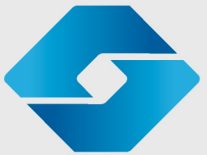


Embracing Sustainability and beyond.

20
24
REPORT
SUSTAINABILITY



TWSE



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INTRODUCTION

About This Report
Message From The Chairman
About The Taiwan Stock Exchange

ABOUT THIS REPORT

The 2024 Sustainability Report issued by the Taiwan Stock Exchange Corporation (the TWSE) is the seventh report issued annually since 2018. This report focuses on our communication with stakeholders, progress and achievements in ESG and sustainability issues, plus operational performance in the year 2024.

Boundary and Scope

This report covers the performance of the TWSE and its subsidiaries, including the Taiwan Depository & Clearing Corporation (the TDCC), Taiwan-CA Inc. (the TWCA), Taiwan Index Plus Corporation (TIP), the Taiwan Carbon Solution Exchange Corporation (the TCX), and FundRich Securities Corporation (FundRich). There were no significant changes in the size, structure, or ownership of the TWSE and its subsidiaries during the reporting period, and there were no circumstances that would have a significant impact on the report. For content outside the scope of this report, please refer to the relevant passages for more details.

Reporting Guidelines

This report is prepared in accordance with the 2021 GRI Standards issued by the Global Sustainability Standards Board (the GSSB); the information disclosed within conforms to the standards for Security & Commodity Exchanges by the Sustainability Accounting Standards Board (SASB), the Task Force on Climate-Related Financial Disclosures (the TCFD), and the reporting framework by the International Financial Reporting Standards (IFRSs) S2 Climate-related Disclosures.

Compilation of this Report

The financial information provided in this report has been audited by Certified Public Accountants (CPAs), and published in the annual report for the general shareholders' meeting. The financial information is prepared under the IFRSs adopted by the Financial Supervisory Commission (the FSC). All financial figures in this report are expressed in TWD. The nonfinancial data is provided through daily operational data, training, and discussions on relevant topics. In accordance with GRI Standards, this report reflects the economic, social, and environmental performance of the TWSE and its subsidiaries. The data for each indicator was collected, measured, and calculated in accordance with Taiwan's regulations. International standards are used where

no local regulations apply. If there are no universal standards available, industry standards or practices are applied.

Third Party Assurance

The TWSE has engaged Deloitte to perform limited assurance procedures on selected performance information of this report in accordance with the "Assurance Criteria TWSAE 3000 - Assurance Cases of Non-Historical Audits or Reviews of Financial Information" issued by the Accounting Research and Development Foundation (the ARDF). In addition, the TWSE and its subsidiaries¹ completed its Greenhouse Gas (GHG) Inventory in accordance with ISO 14064-1:2018, commissioned the British Standards Institution (BSI) to conduct verification based on a reasonable level of assurance in accordance with ISO 14064-3:2019, and engaged Ernst & Young to provide limited assurance on the GHG emissions in accordance with "TWSAE 3410 - Assurance Engagements on Greenhouse Gas Statements" issued by the ARDF. The three aforementioned reports are attached in the appendices.

Reporting Period

The information contained within this report covers the period of January 1, 2024, to December 31, 2024, consistent with the period covered by our Financial Report². This report mainly presents our performance in environment, social, and governance aspects, along with relevant information and data. The report also includes data and information before and after the reporting period so as to provide more context. To view or download past reports, please visit the Sustainability Development page on our official website; the link is provided below.

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Release date of the current edition	September 2025
Release date of the previous edition	September 2024

1. Our subsidiaries, the TDCC, and FundRich commissioned British Standards Institution (BSI) and DNV Business Assurance Co., Ltd., respectively, to conduct reasonable verification of greenhouse gas statements in accordance with the standards of ISO 14064-3:2019.

2. For TWSE Financial Reports, please refer to <https://www.twse.com.tw/en/about/company/finance.html>

MESSAGE FROM THE CHAIRMAN

As global capital markets increasingly highlight the importance of sustainable development in recent years, standards have been raised for corporate sustainability disclosure. In July 2024, the European Union passed the Corporate Sustainability Due Diligence Directive (CSDDD), requiring corporate giants to check their global value chains for human rights along with environmental risks and harms, setting a higher bar for responsible corporate behavior. In view of international practices and in line with Taiwan's commitment to achieving net zero emissions by 2050, the TWSE not only works tirelessly to reach its own sustainability and net zero goals, but also actively engages and encourages companies to adopt sustainable operations. By innovating our systems and introducing emerging technologies, we continue to strengthen the practice of environmental, social, and governance (ESG) principles among listed companies, thereby leading market development toward a sustainable future. Our highlights in sustainable development as well as our outlook are as follows:

Support innovation and sustainable momentum to provide comprehensive services

The TWSE supports companies in sustainable industries to enter the capital market and create clusters of innovative startups. In 2023, "Green Energy and Environmental Services" was added as a new industrial category for listed companies. In 2024, we conducted two activities to promote the industry, inviting government, industry, and academia representatives to share the latest trends in net zero initiatives as well as the benefits of listing on the capital market. Working with the public sector and partners in the startup ecosystem, we actively seek to provide networking opportunities within the industry. TWSE listing service teams and TWSE subsidiaries, including TIP and its IR ENGAGE platform, plus the TCX's carbon credit trading platform, provide comprehensive services through multiple channels to support companies of all sizes on their journey to sustainability.



林修翊

Sherman Lin

Chairman and Chair of the Sustainability
Development Committee

Augment listing mechanisms to promote corporate sustainability

Promoting the sustainable development of enterprises is an important TWSE mission. In response to the amended "Securities and Exchange Act" and to ensure the reasonable compensation of grassroots employees, the TWSE requires companies applying for listing to disclose the average monthly salary of its grassroots employees; if this amount does not reach 1.3 times the basic monthly salary required by law, the applying company should disclose the reasons and offer specific improvement measures to the TWSE. In addition, companies applying to list should, in accordance with the "Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies," explain their sustainability actions plus disclose their climate change risks and opportunities, response measures, and GHG Inventory Report with assurance for the most recent two years. These measures serve not only to improve applying companies' treatment of grassroots employees, but also to provide investors with more transparent information and a greater awareness of the company's sustainability performance.

Enhance quality of sustainable disclosure to lower risk of greenwashing

To assist listed companies in their ability to independently prepare sustainability reports and enhance the quality of disclosure, the TWSE published sample templates, FAQs, and other reference documents in 2024, and launched the "Sustainability Report Assistance Function" in February 2025 on the ESG Digital Platform, a reference framework that incorporates GRI standards and disclosure practices to help companies improve their compliance while lowering costs. In addition, the TWSE released the disclosure examples and self-assessment templates for IFRS Sustainability Disclosure Standard S2 - Climate-related Disclosures to help companies understand and align with disclosure standards. The TWSE has continued to organize sustainability-related seminars, training courses, and workshops so that listed companies can establish and thoroughly implement their sustainable governance culture.

Furthermore, all TWSE and TPEX listed companies should incorporate the management of sustainability information into their internal control systems, and include it as a mandatory audit item in their annual audit plans. Through internal controls, external third party assurance, and a review mechanism for sustainability reports, the TWSE aims to effectively augment the quality of sustainability disclosure and lower the risk of greenwashing.

Promote carbon market development and align with international carbon reduction standards

In accordance with the FSC's "Sustainable Development Guidemap for TWSE and TPEX Listed Companies" and "Sustainable Development Action Plans for TWSE and TPEX Listed Companies," the TWSE has announced that listed companies must conduct GHG Inventory Reports and establish carbon reduction targets. In 2024, phase-one companies completed their GHG Inventory Report and assurance. In 2025, phase-one companies shall disclose GHG inventory and carbon reduction goals for the full scope of their consolidated financial statements, and phase-two companies shall complete their GHG inventory. By 2027, all listed companies shall disclose their Scope 1 and Scope 2 GHG inventory and carbon reduction targets, and acquire third party assurance by 2029. During this period, the TWSE will continue to publish reference documents and FAQs, as well as conduct GHG inventory workshops and promotional events, to strengthen companies' GHG inventory capabilities and set and achieve carbon reduction targets.

To promote the development of the carbon market, the TWSE and TCX actively collaborate with various stakeholders to enhance public awareness and understanding on carbon trading. The TCX has signed a MOU with BSI to introduce a series of ISO certificate courses covering greenhouse gas inventory, carbon footprint, and carbon neutrality. This assists companies in understanding carbon management, regulations, and market trends, allowing them to better respond to carbon pricing and align their practices with global standards.

Introduce emerging technologies to advance operational efficiency

In response to the global trend of digitalization and the surge of Generative AI, the TWSE embraces the use of innovative technology and digital transformation, with plans to integrate intelligent solutions to advance operation and oversight efficiency. Generative AI will be introduced to assist in the review mechanism for listed companies' annual reports, greatly expanding operational productivity, capacity, and quality. As the TWSE is establishing a digital system for transmitting broker audit reports which allows for an online audit and approval process, we will adopt AI and emerging technologies in the smart supervision of securities firms, effectively addressing new types of misconduct or violations and protecting investor rights. In 2025, the TWSE will continue to collect, analyze, and use data in four major areas, namely market supervision, internal applications, information disclosure, and operational resilience, to enhance the breadth and depth of data application.

Create a diverse and inclusive workplace to enhance TWSE competitiveness

The TWSE is unwavering in its commitment to gender equality, empowering women, and creating a diverse and inclusive workplace. In 2025, the TWSE will continue to participate in the WFE's "Ring the Bell for Gender Equality" initiative for the fifth consecutive year. The WFE also honored TWSE President Edith Lee as one of the top women leaders of 2025, a recognition among global capital markets of the TWSE's efforts in promoting a gender-equal workplace culture. Looking to the future, we will continue to work with the global market to promote gender equal opportunity and corporate governance, jointly moving towards a more diverse, fair, and sustainable financial ecosystem, to enhance our international competitiveness and visibility.

The TWSE remains dedicated to sustainable development and upholds the spirit of innovation and sustainability, working hand in hand with stakeholders to achieve an inclusive and prosperous relationship between society and the environment. By embracing high-quality governance and taking specific actions in our commitment to ESG principles, we are doing our part to create a more sustainable future for our Earth.

ABOUT THE TAIWAN STOCK EXCHANGE

As a major operator in the securities market and a platform for fundraising plus investment in Taiwan's capital market, the TWSE bears the responsibility for providing liquidity for businesses and creating wealth for the investing public. Moreover, the TWSE plays a key role in guiding Taiwan's listed companies to advance ESG performance in step with the competent authority's policies and in line with international practices.

Company name	Taiwan Stock Exchange
Headquarter location	9F, No. 7, Sec. 5, Xinyi Rd., Taipei City 110615, Taiwan (R.O.C.)
Established	October 23, 1961 (First meeting to establish the TWSE)
Opened for business	February 9, 1962
Main responsibilities	Promoting the operation and development of the Taiwan securities market. Major operations include listing, trading, clearance, and surveillance. This encompasses listing promotion and review, post-listing governance and supervision, market order maintenance and settlement operation safety, prevention of market defaults, illegal transaction audits, securities firms' services, and investor protection, all of which provide comprehensive services for the securities market.
Main market	Taiwan
Number of business locations	Four locations: Taipei 101 offices, First Data Center, Second Data Center, and Third Data Center

Market Overview

TAIEX closed at a record high of **23,035.10** points at the end of 2024, up **28.47%** from 2023.

Price-to-earnings ratio grew from 21.12 to **21.29**.

The total trading value of listed securities reached TWD99.8 trillion, up **48.5%** YoY. Average daily trading value reached TWD412.4 billion, up **46.7%** YoY, both setting new records.

Dividend yield (including cash and stock dividends) reached **2.46%**.

Market value of listed securities grew **30.0%** YoY to TWD73.9 trillion.

There were **6.63** million active investors.

As of year-end 2024, among top international markets, market value of listed stocks rose from 17th to **12**th place, and trading value jumped from the 19th to the **10**th position.

A total of **13.22** million trading accounts opened.

The number of listed companies rose from 997 to **1,031**.

Foreign investment reached **45.41%**, indicating significant international interest in Taiwan's stock market.

The number of ETFs grew from 153 to **174**, with total AUM soaring **82.8%** YoY to TWD **3.41** trillion and trading value up **94.7%** YoY to TWD **6.72** trillion.

Price-to-book ratio grew from 2.12 to **2.49**.



Business Performance

Unit: TWD thousands

Financial information	2022	2023	2024
Total assets	126,700,765	155,332,339	180,190,953
Total equity	90,729,581	99,713,660	112,495,787
Profit for the year	9,207,363	11,891,278	17,579,841
EPS (Basic Earnings Per Share, TWD)	5.26	6.83	10.17

Note: The 2022 and 2023 basic EPS was retroactively adjusted due to the issuance of stock dividends in 2024.



Milestones of Sustainable Development

- 2010**
 - + The TWSE introduced the “Corporate Social Responsibility Best Practice Principles for TWSE/ TPEX Listed Companies.”
 - + The TWSE unveiled the “Ethical Corporate Management Best Practice Principles for TWSE/ TPEX Listed Companies.”
 - + The TWSE launched the TWSE RA Taiwan Employment Creation 99 Index.
- 2011**
 - + The TWSE organized the “Business Integrity and Corporate Social Responsibility for Listed Companies Forum” for four consecutive years.
- 2013**
 - + The FSC inaugurated the “Corporate Governance Roadmap 2013.”
 - + The TWSE established the Corporate Governance Center.
- 2014**
 - + The TWSE joined the WFE Sustainability Working Group.
 - + The TWSE created the TWSE RAFI® Taiwan High Compensation 100 Index.
- 2015**
 - + The TWSE made it mandatory for certain TWSE listed companies to prepare and publish a CSR report.
 - + The TWSE launched the Taiwan Corporate Governance 100 Index.
- 2016**
 - + The TWSE announced the “Stewardship Principles for Institutional Investors.”
- 2017**
 - + TIP launched the FTSE4Good TIP Taiwan ESG Index, and TIP Taiwan Market Small/Mid-Cap Corporate Governance Index.
- 2018**
 - + The FSC introduced the “New Corporate Governance Roadmap.”
- 2019**
 - + The TWSE amended the “Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies” following the latest GRI Standards’ update.
 - + TIP launched the Taiwan Labor Rights Index.
- 2020**
 - + The FSC announced the “Corporate Governance 3.0 – Sustainable Development Roadmap.”
 - + TIP launched two sustainability indices.
- 2021**
 - + Amended the “Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies” into the “Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies.”
 - + Amended the “Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies” into the “Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies.”
 - + TIP launched eight sustainability indices.
- 2022**
 - + The FSC launched the “Sustainable Development Guidemap for TWSE and TPEX Listed Companies.”
 - + The TWSE regulated sustainability disclosure indicators and climate-related information for listed companies.
 - + TIP launched eight sustainability (including green energy) indices.”
- 2023**
 - + The FSC announced “Sustainable Development Action Plans for TWSE and TPEX Listed Companies (2023).”
 - + The TWSE and the National Development Fund of the Executive Yuan jointly established the TCX.
 - + The FSC released the “Roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards.”
 - + The TCX International Carbon Credit Trading Platform was launched.
 - + TIP launched six sustainability indices.
- 2024**
 - + The TCX Domestic Carbon Credit Trading Platform was launched.
 - + TIP launched the S&P TIP Taiwan Carbon Reduced ESG 50 Index and TIP Taiwan Gender Equality Index.
 - + The TWSE became the world’s first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI.



SUSTAINABILITY PERFORMANCE AND STRATEGIES

2024 Sustainability Performance Highlights

Key Sustainability Initiatives

Awards and Certifications

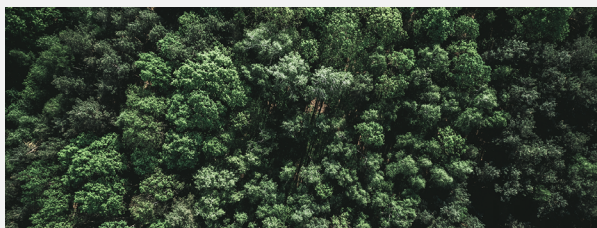
Sustainable Strategy Blueprint

Pathway to Net Zero

2024 SUSTAINABILITY PERFORMANCE HIGHLIGHTS

Environmental Social Governance

The TWSE **achieved carbon neutrality in 2023** and was awarded the ISO 14068-1:2023 carbon neutrality certificate by BSI.



More than **TWD220 million** was donated towards social causes.



To optimize odd lot trading mechanisms, matching intervals were shortened from one minute to **5 seconds**.

The TWSE launched the online campaign, “5D Anti-Fraud Initiative,” raising awareness of fraud and reaching approximately **20 million people** through the first wave of the campaign, “For Your Money, One Song at a Time.”



The TCX International Carbon Credit Trading Platform introduced nature-based and carbon dioxide removal (CDR) projects, and **the Domestic Carbon Credit Trading Platform was launched** in October to strengthen ESG practices in the financial market.



The First Data Center achieved 50% renewable energy use **RE50**, and installed solar panels generating 16,330 kWh.

The number of TIB listed companies reached **19**.



Ring the Bell for Climate

Participated in the World Federation of Exchanges (WFE) “Ring the Bell for Climate” initiative for the **first time**.

KEY SUSTAINABILITY INITIATIVES

In 2024, the TWSE remains committed to sustainable development through its promotion of a number of ESG projects. As a key driving force of the capital market, the TWSE continues to spur enterprises to make strides toward sustainable development, boost economic development and enhance the international competitiveness of our capital market, to showcase our positive impact on overall economic and social development.

Taiwan's Capital Market Summit

To enhance the value of Taiwan's capital market, the TWSE held "Taiwan's Capital Market Summit" on September 30, 2024, which featured keynote speeches on sustainability-related issues and forums in which participants shared knowledge plus experience in carbon pricing as well as the promotion of ESG processes in listed companies. Approximately 250 leaders and senior executives from nearly 220 companies participated in the event. The market value of participating listed companies accounted for nearly 80% of the total market value of all listed companies. The summit promoted cross-industry exchanges and strengthened connections across industrial chains, enhancing the continued growth of Taiwan's capital market.



Group photo of the 2024 "Taiwan's Capital Market Summit." From left to right: Chairman Joseph N.C. Huang, E.SUN Financial Holding Co., Ltd.; Senior Vice President Lora Ho, TSMC; President Edith Lee of the TWSE; Deputy Director-General Kao Chin-Ping, Securities and Futures Bureau, FSC; Chairman Peng Jin-Lung of the FSC; Chairman Sherman Lin of the TWSE; Chairman Wu Chung-Shu, Taiwan Institute of Economic Research; and Chairman Peng Shuang-Lang of AUO.

Digitalization of SBL bank guarantee services

The digital service of financial blockchain bank guarantees for securities lending and borrowing was launched, making the entire securities deposit and approval process paperless. This will reduce time and costs spent on travel, helping to decrease the carbon footprint.

Strengthen anti-fraud measures in the securities market

To assist brokerage personnel and investors in strengthening their anti-fraud awareness, the TWSE implemented several anti-fraud measures in 2024, including a priority selection mechanism to conduct customer interviews with elderly customers to protect their rights and interests. In addition, the TWSE requested the National Police Agency to expand the "Anti-Money Laundering Account Enforcement Warning System" for securities firms to conduct statutory checks. Securities firms are actively encouraged to apply to the system, obtain information on accounts that have been reprimanded, and further assess customers' potential risks. The TWSE assisted 47 securities firms in applying to use the Warning System, and also established the "Anti-Fraud Joint Defense Section," through which securities firms had shared 244 fraud cases by the end of 2024. The initiative was a great success, receiving more than 30,000 views from investors. The TWSE has also mobilized anti-fraud promotional events for securities firms and anti-fraud evaluation and award ceremonies.



Group photo of the 2024 Securities Firms Anti-Fraud Evaluation Award Ceremony, with representatives of award recipients from Taishin Securities, Concord Securities, King's Town Securities, E.SUN Securities, Cathay Securities, Capital Securities, KGI Securities, Fubon Securities, Yuanta Securities, and SinoPac Securities (not in order in the photo).

Development of a big data platform

In 2024, the TWSE big data project, convened by the Chairman, led a cross-departmental team to establish a data governance system, aiming to supervise data processing, optimize data analytics services, facilitate product innovation, and enhance internal monitoring efficiency. The big data platform integrates cross-market data into a portal website which requires a single login, facilitating monitoring by the FSC and improving oversight plus auditing efficiency. At the same time, biometric login methods are introduced to reduce the risk of data leakage. In the future, we will continue to encourage team members to learn and communicate with each other through training courses and regular experience sharing activities.

Protecting and conserving biodiversity

In 2024, the TWSE donated to marine conservation foundations to promote marine ecological conservation and sustainable ocean programs. We sponsored marine ecology studies, ecological release of fish fry, and efforts to promote sustainable oceans. In addition, the TWSE donated to several foundations and associations related to wildlife and bird conservation, helping them compile teaching materials on animal conservation, and funding important preservation work in protecting bird wildlife and their natural habitats. The TWSE also supported forest-related associations dedicated to restoring the natural environment through ecological education and nature appreciation activities.

Continued participation in international sustainability initiatives

In August, the TWSE participated in the 2024 SDG Asia Exhibition, holding a number of sustainability lectures and ESG mini classes with interactive activities, and received the Bronze Award for the Green Design Award. In November, the TWSE joined FinTech Taipei 2024, demonstrating our achievements in intelligent innovation and digital sustainability. The event featured an AI-assisted ESG personality test and introduced the ESG InfoHub, deepening the public's understanding of sustainable information, helping investors identify companies with outstanding sustainable performance, and guiding capital investment to accelerate the sustainable transformation of Taiwan's capital market.

In alignment with the World Federation of Exchanges (WFE) 2024 "Ring the Bell for Climate" initiative, the TWSE and TCX jointly promoted ISO carbon management courses and the Carbon Credit Trading Platforms, to connect Taiwan to international standards and strengthen Taiwan's role in global decarbonization efforts.



The TWSE joined the WFE 2024 "Ring the Bell for Climate" campaign, taking part in the launch of the "Greenhouse Gases – Carbon Footprint of Products' Verification Lead Verifier Training Course (ISO 14067:2018)" and "Carbon Neutrality Lead Training Course (ISO 14068-1:2023)" organized by the Taiwan Carbon Solution Exchange.



The TWSE participated in the 2024 SDG Asia Exhibition in August, where its environmentally friendly and energy-efficient exhibition design was honored with the Bronze Award for the Green Design Award.

Practicing sustainability by giving new life to old clothing and books

In keeping with Goal 12 of the SDGs, Responsible Consumption and Production, the TWSE held a number of events to raise awareness about changing the way we produce and consume goods, in order to reduce our ecological footprint. Two events focused on giving new life to old clothing and books by donating these items to disadvantaged groups and reducing waste. Old clothing was donated to the Eden Social Welfare Foundation to help those families in need, both in Taiwan and abroad. Companies and social groups were also invited to transform and upcycle old clothes to promote green consumption. The TWSE partnered with Mollie Used Books, and proceeds from secondhand books went to the Taiwan Fund for Children and Families to create more dedicated reading environments for children.



TWSE employees enthusiastically participating in events to give new life to old clothing and old books, supporting environmental protection and public welfare, and demonstrating corporate social responsibility through their actions.

World Investor Week (WIW)

In support of the World Investor Week (WIW), the TWSE, TDCC, and other financial organizations cohosted a forum on "Digital and Sustainable Finance under the AI Boom," focusing on Taiwan's asset management landscape and future perspective, companies' efforts toward net zero targets, latest developments in sustainable finance, and strengthening investor resilience as key topics. The forum promoted ESG green sustainability bonds as a product that fulfills investor needs, corporate responsibility, and the principles of sustainable finance. By expanding the influence and effects of such, Taiwan will advance further as an internationally competitive and sustainable financial market.



AWARDS AND CERTIFICATIONS



+ HR Asia Best Companies to Work for in Asia 2024 and Sustainable Workplace Awards 2024

The evaluation scores of the three indicators of core (collective organization for real engagement), self (heart, mind & soul), and group (think, feel & do) are higher than the average of the Taiwan market.

The TWSE held eight carbon reduction initiatives working to achieve SDGs, actively promoted net zero carbon emissions and supply chain management, and led by example to guide businesses to reduce carbon emissions.

+ 2024 Taipei City Net Zero Leadership Award in the Industrial and Commercial Industry Segment

The TWSE is pivoting towards renewable energy, reducing paper and plastic consumption, lowering operational carbon emissions, and increasing energy efficiency.

+ Silver Award of the Social Group at the 2024 8th PwC Sustainability Impact Awards

With the theme of "ESG InfoHub Drives Changes and Achieves Excellence," the TWSE illustrated the influence of the ESG InfoHub on ESG information disclosure in Taiwan's capital market, which guides sustainability funds to invest in companies with excellent ESG performance.

+ Family-Friendly Award at the 2024 Ministry of Labor's Work-Life Balance Awards

+ Performance award in the FSC's financial cyber security offensive and defensive exercises

+ Excellence award from the FSC's Financial Information Sharing and Analysis Center (F-ISAC) for information sharing

+ Digital Trust Talent Development Pioneer Award by BSI

+ Gold Award for Digital Inclusion and Outstanding Award for Digital Service for the FundRich app, which exceeded 160,000 downloads

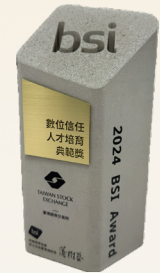


May 2024 | Completed review of BSI 10012 Personal Information Management System (PIMS), and was renewed in November.

June 2024 | Certified for the new standard ISO 27001:2022 Information Security Management System (ISMS).

July 2024 | Became the world's first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI.

November 2024 | Maintained re-certification of ISO 22301 Business Continuity Management System (BCMS).



TWSE's Digital Trust Talent Development Pioneer Award by BSI.



TWSE's performance award in the FSC's 2024 financial cyber security offensive and defensive exercises.



▲ Group photo from the award ceremony of the Family-Friendly Award at the 2024 Ministry of Labor's Work-Life Balance Awards, with Tsai Shiu-Sheng of the Administration Department accepting the award on behalf of the TWSE, demonstrating the company's commitment to outstanding achievements in creating a workplace built on mutual trust, respect, equality, and friendliness.



◀ The TWSE received HR Asia Best Companies to Work for in Asia 2024 and Sustainable Workplace Awards 2024.



◀ Executive Vice President Tu Hui-Chuan of the TWSE received the Silver Award of the Social Group on behalf of the TWSE at the 2024-8th PwC Sustainability Impact Awards with the theme of "ESG InfoHub Drives Changes and Achieves Excellence."



▲ The TWSE received the 2024 Taipei City Net Zero Leadership Award in the Industrial and Commercial Industry Segment; Commissioner Chen Chun-An of the Department of Economic Development, Taipei City Government on left; Lin Hsin-Hong representing the TWSE on right.

SUSTAINABLE STRATEGY BLUEPRINT

To promote the long-term stable growth of Taiwan's securities market while embracing the core values of ESG, the TWSE focuses on two main strategic themes of "Sustainable Market" and "Sustainable Responsibility." Six actionable strategies are developed under the framework of the two main themes, through which the TWSE exerts its influence to promote the sustainable development of Taiwan's securities market.

Strategic Theme 1 SUSTAINABLE MARKET

- Create a transparent, fair, and sustainable market environment to drive the stable growth of enterprises.
- Stimulate green innovation, propel sustainable investment, and collaborate with global partners.

Strategy 1: Market Stability

1. Establish diverse digital platforms to meet the needs of stakeholders.
2. Promote anti-fraud measures and enhance the quality of information disclosure to maintain market safety.

Strategy 2: Financial Inclusion

1. Innovate products and regulations to promote responsible and sustainable financial services.
2. Establish carbon trading mechanisms and platforms to advance the country towards net-zero emissions.

Strategy 3: International Cooperation

1. Continue to deepen connections with international organizations, respond to initiatives, and cultivate green-collar talents.
2. Promote exchanges with foreign institutional investors and attract international funds.



Strategic Theme 2 SUSTAINABLE RESPONSIBILITY

- Fulfill our ESG responsibilities to promote positive, sustainable transformation.
- Create social value and environmental contribution through climate action and a happy workplace.

Strategy 4: Green Operations

1. Implement climate change response strategies to address risks and seize opportunities.
2. Digitize internal and external processes to increase the use of renewable energy and achieve carbon neutrality.

Strategy 5: Integrity Governance

1. Uphold anti-corruption and integrity in business operations and implement internal control mechanisms.
2. Strengthen information security management to ensure operation continuity.

Strategy 6: Social Inclusion

1. Establish a fair and inclusive workplace culture and cultivate employees' sustainability awareness.
2. Promote social welfare and inclusion and support sustainable development goals (SDGs).

Strategic Goals and Implementation

Strategy 1: Market Stability

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
1. Establish diverse digital platforms to meet the needs of stakeholders	Continue to optimize sustainability information disclosure platform and assistive tools 1 Optimized the ESG InfoHub dashboard with the addition of negative ESG material events; a page on Sustainability Courses was launched. 2 Established the ESG Digital Platform, including a section on sustainable economic activity disclosure, and expanded ESG information to 20 material topics and 97 indicators.	1 Continue to expand content on the ESG InfoHub dashboards to provide users access to companies' sustainability reports and related information. 2 The "Sustainability Report Assistance Function" is set to be launched to augment disclosure reporting.	1 Continue to study and refine the ESG InfoHub dashboard design. 2 Adjust indicators and content on the ESG Digital Platform in accordance with international trends.	1 Introduce AI technology on the ESG InfoHub to provide more comprehensive ESG information. 2 Study the adoption of XBRL format for IFRS reporting and disclosure.
	Strengthen market information disclosure to meet investor needs Launched the updated Investment InfoHub 2.0 with enhanced comparison features.	Add securities lending and other trading information to the Investment InfoHub 2.0; assess the addition of comparison information based on industry classification of listed companies.	Introduce AI technology to provide comprehensive investment information.	Introduce AI technology to provide comprehensive investment information.
	Establish IPO Information Hub Provide investors with a one-stop inquiry service with comprehensive IPO information, including tracking the timetable of the IPO filing process, such as dates for auction and public subscription.	Continue to optimize content and user experience of the IPO Information Hub.	Continue to optimize content and user experience of the IPO Information Hub.	Continue to optimize content and user experience of the IPO Information Hub.
	Facilitate communication between listed companies and institutional investors 1 Established the IR ENGAGE platform to enhance connections between listed companies and institutional investors. 2 Focus on three main services to meet user needs: Investor Conferences, ESG Data, and Engagement Services. 3 Trial phase launched on November 1, 2024; registered 508 members as of end of 2024, including 391 TWSE listed companies, 72 TPEX listed companies, and 45 institutional investors.	1 Launch IR Zone to highlight listed companies and increase their exposure; integrate online conference and event registration systems to enhance interaction. 2 Deepen ESG information services, optimize the two-way feedback mechanism, add active push functions, and strengthen matchmaking and basic functions to improve user experience and immediate information delivery.	1 Continue to collect user feedback, analyze market demand and incorporate new technology, and regularly launch new features and services to maintain market competitiveness. 2 Expand the scope of ESG value-added data services and provide more refined and diversified ESG data and indicators to meet market demand. 3 Optimize the IR Zone webpage and online conference value-added functions to further enhance user experience and promote efficient interaction between listed companies and institutional investors.	Continue to improve platform functions to serve the capital market, enhance engagement, and deepen the relationship between listed companies and institutional investors.

Strategy 1: Market Stability

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>2.</p> <p>Promote anti-fraud measures and enhance the quality of information disclosure to maintain market safety</p>	<p>Work with securities firms to fight fraud and maintain market information security</p> <ol style="list-style-type: none"> Established the "Anti-Fraud Joint Defense Section," with securities firms sharing more than 200 fraud cases in 2024. Conducted the 2024 Securities Firms Anti-Fraud Evaluation, with 27 securities firms participating. Assisted and subsidized securities firms in setting up anti-fraud pages on their official websites. 	<ol style="list-style-type: none"> Plan and establish an anti-fraud reporting platform for securities firms, with features such as photo and text information sharing, anti-fraud database, and data analytics. Conduct the 2025 Securities Firms Anti-Fraud Evaluation. 	<p>Continue securities firms' anti-fraud evaluations, and make timely adjustments to anti-fraud measures in the securities market based on the latest fraud trends in the country.</p>	<p>Continue securities firms' anti-fraud evaluations, and make timely adjustments to anti-fraud measures in the securities market based on the latest fraud trends in the country.</p>
	<p>Establish reporting system for illegal online advertisements and fraudulent content</p> <p>Developed and implemented a reporting system for illegal online advertisements and fraudulent content to enhance operational efficiency. A total of 24,910 suspected investment fraud advertisements were reported, and 24,891 were taken down.</p>	<p>Apply emerging technologies to optimize and streamline the reporting of suspicious fraud advertisements to increase reporting frequency; work with peripheral units to improve efficacy of fraud prevention.</p>	<p>Introduce AI learning technology, improve AI fraud detection, and continue to increase the efficiency of fraudulent advertisement reporting, to stop fraud ads and reduce public risk at the source.</p>	<p>Integrate future technological advancements to prevent fraud, continue to optimize fraudulent advertisement reporting to safeguard the public's assets.</p>
	<p>Enhance the quality of sustainable information disclosure</p> <ol style="list-style-type: none"> Updated the FAQ on IFRS Sustainability Disclosure Standards. Continued to review listed companies' sustainability reports and auditors' assurance working papers. Revised the "Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE-listed Companies," recommending that sustainability reports should be approved by the board of directors, to improve and strengthen the responsibility of listed companies and their boards in preparing sustainability reports. Revised the sample template of "Reference Items for Assessing the Effectiveness of Internal Control Systems," incorporating sustainable information management into internal control systems. 	<ol style="list-style-type: none"> Continue to update the FAQ on IFRS Sustainability Disclosure Standards; publish sample templates on IFRS reporting and other reference documents. Expand review scope of listed companies' sustainability reports and auditors' assurance working papers; include GHG assurance working papers in review mechanism. Conduct workshops and seminars. Launch the "Sustainability Report Assistance Function." 	<ol style="list-style-type: none"> Study the adoption of XBRL format for IFRS reporting and disclosure. Continue to update the FAQ on IFRS Sustainability Disclosure Standards, sample templates on IFRS reporting, and other reference documents. 	<ol style="list-style-type: none"> Study the adoption of XBRL format for IFRS reporting and disclosure. Continue to update the FAQ on IFRS Sustainability Disclosure Standards, sample templates on IFRS reporting, and other reference documents.
	<p>Continue to monitor the disclosure of material information by listed companies</p> <p>There were 41,694 pieces of material information reviewed, 107 press conferences held on material information disclosure, and 15 trading halts instituted.</p>	<p>Gradually step up requirements for all listed companies to provide information disclosure in advance of the Annual General Meeting (AGM).</p>	<p>Simplify or relax information reporting items for listed companies to reduce their operational burden and enhance the availability of information disclosure.</p>	<p>Continue to establish sound regulations to enhance the timeliness and integrity of listed companies' information reporting.</p>

Strategy 1: Market Stability

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>2. Promote anti-fraud measures and enhance the quality of information disclosure to maintain market safety</p>	<p>Strengthen securities market's cybersecurity resilience, capacity, and personnel quality</p> <ol style="list-style-type: none"> 1 Assisted fourth-level securities firms in installing IPS and WAF cybersecurity protection mechanisms. 2 Assisted personnel in securities firms in attaining ISO 27001 Information Security Management System (ISMS) certification. 3 Established digital platforms to optimize reporting. 4 The Security and Futures Computer Emergency Response Team (SF-CERT) continued to provide phone support and website monitoring. In 2024, SF-CERT issued four information security alerts, followed up on 587 information security incidents reported by operators, and provided eight sessions of consulting services. 5 Revised the guidelines for information and communication security management for reference by listed companies; incorporated important indicators in the "Reference Items for Assessing the Effectiveness of Internal Control Systems;" and held in-person and online courses on cybersecurity education for chief information security officers, executives, and related personnel from listed companies. 	<ol style="list-style-type: none"> 1 Continue to assist fourth-level securities firms in installing IPS and WAF cybersecurity protection mechanisms. 2 Conduct relevant international information security certification courses. 3 Increase platform reporting items and implement regulations on securities firms' cybersecurity review mechanisms. 4 Continue to assist market participants in strengthening their ability to respond to and handle cybersecurity incidents through SF-CERT. 5 In response to AI issues, emerging technology developments, and recent cybersecurity incidents, as well as to enhance operational resilience, continue to add and revise relevant guidelines and cybersecurity regulations to help strengthen the market's cybersecurity and operational resilience. 	<ol style="list-style-type: none"> 1 Assist fourth-level securities firms in conducting information security diagnostics. 2 Assess securities firms and introduce zero-trust financial network. 3 Continue to review and expand the scope and depth of services by SF-CERT. 4 Strengthen supervision of securities traders' use of AI technology; in response to emerging technologies and cybersecurity incidents, continue to revise relevant guidelines to help strengthen the market's cybersecurity and operational resilience. 	<ol style="list-style-type: none"> 1 Assist all securities firms in increasing the frequency of information security diagnostics. 2 Enhance the level of encryption for securities firms' networks to meet international standards. 3 Continue to review and expand the scope and depth of services by SF-CERT. 4 In response to emerging technologies and cybersecurity incidents, continue to revise relevant guidelines to help strengthen the market's cybersecurity and operational resilience.



Strategy 2: Financial Inclusion

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>1. Innovate products and regulations and promote responsible and sustainable financial services</p>	<p>Innovative diverse products Launched actively managed ETFs and passive multi-asset ETFs; promoted cross-listing ETFs.</p>	<p>Assist asset management companies in launching diversified products; track international market trends based on the development of international markets and the needs of asset management companies; study new products in a timely manner.</p>	<p>Assist asset management companies in launching diversified products; track international market trends based on the development of international markets and the needs of asset management companies; study new products in a timely manner.</p>	<p>Assist asset management companies in launching diversified products; track international market trends based on the development of international markets and the needs of asset management companies; study new products in a timely manner.</p>
	<p>Roll out sustainability related indices and products Continued to compile ESG thematic indices and worked with international institutes to study the feasibility of ESG indices; in 2024, TIP launched the "S&P TIP Taiwan Carbon Reduced ESG 50 Index" and "TIP Taiwan Gender Equality Index," plus acquired technical ownership of the "TIP Taiwan Sustainability Ratings (SEED Model)."</p>	<ol style="list-style-type: none"> 1 Provide more diversified underlying indices for financial products to stimulate the capital market. 2 Promote ESG index data services and enhance the applicability of the "TIP Taiwan Sustainability Ratings (SEED Model)" with supporting data. 	<ol style="list-style-type: none"> 1 Regularly communicate with issuers to understand market trends and continue to compile diversified indices to meet investor needs. 2 Continue to optimize the evaluation system and local ESG database, and expand the commercial application of the database. 	<ol style="list-style-type: none"> 1 Innovate index products and promote the widespread adoption of sustainable thematic indices. 2 Deepen the application of the ESG database and support institutional investors in implementing sustainable and responsible investment.
<p>2. Establish carbon trading mechanisms and platforms to advance the country towards net zero emissions</p>	<p>Support listing of innovative companies 1 Promote the listing of diversified industries: Conducted eight industry experience and sharing conferences to encourage innovative companies to apply for listing on TIB, focusing on industries such as biotechnology, digital and cloud services, green energy and environmental services, plus intelligent healthcare and long-term care. 2 Upgraded to TIB 2.0: Removed restrictions on qualified investors, enhanced the rigor of innovation assessments, created a flexible and friendly fundraising environment, and strengthened the protection of investor rights.</p>	<ol style="list-style-type: none"> 1 Achieve IPO target. 2 Attract high quality domestic startups to list, extend reach to innovative enterprises in Asia, diversify the issuance market, and enhance overall market value. 	<ol style="list-style-type: none"> 1 Achieve IPO target. 2 Attract high quality startups from Taiwan and Asia to list, extend reach to innovative enterprises in Europe and the US, diversify the issuance market, and enhance overall market value. 	<ol style="list-style-type: none"> 1 Achieve IPO target. 2 Attract high quality domestic and foreign startups to list, diversify the issuance market, and enhance overall market value.
	<p>Invigorate the carbon trading market 1 International Carbon Credit Trading: The TCX officially launched the International Carbon Credit Trading Platform in late 2023, and introduced international carbon credit projects such as renewable energy and safe water projects. In mid-2024, nature-based and carbon dioxide removal (CDR) projects were introduced to meet business needs in the global supply chain for reducing carbon or achieving carbon neutrality. 2 Domestic Carbon Credit Trading: The TCX launched its Domestic Carbon Credit Trading Platform in alignment with the Ministry of Environment's carbon pricing mechanism in October 2024. The platform operates with openness, security, and transparency, plus features projects across multiple sectors, including agriculture, petrochemicals, steel, transportation, and services.</p>	<ol style="list-style-type: none"> 1 Ensure the operational efficiency and stability of the trading platform. 2 Continue to strengthen platform information security and system resilience. 3 Introduce high-quality international carbon credits to meet industry needs. 	<ol style="list-style-type: none"> 1 Make adjustments to trading platforms and trading mechanisms in a timely manner and in line with national policies. 2 Introduce diverse and high-quality international carbon credits according to global trends and industry needs to help companies achieve their carbon reduction targets. 3 Assist domestic companies to develop voluntary emission reduction projects, increase our country's natural carbon sinks, while addressing biodiversity and sustainable development issues. 	<ol style="list-style-type: none"> 1 Provide more diverse and high-quality carbon credit trading services to help Taiwan achieve net zero emissions by 2050. 2 Track the trends and development of emerging technologies to integrate them into services in a timely manner.

Strategy 3: International Cooperation

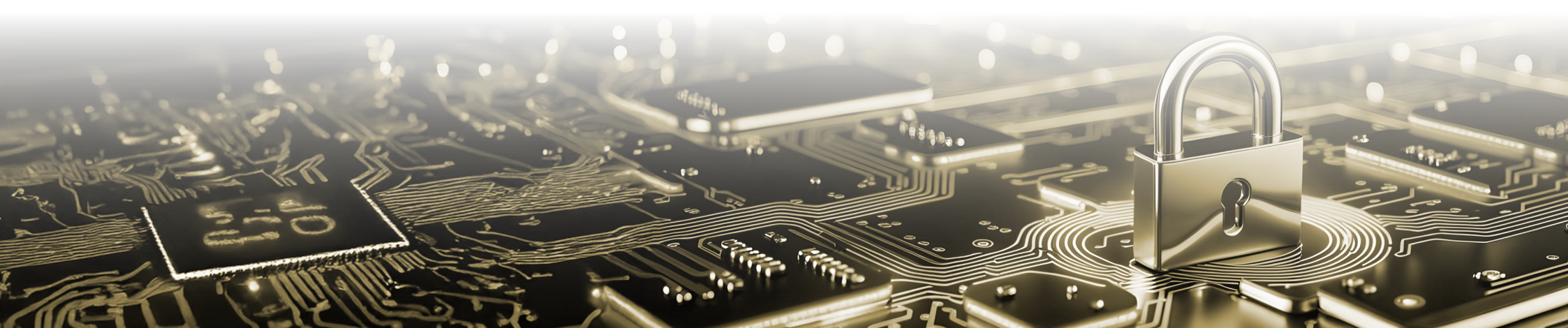
Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>1. Continue to deepen connections with international organizations, respond to initiatives, and cultivate green-collar talents</p>	<p>Deepen international connections</p> <ol style="list-style-type: none"> 1 Participated in the meetings and activities of international organizations, including the OECD and ACGA. 2 Actively promoted exchanges and cooperation with foreign securities institutions and exchanges, such as conducting visits, holding capital introduction events, and MOU signings. 	<ol style="list-style-type: none"> 1 Host the 2025 AOSEF General Assembly. 2 Continue to participate in meetings of international organizations such as the OECD and ACGA. 3 Engage in cooperation with exchanges in the Middle East. 4 Strengthen joint marketing with Asian exchanges; promote cross-listing of financial products with Asian exchanges. 	<ol style="list-style-type: none"> 1 Continue to participate in meetings of international organizations such as the OECD and ACGA. 2 Cooperate with Asian exchanges on product development and marketing. 	<ol style="list-style-type: none"> 1 Continue to participate in meetings of international organizations such as the OECD and ACGA. 2 Explore various areas of cooperation with exchanges of other countries.
	<p>Foster green talent</p> <ol style="list-style-type: none"> 1 Conducted the “Greenhouse Gas Inventory Workshop.” 2 Jointly conducted more than 20 domestic and international forums and over 50 online and in-person carbon management courses and workshops with the TCX, working with top academic institutions, research institutes, NGOs, and digital platforms. 3 Jointly conducted with BSI 38 sessions of ISO certificate courses on carbon inventory, carbon footprint, and carbon neutrality, issuing more than 1,200 certificates. 	<ol style="list-style-type: none"> 1 Continue to conduct sustainability-related workshops and seminars. 2 In line with international trends and industry demand, continue to collaborate with industry, government, and academia to conduct promotion and educational training related to sustainability, carbon credits, and carbon management. 3 Continue to work with international institutes to conduct ISO certificate courses in carbon inventory, carbon footprint, and carbon neutrality to foster green talent in Taiwan and improve our carbon inventory standards in line with international standards. 	<ol style="list-style-type: none"> 1 Continue to conduct sustainability-related workshops and seminars. 2 In line with international trends and industry demand, continue to collaborate with industry, government, and academia to conduct promotion and educational training related to sustainability, carbon credits, and carbon management. 3 Continue to work with international institutes to conduct ISO certificate courses in carbon inventory, carbon footprint, and carbon neutrality to foster green talent in Taiwan and improve our carbon inventory standards in line with international standards. 	<ol style="list-style-type: none"> 1 Continue to conduct sustainability-related workshops and seminars. 2 In line with international trends and industry demand, continue to collaborate with industry, government, and academia to conduct promotion and educational training related to sustainability, carbon credits, and carbon management. 3 Continue to work with international institutes to conduct ISO certificate courses in carbon inventory, carbon footprint, and carbon neutrality to foster green talent in Taiwan and improve our carbon inventory standards in line with international standards.
<p>2. Promote exchanges with foreign institutional investors and attract international funds</p>	<p>Increase the global visibility of the Taiwan capital market</p> <ol style="list-style-type: none"> 1 Visited institutional investors, sovereign funds, and asset management institutions in various countries. 2 Participated in investment forums with international intermediaries and held online and in-person investment forums with intermediaries in Taiwan. 	<ol style="list-style-type: none"> 1 Conduct Taiwan Week activities. 2 Jointly conduct capital introduction events in Taiwan with foreign securities firms. 3 Jointly conduct capital introduction events abroad with intermediaries. 4 Work with the Taiwan External Trade Development Council (TAITRA) to organize forums with listed companies and institutional investors at COMPUTEX Taipei. 	<ol style="list-style-type: none"> 1 Continue to jointly conduct capital introduction events in Taiwan and abroad with intermediaries. 2 Strengthen channels of communication with large institutional investors to attract international funds. 3 Organize capital introduction events during large international expos to highlight Taiwan’s dynamic capital market. 	<p>Enhance the global visibility of Taiwan’s capital market through greater international cooperation, more frequent cross-market investor roadshows and investor conferences, along with more robust IR services.</p>

Strategy 4: Green Operations

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
1. Implement climate change response strategies to address risks and seize opportunities	Implement climate action 1 Conducted system backup drills with a 100% pass rate. 2 Continued implementation of several climate mitigation measures to reduce greenhouse gas emissions and improve the efficiency of renewable energy use. 3 Organized numerous sustainability-related workshops, seminars, and training sessions to raise overall sustainability awareness across the market.	1 Continue to track progress towards climate change-related indicators and goals. 2 Increase the proportion of renewable energy use. 3 Continue to conduct sustainability-related education and training.	1 Replace old equipment with high-efficiency models to reduce energy consumption. 2 Continue to strengthen the functions of sustainability-related platforms.	Continue to steer enterprises to reduce carbon emissions.
	Improve supply chain management Reduced carbon emissions produced during the procurement process by supporting local vendors, thereby enhancing our corporate image and working towards sustainable development.	Continue to encourage suppliers to disclose climate and ESG-related information.	Accelerate suppliers' transformation to sustainable development to fulfill ESG commitments.	All partnering suppliers should achieve ESG targets and meet the requirement for lowering supply chain risk, in the areas of information security, environment, and sustainability.
2. Digitize internal and external processes to increase the use of renewable energy and achieve carbon neutrality	Make strides towards net zero 1 Completed the 2023 GHG inventory and verification, and became the world's first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI. 2 Electronically signed documents accounted for 98.41% of all official documents in 2024, saving approximated 8.64 million sheets of paper. 3 As the FSC established the electronic official document exchange system for the financial market in 2024, the TWSE encouraged listed companies and securities firms to participate in the new system accordingly. As of the end of 2024, the percentage of listed companies and securities firms participating in the electronic official document exchange system accounted for 94% and 100%, respectively. 4 Together with the Financial Information Services Co., Ltd. (FISC), the TWSE launched the digital service of financial blockchain bank guarantees for securities lending and borrowing on the Financial Blockchain Platform, which innovates the process of securities firms' new issuance and return of bank guarantees through the paperless online platform, demonstrating the TWSE's innovative capabilities in green finance and dedication to promoting digital transformation among securities firms in leading by example.	1 Achieved carbon neutrality in 2024; continue to conduct greenhouse gas inventory and verification. 2 Increase the use of renewable energy and expand solar power generation equipment so that the First Data Center achieves RE60. 3 Replace electrical equipment with energy-saving models in conjunction with office renovations. 4 Continue to enhance the operation efficiency of the electronic official document exchange system. 5 Complete online connections with three banks to provide digital bank guarantees.	1 Increase proportion of renewable energy use. 2 Replace high-energy-consuming equipment. 3 Improve the energy efficiency of data centers. 4 Continue to promote the digitalization of operations of the securities and banking industries; achieve goal of digital bank guarantees accounting for 50% of annual bank guarantee value.	1 Continue to review developments and formulate corresponding measures so as to achieve net zero emissions. 2 Continue to promote the complete digitalization of bank guarantee operations to achieve a 100% paperless working procedure.

Strategy 5: Integrity Governance

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>1. Uphold anti-corruption and integrity in business operations and implement internal control mechanisms</p>	<p>Uphold integrity governance Maintained integrity governance through the implementation of avoidance of conflict of interest in accordance with Article 206 of the "Company Act"; strengthening the fiduciary duties of board members so as to scrupulously avoid unjust enrichment; strict legal compliance to ensure the soundness of board functions; and the establishment of multiple whistleblowing mechanisms.</p>	<p>Notify directors and supervisors to comply with the "Integrity Governance Principles for Directors and Supervisors;" continue to require directors and supervisors to strictly avoid conflict of interest and unjust enrichment.</p>	<p>Continue to require directors and supervisors to strictly avoid conflict of interest and unjust enrichment in accordance with the "Integrity Governance Principles for Directors and Supervisors."</p>	<p>Strengthen the supervisory function of the board and improve management efficiency.</p>
<p>2. Strengthen information security management to ensure operation continuity</p>	<p>Strengthen information security In addition to compliance with the "Cyber Security Management Act" and relevant laws, BSI has been commissioned to review the ISO 27001 ISMS certification every six months.</p>	<p>1 Comply with the "Cyber Security Management Act" and relevant laws, information security policies of the FSC, plus ISO 27001 and other international standards.</p> <p>2 In accordance with the FSC's reference guide on financial zero trust architecture, the TWSE will assess the industry's familiarity with the model, formulate a blueprint for introducing zero trust architecture, and promote its adoption.</p>	<p>1 Continue to comply with the "Cyber Security Management Act" and relevant laws, information security policies of the FSC, plus ISO 27001 and other international standards.</p> <p>2 Continue to follow the FSC's reference guide on financial zero trust architecture and gradually introduce zero trust architecture into high-risk areas of information safety control.</p>	<p>Continue to comply with the "Cyber Security Management Act" and relevant laws, information security policies of the FSC, plus ISO 27001 and other international standards.</p>



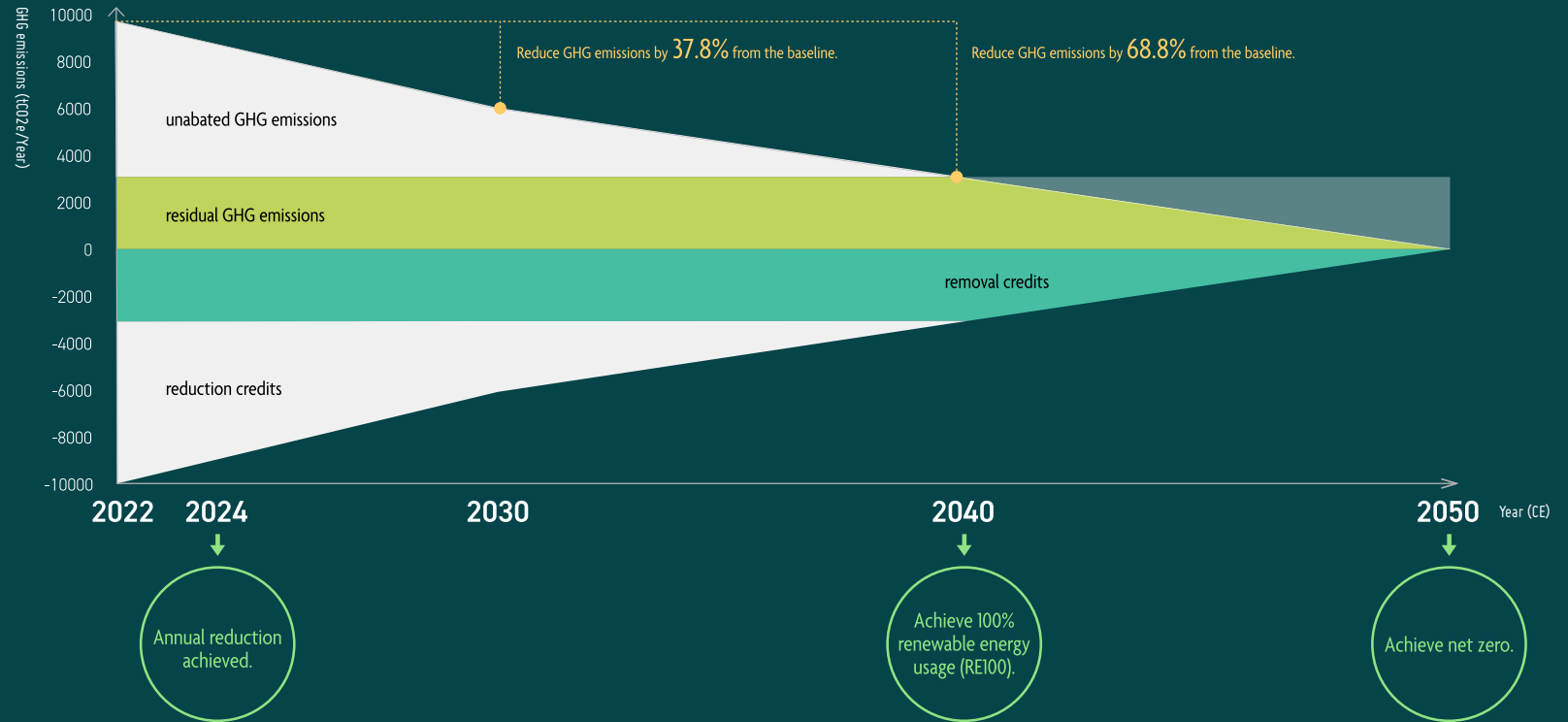
Strategy 6: Social Inclusion

Key Action Aspects	2024 Performance	Short-term targets (2025)	Medium-term targets (2026-2030)	Long-term targets (2031-2050)
<p>1. Establish a fair and inclusive workplace culture and cultivate employees' sustainability awareness</p>	<p>Cultivate a friendly workplace and sustainable awareness</p> <ol style="list-style-type: none"> Conducted three sessions of new employee orientation with 102 participants and one meet-and-greet activity with the TWSE Chairman. Conducted eight team-building exercises with 446 participants and one family day with 1,136 participants, both including employees' family members. Conducted 11 sessions of external training camps on sustainable development with 533 participants. 	<p>Conduct at least one new employee forum and one family day event per year to collect feedback from new personnel, promote family engagement among employees, and foster a friendly and inclusive workplace culture.</p>	<p>Conduct at least one labor education training session per year to enhance labor rights protection and foster a fair and inclusive workplace.</p>	<p>Conduct at least one gender equality training session per year to promote the understanding of sexual and gender diversity plus foster an inclusive and respectful workplace.</p>
<p>2. Promote social welfare and inclusion, to support sustainable development goals (SDGs)</p>	<p>Foster social inclusion</p> <ol style="list-style-type: none"> To promote social welfare, the TWSE has donated towards programs including care for the vulnerable, assistance for underprivileged students, emergency assistance, talent cultivation, support for innovative enterprises, promotion of ESG practices, medical care, development to sustainable agriculture, plus arts and cultural activities. According to each fiscal year, the budget for the following year is prepared with 3% to 5% of the earnings after tax set aside for donations to social welfare organizations or activities. Social welfare donations totaled TWD220 million in 2024. 	<p>The budget for the TWSE's social welfare donations was prepared.</p>	<p>Fulfill our corporate social responsibility to build a fair, inclusive, and resilient society by continuing to care for disadvantaged groups and stepping up our charitable efforts.</p>	<p>Bring about a more equitable, harmonious, and stable society by continuing to care for disadvantaged groups and stepping up our charitable efforts.</p>



PATHWAY TO NET ZERO

Carbon neutrality roadmap



Note 1: The year 2022 was established as the inventory base year; carbon emissions for 2022 totaled 9,814,991 tCO₂e.

Note 2: To achieve carbon neutrality, negative emission technologies will be progressively adopted to neutralize residual greenhouse gas emissions.

Scope of roadmap

The scope of the TWSE's carbon neutrality report is established in accordance with the standards of ISO 14064-1:2018 and includes the Taiwan Stock Exchange Corporation and all the locations over which it has operational control.



To achieve the targets set out in the carbon neutrality roadmap, the TWSE established a carbon neutrality management plan with the following key measures:

Replace high-emission equipment, such as lighting and HVAC, with energy-saving alternatives.

Reduce emergency generator diesel fuel consumption.

Gradually increase the proportion of renewable energy use.

Utilize negative emissions technologies (carbon sinks).



For more information on the progress towards GHG reduction targets and goals by phase, please refer to "4.2 Energy and carbon management," and the TWSE carbon neutrality report (TWSE official website/About the TWSE/ISO Certification).





SUSTAINABLE DEVELOPMENT

Sustainability Spotlights

Sustainable Development Committee

SDG Actions

Stakeholders and Material Sustainability Topics

SUSTAINABILITY SPOTLIGHTS

LAUNCH OF DOMESTIC CARBON CREDIT TRADING PLATFORM USHERS IN NEW ERA FOR CARBON MARKET

The TCX was commissioned to establish the Domestic Carbon Credit Trading Platform in September 2024 in accordance with the Ministry of Environment's "Regulations Governing Trading, Auctions, and Transfer of Greenhouse Gas Reduction Credits" (provisional translation), which was announced on July 1, 2024. The platform aims to increase incentives for companies to reduce carbon emissions, boost green job opportunities, and align with international practices. The TCX is responsible for handling carbon credit trading and auctions, along with has formulated matters of guidance and trading account agreements. The platform was officially launched in October, with the first batch of projects undertaken through set-price trading. The first batch included six projects in total, which were China Steel Corporation's energy conservation from furnaces for steel billets, Taipei 101's adoption of high-energy efficiency lighting in its building parking space, Han-bao agricultural renewable energy project, Han-Bao Agriculture and Livestock's power generation with methane from wastewater treatment (third-phase), Chimei Corporation's replacement of fuel oils with natural gas, and Han-Cheng Bus Traffic Company's electric buses. Their combined carbon credits were equivalent to 6,080 metric tons of carbon dioxide, priced at TWD2,500 to TWD4,000 per metric ton.

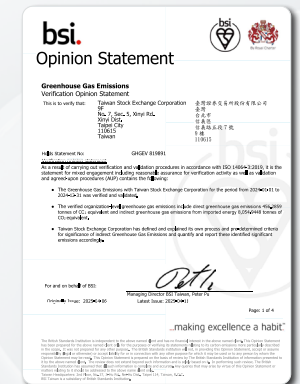
In December 2024, the transaction of the first batch was successfully completed, setting a solid foundation for the domestic carbon credit market. In contrast to the past when companies had to find their own buyers and sellers, now the Domestic Carbon Credit Trading Platform matches buyers and sellers and provides publicly available information on projects, listed products, and other carbon trading information. These measures create a fairer and more open market, providing incentives for companies to participate in carbon reduction.

TWSE AWARDED FIRST CARBON NEUTRALITY CERTIFICATE, DEMONSTRATES LEADERSHIP IN SUSTAINABILITY

In July 2024, the TWSE became the world's first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI. Harold Pradal, President of Assurance Services and Executive Committee Member of the BSI Group, personally presented the certificate, recognizing the TWSE's achievements in promoting sustainable development while adhering to the highest international standards.

The TWSE has long been committed to sustainability practices, continuously enhancing its operational mechanisms and quality across environment, social, and governance aspects. In early 2023, the TWSE responded to Taiwan's 2050 net zero transformation goal by setting a near-term goal to reduce greenhouse gas emissions by 37.8% (from the 2022 baseline) by 2030, with the ultimate objective to reach net zero emissions by 2050. As part of its path to carbon neutrality, the TWSE will reduce emissions through equipment replacement and renewable energy adoption, and plans to offset residual emissions through carbon credits from 2040 to 2050. We aim to lead by example, fostering sustainable development among listed companies in Taiwan.

Carbon neutrality verification certificate and opinion statement by BSI.



Taiwan Stock Exchange becomes the first exchange in the Asia-Pacific region to receive the ISO 14068-1 carbon neutrality verification issued by BSI. From left to right: Managing Director Peter Pu of BSI NE Asia Region; President Harold Pradal of Assurance Services and executive committee member of BSI Group; Chairman & CEO Sherman Lin of the TWSE; Senior Vice President Tsai Hsiu-Sheng of Administration Department of the TWSE; and CEO Joshua Tien of the TCX.

SUSTAINABILITY SPOTLIGHTS



NEW ESG DIGITAL PLATFORM ADVANCES COMPANIES TOWARDS SUSTAINABLE DEVELOPMENT

The TWSE launched its brand new ESG Digital Platform in May 2024 with a user-friendly reporting interface to assist listed companies in efficiently disclosing ESG-related information, providing a reference for market participants' investment decisions and corporate sustainability transformations. The new platform covers "Corporate Environmental, Social, and Governance (ESG) Information," "Sustainability Reports," "Greenhouse Gas Emissions and Reductions," plus "Sustainable Economic Activities" for all listed companies.

Corporate Environmental, Social, and Governance (ESG) Information

In response to the accelerating development of ESG sustainability issues, the TWSE has incorporated content from annual reports, sustainability reports, and key industry-specific sustainability indicators to revise listed companies' disclosure of "Corporate Environmental, Social, and Governance (ESG) Information" has been updated, expanding from the original 7 major topics to 20, and increasing the number of ESG indicators from 29 to 97, with more to be added in accordance with international standards.

Sustainability Reports

Starting in 2025, all listed companies will be required to prepare and submit sustainability reports. The new ESG Digital Platform will not only consolidate listed companies' ESG information but also add a new feature, the "ESG Sustainability Report Assistance Function," in 2025, providing standards, working papers, as well as sample templates to assist companies in enhancing compliance and reducing costs in preparing these crucial reports.

Greenhouse Gas Emissions and Reductions

A phased approach is underway requiring listed companies to set carbon targets, strategies, and action plans. The new platform synchronously adds voluntary early disclosure capabilities in GHG emissions and reductions.

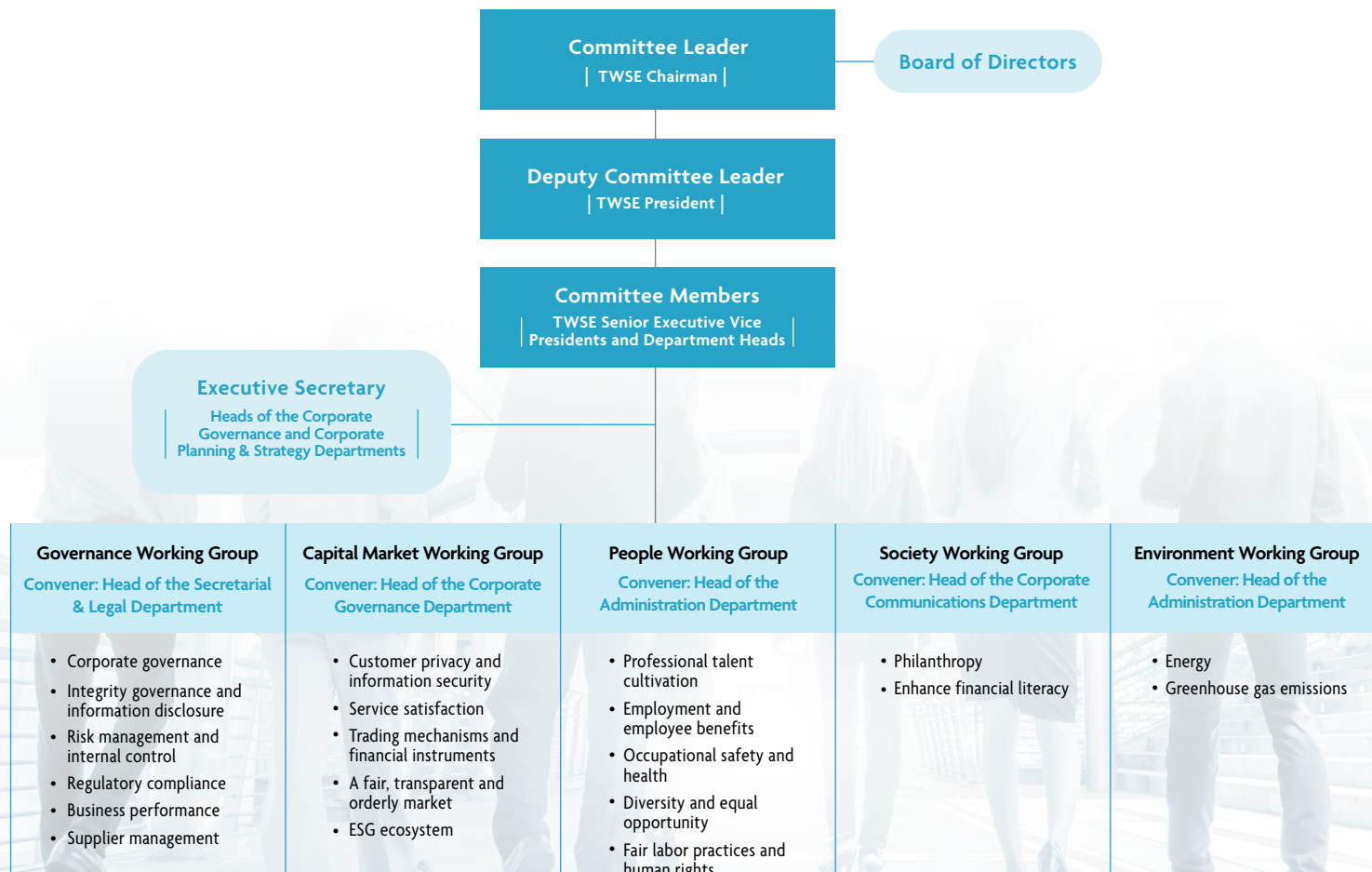
Sustainable Economic Activities

Aligning with Taiwan's 2050 net zero goal, the FSC announced the "Reference Guidelines for Identifying Sustainable Economic Activities" in December 2022 to encourage financial institutions to fund sustainable economic endeavors, propelling corporate sustainability and decarbonization. Listed companies are advised to review their core economic activities against these guidelines. The TWSE's revamped ESG Digital Platform provides a questionnaire for all listed companies to voluntarily disclose sustainable economic activities, facilitating their sustainability transformation journeys. With the publication of the second edition of the FSC's "Reference Guidelines for Identifying Sustainable Economic Activities" on December 31, 2024, the TWSE will revise the reporting content on the platform to adhere to the new guidelines.

SUSTAINABLE DEVELOPMENT COMMITTEE

The Sustainability Development Committee was established in 2020 to supervise operations related to ESG and sustainability reporting. The TWSE Chairman serves as the Committee Leader, and the TWSE President serves as the Deputy Committee Leader. The Senior Executive Vice Presidents and department heads serve as committee members, so as to effectively integrate resources and implement sustainable strategies through each department. In the case of major issues, two board directors may be invited to participate in committee discussions. Five working groups were set up within the Sustainable Development Committee to set policies, targets, and activities to promote sustainable development. In 2024, a total of one Sustainable Development Committee meeting and 12 project progress meetings on “Constructing Taiwan’s ESG Ecosystem” were held. From the feedback of the directors, the TWSE will continue to refine its sustainability practices and reporting. Each year, the company updates the Board of Directors regarding sustainability policies, implementation status, and performance through the TWSE Sustainability Report, in order to enhance the overall knowledge, capabilities, and experience of board members in sustainable development issues.

Organization and responsibilities of the Sustainable Development Committee



SDG ACTIONS

The UN set 17 Sustainable Development Goals (the SDGs) in 2015 to resolve major social problems in collaboration with global enterprises. By proactively connecting our sustainable development strategies with the world, the TWSE responds to the SDGs by leveraging our advantages and contributions. On top of supporting and responding to the 17 SDGs, the TWSE integrates the Sustainable Stock Exchanges (the SSE) initiative with its core competence to demonstrate its influences through the following 15 SDGs.

SDG	Response Chapter	2024 Achievements
1 No Poverty	6.5 Social contribution	<ul style="list-style-type: none"> Sponsored the Financial Services Education Fund, Financial Literacy for Youth (FLY) Courses, the College of Global Banking and Finance, and other talent development programs. Donated to social welfare programs including healthcare, disease treatment, care for vulnerable groups, and emergency assistance.
2 Zero Hunger	6.5 Social contribution	<ul style="list-style-type: none"> Donated to the Greenbox Foundation for Babies Waiting for Homes and the Paramitas Foundation, providing subsidies for meals, medical expenses, and living allowances for orphaned children as well as children and adolescents from poor and disadvantaged families in remote areas.
3 Good Health and Well-Being	6.4 Friendly workplace 6.5 Social contribution	<ul style="list-style-type: none"> Held the “Family Day of Taiwan Stock Exchange 2024,” bringing the happy and friendly corporate culture from the workplace to the family. Offer a variety of benefits, including group insurance, marriage and childbirth subsidies, and wellness programs. Donated to the medical expenses of impoverished patients at Taipei Veterans General Hospital and Taipei Medical University Shuang Ho Hospital, promoting well-being for all ages.
4 Quality Education	Sustainable Strategy Blueprint Key Sustainability Initiatives 6.5 Social contribution	<ul style="list-style-type: none"> Working with digital platforms, research institutes, NGOs, and top academic institutions, the TWSE sponsored and conducted over 20 domestic and international forums and over 50 online and in-person forums, courses, and workshops on ESG talent training, carbon reduction, and net zero emissions, reaching over 5,000 participants. The TWSE and BSI jointly conducted 38 sessions of ISO certificate courses in carbon inventory, carbon footprint, and carbon neutrality, issuing more than 1,200 certificates. The TWSE launched a series of seminars to promote sustainability with a focus on climate change and net zero carbon emissions in northern, central, and southern Taiwan. The seminars focused on the transformation of Taiwan’s capital market and its integration with international standards, with more than 700 directors and corporate governance executives participating. Participated in the 2024 SDG Asia Exhibition, to raise awareness and promote understanding of ESG, financial fraud prevention, and overview of the digital service of bank guarantees for securities borrowing and lending. Published the “High School Investment and Financial Management Teaching Plan” and compiled a special unit on “Financial Sustainability” to enhance students’ understanding of ESG. Regularly issued TWSE publications, including the Annual Report, Sustainability Report, monthly reports of the centralized market, latest international securities market regulations and development, Guide to Investing in Taiwan, and Market Insights, all of which are available on the official website. Created innovative financial education courses, through engaging online videos that integrate basic concepts, key investment themes, and various information channels in a systematic way, to motivate learning through game design elements. Sponsored the Taiwan Printed Circuit Association (TPCA) Environment Foundation, to promote the design of environmentally friendly teaching curriculum for elementary and junior high schools.

SDG	Response Chapter	2024 Achievements
5 Gender Equality	5.1 Corporate governance 6.1 Human rights' protection	<ul style="list-style-type: none"> • The TWSE Board of Directors includes four female directors, accounting for 26.67% of board seats. • Participated in the WFE's "Ring the Bell for Gender Equality" initiative. • Conducted training on the prevention of unlawful infringement in the workplace, gender equality, and prevention of workplace bullying, with 760 participants.
7 Affordable and Clean Energy	4.2 Energy and carbon management	<ul style="list-style-type: none"> • Rented additional office space on the 36th floor of the Taipei 101 building for visitor reception and meetings, and continued to purchase green energy to maintain 100% renewable energy use for offices in Taipei 101. • TWSE's First Data Center initiated use of green energy in March, and RE50 for 2024. • Expanded solar power generation and energy storage equipment, with a total output of 16,330 kWh in 2024.
8 Decent Work and Economic Growth	2.1 Support listing of innovative companies	<ul style="list-style-type: none"> • Encourage listed companies and companies applying for listing to adjust the salary for its non-executive employees in accordance with Paragraph 6, Article 14 of the "Securities and Exchange Act." • TIB encourages businesses with key technologies and innovative capabilities or business models to raise funds on the securities market and fuel their growth. • In line with the FSC's policy to establish a distinctively Taiwanese asset management center in Asia, the TWSE established the Capital Market Service Group to attract high-quality domestic and international enterprises to list in Taiwan and enhance our capital market. • Continue to support startup circles and collaborate with government agencies and resources to attract listings through multiple channels and actively support the development of startups. • Conducted industry activities, inviting government, industry, and academic representatives to share industry trends and listing experiences to encourage and accelerate innovative companies' entry into the capital market.
9 Industry, Innovation, and Infrastructure	Sustainable Strategy Blueprint 1.3 Establish multiple platforms 2.3 Diversify products and invigorate carbon market	<ul style="list-style-type: none"> • Drafted relevant strategies and action plans for constructing Taiwan's ESG ecosystem in cooperation with the FSC's "Sustainable Development Action Plans for TWSE and TPEX Listed Companies." • Upgraded the ESG InfoHub website with an optimized dashboard and the addition of a page on sustainability courses and listed companies' negative ESG material events, to provide investors with more comprehensive sustainability information. • Launched a new ESG Digital Platform with a user-friendly reporting interface to assist listed companies in efficiently disclosing ESG-related information in a uniform format. • As of year-end 2024, thirty-three ESG-related thematic indices have been launched and authorized for diversified applications. • ESG-related indices have been successfully licensed to issue ETFs, ETNs, index futures, index funds, and serve as investment performance tracking indicators for government retirement funds, with a total AUM of over TWD380 billion. • Established the IR ENGAGE platform to provide multi-tier ESG value-added database and facilitate communication plus engagement between listed companies and institutional investors on ESG-related topics.

SDG	Response Chapter	2024 Achievements
10 Reduced Inequalities	1.1 Securities market supervision 6.3 Employee training and development	<ul style="list-style-type: none"> Assisted the FSC in reducing the threshold for declaration and public disclosure of substantial shareholding from 10% to 5%, so that significant changes in shareholding are reported in a timely and transparent manner. Strengthened monitoring through CPAs, underwriters, and other intermediaries. Established suitable management approaches, training programs, grievance channels, and related policies. Assisted securities firms in implementing protection and management mechanisms for information and communications security; continued to augment their digital transformation to provide more convenient and diverse services for investors. Expanded scope of review of sustainability reports to enhance disclosure quality.
12 Responsible Consumption and Production	1.1 Securities market supervision 1.2 Strengthen information disclosure	<ul style="list-style-type: none"> Continue to observe companies' sustainability practices during their listing and review process. Encourage companies to conduct carbon footprint verification with assurance in line with the FSC's "Sustainable Development Guidemap." Revised the "Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies," requiring all listed companies to prepare their sustainability report from 2025 onward. Additionally, listed companies (including subsidiaries on consolidated financial statements) should, in phases, disclose their carbon reduction goals, strategies, and specific action plans. Promoted the evaluation mechanism for Stewardship for Institutional Investors to enhance stewardship information disclosure and transparency. Revised and added ESG metrics into the Corporate Governance Evaluation indicators.
13 Climate Action	Key Sustainability Initiatives Pathway to Net Zero 1.2 Strengthen information disclosure 6.4 Friendly workplace	<ul style="list-style-type: none"> The TCX International Carbon Credit Trading Platform introduced nature-based and carbon dioxide removal (CDR) projects, including blue and green carbon, to meet the business needs in the global supply chain for reducing carbon or achieving carbon neutrality. The Domestic Carbon Credit Trading Platform was launched, with projects spanning multiple industries such as agriculture, petrochemicals, steel, transportation, and services. TIP launched the "S&P TIP Taiwan Carbon Reduced ESG 50 Index," highlighting the performance of Taiwanese companies transitioning towards low carbon and net zero emission. The TWSE became the world's first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI. Conducted sustainability-related training courses, carbon reduction activities, and a family day event aligned with SDGs. Encourage companies to align with IFRS Sustainability Disclosure Standards by publishing reference documents and conducting seminars and educational training, to boost the quality of climate information disclosure and our capital market's international competitiveness.
14 Life Below Water	Key Sustainability Initiatives 6.5 Social contribution	<ul style="list-style-type: none"> Donated to relevant associations to help protect the oceans and coastlines, plus prevent the destruction of Taiwan's coastlines from overdevelopment. Donated to associations that promote environmental education to help schools at all levels conduct environmental education and carry out beach cleanup activities. Donated to promote marine ecology conservation and sustainable ocean projects, and support the study of marine ecology and ocean sustainability.
15 Life on Land	Key Sustainability Initiatives 6.5 Social contribution	<ul style="list-style-type: none"> Made donations to associations dedicated to increasing forest coverage and biodiversity, to safeguard the environment and plant trees for greenification. Supported associations involved in hands-on education to enhance understanding of ecological sustainability, so as to raise awareness of issues such as land and natural resource utilization. Made donations to protect wild birds and their habitats, create a good living environment, and perform other conservation work. Sponsored animal conservation, promotion of environmental sustainability, and compiling of teaching materials related to animal conservation.

SDG	Response Chapter	2024 Achievements
<p>16 Peace, Justice, and Strong Institutions</p>	<p>1.1 Securities market supervision</p>	<ul style="list-style-type: none"> • In addition to regular management of listed companies, spot checks and verification of material information may be conducted from time to time. • To ensure that brokers are in regulatory compliance, conducted regular audits, special audits, and audits targeting their operations to prevent money laundering and counter terrorism financing, as well as anti-fraud evaluation. • Reported suspicious investment fraud advertisements from online media platforms to the FSC, and legally requested the media platforms to take them down, thereby stopping investment fraud ads at the source. • Carried out market surveillance and early warning operations to maintain market order, including auditing illegal transactions, recording and reviewing TV investment programs.
<p>17 Partnerships for the Goals</p>	<p>3.1 Association memberships 3.2 International connections and green talent development</p>	<ul style="list-style-type: none"> • Signed MOUs with the Eswatini Stock Exchange and the Philippine Stock Exchange. • As a contributing participant in international organizations, the TWSE aims to enhance global visibility and strengthen Taiwan's ties with markets worldwide. • The TCX signed a MOU with Verra to promote the development, issuance, and use of high-quality carbon credits.



STAKEHOLDERS AND MATERIAL SUSTAINABILITY TOPICS

STAKEHOLDER IDENTIFICATION

Pursuant to the AA1000 Stakeholder Engagement Standards, the TWSE employs the five principles, i.e. Responsibility, Influence, Tension, Diverse Perspectives, and Dependency, in the identification and ordering of stakeholder significance. The TWSE evaluates the mutual impact between stakeholders and the company through an assessment questionnaire, which was filled out by 15 department heads. The results were then sorted by level of significance.

The 2024 results were categorized into the following eight groups of stakeholders for the TWSE: (1) competent authority; (2) employees; (3) customers; (4) shareholders; (5) intermediaries; (6) suppliers/contractors; (7) media; and (8) listed companies. The results were reported to the Sustainable Development Committee on December 24, 2024. The Committee assessed “investors” as important stakeholders of the TWSE and added the group, making nine groups of stakeholders deemed priority communication targets for 2024.

• Stakeholder Engagement

Stakeholder	What do stakeholders mean to the TWSE?	Main Engagement Channel/Frequency	Engagement Results
Competent Authority	The TWSE is supervised by the regulatory authorities, and strictly complies with their regulations and orders, to build a robust securities market.	<ul style="list-style-type: none"> • Correspondence (daily) • Appearance at legislature meetings as a guest for answering to interpolation (as needed) • Meetings, publicity events, public hearings (as needed) • Phone calls, faxes, and emails (as needed) • Consolidation and reporting of major business statistics (as needed) 	<ul style="list-style-type: none"> • Participated in four FSC meetings regarding the financial market’s Office Document Exchange Center (ODXC). • Attended 21 legislature meetings as a guest for responding to open enquiry. • Participated in six meetings at the Securities and Futures Bureau (SFB) on measures to respond to the securities and futures market. • Participated in one meeting at the SFB on applications of the big data platform. • Participated in the FSC’s “Policy and Industry Summit on Building an Asian Asset Management Center.” • Participated in the FSC’s project meeting for the Asian Asset Management Center policy. • Invited the FSC to participate in the inaugural meeting of the Capital Market Service Group.
Employees	Employees are the most important asset and key to TWSE core competitiveness.	<ul style="list-style-type: none"> • Reporting or complaint channels (immediately) • Phone calls and emails (immediately) • Labor-management meetings (monthly) • Occupational Safety and Health meetings (quarterly) • Employee Welfare Committee meetings (quarterly) • Meetings of the supervisory committee of the Labor Retirement Reserve Fund (quarterly) • Performance evaluation interviews (twice a year) • Collective bargaining agreement meetings (every three years) • On-site visits (aperiodically) • Performance evaluation and follow-up (aperiodically) 	<ul style="list-style-type: none"> • Convened 11 labor-management meetings. • Held four occupational Safety and Health meetings. • Held four Employee Welfare Committee meetings. • Held four meetings of the supervisory committee of the Labor Retirement Reserve Fund. • Two employees applied for parental leave; both the return-to-work rate following a period of parental leave and retention rate were 100%.

Stakeholder	What do stakeholders mean to the TWSE?	Main Engagement Channel/Frequency	Engagement Results
Customers	Data vendors, securities investment trust enterprises, and securities firms are TWSE partners that provide economic benefits, recognize the TWSE for its services, and grow together with the TWSE.	<ul style="list-style-type: none"> • Correspondence (daily) • Site visits (annually) • Seminars (annually) • Business conferences (aperiodically) • Service satisfaction surveys (aperiodically) • Phone calls and emails (aperiodically) 	<ul style="list-style-type: none"> • Conducted 12 sessions of the Training Program of the Standard Directions for Internal Control Systems in Securities Firms. • Conducted three sessions of the Environmental, Social, and Governance Seminar for Securities Firms. • Conducted 18 sessions of the Professional Courses of Securities Regulations and Business Practice. • Conducted two sessions of the Cyber Security Seminar for Securities Firms. • Conducted one session of the Securities Brokers and Dealers Senior Executive Seminar. • Conducted one session of the Forum for Responsible Persons for Securities Firms. • Conducted two seminars on the new rule allowing foreign investors to appoint more than one custodian institution. • Conducted eight seminars on clearing and settlement, auction and IPO allotment process, and reporting of default or out-trade. • Conducted three seminars on the amended rules allowing the inclusion of odd lots in settlement-driven securities borrowing and lending (SBL). • Conducted one seminar on the new standards for securities firms to increase their additional contributions to the Clearing and Settlement Fund under the Monthly Tracking Mechanism. • Conducted three seminars on SBL and financing services for securities firms. • Paid 17 on-site visits to ETF issuers; conducted four sessions of ETF seminars for the Securities Investment Trust and Consulting Association (SITCA). • Conducted one seminar for investment trust personnel. • Paid on-site visits to nine domestic data vendors.
Shareholders	Shareholders are a vital part of a company. In addition to having ownership in a company and the right to participate in corporate decision-making, shareholders must also assume corresponding responsibilities and play an active role in corporate governance.	<ul style="list-style-type: none"> • Financial report (every six months) • Annual general meeting of shareholders (AGM) (annually) • Phone calls, emails, and correspondence (aperiodically) 	<ul style="list-style-type: none"> • Regularly convene shareholders' meetings for in-person communication (shareholder services are handled by professional shareholder services agency). • Established channels for corporate shareholders to aperiodically review the company's financial information to promote information transparency.
Intermediaries	Intermediaries drive company listings, strengthen the capital market, and facilitate communication between listed companies and the TWSE.	<ul style="list-style-type: none"> • Phone calls and emails (immediately) • Correspondence (weekly) • Meetings and publicity events (monthly) 	<ul style="list-style-type: none"> • Participated in KPMG's conference on the biomedical industry. • Worked with CPA firms to convene four sessions of the "Forum for Promoting IPO of Fine-Quality Enterprises." • Held five sessions of the "Forum for Promoting IPO of Fine-Quality Enterprises" with underwriters KGI, Fubon, Taishin, Grand Fortune Securities, and Yuanta Securities. • Held six seminars for securities underwriting businesses.

Stakeholder	What do stakeholders mean to the TWSE?	Main Engagement Channel/Frequency	Engagement Results
Suppliers Contractors	Suppliers are long-term TWSE partners that jointly aim to achieve corporate sustainability and create a culture of integrity governance.	<ul style="list-style-type: none"> • Price negotiation and price comparison meetings (aperiodically) • Phone calls and emails (aperiodically) 	<ul style="list-style-type: none"> • Conducted 327 price negotiation meetings. • Conducted 40 price comparison meetings.
Media	The media quickly disseminates valuable information and serves as a vital communication platform for financial literacy, while improving the international visibility of Taiwan's stock market.	<ul style="list-style-type: none"> • Briefings on material information (immediately) • Press conferences after board meetings (monthly) • Themed investor conferences (quarterly) • Corporate ESG report (annually) • Market announcements and press releases (as needed) • Media interviews (as needed) • Phone calls and emails (as needed) • Financial forums and seminars (aperiodically) • Updates on the official website, MOPS, and social media (as needed) 	<ul style="list-style-type: none"> • The TWSE Chairman was interviewed by local media and institutions (Business Today, Wealth Magazine, and Commonwealth) and foreign outlets (Yahoo Finance, Korea Economic TV) on issues ranging from TIB, ETFs, ESG, TCX developments, results of capital introduction events, and the future of the capital market. • Conducted four themed investor conferences in January, April, August, and November on TIB, biotechnology and medical industry, AI supply chain, and automotive electronics and components industry. • Held numerous press conferences on the "Strengthening the Capital Market and Enhancing Market Value" plan, to convey the company's latest policies and future development. • Produced the 2024 annual corporate ESG report jointly with Economic Daily News.
Listed Companies	Listed companies are indispensable TWSE partners for achieving sustainable governance, co-existence, and co-prosperity.	<ul style="list-style-type: none"> • Seminar on corporate governance evaluation (annually) • Correspondence (aperiodically) • Talent development programs (aperiodically) • Meetings and publicity events (aperiodically) • Service satisfaction surveys (aperiodically) • Phone calls, faxes, and emails (aperiodically) • Reporting or complaint mechanisms – not limited to "Conduct Watch" (aperiodically) 	<ul style="list-style-type: none"> • Held online seminars on corporate governance evaluations. • Conducted Business Seminars for Listed Companies. • Held four advocacy meetings on the "Internal Control System for Sustainability Information Management." • Held five sessions of the "Greenhouse Gas Inventory Workshop." • Held two sessions of seminars to assist in the adoption of IFRS Sustainability Disclosure Standards for phase-one companies. • Held two sessions of the "Sustainable Development Committee and Chief Sustainability Officer Forum." • Held six sessions of the "Sustainability Report Preparation and Production Function Advocacy Meeting for TWSE and TPEX Listed Companies."
Investors	Individual and institutional investors can supervise listed companies and invigorate the capital market.	<ul style="list-style-type: none"> • Facebook fan page (immediately) • Investor service hotline (immediately) • Feedback Mailbox on the TWSE website (immediately) • TWSE "Conduct Watch" for Unlawful Activities (immediately) • Investment and wealth management seminars (as needed) • TWSE "Learning at Home Network" (as needed) • Investor Knowledge Network (as needed) • Domestic and overseas capital introduction events (as needed) 	<ul style="list-style-type: none"> • Held the "Institutional Investor Stewardship Code and Evaluation Process Seminar" with a total of 270 online video views. • Conducted capital investment events in Europe, Singapore, and the Middle East, as well as online and in-person events in Taiwan, holding 39 investor meetings. • The investor service hotline received 21,548 calls, with satisfaction reaching 98.81%. • The TWSE Facebook fan page has over 63,000 followers. • The TWSE "Learning at Home Network" has over 22,000 members and 1.14 million views. • The Investor Knowledge Network has over 27,000 members and 1.85 million views. • Conducted 50 community college seminars on investment and wealth management, with 3,615 participants and a satisfaction rate of 96%.

MANAGEMENT APPROACH OF SUSTAINABILITY TOPICS

Analysis of Material Topics

The TWSE adopts GRI Universal Standards GRI 3: Material Topics 2021 to assess and identify our actual and potential impacts on the economy, environment, and people (including impacts on human rights) throughout our operations and business relationships, using this information as a basis for our sustainability strategic plan.

{ Step 1 } Identifying sustainability topics

20 sustainability topics

Referencing international sustainability standards such as the TCFD and SASB, international rating institutes such as the DJSI and MSCI, "Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies," issues of concern for relevant industries, and the sustainability practices of our peers, the TWSE analyzed its operating activities, business relationships, sustainability context, and stakeholders to select 20 sustainability issues involved in our business operations.

{ Step 2 } Identify actual and potential levels of impact

15 internal impact assessment surveys
230 external surveys of stakeholder concerns

Fifteen TWSE senior executives evaluated the company's 20 sustainability issues and assessed the significant positive and negative impacts on the economy, the environment, as well as people (including impacts on human rights). Each risk is rated on its likelihood and level of impact. In addition, after identifying major stakeholders, an assessment survey was issued to understand the level of concern on 20 sustainability issues, and a total of 230 valid questionnaires were collected.

{ Step 3 } Rank impact level and identify material topics

10 material topics

The analysis results of the internal impact assessment surveys were compiled and sorted according to the level of positive and negative significant impacts, and a matrix of major issues was drawn to identify nine sustainability issues with significant impact. After incorporating the concerns of external stakeholders in accordance with their levels of concern, the issue of "anti-corruption and integrity in business operations" was added, resulting in the selection of 10 material issues.

{ Step 4 } Consult internal and external expert opinion

Expanded to 11 material topics

After consulting internal and external experts, it was recommended that "climate action" be included as a material issue. In the end, there were 11 material issues selected as the main scope of disclosure of the TWSE's 2024 Sustainability Report.

{ Step 5 } Review and approval of material topics

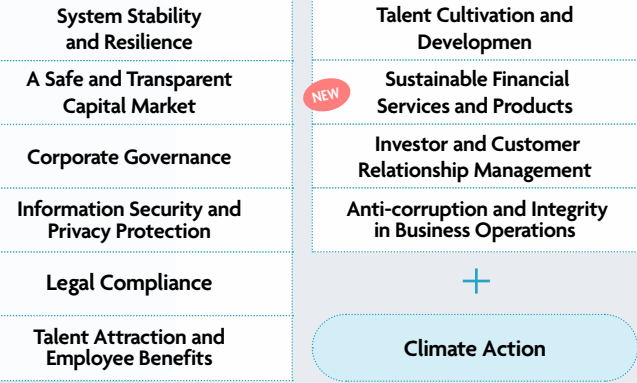
Discussed and approved by the Sustainable Development Committee

On December 24, 2024, the Sustainable Development Committee reviewed and approved the list of material topics for 2024.

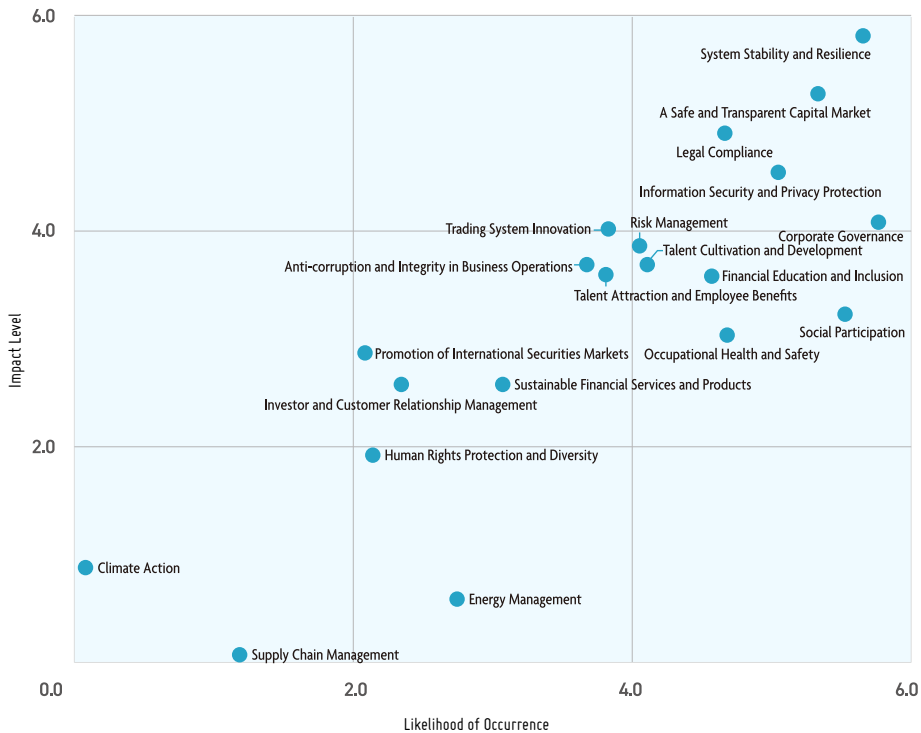
Eleven Material Topics for 2024

The 11 material topics of the TWSE for 2024 included: (1) System Stability and Resilience; (2) A Safe and Transparent Capital Market; (3) Corporate Governance; (4) Information Security and Privacy Protection; (5) Legal Compliance; (6) Talent Attraction and Employee Benefits; (7) Talent Cultivation and Development; (8) Sustainable Financial Services and Products; (9) Investor and Customer Relationship Management; (10) Anti-corruption and Integrity in Business Operations; and (11) Climate Action. Compared to the 2023 Sustainability Report, a new material topic was added: sustainable financial services and products; two material topics were removed: trading system innovation and risk management.

The Material Topics for 2024



Matrix of Material Topics with Positive Impact



Matrix of Material Topics with Negative Impact





Management of Material Topics

The eleven material topics identified by the TWSE in 2024, as well as their impacts on major stakeholders, are presented as follows:

Material Topic	Value Chain								
	Upstream				Midstream	Downstream			
	Regulatory Authorities	Listed Companies	Intermediaries	Media	Employees	Suppliers Contractors	Customers	Shareholders	Investors
System Stability and Resilience	▼	▼	▼	▼	▼	▼	▼	▼	▼
A Safe and Transparent Capital Market	▼	▼	▼	▼	▼		▼	▼	▼
Corporate Governance	▼	▼	▼		▼		▼		
Information Security and Privacy Protection	▼	▼	▼	▼	▼	▼	▼	▼	▼
Legal Compliance	▼	▼	▼	▼	▼	▼	▼	▼	▼
Talent Attraction and Employee Benefits					▼				
Talent Cultivation and Development					▼				
Sustainable Financial Services and Products	▼	▼	▼				▼	▼	▼
Investor and Customer Relationship Management							▼	▼	▼
Anti-corruption and Integrity in Business Operations	▼	▼	▼	▼	▼	▼	▼	▼	▼
Climate Action	▼				▼				

MANAGEMENT APPROACH OF MATERIAL TOPICS IN 2024

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
System Stability and Resilience	The TWSE has established management policies, systems, actions, and performance targets to improve market efficiency and confidence while mitigating risk and uncertainty. We maintain the safety and stability of our financial trading system and ensure uninterrupted operations, even in disasters or crises, by formulating backup mechanisms and conducting drills to hone our resilience.	Stable systems and effective response capabilities ensure continuous operation in the event of a disaster.	Unstable systems may cause trading interruptions or delays.	Published the Business Continuity Management Manual, and uphold the stability of the securities market, investor protection, and service quality based on the contents of this manual. The TWSE also takes into consideration our operational development needs and information asset security risks in establishing a comprehensive and effective security management system to safeguard our overall business continuity.	<ul style="list-style-type: none"> The purpose of the Business Continuity Management System (BCMS) is to maintain the continuous operation of the securities market and its critical information infrastructure, minimize impact when an interruption occurs, and initiate recovery procedures in a timely manner in order to restore operations within a specified timeframe. The annual business continuity goals are determined by the management review meeting and announced for implementation. 	<ul style="list-style-type: none"> Regularly convene management review meetings and conduct external audit verifications to confirm the effectiveness of ISO 22301 operations. Regularly conduct system backup drills to ensure that the system can resume operations within an acceptable downtime. 	<ul style="list-style-type: none"> Maintain re-certification of ISO 22301 BCMS. There was no abnormal damage to the rights and interests of investors caused by system interruption in transactions. 	Self-assessed material topic
A Safe and Transparent Capital Market	The TWSE upholds the principles of timeliness, accuracy, and integrity of information disclosure to achieve the goal of information symmetry and transparency in the securities market.	A safe and transparent market environment can enhance investor confidence, attract investor participation, and promote liquidity.	Failure to maintain the safety and transparency of the capital market may cause investors to lose confidence, lower participation, and affect market liquidity.	Strengthen information disclosure transparency to enhance the competitiveness of the capital market.	<ul style="list-style-type: none"> Apply emerging technologies to optimize the reporting of suspicious fraud advertisements and to streamline procedures to increase reporting frequency; work with peripheral units to improve efficacy of fraud prevention and strengthen investor rights protection. Gradually step up requirements for all listed companies to provide information disclosure in advance of the AGM. 	<ul style="list-style-type: none"> Feedback Mailbox. “Conduct Watch” for Unlawful Activities. Forwarded reports from the FSC. Enhance monitoring mechanisms and regularly track the reporting status of listed companies. 	<ul style="list-style-type: none"> Completed a reporting system for illegal online advertisements and fraudulent content, significantly reducing human resource burden, improving operational efficiency, and increasing reporting frequency. A total of 24,910 suspected investment fraud advertisements were reported, and 24,891 were taken down. Starting from 2024, all listed companies are required to disclose material information simultaneously in Chinese and English. 	Self-assessed material topic

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
Corporate Governance	A diverse and professional Board of Directors is effective in overseeing the TWSE's corporate governance and social responsibility practices.	Maintain a diverse board composition, taking into account the rights and interests of a broad spectrum of stakeholders and promoting healthy market development.	Failure by the directors or executives in their duties to supervise may result in poor performance in corporate governance or legal compliance.	Improve the level of corporate governance in accordance with the "Integrity Governance Principles for Directors and Supervisors," promote the stable development of company operations, and protect the rights and interests of stakeholders.	<ul style="list-style-type: none"> Directors and supervisors are required to strictly avoid conflict of interest and unjust enrichment so as to prevent unethical internal conduct. 	<ul style="list-style-type: none"> The TWSE established reporting channels including "Conduct Watch," Feedback Mailbox, phones, emails, faxes, and official letters. 	<ul style="list-style-type: none"> No incidents of bribery or corruption occurred in 2024. Board meeting attendance rate reached 84.29%. Female directors account for 26.67% of board seats. "Conduct Watch" received one report, which was handled in accordance with regulations. 	GRI 2: General Disclosures GRI 405: Diversity and Equal Opportunity
Information Security and Privacy Protection	The TWSE has established management policies, systems, actions, and performance targets to maintain information system security and prevent malicious attacks, so as to ensure that personal data involved in our operation is protected in accordance with the "Personal Data Protection Act."	Proper implementation of information security and privacy protection maintains market order and investors' interests, while safeguarding the stability of the financial system.	Lack of information security awareness by employees may leave the TWSE vulnerable to external cyber attacks and losses.	Published the information security manual and personal data protection management manual, and established relevant management policies.	<ul style="list-style-type: none"> The TWSE established the information security policy based on our duty to uphold the security of the stock market, investor protection, and service quality. Taking into consideration our operational development needs and information asset security risks, the TWSE formulates a comprehensive and effective information security management system to safeguard our entire information system. The annual information security goals are determined by the management review meeting and announced for implementation. Continue to maintain valid certification for BS 10012 Personal Information Management System (PIMS) and enhance awareness of personal data protection among TWSE employees. 	<ul style="list-style-type: none"> Conduct management review meetings semiannually. Conduct internal audits to confirm the implementation of internal controls. Carry out external audits and verification, with all management systems reviewed semiannually and renewed every three years. 	<ul style="list-style-type: none"> There were no breaches of customer privacy or loss of customer data. BS 10012 PIMS was reviewed in May and renewed in November, maintaining valid certification. Sent 45 newsletters highlighting awareness of personal data risks to all employees. Six sessions of personal data protection training were conducted, totaling 18 hours and 616 participants. 	GRI 418: Customer Privacy

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
Legal Compliance	By strengthening legal compliance and cultivating a strong culture of legal awareness among employees, the TWSE ensures that all operations comply with applicable laws and regulations, thus maintaining market order and investor confidence. A sound compliance framework also mitigates operational risks, improves corporate governance, and strengthens our international competitiveness, promoting the stable development of Taiwan's market.	Ensuring that trading mechanisms, information disclosure, and internal controls are in full compliance with applicable laws and regulations, maintains market order and investor trust. Enhancing employees' awareness of legal and regulatory compliance, along with their professional competencies, mitigates the risk of violations, strengthens the company's capacity for sustainable operations, and ensures the implementation of personal data protection, information security, and risk management.	Failure to fully implement a sound compliance mechanism may lead to deficiencies in internal control, administrative sanctions by regulatory authorities, and adverse effects on the market plus individual stakeholders' rights and interests. Furthermore, regulations are amended frequently, and if not responded to promptly, compliance costs and operational risks may increase.	The TWSE is committed to establishing a comprehensive legal compliance mechanism to ensure that the company's operations comply with relevant laws and regulations. Through the development of various internal policies and procedures—encompassing information security, employee training, performance evaluation, legal compliance, and risk management—the TWSE promotes adherence to relevant internal guidelines and the implementation of lawful business practices by all employees. The TWSE continues to optimize the Rules and Regulations Directory of the official TWSE website, so that employees, investors, plus other stakeholders will be updated on laws and regulations, trends for future amendments, along with stock exchange market mechanisms.	<ul style="list-style-type: none"> The TWSE will strengthen management and awareness of legal compliance within the company by regularly reviewing its internal operating rules and guidelines on delegated authority to ensure that the TWSE keeps pace with current regulations and mitigates compliance risks, while also promptly updating the Rules and Regulations Directory when new or amended laws are announced to facilitate compliance. The TWSE shall conduct business in accordance with the "Regulations Governing Stock Exchanges" launched by the FSC and the "Operating Rules of the Taiwan Stock Exchange Corporation," plus establish controls related to legal compliance. To strengthen risk management and digital regulatory monitoring, the TWSE will optimize the Rules and Regulations Directory to make it more accessible and intuitive for investors and stakeholders, as well as regularly conducting training courses on legal compliance to enhance TWSE employees' awareness. The TWSE seeks to be a leading world-class exchange with a culture of sustainable legal compliance by improving the transparency of compliance management, deeply embedding legal compliance as a core value of corporate culture, promoting the digitization and automation of compliance, and ensuring that compliance is consistent with ESG and sustainable development. The TWSE shall conduct investigations when any TWSE employee is suspected of a crime, corruption, fraud, or violation of the law. Whistleblower protection mechanisms must be in place to ensure the protection of the identity and working rights of the whistleblower. 	<ul style="list-style-type: none"> The TWSE has established whistleblowing mechanisms through multiple reporting channels, including the "Whistleblower Platform," the "Suggestion Box," phones, emails, faxes, and official letters, to ensure that reports may be processed in a fair and unbiased manner. 	<ul style="list-style-type: none"> The TWSE has established multiple reporting channels, including the "Suggestion Box," the "Reporting Box" for unlawful activities, phonelines, fax, emails, and official letters. Analyzed illegal and fraudulent cases to establish a law-abiding environment. Continued to send legal compliance checklists and newsletters regarding personal data protection to ensure that employees are notified of regulatory changes in a timely manner. There were no violations of laws and regulations related to environmental, social, and economic issues. 	GRI 2: General Disclosures

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
Talent Attraction and Employee Benefits	The TWSE provides excellent job opportunities and refines its recruitment requirements and processes. In addition, it provides attractive employee remuneration, bonuses and benefits, plus employee care.	Providing a good working environment and employee benefits serves to attract talent and reduce talent turnover.	Non-compliance with labor laws may harm employees' rights and interests.	Create a good working environment, provide competitive employee compensation and benefits, plus improve employees' job satisfaction and quality of life.	<ul style="list-style-type: none"> Optimize the recruitment process and expand campus recruitment. 	<ul style="list-style-type: none"> Establish suitable management approaches, promotion programs, training programs, grievance channels, and related policies to protect the rights and interests of all employees. 	<ul style="list-style-type: none"> Conducted one round of recruitment. Offered credit courses in collaboration with National Chengchi University, attracting 185 students. Participated in the Northern Taiwan Campus Job Fair for the first time in 2024, setting up recruitment booths at National Taiwan University, National Chengchi University, National Taiwan University of Science and Technology, and National Central University. 	GRI 401: Employment
Talent Cultivation and Development	In response to its business development needs, the TWSE establishes talent cultivation and development goals, education and training planning, along with career growth assistance.	Through various courses, the TWSE emphasizes corporate culture, improves the skills of employees, and maintains corporate competitiveness.	The company's long-term development and profitability may be impacted by failure to plan ahead when cultivating talent in the age of digital finance.	Achieve human capital management objectives and promote corporate culture through educational training.	<ul style="list-style-type: none"> Establish an effective training system to enhance employee skills. 	<ul style="list-style-type: none"> Link employees' annual target training hours with KPIs. Training hours considered a crucial factor for employee promotion. 	<ul style="list-style-type: none"> Optimized the education and training system by including learning outcomes in performance reviews to inspire and motivate employees. The average training time of a TWSE employee in 2024 was 76.07 hours. 	GRI 404: Training and Education

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
Sustainable Financial Services and Products	The TWSE provides education and training to help companies cultivate green-collar talents and achieve carbon neutrality and net zero goals. In response to global trends and in support of the FSC's policies, the TWSE works to provide investors with a more diverse investment platform by continuing to promote sustainable and ESG-related products, including ESG ETNs and ETFs, and improving the trading system through innovative measures.	The TWSE provides education and training to help companies cultivate green-collar talents and achieve carbon neutrality and net zero goals, plus promotes sustainability-related financial services and products to boost revenue.	Companies may not be able to make gains in sustainability if provided with unsuitable or insufficient education and training. Failure to introduce sustainability-related financial services and products may result in loss of business opportunity and profitability.	With reference to international carbon market developments and market needs, the TWSE continues to promote carbon management courses and study the feasibility of developing more sustainability-related financial services and products.	<ul style="list-style-type: none"> Continue to conduct education and training in accordance with the Ministry of Environment's policies and industry needs to help Taiwan achieve net zero emissions by 2050. Promote diverse sustainability index products and collaborate with international organizations to expand market recognition. Improve the "TIP Taiwan Sustainability Ratings (SEED Model)" database and enhance its applicability for companies and investors. Collect customer feedback on their needs for ESG data and develop suitable information products. Continue to promote ESG ETFs through investor education. Encourage companies to issue ESG-related products by assisting in the production of marketing materials, so as to provide investors with more diverse options. 	<ul style="list-style-type: none"> Provide dedicated customer service and email support to promptly resolve customer issues. Maintain and review the quality of information disclosure of ETF and ETN issuers as well as ESG-related products on a regular basis. Regularly communicate with issuers and subscribers to understand market trends and continue to adjust services provided according to feedback. 	<ul style="list-style-type: none"> Issued 1,200 ISO certificates in carbon management. Listed one ESG ETF. Launched the "S&P TIP Taiwan Carbon Reduced ESG 50 Index" and "TIP Taiwan Gender Equality Index." Acquired technical ownership of the "TIP Taiwan Sustainability Ratings (SEED Model)." The market lists 10 ESG ETFs and seven ETFs tracking ESG indices, as well as three ESG ETNs. 	Self-assessed material topic
Investor and Customer Relationship Management	The TWSE has established management policies, systems, actions, and performance targets to ensure service quality plus stakeholder relations through satisfaction surveys and other feedback mechanisms.	Maintaining relationships with customers and investors allows the TWSE to build trust and boost customer satisfaction, thereby ensuring the stable development of the market.	Poor management of investor and client relations may be detrimental to market stability, transparency, and the TWSE's reputation.	Establish a sound system and policies, strengthen investor education and protection, plus communicate with investors and customers to understand their needs.	<ul style="list-style-type: none"> Strengthen connections with industry members to stay apprised of future product development and provide consulting and assistance. Listen to customer feedback, optimize existing services, and improve customer satisfaction. Aim to achieve zero complaints. 	<ul style="list-style-type: none"> Provide dedicated customer service and face-to-face communication channels to handle feedback or disputes in real time. Maintain and regularly review the quality of information disclosure of ETF and ETN issuers. Conduct two-way communication with businesses and hold briefings and seminars. The Feedback Mailbox is on the TWSE website, as are the contact numbers for each department. 	<ul style="list-style-type: none"> A total of 21 ETFs were listed in 2024. Paid 17 on-site visits to ETF issuers. Conducted four sessions of ETF seminars for SITCA. Conducted one seminar for investment trust personnel. Satisfaction reached 98% following briefings and seminars. 	GRI 418: Customer Privacy

Material Topic	Significance to the TWSE	Potential/Actual Impact on the TWSE		Policy/Commitment	Goal	Grievance/ Self-assessment Mechanism	2024 Achievements	GRI/ Self-assessed Material Topic
		Positive Impact	Negative Impact					
Anti-corruption and Integrity in Business Operations	The TWSE has established management policies, systems, actions, and performance targets to uphold business integrity, including the code of ethical conduct, anti-corruption and anti-bribery measures, and reporting channels, while protecting whistleblower rights.	Enhancing corporate integrity and anti-corruption governance helps to boost investor confidence in the TWSE.	Integrity governance violations by employees or executives may affect the neutrality of business operations and damage the TWSE's reputation.	Establish regulations, strengthen advocacy, and create a suitable reporting system in our commitment to combating corrupt activities to maintain market order and protect investor rights.	<ul style="list-style-type: none"> Conduct annual anti-corruption courses, including topics related to financial ethics and anti-money laundering. Suppliers engaging in procurements amounting to TWD1 million or above must sign the "Supplier's Integrity Governance Commitment Letter for Procurement." Establish a rotation mechanism for procurement personnel to ensure the implementation of anti-corruption culture. 	<ul style="list-style-type: none"> Reporting channels include the "Conduct Watch," Feedback Mailbox, phones, emails, faxes, and official letters. Alternatively, whistleblowers can also report directly to the TWSE's Internal Audit Office or the FSC. 	<ul style="list-style-type: none"> No incidents of bribery or corruption occurred in 2024 	GRI 205: Anti-corruption
Climate Action	In response to climate change, the TWSE identifies the risks and opportunities in the short, medium, and long term, then adopts suitable assessment mechanisms, response measures, and future planning plus objectives.	By identifying climate change risks and opportunities, the TWSE can develop action plans and mitigate the impact of risks.	If mitigating measures are not taken in advance, extreme weather may cause operational disruptions, affecting market operations.	Introduce the IFRS S2 and TCFD disclosure frameworks, regularly identify climate risks and opportunities, and track the implementation of action plans.	<ul style="list-style-type: none"> Please refer to climate change related indicators and goals in "4.1 Climate Action." 	<ul style="list-style-type: none"> Regularly assess the risk and opportunity factors of climate change. Routinely track the implementation of action plans. Regularly track progress towards indicators and goals. 	<ul style="list-style-type: none"> Conducted sustainability-related training courses to keep TWSE employees up to date on climate change issues. Regularly reviewed and updated action plans to respond to climate change risks and opportunities. Confirmed the achievement of indicators and goals, plus formulated indicators and goals for the next year. 	Self-assessed material topic



SUSTAINABLE MARKET

Market Stability

Financial Inclusion

International Cooperation

1. MARKET STABILITY

The sustainable growth of the securities market relies on several factors, including the introduction of new financial products, optimization of trading systems, and investor education, so that investors can be more knowledgeable and engaged with the market products and developments. Market supervision is also a crucial factor. The TWSE promotes the use of technology in digital supervision and encourages listed companies to enhance information disclosure, strengthen system stability, and improve cybersecurity protection. These measures all serve to reduce investment risks and maintain the stable operations of the securities market.

1.1 Securities market supervision

As the core administrator of the securities market and a supporter of government policy, the TWSE supports listed companies and securities firms in establishing sound operations. For the benefit of all market participants, it is imperative that we develop comprehensive management mechanisms, fulfill our supervisory role in the market, plus stabilize market trading and operations. In the future, the TWSE will continue strengthening regulatory mechanisms through emerging technologies, reducing manual operations, and improving the efficiency of regular management tasks, thereby promoting the stable development of the capital market.

Listed companies

Listed companies are indispensable to the sturdy development of the economy and society. The TWSE assists in the drafting and implementation of listing regulations to promote the listing of outstanding companies, as well as providing review, supervision, and other services.

- Management mechanisms of listed companies

Management Mechanism	Content	2024 Performance
Regular management	<ul style="list-style-type: none"> • Audit of internal control systems of listed companies • Review of financial statements of listed companies • Review of expert opinions 	157 companies audited 292 companies reviewed 17 companies reviewed
Spot checks	<ul style="list-style-type: none"> • Monthly analysis of material abnormal events of listed companies • Quarterly analysis of financial reports of all listed companies 	1,487 companies inspected Analysis of all listed companies
Verification of material information	<ul style="list-style-type: none"> • Conduct verification of material information released by listed companies, including their timeliness, accuracy, and completeness 	41,694 pieces of material information reviewed

- Enhance sustainability disclosure

To align with the FSC's "Sustainable Development Action Plans for TWSE and TPEX Listed Companies," the TWSE reviewed 100 sustainability reports of listed companies and the working papers of three accounting firms in 2024. This assessed whether listed companies prepared sustainability reports in accordance with the "Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies," and whether assurance institutions performed assurance procedures and issued feedback on industry sustainability indicators in compliance with regulations. In addition to notifying the audited companies and accounting firms individually of the review results in writing, the TWSE also compiled and published a de-identified report of review results as reference, so that all listed companies and accounting firms can improve sustainability disclosure and enhance the completeness and comparability of their sustainability information.

Securities firms

Securities firms are chartered securities institutions. Once a securities firm encounters a severe crisis, it will not only endanger its clients but also affect the operation of the securities market. Therefore, to ensure that securities firms are financially sound and compliant with relevant rules and regulations, the TWSE has established regulations governing securities firms, their internal controls, and internal auditing standards, as well as promoting the understanding of these regulations. The TWSE reviews securities firms' finances, operations, information security, plus internal audit systems, and provides follow-up guidance on any deficiencies found in the review. This also includes matters of registration, management, and penalties in cases of violation for securities firms and their personnel.

- Management approach to securities firms

Management Approach	Content	Cases in 2024
Routine audit	Audit on the financial, business, cybersecurity, and internal auditing operations; follow up assessment and guidance on those securities firms with deficiencies or unsatisfactory ratings in the internal audit.	25
Special audit	Request improvement and submit a review report within a prescribed time from securities firms that are at operational risk, with consecutive losses, lacking improvements on internal auditing deficiencies, or are in violation of the laws or regulations.	46
Selective audit	Audit on indicators of irregularities, complaints from investors, and the matters for which the competent authority requests an audit, and more, plus manage the follow-up, assessment, and guidance on such.	663
Anti-money laundering and combating the financing of terrorism audit	Send an official letter requesting such securities firm to improve on any deficiency in the TWSE audited subjects such as its risk assessment or classification method on the securities firm's individual clients.	10

In addition to conducting the above audits on securities firms in 2024, the TWSE continues to assist securities firms in attaining international information security certification, provide guidance on the allocation of information security manpower according to different levels, and help information security personnel to obtain certification. These measures serve to enhance securities firms' cybersecurity governance, quality and number of personnel, capabilities, and overall management system.



As a major operator of the capital market, the TWSE not only assists the FSC in communicating the future direction of market policies but also collects market feedback from securities firms. Therefore, the TWSE conducts numerous briefings each year to enhance communication with market participants. Publicity activities held in 2024 are listed below:

- Promotional activities for securities firms

Event	Benefits	2024 Performance
Environmental, Social, and Governance Seminar for Securities Firms	Encourage securities and futures sectors to give back to investors and the community by focusing on sustainability issues of global importance; actively work to establish a sustainable market and ESG ecosystem.	Three sessions were held in Taipei, with 600 participants in attendance, including the chairs, directors, and executives of securities firms.
Cyber Security Seminar for Securities Firms	Strengthen securities firms' focus on cybersecurity issues and urge them to comprehensively augment their information security protection capabilities by establishing network security protection measures in line with regulations and improving cybersecurity measures and human resources, with the ultimate goal a zero-tolerance approach to protecting overall information security.	Two sessions were held in Taipei, with 280 participants in attendance, including representatives from the FSC, Taiwan Securities Association, and executives from securities firms.
Training Program of the Standard Directions for Internal Control Systems in Securities Firms	Ensure that securities firms and brokers fully understand the amended standard directions for internal control systems, so that such systems can be fully reviewed, revised, and implemented.	A total of 12 sessions were conducted across Taipei, Hsinchu, Taichung, Tainan, and Kaohsiung, with 1,671 participants.
Professional Courses of Securities Regulations and Business Practice	Promote securities industry members' understanding of relevant revisions to securities market regulations, so as to improve their service quality and safeguard investor rights and interests.	A total of 18 sessions were held in Taipei, Hsinchu, Taichung, Tainan, and Kaohsiung, with approximately 2,700 participants.
Securities Brokers and Dealers Senior Executive Seminar	Assist securities firms to expand business opportunities; collect their feedback to enhance the efficiency of the securities market.	One session was conducted in Taipei with 160 representatives from the FSC, Taiwan Securities Association, and executives from securities firms (dealers and brokerages) in attendance.
Forum for Responsible Persons for Securities Firms	Maintain regular contact with the responsible persons of securities firms to maintain good relationships and channels of communication, so as to facilitate the major operations of the TWSE.	One session was held in Taipei, with 190 participants in attendance, including the chairs and general managers of securities firms, representatives of the FSC, the Taiwan Securities Association, and peripheral organizations, to exchange views on overall business issues such as developmental trends, policy directions, and management measures of the securities market.

In the future, the TWSE will focus on supervising securities firms in their digital transformation and information security resilience. In terms of digital transformation, the TWSE will continue to refine relevant regulations as well as assist securities firms in promoting B2C digital services, improving investor convenience, and providing customized AI services. Big data is utilized for risk identification and precision audits, plus establishing a digital system for auditing securities firms, to achieve the goals of intelligent supervision and carbon reduction. In terms of information security, the TWSE will remain vigilant on cybersecurity risks, urging securities firms to conduct comprehensive cybersecurity assessments, while enhancing information security regulations and the zero-trust network, to ensure information security and regulatory compliance during the digital transformation process.

Market surveillance

The TWSE carries out front-line surveillance of the stock market under FSC supervision, and the main operations include: public announcement of abnormally traded stocks, audit of suspected insider trading or abnormal manipulation of stock prices, processing the filing of insider shareholding changes, and reviewing TV investment programs along with their analysts for any violations against relevant regulations. The goal of the market surveillance system is to maintain the stock market's security and fairness.

- Surveillance mechanisms of the trading market

Surveillance Mechanism	Content	2024 Performance
Surveillance and early warning notice	Abnormally traded stocks will be announced and marked as stocks requiring attention and relevant measures.	<ul style="list-style-type: none"> ● Announcements of Attention Securities: 3,621 times (14.96 times a day). Announcements of Disposition Securities: 176 times (0.72 times a day).
Audit of illegal trading	The TWSE audits any abnormal trading of TWSE listed stocks and reports to the regulatory authority or relevant law enforcement authority upon finding any illegality.	<ul style="list-style-type: none"> ● In cooperation with the regulatory and judicial authority, assisted in the analysis of related trading in high profile cases, provided clarification, and reported any illegal transactions to authorities in accordance with the law. ● Four sessions of insider trading prevention seminars were held online, with 1,870 participants, to introduce relevant regulations and real-life examples of insider trading prevention.
Insider shareholding reporting	The TWSE established the "Insider Shareholding Filing System" for insiders to report their shareholding changes before and after a transfer. It should also be disclosed on MOPS. This would inform the public of insider shareholding changes, effectively monitor and prevent illegal activities, and allow investors to make informed decisions about future operations of the company based on shareholding changes.	<ul style="list-style-type: none"> ● The TWSE assisted the FSC in reducing the threshold for declaration and public disclosure of substantial shareholding from 10% to 5%, so that significant changes in shareholding will be reported in a timely and transparent manner. ● Starting May 10, 2024, the FSC commissioned the TWSE to review, file, and report cases of acquisition of substantial shareholding. ● Listed companies are urged to report insider shareholding changes before the 10th of each month; those that do so will receive higher marks on their Corporate Governance Evaluation due to addition of this indicator. In 2024, a total of 98% of listed companies complied with advance reporting.
Record cable TV programs	The TWSE records and reviews TV investment programs and their analysts daily, reporting any violation to the FSC on a periodic basis; if there is any opinion on such TV programs or if the analyst suspiciously exaggerates the listed company's performance, the TWSE requests the listed company to announce and clarify material information.	<ul style="list-style-type: none"> ● In the recording and monitoring of TV investment programs, there were 22 channels and more than 80 shows that were reviewed 2,850 times. Program analysts were reported to the FSC 13 times for making comments that clearly violated regulations.
Reporting suspicious investment fraud advertisements from online media platforms	Utilizing information technology search techniques, the TWSE established an inspection and sampling mechanism for online media platforms, and reported suspicious investment fraud advertisements to the FSC on a daily basis. This provides the Criminal Investigation Bureau with legal grounds to request online platform operators to take down illegal advertisements, thereby cutting off investment fraud advertisements at the source.	<ul style="list-style-type: none"> ● In 2024, the regular inspection mechanism found a total of 24,910 suspected investment fraud advertisements, including 21,066 Facebook advertisements and 3,844 Google advertisements, with 21,074 and 3,817 being taken down respectively. <p>Note: The number of takedowns includes those that were noted in the previous period but taken down in this period.</p>

1.2 Strengthen information disclosure

The TWSE actively promotes the “Sustainable Development Action Plans for TWSE and TPEX Listed Companies” to enhance communication with investors and improve the disclosure of sustainability-related information, with a special focus on the three aspects of “create a sound ecosystem for corporate sustainable development,” “strengthen sustainability disclosure,” and “enhance corporate governance culture.” We have made updates to our evaluation of sustainability-related indicators, specifically regarding diversified board composition and ESG information disclosure, and raised awareness of these changes. The TWSE aims to strengthen the transparency and sustainable governance of the market, and position us with global sustainable development trends.

Create a sound ecosystem for corporate sustainable development and strengthen information disclosure

As the major platform for Taiwan’s capital market, the TWSE works in collaboration with the FSC’s “Sustainable Development Action Plans for TWSE and TPEX Listed Companies” to outline strategies and action plans to advance Taiwan’s ESG competitive advantage and create an ESG ecosystem incorporating all stakeholders, including securities peripheral units, listed companies, investors, intermediary institutions, other market players, and academic institutions/NGOs.

• Sustainable Development Action Plans for TWSE and TPEX Listed Companies

2024 Highlights

Future direction

Lead listed companies to reach net-zero

- Urged companies to establish carbon reduction targets, strategies, and specific action plans; revised Corporate Governance Evaluation indicators.
- Assisted in establishing a carbon credit trading platform; continued to cooperate with the Ministry of Environment’s planning in providing experience in securities transactions.
- Conducted relevant briefings to encourage companies to disclose Scope 3 GHG emissions.

Study the feasibility of mandatory disclosure of Scope 3 GHG emissions to further propel companies’ carbon reduction actions.

Deepen companies’ sustainable governance culture

- Promoted reasonable compensation policy; established templates for the Corporate Governance Evaluation indicators and conducted educational seminars.
- Encouraged listed companies to establish sustainable development committees (chief sustainability officers); conducted seminars for companies to engage in experience sharing.

Continue to study and revise Corporate Governance Evaluation indicators; study the feasibility of the mandatory establishment of sustainable development committees to further enhance sustainable corporate governance.

Enhance the disclosure of sustainable information

- Continued to review the sustainability reports of listed companies.
- Continued to review auditors’ assurance working papers on industry sustainability indicators.

Expand review of sustainability reports and assurance working papers to ensure that GHG emissions are within the scope of assurance, enhancing the quality of sustainability information.

Strengthen communication with stakeholders

- Completed pilot test of the digital platform for stewardship reports.
- Promoted collective engagement with institutional investors.
- Drafted templates for relevant internal operational procedures on collecting and recording beneficial ownership information for businesses to use as reference.

Study the feasibility of amending the “Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies,” and encourage companies to establish a beneficial ownership database.

Establish ESG evaluation and ESG digitalization

- Expanded the ESG database.
- Completed pilot test of the ESG Digital Platform.
- Promoted understanding of the ESG Evaluation.
- Completed feasibility study of the integration of ESG product information.
- Continue to collect and integrate ESG-related resources and information from all around the world.

The “Sustainability Report Assistance Function” is set to be launched in February 2025 to facilitate the collection and digitalization of ESG data.

- Strengthen planning and effectiveness of information disclosure

In response to international trends and to strengthen the sustainable development of Taiwan's enterprises, the FSC released the "Roadmap for Taiwan Listed Companies to Align with IFRS Sustainability Disclosure Standards" on August 17, 2023, so as to align with IFRS Sustainability Disclosure Standards using direct adoption. This will not only help enhance the international visibility and competitiveness of Taiwan's companies, but also guide funds to sustainable investments, prevent greenwashing, and accelerate companies to achieve sustainable transformation and commitment goals. From 2026 onwards, TWSE and TPEX listed companies will be required to adopt IFRS Standards in three phases:

Plan for introducing IFRS Sustainability Disclosure Standards

1

Phase one: Listed companies with a paid in capital of over TWD10 billion by fiscal year 2026.

2

Phase two: Listed companies with a paid in capital between TWD5 billion and TWD10 billion by fiscal year 2027.

3

Phase three: All listed companies by fiscal year 2028.

As the convener of the second working group responsible for the introduction of IFRS Sustainability Disclosure Standards under the "Roadmap for Taiwan Listed Companies to Align with IFRS Sustainability Disclosure Standards," the TWSE's main duties are to study actual issues encountered in adopting the standards, and compile practical examples and guidelines for companies as reference. The following are the key outputs in 2024, all of which are available on the "IFRS Sustainability Disclosure Standards Alignment Area" website.

1. Published and continually update the FAQ on IFRS Sustainability Disclosure Standards, in response to feedback from companies regarding difficulties encountered during the alignment process.
2. Released the self-assessment templates and industry-specific disclosure examples for IFRS Sustainability Disclosure Standard S2 - Climate-related Disclosures, to help companies understand and align with disclosure standards.
3. Released the "Reference Guide and Frequently Asked Questions for Scope 3 Greenhouse Gas Inventory Operations" to assist companies in conducting Scope 3 inventory.
4. Announced the plan requiring listed companies to adopt IFRS Standards in phases, require companies to submit reports according to schedule, and supervise companies' progress in the adoption of IFRS Sustainability Disclosure Standards.

- Developments in promoting domestic sustainability reporting

1. As of December 31, 2024, there were 722 listed companies that submitted sustainability reports, accounting for 72.42% of the total market, with a 64.40% assurance rate.
2. In 2024, the sustainability reports of 642 listed companies have been approved by their board of directors, accounting for 89% of all reporting companies.
3. Companies are encouraged to refer to industry-based disclosure indicators and metrics in the SASB Standards in their sustainability reports; in 2024, a total of 566 listed companies complied.



- Sustainability Report Preparation and Production Function Advocacy Meeting for TWSE and TPEX Listed Companies

As all listed companies are required to prepare sustainability reports starting from 2025, the TWSE will launch the "Sustainability Report Assistance Function" on the ESG Digital Platform to ease the burden and enhance the efficiency of companies in preparing reports. From November to December 2024, a total of six sessions of the "Sustainability Report Preparation and Production Function Advocacy Meeting for TWSE and TPEX Listed Companies" were held across Taiwan, with more than 580 representatives from listed companies attending.

• New and amended rules for sustainability information disclosure

Date	Title	Key points of the new/amended rule
January 26, 2024	Rules Governing the Preparation and Filing of Sustainability Reports by TWSE and TPEX Listed Companies	<ul style="list-style-type: none"> ● To strengthen the responsibility of listed companies and their boards of directors in the preparation of sustainability reports, they should be approved by the board of directors. ● In accordance with the FSC's "Sustainable Development Action Plans for TWSE and TPEX Listed Companies (2023)," those with a paid-in capital of less than TWD2 billion are required to prepare the sustainability report from the year 2025 onward, and are encouraged to refer to the SASB Standards for the disclosure of industry metrics. ● Companies with a paid-in capital of TWD2 billion or more in 11 industries, such as the cement industry, shall strengthen the disclosure of the sustainability metrics by industry. ● Amended the information regarding Greenhouse Gas Inventory and Assurance Status in Appendix 2, and stipulated the timetables in which listed companies shall disclose their carbon reduction targets, strategies, and specific action plans. ● Considering the practical schedule of TWSE-listed companies for the preparation of sustainability reports and assurance operations, the deadline for these companies to complete their sustainability report filing is adjusted to the end of August each year.
	Directions for the Implementation of Assurance Institutions for the Sustainability Report of TWSE/TPEX Listed Companies	<ul style="list-style-type: none"> ● In compliance with the restructuring of the Environmental Protection Administration, Executive Yuan into the Ministry of Environment, the "Directions for the Implementation of Assurance Institutions for the Sustainability Report of TWSE/TPEX Listed Companies" were revised.
March 29, 2024	Sample Template for "XXX Co., Ltd. Sustainable Development Committee Charter"	<p>Key content:</p> <ul style="list-style-type: none"> ● The purpose and basis, scope of application, public announcement for reference, and procedures for formulation and revision of organizational regulations. ● The composition and responsibilities of the committee and the promoting and executing unit, as well as the term and by-election of committee members. ● The procedures for holding and convening committee meetings, agenda and attendance, resolution methods, avoidance of interests, minutes of proceedings, handling of meeting resolutions, and resources for performing responsibilities.
May 24, 2024	Sample Template of "Reference Items for Assessing the Effectiveness of Internal Control Systems"	<ul style="list-style-type: none"> ● In compliance with the "Regulations Governing Establishment of Internal Control Systems by Public Companies" and the "Evaluation Items for Assessing the Effectiveness of Internal Control Systems of Public Companies" revised by the FSC on April 22, 2024, TWSE and TPEX listed companies should incorporate the management of sustainability information into their internal control systems, and include it as an audit item in their annual audit plans. To strengthen companies' management of sustainability information, the TWSE revised the sample template of "Reference Items for Assessing the Effectiveness of Internal Control Systems."



Enhance corporate governance culture

- Promote corporate governance rules, planning priorities, and expected benefits

To assist the international development of issuing companies, guide them to enhance their corporate value, attract more international capital inflows, and strengthen their ability to create long-term value, plus actively communicate with shareholders and stakeholders, the TWSE added Article 13-3 to the “Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies” and established the “Template for Corporate Value Enhancement Plan” on August 23, 2024, to encourage companies to establish and disclose their operational strategies and business plans. On October 4, the “Corporate Value Enhancement Plan Zone” was launched under the “Investment Section” of MOPS, which features corporate financial indicators and corporate value enhancement plans to encourage listed companies to disclose more comprehensive and in-depth financial and business analysis as well as future strategies.

- Future direction of Corporate Governance Evaluation and ESG Evaluation


In recent years, the TWSE remains committed to promoting the implementation of sustainable development by public companies. In order to further identify the performance of TWSE and TPEX listed companies in various ESG aspects and provide investors with a reference for ESG investment decisions, the TWSE plans to transform the current “Corporate Governance Evaluation” framework into the “ESG Evaluation” in 2026. For a smooth transition, this year’s 12th CG Evaluation took into consideration domestic and international policies and trends, adding a total of seven indicators in environmental and social dimensions to increase the weighting of indicators in the “promoting sustainable development” segment to nearly 50%, gradually achieving the planning and goals of transformation to the ESG Evaluation.



1.3 Establish multiple platforms

To keep abreast of digital development trends and in response to the government's goal of establishing Taiwan as the premier Asian Asset Management Center, the TWSE has constructed multiple information platforms. By using digital and social media platforms to promote important business activities and events, we aim to enhance promotional effectiveness and reach out to general investors, giving them a stronger awareness of current issues and our latest policies.

• Multiple information platforms

Platform	2024 Highlights
<p>ESG InfoHub</p> <p>Received the Silver Award of the Social Group at the PwC Sustainability Impact Awards</p> 	<ul style="list-style-type: none"> ● Optimization of the ESG dashboard interface: Refined the “ESG Dashboard for Listed Companies,” making operations align closer with user needs and more friendly for beginners, allowing users to select ESG indicators to be displayed on the dashboard, and building capacity for future expansion of ESG database indicators. ● Integration of negative ESG material events for TWSE-listed companies: Added negative ESG material events to the dashboard, with the function of individual company and cross-company comparisons plus cross-industry comparisons, providing comparable ESG information to facilitate investor protection and market management. ● Sustainability Course page launched: Established a new “Sustainability Courses” page compiling diverse ESG course information, teaching materials, and videos, so as to cultivate sustainability talent and support the ESG ecosystem.
<p>Investment InfoHub</p>	<ul style="list-style-type: none"> ● Launched the Investment InfoHub 2.0, with enhanced information comparison, mobile-friendly interface, plus added information on day trading and market supervision.



Director Joseph Zhou at PwC (sixth from left); Leader Eliza Li of Sustainability and Climate Change Services, PwC (fourth from left); Deputy Minister Kao Shien-Quey of the National Development Council and award presenter (fifth from left); Executive Vice President Tu Hui-Chuan of the TWSE (fifth from right); together with Social Group award recipients at the 2024 8th PwC Sustainability Impact Awards.



Platform	2024 Highlights
<p>ETFortune</p>	<ul style="list-style-type: none"> ● Continued to maintain and update the one-stop investment information platform ETFortune, which includes visual analysis tools, ETF-related statistics, “Learn from the Experts,” and “ETF Screener.” ● Upgraded ETFortune 2.0: Introduced dedicated bilingual institutional investor sections in Chinese and English in July 2024. Expanded the website's content in November 2024, including dividend distribution information and investment screener.
<p>Market Insights</p>	<ul style="list-style-type: none"> ● A total of 122 articles were published on Market Insights, covering a variety of content including key business items, introductions of newly listed companies, columns by top executives, and regular market reports. ● The number of views exceeded 106,000 in 2024, with 72,000 visitors.
<p>IPO Information Hub</p> <p>NEW launched in 2024</p>	<ul style="list-style-type: none"> ● The IPO Information Hub was officially launched on April 30, 2024, providing a user-friendly and simple operation interface, presenting intuitive visualized information, and offering more comprehensive information services to investors. ● This platform integrates information related to IPOs from the websites of the TWSE, TPEX, Taiwan Securities Association, and MOPS, and further extends the scope to include the progress of companies applying for IPOs. This provides investors with a one-stop convenient inquiry channel and comprehensive information services, facilitating market participation and investor relations.
<p>IR ENGAGE</p> <p>NEW launched in 2024</p>	<ul style="list-style-type: none"> ● Launched the IR ENGAGE platform on November 1, 2024, it provides listed companies and institutional investors with three main services of investor conferences, ESG value-added data, and engagement services. The platform aims to increase corporate exposure, facilitate communication, deepen investor relations, and promote sustainable development.

In 2024, the TWSE focused on promoting financial education and anti-fraud awareness among investors along with knowledge of sustainable development. Through multiple channels such as digital media, short videos, social platforms, and in-person events, we worked to promote financial inclusion and sustainable values so as to effectively conduct financial education and protect the rights and interests of investors.


• 2024 Publicity activities

Anti-fraud activities

- “Square Delivery” anti-fraud website: To help enhance the general public’s ability to recognize fraud, the TWSE launched the “Square Delivery” website, which mimics online food delivery apps, and invited participants to test their ability to sniff out scams. At the same time, a limited edition of good luck snacks that incorporate anti-fraud slogans and information along with anti-fraud dessert magnet packs were launched. Through online and in-person programs, the TWSE reminds the public to remain vigilant against investment scams.

Fraud prevention special agents handing out anti-fraud dessert magnet packs at a “Square Delivery” pop-up event outside Taipei 101.
- “5D Anti-Fraud Initiative”: The TWSE engaged participants and encouraged them to take part in the “5 Don’ts” initiative to strengthen public awareness of financial fraud. The first wave of the campaign featured the theme “For Your Money, One Song at a Time” as well as a 5D dance battle and singalong.



Executives and guests bearing shields at the 5D Anti-Fraud Initiative Ceremony, symbolizing our collective efforts to safeguard assets and the financial environment.

From left to right: Executive Secretary Huang Kuo-Shih of the Anti-Fraud Command Center, Executive Yuan; Commissioner Chou Yew-Woei of the Criminal Investigation Bureau; Director-General Chang Jung-Hsin of the National Police Agency, Ministry of the Interior; Director Chang Chen-Shan of the Securities and Futures Bureau, FSC; TWSE Chairman Sherman Lin; and Chairman Chen Chun-Hong of the Taiwan Securities Association.

Visits to the TWSE

- A total of 22 visits from colleges, universities, and institutions were received, with a total of 768 visitors.

In addition, the TWSE actively cooperates with domestic and foreign financial institutions to communicate and discuss various capital market issues, working to strengthen international cooperation in all aspects of Taiwan’s securities market. The following are the key communication actions with foreign financial institutions in 2024:

• Communication partners and key topics

Topic	Communication partner/visitor
Overview of financial policies and future cooperation	Nomura Group
Overall development, business prospects, and future cooperation	BlackRock Global Markets (BGM) team Ambassador Msibi of Eswatini; Tex-Ray Industrial Co., Ltd.
Recent developments in the Taiwan/Japan capital markets and future cooperation	Daiwa Securities Group Inc.
Taiwan capital market structure, T+1 settlement in the US, and developments and trends in the global capital market	Citigroup Inc.
ETF related issues	AllianceBernstein
Development of digital systems, ETFs, and trading systems	HSBC Group
Promotion of warrant products, future cooperation	Societe Generale
Investment due diligence, investor engagement	BlackRock Investment Stewardship (BIS) team
Actively managed ETFs, future cooperation	Allianz Global Investors
Future cooperation	MasterLink Securities Corp. and Okasan Securities Co., Ltd.



2. FINANCIAL INCLUSION

2.1 Support listing of innovative companies

With the rise of innovative industries across the world, the TWSE continues to adapt by refining the issuance and trading systems to provide a more competitive investment environment. In 2025, TIB will undergo a major upgrade to attract more innovative companies by relaxing investor participation thresholds, enhancing information transparency, and deepening international financing connections. The TWSE will also strengthen its support for new economy industries, leveraging the power of the capital market to promote Taiwan's industrial innovation and development.

TIB upgrades promote innovative industry clusters

In response to the government's goal to establish Taiwan as the premier Asian Asset Management Center, TIB underwent a comprehensive upgrade on January 6, 2025, removing restrictions on qualified investors and opening the market to retail investors. This significant reform aims to strengthen communication channels with investors, enhance transparency, and increase accessibility. In the future, TIB will adopt the same trading system as the General Board, including margin trading, securities lending, and odd lot trading for greater flexibility in trading. To ensure that investors understand market features and potential risks plus enhance their safety awareness, investors are still required to sign the risk disclosure statement prior to trading on TIB. Furthermore, the TWSE will enhance the rigor of innovation assessments to ascertain the quality of listing startups. The improvements in policy, trading systems, and funding sources will make TIB the top listing platform for innovative companies,

bringing together more outstanding companies with high growth potential into industry clusters, and accelerating the momentum of Taiwan's capital market.

IR ENGAGE launched to attract global funds and connections

The TWSE officially launched IR ENGAGE in November 2024, a platform dedicated to promoting two-way dialogue and engagement between listed companies and institutional investors. With the comprehensive upgrade of TIB in 2025 and further refinement of this platform, the TWSE will work with institutional investors to expand international funding for startups, connect with overseas startup ecosystems, and position Taiwan as the preferred listing destination in Asia. By strengthening international connections and attracting international funds, the TWSE will continue to encourage international startups to list in Taiwan, cementing our role as Asia's innovation hub.

Capital market spurs growth of new economy industries

In 2024, the TWSE actively promoted the development of new economy industries, including green energy and environmental services, digital and cloud services, plus biotech and medical care, assisting 14 companies to apply for listing and successfully raising TWD15.544 billion in funds on the capital market. The number of listed companies grew by 75% and fundraising grew by 298% compared to the previous year. This demonstrates our capital market's support for emerging industries, reinforces our competitiveness among global markets, and lays a sound foundation for future industrial innovation and development.



Initiative	Content	2024 Achievements
Promote listing of domestic companies	<p>Conducted on-site visits, video conferences, phone calls, emails, or received visits from high-quality domestic companies more than 100 times.</p>	<ul style="list-style-type: none"> There were 24 companies that submitted applications for listing, four companies applying to transfer from TIB to the General Board, and 30 were successfully listed (including TIB). Held 5 seminars in collaboration with underwriters to promote the listing of outstanding companies. Held 4 seminars in collaboration with accounting firms to promote the listing of outstanding companies.
Promote overseas companies to list in Taiwan	<p>Conducted listing promotion events in the US, Vietnam, Singapore, Malaysia, Indonesia and major markets; for companies recommended by intermediary institutions, listing service teams were sent to conduct in-person visits, providing them with pre-listing consultation services to accelerate their preparation for listing application.</p>	<ul style="list-style-type: none"> A total of 7 foreign issuers submitted applications for primary listing, of which 6 were successfully listed (including TIB). Conducted 13 overseas investment promotion activities, including eight in ASEAN countries (three in Vietnam, two in Singapore and Malaysia, and one in Thailand, Indonesia, and Singapore), two in China, one each in the US, Japan, and Korea. Conducted an enterprise forum in Singapore, with over 40 business representatives participating. Hosted eight seminars highlighting Taiwan's capital market; and visited 45 local companies to promote listing in Taiwan.
Relax TIB regulations	<ul style="list-style-type: none"> Removed the qualified investor restrictions. Enhanced the rigor of innovation assessments. Established a flexible and friendly fundraising environment. Strengthened protection of investor rights and interests. 	<ul style="list-style-type: none"> Removed the qualified investor restrictions to attract more innovative enterprises from Taiwan and abroad as well as investment to our capital market. To boost trading momentum and offer more diversified trading opportunities, TIB will adopt the same trading system as the General Board, including margin trading, securities lending, and intraday (after-hour) odd lot trading. The TWSE will consult external experts to enhance the rigor of innovation assessments, ensuring the listing of innovative companies with outstanding quality, to create a listing platform preferred by all sectors. Relaxed regulations requiring companies applying to list on TIB to allocate 10% of their shares for public sale before listing. Companies applying to transfer from TIB to the General Board and meet the requirement for dispersion of shareholding are exempt from the requirement for public sale before listing. Several measures have been introduced to enhance listing review and supervision. These include: raising the approval threshold for TIB Listing Review Committee decisions to at least two-thirds of attending committee members; limiting sales to group-affiliated or related entities to no more than 70% of total sales; requiring disclosure of plan to enhance corporate value for businesses experiencing severe declines or losses; mandating biannual investor conferences for all TIB listed companies; and increasing the inspection rate of underwriting firms' compliance assistance activities.
Reinforce market promotion and investor relations	<p>Publicized the loosening of TIB regulations by visiting listed companies, increasing media exposure through press releases and in-depth coverage, and conducting briefings for intermediaries. Enhanced transparency of financial and business information disclosed by TIB listed companies to attract innovative companies to list, build momentum among new industries, and form innovative industry clusters.</p>	<ul style="list-style-type: none"> Conducted on-site visits, meetings, and video conferences with innovative companies 58 times, continuing to track IPO progress schedules and provide consultation as needed. Conducted 26 events to publicize TIB; 8 events were conducted to promote the loosening of TIB regulations, attracting more than 600 companies to participate. Conducted 1 event to showcase TIB achievements; investor conferences for TIB listed companies are held regularly each quarter. Participated in startup expos, such as Meet Taipei Startup Festival and Meet Greater South, as well as events held by the Taiwan Venture Capital Association and annual meetings of venture capitalists.

22 Optimize the trading system

The TWSE continues to refine market surveillance and enhance transparency. To strengthen market order and investor protection, we set up a dedicated investor service hotline, reinforced professional training for customer service personnel, and established and regularly update our FAQ database to provide investors with up-to-date, reliable information. The TWSE also undertakes reform measures to improve market liquidity and trading efficiency, ultimately creating a more robust and transparent capital market that attracts international investment and supports financial inclusion.

Greater ease for foreign investors

- Allow foreign investors to appoint more than one custodian institution

To create a friendly investment environment, attract more international capital, and enhance the efficiency of foreign investments in the Taiwan capital market, the FSC announced that offshore foreign institutional investors can appoint more than one custodian institution, but shall designate one primary custodian institution and not more than three secondary custodian institutions, effective from February 24, 2025. This rule change was effected due to the advocacy efforts of custodian institutions in recent years, requesting on behalf of their foreign clients to allow the appointment of more than one custodian institution; global custodian institutions also made similar recommendations during Chairman Lin's visits with the FSC to major institutional investors in Singapore, Japan, and the US in 2023.

- Expand scope of employee stock ownership trusts

The TWSE is studying the feasibility of allowing overseas and foreign employees of listed companies and their overseas affiliated companies or offices to participate in domestic employee stock ownership trusts, so as to facilitate the talent development strategies of issuing companies and attract international companies to list in Taiwan.

Refine trading mechanisms and boost market liquidity

- Odd lot settlement-driven SBL

Starting December 30, 2024, odd lot securities are included in settlement-driven securities borrowing and lending (SBL), to provide greater market flexibility, optimize the use of on-hand odd lots, and promote order in market settlements.

- Refine intraday odd lot trading

To increase transactions and optimize trading efficiency, odd lot trading matching intervals were shortened from one minute to five seconds starting December 2, 2024.

23 Diversify products and invigorate carbon market

To promote sustainable development and meet investors' demand for diversified products, the TWSE and its subsidiaries have actively developed innovative financial products such as ETFs, ETNs, and sustainability indices, injecting new momentum into the capital market. The amount and asset size of sustainability related products have grown year by year, reflecting the increasing importance of sustainable investment to investors, and forming a positive cycle wherein companies focus more on ESG performance.

Diversify products and enhance competitiveness of the asset management industry

In coordination with the policy to build Taiwan as an Asian Asset Management Center, the TWSE completed regulatory and system adjustments in December 2024 to launch actively managed ETFs and passive multi-asset ETFs, while providing relevant market consulting and technical services to domestic and foreign asset management companies. These products are a step forward for financial inclusion, allowing Taiwanese investors to enhance their allocation efficiency with more diversified ETF products. Furthermore, product innovation will drive the development of asset management firms, advance the skill set of professional talent, and raise overall competitiveness.

Seminars for listed companies and underwriters

In 2024, the TWSE held eight Business Seminars for Listed Companies, with over 1,200 participating representatives from listed companies (including executives in accounting, internal audit, information services, and legal affairs). The seminars focused on a wide range of topics, such as material information and trading suspension, recent regulatory amendments, revisions to information disclosure regulations, corporate governance updates and practical applications, cybersecurity, and carbon trading. Furthermore, the TWSE held four seminars for underwriting businesses in 2024, covering topics such as the latest amendments to domestic and foreign listing regulations, matters of note during the listing review process, and corporate governance issues. By engaging representatives from listed companies and underwriters in bilateral communication during the seminars, the TWSE reiterated the principles of timeliness, accuracy, and completeness for information disclosure, thereby facilitating market information symmetry and transparency.

ETF market development and promotion

To provide guidance to new investment trust personnel, promote awareness and understanding of actively managed ETFs and passive multi-asset ETFs, as well as the latest regulatory and policy changes, and collect feedback on new products and trading systems, in 2024 the TWSE paid 17 on-site visits to ETF issuers, conducted four sessions of ETF seminars for the Securities Investment Trust and Consulting Association (SITCA), and conducted one seminar for investment trust personnel.

Sustainability-related index products and ESG investment

The TWSE supports the government’s push for renewable energy and energy technology. As of the end of 2024, the TWSE purchased TWD700 million in green bonds issued by Taiwan Power Company. We have also made great strides in developing ESG-themed indices. Working with S&P Dow Jones Indices, in 2024, TIP launched the “S&P TIP Taiwan Carbon Reduced ESG 50 Index” to be compatible with Taiwan’s 2050 net zero goal and provide market participants with a new sustainable investment option for net zero transformation. The “TIP Taiwan Gender Equality Index” was also launched, highlighting companies that prioritize gender equality issues. As of year-end 2024, ESG-related indices issued by the TWSE and TIP have been successfully licensed to issue ETFs and ETNs, reaching a total AUM of TWD380 billion, up 31% over the previous year. Furthermore, the TWSE and TIP account for a commanding 80% of the underlying indices of domestic securities ETFs.

ESG-related ETF and ETN market developments

As of year-end 2024, there were 20 ESG-related ETFs and ETNs, with a trading value of TWD667.126 billion and TWD502 million respectively.

- Trading value and market size of ESG-related ETFs and ETNs in 2024

Product	ETF	ETN
Products	17 (10 ESG ETFs and 7 ETFs tracking ESG indices)	3
Trading value	TWD 667.126 billion (+31%)	TWD 502 million (-31%)
Issuance/AUM	TWD 531.125 billion (+52%)	TWD 4.47 billion (+15%)





Note: The above statistics are as of the end of December 2024; the figures in parentheses are compared with the same period in 2023.



Looking forward, the TWSE and its subsidiaries are committed to integrating sustainability and innovation, accelerating index development, supporting the issuance of diversified financial products, and strengthening publicity and promotion. The development of more diversified ESG products and instruments can guide investment funds toward sustainable development. This incentivizes companies to focus more on ESG factors, thereby boosting the growth of a holistic ESG ecosystem and building our market's competitive advantage.

Continue promoting the development of the carbon market

Working hand in hand with the TCX, the TWSE will work to achieve Taiwan's net zero goal through the following four approaches:

<p>Foster green talent</p> <p>Conduct carbon management training to nurture net zero and sustainability-related skills of green professionals.</p>  <p style="font-size: 2em; color: orange;">1</p>	<p>Promote voluntary reduction</p> <p>Ensure that carbon credit trading becomes a driving force for industry emissions reduction.</p>  <p style="font-size: 2em; color: orange;">2</p>
<p>Strengthen global connections</p> <p>Continue to introduce international carbon credits to help companies achieve net zero emissions.</p>  <p style="font-size: 2em; color: orange;">3</p>	<p>Create low-carbon innovative clusters</p> <p>Support the development of innovative, low-carbon industries.</p>  <p style="font-size: 2em; color: orange;">4</p>

Aligning with Taiwan's 2050 net zero goal, the TCX launched the International Carbon Credit Trading Platform in December 2023 and Domestic Carbon Credit Trading Platform in October 2024, providing channels for enterprises to purchase carbon credits. The TWSE and its subsidiaries will continue to synergize the carbon trading market through various measures to help Taiwan make strides toward net zero emissions.



Group photo at the launch of the Domestic Carbon Credit Trading Platform; from left: Deputy Minister Shih Wen-Chen of the Ministry of the Environment; Deputy Minister Kao Shien-Quey of the National Development Council; Kaohsiung Mayor Chen Chi-Mai; TCX Chairman Sherman Lin; Vice Chairperson Jean Shu-Chen Chiu, FSC; and Chief Secretary Chuang Ming-Chih, Ministry of Economic Affairs.

3. INTERNATIONAL COOPERATION

3.1 Association memberships

The TWSE and its subsidiaries have participated in numerous international events to keep abreast of trends in the worldwide financial market and private sector. In recent years, the TWSE has actively promoted the Taiwan securities market, and used its memberships or affiliated memberships in domestic and global organizations to extensively observe and revise innovative methodologies that are beneficial and applicable to our market. The TWSE has utilized this to increase the exposure and visibility of Taiwan's market. The following is a list of public associations in Taiwan and foreign organizations of which the TWSE or its subsidiary was a member of in 2024.

- Membership in international organizations

Participant	Association	Status	Description of 2024 Key Participation Contents
TWSE	Asian and Oceanian Stock Exchanges Federation (AOSEF)	Member	<ul style="list-style-type: none"> Participated virtually in the 25th and 27th Working Committee Meetings in February and September, as well as several charter amendment meetings and online get-togethers, sharing views with member exchanges. Participated in online webinars in June and October, with the TWSE giving a presentation on promoting financial literacy in the October webinar. Participated in the AOSEF General Assembly and 26th Working Committee Meeting in March in Busan.
	Global Association of Central Counterparties (CCP Global)	Member	<ul style="list-style-type: none"> Participated in the CCP Global 2024 Annual General Meeting in May in Athens.
	Global Reporting Initiative (GRI)	Member	<ul style="list-style-type: none"> ESG Digital Platform receives licensing; participated in online events.
	International Corporate Governance Network (ICGN)	Member	<ul style="list-style-type: none"> Participated in the ICGN 2024 Annual Conference, and discussed the latest trends in corporate governance with institutional investors and supervisory authorities.
	International Organization of Securities Commissions (IOSCO)	Affiliate member	<ul style="list-style-type: none"> Participated in the January and October meetings of the Affiliate Members Consultative Committee (AMCC) in Madrid and Toronto. Participated in the 49th Annual Meeting of IOSCO in May in Athens.
	World Federation of Exchanges (WFE)	Member	<ul style="list-style-type: none"> Participated in the Working Committee Meeting in Frankfurt in January and the 63rd General Assembly in Kuala Lumpur in September.
	International Securities Services Association (ISSA)	Member	<ul style="list-style-type: none"> Participated in the virtual ISSA General Meeting in September.
TCX	International Emissions Trading Association (IETA)	Member	<ul style="list-style-type: none"> Became a member of IETA.

Note: For TDCC or FundRich memberships, please refer to the 2024 Sustainability Report of the TDCC.





• Membership in domestic associations

Member	Association	Member	Association
TWSE	Taiwan India Business Association	TWSE	Cross-Strait CEO Summit
	Taiwan-Asia Exchange Foundation		Business Council for Sustainable Development (BCSD)
	Taiwan Russia Association		International Fiscal Association (IFA) Chinese Taipei
	Chinese East Asia Economic Association		Global Brands Management Association
	American Chamber of Commerce in Taiwan		General Association of Chinese Culture
	British Chamber of Commerce in Taipei		Chinese Financial Research and Development Association
	European Chamber of Commerce Taiwan		Chinese Arbitration Association, Taipei
	Taiwan Center for Corporate Sustainability		Corporate Operating and Sustainable Development Association
	Taiwan Financial Services Roundtable		Taiwan Corporate Governance Association
	Securities Analysts Association, Chinese Taipei		Chinese Association of Business and Intangible Assets Valuation
	Taiwan Turnaround Management Association	Accounting Research and Development Foundation	
	Chinese National Association of Industry and Commerce	Taiwan Stock Affairs Association	
	Financial Planning Association of Taiwan	The Institute of Internal Auditors-Chinese Taiwan	
	Taiwan Finance Association	Computer Audit Association	
	Taiwan Economic Association	Financial Engineering Association of Taiwan	
	Taiwan M&A and Private Equity Council	TWCA	Information Service Industry Association of R.O.C. (CISA)
	Taipei Foundation of Finance		Taipei Computer Association
	Chung-hua Association for Financial and Economic Strategies		Digital Transformation Association
	Taiwan Institute of Economic Research		Taiwan Internet and e-Commerce Association
	Chung-Hua Financial And Economic Forum, Chung-Hua Institute for Economic Research		Taiwan Association of Information and Communication Standards
Banking Education Association of Taiwan	AI FinTech Association		
Financial Executives Institute	Taiwan Telematics Industry Association		
	Taiwan Financial Services Roundtable		

Note: For the TDCC or FundRich memberships, please refer to the 2024 Sustainability Report of the TDCC.

32 International connections and green talent development

To promote the globalization of the Taiwan capital market, the TWSE enhances its international connections and engages in worldwide cooperation. The TWSE signed 47 effective MOUs/MOCs with 31 exchanges and securities peripheral units, on cooperation expanding through product cross-listing, compiling joint indices, visits between top executives, professional technology workshops, and joint marketing. These efforts extended the reach of the Taiwan securities market, attracted international capital to invest in the Taiwan stock market, and also promoted Taiwan's advantages and strengths to elevate Taiwan's standing and positioning. The TWSE proactively meets with major global exchanges to consolidate friendly connections. In addition, one-on-one meetings were held with foreign institutional investors to introduce our latest developments and address their concerns as well as suggestions on a case-by-case basis. We also collaborate with intermediary institutions to attract capital, effectively promoting Taiwan's securities market to embrace internationalization.

- Respond to initiatives and foster green talent

In alignment with the World Federation of Exchanges (WFE) 2024 "Ring the Bell for Climate" initiative and Taiwan's 2050 net zero vision, the TWSE stepped up its commitment to sustainable finance education. The TWSE and TCX jointly organized the ISO 14067 carbon footprint and ISO 14068-1 carbon neutrality courses, aimed to cultivate carbon management professionals, connect Taiwan to international standards, and strengthen Taiwan's role in global decarbonization efforts.

To foster green-collar talent, the TWSE and TCX conducted 20 domestic and international forums and over 50 sustainability courses, working with top academic institutions, research institutes, NGOs, and digital platforms, in training over 5,000 participants. Furthermore, the TCX signed a MOU with BSI to introduce a series of ISO certificate courses covering greenhouse gas inventory, carbon footprint, and carbon neutrality. In 2024, more than 1,200 certificates were issued. The TWSE assists companies with the training of green-collar talent and understanding carbon reduction technologies, regulations, and market trends, empowering them to carry out carbon reduction management and planning, convert their reduction efforts into carbon credits in response to carbon pricing, and align their practices with international standards.



• Participation in international activities

Country/Region	Activity	Highlights
Japan, Philippines	Meeting	<ul style="list-style-type: none"> Attended the OECD-ADBI Roundtable on Capital Market and Financial Reform in Asia on March 13-14 in Tokyo. Attended the OECD-Asia Roundtable on Corporate Governance on December 11-12 in Manila.
Hong Kong	Meeting	<ul style="list-style-type: none"> Hosted HKEX in January to discuss future collaboration between the exchanges and on MSCI A50 Index Futures. Hosted HKEX in February to exchange views on attracting foreign investment, ETF market, carbon credits, and market data.
UK	Meeting	<ul style="list-style-type: none"> Visited the London Stock Exchange in March to exchange views on ESG, introduction of ISSB, and carbon trading platforms. Visited LCH (originally London Clearing House) to exchange views on T+1 settlement.
Luxembourg	Meeting	<ul style="list-style-type: none"> Visited the Luxembourg Stock Exchange in March to exchange views on green finance, carbon trading platforms, the EU capital market, and T+1 settlement.
Germany	Meeting	<ul style="list-style-type: none"> Visited the Deutsche Börse Group in March to exchange views on the EU capital market and T+1 settlement.
Singapore	Meeting	<ul style="list-style-type: none"> Visited the Singapore Exchange (SGX) in March to hold a meeting on Taiwan-Singapore capital market product development cooperation, focusing on depositary receipts (DR) and ETFs. Jointly hosted the Taiwan-Singapore AI and Technology Forum with SGX in April. Jointly hosted the Singapore REITs Investment Forum with SGX in May. Attended the ACGA Annual Conference in Singapore on November 5-7 and held meetings with ACGA members over two days. Invited ACGA Research Manager for Taiwan to attend related forums in Taiwan on December 17-19 and exchange views with the TWSE and FSC regarding CG WATCH 2023.
Qatar	Meeting	<ul style="list-style-type: none"> Visited the Qatar Stock Exchange in October to confer on recent developments in both markets, future opportunities for cooperation, IPOs, and ETFs.
UAE	Meeting	<ul style="list-style-type: none"> Visited the Abu Dhabi Securities Exchange in October to exchange views on ETFs and IPOs. Visited the Dubai Financial Market in October to discuss ETFs and IPOs.
Vietnam	Meeting	<ul style="list-style-type: none"> Hosted the State Securities Commission (SSC) of Vietnam in October to discuss the TWSE's experience in the management and development of ETFs, and exchange views on practical experience in the supervision of securities firms and development of Taiwan's carbon credit market. Hosted the Ho Chi Minh Stock Exchange together with TIP in November to discuss issues including ESG and sustainable development, as well as the recent development of index investment. Hosted the Hanoi Stock Exchange in November to exchange views on the listing system, corporate governance, market surveillance, and trading system.
Eswatini	MOU signing	<ul style="list-style-type: none"> Hosted the Eswatini Stock Exchange (ESE) in March for the signing of separate MOUs with the TWSE and TCX.
	Meeting	<ul style="list-style-type: none"> Held a video conference with the ESE and TCX in October to share discussion on the market structure and current situation of our respective markets, as well as the TWSE's experience in attracting foreign investment. Both parties seek to maintain connections and explore mutually beneficial cooperation opportunities in the future.
Philippines	MOU signing	<ul style="list-style-type: none"> Hosted the Philippine Stock Exchange (PSE) in August to sign a MOU and set up a working group to share business experiences.
	Meeting	<ul style="list-style-type: none"> Hosted the PSE in October to exchange views along with TIP regarding recent developments of ETF and index investment.

Country/Region	Activity	Highlights
Japan	Visit	<ul style="list-style-type: none"> Together with TIP, participated in the 16th Annual S&P DJI Japan ETF Conference in June. The TWSE served on a panel discussion for stock exchanges and jointly hosted a booth with TIP to promote Taiwan's securities market plus the development of index investment to over 800 institutional investors. Visits were conducted with JPXi and important local asset management companies to build good relations.
Korea	Visit	<ul style="list-style-type: none"> Together with TIP, we participated in the Global ETP Conference organized by the Korea Exchange. The TWSE served on a panel discussion for stock exchanges and promoted Taiwan's capital market as well as the development of index investment to international institutional investors. Visits were conducted with important local asset management companies to build good relations.
Kazakhstan	Visit	<ul style="list-style-type: none"> The TDCC participated in the 26th Asia-Pacific Central Securities Depository Group (ACG) Annual Meeting in Almaty, Kazakhstan on September 9-12, during which the TDCC actively organized discussions with top executives and representatives of depository institutions from various countries on the latest development trends in the depository industry, enhancing the visibility of Taiwan's capital market.



TWSE Chairman Lin participated in a discussion panel at the Middle East Forum hosted by J.P. Morgan at Riyadh, highlighting the competitiveness of Taiwan's capital market and its strategic role in the AI supply chain, promotion of new economy industries, and development of the ETF market.



The TWSE and PSE signed an MOU.





SUSTAINABLE RESPONSIBILITY

Green Operations
Integrity Governance
Social Inclusion

4. GREEN OPERATIONS

4.1 Climate action

Climate change governance

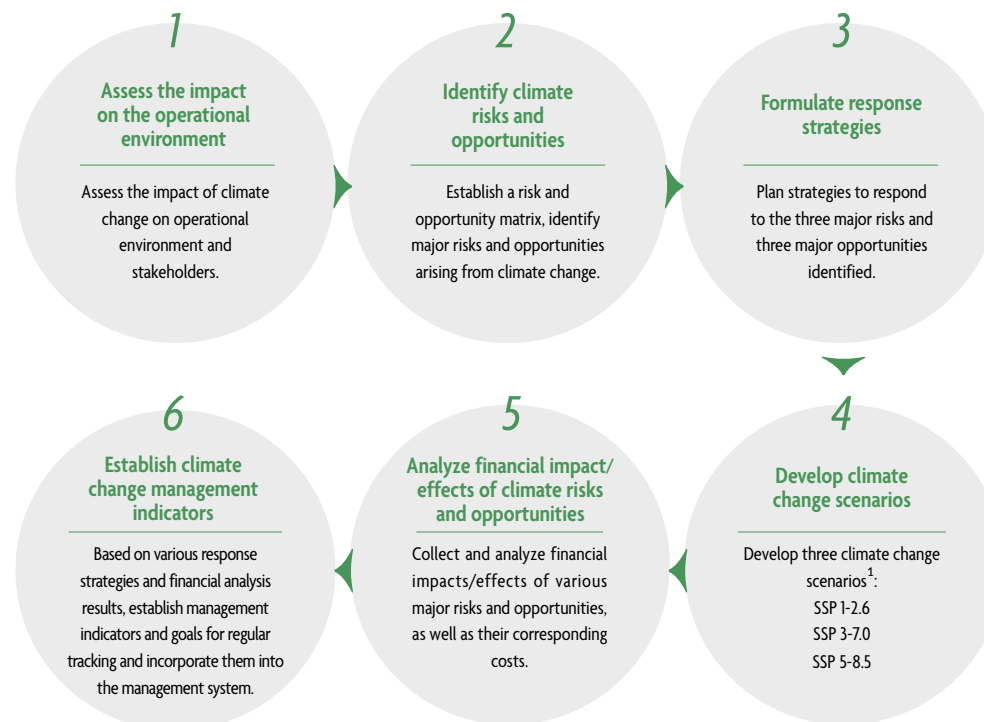
In response to the global trend of mitigating and adapting to climate change, the TWSE has voluntarily adopted the TCFD guidelines and the IFRS S2 climate-related disclosures. On September 11, 2024, the TWSE established the "Climate Change Management Policy and Procedures" with the following four core elements: "governance," "strategy," "risk management," plus "metrics and targets." Based on these core elements, the TWSE has established a relevant risk management framework, identifying significant risks and opportunities that climate change may pose to the company, proposing relevant response strategies, and integrating existing risk management procedures.

The TWSE Sustainable Development Committee is responsible for reviewing major policies and proposals related to climate change, and overseeing the effective operation of the climate change management mechanisms. The working groups within the Sustainable Development Committee regularly provide information on global climate change trends to all TWSE departments, enhancing employees' awareness of climate change. Each department implements relevant risk assessment and control measures in daily management operations to mitigate climate change-related risks faced by business operations to a manageable and controllable range. In addition, they seize climate change-related opportunities to ensure the effectiveness of climate change management.

Management of climate-related risks and opportunities

1. Identification process of climate risks and opportunities

Based on three climate change scenarios, the TWSE identified the risks and opportunities brought about by extreme weather and climate change. In regularly scheduled TCFD workshops, department heads are invited to conduct research, discussion, information gathering, and analysis of climate change. As a result, they identified significant risks and opportunities for the company. In addition, the TWSE regularly conducts comprehensive assessments of potential risk and opportunity factors, and establishes relevant risk prevention measures according to international practices and regulatory policies, thereby reducing risks and seizing opportunities. The process of identifying and formulating strategies for risks and opportunities related to climate change is as follows:



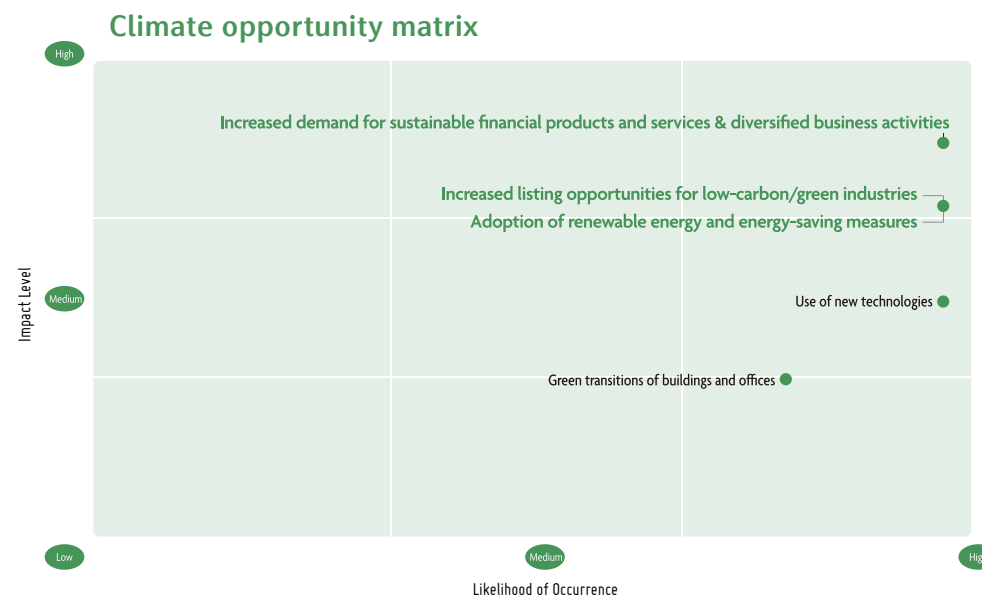
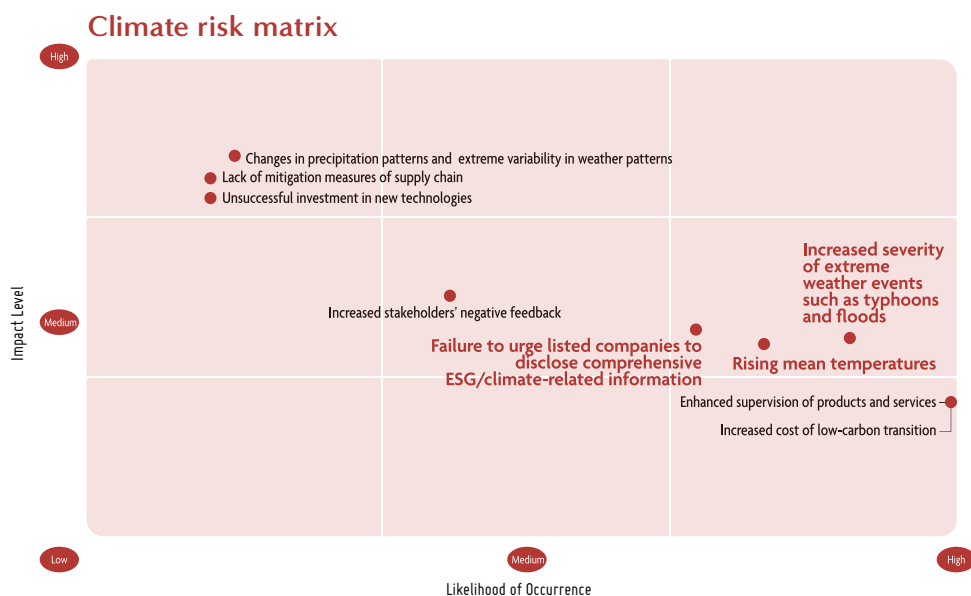
Scenario	Estimated warming by ²	
	mid-21st century	late-21st century
SSP 1-2.6	1.3 °C	1.4 °C
SSP 3-7.0	1.5 °C	2.8 °C
SSP 5-8.5	1.8 °C	3.4 °C

Note 1 : The scenarios are based on those proposed in the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC).

Note 2 : According to the updated report on climate change in Taiwan, it is estimated that the temperatures in various regions of Taiwan will continue to rise by various levels in future scenarios as shown in the table above.

2. Identification results of climate risks and opportunities

After completing the identification of climate risks and opportunities, a risk and opportunity matrix was drawn up according to the likelihood of occurrence and degree of impact. Based on the top three climate risks and opportunities, the TWSE has developed respective strategies and estimated the quantitative impact and financial costs. The climate risk and opportunity matrix of the TWSE are as shown as follows:



Based on the above matrix, the TWSE has identified the top three risks and opportunities, as well as their type and time frame, as follows:

Summary table of identified climate change risks

Risk no.	Type of risk	Risk factors	Time frame
1	Physical risk – acute	Increased severity of extreme weather events such as typhoons and floods	Short-term
2	Physical risk – chronic	Rising mean temperatures	Long-term
3	Transition risk – reputation	Failure to urge listed companies to disclose comprehensive ESG/climate-related information	Medium-term

Summary table of identified climate change opportunities

Opportunity no.	Type of opportunity	Opportunity factors	Time frame
1	Opportunity – products and services	Increased demand for sustainable financial products and services; diversified business activities	Short-term
2	Opportunity – markets	Increased listing opportunities for low-carbon and green industries	Medium-term
3	Opportunity – energy source	Adoption of renewable energy and energy-saving measures	Short-term

Note: Definition of time frames: short-term refers to the year 2025; middle-term refers to 2026-2030; long-term refers to 2031-2050.

Climate change risk and opportunity management strategies

Risk 1 Increased severity of extreme weather events such as typhoons and floods

Due to extreme weather changes and increased severity, the frequency of severe weather such as strong typhoons and flooding will increase, leading to power outages, equipment failures, and inability of employees to work, potentially causing stock market closures along with business interruptions, ultimately affecting the normal operation of the exchange as well as internal and external audit operations, resulting in reduced trading volume, decreased revenue, and increased costs.

Risk impacts

Products and services

- Natural disasters can cause damage to equipment hardware, power outages, and network disruptions, resulting in interruptions of core business as well as information operations and services, leading to an increased risk of stock market closure and business interruption.
- Extreme weather may hinder on-site inspections of the TWSE's data centers and subsidiaries, as well as securities firms, leading to an inability to immediately discover significant internal control deficiencies that may affect operations. In addition, having to confirm internal controls and audit operations through written reviews may increase audit risks and costs.

Supply chain and value chain

- Natural disasters may damage government infrastructure, causing disruption of water, electricity, communication, and internet services to the data centers, leading to operational interruptions and other negative impacts.
- Securities firms and IT companies may lack sufficient resilience in their information system equipment, and system instability resulting from extreme weather conditions could cause individual companies or specific regions to experience trading interruptions. This could prevent investors from conducting transactions and impact investor rights and business stability.

Response strategies

Products and services

- Adhere to the "Taiwan Stock Exchange Corporation Measures for Responding to Natural Disasters."
- Maintain re-certification of ISO 22301. Establish a complete, feasible, and effective business continuity management system, and conduct regular system backup drills every year to confirm that the system can resume operation within an acceptable downtime.
- Establish a digital system for transmitting broker audit reports and implement an online audit and approval process. Formulate measures to improve audit operations in order to reduce the impact of climate disasters and minimize the risks and costs of audit operations.

- Inspections of the TWSE's data centers and subsidiaries will be conducted via video or other means if on-site inspections are hindered by extreme weather.

Supply chain and value chain

- Critical TWSE infrastructure supply chain is equipped with backup mechanisms.
- Enhance the resilience of securities firms' information operations according to the "Financial Cybersecurity Action Plan." Formulate reference guidelines for information operation resilience, and regularly invite securities firms to participate in backup testing.

Financial impacts

Decreased revenue

- Stock market closures, system abnormalities, or interruptions can prevent investors from carrying out trades, resulting in decreased trading volume and consequently reduced revenue.

Increased operating costs

- If securities firm audits are changed to a written review, this will lead to increased audit costs and increased audit risks.

Increased capital expenditure

- Damage to infrastructure or failure of critical information equipment may lead to the premature scrapping of assets; repairing or rebuilding damaged infrastructure will result in increased related repair costs, including labor and material costs; purchasing new equipment will increase capital expenditure.

SSP scenario: SSP 5-8.5

	Short-term 2025	Medium-term 2030	Long-term 2050
Estimated costs ¹ (TWD1,000/year)	212,307	274,448	379,130
% of revenue ²	1.28%	1.65%	2.28%

1. Due to the increase in typhoon days and revenue, the financial impact amount significantly increased compared to the previous year.

2. The financial impact is calculated as a percentage of revenue of the TWSE for the year 2024. (This applies to all following financial impact calculations.)

Estimated costs

Increased operating costs

- The increased frequency of system backup drills and climate disaster drills will result in increased costs related to personnel, equipment, and venues.

Increased capital expenditure

- The establishment of a digital audit report system will result in increased expenses related to system implementation.

Estimated increased costs of TWD1.772 million per year, accounting for 0.01% of revenue.

Risk 2 Rising mean temperatures

Due to the rise in average temperatures, in order to maintain a stable temperature for the equipment in the data centers, the TWSE will need additional cooling, leading to an increase in electricity costs. If the overall increase in electricity demand leads to insufficient supply, it may result in power outages, operational interruptions, and other unforeseen situations, causing market trading halts and business interruptions, affecting the stability of the securities market, and leading to a decrease in revenue.

Risk impacts

Products and services

- ✦ **The risk of hardware and system failures increases**, as rising temperatures may lead to an increase in the temperature inside the server rooms. In addition to negatively impacting equipment performance, it may also lead to hardware damage or data loss.
- ✦ **Insufficient power supply may lead to power outages, which in turn cause operational interruptions; high temperatures lead to increased usage of air conditioning and cooling systems, thereby increasing the demand for electricity**, which may lead to insufficient power supply and even cause blackouts.

Supply chain and value chain

- ✦ **Declining performance of the cooling system** may lead to poor cooling effect and thus affect the performance of the infrastructure equipment. The entire value chain will be impacted, including data vendors, securities firms, peripheral units, and related financial industry participants.

Response strategies

Products and services

- ✦ **Using energy-saving equipment and updating hardware technology, electromechanical equipment, and cooling systems** will reduce energy consumption and improve energy efficiency, while also reducing carbon emissions.
- ✦ Established data centers with international standard TIA942 Rated 4 certification, and equipped them with **fuel tanks and backup power supply equipment** for emergency electricity.

Supply chain and value chain

- ✦ **Guided securities firms to implement the FSC's "Transition Strategies of Sustainable Development for Securities and Futures Sectors"** to enhance their sustainability ecosystem and strengthen climate risk response.
- ✦ To maintain operations, all real-time data vendors contracted with the TWSE have backup systems.

Financial impacts

Increased operating costs

- ✦ Increased maintenance and inspection frequency of data center infrastructure will lead to higher facility maintenance costs.
- ✦ Additional operation time of the air conditioning system will lead to an increase in water and electricity expenses.

Increased capital expenditure

- ✦ Early replacement of existing data center system equipment and electromechanical equipment will lead to an increase in capital expenditure.

SSP scenario: SSP 5-8.5

	Short-term 2025	Medium-term 2030	Long-term 2050
Estimated costs (TWD1,000/year)	6,893	7,043	7,418
% of revenue	0.041%	0.042%	0.045%

SSP scenario: SSP 3-7.0

	Short-term 2025	Medium-term 2030	Long-term 2050
Estimated costs (TWD1,000/year)	6,893	7,018	7,331
% of revenue	0.041%	0.042%	0.044%

SSP scenario: SSP 1-2.6

	Short-term 2025	Medium-term 2030	Long-term 2050
Estimated costs (TWD1,000/year)	6,893	7,001	7,272
% of revenue	0.041%	0.042%	0.044%

Estimated costs

Increased operating costs

- ✦ Increases in maintenance cost of backup power equipment.

Increased capital expenditure

- ✦ Adjusting and upgrading existing infrastructure will increase capital expenditures.

Estimated increased costs of TWD28.105 million per year, accounting for 0.17% of revenue.



Risk 3 Failure to urge listed companies to disclose comprehensive ESG and climate-related information

External stakeholders are paying increasing attention to the disclosure of ESG and climate-related information by listed companies, which plays a steadily more important role in investment decision-making. If the TWSE fails to encourage listed companies to disclose relevant information, or if listed companies engage in greenwashing or provide false or misleading information, it may affect investor’s decision-making, raising public concerns and tarnishing the TWSE’s reputation.

Risk impacts

Products and services

- Failure to properly monitor the accuracy and completeness of ESG disclosures by listed companies not only casts doubt on legal compliance and poses risks of greenwashing, but may also hinder investors from making a thorough assessment of company information, and **affect the trust of the public in the TWSE’s regulation of listed companies.**



Financial impacts

Decreased revenue

- If listed companies disclose inaccurate ESG and climate-related information or are suspected of greenwashing, it will reduce the attractiveness of Taiwan’s capital market to domestic and foreign funds, thereby affecting revenue.

Note: If the ESG and climate information disclosed by listed companies is incomplete, it may affect investors’ willingness to invest. However, as the securities market is influenced by multiple factors, it is difficult to precisely quantify the impact of individual factors on the securities market and the TWSE. Therefore, the financial impact of this section is presented qualitatively.

Response strategies

Products and services

- In order to promote the integration of **more comprehensive ESG information** and enhance user experience, the TWSE launched the **upgraded ESG InfoHub in April 2024**, with the addition of negative ESG material events and a page on Sustainability Courses.
- Hold briefings for listed companies and provide education and training**, offer more consultation services on sustainable information disclosure, thereby helping listed companies raise awareness of sustainability issues and enhance the quality and accuracy of their disclosures.
- Assist listed companies in establishing sustainable information internal control **mechanisms** to ensure that they can effectively manage, supervise, and disclose ESG information, enhance their sustainability and transparency, plus reduce legal and reputational risks.

- Established a digital platform for sustainable reporting** to assist small-and medium-sized listed companies in preparing sustainability reports. In addition, **AI will be utilized to assist in reviewing sustainability reports and inspecting ESG disclosure information** to enhance regulatory efficiency.
- Organized internal education and training** to ensure that employees understand how to correctly disclose ESG information, thereby enhancing the quality of supervision, strengthening regulatory efforts, and reducing the risk of misinformation.
- Continue to review listed companies’ sustainability reports and auditors’ assurance working papers on industry sustainability indicators through the review mechanism**, to ensure that listed companies disclose ESG and climate-related information in accordance with relevant regulations, and that auditing institutions have conducted appropriate assurance procedures based on industry indicators.
- Establish a review mechanism for greenhouse gas assurance working papers** to ensure that the auditing institutions have conducted appropriate assurance procedures on greenhouse gas inventory.

Estimated costs

Increased capital expenditure

- Building digital platforms such as the ESG InfoHub and the ESG Digital Platform has led to an increase in capital expenditure.

Increased operating costs

- More human resources need to be invested to ensure the supervision and guidance of listed companies, resulting in increased personnel costs.
- Organizing internal employee education and training or recruiting professional talents in the field of ESG increases personnel costs.
- Additional expenses are required for conducting seminars and education training for listed companies.

Estimated increased costs of TWD14.425 million per year, accounting for 0.09% of revenue.

Opportunity 1 Increased demand for sustainable financial products and services; diversified business activities

In response to the increasing demand for sustainable financial products and services, the TWSE and its subsidiaries are dedicated to launching ESG-related thematic indices to promote the issuance of diverse ESG financial products, such as securities and sustainable funds by issuers to increase revenue. At the same time, we proactively embrace the shift toward ESG by introducing climate change and carbon governance-related education, plus training to increase the sustainability awareness of listed companies, while enhancing the TWSE's reputation.

Opportunity impacts	Response strategies
<p>Products and services</p> <ul style="list-style-type: none"> By staying on top of the demand for sustainable financial markets plus domestic and international development trends, we will continue to introduce ESG-related ETFs, ETNs, and indices. In addition, we will expand the range of sustainable financial products, augment our business activities and revenue sources, as well as channel funds toward sustainable activities. To attract more overseas funds and connect with the local and international capital markets, the TWSE created the Investment InfoHub and ESG InfoHub websites to enhance the accessibility and comprehensiveness of investment and sustainability information. In response to the increasing market demand for sustainable talent, we have launched education and training related to sustainability to cultivate talent in the capital market. At the same time, we work with the FSC to assist companies in aligning with international sustainability disclosure standards, develop practical examples and guidelines for reference by the companies in their sustainable transformation, deepen their understanding of sustainable development, and ultimately enhance the TWSE's reputation. With the increase in demand for carbon credits from domestic enterprises, the TCX actively engages with the international community, plus facilitates communication between industry and the Ministry of Environment, to promote domestic and international carbon credit trading. To help corporations achieve their own climate goals, the TCX facilitates broader industry engagement in decarbonization efforts and offers related education and training, enhancing the breadth and quality of sustainable disclosure. 	<p>Products and services</p> <ul style="list-style-type: none"> TIP will expand the offering of sustainability indices and ESG value-added data by gathering data on investor needs. By enhancing the "TIP Taiwan Sustainability Ratings (SEED Model)" system, expanding the local ESG database, and deepening cooperation with international index providers, TIP will research and expand the types of sustainability themed indices plus promote index investment products and their applications. The IR ENGAGE platform provides a strong communication channel between listed companies and institutional investors. Through it, TIP provides multi-tier ESG value-added databases and enhances engagement information, plus matchmaking services for investors. This will assist institutional investors in complying with responsible investment principles and following due diligence governance, and apply ESG factors in the investment process. These services also help institutional investors in addressing their concerns about sustainability issues, and provide an informational foundation on which they can engage in bilateral communication and ESG negotiations with the TWSE and TPEX listed companies in which they invest. Updated the ESG InfoHub and conducted investor education activities to strengthen investors' understanding of sustainable finance and enhance risk awareness. Providing sustainable financial related reports and files through our Data E-Shop in a systematic and standardized manner enhances clients' efficiency in accessing information and facilitates the promotion of sustainable information. In response to the many sustainable regulatory requirements facing businesses, the TWSE collaborates with government agencies, peripheral units of the securities industry, schools, NGOs, and platform operators to jointly organize education and training activities covering sustainable information disclosure and carbon governance, in order to deeply instill the concept of sustainable development in corporate culture and enhance their competitiveness.
Financial impacts	Estimated costs
<p>Increased revenue</p> <ul style="list-style-type: none"> TIP will compile new ESG thematic indices, issue ESG products linked to these indices, and expand ESG database applications to open up new markets to attract investors, boost trading volume, and ultimately increase revenue. Diversify information products and generate additional revenue through the online sale of sustainable finance related information. <p>By offering a variety of carbon credit products to meet the diverse needs of enterprises and providing international certification courses related to carbon management, we can increase company revenue.</p> <p>Estimated financial gains of TWD36.082 million per year, accounting for 0.22% of revenue.</p>	<p>Increased operating costs</p> <ul style="list-style-type: none"> To compile new ESG thematic indices, deepen ESG evaluations, develop ESG data applications, and establish a local ESG database, it is necessary to incur increased expenses. This includes those related to the recruitment of more talent, increased human resources, establishing system functions, plus marketing costs. Furthermore, the IR ENGAGE platform requires optimization and expansion for new IR services, deepening ESG value-added data, and developing differentiation functions. Hosting net zero and sustainability related seminars, lectures, along with training courses will increase operating costs, including speaker fees and venue expenses. <p>Increased capital expenditure</p> <ul style="list-style-type: none"> The development and maintenance of related platforms and databases, as well as the establishment of relevant infrastructure, will lead to increasing capital expenditure. <p>Estimated increased costs of TWD22.963 million per year, accounting for 0.14% of revenue.</p>

Opportunity 2 Increased listing opportunities for low-carbon and green industries

The TWSE promotes the listing of low-carbon and green industries, encourages companies to embrace low-carbon transformation through innovation, thereby promoting the development and popularization of low-carbon technology. The listing of such companies on the TWSE will help attract local and foreign investors plus funding, and enhance Taiwan's international influence in the field of low-carbon transformation, thereby increasing revenue and international visibility.

Opportunity impacts	Response strategies
<p>Products and services</p> <ul style="list-style-type: none"> ✦ The TWSE encourages businesses to embrace low-carbon transformation and develop new technologies, which will improve ecological benefits while enhancing market competitiveness. These advancements will attract domestic and foreign investment, further enhancing Taiwan's international influence in the field of low-carbon transformation. ✦ The increasing opportunities for listing low-carbon and green industries are expected to expand and diversify the market. Investors will be able to choose from a wider variety of companies, thereby spreading risk and increasing the diversity of their investment portfolios. <p>✦ Corresponding with sustainable development trends and national development strategies, the TWSE supports the development of new economy industries. We promote the capital market's transition to sustainability, and provide a diverse range of sustainability-related investment products.</p> <p>✦ The addition of the new industrial category for listed companies, "green energy and environmental services," has been enthusiastically received. We hope that this momentum will drive growth and fuel the formation of a cluster of environmentally friendly listed companies.</p>	<p>Products and services</p> <ul style="list-style-type: none"> ✦ Referring to the guidelines recognized for sustainable economic activities at home and abroad, we clearly define the standards for low-carbon and green industries to ensure that enterprises comply with relevant requirements and reduce the risk of greenwashing. In addition, corresponding regulatory mechanisms are established to make certain that regulatory responsibilities are met and ensure the transparency and accuracy of market information. ✦ Regularly survey market industry trends and developments, while also paying attention to foreign sustainable and low-carbon technology development trends, in order to stay on top of overall market dynamics. ✦ Conduct industry-specific seminars and briefings with the collaboration of government, industry, and academia, to promote knowledge of low-carbon and innovative technology industries, enhance overall market sustainability awareness, and provide relevant consulting services. <ul style="list-style-type: none"> ✦ Continue to conduct industry activities and invite government, industry, and academia representatives to share the latest trends in green energy and environmental protection industries as well as listing experiences. These events attract company representatives, demonstrating the abundant momentum of Taiwan's green industries, and accelerate companies' entry into the capital market for further growth and development. ✦ Actively communicate with the startup ecosystem. Currently, TIB listed companies hail from industries spanning digital and cloud services, green energy and environmental services, biotech medical, and electric vehicles. The goal is to develop TIB into a "boutique" offering specialized products driven by innovation and growth. ✦ Loose regulations for issuance and trading attract more new economy industry companies to go public, expanding market capitalization and further enhancing the vitality of startup companies in the capital market.
<p>Financial impacts</p> <p>Increased revenue</p> <ul style="list-style-type: none"> ✦ The increase in the number of listed industry categories and companies can meet investors' needs, enhance the attractiveness of Taiwan's securities market to domestic and foreign funds, plus increase trading volume to drive revenue growth. <p>Estimated financial gains of TWD13,464 million per year, accounting for 0.08% of revenue.</p>	<p>Estimated costs</p> <p>Increased operating costs</p> <ul style="list-style-type: none"> ✦ Organizing relevant promotional events, briefings, and other activities generates related expenses for the activities and personnel. ✦ Conducting Green Energy and Environmental Services and thematic institutional investor conferences. ✦ Conducting regular surveys of market industry trends and irregularly revising issuance/trading rules will increase related human resource costs. ✦ Engaging international public relations companies to strengthen foreign media publicity will generate related publicity expenses. <p>Estimated increased costs of TWD5,194 million per year, accounting for 0.03% of revenue.</p>

Opportunity 3 Adoption of renewable energy and energy-saving measures

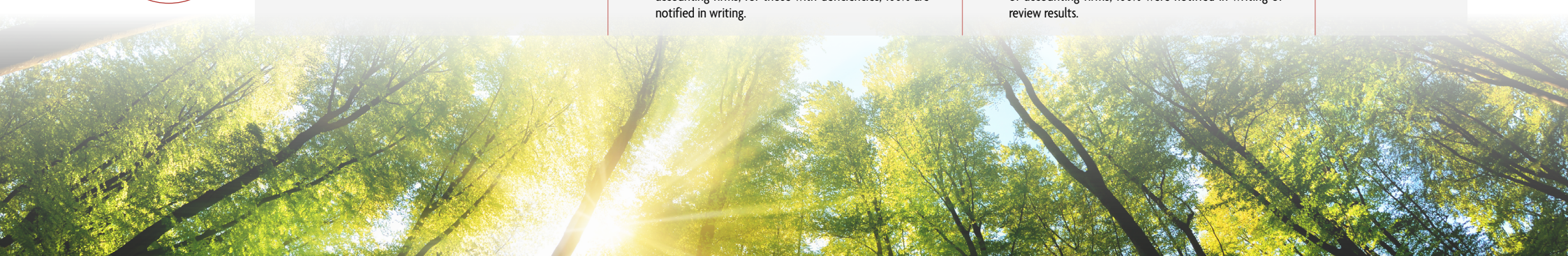
The use of renewable energy and the adoption of energy-saving measures will effectively reduce the TWSE's carbon emissions. Related measures include the use of LED lighting, environmentally friendly and energy-saving vehicles, as well as implementing a paperless office to reduce energy consumption and achieve carbon reduction goals. With the use of multiple carbon reduction measures, the TWSE can lead by example and guide listed companies to adopt similar measures, thereby enhancing our reputation.

Opportunity impacts		Response strategies	
<p>Climate adaptation and mitigation</p> <ul style="list-style-type: none"> Using renewable energy can effectively reduce carbon emissions during operations, achieve carbon reduction goals, and also help mitigate climate change. The introduction of energy-saving equipment effectively reduces operational energy consumption, lowers peak electricity demand for the Taiwan Power Company, and minimizes the risk of operational interruptions caused by insufficient power supply. 	<p>Products and services</p> <ul style="list-style-type: none"> By using renewable energy, the carbon emissions generated by TWSE services are reduced, providing stakeholders, including intermediaries, listed companies, and investors among others, with lower-carbon services while making strides towards a sustainable securities market. 	<p>Climate adaptation and mitigation</p> <ul style="list-style-type: none"> Achieve REI00 by 2040. Installed high-efficiency and energy-saving servers, network equipment, and electromechanical equipment, optimizing cooling systems, reducing operational carbon emissions, and improving energy usage efficiency. According to the climate characteristics of different regions, evaluations should be conducted to introduce green building planning to ensure that operational bases can adapt to local climates. In addition to reducing energy consumption, it also reduces the impact of extreme weather on business and enhances climate resilience. 	<p>Supply chain and value chain</p> <ul style="list-style-type: none"> The TWSE encourages the use of renewable energy and energy-saving equipment in the supply chain to help reduce the TWSE's Scope 3 emissions. This will diversify energy resources, reduce operational disruption risks, and enhance operational resilience.
Financial impacts		Estimated costs	
<p>Decreased operating costs</p> <ul style="list-style-type: none"> Energy-saving equipment is expected to reduce energy consumption for business operations, thereby reducing operating costs such as electricity bills. 	<p>Estimated financial gains of TWD5.572 million per year, accounting for 0.03% of revenue.</p>	<p>Increased operating costs</p> <ul style="list-style-type: none"> The cost of renewable energy is higher, leading to an increase in electricity costs in the short term. <p>Increased capital expenditure</p> <ul style="list-style-type: none"> Capital expenditure will increase due to the purchase of energy-saving equipment. 	<p>Estimated increased costs of TWD11.012 million per year, accounting for 0.07% of revenue.</p>



• Climate change related indicators and goals

Item	Indicator	Goal	2024 Progress	2024 Achievements
Risk 1 Increased severity of extreme weather events such as typhoons and floods				
Risk mitigation plan	<ul style="list-style-type: none"> Improve energy efficiency, reduce reliance on unstable energy supply. Maintain re-certification of ISO 22301 Business Continuity Management System (BCMS). Regularly conduct system backup drills. 	<ul style="list-style-type: none"> The power usage effectiveness (PUE) of the servers does not exceed the highest value of the past five years. Conduct a regular business continuity management review meeting once a year. Hold an annual external audit of ISO 22301 BCMS to ensure continuous validity of the certification. Conduct regular system backup drills twice a year with 100% pass rate. 	<ul style="list-style-type: none"> PUE did not exceed the highest value of the past five years. Conducted one regular business continuity management review meeting. Maintained validity of ISO 22301 BCMS after external audit. Conducted two regular system backup drills with a 100% pass rate. 	All goals achieved.
Risk 2 Rising mean temperatures				
Resilience of equipment operations	<ul style="list-style-type: none"> The First Data Center system architecture is certified international standard TIA942 Rated 4. 	<ul style="list-style-type: none"> The First Data Center continues to meet the standards for TIA942 Rated 4. 	<ul style="list-style-type: none"> The First Data Center continued to meet the standards for TIA942 Rated 4. 	All goals achieved.
Risk 3 Failure to urge listed companies to disclose comprehensive ESG and climate-related information				
Establish a review mechanism	<ul style="list-style-type: none"> Review a specific number of cases, including the sustainability reports of listed companies and auditors' assurance working papers, and notify (in writing or via other means) the listed companies and accounting firms to make improvements if deficiencies are found. 	<ul style="list-style-type: none"> Conduct random checks each year on the sustainability reports of listed companies; for those with deficiencies, 100% are notified (in writing or via other means) to make improvements. Conduct sample checks on the working papers of accounting firms; for those with deficiencies, 100% are notified in writing. 	<ul style="list-style-type: none"> Conducted random checks on 100 sustainability reports of listed companies; 100% were notified (in writing or via other means) of review results, and those with deficiencies were notified to make improvements. Conducted sample checks on three working papers of accounting firms; 100% were notified in writing of review results. 	All goals achieved.



Item	Indicator	Goal	2024 Progress	2024 Achievements
Opportunity 1 Increased demand for sustainable financial products and services; diversified business activities				
Expand business operations	<ul style="list-style-type: none"> Promote sustainable financial information services and collect market feedback. Promote important business initiatives and conduct various publicity activities, including promoting and advocating for ESG and carbon trading businesses. 	<ul style="list-style-type: none"> Collect feedback from at least three potential clients each year on their market opinions regarding sustainable financial information services. Conduct at least 10 ESG-related events and at least 20 carbon credit trading promotional events each year. 	<ul style="list-style-type: none"> Conducted educational sessions for the 2024 Corporate Governance Evaluation. Held four advocacy meetings on the “Internal Control System for Sustainability Information Management.” Held five sessions of the “Greenhouse Gas Inventory Workshop.” Held two seminars to assist in the adoption of IFRS Sustainability Disclosure Standards for phase-one companies. Held two sessions of the “Sustainable Development Committee and Chief Sustainability Officer Forum.” Held six sessions of the “Sustainability Report Preparation and Production Function Advocacy Meeting for TWSE and TPEX Listed Companies.” Collected feedback from three potential clients on their market insight regarding sustainable financial information services. The TWSE and TCX conducted more than 20 domestic and international forums and over 50 online and in-person carbon management courses and workshops, working with top academic institutions, research institutes, NGOs, and digital platforms. 	All goals achieved.
Opportunity 2 Increased listing opportunities for low-carbon and green industries				
Market promotion	<ul style="list-style-type: none"> Support the development of new economy industries and continue to optimize regulations for issuance and trading. 	<ul style="list-style-type: none"> Conduct at least two promotional events or seminars per year related to listed companies in new economy industries. Work with the public sector and startup ecosystem to encourage new economy businesses with key technologies and innovative capabilities or business models to join the capital market. 	<ul style="list-style-type: none"> Conducted “Meet the Experts” series, focusing on industries including biotechnology, digital and cloud services, intelligent healthcare and long-term care, and green energy and environmental services. Participated in the “IPO and M&A in the Healthcare Industry” meeting and the “Care Industry Operation and Management” forum. Conducted “Ushering in a New Era of Diversified Industries” conferences focusing on digital and cloud services and green energy and environmental services industries. Conducted two investor conferences on TIB and one themed investor conference on the biotechnology and medical industry. 	All goals achieved.
Opportunity 3 Adoption of renewable energy and energy-saving measures				
Use of renewable energy	<ul style="list-style-type: none"> Increase the proportion of renewable energy use. 	<ul style="list-style-type: none"> For renewable energy usage goals, please refer to “4.2 Energy and carbon management.” 	<ul style="list-style-type: none"> For progress on renewable energy usage, please refer to “4.2 Energy and carbon management.” 	All goals achieved.
Set up energy-saving measures	<ul style="list-style-type: none"> Continue to increase implementation of energy-saving equipment to reduce greenhouse gas emissions. 	<ul style="list-style-type: none"> For greenhouse gas reduction goals, please refer to “Pathway to Net Zero” and “4.2 Energy and carbon management.” 	<ul style="list-style-type: none"> For progress on greenhouse gas reduction, please refer to “Pathway to Net Zero” and “4.2 Energy and carbon management.” 	

Note: The TWSE annually reviews the implementation of various strategies and the fulfillment of climate change-related goals when compiling each year’s sustainability report.

4.2 Energy and carbon management

The TWSE and its subsidiaries mainly provide financial and IT services, and the majority of its energy consumption is by its offices (including public facilities) and data centers, as well as gasoline consumption by company cars and diesel fuel consumption by backup power generators. In 2022, the TWSE and its subsidiaries first completed its GHG Inventory Report in accordance with ISO 14064-1:2018, establishing the year 2022 as the inventory base year, in order to measure our greenhouse gas emissions and to formulate our carbon reduction plans accordingly.

• Energy usage

Item	2023		2024	
	Energy consumption	GJ	Energy consumption	GJ
Gasoline (liters)	14,485.03	473.04	12,234.02	399.32
Diesel (liters)	10,918.32	383.99	8,662.00	304.47
Purchase of non-renewable energy (kWh)	16,378,523.26	58,962.68	11,779,138.91	42,404.90
Purchase of renewable energy (kWh)	3,041,983.00	10,951.14	9,782,483.00	35,216.94
Self-generated renewable energy (kWh)	5,149.00	18.54	16,330.00	58.79
Total energy consumption (GJ)	-	70,789.39	-	78,384.42
Energy intensity (GJ/person)	-	51.90	-	56.19

Note 1: This report covers data from the TWSE, TWCA, TIP, the TDCC, FundRich, and the TCX in 2024 and 2023, adjusted according to the GHG inventory results with assurance for such year. All calculations are rounded to the nearest two decimal places.

Note 2: The heating value coefficient is based on the Ministry of Environment's Greenhouse Gas Emission Coefficient Management Table 6.0.4 version, with gasoline at 7,800 Kcal/liter and diesel at 8,400 Kcal/liter.

Note 3: 1 gigajoule (GJ) = 10^9 joules (J); 1 kilocalorie (Kcal) = 4,186.8 joules (J); 1 kilowatt hour (kWh) = 3.6 megajoules (MJ)

Note 4: The energy types covered by the energy intensity ratio are fuel and electricity, and this ratio uses the energy consumption within the organization. Energy intensity is calculated based on the number of employees as of December 31 of that year, with 1,395 employees in 2024 and 1,364 employees in 2023.

Note 5: The types of greenhouse gases covered include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

To enhance the credibility of the inventory report, the TWSE acquired third party verification for Category 1, Category 2, and Category 4 of our GHG Inventory Report in 2024 (see Note). The inventory scope includes Category 1's direct greenhouse gas emissions (refrigerants, gasoline, diesel, etc.), Category 2's indirect greenhouse gas emissions from imported energy (electricity), Category 3's indirect greenhouse gas emissions generated by transportation (business travel emissions), and Category 4's total indirect greenhouse gas emissions caused by organizations' use of products (capital goods, fuel, and energy-related activities).

Note: The TWCA, TIP, and the TCX have acquired third party assurance for Category 1 and Category 2. Please refer to the TDCC 2024 ESG Report for the third-party verification statement of the TDCC and FundRich.

• Greenhouse gas emissions

Item	2023	2024
Category 1 direct GHG emissions (tCO ₂ e)	512.21	500.63
Category 2 indirect GHG emissions from imported energy (tCO ₂ e) (by location)	9,598.54	10,651.44
Category 2 indirect GHG emissions from imported energy (tCO ₂ e) (by market)	8,095.61	5,818.89
Category 3 indirect GHG emissions from transportation (business travel) (tCO ₂ e)	268.63	196.67
Category 4 indirect GHG emissions from products an organization uses (capital goods, fuel, and energy-related activities) (tCO ₂ e)	4,986.72	9,228.38
Total (tCO ₂ e) (by location)	15,366.10	20,577.13
Total (tCO ₂ e) (by market)	13,863.17	15,744.59

Note 1: This report covers data from the TWSE, TWCA, TIP, the TDCC, FundRich, and the TCX in 2024 and 2023. All calculations are rounded to the nearest two decimal places.

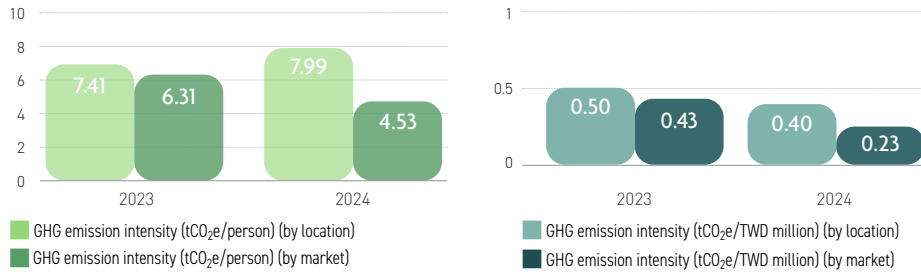
Note 2: The calculation of greenhouse gas emissions is based on the operational control approach. The calculation method is activity data multiplied by the emission coefficient multiplied by GWP values. The emission coefficient is based on the Ministry of Environment's Greenhouse Gas Emission Coefficient Management Table 6.0.4. GWP values are based on the IPCC's Sixth Assessment Report published in 2021. If there are no updates in the Sixth Assessment Report, the calculations should be based on the content of the IPCC's Fifth Assessment Report published in 2013.

Note 3: For Category 2 greenhouse gas emissions, purchased electricity is the main source. In 2024 and 2023, the electricity emission factors are based on the Bureau of Energy, Ministry of Economic Affairs' 2023 and 2022 electricity emission factors of 0.494 and 0.495 kgCO₂e/kWh, respectively.

Note 4: The types of greenhouse gases covered include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

Note 5: In accordance with GHG Protocol Scope 2 Guidance (2015), the TWSE discloses Scope 2 emissions according to both the location-based and market-based methods due to its own and its subsidiaries' purchase of renewable energy. For Category 2 emissions in the above table, location-based emissions are calculated by multiplying total electricity consumption by the average electricity emission factor of the location, while market-based emissions are calculated by multiplying solar power used and the amount bought through the power purchase agreement with Taiwan Power Company with the contract source emissions factor.

Greenhouse Gas Emission Intensity (Category 1 + Category 2)



Note 1: GHG emission intensity is calculated based on the number of employees as of December 31 of that year, with 1,395 employees in 2024 and 1,364 employees in 2023.
 Note 2: GHG emission intensity is calculated based on the consolidated revenue for that year with TWD27,806 million in 2024 and TWD20,194 million in 2023.

Use of renewable energy

To mitigate climate change, the TWSE strongly supports the government's promotion of renewable energy use. In 2024, all the TWSE offices in Taipei 101 continued its 100% use of green energy. The First Data Center completed its purchase of green energy, began using green energy in March 2024, and achieved its short-term goal of RE50 in 2024. In addition, the First Data Center completed the installation of solar panels and energy storage equipment, generating 16,330 kWh of electricity in 2024, with a carbon reduction benefit of approximately 8,067 kg of CO₂e. In 2024, the proportion of the TWSE's use of renewable energy has grown to 56.56%, significantly higher than the previous year's 19.52%.

• TWSE renewable energy use

Year	Energy used (kWh)	% of total energy used
2023	2,852,617	19.52%
2024	9,231,246	56.56%

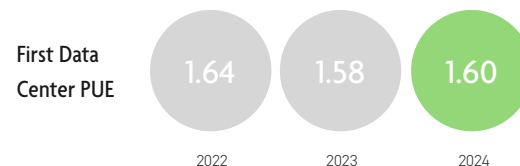
The TWSE exerts great effort in energy conservation to achieve its carbon reduction targets. In addition to using renewable energy, the TWSE has replaced older company cars and leases environmentally friendly and energy-saving models, gradually installed and upgraded energy-saving office equipment, and the central air-conditioning water-cooling system makes ice at night and uses it for cooling during the day. Furthermore, to reduce environmental harm caused by consumption, the TWSE has established an eco-friendly procurement policy for products purchased for operations, including most commonly purchased goods including paper, computer supplies, office supplies, batteries, and light fixtures. The policy gives priority to products that meet the government's Green Mark criteria or are made of recycled materials.

• TWSE energy conservation measures

Item	Content
Chiller	The chiller units are operated alternately on a schedule so as to ensure optimum efficiency. The First Data Center building is also equipped with ice storage air conditioning, which creates ice during the night at off-peak hours, and uses the cooling from the ice melt during the day. The process can divert energy consumption from peak hours and is cost-effective and energy saving.
Chilled water pump, cooling water pump, cooling tower	Using frequency conversion technology, the chilled water pumps, cooling water pumps, and cooling towers can be adjusted depending on motor rotational speed to achieve energy conservation.
Computer room	Computer rooms adopt high-efficiency EC fans plus constant temperature and humidity air conditioning units for regulating the temperature and humidity of the environment.
Air distribution system	The First Data Center building adopts frequency conversion technology with its air handling units to cool entire sections through the VAV air distribution system.
Central control system	The central control system manages and monitors the building's systems/operations, ensuring energy conservation, and issuing alerts in the case of abnormal situations.
Air conditioning system energy conservation	The operational parameters for the central air conditioning system of the First Data Center continue to be optimized to achieve energy conservation.
Thermal insulation in the data center	The use of thermal insulation materials in the First Data Center effectively blocks outdoor heat from entering the building, achieving energy savings.
Eco-friendly procurement	The TWSE established an eco-friendly procurement policy, giving priority to products that meet the government's Green Mark criteria or are made of recycled materials.

Data center PUE

The Power Usage Effectiveness (PUE) of the TWSE's First Data Center rose slightly from 2023 to 2024's 1.60, due to system expansion to accommodate new tenants. The TWSE will continue to conserve energy through the HVAC system, enhance the operation environment of the server rooms, and conduct regular maintenance checks to ensure energy consumption is reduced, in order to lower the PUE rating and achieve the goal of lowering carbon emissions.



Note 1: Power Usage Effectiveness (PUE) is calculated by dividing "the total power usage by the data center" by "the total power usage of ICT equipment in the server rooms."

Note 2: Since the solar power generation and consumption in 2023 and 2024 accounts only for a small percentage of total electricity consumption, it is not included in either the numerator or denominator of PUE calculations.

• TWSE carbon reduction targets and performance

2024 Performance

- Completed the 2023 GHG inventory and verification, and became the world's first exchange to be awarded the ISO 14068-1 carbon neutrality verification certificate by BSI.
- The First Data Center achieved 50% renewable energy use, and the installed solar panels generated 16,330 kWh.
- The additional office space on the 36th floor of the 101 Building uses 100% green energy.
- Older company cars were replaced with environmentally friendly and energy-saving models, and employees are encouraged to share rides using the corporate taxi service.
- Replaced all lighting in the TWSE offices, warehouses, and other areas with LED light fixtures; reduced office paper usage by 5% with the paperless office policy; reduced purchase of mineral water by 5% by providing environmentally friendly, reusable cups in conference rooms.
- Promote suppliers' commitment to sustainable development; conducted a series of activities titled "Co-prosperity in all four seasons, sustainability in all directions" to support SDGs.



Short-term targets | 2025 |

- Increase the proportion of renewable energy use and expand solar power generation.
- Promote energy conservation and carbon reduction measures (including upgrading electronics and reducing use of paper and plastic, etc.) in line with sustainable development.
- Continue to respond to international initiatives and conduct activities to support SDGs.
- Conducted the 2024 GHG Inventory and carbon neutrality, both with third-party verification.



Medium-term targets | 2030 |

- Reduce emergency generator diesel fuel consumption and carbon emissions by 4%.
- Continue to increase the use of renewable energy; achieve 60% usage at the First Data Center.
- Replace and upgrade equipment with energy-saving models.
- Reduce office paper usage and mineral water purchases by 10%.



Long-term targets | 2050 |

- Continue to expand the GHG inventory scope, and develop responsive measures based on future developments to achieve net-zero emissions.



4.3 Resource management

Waste management

The TWSE mainly provides financial and IT services, and the majority of our waste is general waste and photocopier paper. There are no concerns about pollution or waste from actual development or manufacturing activities. The office has switched to environmentally friendly toner cartridges, which are 100% recycled after use by the original manufacturer to avoid pollution and waste of resources. The TWSE generated a total of 32.541 metric tons of general waste in 2024, which was handed over to qualified disposal facilities for further processing.

Waste composition	Waste produced	Waste diverted from disposal	Waste directed to disposal
General waste	32.541	4.821	27.72
Hazardous waste	0	0	0

Waste intensity	
Total waste (metric tons)	32.541
Revenue (TWD thousand)	16,621,181
Waste intensity	0.000002 metric ton/TWD1,000



Note: The waste in the above chart is only generated by the TWSE. Waste from the TDCC, TCX, FundRich, TIP, and the TWCA is handled by their respective building management committees and paid for in management fees, and therefore is not included in calculations.

Going paperless

All departments of the TWSE achieved their annual paper reduction goals as of the end of 2024. The TWSE is proactive in digitalizing internal systems, and has set up mechanisms to reduce paper usage and energy consumption in every department. Based on the amount of paper procured by each department in 2023, the target is to reduce usage by 5% by the end of 2024. Departments that achieved the target were rewarded, while those that fail to do so have to explain at a project meeting to ensure that environmental protection and carbon reduction measures are implemented in all departments. In addition, the TWSE continues to improve the operational efficiency of the electronic official document exchange system, and encourages listed companies that have not yet adopted the system to join.

Water resource management

The main source of water for the TWSE comes from the Taiwan Water Corporation, without using groundwater or other water sources. The total water intake in 2024 was 26.583 million liters. In recent years, climate change has indirectly altered the water cycle and precipitation patterns. The TWSE is committed to conserving and managing water resources. In addition to raising awareness of water-saving measures among employees, water saving devices have been installed and the water tower in the building is cleaned regularly. Water quality testing and periodic inspections of water equipment are also conducted. The First Data Center fully adopted water-saving devices, including sensor operated faucets and water-saving taps, dual-flush water-saving toilets certified by the Water Efficiency Label, automatic sensor operated urinals, and water-saving shower fixtures, in order to reduce everyday water consumption. In outdoor areas, a drip irrigation system has been installed, and the water usage is automatically controlled by a schedule to reduce water used for irrigation. In the future, we will replace the old air conditioning cooling towers with more efficient water-saving cooling towers to reduce the loss of cooling water through drift, evaporation, and emissions. The goal is to use less water for air conditioning.

5. INTEGRITY GOVERNANCE

5.1 Corporate governance

Board composition, nomination, and selection

The Board of Directors is the highest governing body of the TWSE. There are currently 15 directors and 3 supervisors. According to the "Securities and Exchange Act," at least one-third are experts appointed by the competent authority, the remaining board directors are elected by the shareholders' meeting. All directors are experts from industry and academia, specializing in different fields including finance, accounting, and law. A term is three years, and the composition of the Board follows the principle of diversity, with four female directors, accounting for 26.67% of the total. In addition to regular monthly meetings, the Board of Directors also holds ad hoc meetings. In 2024, there were 14 board meetings held, with an average attendance rate of 84.29%.

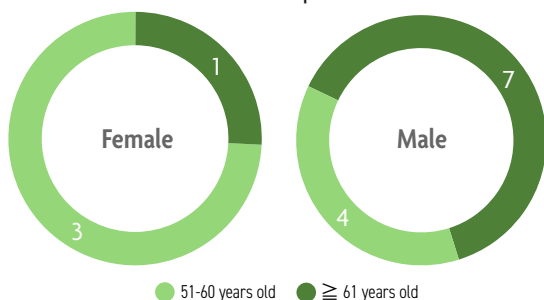
The TWSE Chairman is selected from among the directors, and everyone fulfills their duties stipulated in the "Integrity Governance Principles for Directors and Supervisors" to strictly avoid conflict of interest. Should there be any such cases in the monthly board meeting so that a director must recuse themselves, the TWSE would require that said director explain to the board the essential contents of such a personal interest, according to Paragraph 2, Article 206 of the "Company Act."

• Board of Directors

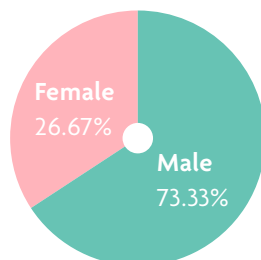
Chairman	Sherman Lin	Government appointed
Director	Bank of Taiwan	Representative: Chia-Hsiao Wu
Director	Land Bank of Taiwan	Representative: Ying-Ming He
Director	Taiwan Power Company	Representative: Jenn-Yeong Wang
Director	First Commercial Bank	Representative: Monica Chiou
Director	Fubon Securities Co., Ltd.	Representative: Ming-Chien Cheng
Director	Mega International Commercial Bank	Representative: Hung-Wen Chien
Director	Taiwan Cement Co., Ltd.	Representative: Nelson Chang
Director	Yuanta Securities Co., Ltd.	Representative: Wei-Chen Ma
Director	YFY Inc.	Representative: David Lo
Director	Edith Lee	Government appointed
Director	Yung-Cheng Chuang	Government appointed
Director	Hsin-Ti Chang	Government appointed
Director	Ching-Ping Shao	Government appointed
Director	Woan-Yuh Jang	Government appointed
Resident Supervisor	Fu-Hau Hsu	Government appointed
Supervisor	Chang Hwa Commercial Bank Ltd.	Representative: Kuang-Hua Hu
Supervisor	Taiwan Sugar Corporation	Representative: Chi-Yuan Hsiao

Note: The latest board members as of March 31, 2025.

• Board composition



• Board Gender Ratio



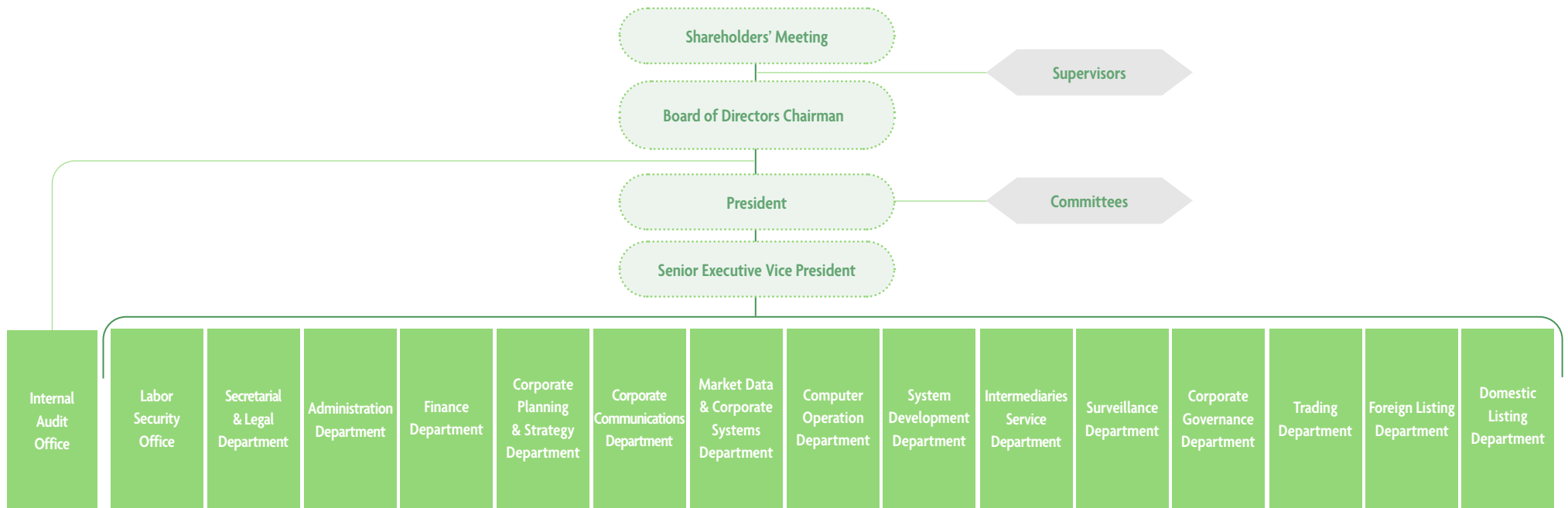
The salaries of the Chairperson and President of the TWSE are handled in accordance with the FSC's regulations regarding the compensation standards for FSC appointed or nominated chairs and presidents of businesses and foundations or their investment businesses.

Each year, the TWSE Chairperson and President must fill out a performance evaluation form, required for FSC-nominated responsible persons of foundations or businesses, in accordance with regulations. The form requires performance self-assessment, and has to be submitted to the FSC.

All TWSE employees must set work objectives according to the annual business plan (including ESG performance) and track their progress on a quarterly basis. The company's yearly performance assessment and outstanding achievements are reported to the FSC to assess the TWSE's performance.

Governance framework

The TWSE mission is to encourage investment, boost economic growth, assist business development, and protect investors' rights and interests. The President is responsible for carrying out of the resolutions of the board; the senior executive vice presidents assist the President in conducting operations through subordinate departments. In addition, the Internal Audit Office is established independently from other departments, and answers directly to the board. The TWSE organizational framework is as below:



5.2 Business integrity

The TWSE is responsible for the operation of Taiwan’s securities market, and thus holds itself to the highest standard of business integrity as a role model for all listed companies. To uphold our principles, the TWSE established the “Integrity Governance Principles for Directors and Supervisors,” which was approved by the Board of Directors. To ensure compliance with anti-corruption related standards and regulations, all TWSE employees have signed the “Employee Statement.” Departments within the TWSE conduct their own compliance risk assessments. To prevent incidents of fraud or bribery by TWSE employees, as well as to maintain fair and impartial business operations, the TWSE has established regulations regarding employee property declaration and employee integrity plus ethical guidelines. In 2024, no incidents of bribery or corruption were found, nor have there been any behaviors that could potentially affect the order of the capital market, such as fraud, insider trading, antitrust, anti-competitive behavior, market manipulation, or related misconduct.

Integrity governance and ethical operations are deeply rooted in our company culture, and the TWSE promotes above principles to all employees through regular education and training courses.

- Educational training on anti-corruption and integrity in business operations in 2024

Course	Sessions	Target audience	Number of trainees	Total training hours
Internal control design, auditing skills, writing effective audit reports, and promotion of internal whistleblowing systems to fulfill the TWSE’s social responsibility and ESG.	1	All personnel	29	174
Financial ethics and anti-money laundering	5	All personnel	607	1214

Conduct Watch

The TWSE’s “Conduct Watch” was commissioned to an impartial third party so that it may process grievances in a fair and unbiased manner. When the TWSE or any of its employees are suspected of a crime, corruption, fraud, or violation of the law, a whistleblower can file a complaint on “Conduct Watch” through the website, or via email, fax, or letter. Reported cases are processed by an impartial third party to protect the whistleblower’s identity and enhance their trust and privacy protection. The TWSE will not terminate the employment, relieve the position, demote, reduce the salary, or damage any rights of the whistleblowers that are provided by the law, contract, or customs, or impose other penalties for filing a complaint. The identity and working rights of the whistleblowers are protected. In 2024, one case was reported through “Conduct Watch,” which was handled in accordance with regulations.



5.3 Risk management

The TWSE has established a comprehensive risk management structure, with rigorous risk control systems and processes that enable us to immediately identify and properly manage material risks.

- Risk management methods

Type	Method
Financial risks	To control financial risks, the Finance Department regularly and intermittently assesses financial instruments, transaction processes, and counterparties in accordance with relevant laws and regulations, as well as policies approved by the Board of Directors. The Finance Department then proposes improvement reports and is responsible for implementation.
Market risks	Taking into account external environmental impacts and market fluctuations, the TWSE has set up rigorous review, transaction, and regulatory mechanisms, established risk management, market supervision, and early warning methods, plus effectively controls market risks.
Other emerging risks or potential material risks	Other emerging risks or potential material risks are reported to the Board of Directors for evaluation and handled once they are identified. Improvement procedures in progress are tracked to effectively minimize the effect of different risks.

ISO 22301 Business Continuity Management System (BCMS) Certification

In 2020, the TWSE became certified for ISO 22301 BCMS to more effectively respond to regional disasters or other significant incidents; the validity of the ISO 22301 certificate was extended and applied to the Third Data Center in 2021. In the same year, the offsite backup sites of the Third Data Center also acquired ISO 22301 certification.

In 2024, the TWSE continued to conduct business impact analysis and risk assessment, carry out training courses and evacuation drills, and test the operations of off-site backup systems. In addition, a document review of our Business Continuity Management Systems (BCMS) is regularly conducted, and the TWSE was re-certified by BSI at the end of 2024 for ISO 22301 BCMS. No interruption to business continuity was found in 2024, and the TWSE will continue to enhance business continuity related procedures.

Internal controls

The TWSE is fully compliant with legal and regulatory requirements, and has established an internal control system and an Internal Audit Office under the Board of Directors. The internal control system responds to changes in the environment and improves the quality of self-supervision through self-assessment. The TWSE established the Internal Audit Office to ensure the effective implementation of its internal control system, through periodic audits, supervision, and reviews. In addition, each year the TWSE prepares a report on internal controls regarding their design and implementation effectiveness to respond to changes in the environment and augment the quality of the self-supervision mechanism. In 2024, the Internal Audit Office conducted 204 audits (including special audits) of TWSE departments and subsidiaries; no significant deficiencies of the internal control system were found. In addition to carrying out regular audits, the Internal Audit Office periodically conducts special audits or specific item audits as required by business needs or at the behest of the supervisory authority. As TWSE operations become more digital and systematic, the Internal Audit Office completed and launched the automated management system for internal audit on June 26, 2023, effectively advancing the efficiency of audit operations. The plans, processes, and reports of internal audit operations are developed in a systematic framework, achieving the initial goal of digital transformation of auditing and laying the foundation for future automation of internal audit operations throughout the entire company. In addition, a system for automatically uploading electronic signatures on tablet computers was introduced, so as to implement digital auditing and achieve the goal of sustainable operation.

Strengthening fire prevention and response mechanisms

The TWSE recognizes the importance of fire protection measures and actively implements relevant safety management. No fire accidents occurred in 2024. In addition to formulating fire prevention plans, the TWSE has also established its own self-defense firefighting organization and protection squad; the company regularly conducts fire education and training plus fire evacuation drills, and undergoes fire department inspections in order to make improvements at their direction to improve fire safety management. In the event of a fire, employees respond according to the fire prevention plan. This includes: (1) confirming the source of the fire, (2) notifying the central control center, (3) self-defense firefighting organization, and fire department, (4) evacuating personnel, and (5) assisting the injured in receiving further medical care. According to the TWSEs "Key Points for Emergency Response to Critical Facilities," the key response actions are as follows:



Fire alarm and response	<ul style="list-style-type: none"> In case of fire, those who witness the fire should activate the alarm or call out for help. Put out the fire with a fire extinguisher if possible, and notify the Administration Department. When the fire alarm is automatically triggered at the detection of a fire, security personnel should confirm the source of the fire and notify the Administration Department. If the fire cannot be controlled, security personnel should immediately call 110 or 119 to report the incident to the police and fire department, and notify the Administration Department.
Incident reporting and response	<ul style="list-style-type: none"> The head of the Administration Department should immediately inform the incident commander; the Administration Department and Labor Security Office should establish a disaster coordination center.
Evacuation mechanism	<ul style="list-style-type: none"> If the fire cannot be controlled, the head of the Administration Department should immediately notify the incident commander to initiate the evacuation of personnel, with the guidance and support of the members of the self-defense firefighting organization.
Response during non-working hours	<ul style="list-style-type: none"> If a fire occurs outside working hours, personnel should be sent to the scene and report to the head of the Administration Department. If it is determined that the office is affected and employees are unable to go to work, a meeting of the crisis response team shall be convened in accordance with the TWSE business continuity plan to determine whether the continuity plan should be activated.
Post-fire incident management	<ul style="list-style-type: none"> After the fire, steps should be taken to confirm that the site is safe, survey and record the extent of the disaster, summarize the extent of the disaster, and provide updates on the extent of the disaster and other related information in a timely manner. The Administration Department shall then submit a written loss assessment report to the crisis response team meeting and be responsible for post-disaster operations.

5.4 Information security

The TWSE is a critical infrastructure for Taiwan's capital market. One of its core functions is to serve as a primary platform for securities firms and listed companies to disclose material information and promote information transparency. To safeguard the confidentiality, integrity, and availability of trading information, the TWSE continued to maintain valid certification for ISO 27001 Information Security Management System in 2024 and provide information security education and training. No major information security incident occurred in 2024.

ISO 27001 Information Security Management System (ISMS) Certification

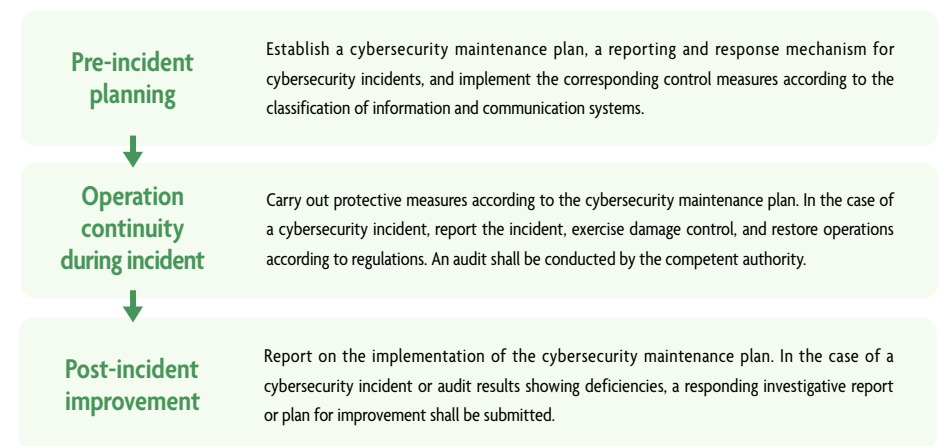
The TWSE received certification of ISO 27001/BS7799 ISMS in 2004, and expanded ISO 27001 certification to cover all TWSE departments in 2023. In 2024, the TWSE was certified for the new standard ISO 27001:2022, and will continue to maintain its validity in the future.

BS 10012 Personal Information Management System (PIMS) Certification

To strengthen personal data protection, the TWSE convenes personal data management review meetings every six months. The certification BS 10012 is commissioned to be reviewed by BSI twice a year (last reviewed in May 2024) and renewed every three years (last renewed in November 2024). There were no breaches of customer privacy or loss of customer data within the TWSE in 2024. In addition, the TWSE sent 45 newsletters highlighting awareness of personal data risks to all employees via email in 2024.

Information security measures

The TWSE established ISMS in accordance with the "Cyber Security Management Act," and has also carefully considered cybersecurity risks through pre-incident, during the incident, and post-incident analysis. Relevant protection measures, anomaly detection mechanisms, plus a response and reporting procedure for cybersecurity incidents have been put into place to mitigate the impact of malicious attacks.



The TWSE participated in financial cybersecurity drills to enhance our capability to respond to information security incidents. White-hat hackers were invited to test the effectiveness of the company's cybersecurity monitoring and protection mechanisms. In compliance with national cybersecurity policies, the TWSE introduced the zero-trust financial network to strengthen information security in five core aspects: identity, equipment, network, applications, and data.

Information security training

The TWSE holds regular cybersecurity education, training, and courses within the company on ISO standards and certification, regulatory compliance, plus professional cybersecurity courses on an as-needed basis. A total of 993 attendees participated in ten education and training courses related to cybersecurity in 2024 with 4,359 total training hours.

To measure the effectiveness of personal data training, the TWSE established a target that 100% of employees should participate in at least two hours of personal data protection training each year. In 2024, a total of six sessions of personal data protection training was conducted, with a total of 18 hours and 616 participants, achieving a completion rate of 100%.

5.5 Supply chain management

TWSE suppliers mainly fall into eight categories: (1) OA equipment, (2) ICT, (3) construction, (4) printing and publicity media, (5) security, (6) gifts, (7) lease, and (8) others. In 2024, there were no significant changes in the scale, structure, or ownership of the supply chain. To build cooperative relationships with suppliers on a foundation of mutual trust, the TWSE has established relevant regulations regarding procurement management, procurement procedures for major products, and procurement procedures for software and hardware. In addition, the TWSE revises regulations on an annual basis regarding supplier selection and procurement, establishes a template for bidding instructions on TWSE cases, reviews and adds clauses to prohibit commission rebates, and fully implements corporate social responsibility. We clearly advocate and communicate that suppliers must avoid bribery and maintain fair trade and competition among suppliers, thereby ensuring that the TWSE's procurement operations are sustainable. Starting in October 2019, the TWSE requested all suppliers sign the "Supplier's Integrity Governance Commitment Letter for Procurement." Starting on November 21, 2023, all the TWSE suppliers are requested to sign the "Supplier's Sustainable Development Commitment Letter for Procurement." The TWSE continues to encourage suppliers to disclose climate and ESG-related information and strengthen due diligence to address supply chain risks (cybersecurity risks, environmental risks, and sustainability risks).

• 2024 Achievements in supply chain management

- In 2024, local suppliers accounted for 99.9% of the TWSE's procurement expenditure. Our company supports local manufacturers and aims to reduce the carbon emissions produced during the procurement process.



- In 2024, there were 100% of suppliers who completed the signing of standard contracts with the TWSE and complied with the clause to prohibit commission rebates.



- Excluding peripheral units of the securities and futures industry, investment holding companies, subsidiaries, and approved projects, there were 100% of suppliers engaging in procurements amounting to TWD1 million or above signed the "Supplier's Integrity Governance Commitment Letter for Procurement."



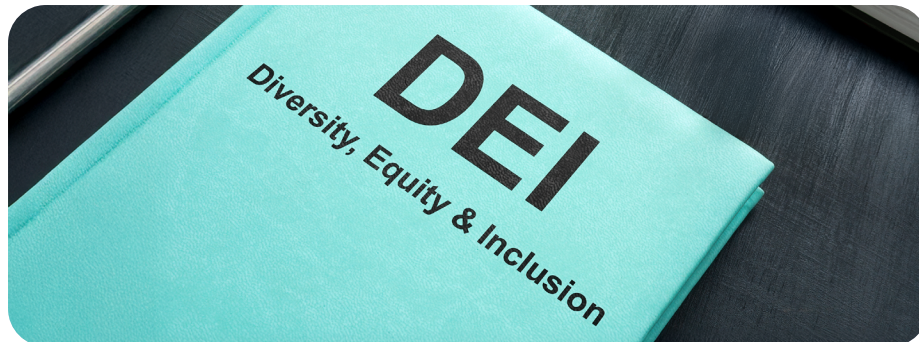
6. SOCIAL INCLUSION

6.1 Human rights protection

The TWSE and its subsidiaries strive to create a fair, inclusive, and diverse work environment. To this end, we have established suitable management approaches, training programs, grievance channels, and related policies, to protect the rights and interests of all employees. In addition to abiding by Taiwan's labor-related laws and regulations, we also recognize and support various international human rights conventions such as the "Universal Declaration of Human Rights" and the "International Labor Organization Conventions," to ensure that there is no discrimination based on individual gender, sexual orientation, race, socio-economic status, age, marital status, family status, language, belief, political affiliation, nationality, appearance, physical or intellectual disabilities, or any other factors.

The TWSE actively promotes a number of measures to maintain market order, protect the rights and interests of investors, and enhance the sustainable development of enterprises. The following are the main activities that the TWSE carried out in 2024:

1. All contracts with suppliers include a letter of commitment to sustainability, ensuring that suppliers are committed to prohibiting forced labor, child labor, discrimination, and inhumane treatment, as well as protecting employees' freedom of association and right to collective bargaining.
2. Conducted courses on gender equality and DEI in the workplace.
3. Recruitment is open to the public based on job vacancies, and there are no different admission quotas for those with disabilities or specific ethnic groups.

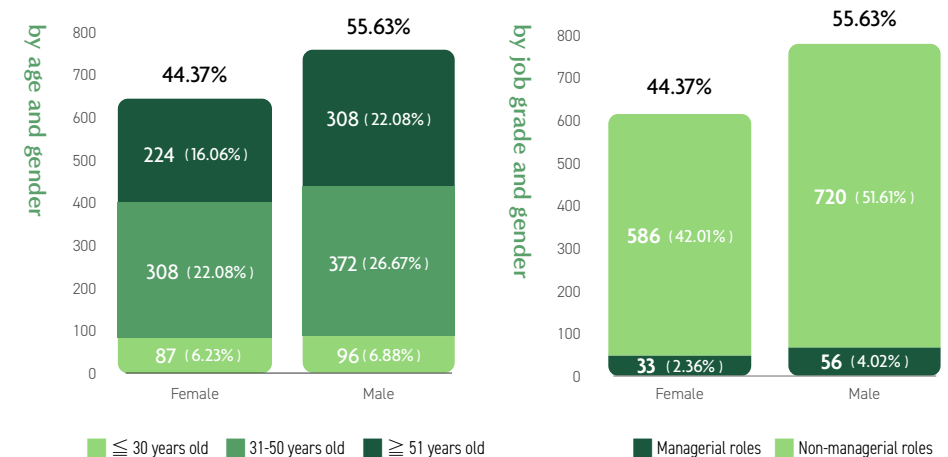


4. Employees can file complaints on unlawful infringement or sexual harassment in the workplace through the complaint mailbox or complaint hotline.

6.2 Diverse workforce

The TWSE and its subsidiaries are committed to building a diverse and inclusive workplace, ensuring that no employee is unfairly treated based on gender, age, or other characteristics, and that all employees can work in a safe and supportive environment. As of the end of 2024, the TWSE and its subsidiaries have a total of 1,395 official employees (all of whom are full-time employees under regular employment contracts) and 69 unofficial workers (including contractors, summer interns and dispatch personnel handling non-core business such as document processing and general affairs, as well as janitorial personnel). The overall number of employees at the TWSE and its subsidiaries did not fluctuate significantly, but the number of unofficial workers decreased by 10 compared to the previous year due to business adjustments. The male-to-female ratio of official employees was 1.25:1. Women accounted for 37.08% of management and 44.37% of official employees. A total of 10 disabled workers were employed at the TWSE and its subsidiaries, all of which remain committed to developing their professional capabilities and upholding the equal employment rights of the mentally and physically disabled according to law.

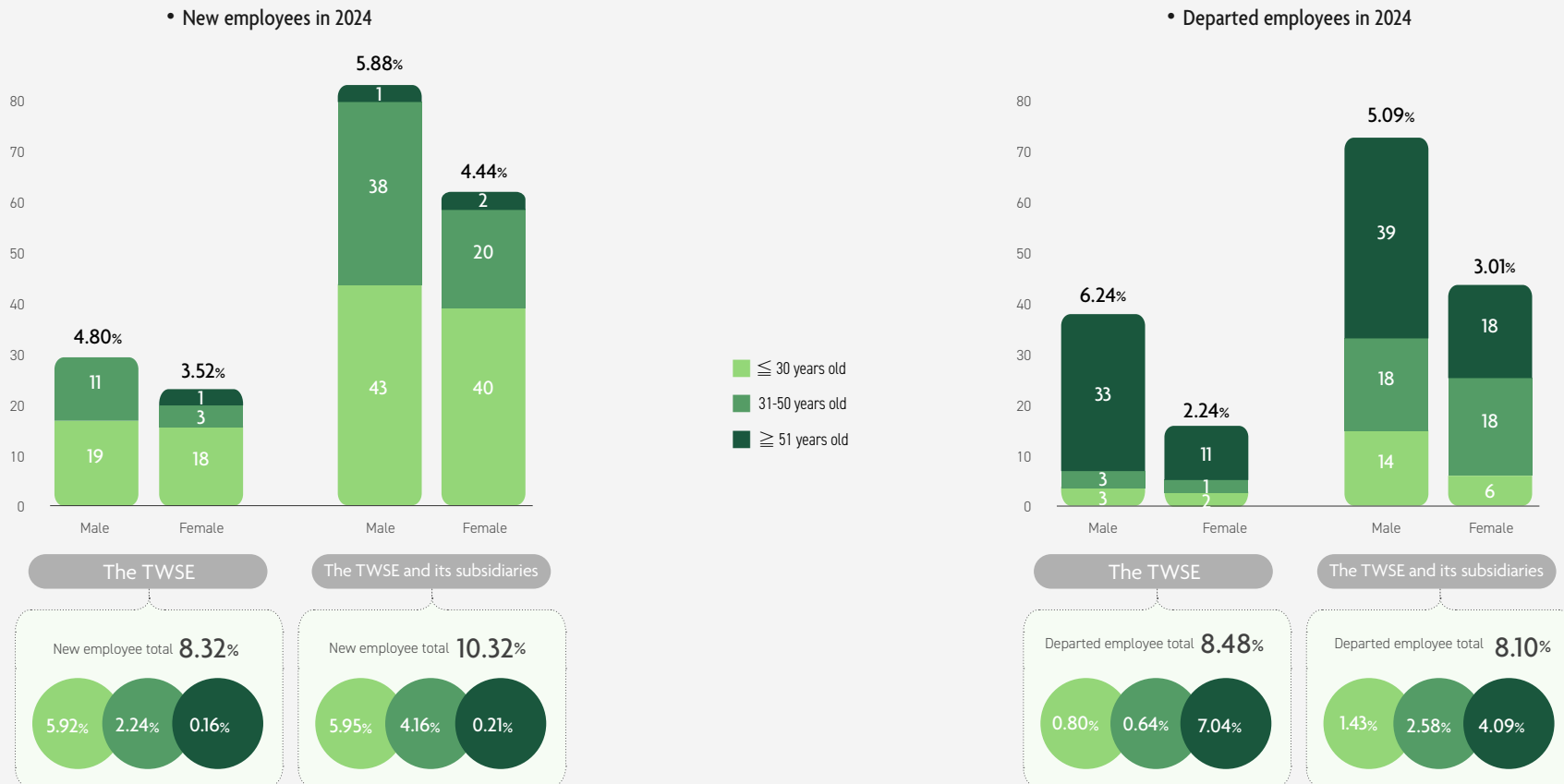
• Number of TWSE and its subsidiaries' employees in 2024



Note: Managerial roles refer to executives and heads of departments; non-managerial roles refer to those other than executives and heads of departments.

New employees and employee turnover

Employees are the critical foundation for the development of an organization. The TWSE and its subsidiaries attach great importance to the recruitment and training of talents, as well as being committed to providing a comprehensive talent development mechanism and employee benefits. Combined with a safe, diversified, and friendly workplace, the TWSE and its subsidiaries are able to retain talent for longer periods of time and create a healthy turnover rate. In 2024, the TWSE and its subsidiaries had 144 new employees (excluding unofficial workers), resulting in a 10.32% new employee rate, up 1.89% from 8.43% in 2023. The total number of departing employees (excluding unofficial workers) for 2024 was 113, with an 8.10% turnover rate, up 3.11% from 4.99% in 2023. For the TWSE itself, the new employee rate and turnover rate were 8.32% and 8.48% respectively.



Note: The new employee rate is: (the number of new hires for the year) / (the total number of employees as of the end of the year) * 100%. Does not include the number of dispatch personnel. As of the end of 2024, there were 625 employees at the TWSE standalone, with a total of 1,395 employees if its subsidiaries were included.

Note: The turnover rate is: (the number of employees who left the company) / (the total number of employees as of the end of the year) * 100%. Does not include the number of dispatch personnel. As of the end of 2024, there were 625 employees at the TWSE standalone, with a total of 1,395 employees if its subsidiaries were included.

6.3 Employee training and development

The TWSE and its subsidiaries are well aware that talent is the key to a successful business, and therefore continue to invest resources in nurturing the professional and leadership capabilities of our employees. Through continuous education and training programs, as well as professional courses, employees are encouraged to consistently learn and grow to meet the quick shifts in market demands. At the same time, a fair and transparent performance evaluation system is established to ensure that employees' contributions are fairly evaluated and to motivate them to continue to pursue excellence.

TWSE education and training plan

1. Centered on the TWSE's operating goals and business needs

In order to meet the TWSE's business goals and focus on skills needed for key operations, training courses are divided into compulsory and elective courses, with professional courses and strategic courses at the core of professional training. Each department conducts courses on various topics according to the company's business development items and business needs, including major developments in the department's core business, improvement of professional knowledge, amendments to relevant regulations, and sharing of key case studies. Personnel are encouraged to participate in important external promotion meetings. Furthermore, all employees must undergo at least two professional courses each year unrelated to their departmental duties to expand their horizons and cross-departmental skills.

2. Enhance professional skills and capabilities to further employees' career development

To help employees develop into well-rounded individuals and propel their long-term career development, personnel training courses cover eight major aspects, including professional training, strategy, legal compliance, management, industry development, certification, mental and physical health, and foreign languages. In 2024, the TWSE expanded digital e-learning courses and offered diversified learning channels. Some of the highlighted courses are: "Exploring the Infinite Possibilities of Business Applications through Generative AI," "Sustainable Development Strategy," "Personal Data Protection," "Information Security Education and Training," and "Prevention of Illegal Infringement in the Workplace." Some employees were selected to participate in professional courses in foreign securities markets such as the U.S. Securities and Exchange Commission.

3. Establish multiple learning channels, pool education resources with subsidiaries

The TWSE offers different approaches to providing training courses, including internal training, e-learning, and assigning employees to external training courses. Employees can also apply to attend external training courses, allowing them to engage in various in-person and online educational programs unfettered by time zones or geographical restraints. The TWSE continues to conduct English courses and a number of video courses on the Webpro employee online learning platform, and has opened up resources to employees of our subsidiaries so as to maximize the benefits from these training programs.

4. Strengthen evaluation mechanisms by integrating training and performance review

After each course, post-training evaluation on learning effectiveness is carried out based on course type, through methods such as hands-on practice, interactive exercises, group discussion, or testing. The results are analyzed by employees' job level and training hours to effectively manage professional training. Department heads can emphasize training in certain courses by including the assessment of these courses in their department's KPI evaluations at the beginning of the year. Completion of training courses is taken into account during the year-end performance evaluation. This encourages employees to continuously improve their professional abilities and apply the skills in practice.

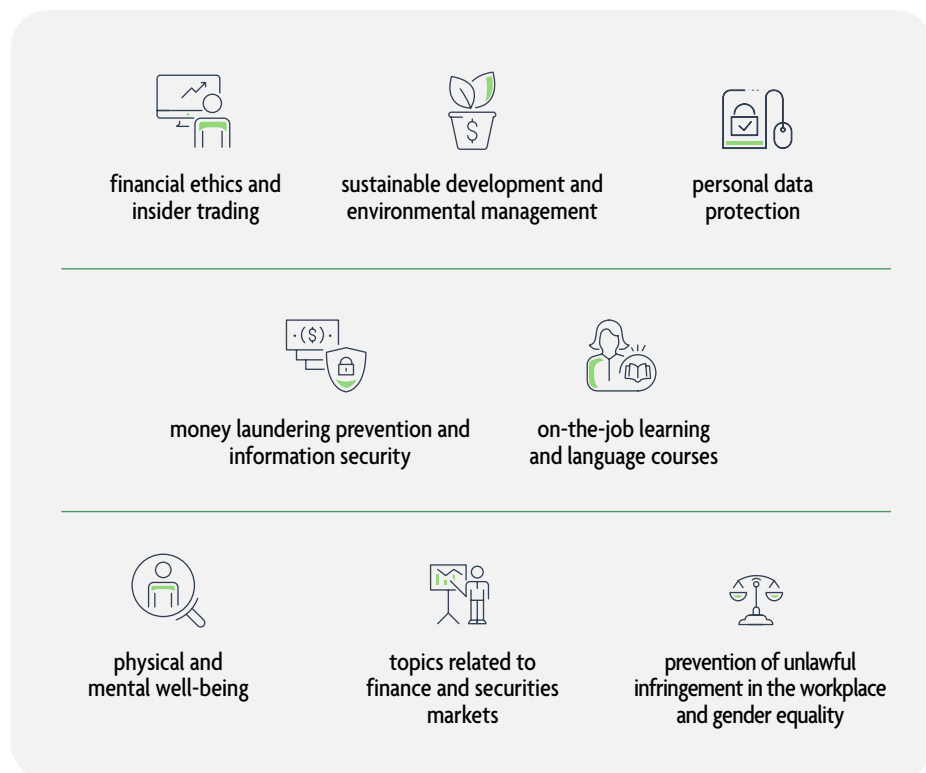
An employee's training record based on their KPIs has been adjusted from a single performance measure to an annual requirement of training hours in mandatory courses based on said employee's job requirements. All employees should complete 30 hours of training annually, including six hours of professional courses and four hours of legal compliance courses; six hours of strategy courses are required for project team members and two for other employees; four hours of management courses are mandated for those in managerial positions. In addition, all learning materials are automatically linked to the human resources management system, providing a basis for department heads to conduct KPI evaluations, enhancing employees' learning motivation, and maximizing the effectiveness of education and training.

• 2024 Employee training hours for the TWSE and its subsidiaries

	Managerial roles	Non-managerial roles	Total training hours
Female	3,332	31,313	34,645
Male	3,858	37,154	41,012
Total	7,190	68,467	75,657

Note: Managerial roles refer to executives and heads of departments; non-managerial roles refer to those other than executives and heads of departments.

Education and Training Course Categories



Performance review

To accurately evaluate employees' work performance and offer proper development in their career growth, which will drive business development, the TWSE and its subsidiaries all established annual employee performance review mechanisms. All TWSE employees and its subsidiaries conducted these reviews in 2024. To ensure the fairness and reasonableness of performance reviews, the TWSE and its subsidiaries established internal policies for grievances to protect employees' complaint rights.

6.4 Friendly workplace

The TWSE and its subsidiaries aim to create a work environment where employees feel safe, satisfied, and fulfilled. We provide excellent working conditions, emphasize work-life balance, promote teamwork and communication, establish a strong corporate culture and values, plus make every employee feel respected and valued.

Multiple communication channels

To promote labor and management harmony and comply with relevant labor laws, the TWSE successfully completed the second collective agreement with the labor union on May 31, 2022. Employees are encouraged to join the labor union, and their freedom to join the labor union is ensured. In 2024, the number of union participants totaled 590, accounting for 99.33% of the workforce¹.

The TWSE values and listens to the voices of its employees. The labor-management meetings are convened on a monthly basis (the "Labor Standards Act" only requires quarterly meetings), with 11 meetings held in 2024, excluding the Chinese New Year holiday period. There are nine labor representatives and nine management representatives. Both labor and management representatives each nominate one person to serve as co-chairs. The meetings are convened for the purpose of facilitating communication and cooperation.

Note: According to the labor union charter and practices, the calculation excludes personnel above the managerial level, those on unpaid leave, and those in pre-service training. However, in the event of occupational accidents, the TWSE provides better protections than those stipulated in the "Labor Standards Act" for employees with employment contracts.

Compensation system

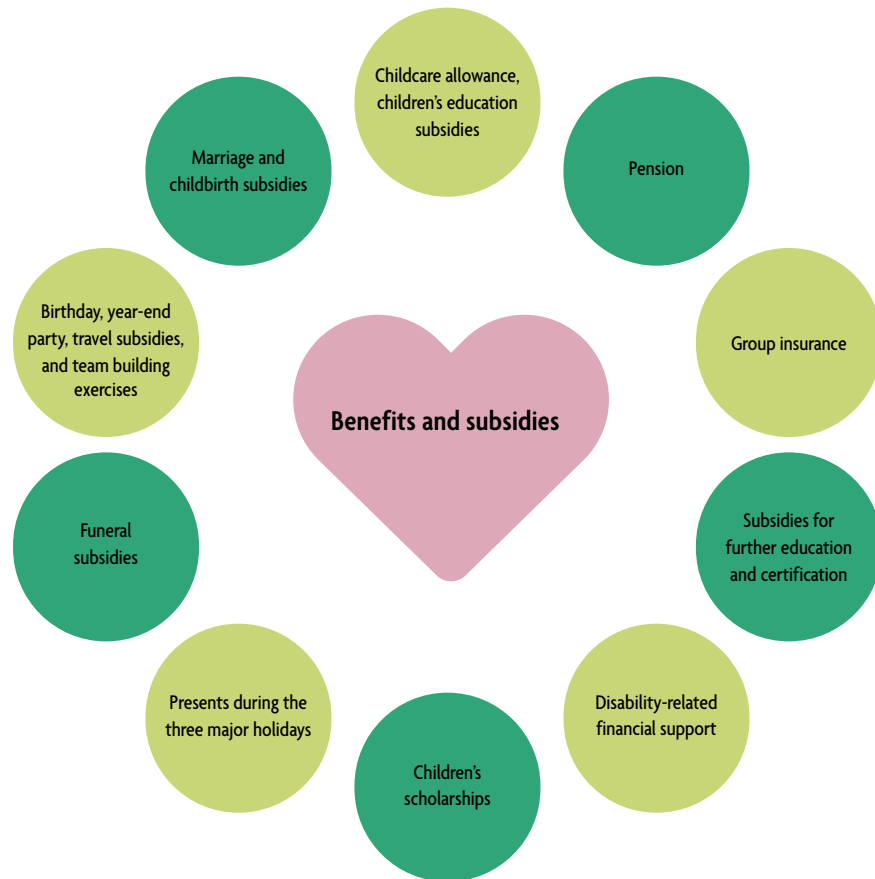
In order to attract and retain talent, the TWSE provides a competitive salary system and comprehensive benefits. Salary standards are not differentiated by race or gender, and regular promotions and salary adjustments are carried out. The TWSE and its subsidiaries provide employees with compensation that is higher than the minimum wage. In 2024, the average salaries of male and female entry-level employees were both higher than the local (Taiwanese) minimum wage, demonstrating the stock exchange's emphasis and trust in the professionalism of its employees.

- 2024 ratio of standard wages for grassroots personnel to the local (Taiwanese) minimum wage

Male	Female	Local (Taiwanese) minimum wage
2.83	2.93	1

Employee benefits

The TWSE and its subsidiaries are committed to creating a happy and harmonious work environment for employees, with the employees' needs and well-being as the starting point. We not only provide various support programs and benefits to help employees achieve work-life balance, but also offer a comprehensive and diverse benefits system through jointly arranged by the company and the Employee Welfare Committee, ensuring that every employee feels valued and well taken care of.



Childbearing and childcare support measures

The TWSE and its subsidiaries take care of our employees, providing a variety of flexible working and support arrangements for employees with family care needs to ensure that employees and their families receive appropriate care and work-life balance. The maternity welfare system covers three stages: prenatal, childbirth, and postnatal. It includes flexible working hours, childcare subsidies, and leave entitlements that exceed legal requirements. This not only helps reduce the financial burden on new parents, but also increases the retention rate of colleagues returning to work after taking parental leave. In 2024, a total of six employees from the TWSE and its subsidiaries applied for parental leave; the return-to-work rate following a period of parental leave and retention rate were both 100%.

Marriage	For weddings, employees are entitled to 14 days of wedding leave (better than the eight days mandated by the "Regulations of Leave-Taking of Workers") and receive marriage subsidies provided by the Employee Welfare Committee.
Family care	Employees may request family care leave with pay of up to seven days in one year; the number of family care leave days is incorporated into personal leave days (better than mandated by the "Regulations of Leave-Taking of Workers," which stipulates that personal leave is without pay).
Pregnancy	To reduce the discomfort experienced during pregnancy, the TWSE offers expectant mothers professional nursing care at a healthcare center or through a hotline.
Childbirth	<ul style="list-style-type: none"> • Maternity leave of 42 days, plus seven days for accompanying prenatal checkups and paternity leave, is more beneficial than the eight weeks (including weekends) of maternity leave mandated by the "Act of Gender Equality in Employment." • A pregnancy-related recuperation period may be incorporated into sick leave, with up to 30 days of leave with full pay (better than mandated by the "Regulations of Leave Taking of Workers," where up to 30 days of sick leave is entitled to fifty percent of salary). • Childbirth subsidies are provided.
Breastfeeding	Two breastfeeding rooms are situated in the TWSE offices, equipped with refrigerators and electric breast pumps.
Childcare	<ul style="list-style-type: none"> • Parental leave is provided. • The TWSE has contracted external childcare centers, offering employee discounts to meet their childcare needs. • Flexible work schedule: The TWSE offers flexible working arrangements to help employees drop off and pick up their children. • Children's education subsidies are provided. • Childcare allowance is provided.

• TWSE and its subsidiaries' parental leave in 2024

Category	Female	Male	Total
Number of those qualified to apply for unpaid parental leave	21	26	47
Number of applications for parental leave	4	2	6
Total number of employees due to return to work after taking parental leave in the year 2024 (A)	1	2	3
Total number of employees that did return to work after parental leave in the year 2024 (B)	1	2	3
Total number of employees that did return to work after parental leave in the last year 2023 (C)	7	2	9
Total number of employees who returned to work after parental leave in 2023 and remained employed for 12 months thereafter (D)	7	2	9
Return-to-work rate (B/A)	100%	100%	100%
Retention rate (D/C)	100%	100%	100%



Implementing workplace health management

The TWSE understands the importance of employees' physical and mental health. Therefore, the TWSE and its subsidiaries provide a variety of health promotion activities to enhance employees' awareness of health concepts, nutrition knowledge, and first-aid skills. The aim is to prevent health issues, maintain employee well-being, and reduce potential risks and concerns.

Health management activities	Content	2024 Performance
Employee physical examinations	<ul style="list-style-type: none"> Provide subsidies for employees' physical examination, which cover cancer screening tests. 	There were 347 applicants.
Employee health seminars	<ul style="list-style-type: none"> In accordance with the "Occupational Safety and Health Act," health seminars are organized based on employees' health requirements. Topics include employee assistance programs, chronic disease prevention and treatment, medical and healthcare seminars, and stress relief seminars. 	There were 18 sessions conducted with a total of 796 participants.
On-site health consultations	<ul style="list-style-type: none"> The TWSE arranges for physicians to visit quarterly, and specialists aperiodically, for one-on-one consultations. 	There were five sessions conducted with a total of 34 participants.
Health center	<ul style="list-style-type: none"> Regular health consultations and emergency medical care are provided for occupational and other injuries. 	A total of 291 employees received health consultations or underwent injury treatment (including emergency medical care).
Employee Assistance Program (EAP)	<ul style="list-style-type: none"> To help employees resolve pressure and issues they may encounter at work and in life, the TWSE has a long-term partnership with the Employee Assistance Service Center of Hsinchu City Lifeline Association in implementing the EAP. EAP provides consultation in psychological, legal, financial management, medical, and management issues, with every employee having an eight-hour consultation quota each year. 	There were 32 employees that applied for EAP consultation for a total of 32 hours.
Flu vaccination subsidies for employees	<ul style="list-style-type: none"> The program safeguards employees' health by reducing the risk of serious complications caused by influenza. 	There were 76 applicants.

Promote current and retired employees' well-being

The TWSE actively promotes health and leisure activities to enhance employees' physical and mental well-being and work-life balance. Through the Employee Welfare Committee Club Guidance Regulations, the TWSE supports the activities of its 14 recreational and social clubs, including table tennis, badminton, golf, softball, cycling, Tai chi, yoga, Buddhist studies, basketball, board games, choir, photography, fitness, and billiards. Each club regularly organizes activities and holds annual meetings to promote relaxation and stress relief through exercise and social interaction. In addition, the TWSE offers a diverse range of courses and activities to promote employees' wellness, such as gyrokinesis lessons, physical fitness activities, medical care seminars, and therapeutic horticulture. These courses help employees alleviate stress and have been widely praised.

The TWSE continues to care for its retired employees through consolation money and various discounts for health checkups and hotel stays. Retirees are also invited to the annual year-end party so that the TWSE can continue to express gratitude for their contribution and service.



Hazardous materials safety training

The TWSE has established a hazard communication plan in accordance with the "Occupational Safety and Health Act" in order to properly manage information regarding the production, disposal, or use of hazardous material, including their source, location of use, quantity, storage, inventory, and method of use. Each month, the TWSE prepares an inventory of hazardous chemicals, manages a security checklist, and labels containers with hazardous materials according to the plan. External experts conduct regular training for personnel working in the data centers each year to strengthen their awareness of operational safety in handling hazardous chemicals and prevent occupational accidents.

Taipei 101 pre-drill training

In addition to establishing a self-defense firefighting organization and fire protection squad in accordance with fire regulations, the TWSE participates in Taipei 101's fire drills held every six months. The self-defense firefighters attend regular pre-drill training to maintain readiness, familiarize themselves with their tasks, and equip themselves with the skills and knowledge necessary to calmly assist in evacuation and disaster relief operations during real-life situations.

Air raid drills and pre-drill training

As the operator of key infrastructure in Taiwan's financial sector and a critical member in maintaining the country's economic and financial order, the TWSE maintains its preparedness in case of air attacks and has established an air defense evacuation and sheltering protection team in accordance with the "Civil Defense Act." When air attack alarms are issued in the greater Taipei area, the team assists in the evacuation and guidance to air shelters. Air raid evacuation drills are held regularly every year according to the company's emergency response plans, and pre-drill training is conducted so that team members are familiarized with evacuation routes and locations in advance.

Sustainability-themed family day for the entire TWSE team

To enhance internal cohesion and promote physical activity, the TWSE conducted its annual sports meet and family day this year at POPOP Taipei (formerly the Nangang Bottle Cap Factory). Employees were encouraged to bring family members to become better acquainted with the TWSE community. The festival-like event featured wonderful performances and food trucks with local delicacies, spreading the joy of the TWSE's corporate culture to each and every family. The theme of "Twin Transformation Towards Digitalization and Sustainability" was also incorporated into the event, using a mobile app for participants to register and collect reward points at various stations, implementing a low-carbon paperless process. A farmer's market featuring local fruit and vegetables encouraged all participants to support local produce. Public welfare

groups were also invited to take part, supporting disadvantaged groups with employment opportunities. In big ways and small, the TWSE carries out its social responsibility and dedication to SDGs through this family-friendly gathering.



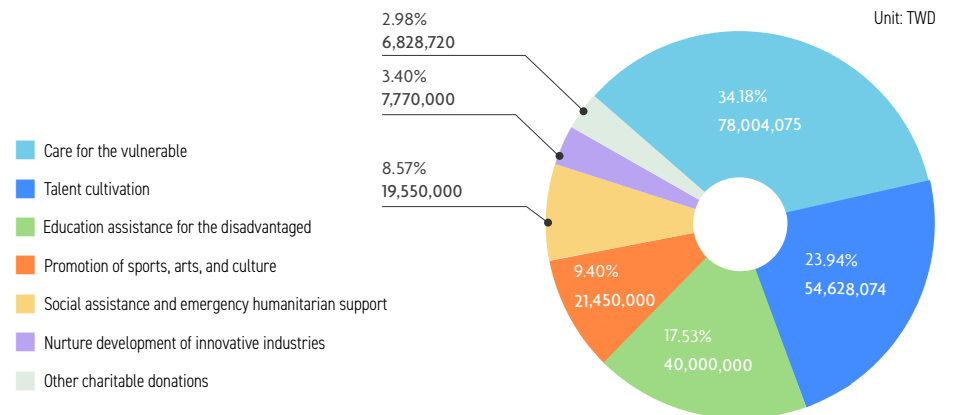
Group photo of TWSE team and family members enjoying themselves at the family day at POPOP Taipei.



Mobile app registration and collection of reward points at the 2024 TWSE family day event, implementing a low-carbon paperless process.





6.5 Social contribution

The TWSE has long been committed to various public welfare activities and our social responsibility. Special attention is paid to vulnerable groups, through public fundraising support and subsidies to social welfare agencies. In the spirit of community participation, the TWSE made a total of TWD228.23 million in social contributions in 2024. In addition, employees are also encouraged to participate in volunteer service and social welfare activities. By joining hands with all corners of society, the TWSE continues to spread benevolence and care, doing our utmost to offer warmth and heartfelt kindness to make Taiwan a better place for all its citizens.



Talent cultivation

Drawing on our own expertise in this field, the TWSE is committed to promoting and cultivating financial talent, strengthening young people’s investment risk awareness, and continuing to hold campus financial education activities such as campus lectures and ETF expos. To support financially disadvantaged students in learning financial knowledge, the TWSE regularly sponsors public welfare funds and has established public welfare classes to help students apply what they have learned to future career development. Based on satisfaction surveys and feedback, we continue to strengthen the promotion of financial education and advertise through digital and social platforms to spread financial knowledge to all corners.

Program	Content	2024 Performance	Corresponding SDG
 <p>Financial Services Education Fund</p>	<ul style="list-style-type: none"> In 2015, the TWSE began to donate TWD10 million each year to the Financial Services Education Fund established by the Taiwan Financial Services Roundtable (the TFSR). Part of the fund went to scholarships for students with superior academic performance from low-income households to help them earn a university degree. The remaining funds were used to promote fundamental financial education to vulnerable students, providing them with the opportunity to acquire financial knowledge and understanding. 	<p>Total donation: TWD10 million 1,542 beneficiaries</p>	<p>SDG1 No Poverty SDG4 Quality Education</p>
 <p>“Financial Literacy for Youth” courses</p>	<ul style="list-style-type: none"> In 2015, the TWSE began to participate in the FLY courses organized by the TDCC. The program offers a series of professional financial training courses and sharing of experience aimed at economically disadvantaged college and university students, which enhances the competitiveness of those aspiring to develop a successful career in the field of finance. 	<p>Total donation: TWD6.12 million 475 beneficiaries</p>	<p>SDG1 No Poverty SDG4 Quality Education SDG8 Decent Work and Economic Growth</p>
 <p>College of Global Banking and Finance</p>	<ul style="list-style-type: none"> In 2022, the TWSE joined forces with the TFSR and the Taiwan Academy of Banking and Finance to promote the College of Global Banking and Finance. Working with National Sun Yat-sen University’s School of Banking and Finance, as well as National Chengchi University’s College of Global Banking and Finance, the TWSE helps to nurture the talents required for the development of Taiwan’s international financial industry, and to position Taiwan as a major hub for corporate financing and asset management in Asia. 	<p>Total donation: TWD10 million 217 beneficiaries</p>	<p>SDG1 No Poverty SDG4 Quality Education SDG8 Decent Work and Economic Growth</p>
 <p>Capital Market ESG Ecosystem – ESG Talent Cultivation” courses</p>	<ul style="list-style-type: none"> The TWSE collaborates with the Taiwan Institute for Sustainable Energy, major domestic universities, and other academic institutions to organize a series of ESG talent development courses. It actively cultivates sustainability talents and encourages research and development, facilitating Taiwan’s enterprises to incorporate ESG into their corporate values and competitive edge, align with international practices, achieving a future of net zero emissions. 	<p>Total donation: TWD28.5 million 525 beneficiaries</p>	<p>SDG4 Quality Education SDG13 Climate Action</p>

Financial literacy activities

The TWSE continues to promote inclusive financial knowledge and anti-fraud education by integrating various resources and using innovative methods. Our aim, as a key educator in universal financial literacy, is to protect investor rights and achieve the sustainable development of the capital market.

Program	Promoting financial literacy	Campus education
2024 Achievements	<p>In response to the FSC's policies to promote financial knowledge among the elderly, a series of financial management seminars titled "Financial Knowledge Popularization Project: Investing in the Future" are regularly held in community colleges across Taiwan, covering practical and forward-thinking topics such as the TWSE's various securities products and new systems. A total of 50 sessions were held across Taiwan to help the general public learn about investment and financial management, while also promoting anti-fraud awareness.</p>	<p>The TWSE published the "High School Investment and Financial Management Teaching Plan" and compiled a special unit on "Financial Sustainability" to enhance students' understanding of ESG. In addition, the "5D Anti-Fraud Initiative" was launched, encouraging stakeholders and investors to participate in a singalong of a catchy anti-fraud song, to strengthen public awareness of financial fraud.</p>

Promotion of sports, arts, and culture

Activity	Football activities	Boundaryless Music Infinite Love charity concert	Cloud Gate arts and cultural promotion	Sanlih celebrates environmental protection by hosting movie day for children	Performance of Rainbow Ballad, Taiwan Indigenous Association of 3S3T Youths, and Mata Dance Company	Taiwan Baseball Hall of Fame	Golf training program
2024 Achievements	<p>The TWSE and its subsidiaries and Pou Chen Group cooperatively established the "Joint Corporate Sponsorship Football Promotion Plan" to support football development in rural schools. Since 2022, the TWSE has sponsored the Chinese Taipei Football Association to hold domestic matches. The TWSE donated TWD4.1 million in 2024, marking the tenth year of the program, which has achieved remarkable results and seeks to nurture new football talent.</p>	<p>The TWSE sponsored the National Taiwan Symphony Orchestra's 2024 Boundaryless Music Infinite Love charity concert. To make sure that art education is for all, students from remote areas, disadvantaged groups, and social welfare groups were invited to enjoy musical performances, engage in hands-on learning of musical instruments, and learn about concert etiquette. This project works to ensure that the arts and cultural resources are accessible throughout Taiwan.</p>	<p>The TWSE sponsored Cloud Gate Dance Theater's "Dancing Dandelion" project to tour performances at remote schools and "Spring Riot" project to showcase new choreographers, promoting cultural development and international exchange.</p>	<p>The TWSE sponsored Sanlih Television Charity Foundation in conducting an environmentally friendly movie day for children. The event hosted children from remote areas of Miaoli County to watch a documentary film about the comeback of Asia's big cats, produced by Sanlih Television, at the SPOT Huashan Theater. As part of the event, children's books were donated to school libraries in remote areas to bridge the culture gap between urban and rural regions.</p>	<p>At the invitation of RAIN Alliance and NFC Forum, Rainbow Ballad, Taiwan Indigenous Association of 3S3T Youths, and Mata Dance Company jointly performed at Taiwan Night, proudly displaying Taiwan's indigenous culture.</p>	<p>The TWSE donated TWD300,000 to the Taiwan Baseball Hall of Fame to host a recognition ceremony for famous baseball athletes and a special exhibition to showcase Taiwan's baseball history plus promote the culture of baseball.</p>	<p>The TWSE donated TWD1.4 million to the Golf Association of the ROC to cultivate outstanding youth with great potential into future champions.</p>



Care for the vulnerable

Starting in 2019, to extend social care and expand care for the vulnerable, the TWSE has supported charitable organizations authorized by the “MOHW Charity Donations Destined for Social Welfare Funds Administration System,” including those that assist families and children in need, the vulnerable elderly and women, the disabled, and those in disease treatment. Support has expanded to include ecological conservation and sustainable environment. In 2024, the TWSE donated TWD50 million to 138 organizations.

Category	Families and children in need	Disability assistance	Vulnerable elderly and women	Disease treatment	Ecological conservation	Sustainable environment
Content	Improve the quality of life and education for families and children in need.	Offer daily, medical, education, and employment assistance to people with disabilities. Help eliminate workplace discrimination and create accessible environments.	Provide care and services to the elderly, and advocate consultation services for women who have suffered from violence or abuse.	Promote disease awareness through health education. Provide financial support and care for patients during and after treatment.	Protect threatened wildlife and their habitats, study and conserve marine life and ecology, and restore natural forests.	Promote environmental education to increase the public's awareness and understanding of sustainability-related issues; protect trees in urban areas to reduce urban heat island effects and air pollution.
Resources devoted in 2024 (TWD)	21,420,000	11,850,000	7,850,000	4,900,000	2,330,000	1,650,000

- **United Way of Taiwan**

Since 2019, the TWSE has supported social welfare organizations through the United Way of Taiwan, a domestic coalition of charitable organizations. Through careful assessment of the needs of social welfare organizations, United Way of Taiwan supervises the flow and utilization of donations to ensure effective integration of social resources for the most urgent of social welfare organizations and vulnerable groups. In 2024, the TWSE donated TWD18 million in total.

- **Food (Necessities) Bank**

Since 2015, the TWSE has supported the “Food (Necessities) Bank” convened by the FSC. Through a joint donation drive organized by TAIFEX, the TWSE distributes charitable supplies to vulnerable children, elderly individuals, the poor, the disabled, and those in emergency situations to help them overcome economic hardship. In 2024, the TWSE donated TWD12 million and this charitable giving has helped over 1.7 million beneficiaries.

Social assistance and emergency humanitarian support

- Social assistance funds of 22 county/city governments

The TWSE has contributed to the social assistance funds of 22 county/city governments nationwide. These funds are not designated for a specific purpose, allowing county/city governments to allocate at their discretion for low-income households, disaster relief, daily living assistance, medical subsidies, or emergency assistance. A total of TWD15 million was donated in 2024.

- Donations towards medical expenses

The TWSE donated TWD4 million to the medical expenses of impoverished patients at Taipei Veterans General Hospital and Taipei Medical University Shuang Ho Hospital.

Education assistance for the disadvantaged

- School Education Special Savings Account (SESSA) program

To continue to strengthen campus public welfare, the TWSE engages in campus assistance programs through the charity initiative “Love and Care of Financial Institutions for Disadvantaged Students” and to SESSA on the Ministry of Education’s philanthropy fundraising platform from 2018. The funds are used to help economically disadvantaged students by providing basic needs for completing compulsory education, such as meals, after-school care, books and more. The TWSE donated TWD40 million in 2024, benefiting 272 schools and 8,738 students.

Donations toward promotion of ESG issues and development of innovative industries

Category	Description	Resources devoted in 2024 (TWD)
Development of innovative industries	By sponsoring related associations and universities to hold projects and exchange activities, the TWSE supports the development of new industries and assist in the transformation of Taiwan’s industries, thereby enhancing economic resilience and corporate value.	7,770,000
Promotion of ESG issues	Through sponsoring activities and projects related to ESG issues, the TWSE promotes sustainable environmental education to the public. For example, the TWSE participated in Pingtung County’s “Neipu Township Fruit and Vegetable Culture and Art Festival and Water Resources Conservation Activities,” which featured agricultural products produced by local small farmers, but also highlighted sustainable development issues such as energy conservation, carbon reduction, and water conservation. The TWSE’s support of such activities helps amplify the effects of sustainability education, while also shining a spotlight on the agricultural economy in remote areas and other important issues.	1,753,720





APPENDIX

GRI Index

SASB Index

Climate-related Information

IFRS S2 Index

Limited Assurance Report for the 2024
Sustainability Report

Limited Assurance Report on the 2024 GHG
Inventory of the TWSE and Its Subsidiaries

Reasonable Assurance Statement on the TWSE's
2024 GHG Emissions

GRI INDEX

Statement of use	The TWSE has reported in accordance with GRI standards for the period from January 1, 2024, to December 31, 2024.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	No applicable Sector Standard

GRI	Disclosure	Chapter	Page	Explanation
GRI 2: General Disclosures 2021				
2-1	Organizational details	ABOUT THE TAIWAN STOCK EXCHANGE	8	
2-2	Entities included in the organization's sustainability reporting	ABOUT THIS REPORT	4	
2-3	Reporting period, frequency and contact point	ABOUT THIS REPORT	4	
2-4	Restatements of information	-	-	No information restatements in 2024.
2-5	External assurance	ABOUT THIS REPORT	4	
2-6	Activities, value chain and other business relationships	ABOUT THE TAIWAN STOCK EXCHANGE 5.5 Supply chain management	8 88	
2-7	Employees	6.2 Diverse workforce	89	
2-8	Workers who are not employees	6.2 Diverse workforce	89	
2-9	Governance structure and composition	5.1 Corporate governance	83-84	
2-10	Nomination and selection of the highest governance body	5.1 Corporate governance	83	
2-11	Chair of the highest governance body	5.1 Corporate governance	83	
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainable Development Committee 5.1 Corporate governance	30 83	
2-13	Delegation of responsibility for managing impacts	Sustainable Development Committee 5.1 Corporate governance	30 83	
2-14	Role of the highest governance body in sustainability reporting	Sustainable Development Committee	30	

GRI	Disclosure	Chapter	Page	Explanation
2-15	Conflicts of interest	5.1 Corporate governance	83	
2-16	Communication of critical concerns	Stakeholders and Material Sustainability Topics	40-46	
2-17	Collective knowledge of the highest governance body	Sustainable Development Committee	30	
2-18	Evaluation of the performance of the highest governance body	5.1 Corporate governance	84	
2-19	Remuneration policies	5.1 Corporate governance	84	
2-20	Process to determine remuneration	5.1 Corporate governance	84	
2-21	Annual total compensation ratio	-	-	The highest individual annual total compensation at the TWSE is 4.44 times the median of other employees. The percentage increase in the highest individual compensation is 0.11 times the median percentage increase for other employees.
2-22	Statement on sustainable development strategy	MESSAGE FROM THE CHAIRMAN Sustainable Strategy Blueprint	5-7 17	
2-23	Policy commitments	5.2 Business integrity 5.5 Supply chain management 6.1 Human rights protection	85 88 89	
2-24	Embedding policy commitments	5.2 Business integrity 5.5 Supply chain management 6.1 Human rights protection	85 88 89	
2-25	Processes to remediate negative impacts	5.2 Business integrity	85	
2-26	Mechanisms for seeking advice and raising concerns	5.2 Business integrity	85	
2-27	Compliance with laws and regulations	-	-	A major penalty is defined as a single event in which the total amount of fines imposed reaches TWD1 million or more. No major penalties were incurred in 2024.

GRI	Disclosure	Chapter	Page	Explanation
2-28	Membership associations	3.1 Association memberships	63-64	
2-29	Approach to stakeholder engagement	Stakeholders and Material Sustainability Topics	35-37	
2-30	Collective bargaining agreements	6.4 Friendly workplace	92	
GRI 3: Material Topics 2021				
3-1	Process to determine material topics	Stakeholders and Material Sustainability Topics	38-39	
3-2	List of material topics	Stakeholders and Material Sustainability Topics	39	
3-3	Management of material topics	Stakeholders and Material Sustainability Topics	40-46	
Material Topic				
System stability and resilience				
Self-assessed material topic				
	System stability and resilience	1.1 Securities market supervision 5.3 Risk management	48-51 86-87	
A safe and transparent capital market				
Self-assessed material topic				
	A safe and transparent capital market	1.1 Securities market supervision 1.2 Strengthen information disclosure	48-51 52-55	
Corporate governance				
GRI 405: Diversity and Equal Opportunity 2016				
405-1	Diversity of governance bodies and employees	5.1 Corporate governance 6.2 Diverse workforce	83 89	
Information security and privacy protection				
GRI 418: Customer Privacy 2016				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	5.4 Information security	87	

GRI	Disclosure	Chapter	Page	Explanation
Legal compliance				
GRI 2: General Disclosures 2021				
2-27	Compliance with laws and regulations		-	A major penalty is defined as a single event in which the total amount of fines imposed reaches TWDS\$1 million or more. No major penalties were incurred in 2024.
Talent attraction and employee benefits				
GRI 401: Employment 2016				
401-1	New employee hires and employee turnover	6.2 Diverse workforce	90	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.4 Friendly workplace	93	
401-3	Parental leave	6.4 Friendly workplace	93-94	
Talent cultivation and development				
GRI 404: Training and Education 2016				
404-1	Average hours of training per year per employee	6.3 Employee training and development	91	
404-3	Percentage of employees receiving regular performance and career development reviews	6.3 Employee training and development	92	
Sustainable Financial Services and Products				
Self-assessed material topic				
	Sustainable Financial Services and Products	2.3 Diversify products and invigorate carbon market	60-62	
Investor and customer relationship management				
GRI 418: Customer Privacy 2016				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	5.4 Information security	87	
Anti-corruption and integrity in business operations				
GRI 205: Anti-corruption 2016				
205-3	Confirmed incidents of corruption and actions taken	5.2 Business integrity	85	

GRI	Disclosure	Chapter	Page	Explanation
Climate action				
Self-assessed material topic				
	Climate action	4.1 Climate action	71-78	
Topic standards series				
GRI 200: Economic Series				
GRI 202: Market Presence 2016				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	6.4 Friendly workplace	92	
GRI 204: Procurement Practices 2016				
204-1	Proportion of spending on local suppliers	5.5 Supply chain management	88	
GRI206: Anti-competitive Behavior 2016				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	5.2 Business integrity	85	
GRI 300: Environmental Series				
GRI 302: Energy 2016				
302-1	Energy consumption within the organization	4.2 Energy and carbon management	79	
302-3	Energy intensity	4.2 Energy and carbon management	79	
GRI 305: Emissions 2016				
305-1	Direct (Scope 1) GHG emissions	4.2 Energy and carbon management	79	
305-2	Energy indirect (Scope 2) GHG emissions	4.2 Energy and carbon management	79	
305-3	Other indirect (Scope 3) GHG emissions	4.2 Energy and carbon management	79	
305-4	GHG emissions intensity	4.2 Energy and carbon management	80	
GRI 400: Social Series				
GRI 403: Occupational Health and Safety 2018				
403-3	Occupational health services	6.4 Friendly workplace	94	
403-6	Promotion of worker health	6.4 Friendly workplace	95-96	

GRI	Disclosure	Chapter	Page	Explanation
GRI 417: Marketing and Labeling 2016				
417-2	Incidents of non-compliance concerning product and service information and labeling	-	-	The TWSE did not fail to comply with product and service information and labeling regulations in 2024.
417-3	Incidents of non-compliance concerning marketing communications	-	-	The TWSE did not fail to comply with marketing communications regulations in 2024.



SASB INDEX

Topic	Code	Category	Accounting Metric	Current relevant disclosure	Page
Promoting Transparent & Efficient Capital Markets	FN-EX-410a.1	Quantitative	<ul style="list-style-type: none"> (1) Number and (2) average duration of halts related to public release of information (1) Number and (2) average duration of pauses related to volatility 	<ul style="list-style-type: none"> In 2024, the total number of suspended trading among listed companies was fifteen times (twelve instances for domestic companies and three instance for primary listed companies), with an average suspended trading time of one day. No abnormal fluctuations causing the suspension of trading in 2024. 	-
	FN-EX-410a.2	Quantitative	Percentage of trades generated from automated trading systems.	<ul style="list-style-type: none"> The TWSE currently does not have a clear definition for automated trading systems (high-frequency trading or algorithmic trading), but provides a trading platform for securities firms to place orders and match trades. Computer assisted trading operations were adopted in early August 1985, replacing manual trading methods. Since May 1993, automated computer trading operations have been fully implemented. The TWSE will continue to closely observe trends and developments in trading systems around the world, research new technologies plus the feasibility of introducing them in practice to enhance system processing power and efficiency. 	-
	FN-EX-410a.3	Discussion and Analysis	Description of alert policy regarding timing and nature of public release of information.	<ul style="list-style-type: none"> In accordance with the "Taiwan Stock Exchange Corporation Procedures for Verification and Disclosure of Material Information of Companies with Listed Securities," TWSE listed companies should announce material information and the TWSE will conduct the verification. In 2024, the TWSE verified 41,694 announcements of material information. For more information, please refer to 11 "Securities market supervision" or selaw.com.tw 	48
	FN-EX-410a.4	Discussion and Analysis	Description of policy to encourage or require listed companies to publicly disclose environmental, social, and governance (ESG) information.	1.2 Strengthen information disclosure	52-55
Managing Conflicts of Interest	FN-EX-510a.1	Quantitative	Total amount of monetary losses as a result of legal proceedings associated with fraud, insider trading, anti-trust, anti-competitive behavior, market manipulation, malpractice, or other related financial industry laws or regulations.	5.2 Business integrity	85
	FN-EX-510a.2	Discussion and Analysis	Discussion of processes for identifying and assessing conflicts of interest	5.1 Corporate governance	83
Managing Business Continuity & Technology Risks	FN-EX-550a.1	Quantitative	(1) Number of significant market disruptions and (2) duration of downtime	No market disruptions occurred in 2024.	-
	FN-EX-550a.2	Quantitative	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of customers affected	No data breaches occurred in 2024.	-
	FN-EX-550a.3	Discussion and Analysis	Description of efforts to prevent technology errors, security breaches, and market disruptions	5.4 Information security	87

Products	Activity Metrics	
	FN-EX-000.A: Average daily number of trades executed, by product or asset class	FN-EX-000.B: Average daily volume traded, by product or asset class
	Average daily number of trades executed in 2024	Average daily volume traded in 2024 (Unit: TWD Millions)
Stocks	2,418,667	381,359.41
ETFs	393,496	27,786.69
Call (put) Warrants	97,104	2,946.04
TDRs	9,331	317.75
ETNs	216	13.43
Beneficiary Securities	83	22.02

CLIMATE-RELATED INFORMATION

Aspects	Item	Chapter	Page
Implementation of Climate-Related Information	1. Describe the board of directors' and management's oversight and governance of climate-related risks and opportunities.	4.1 Climate action	69
	2. Describe how the identified climate risks and opportunities affect the business, strategy, and finances of the business (short, medium, and long term).	4.1 Climate action	70-76
	3. Describe the financial impact of extreme weather events and transformative actions.	4.1 Climate action	71-76
	4. Describe how climate risk identification, assessment, and management processes are integrated into the overall risk management system.	4.1 Climate action	69-70
	5. If scenario analysis is used to assess resilience to climate change risks, the scenarios, parameters, assumptions, analysis factors and major financial impacts used should be described.	4.1 Climate action	69 · 71-72
	6. If there is a transition plan for managing climate-related risks, describe the content of the plan, and the indicators and targets used to identify and manage physical risks and transition risks.	4.1 Climate action	71-78
	7. If internal carbon pricing is used as a planning tool, the basis for setting the price should be stated.	Under internal assessment.	-
	8. If climate-related targets have been set, the activities covered, the scope of greenhouse gas emissions, the planning horizon, and the progress achieved each year should be specified. If carbon credits or renewable energy certificates (RECs) are used to achieve relevant targets, the source and quantity of carbon credits or RECs to be offset should be specified.	4.1 Climate action	77-78
		4.2 Energy and carbon management	79-81
9. Greenhouse gas inventory and assurance status and reduction targets, strategy, and concrete action plan.	4.2 Energy and carbon management	79-81	
Greenhouse Gas Inventory and Assurance Status for the Most Recent 2 Fiscal Years	Greenhouse Gas Inventory Information	4.2 Energy and carbon management	79
	Greenhouse Gas Assurance Information	Limited assurance report for the 2024 greenhouse gas inventory report Verification opinion statement for the 2024 greenhouse gas emissions report	111-112
Greenhouse Gas Reduction Targets, Strategy, and Concrete Action Plan	Specify the greenhouse gas reduction base year and its data, the reduction targets, strategy and concrete action plan, and the status of achievement of the reduction targets.	4.2 Energy and carbon management	79-81

IFRS S2 INDEX

Aspects	Indicator Description	Chapter	Page
Governance	• Information about the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities.	4.1 Climate action	69
	• Management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.		
Strategy	Climate-related risks and opportunities	4.1 Climate action	71-76
	• Information that enables users of general purpose financial reports to understand the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects.		
	Business model and value chain	4.1 Climate action	71-76
	• Information that enables users of general purpose financial reports to understand the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain.		
	Strategy and decision-making	4.1 Climate action	71-78
	• Information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the entity plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation.		
	• Information about how the entity is resourcing, and plans to resource, the activities disclosed in the preceding item.		
	• Quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in the preceding item.	4.1 Climate action	71-76
	Financial position, financial performance and cash flows		
	• The effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects).		
Climate resilience	• The anticipated effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).	4.1 Climate action	69 · 71-72
	• The entity shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances. In providing quantitative information, the entity may disclose a single amount or a range.		
	• How and when the climate-related scenario analysis was carried out.		
Risk management	• Information about the processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks.	4.1 Climate action	69-70
	• Whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks.		
	• The extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.		

Aspects	Indicator Description	Chapter	Page	
Metrics and targets	Climate-related metrics			
	Greenhouse gas emissions	1. Disclose the absolute gross greenhouse gas emissions generated in accordance with the Greenhouse Gas Protocol during the reporting period, expressed as metric tonnes of CO ² equivalent, classified as: (1) Scope 1 greenhouse gas emissions; (2) Scope 2 greenhouse gas emissions; and (3) Scope 3 greenhouse gas emissions; 2. For Scope 1 and Scope 2 greenhouse gas emissions disclosed in the preceding item, disaggregate emissions between: (1) the consolidated accounting group (for example, for an entity applying IFRS Accounting Standards, this group would comprise the parent and its consolidated subsidiaries); and (2) other investees excluded from the consolidated accounting group (for example, for an entity applying IFRS Accounting Standards, these investees would include associates, joint ventures and unconsolidated subsidiaries).	4.2 Energy and carbon management	79
	Climate-related transition risks	The amount and percentage of assets or business activities vulnerable to climate-related transition risks.	4.1 Climate action	73
	Climate-related physical risks	The amount and percentage of assets or business activities vulnerable to climate-related physical risks.	4.1 Climate action	71-72
	Climate-related opportunities	The amount and percentage of assets or business activities aligned with climate-related opportunities.	4.1 Climate action	74-76
	Capital deployment	The amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities.	4.1 Climate action	71-76
	Internal carbon prices	The entity shall disclose: 1. the price for each metric tonne of greenhouse gas emissions the entity uses to assess the costs of its greenhouse gas emissions; and 2. an explanation of whether and how the entity is applying a carbon price in decision-making (for example, investment decisions, transfer pricing and scenario analysis).	Under internal assessment.	-
	Remuneration	The entity shall disclose: 1. the percentage of executive management remuneration recognised in the current period that is linked to climate-related considerations; and 2. a description of whether and how climate-related considerations are factored into executive remuneration.	5.1 Corporate governance	84
	Climate-related targets		4.1 Climate action	77-78
		<ul style="list-style-type: none"> An entity shall disclose the quantitative and qualitative climate-related targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation, including any greenhouse gas emissions targets. 	4.2 Energy and carbon management	81
	<ul style="list-style-type: none"> An entity shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target. 	4.1 Climate action	69 · 77-78	
	<ul style="list-style-type: none"> For each greenhouse gas emissions target disclosed in the preceding item. 	4.2 Energy and carbon management	81	

LIMITED ASSURANCE REPORT FOR THE 2024 SUSTAINABILITY REPORT



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INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT

Taiwan Stock Exchange Corporation

We have undertaken a limited assurance engagement on the selected performance indicators in the Sustainability Report ("the Report") of Taiwan Stock Exchange Corporation ("the Company") for the year ended December 31, 2024.

Subject Matter Information and Applicable Criteria

See Appendix 1 for the Company's selected performance indicators ("the Subject Matter Information") and applicable criteria.

Responsibilities of Management

The management of the Company is responsible for the preparation of the Subject Matter Information in accordance with Universal Standards, Sector Standards and Topic Standards published by the Global Reporting Initiative (GRI), and the criteria specifically designed by the Company, and for such internal control as management determines is necessary to enable the preparation of the Subject Matter Information that are free from material misstatement resulted from fraud or error.

Auditors' Responsibilities

Our responsibility is to plan and conduct our limited assurance engagement in accordance with Standard on Assurance Engagement 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" issued by the Accounting Research and Development Foundation of the Republic of China to issue a limited assurance report on whether the Subject Matter Information (see Appendix 1) is free from material misstatement. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and, therefore, a lower assurance level is obtained than a reasonable assurance.

We based on our professional judgment in the planning and conducting of our work to obtain evidence supporting the limited assurance. Because of the inherent limitations of any internal control, there is an unavoidable risk that even some material misstatements may remain undetected. The procedures we performed include, but not limited to:

- Inquiring of management and the personnel responsible for the Subject Matter Information to obtain an understanding of the policies, procedures, internal control, and information system relevant to the Subject Matter Information to identify areas where a material misstatement of the subject matter information is likely to arise.
- Selecting sample items from the Subject Matter Information and performing procedures such as inspection, re-calculation, re-performance, observation, and analytical procedures to obtain evidence supporting limited assurance.

Inherent Limitations

The Subject Matter Information involved non-financial information, which was subject to more inherent limitations than financial information. The information may involve significant judgment, assumptions and interpretations by the management, and the different stakeholders may have different interpretations of such information.

Independence and Quality Control

We have complied with the independence and other ethical requirements of the Norm of Professional Ethics for Certified Public Accountant in the Republic of China, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm applies Standard on Quality Management 1 "Quality Management for Public Accounting Firms" issued by the Accounting Research and Development Foundation of the Republic of China, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Subject Matter Information is not prepared, in all material respects, in accordance with the applicable criteria.

Other Matters

We shall not be responsible for conducting any further assurance work for any change of the Subject Matter Information or the applicable criteria after the issuance date of this report.

The engagement partner on the limited assurance report is Jiun-Hung Shih.

Deloitte & Touche
Taipei, Taiwan
Republic of China

April 15, 2025

Notice to Readers

For the convenience of readers, the independent auditors' limited assurance report and the accompanying summary of subject matter information have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' limited assurance report and summary of subject matter information shall prevail.

APPENDIX 1

SUMMARY OF SUBJECT MATTER INFORMATION

#	Subject Matter Information	Corresponding Section	Applicable Criteria																																																																						
1.	<table border="1"> <thead> <tr> <th colspan="5">New employees in 2024</th> </tr> <tr> <th></th> <th>Male</th> <th>Female</th> <th>Total</th> <th>Ratio</th> </tr> </thead> <tbody> <tr> <td>≤ 30 years old</td> <td>19</td> <td>18</td> <td>37</td> <td>5.92%</td> </tr> <tr> <td>30-50 years old</td> <td>11</td> <td>3</td> <td>14</td> <td>2.24%</td> </tr> <tr> <td>≥ 51 years old</td> <td>0</td> <td>1</td> <td>1</td> <td>0.16%</td> </tr> <tr> <td>Total</td> <td>30</td> <td>22</td> <td>52</td> <td>8.32%</td> </tr> <tr> <td>Ratio</td> <td>4.80%</td> <td>3.52%</td> <td>8.32%</td> <td>-</td> </tr> </tbody> </table> <p>Note: The new employee rate is: (The number of new hires for the year)/(the total number of employees as of the end of the year) * 100%. Does not include the number of dispatch personnel. As of the end of 2024, there were 625 employees at the TWSE standalone.</p> <table border="1"> <thead> <tr> <th colspan="5">Departed employees in 2024</th> </tr> <tr> <th></th> <th>Male</th> <th>Female</th> <th>Total</th> <th>Ratio</th> </tr> </thead> <tbody> <tr> <td>≤ 30 years old</td> <td>3</td> <td>2</td> <td>5</td> <td>0.80%</td> </tr> <tr> <td>30-50 years old</td> <td>3</td> <td>1</td> <td>4</td> <td>0.64%</td> </tr> <tr> <td>≥ 51 years old</td> <td>33</td> <td>11</td> <td>44</td> <td>7.04%</td> </tr> <tr> <td>Total</td> <td>39</td> <td>14</td> <td>53</td> <td>8.48%</td> </tr> <tr> <td>Ratio</td> <td>6.24%</td> <td>2.24%</td> <td>8.48%</td> <td>-</td> </tr> </tbody> </table> <p>Note: The turnover rate is: (The number of employees who left the company)/(the total number of employees as of the end of the year) * 100%. Does not include the number of dispatch personnel. As of the end of 2024, there were 625 employees at the TWSE standalone.</p>	New employees in 2024						Male	Female	Total	Ratio	≤ 30 years old	19	18	37	5.92%	30-50 years old	11	3	14	2.24%	≥ 51 years old	0	1	1	0.16%	Total	30	22	52	8.32%	Ratio	4.80%	3.52%	8.32%	-	Departed employees in 2024						Male	Female	Total	Ratio	≤ 30 years old	3	2	5	0.80%	30-50 years old	3	1	4	0.64%	≥ 51 years old	33	11	44	7.04%	Total	39	14	53	8.48%	Ratio	6.24%	2.24%	8.48%	-	6.2 Diverse workforce	GRI 401-1: 2016 New employee hires and employee turnover
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2.	There were no breaches of customer privacy or loss of customer data within the TWSE in 2024.	5.4 Information security	GRI 418-1: 2016 Substantiated complaints concerning breaches of customer privacy and losses of customer data																																																																						
3.	<p>The Power Usage Effectiveness (PUE) of the TWSE's First Data Center is 1.60 in 2024.</p> <p>Note 1: Power Usage Effectiveness (PUE) is calculated by dividing "the total power usage by the data center" by "the total power usage of ICT equipment in the server rooms."</p> <p>Note 2: Since the solar power generation and consumption in 2023 and 2024 accounts only for a small percentage of total electricity consumption, it is not included in either the numerator or denominator of PUE calculations.</p>	4.2 Energy and carbon management	Designated indicator 1 The data center power usage effectiveness for the year 2024, measured by the ratio of the total power usage by the data center to the total power usage of ICT equipment in the server rooms.																																																																						

(Continued)

LIMITED ASSURANCE REPORT FOR THE 2024 SUSTAINABILITY REPORT

#	Subject Matter Information	Corresponding Section	Applicable Criteria
4.	As of year-end 2024, there were 20 ESG-related ETFs and ETNs, with a trading value of TWD667.126 billion and TWD502 million respectively.	2.3 Diversify products and invigorate carbon market	Designated indicator 2 The number of ESG-themed ETFs and ETNs listed as of the end of 2024 and their cumulative trading value during the year. "ETFs and ETNs related to investment themes such as green energy and sustainability" include: (1) ETFs listed in the Environmental, Social, and Governance (ESG) Fund section, based on the "Guidelines for Information Disclosure and Supervisory Principles of ESG-Related Mutual Funds" issued by the Financial Supervisory Commission in July 2021, and (2) ETFs and ETNs that are not categorized as ESG funds but track indices that incorporate Environmental (E), Social (S), or Governance (G) considerations in their index construction rules.
5.	The TWSE assisted 47 securities firms in applying to use the Warning System, and also established the "Anti-Fraud Joint Defense Section," through which securities firms had shared 244 fraud cases by the end of 2024.	Key Sustainability Initiatives	Designated indicator 3 The number of securities firms connected to the National Police Agency's "Warning Household Inquiry System" and number of case studies shared on the Anti-Fraud Collaborative Action section in 2024.

(Continued)

#	Subject Matter Information	Corresponding Section	Applicable Criteria
6.	A total of 993 attendees participated in ten education and training courses related to cybersecurity in 2024 with 4,359 total training hours.	5.4 Information security	Designated indicator 4 Cybersecurity-related education and training courses in 2024: Number of participants and total training hours in 2024. The courses include: <ul style="list-style-type: none"> • Mastering Green Digital Transformation: Generative AI Development Trends and Risks • Building Resilience for Business Continuity in a Rapidly Changing World • Software Testing and Debugging • Overview of Cloud Operations and Enhanced Cybersecurity Strategies • Information Security Guidelines and Audit Practices for Listed Companies • BS10012:2017+A1:2018 Personal Information Management System - Lead Auditor Training Course • Cloud Information Security Management System - Lead Auditor Training Course • ISO/IEC 27001:2022 ISMS - Lead Auditor Training Course • ISO/IEC 27001:2022 ISMS - Lead Auditor Training Course (CQI and IRCA Certified) • ISO 22301:2019 Business Continuity Management - Lead Auditor Training Course (CQI and IRCA Certified)

(Concluded)

LIMITED ASSURANCE REPORT ON THE 2024 GHG INVENTORY OF THE TWSE AND ITS SUBSIDIARIES



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English Translation of a Report Originally Issued in Chinese

Independent Accountant's Limited Assurance Report on Taiwan Stock Exchange Corporation's Greenhouse Gas (GHG) Statement

Taiwan Stock Exchange Corporation

We have undertaken a limited assurance engagement of the accompanying GHG statement of Taiwan Stock Exchange Corporation and Subsidiaries (including Taiwan Index Plus Corporation, TAIWAN-CA INC., and Taiwan Carbon Solution Exchange Corporation) ("TWSE") for the period from 2024/1/1 to 2024/12/31, comprising the Emissions Inventory.

Regarding GHG statement of TWSE's, please refer to appendix A.

TWSE's responsibility for the GHG Statement

TWSE is responsible for the preparation of the GHG statement in accordance with ISO International Standards ISO 14064-1:2018 ("ISO 14064-1:2018") published by International Organization for Standardization. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of a GHG statement that is free from material misstatement, whether due to fraud or error.

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the The Norm of Professional Ethics for Certified Public Accountant of the Republic of China issued by the National Federation of CPA Associations of the R.O.C., which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm applies TWSQM1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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Our Responsibility

Our responsibility is to express a limited assurance conclusion on the GHG statement based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3410, *Assurance Engagements on Greenhouse Gas Statements* ("ISAE 3410"), issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform this engagement to obtain limited assurance about whether the GHG statement is free from material misstatement.

A limited assurance engagement undertaken in accordance with ISAE 3410 involves assessing the suitability in the circumstances of TWSE's use of ISO 14064-1:2018 as the basis for the preparation of the GHG statement, assessing the risks of material misstatement of the GHG statement whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG statement. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above, our procedures included:

- Inquiring to obtain an understanding of TWSE's control environment and information systems related to emissions quantification and reporting, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness;

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Limited Assurance Conclusion

- Assessing the appropriateness and consistency of TWSE's estimation methods. However, the procedures performed did not include testing the data on which the estimates were based, nor did it involve making independent estimates by the auditor to assess the estimates made by TWSE;
- Undertook site visit at one site to assess the completeness of the emissions sources, data collection methods, source data and relevant assumptions applicable to these sites. The selection of sites for the visits taking into consideration their emissions in relation to total emissions, emissions sources, and sites selected in prior periods. Our procedures did not include testing information systems to collect and aggregate facility data, or the controls at these sites.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether TWSE's GHG statement has been prepared, in all material respects, in accordance with ISO 14064-1:2018.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that TWSE's GHG statement for the period from 2024/1/1 to 2024/12/31 is not prepared, in all material respects, in accordance with ISO 14064-1:2018.


Ernst & Young
April 15, 2025
Taipei, Taiwan, Republic of China

Notice to Readers:



The reader is advised that the assurance report has been prepared originally in Chinese. In the event of a conflict between the assurance report and the original Chinese version or difference in interpretation between the two versions, the Chinese language assurance report shall prevail.

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REASONABLE ASSURANCE STATEMENT ON THE TWSE'S 2024 GHG EMISSIONS



Opinion Statement

By Royal Charter

Greenhouse Gas Emissions
Verification Opinion Statement

This is to verify that:


Taiwan Stock Exchange Corporation 9F No. 7, Sec. 5, Xinyi Rd. Xinyi Dist. Taipei City 110615 Taiwan	臺灣證券交易所股份有限公司 臺灣 台北市 信義區 信義路五段7號 9樓 110615
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Hold Statement No: GHGEV 819891

Verification opinion statement

As a result of carrying out verification and validation procedures in accordance with ISO 14064-3:2019, it is the statement for mixed engagement including reasonable assurance for verification activity as well as validation and agreed-upon procedures (AUP) contains the following:

- The Greenhouse Gas Emissions with Taiwan Stock Exchange Corporation for the period from 2024-01-01 to 2024-12-31 was verified and validated.
- The verified organization-level greenhouse gas emissions include direct greenhouse gas emissions 456,2859 tonnes of CO₂ equivalent and indirect greenhouse gas emissions from imported energy 8,054,9448 tonnes of CO₂ equivalent.
- Taiwan Stock Exchange Corporation has defined and explained its own process and pre-determined criteria for significance of indirect Greenhouse Gas Emissions and quantify and report these identified significant emissions accordingly.



For and on behalf of BSI: Managing Director BSI Taiwan, Peter Pu

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The British Standards Institution is independent to the above named client and has no financial interest in the above named client. This Opinion Statement has been prepared for the above named client only for the purposes of verifying its statements relating to its carbon emissions more particularly described in the scope. It was not prepared for any other purpose. The British Standards Institution will not, in providing this Opinion Statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used or to any person by whom the Opinion Statement may be read. This Opinion Statement is prepared on the basis of review by The British Standards Institution of information presented to it by the above named client. The review does not extend beyond such information and is solely based on it. In performing such review, The British Standards Institution has assumed that such information is complete and accurate. Any queries that may arise by virtue of this Opinion Statement or matters relating to it should be addressed to the above named client only.
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Securities Publication Number 02-114-9-02

