glossary for the definitions of these elements)



CSA expected practice	Public disclosure of information security management programs

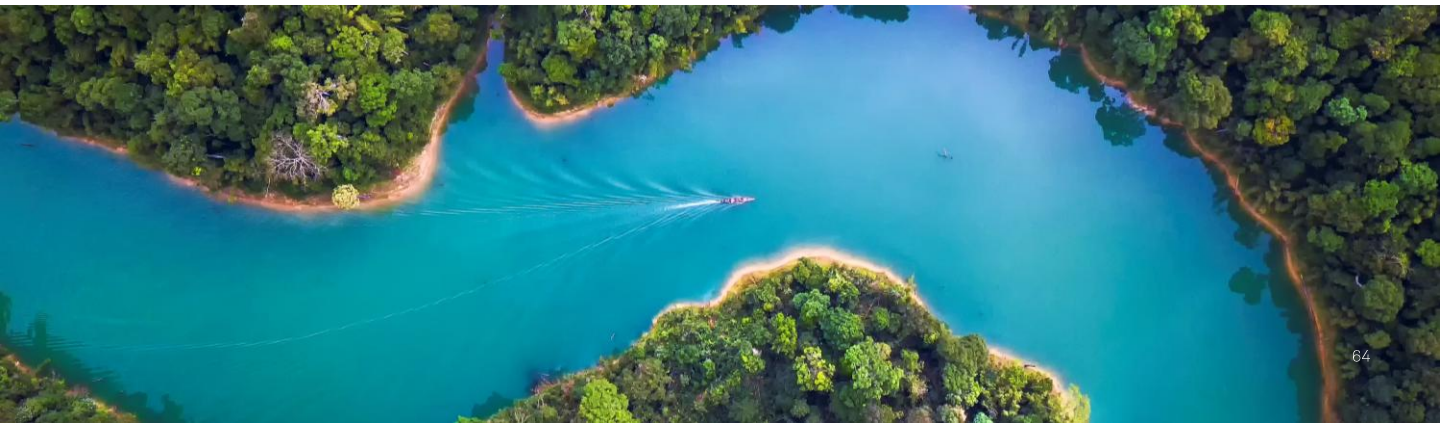
Key observations

- TWSE issuers report 99% implementation of awareness training, compared with 99% for DJBIC World and 99% for DJBIC Emerging Markets. Breach disclosure stands at 91% for TWSE, compared with 74% for DJBIC World and 95% for DJBIC Emerging Markets.
- TWSE implementation rates for other elements: vulnerability analysis (69%), business continuity (68%), external audit (61%), internal audit (58%) and escalation processes (41%), compared with DJBIC benchmark ranges of 69%-96%.
- TWSE Top Decile companies demonstrate comprehensive program implementation, achieving 100% across five elements (awareness training, breach disclosure, vulnerability analysis, business continuity, external audit), with near-universal adoption for internal audit (98%) and strong majority adoption for escalation processes (91%).
- **CSA expectation:** Leading practice involves comprehensive information security management programs addressing four key dimensions: prevention and preparedness (business continuity planning, vulnerability analysis, security awareness training); detection and monitoring (internal audits, incident reporting and escalation protocols); transparency (disclosure of breach incidents); and independent verification (external audits such as ISO 27001 certification). Program maturity requires implementation across all dimensions rather than selective adoption of individual elements.
- **Stakeholder expectations:** The observed pattern may partly reflect the influence of Taiwan's evolving ESG evaluation and corporate governance frameworks, which increasingly emphasize structured governance, internal controls and management accountability for material operational and sustainability-related risks. The 2026 ESG Evaluation System may encourage issuers to formalize and disclose information security practices other than awareness training and breach disclosures.

Data universe: All TWSE issuers that have been assessed in 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; The 2026 ESG Evaluation System

TWSE information security practices show foundational strength with varied adoption of advanced governance structures compared to global benchmarks

- TWSE Issuers' information security CSA scores improved from 9 (CSA 2020) to 53 (CSA 2025), compared with 72 for DJBIC World and 82 for DJBIC Emerging Markets. TWSE Top Decile companies scored 89 points in 2025, exceeding both global benchmarks and improving from 69 points in 2020.
- Foundational practices are established among TWSE Issuers: information security policy disclosure at 87%, awareness training at 99% and executive-level responsibility at 87%. TWSE Top Decile companies achieve near-universal or universal adoption across foundational practices, including 100% policy disclosure, 100% awareness training and 100% executive-level responsibility (91% CISO designation, 9% other executive officer).
- Advanced governance shows varied adoption among TWSE Issuers: board-level oversight at 17% (versus 72%-79% for DJBIC benchmarks) and CISO designation at 56% (versus 64%-72% for benchmarks), with operational controls including vulnerability analysis, business continuity and audit mechanisms at lower implementation rates. TWSE Top Decile companies demonstrate substantially stronger adoption of advanced governance, with 78% board-level oversight, 91% CISO designation, and 91%-100% implementation across operational controls (vulnerability analysis, business continuity, external audit, internal audit, escalation processes).
- Areas where TWSE Issuers overall continue to trail global benchmarks include board-level oversight structures, CISO designation rates, and comprehensive implementation of operational controls such as vulnerability analysis, business continuity planning and audit mechanisms.



Climate strategy

Rationale

Most industries will be impacted by climate change, albeit to a varying degree. The need for robust strategies to meet the scale of the challenge is growing ever more significant. There is increasing focus not only on identifying the risks and opportunities of climate change but also on managing these risks, setting targets and ensuring appropriate governance and oversight at all levels of the business.

As the number of climate-related mandatory and voluntary disclosure frameworks and standards increases, companies must remain vigilant in not only assessing their own exposure to climate but also documenting this in a way that meets disclosure requirements.

CSA approach

CSA frameworks assess the following aspects through this criterion:

- Climate strategy refers to the risks and opportunities presented by climate change and the transition to a low-carbon economy.
- It focuses on disclosure of different emissions to assess the overall trend and on strategies for the management of climate-associated risks and impacts as reported based on climate disclosure recommendations and regulations.
- Majority of the information and practices should be available in the public domain.

Aspects analyzed

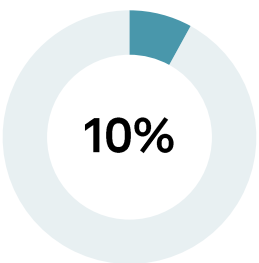
- Focus of the performance analysis and benchmarking included in the paper:
- Scope 1 GHG emissions, Scope 2 GHG emissions and Scope 3 GHG emissions:
  - Public reporting
  - Third-party verification (most recent four comparator year reported)
  - Trend of average reported emissions
- Physical climate risk adaptation: Type of existing plan to adapt to physical climate risks

Understanding the materiality of the topic

Climate transition refers to the risks and opportunities presented by climate change and the transition to a low-carbon economy. It focuses on strategies for the management of climate-associated risks and impacts as well as energy transition goals. Climate transition implies regulatory, market and technology developments, including climate solutions and business response throughout the value chain. While physical risk exposure is location and company specific, transition risks and opportunities are associated with specific industries and sectors.

Impact on enterprise value creation: Risk exposure, profitability, growth

CSA 2025 criterion average weight across the applicable CSA industries (62/62)



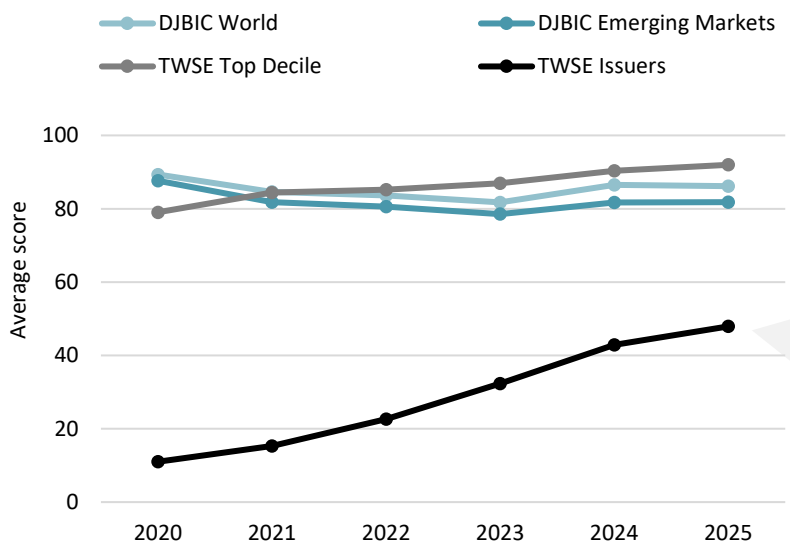
Sources: CSA Methodology Handbook; SP_22-Materiality-Core-Subjects_2025.pdf

Climate strategy

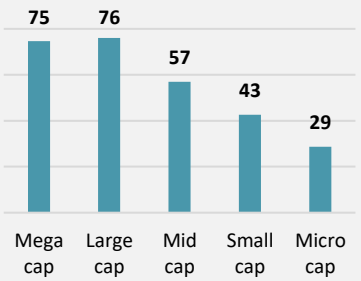
Climate strategy CSA score: Comparative performance review

The following analysis compares climate strategy criterion scores for TWSE issuers with DJBIC World and Emerging Markets benchmarks over six years. The climate strategy criterion assesses emissions reporting and climate governance practices. Emissions components include reporting at least three years of emissions data with high coverage, trend analysis of normalized emissions, annual target setting and achievement, and public reporting with third-party verification. Climate governance components include board oversight, management responsibility, climate-related management incentives and integration of TCFD recommendations into climate risk management and disclosure. The criterion also assesses climate-related financial risk analysis, including quantitative or combined quantitative and qualitative scenario analysis covering transition and physical risks, and disclosure of physical climate risk adaptation measures. Additional elements include transparency on absolute and intensity emissions targets, net-zero commitments, internal carbon pricing and net-zero transition plans. For detailed scoring elements, refer to the CSA 2025 criterion rationale on the previous page.

6-year comparison of Climate Strategy average scores for TWSE issuers against global and emerging market benchmarks



Average climate strategy scores of TWSE issuers by market capitalization distribution.



What the data shows TWSE climate strategy scores improved from 11 (CSA 2020) to 48 (CSA 2025) but remain below DJBIC benchmarks

Key observations

- TWSE Issuers improved climate strategy criterion scores from an average of 11 in CSA 2020 to 48 in CSA 2025, with acceleration in improvement from 2022 onward. TWSE Top Decile companies have maintained climate strategy leadership throughout the period, scoring 79 points in 2020 (already approaching benchmark levels) and reaching 92 points in 2025, exceeding both DJBIC World (86) and DJBIC Emerging Markets (82).
- TWSE scores remain below DJBIC benchmarks, which recorded 86 for DJBIC World and 82 for DJBIC Emerging Markets in 2025.
- The improvement reflects the adoption of climate-related practices, supported by regulatory developments and alignment with international frameworks, including TCFD and IFRS Sustainability Disclosure Standards.

TCFD = Task Force on Climate-Related Financial Disclosures.
Data universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Scope 1 GHG emissions

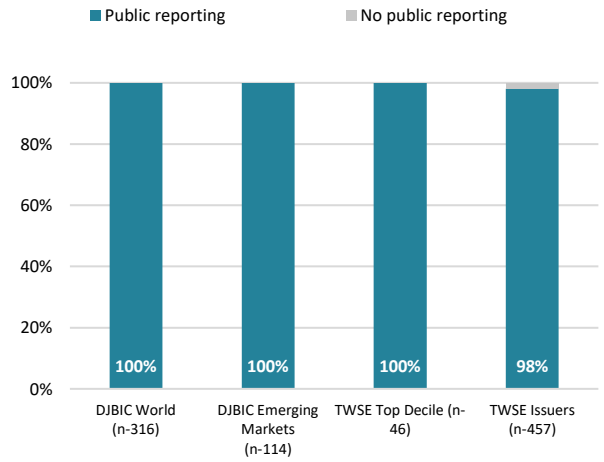
Rationale

Emissions are a critical indicator of a company's impact on the climate. Increasingly, the disclosure of emissions is expected from investors, and growing regulatory pressure has led to the mandatory disclosure of certain emissions. By disclosing emissions, investors and stakeholders can ascertain a company's climate risks and identify trends in emissions reduction to benchmark against competitors.

Focus

Assessment of the company's direct GHG (Scope 1) emissions and their overall trend, transparency and third-party verification.

Companies publicly reporting Scope 1 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)

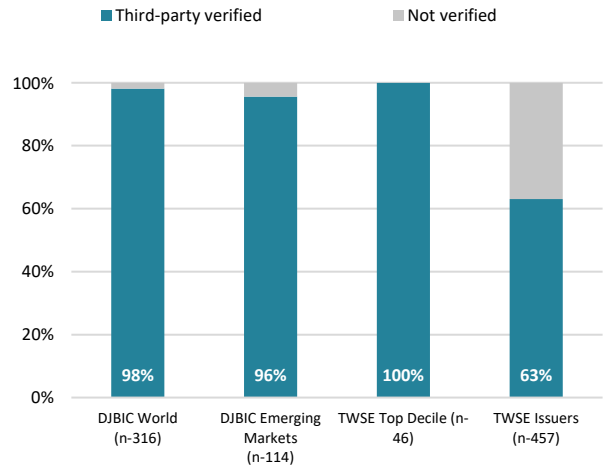


CSA expected practice Scope 1 GHG emissions data is publicly reported

Key observations

- In CSA 2025, TWSE Issuers reached 98% public reporting rates for Scope 1 emissions, with only 2% of companies not yet publicly disclosing this data. TWSE Top Decile companies achieve 100% disclosure, matching global benchmarks.
- Companies in both the DJBIC World index and the DJBIC Emerging Markets index achieved 100% public reporting of Scope 1 GHG emissions data in 2025, demonstrating complete transparency in direct emissions disclosure.
- **CSA expectation:** Leading practice involves measuring and publicly disclosing Scope 1 GHG emissions, direct emissions from owned or controlled sources. Transparent reporting enables investors to evaluate direct climate impact, assess carbon-related regulatory and transition risks, and track decarbonization progress.
- **Stakeholder expectations:** Taiwan's FSC released the Sustainable Development Roadmap for TWSE/TPEx Listed Companies on March 3, 2022, and promotes the phased completion of GHG inventories by 2027 and GHG inventory assurance by 2029 for all TWSE/TPEx listed companies.

Companies with third-party verification for Scope 1 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice Scope 1 GHG emissions data verified by a third party

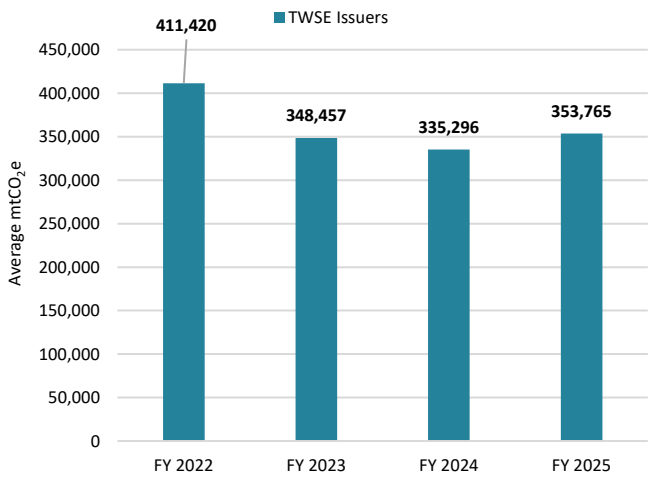
Key observations

- TWSE Issuers show 63% third-party verification for Scope 1 GHG emissions, compared to 98% for DJBIC World and 96% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% third-party verification, exceeding both global benchmarks.
- Third-party verification of emissions data varies across markets based on regulatory requirements, market practices and assurance infrastructure.
- **CSA expectation:** Leading practice involves independent third-party verification or assurance of reported Scope 1 GHG emissions data, enhancing credibility and reliability of disclosed direct emissions.
- **Stakeholder expectations:** TWSE has expanded third-party verification requirements for specific information in sustainability reports to food, chemicals, financial services and insurance sectors, while encouraging broader adoption to improve disclosure reliability. Taiwan's FSC released the Sustainable Development Roadmap for TWSE/TPEx Listed Companies on March 3, 2022, and promotes the phased completion of GHG inventories by 2027 and GHG inventory assurance by 2029 for all TWSE/TPEx listed companies.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research Universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2022-2025 ; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights; Press Release-The Financial Supervisory Commission (FSC) releases the roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards-Financial Supervisory Commission.

Analysis of Scope 1 emissions reporting over 4 years

Average reported Scope 1 emissions for TWSE issuers, 2022-25

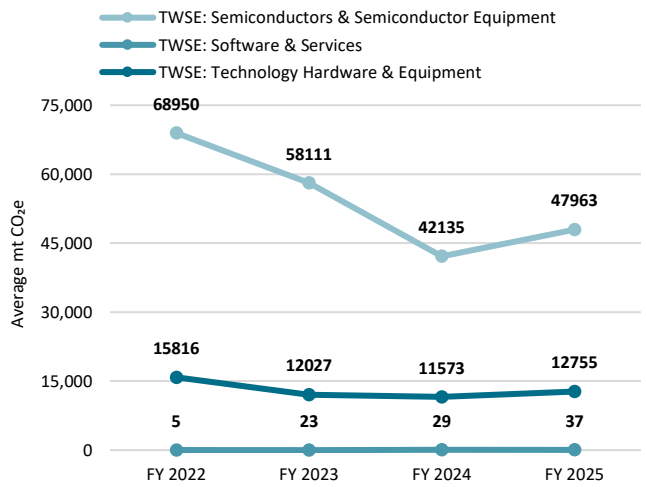


CSA expected practice	Decreasing trend of normalized Scope 1 GHG emissions over the past four years

Key observations

- Average reported Scope 1 emissions for TWSE issuers decreased from 411,420 metric tons of CO_2 equivalent in 2022 to 335,296 $mtCO_2e$ in 2024, then increased to 353,765 $mtCO_2e$ in 2025.
- The largest decline occurred between 2022 and 2023, with continued decreases through 2024. Reported emissions in 2025 remain 14% below 2022 levels.
- **CSA expectation:** Leading practice involves demonstrating sustained decreasing trends in normalized Scope 1 GHG emissions (emissions per revenue, production or other business metric) over multiple four comparator years, typically three to four. Downward emissions intensity trends signal effective decarbonization strategies and operational improvements, enabling investors to assess whether emissions reductions are keeping pace with or outperforming business growth.

Average reported Scope 1 emissions for TWSE technology sectors, 2022-25



CSA expected practice	Decreasing trend of normalized Scope 1 GHG emissions over the past four years

Key observations

- Semiconductors and semiconductor equipment (n=65): Average emissions decreased from 68,950 $mtCO_2e$ (2022) to 42,135 $mtCO_2e$ (2024), then increased to 47,963 $mtCO_2e$ (2025), representing a 30% net decline from 2022.
- Technology hardware and equipment (n=118): Average emissions declined from 15,816 $mtCO_2e$ (2022) to 11,573 $mtCO_2e$ (2024), then increased to 12,755 $mtCO_2e$ (2025), representing a 19% net decline from 2022.
- Software and services (n=3): Average emissions increased from 5 $mtCO_2e$ (2022) to 37 $mtCO_2e$ (2025), although absolute levels remain minimal relative to other sectors.
  Note: Company counts (n) remained constant across all four years for each sector.
- **CSA expectation:** Leading practice involves demonstrating sustained decreasing trends in normalized Scope 1 GHG emissions (emissions per revenue, production or other business metric) over multiple four comparator years, typically three to four. Downward emissions intensity trends signal effective decarbonization strategies and operational improvements, enabling investors to assess whether emissions reductions are keeping pace with or outperforming business growth.

Data universe: All TWSE issuers that have been assessed in CSA 2022-2025; all companies that have been assessed as part of specific industry groups mentioned above are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2022-2025.

Scope 2 GHG emissions

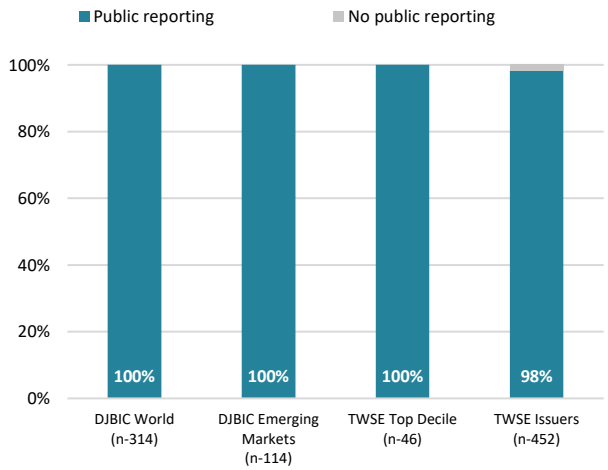
Rationale

Emissions are a critical indicator of a company's impact on the climate. Increasingly, the disclosure of emissions is expected from investors, and growing regulatory pressure has led to the mandatory disclosure of certain emissions. By disclosing emissions, investors and stakeholders can ascertain a company's climate risks and identify trends in emissions reduction to benchmark against competitors.

Focus

Assessment of the company's indirect GHG (Scope 2) emissions and their overall trend, transparency and third-party verification.

Companies publicly reporting Scope 2 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)

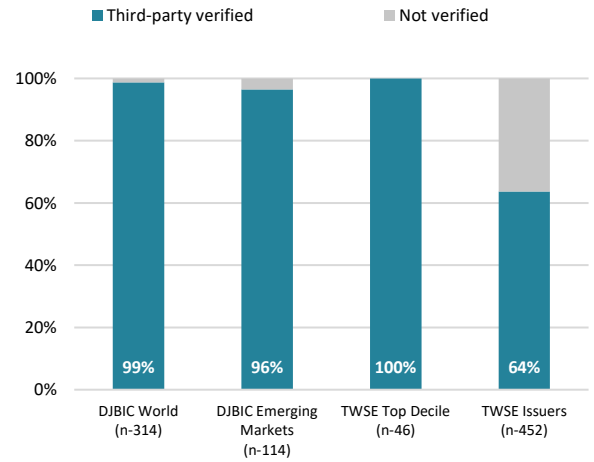


CSA expected practice Scope 2 GHG emissions data is publicly reported

Key observations

- Ninety-eight percent of TWSE issuers publicly report Scope 2 GHG emissions data, compared with 100% for both DJBIC World and DJBIC Emerging Markets, indicating near-universal adoption across all groups.
- **CSA expectation:** Leading practice involves measuring and publicly disclosing Scope 2 GHG emissions, indirect emissions from purchased electricity, heat, steam and cooling. Transparent reporting enables investors to evaluate energy-related climate impact, assess exposure to energy transition risks and track renewable energy adoption progress.
- **Stakeholder expectations**: Taiwan's FSC released the Sustainable Development Roadmap for TWSE/TPEx Listed Companies on March 3, 2022, and promotes the phased completion of GHG inventories by 2027 and GHG inventory assurance by 2029 for all TWSE/TPEx listed companies.

Companies with third-party verification for Scope 2 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice Scope 2 GHG emissions data verified by a third party

Key observations

- TWSE Issuers show 64% third-party verification for Scope 2 GHG emissions, compared with 99% for DJBIC World and 96% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% third-party verification, exceeding both global benchmarks.
  Third-party verification of emissions data varies across markets based on regulatory requirements, market practices and assurance infrastructure.
- **CSA expectation**: Leading practice involves independent third-party verification or assurance of reported Scope 2 GHG emissions data, enhancing credibility and reliability of disclosed indirect energy-related emissions.
- **Stakeholder expectations:** TWSE has expanded third-party verification requirements to food, chemicals, financial services and insurance sectors, while encouraging broader adoption to improve disclosure reliability.
- Taiwan's FSC released the Sustainable Development Roadmap for TWSE/TPEx Listed Companies on March 3, 2022, and promotes the phased completion of GHG inventories by 2027 and GHG inventory assurance by 2029 for all TWSE/TPEx listed companies.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2022-2025; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights; Press Release-The Financial Supervisory Commission (FSC) releases the roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards-Financial Supervisory Commission.

Scope 3 GHG emissions

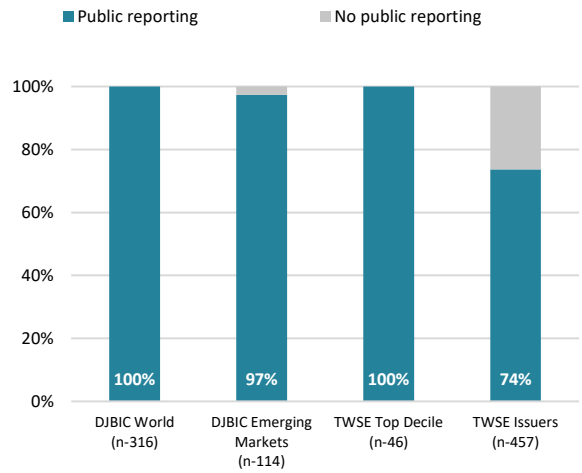
Rationale

Scope 3 emissions represent most emissions for the majority of industries, so it is crucial for companies to measure all relevant sources of Scope 3 emissions in their value chain to identify climate risks and opportunities, provide transparency to the markets and comply with regulatory requirements.

Focus

Assessment of the company's indirect emissions from the value chain (Scope 3 emissions) and assess its overall trend, transparency and third-party verification.

Companies publicly reporting Scope 3 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)

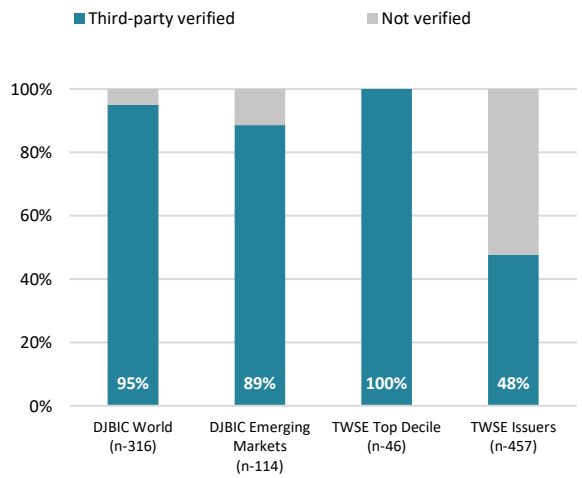


CSA expected practice: Indirect Scope 3 GHG emissions data is publicly reported

Key observations

- Seventy-four percent of TWSE Issuers publicly report Scope 3 emissions data, trailing both DJBIC World (100%) and DJBIC Emerging Markets (97%). TWSE Top Decile companies achieve 100% disclosure, matching DJBIC World.
- **CSA expectation:** Leading practice involves measuring and publicly disclosing Scope 3 GHG emissions - indirect emissions across the value chain, including supply chain, business travel, product use and distribution.
- **Stakeholder expectations:** Scope 3 emissions, which capture indirect emissions across a company's value chain, represent a critical component of comprehensive climate risk assessment. Per Taiwan FSC's road map for Taiwan-listed companies to align with IFRS Sustainability Disclosure Standards, the initial adoption allows temporary exemption from Scope 3 emissions disclosure. Companies should prepare to measure and report these emissions using reasonable estimation methods. Disclosures can rely on available data and supportable information that does not require high costs to obtain.

Companies with third-party verification for Scope 3 GHG emissions data: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice: Scope 3 GHG emissions data verified by a third party

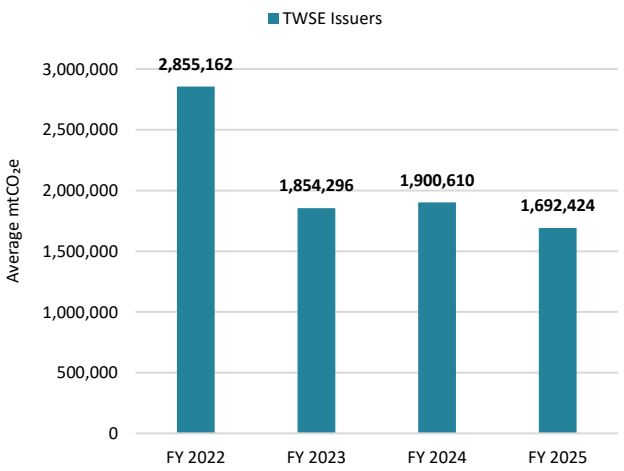
Key observations

- TWSE Issuers show 48% third-party verification for Scope 3 GHG emissions, compared with 95% for DJBIC World and 89% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% third-party verification, exceeding both global benchmarks.
- Scope 3 verification rates are lower than those of Scope 1 (63%) and Scope 2 (64%) for TWSE issuers, reflecting the complexity of value chain emissions assurance.
- Third-party verification of Scope 3 emissions varies across markets based on regulatory requirements, market practices and the complexity of value chain data collection.
- **CSA expectation:** Leading practice involves independent third-party verification or assurance of reported Scope 3 GHG emissions data, enhancing credibility and reliability of disclosed value chain emissions.
- **Stakeholder expectations**: Taiwan's FSC requires listed companies to enhance sustainability disclosure quality. Per their road map for Taiwan-listed companies to align with IFRS Sustainability Disclosure Standards, the initial adoption allows a temporary exemption from Scope 3 emissions disclosure. Companies should prepare to measure and report these emissions using reasonable estimation methods. Disclosures can rely on available data and supportable information that does not require high costs to obtain.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2022-2025; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights; Press Release-The Financial Supervisory Commission (FSC) releases the roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards-Financial Supervisory Commission; _CSA_MethodologyHandbook_SEM.pdf.

Analysis of Scope 3 emissions trend over 4 years

Average reported Scope 3 emissions for TWSE issuers, 2022-25



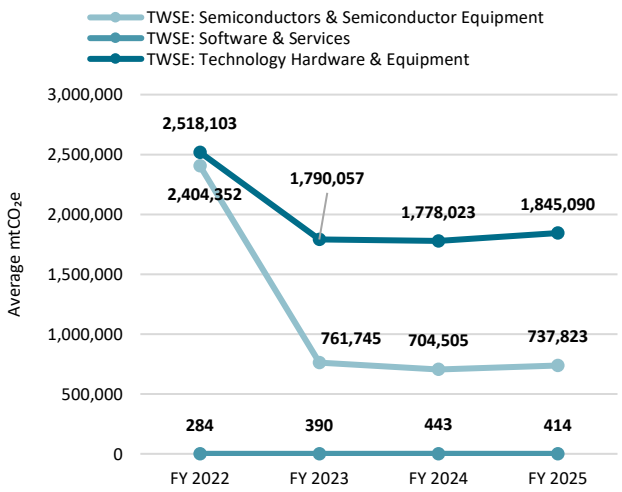
Note: This chart presents the average of disclosed emissions and is not adjusted for revenue, production volume, or any other operating metric; therefore, it cannot be used directly to determine changes in emissions intensity.

CSA expected practice	Decreasing trend of normalized Scope 3 GHG emissions over the past four years

Key observations

- Average reported Scope 3 emissions for TWSE issuers decreased by 41% from 2022 to 2025, with the largest decline occurring between 2022 and 2023.
- Scope 3 emissions data is influenced by reporting boundaries, category coverage, estimation methodologies and supplier data quality, which can vary across companies and years.
- **CSA expectation:** Companies should show that their Scope 3 emissions intensity is decreasing over time, typically across three to four years. This is particularly important because Scope 3 usually accounts for most of a company's total carbon footprint and involves emissions the company does not directly control, like those from suppliers, product transportation and product use. A downward trend shows the company is successfully working with suppliers and partners to reduce emissions across the entire value chain, not just in its own operations.

Average reported Scope 3 emissions for TWSE technology sectors (2022-2025)



Note: This chart presents the average of disclosed emissions and is not adjusted for revenue, production volume, or any other operating metric; therefore, it cannot be used directly to determine changes in emissions intensity.

CSA expected practice	Decreasing trend of normalized indirect Scope 3 GHG emissions for the past three or four comparator years

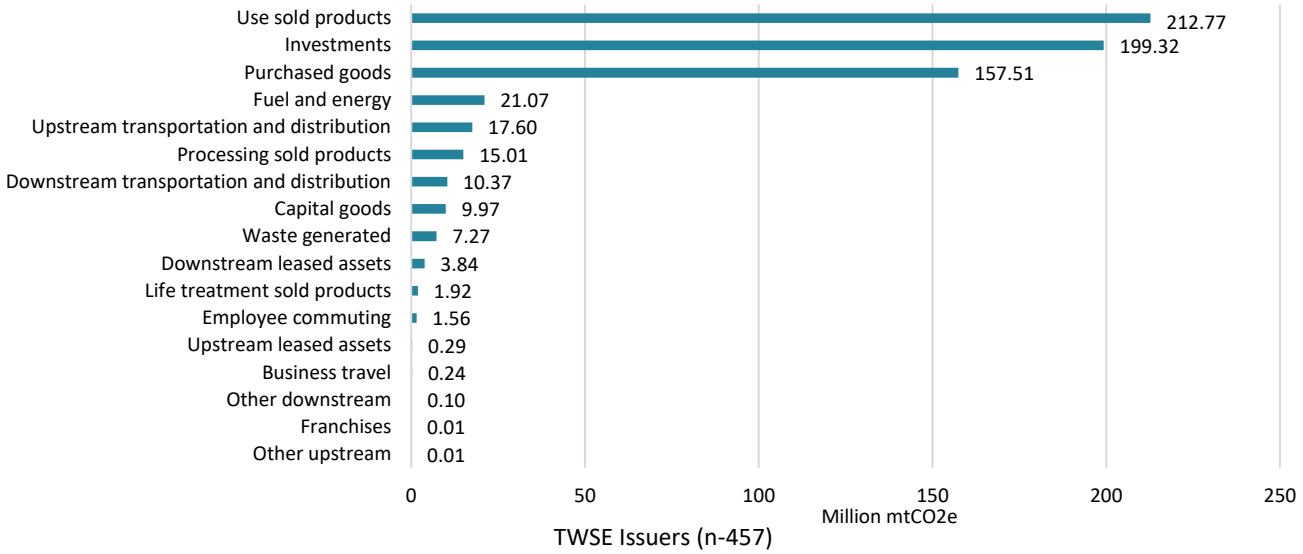
Key observations

- Semiconductors and semiconductor equipment (n=65): Average emissions decreased 68% from 2,404,352 $mtCO_2e$ (2022) to 761,745 $mtCO_2e$ (2023), with subsequent moderate changes through 2025.
- Technology hardware and equipment (n=118): Average emissions showed a similar pattern, with the largest decline between 2022 and 2023, followed by relatively stable levels in 2024 and a modest increase in 2025.
- Software and services (n=3): Average emissions remain minimal across all years relative to hardware-focused sectors, reflecting different business models and value chain structures.
  Note: Company counts (n) remained constant across all four years for each sector. Scope 3 data is influenced by reporting boundaries, category coverage and estimation methodologies.
- **CSA expectation:** Companies should show that their Scope 3 emissions intensity is decreasing over time, typically across three to four years. This is particularly important because Scope 3 usually accounts for most of a company's total carbon footprint and involves emissions the company does not directly control, like those from suppliers, product transportation and product use. A downward trend shows the company is successfully working with suppliers and partners to reduce emissions across the entire value chain, not just in its own operations.

Data universe: All TWSE issuers that have been assessed in CSA 2022-2025; all companies that have been assessed as part of specific industry groups mentioned above are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2022-2025.

Climate strategy

Aggregate Scope 3 emissions reported by category: TWSE issuers in 2025 (million $mtCO_2e$)



Note: The chart shows 17 categories of Scope 3 emissions, including 15 categories based on the GHG Protocol Corporate Value Chain Standard, as well as two additional categories 'other upstream activities' and 'other downstream activities' to capture emissions that cannot be classified within the standard 15 categories.

CSA expected practice Disclosure on company's Scope 3 emissions split based on the 15 categories of the GHG Protocol Corporate Value Chain Standard

Key observations

- Three categories dominate reported Scope 3 emissions: use of sold products (212,770,705 $mtCO_2e$), investments (199,318,184 $mtCO_2e$), and purchased goods and services (157,505,957 $mtCO_2e$), representing approximately 86% of total reported Scope 3 emissions.
- Mid-scale categories include fuel and energy (21,068,416 $mtCO_2e$), upstream transportation and distribution (17,595,109 $mtCO_2e$), processing of sold products (15,012,637 $mtCO_2e$), downstream transportation and distribution (10,370,109 $mtCO_2e$), and capital goods (9,974,527 $mtCO_2e$).
- Lower-scale categories include business travel (240,693 $mtCO_2e$), employee commuting, waste, leased assets, life treatment of sold products and franchises, with other downstream and upstream activities (6,363 $mtCO_2e$). *Category distribution reflects reporting boundaries, materiality assessments, data availability and estimation methodologies, which vary across companies and sectors.*
- **CSA expectation:** Leading practice involves disclosing Scope 3 emissions by relevant categories from the GHG Protocol's 15-category framework, typically covering at least five material categories applicable to the company's business model. Category-level disclosure enables investors to identify emissions concentration across upstream (purchased goods, transportation, business travel) and downstream (product use, end-of-life) activities, assess which value chain segments contribute most significantly and evaluate whether reduction strategies target the most material emissions sources.
- **Stakeholder expectations:** Taiwan's FSC requires listed companies to enhance sustainability disclosure quality. Per their road map for Taiwan-listed companies to align with IFRS Sustainability Disclosure Standards, the initial adoption allows a temporary exemption from Scope 3 emissions disclosure. Companies should prepare to measure and report these emissions using reasonable estimation methods. Disclosures can rely on available data and supportable information that does not require high costs to obtain.

Data universe: All TWSE issuers that have been assessed in CSA 2025; please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; Press Release-The Financial Supervisory Commission (FSC) releases the roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards-Financial Supervisory Commission.

Climate strategy

Physical climate risk adaptation

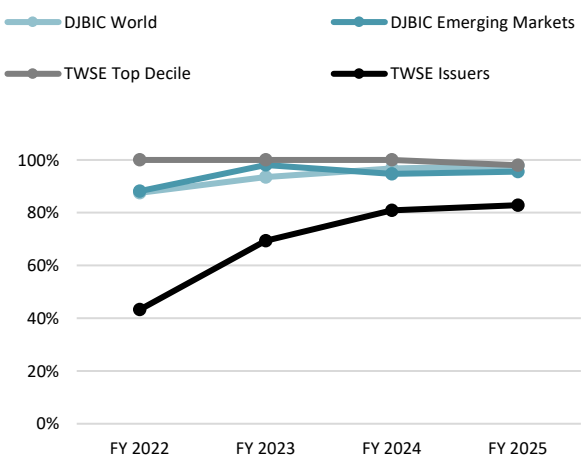
Rationale

The climate risk assessment of physical and transition risks is the basis on which companies plan adaptation and mitigation measures for those risks. Adaptation and mitigation measures are ideally planned so that context-specific factors are considered for all relevant assets and operations, since climate-related hazards are location- and context-specific.

Focus

Assessment of companies on whether they have adaptation measures for physical risks. Adaptation includes business opportunities such as new technologies to use scarce water resources more efficiently or the building of new flood defenses.

Companies publicly reporting physical climate risk adaptation plans: TWSE issuers vs. DJBIC benchmarks, 2022-25 (%)

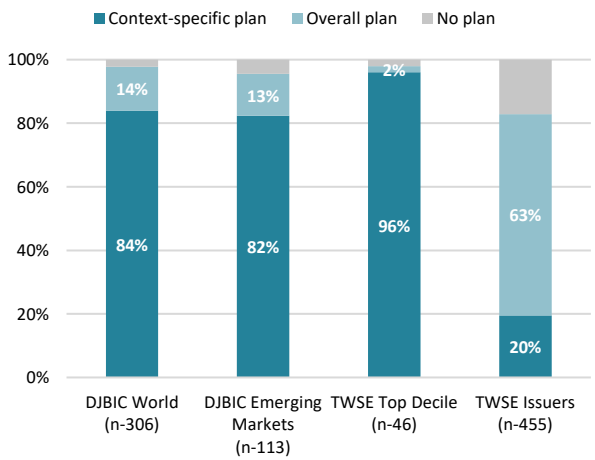


CSA expected practice	Public reporting on the plan to adapt to physical climate risk

Key observations

- TWSE Issuers reporting physical climate risk adaptation plans increased from 43% (2022) to 83% (2025), narrowing the gap with global benchmarks. DJBIC World increased from 88% (2022) to 98% (2025), while DJBIC Emerging Markets increased from 88% (2022) to 96% (2025). TWSE Top Decile companies maintained near-universal disclosure.
- **CSA expectation:** Leading practice involves public disclosure of climate adaptation strategies addressing physical climate risks, including acute risks and chronic risks. Adaptation planning demonstrates assessment of climate vulnerabilities across operations and supply chains, identification of high-risk locations, implementation of resilience measures, and integration into capital allocation and business continuity planning. Transparent disclosure enables investors to evaluate preparedness for climate-related disruptions and assess impacts on asset values and enterprise value.
- **Stakeholder expectations:** Investors and regulatory bodies have increasingly referenced TCFD and ISSB frameworks when evaluating climate disclosures for companies. As the central hub of the capital market, the TWSE expects to gradually improve the transparency of ESG information to allow more funds to flow into companies with better sustainability performance.

Types of physical climate risk adaptation plans: TWSE issuers vs. DJBIC benchmarks in 2025 (%)



CSA expected practice	Context specific plan to adapt to physical climate risks

Key observations

- TWSE Issuers primarily report overall adaptation plans (63%), while DJBIC World (84%) and DJBIC Emerging Markets (82%) primarily report context-specific plans tailored to identified physical climate risks. TWSE Top Decile companies report 96% context-specific plans, exceeding both global benchmarks and demonstrating targeted risk management aligned with leading practice.
- TWSE issuers report context-specific adaptation plans at 20%, compared with 84% for DJBIC World and 82% for DJBIC Emerging Markets. Seventeen percent of TWSE issuers report no adaptation plan, compared with 2% for DJBIC World and 5% for DJBIC Emerging Markets.

  Note: "Overall plan" refers to general adaptation strategies; "context-specific plan" refers to plans tailored to specific identified physical climate risks.
- **CSA expectation:** Leading practice involves implementing context-specific adaptation plans tailored to the company's unique geographic exposures, asset locations and operational vulnerabilities, demonstrating targeted risk management rather than generic climate resilience statements.

Data universe: All TWSE issuers that have been assessed in CSA 2022-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2022-2025; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights.

Climate strategy

Net-zero commitment

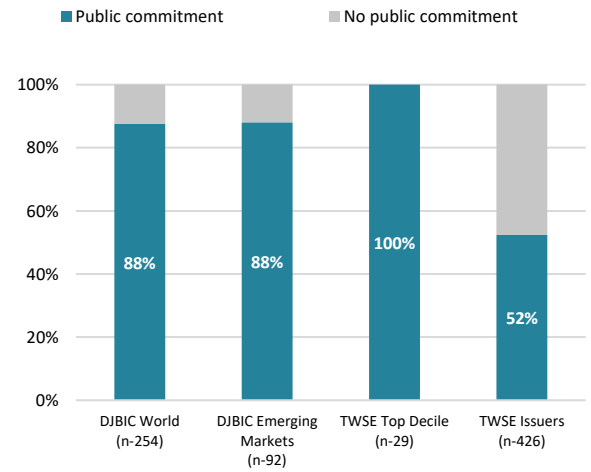
Rationale

Companies are increasingly adopting net-zero targets to align their activities with the aim of limiting the rise of global temperature to 1.5 degrees C above preindustrial levels. Owing to the lack of a common understanding of the definition of net-zero, the Science Based Targets initiative (SBTi) developed a global science-based standard for companies to set net-zero targets.

Focus

The focus is to find out if a company has made a net-zero commitment, how well it is aligned with the science-based targets and what activities are planned to reach the target. This question follows the criteria and definitions of the SBTi Net-Zero Standard.

Companies publicly committed to net-zero emissions across the value chain: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)

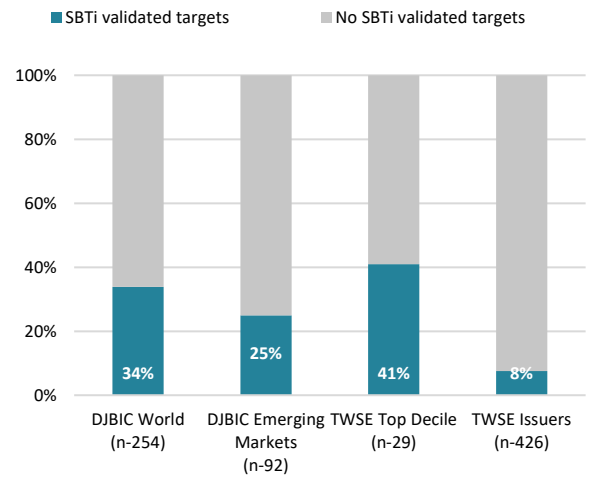


CSA expected practice	Public commitment to reach net-zero emissions across the value chain

Key observations

- Fifty-two percent of TWSE Issuers have publicly committed to net-zero emissions across their value chains, compared with 88% for both DJBIC World and DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% net-zero commitment, exceeding both global benchmarks.
- Net-zero commitment rates vary across markets based on regulatory requirements, investor expectations and corporate strategy timelines.
  Note: Public commitments reflect disclosed targets; implementation approaches, timelines and interim targets vary across companies.
- **CSA expectation:** Leading practice involves public commitment to achieving net-zero GHG emissions across the full value chain (Scopes 1, 2 and 3) with a defined target year.
- **Stakeholder expectations:** To achieve the goal of net-zero transformation in the capital market, the action plan released by the FSC in 2023 further encourages TWSE/TPEx-listed companies to establish carbon reduction targets, strategies and specific action plans.

Companies with SBTi-validated emissions reduction targets: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	Target validated by SBTi

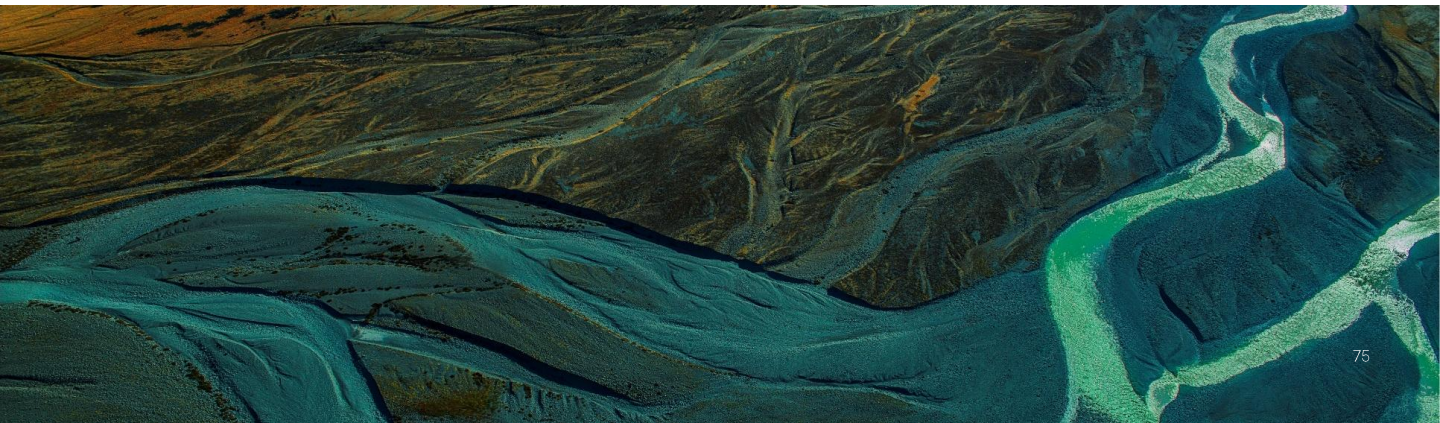
Key observations

- Eight percent of TWSE Issuers have emissions reduction targets validated by the SBTi, compared with 34% for DJBIC World and 25% for DJBIC Emerging Markets. TWSE Top Decile companies report 41% SBTi validation, exceeding both global benchmarks.
- SBTi validation rates vary across markets; validation is voluntary and requires meeting specific criteria for target ambition, scope coverage and timeframes.
  Note: SBTI validation represents one approach to target-setting; companies may have ambitious emissions targets through alternative frameworks or internal methodologies.
- **CSA expectation:** Credible commitments demonstrate science-based target setting, interim reduction milestones, comprehensive scope coverage, transparent decarbonization road maps and governance accountability, enabling investors to evaluate transition strategy credibility, capital allocation implications and alignment with climate goals.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to the financial sector in CSA. Therefore, a total of 115 companies across TWSE issuers and DJBIC peer groups are excluded from the above graph.
Sources: S&P Sustainable1 CSA 2025; The Development of Sustainability Information Disclosure in Taiwan - TWSE | Market Insights.

TWSE climate strategy scores improved from 11 to 48 (CSA 2020-25), with strong disclosure growth and varied adoption of assurance and target validation practices

- Climate strategy scores increased from 11 (CSA 2020) to 48 (CSA 2025) for TWSE Issuers, compared with 86 for DJBIC World and 82 for DJBIC Emerging Markets. TWSE Top Decile companies scored 92 points in 2025, exceeding both global benchmarks and improving from 79 points in 2020. Improvement accelerated from 2022 onward, supported by regulatory developments and alignment with international frameworks, including TCFD and IFRS Sustainability Disclosure Standards.
- Emissions disclosure is well established among TWSE Issuers: Scope 1 and Scope 2 reporting reached 98%, while Scope 3 reporting increased from 53% (2023) to 74% (2025). TWSE Top Decile companies achieve 100% disclosure across all three scopes. Average reported emissions showed declines, although data is influenced by reporting boundaries, category coverage and estimation methodologies.
- Third-party verification rates vary among TWSE Issuers: Scope 1 (63%), Scope 2 (64%) and Scope 3 (48%) verification rates remain below DJBIC benchmarks (89%-99%), reflecting different market practices and assurance infrastructure availability. TWSE Top Decile companies achieve 100% third-party verification across all three scopes, exceeding global benchmarks.
- Physical climate risk adaptation planning among TWSE Issuers increased from 43% (2022) to 83% (2025). TWSE Issuers primarily report overall adaptation plans (63%), while DJBIC benchmarks primarily report context-specific plans (82%-84%). TWSE Top Decile companies report 96% context-specific adaptation plans, exceeding both global benchmarks and demonstrating targeted risk management. Plan classification reflects disclosure specificity; companies may have detailed internal plans not fully reflected in public reporting.
- Net-zero commitments and target validation show varied adoption among TWSE Issuers: net-zero commitments stand at 52% (versus 88% for DJBIC benchmarks), while SBTi-validated targets stand at 8% (versus 25%-34% for DJBIC benchmarks). TWSE Top Decile companies achieve 100% net-zero commitment and 41% SBTi validation, with the latter exceeding both global benchmarks. Both represent voluntary frameworks; companies may have ambitious targets through alternative approaches.
- TWSE Issuers overall show lower rates than global benchmarks in third-party verification (all scopes), context-specific adaptation planning, net-zero commitments and SBTi validation. TWSE Top Decile companies demonstrate that Taiwan's leading companies achieve performance aligned with or exceeding global standards across all climate strategy dimensions.



Energy

Rationale

In the past century, there has been an unprecedented increase in the use of natural resources and materials. Producing more with less material is essential for many industries affected by the increasing scarcity of natural resources.

Resource efficiency and circularity can significantly enhance a company's competitiveness by reducing costs and minimizing environmental liabilities. Additionally, these practices position companies to be better equipped for future environmental regulations.

CSA approach

CSA frameworks assess the following aspects through this criterion:

- Energy performance refers to the sourcing and efficient use of energy consumed by the companies for their business operations.
- The key focus of this criterion is to identify trends across the company's energy/fuel consumption, efficiency and circularity across business operations.
- Majority of the questions in the energy criteria require some information in the public domain.

Aspects analyzed

Focus of the performance analysis and benchmarking included in the paper:

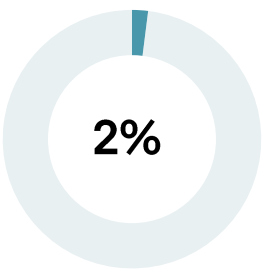
- Public reporting of energy consumption data
- Third-party verification for the reported data on energy consumption
- Trend analysis of the normalized non-renewable energy consumption reported data

Understanding the materiality of the topic

Energy refers to good practices and technologies to advance energy efficiency, cleaner energy, alternative energy and integrated energy systems. Energy consumption is a material dimension within the CSA framework, reflecting both operational efficiency and exposure to transition risks associated with the global shift toward lower-carbon energy systems. The CSA evaluates how companies measure, manage and reduce energy use as part of broader sustainability performance. Reliable measurement of energy consumption is therefore critical. At the same time, trends in energy consumption provide insight into companies' progress toward efficiency and decarbonization objectives, as reductions in energy intensity or absolute use can indicate more effective resource management and alignment with energy transition pathways.

Impact on enterprise value creation: Risk exposure, profitability

CSA 2025 criterion average weight across the applicable CSA industries (58/62)



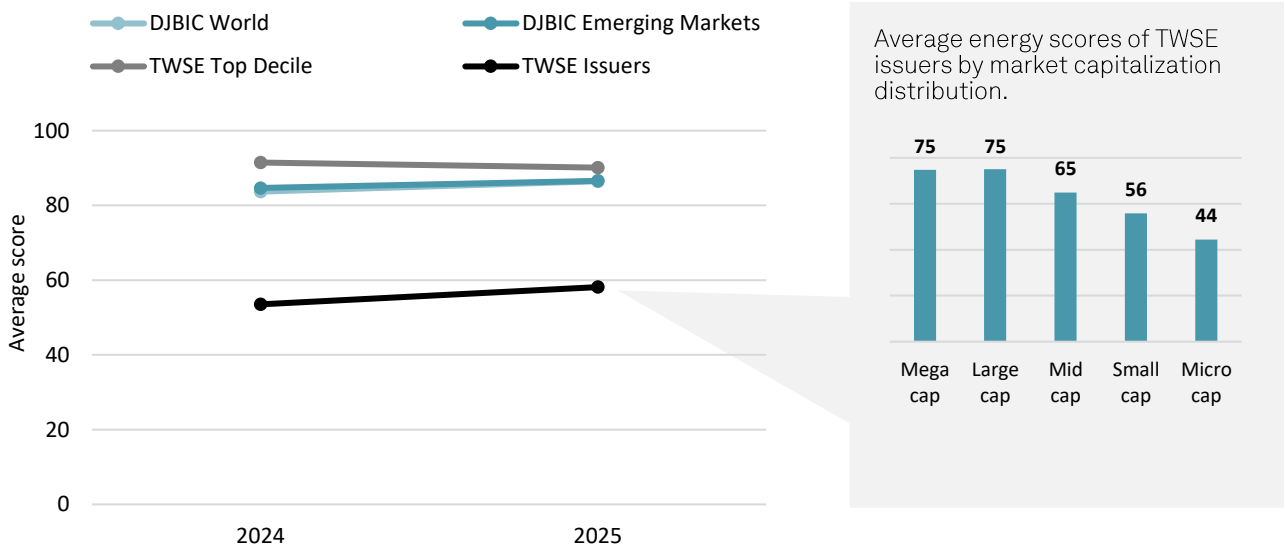
Sources: CSA Methodology Handbook; SP_22-Materiality-Core-Subjects_2025.pdf

Energy

Energy CSA score: Comparative performance review

The following analysis compares energy criterion scores for TWSE issuers with DJBIC World and Emerging Markets benchmarks over two years. The energy criterion was introduced in the CSA 2024 methodology update. The criterion assesses energy management programs and disclosed energy performance, including trend analysis of normalized energy consumption using at least three years of data, annual target setting and achievement, data coverage, third-party verification, and public reporting. For detailed scoring elements, refer to the CSA 2025 criterion rationale on the previous page.

2-year comparison of Energy average scores for TWSE issuers against DJBIC World and Emerging Market benchmarks



Average energy scores of TWSE issuers by market capitalization distribution.

What the data shows TWSE energy criterion scores improved from 54 (2024) to 58 (2025) but remained below DJBIC benchmarks

Key observations

→ The energy criterion was introduced in CSA 2024; two years of data are currently available. TWSE Issuers' average energy criterion scores increased from 54 (2024) to 58 (2025), compared with 86 for DJBIC World and 87 for DJBIC Emerging Markets in 2025. TWSE Top Decile companies scored 90 points in 2025, exceeding both DJBIC World and DJBIC Emerging Markets, with scores of 91 in 2024 and 90 in 2025.

Data universe: All TWSE issuers that have been assessed in CSA 2024-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research Universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2024-2025.

Energy management programs

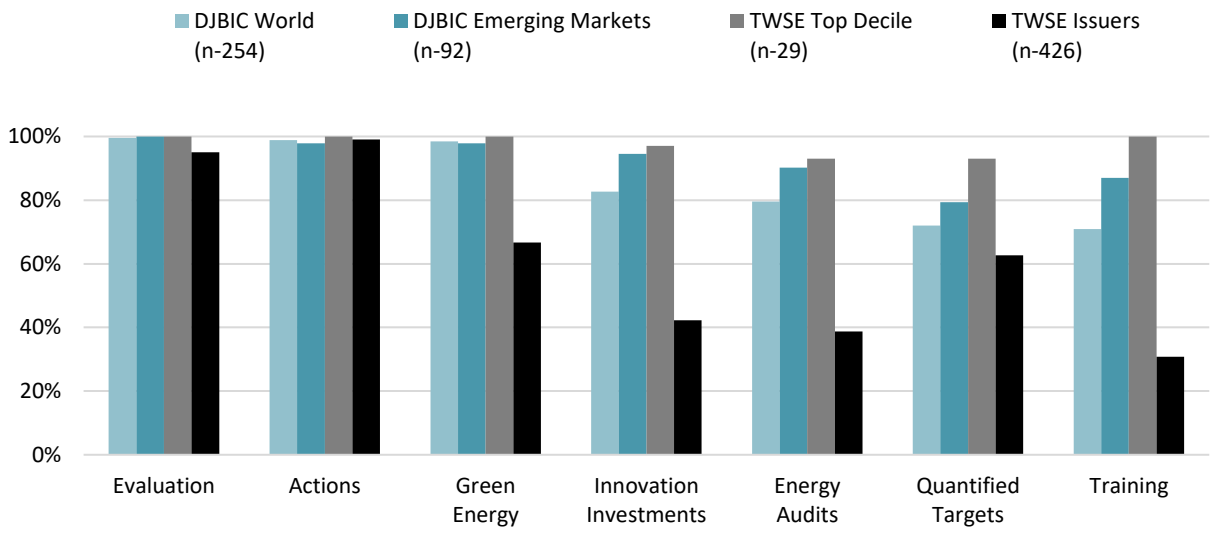
Rationale

By integrating energy management programs into business practice, companies can establish a robust process to continually improve energy performance. By improving energy performance and associated energy costs, companies can improve their competitiveness. In addition, improving energy performance can lead to climate change mitigation goals by reducing GHG emissions.

Focus

Focus is on the set of actions that ensure a robust, credible and reliable energy management program aimed at reducing energy consumption within a company's own operations.

Energy management program components: TWSE issuers vs. DJBIC benchmarks in 2025 (%) *(Refer to the glossary for the definitions of these components)*



CSA expected practice	The publicly available energy management programs cover energy audits, quantified targets to address energy savings, actions to reduce the amount of energy use, evaluation of progress in reducing energy consumption, use of clean or green energy, investments in innovation or research to decrease energy consumption and energy efficiency training for employees.

Key observations

- TWSE Issuers' energy management component adoption varies: innovation investments (42%), energy audits (39%), quantified targets (63%) and training (31%), compared with consistently higher rates across DJBIC benchmarks. TWSE Top Decile companies demonstrate substantially higher adoption, achieving 93%-100% across all components, including 100% for evaluation, actions, green energy adoption and training, 97% for innovation investments, and 93% for energy audits and quantified targets.
- DJBIC World and DJBIC Emerging Markets show higher adoption across components: Training (71% and 87%), energy audits (72% and 79%), with DJBIC Emerging Markets showing particularly high rates for training and actions.

  Note: Component adoption reflects disclosed programs; implementation approaches and maturity levels vary across companies.
- **CSA expectation:** Leading practice involves comprehensive public disclosure of energy management programs addressing four key dimensions: Assessment and planning (energy audits, quantified savings targets); implementation (actions to reduce energy use, clean and renewable energy adoption); innovation (investments in energy efficiency R&D and technology); and engagement (employee training and awareness programs). Comprehensive programs demonstrate a systematic approach to reducing energy consumption, improving operational efficiency, lowering costs and mitigating climate impact across the organization.
- **Stakeholder expectations**: Taiwan's FSC continues to implement the Green and Transition Finance Action Plan in alignment with Taiwan's climate policies and global sustainable development trends. The plan aims to channel financial resources toward industrial net-zero transition and facilitate reaching Taiwan's 2050 net-zero emissions goals.

Data universe: TWSE issuers that have been assessed in CSA 2025; companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graph. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to the financial sector in CSA. Therefore, a total of 115 companies across TWSE issuers, and DJBIC peer groups are excluded from the above graph.
Sources: S&P Sustainable1 CSA 2025; Press Release-FSC continues to promote green and transition finance, channeling capital in support of the industrial net-zero transition-Financial Supervisory Commission.

Energy consumption

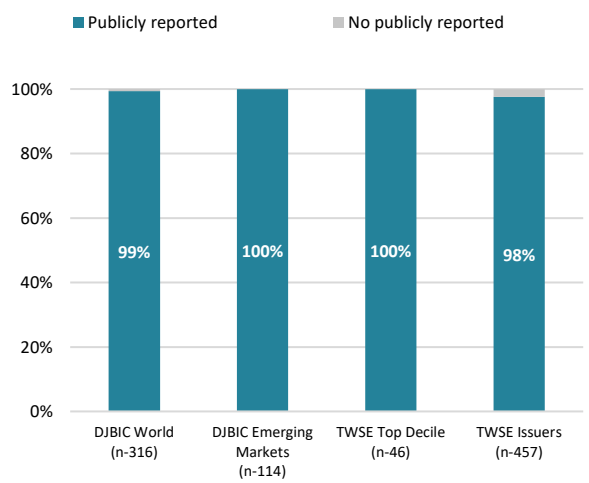
Rationale

In the past century, there has been an unprecedented increase in the use of natural resources and materials. Producing more with fewer materials is essential for many industries affected by the increasing scarcity of natural resources. Resource efficiency and circularity can enhance companies' competitiveness by reducing costs and environmental liabilities. It can also prepare companies for future environmental regulations.

Focus

Assessment of companies' total non-renewable and renewable energy consumption, assessing the overall trend of consumption and external verification of energy consumption data.

Companies publicly reporting energy consumption data: TWSE issuers vs. DJBIC benchmarks in 2025 (%)



CSA expected practice	Energy consumption data is publicly reported for the most recent reporting year

Key observations

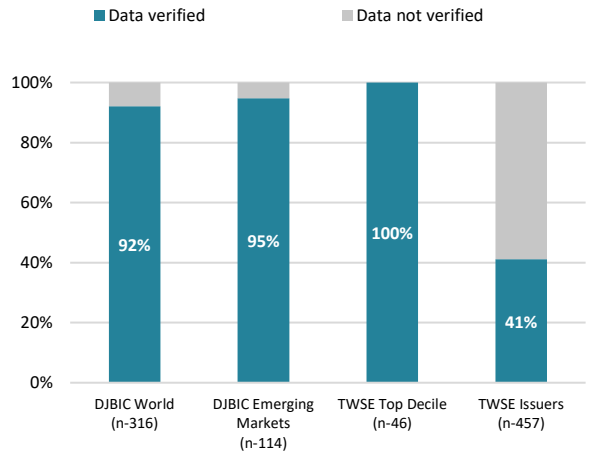
- Ninety-eight percent of TWSE issuers publicly report energy consumption data, compared with 99% for DJBIC World and 100% for DJBIC Emerging Markets, indicating near-universal adoption across all groups.

  Note: Disclosure rates reflect public reporting; data quality, completeness and comparability vary across companies.

- **CSA expectation:** Leading practice involves measuring and publicly disclosing total energy consumption for the most recent four comparator year, disaggregated by energy source (renewable versus non-renewable) and major operational segments. Transparent reporting enables investors to assess energy intensity and efficiency, evaluate exposure to energy price volatility and supply risks, and track clean energy transition progress.

- **Stakeholder expectations:** The former Corporate Governance Evaluation is replaced with the 2026 ESG Evaluation system that aims to cultivate a sustainable value culture, identify listed companies' ESG performance and offer investors a reference for their decisions. This system, in its expanded version, includes the environmental evaluation indicator on the disclosure of energy usage by companies.

Companies with third-party verification for energy consumption data: TWSE issuers vs. DJBIC benchmarks in 2025 (%)



CSA expected practice	Energy consumption data verified by a third party

Key observations

- TWSE Issuers show 41% third-party verification for energy consumption data, compared with 92% for DJBIC World and 95% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% third-party verification, exceeding both global benchmarks.

- Third-party verification of energy data varies across markets based on regulatory requirements, market practices and assurance infrastructure availability.

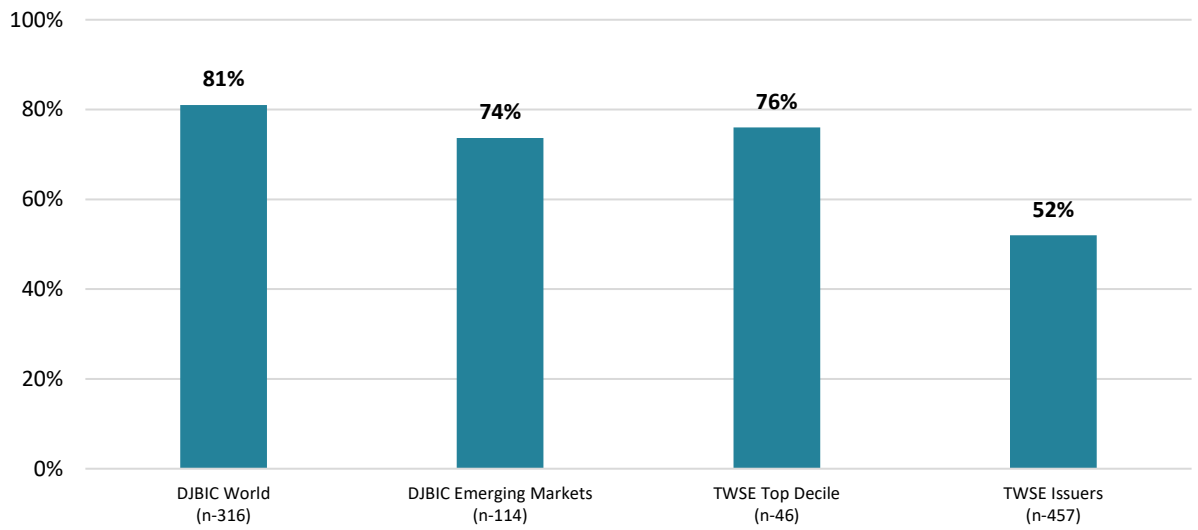
  Note: Verification rates are lower than disclosure rates across all groups; TWSE shows 98% disclosure with 41% verification.

- **CSA expectation:** Leading practice involves independent third-party verification or assurance of reported energy consumption data, enhancing credibility and reliability of disclosed energy metrics. External verification demonstrates commitment to data quality and transparency, enabling investors and stakeholders to make informed assessments of energy performance based on assured metrics.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graph. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Sources: S&P Sustainable1 CSA 2025; TWSE 公司治理中心 The 2026 ESG Evaluation System.

Energy

Companies reporting declining normalized non-renewable energy consumption trends: TWSE issuers vs. DJBIC benchmarks, 2022-25 (%)



CSA expected practice	Decreasing trend of normalized non-renewable energy consumption over the past four comparator years

Key observations

→ Fifty-two percent of TWSE Issuers report declining normalized non-renewable energy consumption over 2022-25, compared to 81% for DJBIC World and 74% for DJBIC Emerging Markets. TWSE Top Decile companies report 76% with declining trends, aligning closely with DJBIC Emerging Markets and approaching DJBIC World levels.

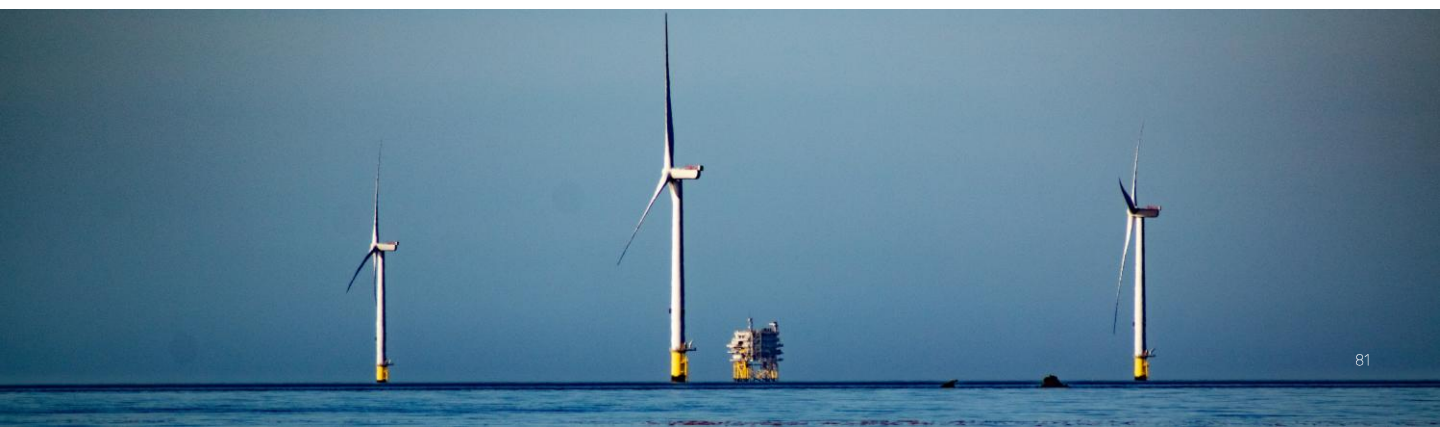
Note: Trend reporting reflects disclosed data for companies with at least three years of normalized consumption data; trends may be influenced by business activity changes, energy efficiency measures and fuel switching.

→ **CSA expectation:** Leading practice involves demonstrating sustained decreasing trends in normalized non-renewable energy consumption (consumption per revenue, production or other business metric) over multiple four comparator years, typically three to four. Downward non-renewable energy intensity trends signal effective energy efficiency strategies, clean energy adoption and fuel switching that reduce both energy costs and carbon emissions, enabling investors to assess fossil fuel transition progress, evaluate exposure to energy price volatility and carbon pricing, and gauge alignment with clean energy commitments.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graph. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable.
Source: S&P Sustainable1 CSA 2025.

TWSE Energy scores improved from 54 to 58 (2024-25) with near-universal disclosure and varied adoption of program components and verification practices

- Energy scores increased from 54 (2024) to 58 (2025) for TWSE Issuers, compared with 86 for DJBIC World and 87 for DJBIC Emerging Markets. TWSE Top Decile companies scored 90 points in 2025, exceeding both global benchmarks, with scores of 91 in 2024 and 90 in 2025. The Energy criterion was introduced in CSA 2024; two years of data are currently available.
- Energy consumption disclosure reached 98% among TWSE Issuers, matching Scope 1 and Scope 2 emissions disclosure rates. TWSE Top Decile companies achieve 100% disclosure. Near-universal disclosure indicates foundational reporting is established.
- Energy management component adoption varies among TWSE Issuers: innovation investments (42%), energy audits (39%), quantified targets (63%) and training (31%), compared with consistently higher rates across DJBIC benchmarks (71%-95%). TWSE Top Decile companies demonstrate comprehensive program adoption at 93%-100% across all components, including 100% for evaluation, actions, green energy adoption and training. Component adoption reflects disclosed programs; implementation approaches and maturity levels vary across companies.
- Third-party verification stands at 41% among TWSE Issuers, compared with 92%-95% for DJBIC benchmarks. TWSE Top Decile companies achieve 100% third-party verification, exceeding global benchmarks. Verification practices vary across markets based on regulatory requirements, market practices and assurance infrastructure availability.
- Fifty-two percent of TWSE Issuers report declining normalized non-renewable energy consumption trends (2022-25), compared with 74%-81% for DJBIC benchmarks. TWSE Top Decile companies report 76% with declining trends, aligning closely with DJBIC Emerging Markets (74%) and approaching DJBIC World (81%). Trends may be influenced by business activity changes, energy efficiency measures and fuel switching.
- Areas where TWSE Issuers overall continue to trail global benchmarks include comprehensive energy management program implementation across all components, third-party verification rates, and the proportion of companies demonstrating declining normalized non-renewable energy consumption trends. TWSE Top Decile companies demonstrate performance aligned with or exceeding global standards across these dimensions, with some areas where further progress can be made.



Labor practices

Rationale

Employees are among a company's most valuable assets. Fostering positive relationships with employees is crucial for the success of business operations, especially in industries where organized labor is prevalent. Beyond providing a safe and healthy working environment, companies should support fair treatment practices such as guaranteeing diversity, ensuring equal remuneration and supporting freedom of association.

In alignment with international labor and human rights standards, companies are increasingly expected to consistently implement and uphold these standards across all operations within the organization.

CSA approach

CSA frameworks assess the following aspects through this criterion:

- The primary focus of this criterion is on companies' policies for managing labor relations, associated key performance indicators, equal employment and development opportunities, as well as human rights and the freedom of association.
- Majority of the information and practices related to transparency and reporting should be available in the public domain.

Aspects analyzed

Focus of the performance analysis and benchmarking included in the paper:

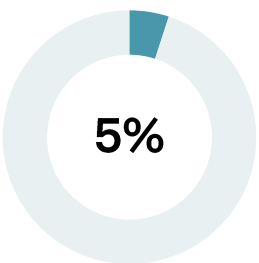
- Public disclosure of the company's policy to respect labor rights
- Public disclosure of the company's initiatives aimed at managing labor practices.
- Gender pay indicators
  - Company's gender pay indicators: Type of analysis
  - Gender pay gap analysis

Understanding the materiality of the topic

Labor practices concern relations and practices performed within, by and on behalf of companies. It includes the promotion of diversity, inclusion and equality. Central are core labor standards such as respecting freedom of association and the right to collective bargaining, as well as fair working conditions and social protection. Efforts to eliminate discrimination require, among others, assessment of the composition of the workforce and equal pay. Critical in some industries is the living wage, considering working hours and the basic needs of workers and their families.

Impact on enterprise value creation: Risk exposure, growth, profitability

CSA 2025 criterion average weight across the applicable CSA industries (62/62)



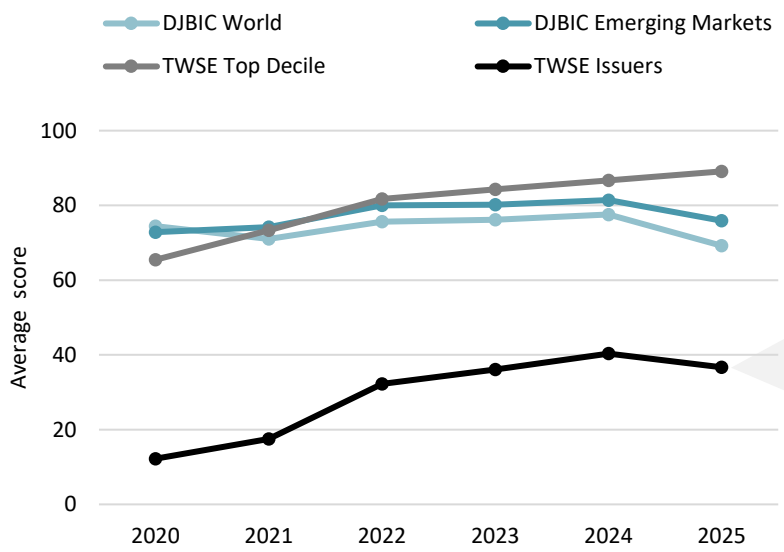
Sources: CSA Methodology Handbook; CSA Materiality Core Subjects

Labor practices

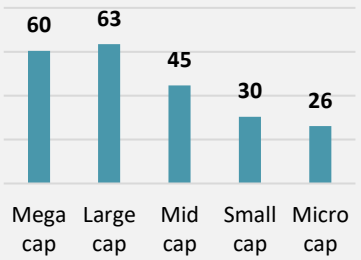
Labor practices CSA score: Comparative performance review

The chart below compares labor practices scores for TWSE-listed issuers assessed in CSA 2025 against two benchmark cohorts - DJBIC World and Emerging Markets - across a six-year period. The CSA labor practices criterion evaluates publicly disclosed policies and reported performance across several dimensions. Assessment factors include evidence of policies respecting labor rights, company initiatives managing labor practices and group-wide non-discrimination and anti-harassment policies. The criterion also measures workforce reporting transparency, including gender-based workforce breakdowns across management levels with associated targets, and coverage of race, ethnicity, and nationality data. Additional evaluation areas encompass gender pay indicators comparing average base salaries between women and men, and workforce coverage under trade union membership and collective bargaining agreements. For detailed information on the specific elements and methodology used in scoring this criterion, refer to the CSA approach outlined in the previous section.

6-year comparison of labor practices average scores for TWSE issuers against DJBIC World and Emerging Market benchmarks



Average labor practices scores of TWSE issuers by market capitalization distribution.



What the data shows TWSE labor practices scores trail benchmark cohorts

Key observations

- Labor practices scores for TWSE Issuers remained consistently below both benchmark cohorts throughout the six-year period. TWSE Issuers' average scores rose from 12 in 2020 to 37 in 2025, after increasing steadily through 2024 before declining slightly in 2025. DJBIC World scores fluctuated over the period, declining from 74 in 2020 to 71 in 2021, then rising to 78 in 2024 before falling to 69 in 2025. DJBIC Emerging Markets scores increased from 73 in 2020 to 81 in 2024, before declining to 76 in 2025. TWSE Top Decile companies scored 89 points in 2025, exceeding both benchmark cohorts, and improved consistently from 65 points in 2020.
- TWSE issuers showed an increase from 2020 to 2024, followed by a decline in 2025. DJBIC World and DJBIC Emerging Markets scores remained relatively stable across most of the period, with both cohorts experiencing declines in 2025. DJBIC World scores decreased to 69 in 2025.
- Average scores decreased across all three cohorts from 2024 to 2025. This decline coincided with updates to the CSA 2025 methodology. The labor practices criterion incorporated two additional questions addressing labor practices commitment/policy and programs. These methodology changes affected scoring parameters and may account for score decreases independent of changes in company practices.

Data universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Labor practices

Labor practices commitment

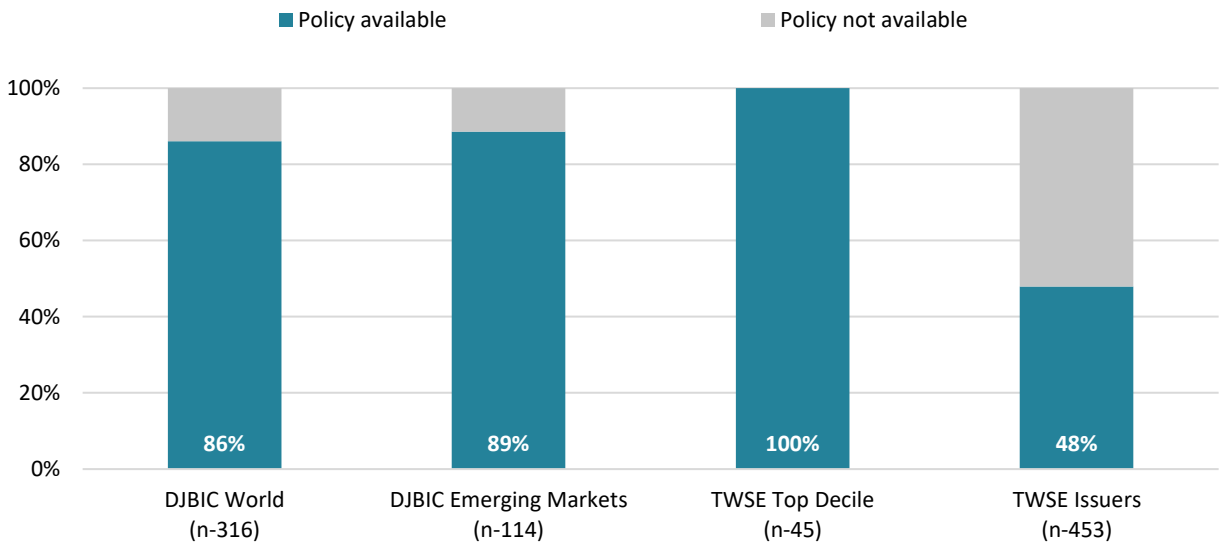
Rationale

Strong labor commitments are essential for promoting fair working conditions, reducing risks related to workforce dissatisfaction and enhancing a company's social license to operate. A clear public commitment to labor rights indicates that a company is proactive in addressing labor issues and aligns its practices with international standards, contributing to a more sustainable and equitable workforce.

Focus

The focus is to evaluate company's commitment to upholding fundamental labor rights and ensuring fair treatment across its workforce and supply chain.

Group-wide public commitment to respect labor rights: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	Publicly available group-wide labor practices policy/commitment

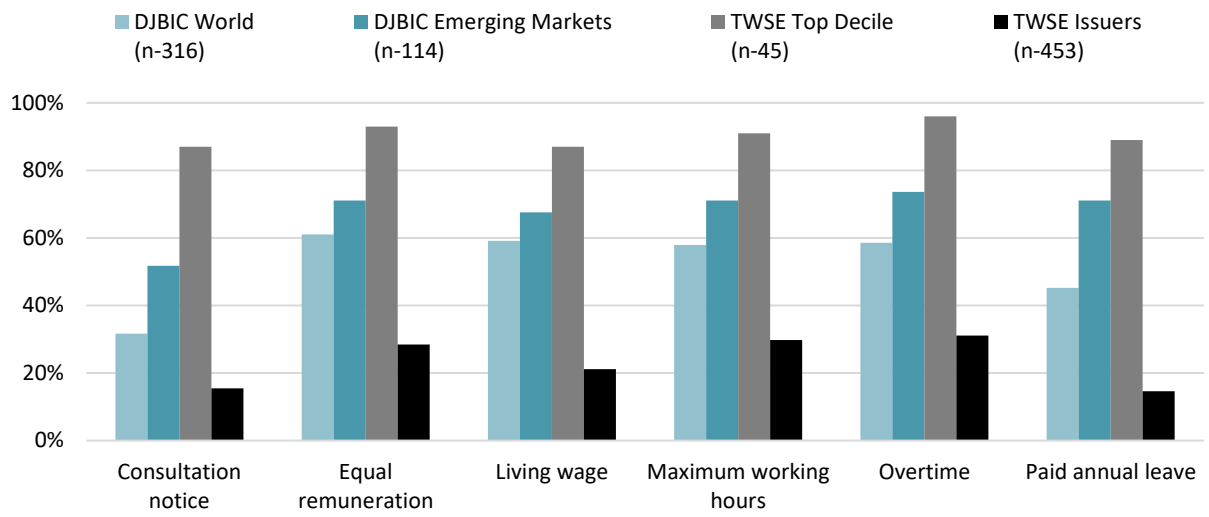
Key observations

- In CSA 2025, 48% of TWSE Issuers publicly disclosed group-wide labor practices policies, compared with 86% of DJBIC World companies and 89% of DJBIC Emerging Markets companies. TWSE Top Decile companies achieve 100% disclosure.
- The data shows higher disclosure rates among both DJBIC cohorts relative to TWSE issuers for group-wide labor practices commitments.
- Disclosure rate variations may reflect differences in industry composition, regulatory environments and market practices, though TWSE Top Decile's 100% demonstrates that comprehensive labor policy disclosure is achievable.
- **CSA expectation:** Leading practice involves public disclosure of group-wide labor rights policies addressing freedom of association and collective bargaining, elimination of forced and child labor, non-discrimination, fair wages and working hours, and safe working conditions. Commitments aligned with internationally recognized standards such as the International Labour Organization core conventions demonstrate corporate responsibility, support operational stability, reduce labor-related reputational and regulatory risks, and enable investors to assess human capital management practices across operations and supply chains.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
The question of "labor practices commitment" was introduced as part of the CSA 2024 methodology.
Source: S&P Sustainable1 CSA 2025.

Labor practices

Labor Rights Policy Components in Group-Wide Commitments: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	The publicly available group-wide labor practices policy/commitment covers the following aspects: setting minimum consultation notice, equal remuneration, paying living wages, maximum working hours, avoiding overtime and paid annual leaves

Key observations

- In CSA 2025, TWSE Issuers showed lower coverage rates for specific labor rights components compared with both DJBIC cohorts. TWSE Top Decile companies achieve 87%-96% coverage across all components. Equal remuneration provisions appeared in 28% of TWSE Issuers' policies, compared with 61% for DJBIC World and 71% for DJBIC Emerging Markets. Living wage provisions were included by 21% of TWSE issuers, compared with 59% for DJBIC World and 68% for DJBIC Emerging Markets.
- Coverage of maximum working hours, overtime and paid annual leave among TWSE issuers ranged from 15% to 31%. DJBIC Emerging Markets companies showed coverage rates above 70% for most of these components, while DJBIC World companies maintained rates at or above 50% in the majority of categories.
- The data shows variation in policy component coverage across the three cohorts for labor rights aspects assessed in CSA 2025.
- **CSA expectation:** Leading practice involves comprehensive labor practices policies addressing all three key dimensions: Fair compensation (equal remuneration, living wages); working time standards (maximum hours, overtime management, paid leave); and worker consultation (notice periods).

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
The question of "labor practices commitment" was introduced as part of the CSA 2024 methodology.
Source: S&P Sustainable1 CSA 2025.

Labor practices

Labor practices programs

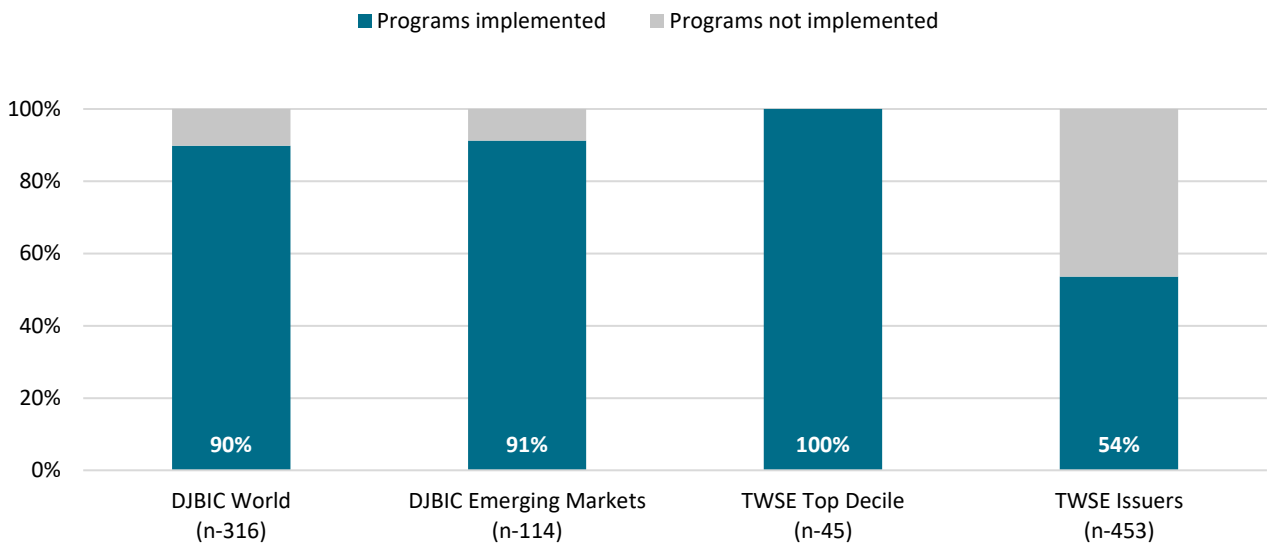
Rationale

Transparency and the proper management of labor practices can have a direct impact on a company's workforce and ultimately influence the company's reputation when labor practices are unfair or do not follow local and national laws or standards, as well as international norms. Labor-related programs seek to cover a set of actions that companies should follow to promote productive employment and decent work. The application of labor programs provides companies with tools to assess and improve performance in aspects such as achieving equal remuneration and social protection.

Focus

The focus is to assess how a company ensures the effective management of its labor practices through robust and dedicated labor programs.

Public disclosure of labor practices programs: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	Publicly available programs to manage company's labor practices

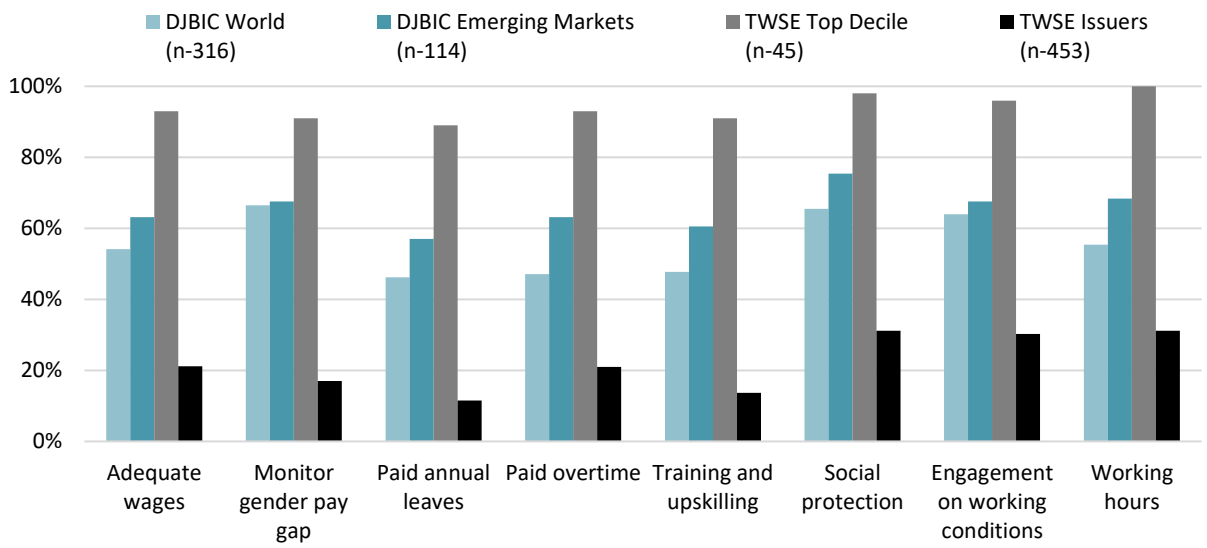
Key observations

- In CSA 2025, 54% of TWSE Issuers publicly disclosed labor practices programs, compared with 90% of DJBIC World companies and 91% of DJBIC Emerging Markets companies. TWSE Top Decile companies achieve 100% disclosure, exceeding both global benchmarks. DJBIC World and DJBIC Emerging Markets showed comparable disclosure rates at 90% and 91%, respectively.
- Disclosure rate variations across cohorts may reflect differences in regulatory frameworks and market practices.
- **CSA expectation:** Leading practice involves publicly disclosing labor practices programs demonstrating systematic implementation and monitoring of labor rights commitments.
- **Stakeholder expectation:** The former Corporate Governance Evaluation is replaced with the 2026 ESG Evaluation system that aims to cultivate a sustainable value culture, identify listed companies' ESG performance and offer investors a reference for their decisions. This system includes social indicators such as employee welfare, retirement plans, workplace safety, remuneration links, family and caregiving, employee training and development, and disclosure on employee-opinion surveys.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
Sources: S&P Sustainable1 CSA 2025; TWSE 公司治理中心 'The 2026 ESG Evaluation System'.

Labor practices

Labor practices program components: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	The publicly available labor practices active programs covering the following aspects: adequate wages, gender pay gap monitoring, paid annual leaves, paid overtime, training and upskilling of employees, social protection coverage, and workers' representative engagement on working conditions and hours

Key observations

- In CSA 2025, TWSE Issuers showed lower disclosure rates for specific labor program components compared with both DJBIC cohorts. TWSE Top Decile companies demonstrate substantially higher disclosure at 89%-100% across all eight components. Adequate wages and paid overtime programs each were disclosed by 21% of TWSE Issuers, compared with 54% and 47% of DJBIC World companies, respectively, and 63% of DJBIC Emerging Markets companies for both components.
- Gender pay gap monitoring programs were disclosed by 17% of TWSE issuers, compared with 66% of DJBIC World companies and 68% of DJBIC Emerging Markets companies. Paid annual leave programs were disclosed by 11% of TWSE issuers, compared with 46% of DJBIC World companies and 57% of DJBIC Emerging Markets companies.
- Disclosure rate variations may reflect differences in regulatory frameworks and market practices.
- **CSA expectation:** Leading practice involves comprehensive labor practices programs addressing all eight workforce dimensions: adequate wages, gender pay gap monitoring, paid overtime and leave, working hours, training and upskilling, social protection, and worker engagement, demonstrating systematic rather than selective implementation.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
Sources: S&P Sustainable1 CSA 2025

Labor practices

Gender pay indicators

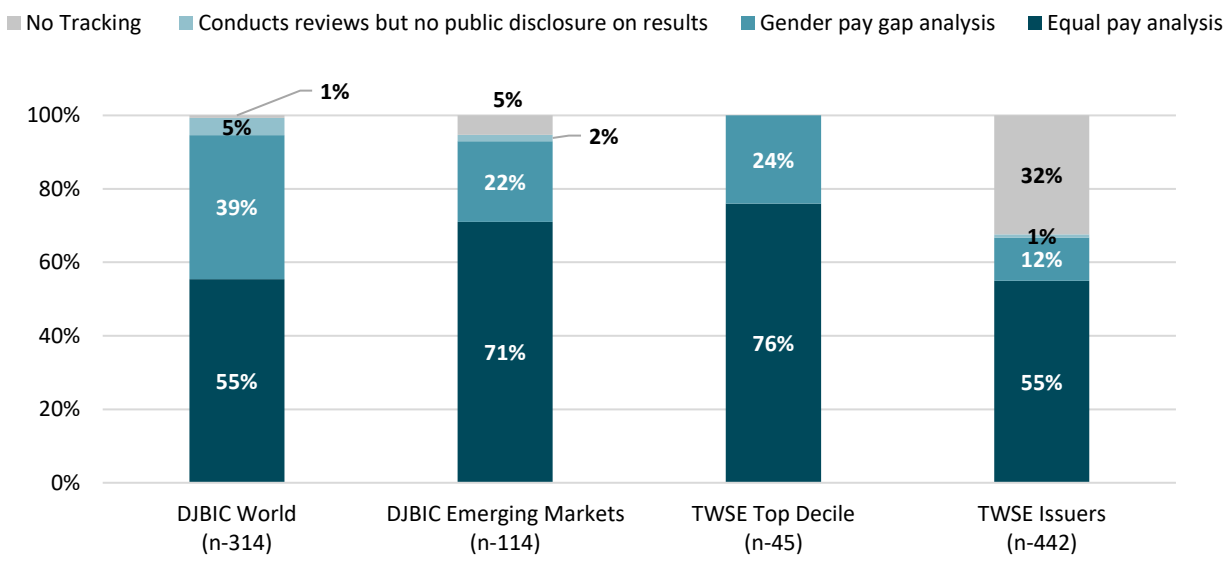
Rationale

An increasing number of countries are adopting regulations that require companies to conduct pay assessments and disclose the results, making this topic of high strategic importance. Furthermore, unequal pay and gender pay gaps threaten a company's ability to attract and retain women employees, lower employee engagement and can cause reputational damage.

Focus

Assessment of a company's pay practices by evaluating the results of its gender pay assessments.

Disclosed gender pay analysis types, CSA 2025



CSA expected practice	Companies are expected to conduct a gender pay assessment using either an equal pay analysis or a gender pay gap analysis and disclose the outcome.

Key observations

- In CSA 2025, 55% of TWSE Issuers and DJBIC World companies disclosed equal pay analysis, while 71% of DJBIC Emerging Markets companies disclosed this analysis type. TWSE Top Decile companies report 76% equal pay analysis disclosure, exceeding all benchmarks. Gender pay gap analysis was disclosed by 12% of TWSE Issuers, compared with 39% of DJBIC World companies and 22% of DJBIC Emerging Markets companies, with TWSE Top Decile at 24%.
- Among TWSE issuers, 32% disclosed that they do not track gender pay indicators, compared with 1% of DJBIC World companies and 5% of DJBIC Emerging Markets companies.
- TWSE issuers and DJBIC World companies showed comparable disclosure rates for equal pay analysis (55% each), while disclosure rates for gender pay gap analysis varied across all three cohorts.
- Disclosure rate variations may reflect differences in regulatory frameworks and market practices.
- **CSA expectation:** Leading practice involves a comprehensive gender pay equity assessment and public disclosure, including equal pay analysis comparing compensation for men and women in equivalent roles, and gender pay gap analysis examining median or mean compensation differences across the entire workforce. Transparent disclosure of assessment methodologies, quantitative findings (such as percentage pay gaps by level or function), root cause analysis and concrete remediation plans demonstrates commitment to pay equity, supports talent attraction and retention, reduces exposure to discrimination-related legal and reputational risks, and enables investors to evaluate human capital management practices and assess potential liabilities related to compensation inequity.

For definitions of equal pay and gender pay gap analysis, please refer to the glossary provided at the end of this paper.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to 15 TWSE issuers.
Source: S&P Sustainable1 CSA 2025.

TWSE labor practices scores improved from 12 to 37 (2020-25) with TWSE Top Decile exceeding global benchmarks at 89 points despite lower overall disclosure rates

- Labor practices scores for TWSE Issuers remained consistently below both benchmark cohorts throughout the six-year period. TWSE Issuers' average scores rose from 12 in 2020 to 37 in 2025, after increasing steadily through 2024 before declining slightly in 2025. DJBIC World scores fluctuated over the period, declining from 74 in 2020 to 71 in 2021, then rising to 78 in 2024 before falling to 69 in 2025. DJBIC Emerging Markets scores increased from 73 in 2020 to 81 in 2024, before declining to 76 in 2025. TWSE Top Decile companies scored 89 points in 2025, exceeding both benchmark cohorts, and improved consistently from 65 points in 2020.
- Group-wide labor rights commitments: TWSE Issuers at 48% versus DJBIC World at 86% and DJBIC Emerging Markets at 89%. TWSE Top Decile companies achieve 100% disclosure, exceeding both global benchmarks.
- Policy components with lower TWSE coverage include:
  - Equal remuneration provisions (TWSE at 28% versus DJBIC World at 61%, DJBIC Emerging Markets at 71%)
  - Living wage provisions (TWSE at 21% versus DJBIC World at 59%, DJBIC Emerging Markets at 68%)
  - Maximum working hours, overtime, paid annual leave (TWSE at 15%-31% versus DJBIC World at 50%+, DJBIC Emerging Markets at 70%+)
  - TWSE Top Decile companies demonstrate 87%-96% coverage across all policy components.
- Labor practices programs: TWSE Issuers at 54% versus DJBIC World at 90% and DJBIC Emerging Markets at 91%. TWSE Top Decile companies achieve 100% disclosure.
- Program components with lower TWSE disclosure:
  - Adequate wages and paid overtime (TWSE at 21% each versus DJBIC World at 54% and 47%, respectively and DJBIC Emerging Markets at 63% each)
  - Gender pay gap monitoring (TWSE at 17% versus DJBIC World at 66%, DJBIC Emerging Markets at 68%)
  - Paid annual leave programs (TWSE at 11% versus DJBIC World at 46%, DJBIC Emerging Markets at 57%)
  - TWSE Top Decile companies demonstrate 89%-100% disclosure across all eight program components.
- Equal pay analysis:
  - TWSE at 55%, comparable to DJBIC World 55%, TWSE Top Decile at 76%, exceeding all benchmarks.
  - Gender pay gap analysis: TWSE is at 12% disclosure, below 39% for DJBIC World and 22% for DJBIC Emerging Markets. Among the TWSE Top Decile disclosure is at 24% below the DJBIC World's 39%.
  - No gender pay tracking disclosed: TWSE at 32% versus DJBIC World at 1%, DJBIC Emerging Markets at 5%
- Areas where TWSE Issuers overall continue to trail global benchmarks include group-wide labor rights commitments, comprehensive policy component coverage, labor practices program disclosure, program component implementation, and gender pay gap analysis. TWSE Top Decile companies demonstrate performance aligned with or exceeding global standards across labor practices dimensions, with scores of 89 points surpassing both DJBIC benchmarks.



Human capital management

Rationale

Human capital makes up a significant part of a company's intangible assets and for many industries, human capital development is one of the most financially material sustainability factors.

In light of the drivers of technological disruption and innovation, demographic shifts and societal developments, companies must prioritize the development of their human capital. It is essential to ensure that employees possess the necessary skill sets to perform effectively and execute the business strategy successfully.

CSA approach

CSA frameworks assess the following aspects through this criterion:

- The company's comprehensive approach to identifying skill gaps, measuring human capital management and developing systems to share knowledge across the company.
- Effective management of human capital. Areas covered are:
  - Recruitment
  - Development
  - Performance management and compensation
- Ensuring skill sets to align with corporate strategy and perform well
- Talent attraction and retention-related employee support programs
- Employee wellbeing
- Majority of the information and practices should be available in the public domain

Aspects analyzed

Focus of the performance analysis and benchmarking included in the paper:

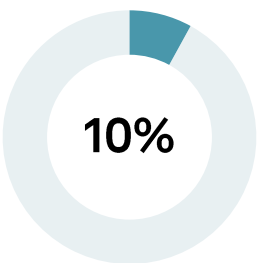
- Employee development programs for the enhancement of employee skills
- Employee support programs: Employee benefits, work conditions and family benefits

Understanding the materiality of the topic

Human capital management is about the effective management of human capital, a critical part of the intangible assets of any company. Human capital management areas range from recruitment and development to performance management and compensation. Development activities include education, training and coaching, ensuring employees have the necessary abilities and skill sets to perform well. The topic also encompasses talent attraction and retention, related employee support programs such as flexible working arrangements and stress management, as well as employee surveying to track core employee wellbeing metrics.

Impact on enterprise value creation: Growth, profitability

CSA 2025 criterion average weight across the applicable CSA industries (62/62)



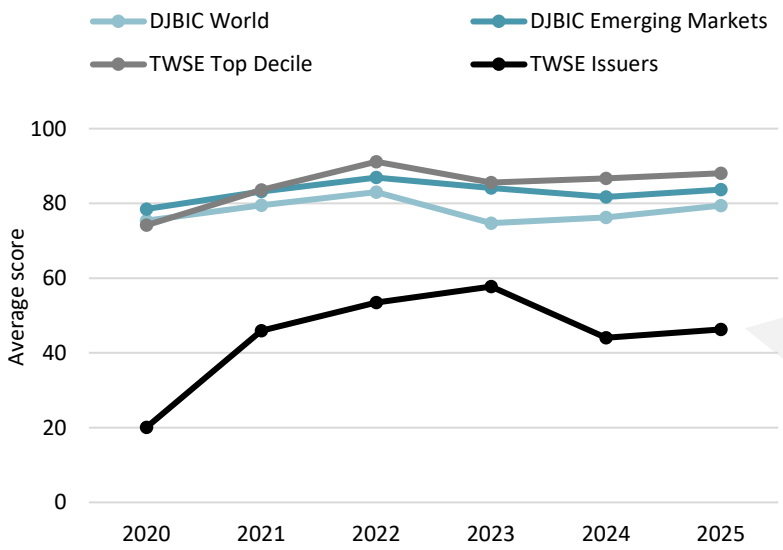
Sources: CSA Methodology Handbook; CSA Materiality Core Subjects

Human capital management

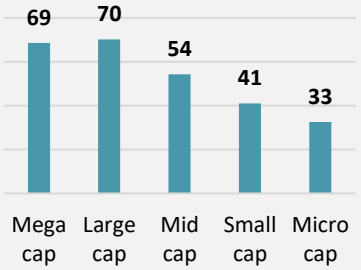
Human capital management CSA score: Comparative performance review

The chart below compares human capital management scores for TWSE-listed issuers assessed in CSA 2025 against two benchmark cohorts DJBIC World and Emerging Markets - across a six-year period. The CSA human capital management criterion evaluates publicly disclosed policies and reported performance across several dimensions. Assessment factors include training and development metrics such as average hours and spending on employee training, training coverage and breakdown, and employee development programs. The criterion also measures human capital return on investment (HC ROI) disclosure, including revenue, operating expenses, employee-related expenses and HC ROI trends. Additional evaluation areas encompass hiring statistics with diversity breakdowns, performance appraisal structures and frequency for individuals and teams, employee support programs including long-term incentives below senior management level, and workforce stability indicators such as total and voluntary turnover rates and employee wellbeing survey trends. For detailed information on the specific elements and methodology used in scoring this criterion, refer to the CSA approach outlined in the previous section.

6-year comparison of human capital management average scores for TWSE issuers against DJBIC World and Emerging Market benchmarks



Average human capital management scores of TWSE issuers by market capitalization distribution.



What the data shows TWSE human capital management scores consistently trail DJBIC benchmarks across six years, with the 2024 decline coinciding with CSA methodology updates affecting all cohorts.

Key observations

- Human capital management scores for TWSE Issuers remained below both benchmark cohorts throughout the six-year period. TWSE Top Decile companies scored 88 points in 2025, exceeding DJBIC Emerging Markets by 4 points (84) and improving from 74 points in 2020. DJBIC World and DJBIC Emerging Markets companies showed consistently higher average scores across all years assessed.
- TWSE issuers showed an increase from 2020 to 2023, followed by a decline in 2024 and a partial recovery in 2025. DJBIC Emerging Markets companies recorded scores above 80 from 2021 to 2025.
- The CSA human capital management criterion methodology was updated in 2024. Year-over-year comparisons involving 2024 and subsequent periods reflect these methodology changes in addition to any changes in company practices.

Data Universe: All TWSE issuers that have been assessed in CSA 2020-2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to Research Universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. The composition of the above four comparator groups differs by size, sector and geography.
Source: S&P Sustainable1 CSA 2020-2025.

Human capital management

Employee development programs

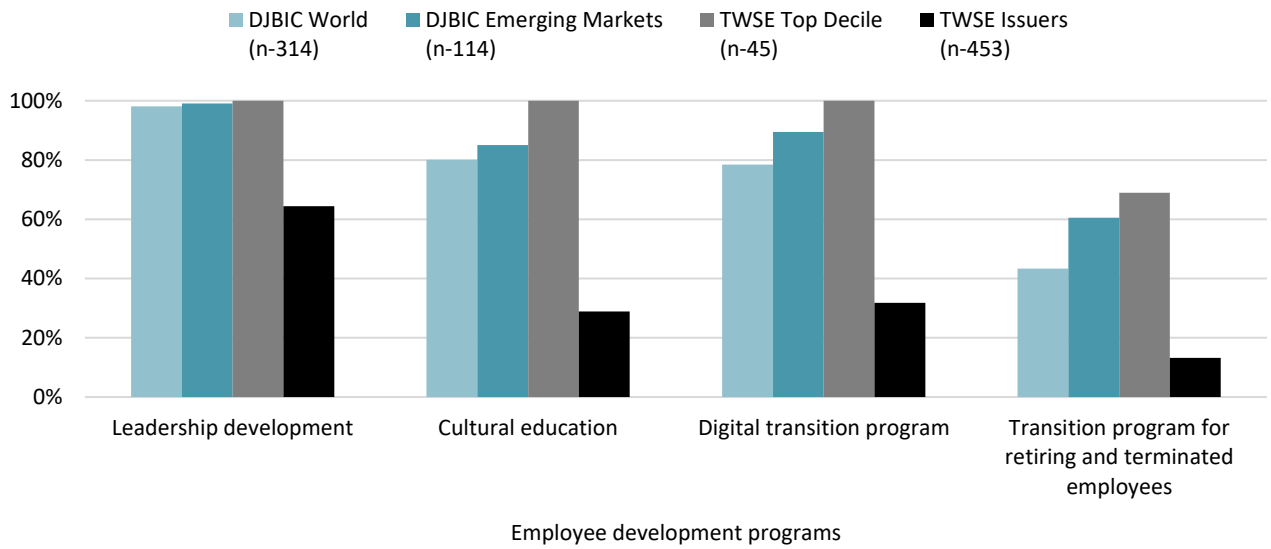
Rationale

One of the challenges companies face is comprehending the positive business and financial impacts of investing in employees and determining whether these investments yield the desired outcomes for both their workforce and the organization. Demonstrating these benefits and quantifying them is crucial. For investors, understanding whether companies are optimizing the returns on their investments in human capital is essential for evaluating the efficient deployment of capital and the strategic, forward-looking investments in their workforce.

Focus

Assessment of the availability of skill development programs for employees, whether on a full-time or part-time basis, and evaluates how effectively companies can measure the benefits of their human capital investments.

Disclosed employee development program types, CSA 2025 (*Refer to the glossary for the definitions of these programs*)



CSA expected practice	Public disclosure on the types of programs provided for employee development

Key observations

- In CSA 2025, leadership development programs were disclosed by 64% of TWSE Issuers, compared with 98% of DJBIC World companies and 99% of DJBIC Emerging Markets companies. TWSE Top Decile companies achieve 100% disclosure for leadership development, cultural education and digital transition programs, with 69% for transition programs for retiring and terminated employees.
- DJBIC Emerging Markets companies showed higher disclosure rates than DJBIC World companies across all assessed program types, including cultural education, digital transition programs, and transition programs for retiring and terminated employees.
- TWSE issuers showed lower disclosure rates than both benchmark cohorts across all program categories, with the largest differentials in leadership development and employee transition programs.
- Disclosure rate variations may reflect differences in regulatory frameworks, market practices and organizational priorities.
- **CSA expectation:** Leading practice involves publicly disclosing diverse employee development programs: leadership development, building talent pipelines and succession readiness; digital transformation training, equipping employees for evolving business requirements; cultural competency and diversity education, fostering inclusive environments; and career transition support for retiring or departing employees. Comprehensive program portfolios demonstrate strategic human capital investment, support workforce agility and retention, reduce skills gaps and succession risks, and enable investors to assess talent management effectiveness and workforce preparedness for business transformation.
- **Stakeholder expectations:** The 2026 ESG Evaluation System aims to cultivate a sustainable value culture, identify listed companies' ESG performance and offer investors a reference for their decisions. Within its social indicators, the system evaluates whether companies have established employee training and development programs aimed at improving employees' career skills, and whether they disclose the program content and implementation status.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
Sources: S&P Sustainable1 CSA 2025; The 2026 ESG Evaluation System.

Human capital management

Employee support programs

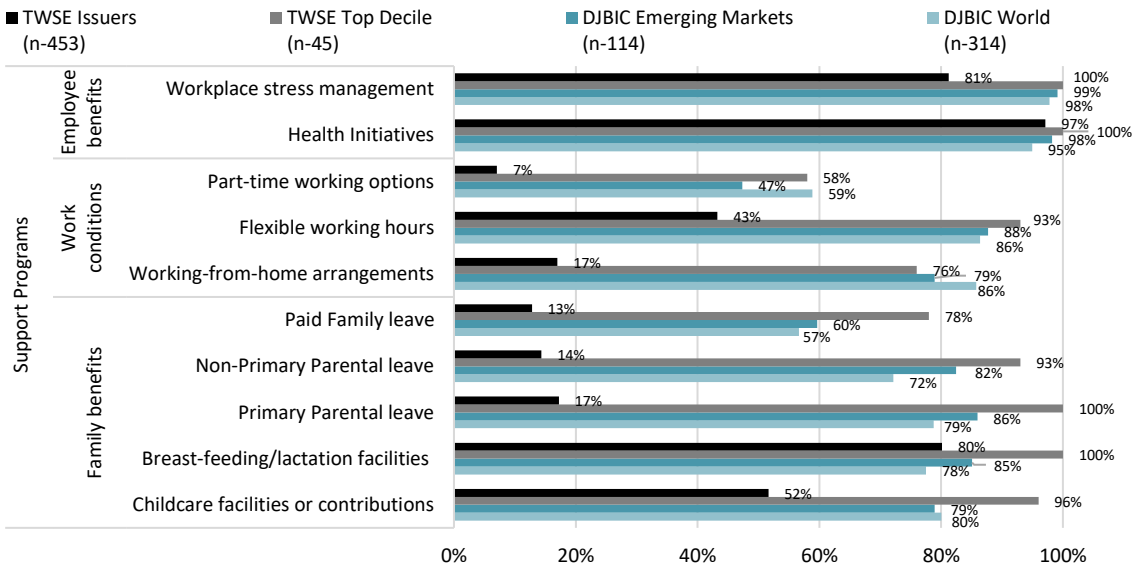
Rationale

Employee health and well-being are essential to ensuring employee satisfaction, productivity and retention. While flexible work arrangements allow employees to adapt their work schedule to their individual needs and personal commitments, paid parental and care leave, as well as childcare facilities and lactation rooms, ensure that employees can balance work and care responsibilities. This flexibility and these benefits boost employee morale, increase productivity, reduce absenteeism and help attract and retain top talent while reducing turnover. This can result in companies improving their financial and nonfinancial performance indicators.

Focus

Assessment of a company's programs and policies that aim to foster employee health and well-being. To reward greater flexibility and equality for caregivers, the question considers the parental leave granted to nonprimary caregivers as a percentage of the total number of weeks provided to the primary caregiver.

Disclosed employee support program types, CSA 2025 *(Refer to the glossary for the definitions of these programs)*



CSA expected practice	Publicly available employee support programs covering aspects on employee benefits, work conditions and family benefits

Key observations

- In CSA 2025, TWSE Issuers showed lower disclosure rates than both benchmark cohorts for most employee support program categories. TWSE Top Decile companies demonstrate substantially higher disclosure at 58%-100% across all ten program types, with 100% for workplace stress management, health initiatives, primary parental leave and breastfeeding/lactation facilities. Paid family leave, primary and non-primary parental leave, and part-time working options showed the largest disclosure differentials between TWSE Issuers and benchmark cohorts.
- DJBIC World and DJBIC Emerging Markets companies showed comparable disclosure rates across most categories. DJBIC Emerging Markets companies showed higher disclosure for breastfeeding/lactation facilities and parental leave programs, while DJBIC World companies showed higher disclosure for part-time working options and work-from-home arrangements.
- Health initiatives were disclosed by 97% of TWSE issuers, 95%+ of DJBIC World companies and 95%+ of DJBIC Emerging Markets companies. Workplace stress management programs were disclosed by 81% of TWSE issuers compared with 95%+ for both benchmark cohorts. Disclosure rate variations may reflect differences in regulatory frameworks, market practices and organizational structures.
- **CSA expectation:** Leading practice involves comprehensive employee support programs covering health and well-being (stress management, health initiatives), flexible work arrangements (part-time, flexible hours, remote work), and family support (parental leave, childcare, lactation facilities), demonstrating holistic workforce support.
- **Stakeholder expectations:** Taiwan's 2026 ESG Evaluation System is designed to foster a sustainable value-oriented corporate culture, assess the ESG performance of listed companies and provide investors with a practical reference for decision-making. Within its social indicators, the system evaluates whether a company provides a workplace environment and measures that are friendly to marriage, childbearing or family caregiving, and describes the implementation status and effectiveness.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to four TWSE issuers.
Sources: S&P Sustainable1 CSA 2025; The 2026 ESG Evaluation System.

Human capital management

Trend of employee well-being

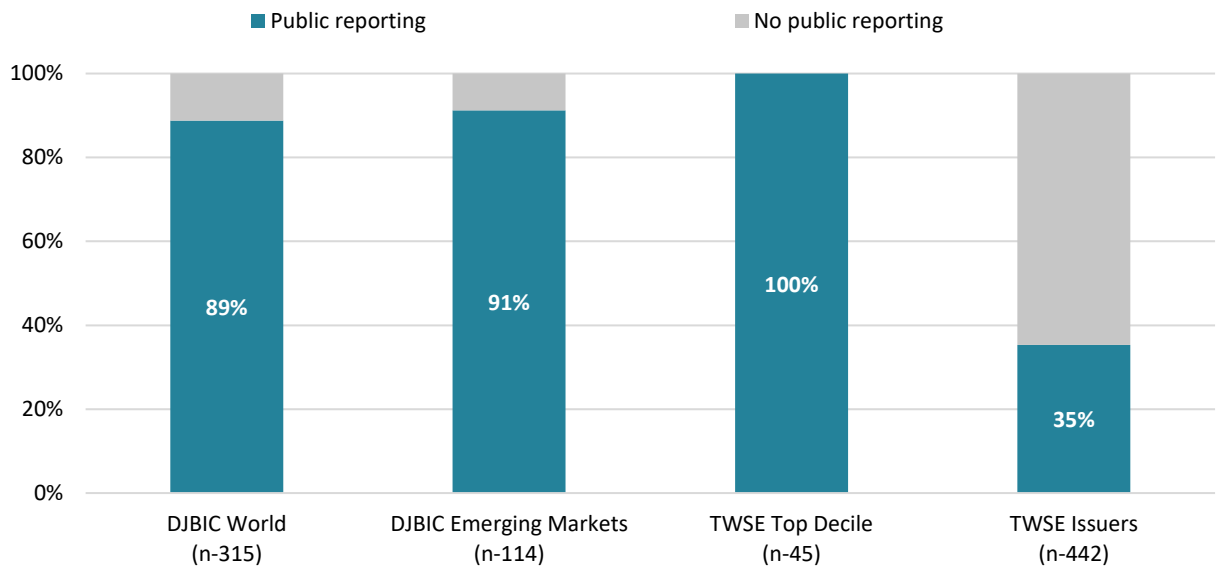
Rationale

Employee engagement, satisfaction and well-being surveys are crucial tools for evaluating employee conditions; developing policies to attract, retain and develop the best employees; and identifying areas for improvement. The four aspects - job satisfaction, purpose, happiness and stress - are recommended by the World Wellbeing Movement as evidence-informed employee well-being outcome measures. Research indicates there is a strong link between employee well-being and business outcomes such as employee productivity, retention, recruitment and firm performance.

Focus

Focus is to determine whether companies conduct regular employee surveys and how metrics on job satisfaction, purpose, happiness and stress are addressed in employee surveys.

Public disclosure on the results of annual employee surveys: TWSE issuers vs. DJBIC benchmarks in CSA 2025 (%)



CSA expected practice	Public reporting on the results of annual employee surveys for the most recent reported year

Key observations

- In CSA 2025, public disclosure rates for annual employee survey results differ between TWSE Issuers and DJBIC constituents. Among DJBIC constituents, 89% of World companies and 91% of Emerging Markets companies disclosed annual employee survey results. Among TWSE Issuers, 35% disclosed this information. TWSE Top Decile companies achieve 100% disclosure, exceeding both global benchmarks.
- **CSA expectation:** Leading practice involves publicly disclosing annual employee well-being survey results with substantial workforce participation, addressing key dimensions including job satisfaction, work-life balance, mental health, workplace safety and engagement. Multiyear disclosure enables investors to assess workforce sentiment trends, evaluate employee experience quality, identify retention or morale risks, and understand how human capital practices impact wellbeing and organizational culture.
- **Stakeholder expectations:** Taiwan's 2026 ESG Evaluation system is designed to foster a sustainable value-oriented corporate culture, assess the ESG performance of listed companies and provide investors with a practical reference for decision-making. Within its social indicators, the system evaluates whether a company regularly conducts employee opinion surveys and discloses the status of implementation and plans for improvement.

Data universe: All TWSE issuers that have been assessed in CSA 2025; all companies that have been included on DJBIC World and DJBIC Emerging Markets are included in the scope of the above graphs. For more details on the scope of the analysis, please refer to the Research universe section of this report.
The data analysis only includes companies for which this question has been considered applicable. This question is not applicable to 15 TWSE issuers and 3 DJBIC World members.
Sources: S&P Sustainable1 CSA 2025; The 2026 ESG Evaluation System.

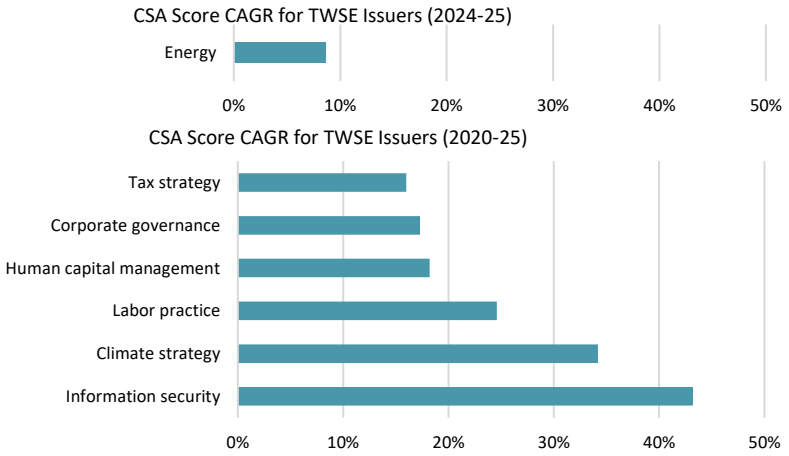
TWSE human capital management scores rose from 20 to 46 (2020-25) with strong health initiatives disclosure (97%) but gaps in leadership development (64%) and family support programs

- TWSE Issuers' average human capital management scores increased from 20 (2020) to 46 (2025), remaining below DJBIC World and DJBIC Emerging Markets across all years assessed, with volatility from 2023-2025 coinciding with CSA 2024 methodology updates. TWSE Top Decile companies scored 88 points in 2025, approaching DJBIC Emerging Markets levels and improving from 74 points in 2020.
- Leadership development program disclosure reached 64% among TWSE Issuers, compared with 98% for DJBIC World and 99% for DJBIC Emerging Markets. TWSE Top Decile companies achieve 100% disclosure for leadership development, cultural education and digital transition programs, with 69% for transition programs for retiring and terminated employees. DJBIC Emerging Markets companies showed higher disclosure rates than DJBIC World across all assessed development program types.
- Program categories with lower TWSE disclosure include:
  - Cultural education programs
  - Digital transition programs
  - Transition programs for retiring and terminated employees
- Employee support program disclosure gaps: Family and work condition benefits showed significant disclosure differentials:
  - Paid family leave (TWSE lower than both benchmarks)
  - Primary and non-primary parental leave (TWSE lower than both benchmarks)
  - Part-time working options (TWSE lower than both benchmarks)
  - TWSE Top Decile companies demonstrate 58%-100% disclosure across all ten employee support program types, with 100% for workplace stress management, health initiatives, primary parental leave and breastfeeding/lactation facilities
  - Health initiatives disclosure: TWSE at 97%, comparable to DJBIC cohorts (95%+)
  - Workplace stress management: TWSE at 81% versus DJBIC World at 95%+, DJBIC Emerging Markets at 95%+
- Health initiatives disclosure reached 97% among TWSE Issuers, comparable to DJBIC cohorts (95%+), representing an area of aligned performance. Workplace stress management stands at 81% among TWSE Issuers, compared with 95%+ for both DJBIC World and DJBIC Emerging Markets.
- Employee well-being measurement through annual employee surveys reached 35% among TWSE Issuers, compared with 89% for DJBIC World and 91% for DJBIC Emerging Markets, representing a 54-56 percentage point disclosure gap. TWSE Top Decile companies achieve 100% disclosure, exceeding both global benchmarks.
- Areas where TWSE Issuers overall continue to trail global benchmarks include employee development program disclosure (particularly leadership development, cultural education and digital transition), employee support programs (particularly family leave and flexible work arrangements), and employee well-being measurement. TWSE Top Decile companies demonstrate performance approaching or exceeding global standards across these dimensions.



TWSE Issuers Performance and Improvement Momentum Across Seven CSA Topics

Analysis of 2025 S&P Global Corporate Sustainability Assessment (CSA) results shows that TWSE Issuers recorded score increases across all seven assessed topics with six topics demonstrating growth from 2020 to 2025 and energy showing growth from 2024 to 2025*. While average TWSE scores remain below DJBIC World and DJBIC Emerging Markets benchmarks, three topics, Climate Strategy, Information Security, and Labor Practices, demonstrate notable patterns based on compound annual growth rates (CAGR) and absolute 2025 score comparisons.



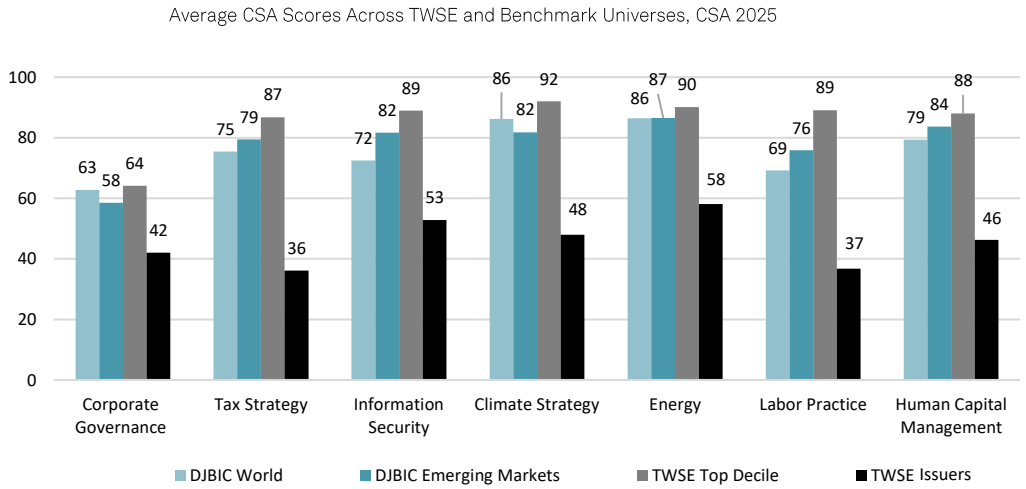
What the data shows Information Security, Climate Strategy, and Labor Practice have delivered the strongest rates of improvement over the past five years.

Key Takeaways

- **Strongest momentum in Information Security:** This topic stands out as the most improved among TWSE Issuers, with average scores increasing from 9 in 2020 to 53 in 2025, representing the highest CAGR among all assessed topics (43%).
- **Rapid advancement in Climate Strategy:** Average scores increased more than fourfold, from 11 in 2020 to 48 in 2025, resulting in a CAGR of 34%, the second-highest across all topics. This trajectory demonstrates broad-based enhancement in climate-related management practices and disclosure among TWSE Issuers over the five-year period.
- **Improvement in workforce management**: Workforce-related topics have also shown substantial development. Average Labor Practices scores increased from 12 in 2020 to 37 in 2025 (CAGR of 25%), while Human Capital Management scores rose from 20 to 46 (CAGR of 18%)
- **Continued progress in governance topics**: Corporate Governance and Tax Strategy have recorded consistent improvement throughout the assessment period. Corporate Governance scores increased from 19 in 2020 to 42 in 2025, while Tax Strategy scores more than doubled from 17 to 36. These trends demonstrate ongoing enhancement in governance-related practices and transparency among TWSE Issuers.
- **Energy represents the highest absolute score:** Among the seven assessed topics, Energy achieved the highest average score for TWSE Issuers in 2025 at 58, exceeding scores in Information Security (53), Climate Strategy (48), Human Capital Management (46), Corporate Governance (42), Labor Practices (37), and Tax Strategy (36). Historical trend data for Energy is available for 2024-2025 only.
- TWSE Issuers overall recorded higher CAGRs than the Top Decile across most topics, reflecting lower baseline scores in 2020. The Top Decile group showed more moderate growth rates from elevated starting positions.

As of May 2026.
** Energy criterion introduced in CSA 2024; two years of data available.*

TWSE Top Decile companies demonstrate performance exceeding global benchmarks across all seven CSA topics



What the data shows	TWSE Top Decile companies outperform both global benchmarks across all seven topics.

Key Takeaways

- The TWSE Top Decile group (n=46) recorded 2025 scores above both DJBIC World and DJBIC Emerging Markets benchmarks across all seven assessed topics, with the largest differentials in labor practice and technology-related areas.
- Largest score differentials relative to DJBIC World benchmarks were observed in:
  - Labor Practice: +20 points (89 vs. 69)
  - Information Security: +17 points (89 vs. 72)
  - Tax Strategy: +12 points (87 vs. 75)
  - Human Capital Management: +9 points (88 vs. 79)
- Climate Strategy achieves highest absolute score: TWSE Top Decile companies scored 92 in Climate Strategy, the highest among all seven topics, exceeding DJBIC World (86) by 6 points and DJBIC Emerging Markets (82) by 10 points.
- Strong performance in workforce topics: Both workforce-related topics scored 88 or above, with Labor Practices at 89 and Human Capital Management at 88. Relative to DJBIC World, Labor Practices and Human Capital Management scored 20 and 9 points higher, respectively.
- Context: While TWSE Issuers overall continue to trail DJBIC benchmarks across all topics (as detailed on the previous page), the Top Decile group demonstrates that TWSE companies can achieve and exceed global performance standards.

Conclusion

TWSE-listed companies have recorded measurable progress across all CSA** criteria: average scores in 2025 were higher than in 2020 for each of the six themes. While the Energy theme advanced from 2024 to 2025, year-on-year scores continued to fluctuate across all themes. TWSE Issuers overall show performance gaps relative to DJBIC World and DJBIC Emerging Markets benchmarks, particularly in governance structures, disclosure practices, and program implementation. TWSE Top Decile companies, however, demonstrate performance approaching or exceeding global benchmarks across most dimensions.

Performance summary by criterion

Criterion	TWSE Average Score (2020→2025)	TWSE Top Decile Average Score (2020→2025)	DJBIC World Average Score (2020→2025)	DJBIC Emerging Markets Average Score (2020→2025)	Key Strengths	Key Gaps
Corporate governance	19 → 42	42 → 64	61 → 63	47 → 58	Board independence disclosure (100%); board diversity policies established. TWSE Top Decile (64 points) slightly exceeds DJBIC World (63) and surpasses DJBIC Emerging Markets (58).	Female board representation (14% vs. 22%-33%); CEO performance compensation (10% vs. 70%-87%). TWSE Top Decile: 22% and 74% respectively.
Tax strategy	17 → 36	54 → 87	60 → 75	66 → 79	Score improvement trajectory; jurisdictional and element-level disclosure increased. TWSE Top Decile (87) exceeds benchmarks (75-79), achieving 100% policy and 76% jurisdictional disclosure.	Tax policy (36% vs. 91%-92%); jurisdictional reporting (45% vs. 62%-81%). TWSE Top Decile achieves comprehensive disclosure across all dimensions.
Information security	9 → 53	69 → 89	66 → 72	70 → 82	Policy (87%); awareness training (99%); executive responsibility (87%). TWSE Top Decile (89) exceeds benchmarks across all components.	Board oversight (17% vs. 72%-79%); CISO designation (56% vs. 64%-72%). TWSE Top Decile: 78% and 91% respectively.
Climate strategy	11 → 48	79 → 92	89 → 86	88 → 82	Scopes 1-2 disclosure (98%); Scope 3 (74%); adaptation planning (83%). TWSE Top Decile (92) exceeds benchmarks (82-86) with 100% disclosure/verification across all scopes and 100% net-zero commitment.	Verification (48%-64% vs. 89%-99%); net-zero commitments (52% vs. 88%); SBTi targets (8% vs. 25%-34%). TWSE Top Decile: 100%, 100%, and 41% (exceeding benchmarks) respectively.
Energy*	54 → 58*	91 → 90*	84 → 86*	85 → 87*	Energy consumption disclosure (98%). TWSE Top Decile (90) exceeds benchmarks (86-87) with 100% disclosure/verification and 93%-100% program coverage.	Program components (31%-67% vs. 71%-95%); verification (41% vs. 92%-95%). TWSE Top Decile achieves comprehensive implementation and 100% verification.
Labor practices	12 → 37	65 → 89	74 → 69	73 → 76	Equal pay analysis (55%, comparable to DJBIC World). TWSE Top Decile (89) exceeds benchmarks (69-76) with 100% labor commitment, 87%-100% policy/program coverage, and 76% equal pay analysis.	Labor rights (48% vs. 86%-89%); gender pay gap analysis (12% vs. 22%-39%); living wage (21% vs. 59%-68%). TWSE Top Decile: 100%, 24%, and 87% respectively.
Human capital management	Increased 2020-2023 (20 → 58), declined in 2024 before partially recovering in 2025 (58 in 2023, falling to 44 in 2024 and rebounding to 46 in 2025).	74 → 88	78 → 79	78 → 84	Health initiatives (97%, aligned with benchmarks). TWSE Top Decile (88) 4 points higher than DJBIC EM levels (80+) with 100% disclosure for development programs and employee surveys, plus 58%-100% support program coverage.	Leadership development (64% vs. 98%-99%); paid family leave; flexible work; employee surveys (35% vs. 89%-91%). TWSE Top Decile: 69%-100% across all programs.

Please note:
- Key strengths and gaps reflect only the topics and aspects covered in this paper for the CSA 2025 methodology. This analysis addresses only some selected CSA performance indicators included in the assessment of the above seven criteria.
- CSA criteria carry different weights in overall scores based on factors such as industry materiality.

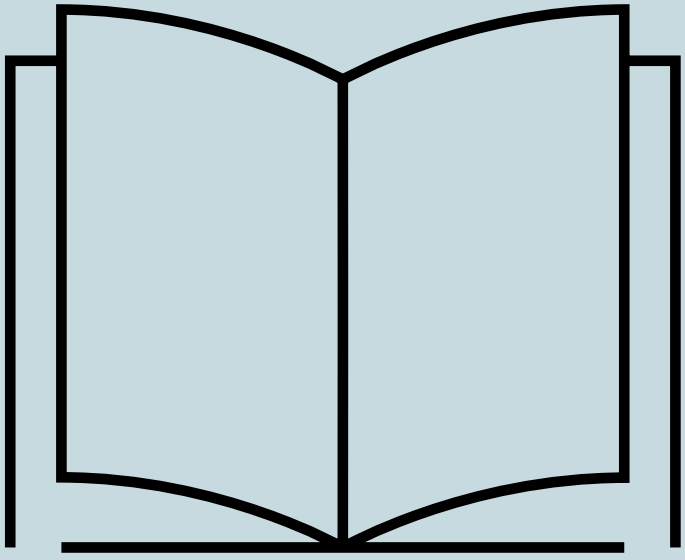
* Energy criterion introduced in CSA 2024; two years of data available.
** CSA methodology goes through yearly updates in criteria guidance and structure that may influence the performance of companies.

Sustainability Performance and Investment Landscape

The sustainability performance analysis shows differentiated performance levels among TWSE issuers. The broader TWSE Issuer universe trails global benchmarks, while the Top Decile group (n=46) achieves scores exceeding DJBIC World and Emerging Markets benchmarks across all seven assessed topics. Performance differentiation is most pronounced in Climate Strategy (Top Decile score of 92), Information Security (89), and Labor Practices (89), where Top Decile scores exceed global peer averages by 6-20 points.

Score improvement trajectories from 2020-2025 (Information Security +43% CAGR, Climate Strategy +34% CAGR, Labor Practices +25% CAGR) show an expanding group of TWSE issuers achieving benchmark-comparable performance levels. Sustainable fund investment in TWSE issuers includes 442 actively managed funds (54% of fund base) and 222 passive funds (27% of fund base), with passive strategies holding $47.4 billion (61% of total assets) compared with $28 billion (36%) for active strategies. This distribution shows that while active funds are more numerous, passive strategies dominate by invested capital. Investment concentration patterns show 91% of sustainable fund assets in mega- and large-cap companies, with heavy weighting toward Information Technology and Financials, sectors where TWSE Top Decile companies achieve the highest sustainability performance scores relative to benchmarks.

Glossary



Fund and issuer analysis glossary

Page No.	Term	Definition
3	Fund name	Name of the fund
3	Sustainable Fund	Sustainable funds are investment funds that incorporate environmental, social, and governance considerations or sustainability-related objectives into their investment approach, either through ESG integration, screening, thematic exposure, impact orientation, or other sustainability-focused strategies.
18, 19	Fund management style	Style refers to the investment approach or objective that a fund manager uses. Style guides how a fund manager selects securities for the fund's portfolio based on their knowledge, skill, and understanding of the market.
18	Orientation – Active	A style and/or strategy of management/investment that actively applies various strategies and day-to-day investment decisions. Active investors include all investor/strategy types excluding index, ETF, and quantitative.
18	Orientation - Passive	A style and/or strategy of management/investing that mirrors a market index. Passive orientation is the opposite of 'Active' orientation, in which a Firm or Fund actively applies various strategies and investment decisions. Passive investors include index, ETF, and quantitative investors/strategies.
19	Aggressive growth	Focuses on companies with high revenue and EPS growth, typically with no dividends and high turnover.
19	Growth	Invests in high-growth companies with higher-than-market multiples, insensitive to yield.
19	GARP	Targets discounted companies expected to grow faster than the market, with longer holding periods.
19	Value	Seeks fundamentally strong companies with low valuations and steady growth, favoring long-term holdings.
19	Deep value	Invests in significantly undervalued companies or industries out of favor for extended periods.
19	Broker	Holdings mainly come from brokerage inventory rather than a specific investment strategy.
19	Yield	Prioritizes companies with high dividend yields and a history of dividend growth.

Page No.	Term	Definition
19	Specialty	Employs unique strategies focused on specific industries or sectors.
19	Index	Follows predetermined indexes to mirror market performance.
20	Market cap coverage	The combined market capitalization of listed companies held by at least one sustainability fund as a proportion of the total market capitalization of all listed companies within the scope of the analysis.
27	Free float	Shares outstanding less closely held positions such as private equity, founder, director and other insider shares
28	Region	What number of funds and investment coming from specific region.

Corporate Sustainability Assessment (CSA) glossary

Page No.	Term	CSA Definition
3	CSA	Corporate Sustainability Assessment
3	TWSE	Taiwan Stock Exchange
5	DJBIC	Dow Jones Best-in-Class
6	Public assessment	Companies evaluated by S&P Global based on publicly available information when they do not directly participate in the CSA survey.
6	Survey respondent	Companies that actively participate in the CSA by completing the detailed survey covering a broad range of ESG topics.
42	Board independence statement	The independence statement, which is disclosed across various regions, is likely shaped by national corporate governance codes and stock exchange requirements in developed countries. These regulations mandate the public disclosure of definitions and criteria for independence.
43	Race	In the absence of any internationally agreed definition, race is most often statistically characterized in terms of phenotype and appearance (e.g., skin colors), or with regard to ancestry. This should not be understood as an attempt to trace the definition of race to biological, anthropological or genetic factors but rather to (somewhat artificially) distinguish it from the concept of ethnicity (OECD, 2018).
43	Ethnicity	This describes a shared culture, the practices, values, and beliefs that characterize those belonging to a community. This multidimensional concept acts as an umbrella term encompassing language, religious traditions, and others (UN, 2017). A number of related concepts, including ancestry, citizenship, and nationality, may overlap with ethnicity. However, ethnicity is not the same as nationality or citizenship, nor is it a measure of biology or genes (OECD, 2018).
43	Nationality	While geographic diversity has received less attention than gender or racial diversity on boards, geographic diversity adjusts the lens through which risks and strategies are examined. To manage global risks and opportunities and to improve board effectiveness, geographic diversity in the boardroom in a global marketplace needs to increase. Here, nationality captures a person's country of origin or citizenship

Page No.	Term	CSA Definition
45	Deferred shares	This refers to the percentage of the short-term bonus paid out in deferred shares instead of cash.
45	Deferred Bonus	This is an arrangement in which a portion of an employee's income is paid out at a later date after which the income was earned during a set performance period.
45	Performance Period	Refers to a performance-based pay-out structure of variable compensation for the current period x, which is dependent on achieving targets in the following periods (x+1, x+2, x+3, etc.).
45	Clawback Provision	This is a policy that allows a company to recover performance-based compensation for some period of time after compensation awards are granted.
45	Time vesting	This is a time-based pay-out structure of variable compensation for the current period x over the coming years (x+1, x+2, x+3, etc.). The amount of future payout is independent of the coming year's performance.
50	Tax avoidance	Tax avoidance is an abuse of the tax system. It is a deliberate attempt to get out of an obligation to pay tax by entering into a set of artificial financial arrangements with little or no commercial purpose other than to reduce a tax bill.
50	The spirit of the tax laws	This refers to the intention of the policymaker who wrote the respective law.
50	The letter of the law	This refers to the literal interpretation of the law only.
50	Low tax jurisdiction	Low tax jurisdiction refers to any jurisdiction with significantly lower tax rates than other jurisdictions in which the company operates.
50	The arm's length principle	This valuation principle is commonly applied to commercial and financial transactions between related companies. It says that transactions should be valued as if they had been carried out between unrelated parties, each acting in their own best interest.
50	Tax havens	(Offshore) countries or jurisdictions offering little or no tax liability.
50	A Constituent Entity (names of resident entities)	Is a separate business unit, or subsidiary, of a multinational enterprise group that is included in the consolidated group for financial reporting purposes. This includes a permanent establishment if a separate income statement is prepared for regulatory, financial, internal management or tax purposes.

Page No.	Term	CSA Definition
53	Primary Activities By Jurisdiction	A short statement regarding the nature of the trade in the respective location (e.g., sales, marketing or distribution, manufacturing or production, purchasing or procurement, research and development, holding or managing intellectual property, etc.).
53	Revenues	All revenue, (extraordinary) gains and income, or other inflows shown in the financial statement prepared in accordance with the applicable accounting rules relating to profit and loss.
53	Profit (loss) before Tax	Referred to as pretax profit (loss), pretax income, or earnings before tax (EBT). We also accept operating profit, or earnings before interest and tax (EBIT).
53	Income Tax Accrued (current year)	It is an amount of accrued current tax expense recorded on taxable profits or losses for the reporting four comparator year of all constituent entities resident for tax purposes in the relevant tax jurisdiction irrespective of whether or not the tax has been paid (e.g., based on a preliminary tax assessment).
53	Income Tax Paid (on cash basis)	Is the amount of corporate income tax actually paid during the reporting four comparator year.
53	The Number of Employees	An average number of full-time equivalents during the reporting four comparator year.
56	Information Security	It refers to the comprehensive measures taken to protect an information technology system from threats including malicious attacks, data loss, service disruptions, and any damage to its hardware, software, and stored data.
59	Board-level committee with information security oversight	Assigned committee, formed of board members only, responsible for overseeing information security-related issues.
59	Executive role to oversee information security	The highest-ranking individual responsible for assessing and managing information security-related issues.
59	CISO	A Chief Information Security Officer (CISO) is the senior-level executive in an organization responsible for establishing and maintaining the organization's vision, strategy, and program to ensure the protection of information assets and technologies.
59	CIO	A Chief Information Officer (CIO) is the senior-level executive responsible for managing computer and information systems.

Page No.	Term	CSA Definition
59	CTO	A Chief Technology Officer (CTO) is the senior-level executive responsible for managing an organization's technology strategy and ensuring its technology infrastructure meets the company's goals.
60	Information Security Policy	Formal declaration of the company's commitment to implementing and maintaining standards for protecting information systems.
60,61	Continuously improving information security systems	Information security risks are not static; risks might vary and evolve depending on different circumstances, which is why continually improving the information security management system is important to protect and create value.
60,61	Ensuring integrity and protection of data	Ensuring that data remains accurate, consistent, and safeguarded from unauthorized access, tampering, or destruction.
61	Monitoring and responding to information security threats	Actively monitoring cybersecurity risks, responding to incidents promptly, and implementing mitigation strategies.
61	Establishing individual responsibilities for the entire workforce	The establishment of responsibilities for the entire workforce pertaining to information security.
61	Establishing information security requirements for third parties (e.g., suppliers)	The establishment of information security requirements for third parties, which list the security policies that they are expected to comply with to work with the company.
61	Business continuity plans (BCP)	A set of procedures to prevent potential threats, limit damages (contingency) and recover systems when they occur.
61, 62	Vulnerability analysis	The analysis that a company conducts for defining, identifying, classifying, and prioritizing vulnerabilities in computer systems, applications, and network infrastructures.
61, 62	Data breach	Occurs when unauthorized parties access confidential and/or sensitive information of company's stakeholders and the overall organization.
61, 62	Information security awareness training	Training delivered to employees on IT security / information security management systems.

Page No.	Term	CSA Definition
61, 62	Internal audits of information security	Audits done internally based on recognized standards/ frameworks on the IT infrastructure / information security management system.
61, 62	External audit of information security	External audit of IT infrastructure / information security management system with certifications such as ISO/IEC 27000 family, SOC, CIS.
61, 62	Escalation process	The escalation process for employees to report incidents, vulnerabilities or suspicious activities with proper direction to the legal and compliance department, IT department or other similar internal stakeholders.
65-67	GHG Scope 1	Greenhouse gas emissions refer to the emissions of the six main GHGs that are covered by the Kyoto Protocol. These gases are Carbon Dioxide - CO2, Methane - CH4, Nitrous Oxide - N2O, Hydrofluorocarbons - HFCs, Perfluorocarbons - PFCs and Sulphur Hexafluoride - SF6.
67	Third-party verification	The relevant data for the most recent disclosure year have been verified by an independent third party.
69	GHG scope 2	Indirect GHG emissions are emissions that are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity. Scope 2 emissions are emissions from consumption of purchased electricity, heat or steam.
70-72	GHG scope 3	GHG scope 3 refers to indirect greenhouse gas emissions that are a consequence of the activities of the company and from sources not owned or controlled by the company.
73	Physical risks	Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns.
73	Context-specific	Adaptation responds to physical climate risks that are mostly location- and context-specific.
74	Net-zero commitment	A credible corporate net-zero commitment includes commitments to reduce Scope 1, 2, and 3 emissions to zero or to a level that is consistent with reaching net-zero emissions at the global or sector level in eligible 1.5 degrees C-aligned pathways.
74	Science-based targets	According to the SBTi, targets are considered science-based if they are aligned with what the latest climate science deems necessary to meet the goals of the Paris Agreement on climate change – limiting global warming to well-below 2 degrees C above preindustrial levels and pursuing efforts to limit warming to 1.5 degrees C.

Page No.	Term	CSA Definition
74	Science Based Targets initiative (SBTi)	A global body that defines and promotes best practices in emissions reductions and net-zero targets in line with climate science.
78	Evaluation	Comparison of performance before and after the implementation of action plans for reducing energy consumption.
78	Actions	Concrete and targeted actions focused on reducing energy consumption.
78	Green energy	Resources that come from natural sources, such as the sun. Renewable energies are both clean and green energy since they come from sources that are constantly being replenished, such as hydropower, wind power or solar energy.
78	Innovation investment	Procedures that consider improvement opportunities, operational control and energy performance in the design of new, modified and renovated facilities, equipment, systems, and energy-using processes in the scope and boundaries of the company.
78	Energy audits	Process that analyzes energy efficiency and consumption based on data and evidence.
78	Quantified targets	Objectives with specific, measurable and quantifiable energy performance improvement targets to reduce the company's energy consumption (e.g., reduce electricity consumption by 3% by the end of the year).
78	Training	Training focused on raising awareness within the company's personnel to optimize energy behavior and lead to a culture that aims to reduce energy consumption.
79, 80	Energy consumption	The sum of renewable and non-renewable consumption of fuel (excluding feedstocks).
80	Normalized non-renewable energy consumption	Normalized energy consumption is defined as energy consumption for the four comparator year divided by revenues earned, number of employees, or number of units produced, depending on the type of company's business.
85	Consultation notice	The minimum amount of notice that companies must provide employees before executing mass layoffs or terminations.
85	Equal remuneration	As defined by the ILO "the term equal remuneration for men and women workers for work of equal value refers to rates of remuneration established without discrimination based on sex."
85	Living wage	A wage that meets or exceeds the minimum required to cover the basic needs of workers and their families, which includes food, housing, clothing, healthcare, transportation, and education.

Page No.	Term	CSA Definition
85	Maximum working hours	The legally defined or agreed-upon limit for working hours per day or week to ensure the well-being of employees. Any hours worked beyond this are considered overtime.
85	Overtime	Refers to working hours that exceed the legal or agreed-upon limit, which can have a negative impact on employees' health and well-being.
85	Paid annual leave	The number of paid days off that employees are entitled to take each year, as defined by labor laws or company policies, without impacting their wages or social protection benefits.
87	Adequate wages	A wage that provides for the needs of the worker and their family considering economic and social conditions.
87	Monitor gender pay gap	It refers to measures taken to actively and regularly assess and work toward equal remuneration, such as conducting assessments, audits, or external analyses of the gender pay gap.
87	Paid annual leaves	This refers to a period of time set by the employer, when employees can take time away from work while still receiving a paycheck and being eligible for social protection.
87	Paid overtime	This includes hours worked in addition to the normal, legally mandated working hours during a day or week and ensure employees are paid for overtime.
87	Training and upskilling	It refers to efforts by the company to support employees in adapting to shifts in business operations and workforce requirements resulting from the transition to a climate-resilient economy or other industrial changes.
87	Social protection	This includes but is not limited to the provision of medical care, sickness benefits, maternity benefits, invalidity benefits, old-age benefits, survivors' benefits, employment injury benefits due to occupational injuries and diseases, unemployment benefits, family benefits, etc.
87	Engagement on working conditions	An engagement or consulting with workers' representatives on working conditions.
87	Working hours	Mechanisms to monitor and/or manage overtime to ensure employees are not working excessive hours.
88	Equal pay	Equal pay compares the salary of men and women who have the same or equivalent positions to assess whether they are paid the same for equal work.
88	Gender pay gap	The gender pay gap is the difference in average gross hourly earnings between women and men; it, therefore, assesses the difference in pay at the aggregated level.

Page No.	Term	CSA Definition
92	Employee development programs	These refer to programs that have been developed to enhance or improve employees' skills.
92	Leadership development	This refers to the training initiatives that aim to enhance an individual's leadership skills and abilities.
92	Cultural education	Cultural education for employees refers to training programs and initiatives designed to increase awareness, understanding, and respect for different cultural backgrounds, practices, and perspectives.
92	Digital transition program	A digital transition program focuses on helping employees adapt to new digital tools, processes, and technologies within the workplace.
92	Transition program for retiring and terminated employees	This includes transition assistance programs to facilitate continued employability, and the management of career endings due to retirement or termination.
93	Workplace stress management	This refers to the programs, information or training offered that help employees manage their stress levels. This relates to both work and nonwork-related stress.
93	Health initiatives	This refers to programs or initiatives that help promote the overall health of employees as regards physical activity and/or nutrition goals.
93	Part-time working options	Part-time work is a form of employment by which the employee works fewer hours in the week than what is deemed full-time employment.
93	Flexible working hours	This refers to a schedule that allows employees to decide when to start and/or finish their workday according to their individual needs.
93	Working-from-home arrangements	This refers to a working arrangement by which employees can work from their own homes or other locations of their choice outside of company facilities.
93	Paid family leave	This refers to paid leave granted to employees so they can take care of a spouse, domestic partner, child, dependent, parent, parent-in-law, grandparent, grandchild, sibling or other designated relation in the case of a physical or mental health condition that requires additional care.
93	Primary parental leave	This refers to paid leave offered on top of normal paid vacation time to support primary caregivers during pregnancy, after birth, or for the adoption or fostering of a child.

Page No.	Term	CSA Definition
93	Non-primary parental leave	This refers to paid leave offered on top of normal paid vacation time to support nonprimary caregivers during pregnancy, after birth, or for the adoption or fostering of a child.
93	Breastfeeding/lactation facilities	This refers to a dedicated lactation room or facility where new mothers can breastfeed or use a breast pump for their newborn child.
93	Childcare facilities or contributions	This refers to the financial support designed to ensure that parents have access to qualified childcare services to take care of their children during working hours.
94	Employee well-being	Wellbeing refers to "all of the things that are important to each of us and how we experience our lives. Key wellbeing measures include how employees rate their current and expected future lives (life evaluation) and how strongly employees believe their organization cares about their wellbeing.

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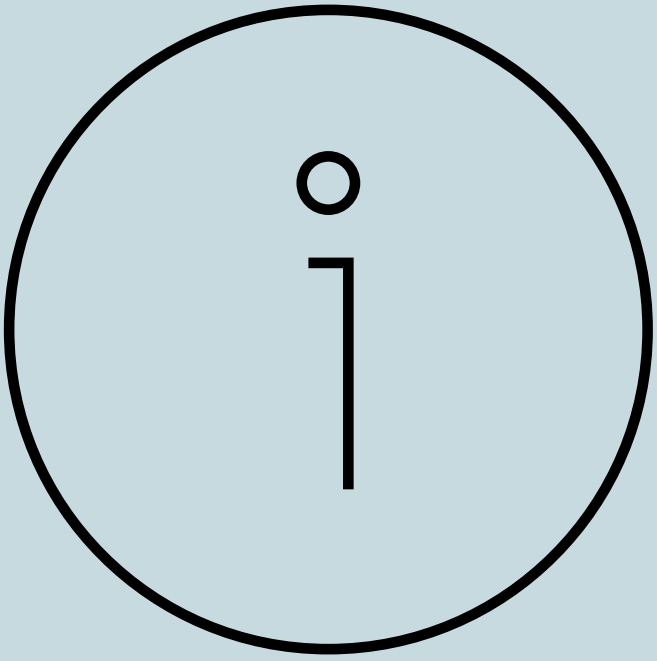

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