WORLD FEDERATION OF EXCHANGES

The WFE's 9th Sustainability Survey

Exchanges reach new milestones in their ESG goals

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Contents

1. Executive summary

The **WFE Sustainability Survey 2022** is the ninth annual edition of this comprehensive questionnaire, which collects information from WFE members and affiliates, including stock and derivatives exchanges, from developed to frontier markets. The survey aims to capture the progress and achievements of the exchange industry in its engagement with Environmental, Social, and Governance (ESG) issues as well as the challenges it faces in achieving its ESG goals.

To capture the evolution of the ESG landscape, this year's edition added questions on carbon markets, on net-zero targets, and on the adoption of green equity definitions.

Key highlights of the survey include:

- This year, for the first time since the first edition of the Survey, every exchange responding to the survey participated in at least one ESG initiative and engaged in at least one **WFE Sustainability Principle**. This is a milestone in the industry's collective efforts to achieve sustainability.
- Sixteen respondents (out of 54) reported engagement in at least 12 ESG initiatives, which is twice the number observed last year. This year, twelve exchanges reported having put in place net zero targets. In total, two respondents engaged in all 14 listed ESG initiatives.
- Not only has the number of exchanges engaging in ESG initiatives increased, but the average number of initiatives implemented per exchange has also increased from 8.4 to 9.2.
- During 2022, WFE members worked to create a global framework that individual exchanges can use to establish a 'green' offering for listed equities, thus improving the flow of funding towards the financing of more sustainable economies. This effort led to the publication, in early 2023, of the **WFE Green Equity Principles**.
- Adherence of exchanges to the **WFE Sustainability Principles** remains strong, with 70% of respondents implementing initiatives that corresponded to all five Principles.
- Sustainability concerns and the opportunities for business expansion were again the most frequently reported motivations for ESG engagement. On the other hand, the main challenges faced by exchanges stem from external factors, such as limited resources for implementation, unreliable ESG data, and the lack of standardised reporting frameworks for promoting sustainability.
- Of the 58% of exchanges reporting their carbon emissions, 68% cover Scopes 1, 2 and 3, which reflects a comprehensive approach to measuring and managing their carbon footprint, considering both direct and indirect emissions throughout their value chain.
- With regards to **gender diversity**, the exchanges' average female workforce has seen a slight increase of 1.2 percentage points since the previous year. The Americas region leads in women's leadership positions, while the EMEA and APAC regions have similarly high levels of female representation in their workforce.
- **Green bonds** persist as the most popular ESG product. Three exchanges have also introduced green equity, relying on either their own standards or those established by national regulators.

2. Introduction

In line with the trends seen in previous years, ESG initiatives continued to be of increasing interest to regulators, policymakers, investors, issuers, and broader stakeholders in 2022. Some of the major developments by regulators and standard setters in 2022 were the following:

Mandatory TCFD-aligned reporting[1] became effective in various jurisdictions such as the UK. The US and European Commission, as well as other regulators and governments, released detailed proposals for phasing in reporting that is at least partly aligned with the TCFD framework.

There was also progress on the TNFD[2] as three iterations of the TNFD beta framework were released in 2022.

The year saw an effort by standard setters to promote harmonisation as the Climate Disclosure Standards Board merged with the International Finance Reporting Standards foundation (IFRS) in a push for setting global accounting sustainability standards. IFRS took steps to establish ISSB presence in Germany and Canada. ISSB and GRI also announced a Memorandum of Understanding, which commits the two to coordinate work programmes and standard-setting activities; this includes conducting a mapping exercise between the two frameworks. ISSB completed a public consultation on its drafts of the S1 and S2 disclosure requirements.

In 2022 we also saw many regulators taking action against listed companies involved in greenwashing. Regulators such as the FCA and SEC also proposed rules to tackle greenwashing.

The European Commission added additional economic activities from the energy sector into the taxonomy and introduced specific disclosure requirements for business activities in the gas and nuclear energy sectors through its Complementary Climate Delegated Act. Indonesia launched its own green taxonomy, and Colombia became the first Latin American economy to publish a green taxonomy for the financial sector.

Carbon continued to be a focus globally as the European Council reached an agreement on the EU Carbon Border Adjustment Mechanism. Responding to the increasing popularity of carbon markets, IOSCO launched a consultation on the development of well-functioning Compliance and Voluntary Carbon markets.

One area of concern was the quality of ESG ratings and data. SEBI warned of potential conflicts of interest for firms issuing credit ratings as they also provide other services, such as advisory.

1 The Task Force for Climate-related Financial Disclosures (TCFD) was created by the Financial Stability Board (FSB) "to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing risks related to climate change" (https://www.fsb-tcfd.org/).

2 The Task Force for Nature-related Financial Disclosures (TNFD) was set "to develop and deliver a risk management and disclosure framework for organisations to report and act on evolving nature-related risks" (https://tnfd.global/).

The FCA and the Financial Services Agency announced plans to publish a Code of Conduct for ESG data providers. Meanwhile, in Europe, ESMA launched a 'Call for Evidence' on ESG ratings.

The FCA released a policy statement demanding listed companies disclose on a 'comply or explain' basis against various diversity-related targets, such as ensuring that 40% of the board is female and that at least one member from the board is from a n on-white ethnic minority background. The SEC also introduced rules requiring certain companies to disclose the diversity of the board and executive management by gender and ethnicity.

Regulators have not only pushed the ESG agenda through policies/ frameworks but also through capacity-building activities; many have been involved in launching ESG reporting platforms and workshops. Hong Kong's Financial Reporting Council (FRC) launched a Sustainability and Climate Action Task Force, and SEBI launched an ESG advisory committee. The Monetary Authority of Singapore and The People's Bank of China jointly established a green finance taskforce.

COP27 took place towards the end of 2022 and less than a month after the release of the UN Climate Change's NDC synthesis report that estimated that the current climate plans proposed by countries would lead to an increase in global warming that is higher than 1.5 degrees Celsius by the end of the century. One of the key takeaways from COP27 was the breakthrough agreement around establishing a 'loss and damage' fund for countries that are most vulnerable to climate change risk. COP27 also focused on creating a path to align finance flows towards low emissions and climate-resilient developments; the Sharm el-Sheikh Implementation Plan highlighted that the global transition to a low-carbon economy would require investments of at least USD 4-6 trillion a year. It was also acknowledged that the goal agreed on by developed parties to mobilise USD 100 billion per year collectively by 2020 had not been met.

Exchanges play a crucial role in allocating finance to help aid a global transition to a sustainable economy, for example, through product development, carbon trading and capacity-building activities. The significance of this role can be seen in the results of this year's Sustainability Survey, where the number of exchanges involved in ESG initiatives increased by five members compared to the prior year, and for the first time since the Sustainability Survey series began, there were no exchanges not involved with the ESG initiatives. We hope you find this report to be useful and welcome dialogue concerning it.

3. Survey methodology

As in previous years, a questionnaire was sent to all WFE member exchanges and affiliates, along with a scaled-back version for derivatives-only exchanges. Responses were collected through an online survey tool between February and March 2023, and responses referred to the 2022 calendar year. To reflect new developments in the ESG space, this year we added:

- "Have put in place net-zero targets" as an additional item in the list of benchmark ESG/sustainability initiatives.
- Questions to improve the measurement of sustainability concerns regarding ESG data, ratings, reporting standards, and the management of reporting requirements.
- Questions on the reporting factors related to the carbon footprint emissions and the KPIs based on the standards set by GRI and/or SASB.
- Questions about the definition or standards that exchanges have adopted to define green equity.
- Questions regarding the types of carbon markets in each jurisdiction, as well as the types of products being traded within this specific market.

Respondents were directed to different questions depending on their answers, and they could skip some questions. Hence, the response rates for different questions vary. The total number of responses for each question is noted throughout. A total of 54 exchanges[3] participated in this year's survey (see **Figure 1**). Exchanges located in the Europe, Middle East, and Africa (EMEA) region accounted for the larger share of respondents (55%), as shown in **Figure 2**.

Figure 1. Respondent profile

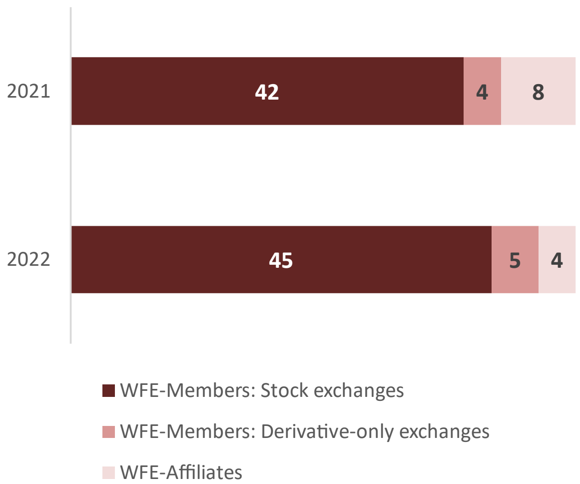
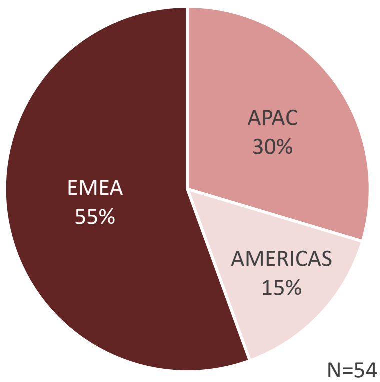


Figure 2. Respondents by region



Throughout the survey, figures are rounded to the nearest integer or, when additional precision is useful, to one decimal place. Because of rounding, percentages may not always add up to 100%. When expressing local currency in US dollars (USD) we use conversion rates as of March 2023.

[3] The complete list of respondent exchanges can be found in Annex 1.

4. Survey results

4.1 Exchanges and sustainability

In 2022, for the first time since the start of the Sustainability Survey, all exchanges are involved in at least one sustainability initiative.

To gauge progress towards sustainable development, the survey requests exchanges to disclose their engagement in diverse sustainability initiatives that have been set as benchmarks. To better represent the importance of carbon emissions trading, this year the survey has included "Have put in place net zero targets" as an additional initiative to measure, increasing the number of initiatives to 14 (see **Figure 3**).

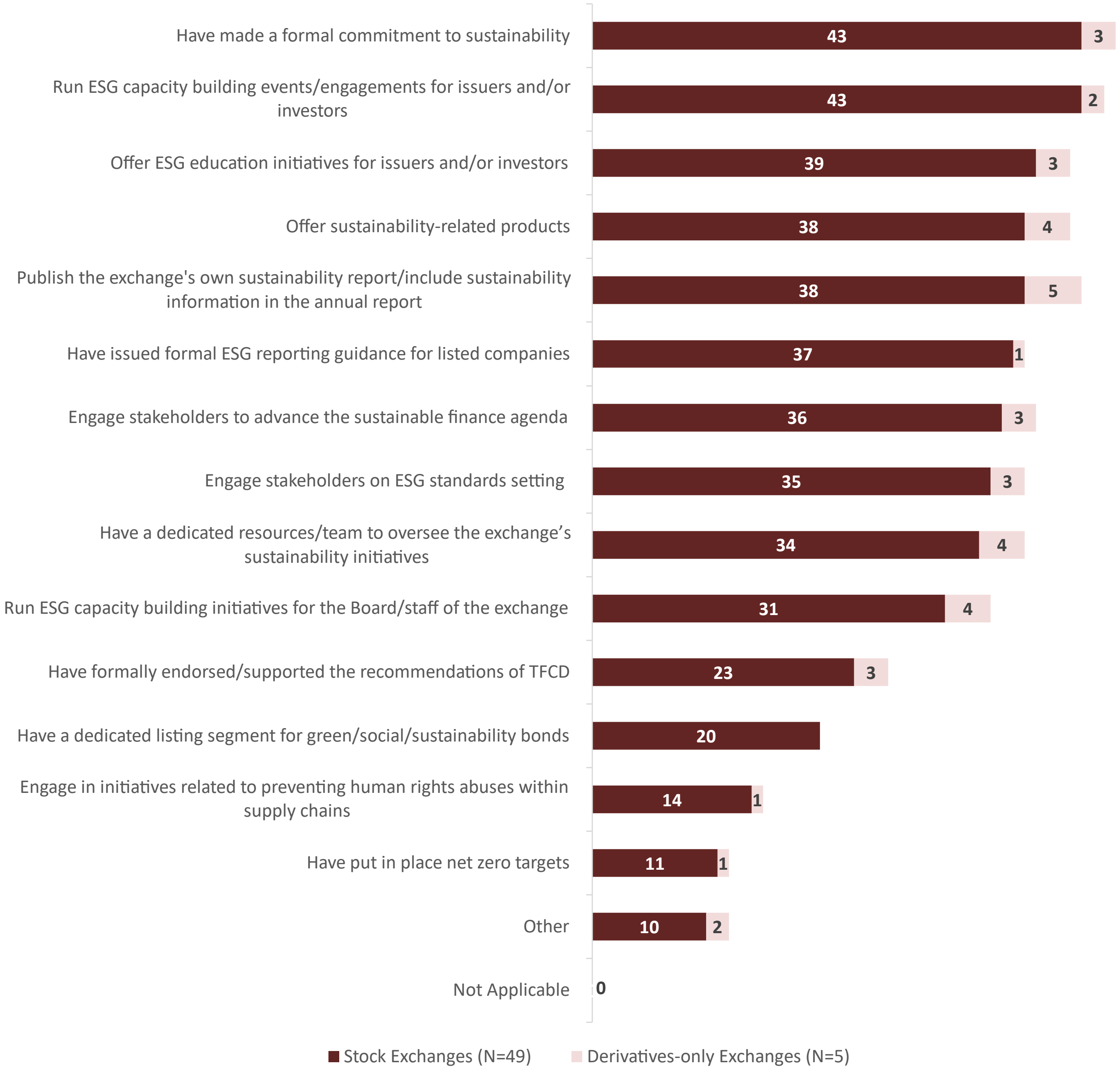
This year's survey results reveal a persistent strong commitment across all benchmark initiatives, with sixteen participants engaged in at least 12 initiatives, which is twice the number reported last year. When considering the newly added initiative centred on setting net-zero targets, two exchanges, **Deutsche Börse Group (DBG)** and **Luxembourg Stock Exchange (LuxSE)**, reported to have participated in all 14 initiatives.

It is worth noting that for the first time since the WFE launched its survey series, the number of exchanges not participating in any initiative reached zero, which represents a milestone in the industry engagement in sustainability. In addition, exchanges saw an average increase in the implementation of sustainability initiatives in 2022, as the mean number of initiatives per exchange rose from 8.4 to 9.2.

The initiative "*Run ESG capacity building events/engagements for issuers and/or investors*" secured second place, with 83% participation, a significant jump from its fifth place in 2021. This year, "*Have put in place net zero targets*" was added to the list, and twelve exchanges (22%) reported participating.

ESG initiatives reported under the "Other" category include collaboration with Global Reporting Initiative (GRI) standards, offering gender-focused bonds, developing an ESG Index, and achieving operational carbon neutrality by purchasing carbon offsets.

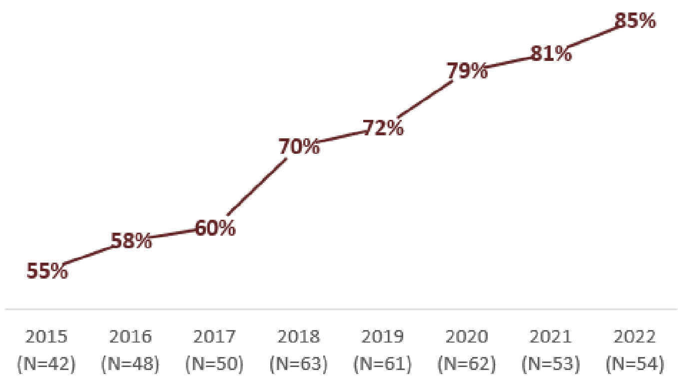
Figure 3. Exchanges' ESG initiatives*



**Multiple answers allowed. "Not applicable" means the exchange was not involved in any sustainability initiative.*

As illustrated in **Figure 4**, this year marked the highest engagement rate in the past eight years for the "Have made a formal commitment to sustainability" initiative. 85% of respondents have participated in this initiative, retaining its top place on the list of ESG initiatives.

Figure 4 Formal commitment to sustainability



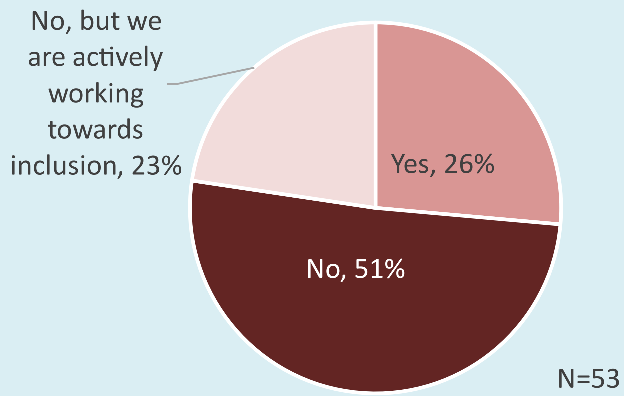
Box 1: Exchanges in ESG indexes

For listed exchanges, we track how many of them are included as a constituent of one or more indexes tracking the firms' sustainability or ESG performance.

Being included in such indexes underscores the exchange's commitment to ESG initiatives.

The survey found that 14 out of 53 respondents (26%) are incorporated in at least one sustainability/ESG index, a slight decrease from last year's 33%. However, this year 12 exchanges (23%) are actively working towards inclusion (compared with 19% in 2021). It is noteworthy that two exchanges which were working towards inclusion in 2021 have successfully been incorporated into ESG indexes in 2022.

Figure 5. Exchanges' inclusion in ESG Indexes



Engagement with the WFE Sustainability Principles

All exchanges reported being engaged in at least one Sustainability Principle, confirming a milestone of full commitment to sustainability initiatives.

The **WFE Sustainability Principles** (the Principles, hereafter) outline how WFE member exchanges aim to foster sustainability within their markets. Since their introduction in 2018, the WFE has been monitoring exchanges' engagement with these Principles and assessing their progress. To provide a concrete measure of involvement with each Principle, a set of initiatives corresponding to the different Principles has been defined (details on the mapping can be found in Annex 2). Exchanges are also encouraged to report any additional initiatives that align with the five Principles.

While the percentage of respondents involved in each Principle during 2022 is consistent with percentages observed in 2021 (see **Figure 6**), we note that **Principle 3**: "*Engage stakeholders to advance the sustainable finance agenda*", rose by eleven percentage points from the previous year, sharing first place (54 exchanges, 94% of respondents) with the consistently top-ranked **Principle 5**: "*Embed sustainability into the exchange's governance, strategy and organisation structures*". Increased emphasis on Principle 3 is consistent with a growing recognition of the value of collaboration and dialogue among market participants, policymakers, and other relevant parties. The consistently high participation rates in Principles 1 and 5 confirm that exchanges are committed to fostering sustainability within financial markets, actively integrating ESG considerations into their operations, and prioritising the dissemination of sustainability knowledge among market actors.

We also analysed the engagement of each exchange with the Sustainability Principles (refer to **Figure 7**). We observe that:

- 70% (38/54) of the responding exchanges implemented initiatives that corresponded to all five Sustainability Principles, a slight increase from the previous year (69%).
- The percentage of respondents that engaged in four out of the five Principles ranked second, with a 19% participation rate, which is ten percentage points higher than last year.
- Remarkably, the number of exchanges that did not engage in any Principle has decreased to zero, confirming a milestone year of full commitment to sustainability.
- Of the five derivatives-only exchanges that participated in the survey, three exhibited full engagement with the Principles, while the other two demonstrated a high level of engagement as well.

Overall, the survey results indicate a growing commitment among exchanges to prioritise sustainability and engage with stakeholders in promoting sustainable finance.

Figure 6. Number and percentage of exchanges engaged in each of the WFE Sustainability Principles

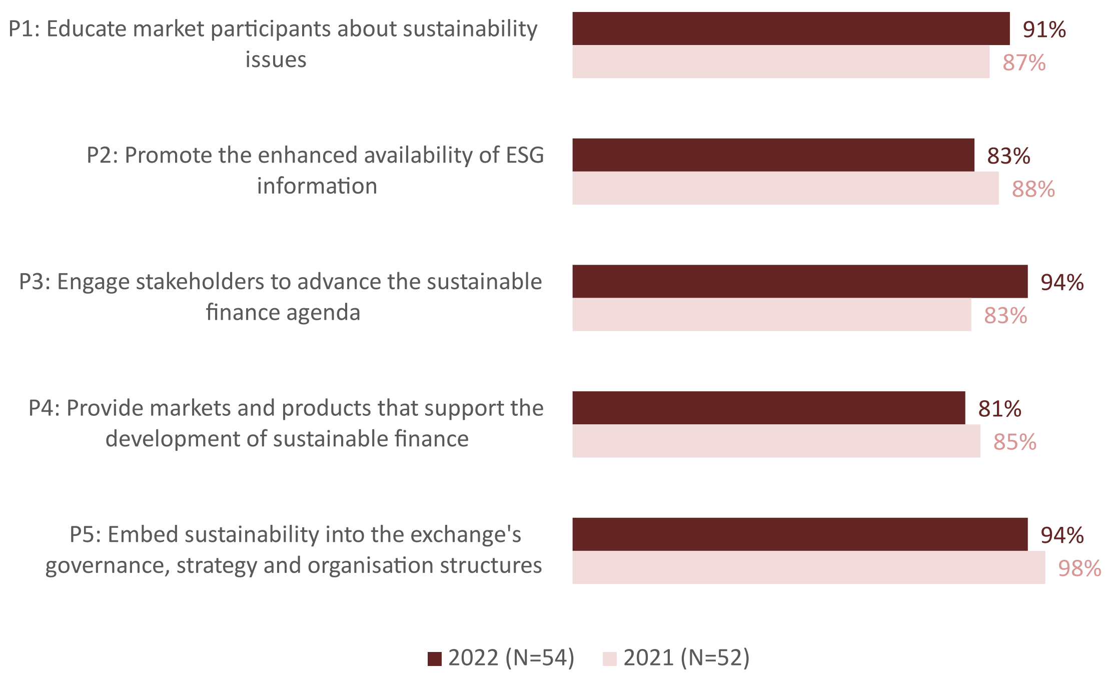
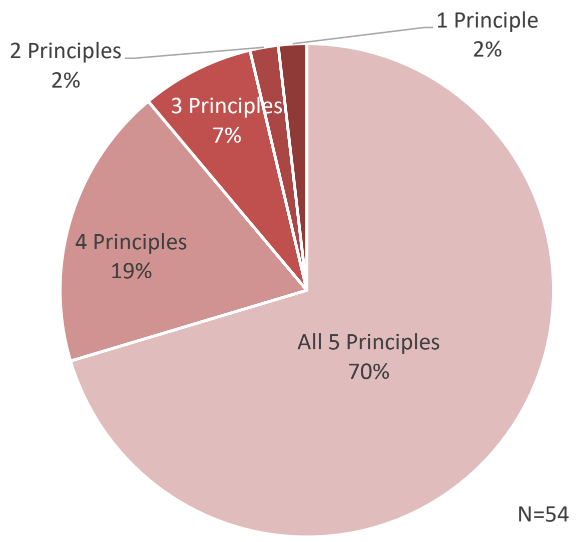


Figure 7. Number of principle engagement per exchange



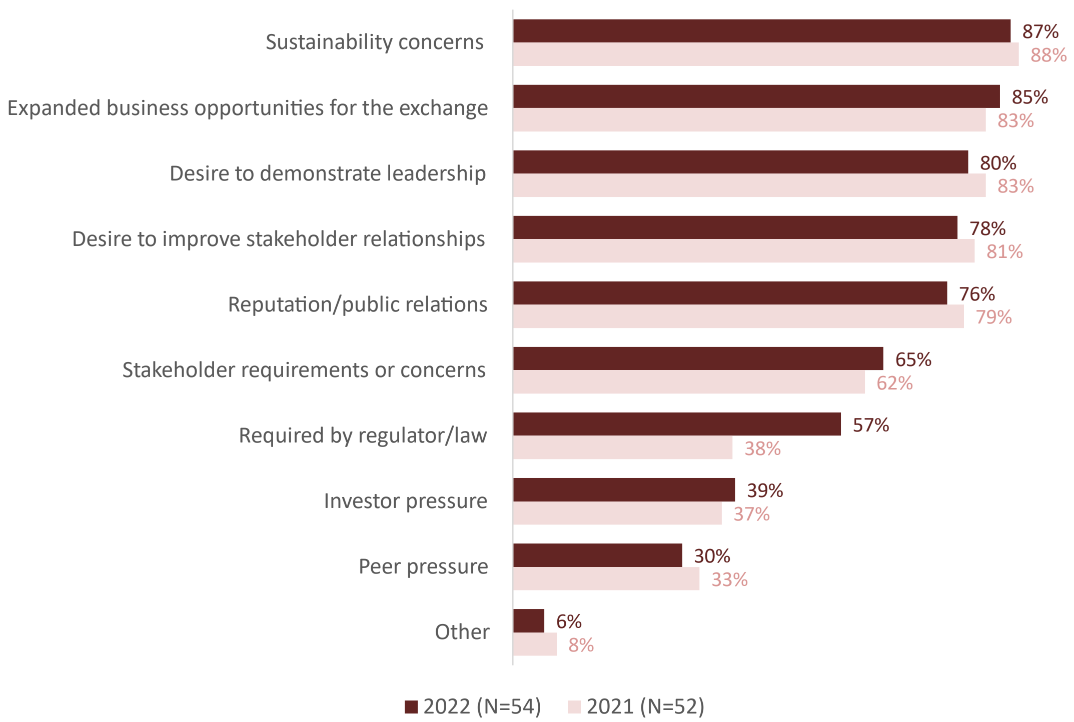
Sustainability initiatives: motivations and concerns

Lack of resources to implement sustainability initiatives, lack of reliable ESG data, and divergence in ESG ratings are the three major industry concerns.

Integrating sustainability initiatives can provide a range of benefits to exchanges, such as addressing sustainability concerns, fostering business growth opportunities, strengthening stakeholder relationships, or demonstrating leadership. Even so, exchanges might face obstacles when implementing these initiatives, including limited resources, insufficient reliability of ESG data, inconsistencies in ESG ratings, or the absence of well-defined reporting standards. The survey collected information on the primary motivations for exchanges to engage in sustainability efforts and on the potential hurdles they perceive in progressing towards their sustainability goals.

Figure 8 ranks the primary motivations for exchanges to engage in ESG initiatives according to the percentage of respondents acknowledging having such motivation. The proportion of respondents for each motivation remains consistent with last year's, except for "*Required by regulator/law* (31/54, 57%)," which experienced a 19-point increase from 38% in the last survey. "*Sustainability concerns* (87%)," "*Expanding business opportunities* (85%)," "*Desire to demonstrate leadership* (80%)," and *"Desire to improve stakeholder relationships* (78%)" continue to dominate the list.

Figure 8. Motivations for sustainability involvement



**Multiple answers allowed*

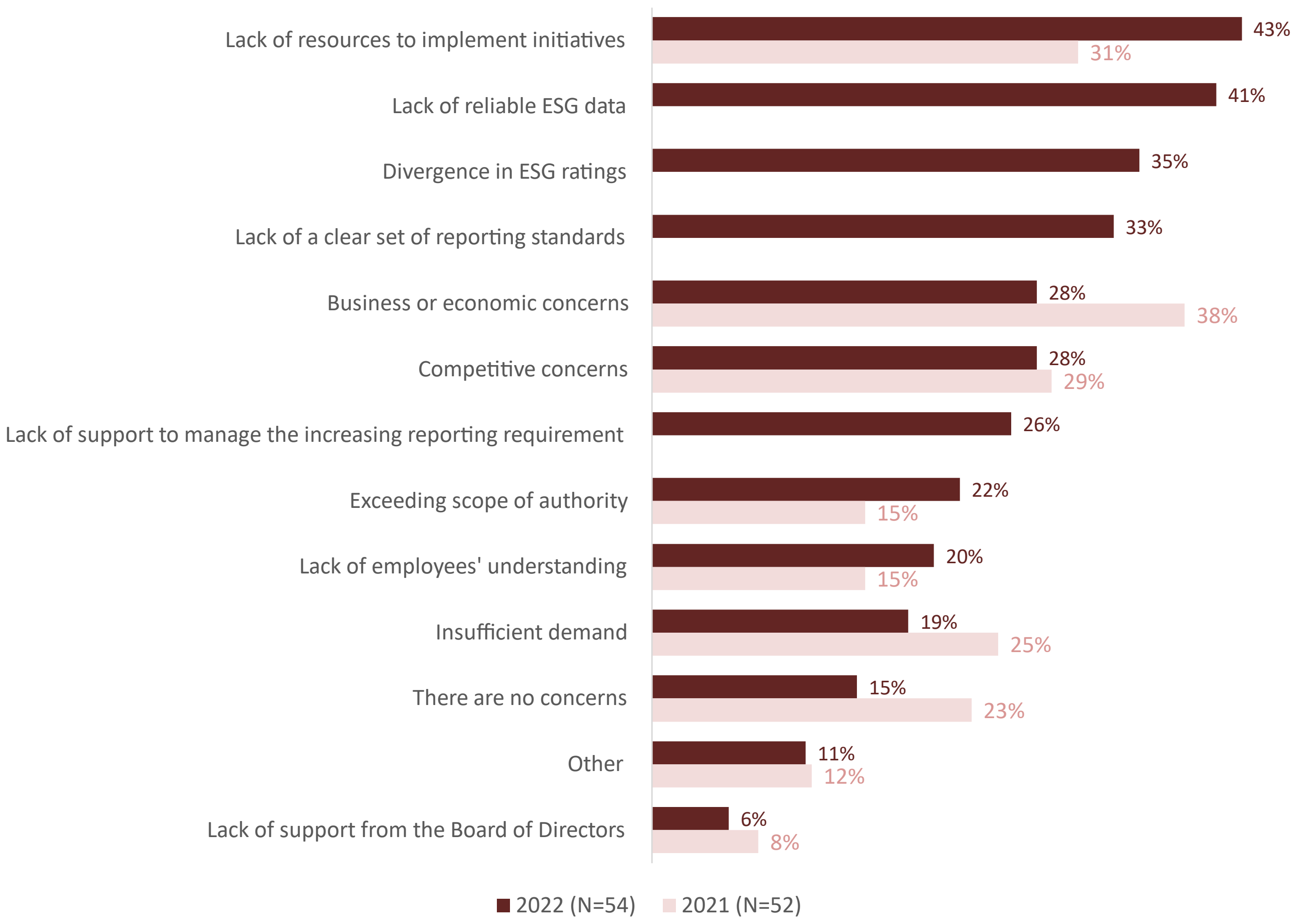
The significant increase (19 percentage points) in the proportion of respondents who reported "*Required by regulator/law*" as a motivation reflects the growing regulatory and legal pressures on exchanges to incorporate ESG considerations into their operations and decision-making processes.

Upon examining the challenges exchanges encounter in their sustainability endeavours, we notice some shifts compared to the 2021 results. As depicted in **Figure 9**, "Lack of resources to implement initiatives (23/54, 43%)" supplants "Business or economic concerns" as the most frequently reported issue, coinciding with the gradual recovery of the global economy from the pandemic. This year, we introduced "Lack of reliable ESG data" "Divergence in ESG ratings" and "Lack of a clear set of reporting standards" as options, which ranked as the second, third, and fourth most significant concerns, respectively. These results are in line with a growing need for standardisation and consistency in ESG reporting.

One remarkable result is the persistent decrease in time of “insufficient demand" as a concern, dropping from 31% in 2020 to 25% in 2021 and further reducing to 19% in 2022.

For exchanges that reported other concerns, the primary issue is that the absence of standardised regulation contributes to greenwashing.

Figure 9. Concerns around sustainability efforts*



**Multiple answers allowed*

Box 2: ESG data initiatives

The availability of timely, accurate and comprehensive data is fundamental for investors to make informed decisions. Here are some examples of exchanges' initiatives to enhance the availability of ESG data.

Athens Stock Exchange (ATHEX) launched ATHEX BONDS GREENet in January 2022, which is a digital communication hub designed to showcase ESG-related information pertaining to all eligible green, social, sustainability, and sustainability-linked bonds listed on the ATHEX Bond markets. This hub allows issuers to present the ESG principles of the issuance and its compliance throughout the lifetime of the bonds. It also provides investors with easy access to consolidated and easily comparable information related to investable ESG instruments.

Borsa İstanbul (BIST) uses Refinitiv's ESG scores to calculate sustainability-themed indices. These scores measure ESG performance, commitment, and efficiency across ten main themes based on publicly reported data.

The **Korea Exchange (KRX)** has broadened the list of ESG rating providers and the coverage of information on its ESG portal. This improvement is aimed at giving investors better access to essential ESG data.

The **LGX DataHub**, **Luxembourg Stock Exchange (LuxSE)** centralised hub for structured sustainability data, expanded in 2022, offering data on over 9,900 green, social, sustainability, and sustainability-linked (GSSS) bonds from more than 2,400 issuers. The LGX DataHub was recognised by the OECD, which used its data to analyse the GSSS bond market in developing countries. LGX DataHub also introduced post-issuance data on sustainability-linked bonds (SLBs) and a 'My Portfolio' feature for a better user experience.

In September 2022, the **Singapore Exchange (SGX Group)**, along with the Monetary Authority of Singapore (MAS), introduced **ESGenome**, a digital platform for companies to disclose their ESG data in a consistent, structured way, thus facilitating investor access to such data. ESGenome was awarded the "ESG Initiative of the Year" at the Regulation Asia Awards for Excellence in 2022.

Since 2022, the **Taiwan Stock Exchange (TWSE)** has been promoting the establishment of an ESG ecosystem, which is closely aligned with the Taiwan FSC's newly announced "Sustainable Development Action Plans for TWSE- and TPEx-Listed Companies (2023)". These plans include creating an integrated ESG information platform, a digital platform for sustainable reports, carbon verification assistance, promotion of ESG evaluation, diversified ESG product development, and the planned launch of a carbon trading platform.

In 2022 the **WFE members** started submitting to the **WFE Database** market indicators for green, social and sustainability bonds (see https://www.world-exchanges.org/our-work/statistics)

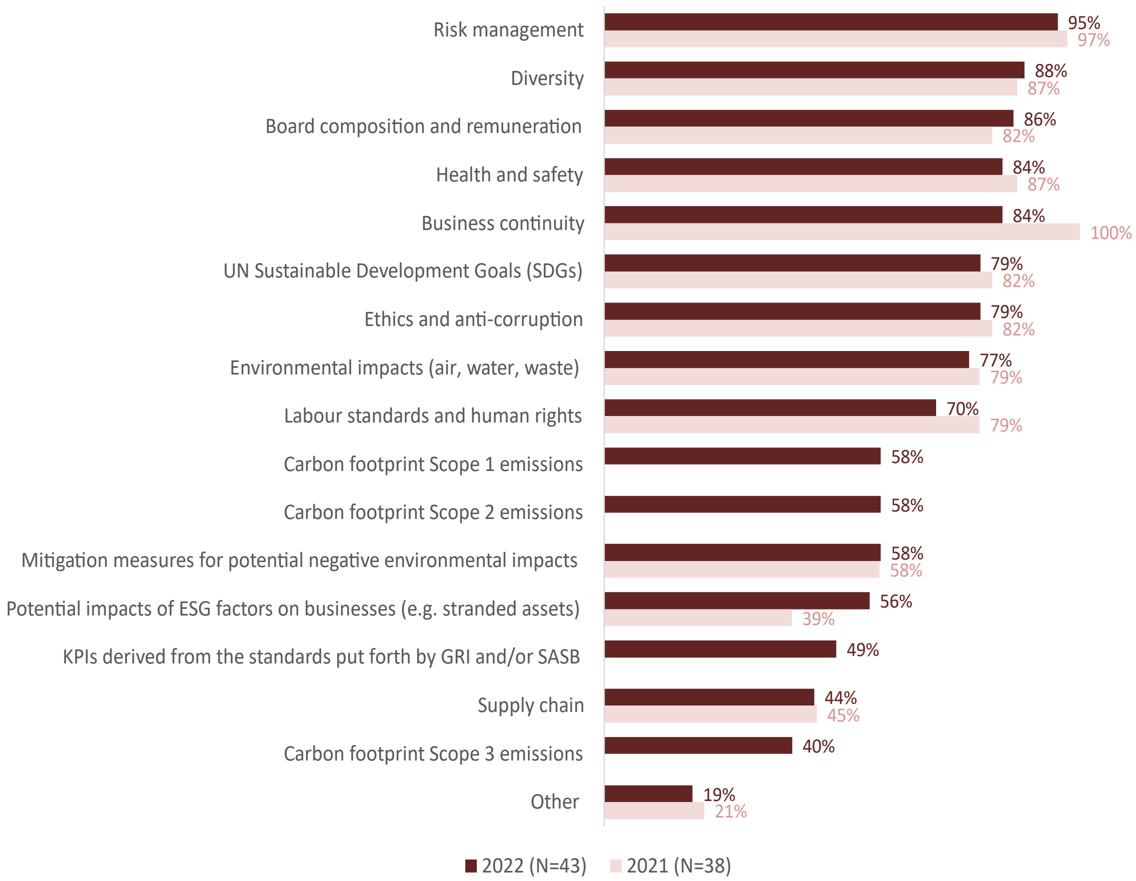
ESG factors in exchanges' reporting

Disclosing information that demonstrates a company's impact on sustainability and the added value it provides across different ESG factors is crucial for assessing its ESG footprint. ESG reporting can take multiple forms, such as being integrated into the annual financial report or existing as a standalone document. And it could cover all or just a portion of the distinct ESG factors. The survey examined the formats employed by the exchanges and the primary ESG factors addressed in the reports.

The proportion of responding exchanges publishing their own sustainability report has significantly increased from 70% (38/54) to 80% (43/54). This year, the survey included as ESG factors the three scopes of carbon footprint emissions (see **Box 3**), along with KPIs based on the standards established by GRI and/or SASB.

Figure 10 presents the coverage of reporting across 16 different ESG factors. Five exchanges reported that their sustainability report encompassed all of them. Though their order has changed, the top five factors remain the same as in the previous year. This year, "Risk management" emerged as the most frequently reported factor (41/43, 95%) in the survey, while "Business continuity," which was the top-reported factor (38/38, 100%) last year, fell to fifth place (36/43, 84%).

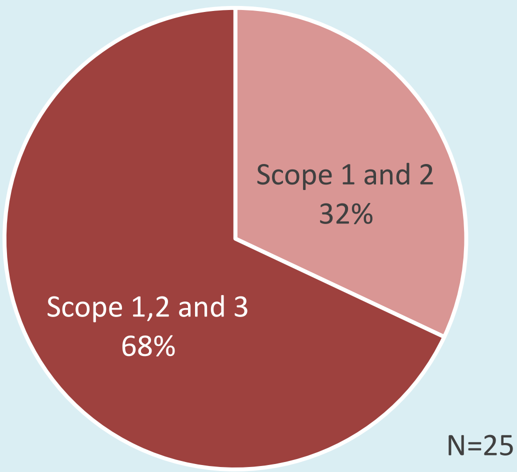
Figure 10. ESG factors reported by exchanges*



**Multiple answers allowed*

Box 3: Scope of GHG emissions and exchanges' engagement

Figure 11. Carbon footprint emissions



Scope 1, Scope 2, and Scope 3 are terms utilised in the domain of Greenhouse Gas (GHG) inventories and are integral to corporate sustainability reporting. These terms have been outlined by the Greenhouse Gas Protocol, a globally recognised international standard.

Scope 1 encompasses all direct GHG emissions from sources that are owned or controlled by the organisation. For instance, emissions from company-owned vehicles, factories, or any other operational facilities. This scope allows for a clear assessment of the direct environmental impact an organisation has through its immediate activities.

Scope 2 includes GHG emissions resulting from the generation of purchased electricity, steam, heating, and cooling that the organisation consumes. Although these emissions are not directly controlled by the organisation, they are a consequence of the organisation's energy use and therefore are considered in the inventory. This highlights the organisation's indirect impact on the environment through its consumption of energy.

Scope 3, on the other hand, covers all other indirect emissions not included in Scope 2. These emissions occur in the value chain of the reporting company and incorporate both upstream and downstream emissions. These could be emissions from the extraction and production of purchased materials, outsourced activities, waste disposal, and the use of sold products and services, among others. This scope provides a broader perspective on the organisation's indirect environmental footprint across its value chain.

Twenty-five (25/43, 58%) exchanges reported their carbon footprint emissions. The fact that 68% of these exchanges cover all three scopes reflects their comprehensive approach to measuring and managing their carbon footprint, considering both direct and indirect emissions throughout their value chain (see **Figure 11**). 32% of exchanges reporting at least scope 1 and 2 emissions highlight their focus on their direct emissions as well as indirect emissions from purchased energy.

According to the survey, 49% of the respondents follow the widely recognised sustainability reporting frameworks established by the Global Reporting Initiative (GRI) or the Sustainability Accounting Standards Board (SASB). By using these standards, these exchanges ensure that their KPIs related to ESG issues are consistent, comparable, and transparent. This also demonstrates a commitment to best practices in sustainability reporting and helps build trust with stakeholders, regulators, and investors by providing reliable and relevant information on their ESG performance. Furthermore, the UN Sustainable Development Goals (SDGs) continued to garner significant interest this year and remained closely aligned with the top five reporting factors from the past two years.

The balance between E, S and G

In 2020, we introduced a question asking exchanges to indicate what percentage of their total ESG efforts was focused on Environmental (E), Social (S), or Governance (G). This year, a total of 45 respondents shared a breakdown of their ESG efforts.

Table 1 displays the average percentage of exchanges' efforts dedicated to each of the three ESG components. These scores were calculated for all participants and across regions. The average scores for each component remain similar to the previous year. In 2022, governance accounted for an average of 38.0% of exchanges' sustainability efforts, retaining its status as the primary focus area in ESG. The difference in effort between the social (31.1%) and environmental (30.9%) components was small and not statistically significant.

The statistically higher focus on governance (p-value < 0.01) compared to the other two components, suggests exchanges placing a greater emphasis on maintaining robust ethical standards, accountability, and transparency in their operations. This commitment can result in improved decision-making and risk management while still addressing environmental and social aspects.

When grouping by regions, the results are similar. Governance consistently received the highest effort score, and the score dispersion was lower in the Americas region, consistent with the results from 2020 and 2021. This suggests that exchanges in the Americas tend to have a more balanced approach to addressing environmental, social, and governance issues.

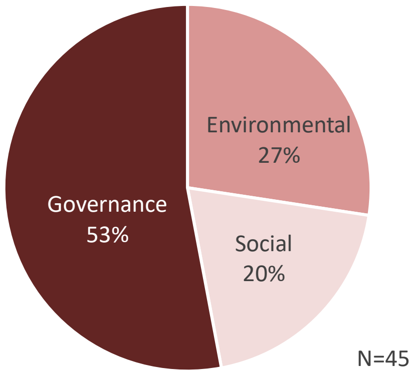
Table 1. ESG efforts breakdown (average percentages)

Region	N	Environmental (%)	Social (%)	Governance (%)
ALL	45	30.9	31.1	38.0
AMERICAS	8	34.3	30.5	35.3
APAC	12	29.0	31.4	39.5
EMEA	25	30.8	31.1	38.1

In addition to measuring the average effort distribution for E, S and G, we also analysed the percentage of exchanges that prioritised each individual component. To do this, we assigned a weight of 1 to the ESG component, where each exchange received the highest effort. In the case of two (or three) areas receiving the same highest score, we assigned a weight of 0.5 (or 0.33) to each area.

Figure 12 displays the distribution of the exchanges' top priorities, showing that 53% of the exchanges prioritise governance. Compared to last year, the narrower gap between social and environmental priorities (7% vs 18%) supports the notion that exchanges are taking a more balanced approach to addressing ESG issues.

Figure 12. Percentage of exchanges prioritising E, S, or G



4.2 UN Sustainable Development Goals (SDGs)

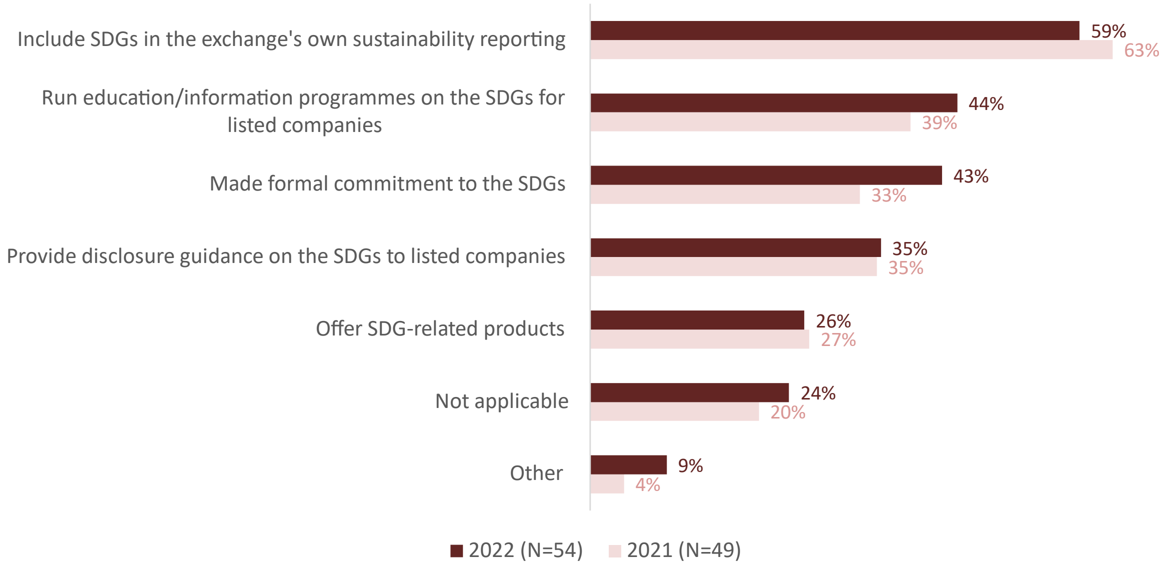
Gender equality; decent work and economic growth; and climate action top the list of the exchanges' engagement with specific SDGs

The UN Sustainable Stock Exchange (SSE) initiative is a United Nations Partnership Programme whose mission is to provide an international platform for exploring how exchanges can enhance performance on ESG issues and encourage sustainable investment.[4] The WFE and WFE members have been highly involved in the SSE initiative -- 54 of the WFE members are part of the initiative. Besides the SSE, the UN also sets 17 Sustainable Development Goals (SDGs), which are an urgent call for action,[5] and the WFE members also strongly engage in promoting and achieving the SDGs.

In the WFE Sustainability survey, we collected information on the exchanges' UN SDGs-related initiatives. The summary result is presented in **Figure 13.**

[4] For more information on the UN Sustainable Stock Exchange initiative, see https://sseinitiative.org.
[5] For more information on the UN Sustainable Development Goals, see https://sdgs.un.org.

Figure 13. UN SDG-specific initiatives*



**Multiple answers allowed. These initiatives do not apply to derivative-only exchanges.*

In accordance with past trends, WFE members and affiliates demonstrated a strong commitment to the UN Sustainable Development Goals (SDGs), with 76% (41/54) of respondents implementing sustainability initiatives linked to the SDGs. Of these respondents, 59% reported incorporating the SDGs into their sustainability reports, making it the most frequently reported initiative in 2021 and 2022. The second and third most common initiatives were offering educational programs and formally committing to the SDGs, respectively.

In the survey, 26% of the respondents reported offering SDG-related products. Of these, ESG bonds (i.e., green, social, and sustainable) were the most frequently offered, available at ten exchanges. ESG indexes were the next most common, offered by five exchanges. Additionally, exchanges facilitated the advancement of the SDGs by offering ESG ETFs and establishing ESG-dedicated market segments.

As with previous years, we surveyed exchanges to identify which of the 17 SDGs they focused on. In this year's survey, 73% of responding exchanges indicated they followed the UN Sustainable Stock Exchanges Initiative's recommendation and engaged in Goals 5, 8, 12, 13, and 17, representing an increase from 57% in the previous year. These five SDGs were also the top five SDGs in this year's survey and the three preceding years, although their order is slightly varied.

"Goal 5: Gender Equality" continued to be the item attracting higher engagement, as indicated in **Table 2**. The top five goals saw increased engagement compared to the previous year, demonstrating growing interest and involvement in these objectives.

Table 2. The five SDGs attracting higher engagement from exchanges

SDGs	2022 (N=42)	2021 (N=37)
Goal 5: Gender equality	39	32
Goal 8: Decent work and economic growth	39	31
Goal 13: Climate action	37	29
Goal 17: Partnerships to achieve the goal	37	26
Goal 12: Responsible consumption and production	31	26

Gender Equality

Driven by the UN SDGs and the desire of exchanges to advance gender equality, the WFE initiated the collection of gender-related data in their 2020 survey. **Table 3** presents this year's average proportion of female members in the boards, senior management, and workforce of exchanges.

Despite a slight overall increase in the average percentage of women in board and senior management positions, the composition has changed, particularly in exchanges in the Americas region. The decrease in female board members in the Americas region exchanges (2.7%) contrasts with the significant increase in female senior managers in the same region (from 34.2% in 2021 to 42.9% in 2022). The average female workforce in exchanges has experienced a modest growth of 1.2% since last year, indicating progress in overall gender diversity. The APAC region stands out for its substantial increase in female workforce participation, with a 4.2% rise compared to the previous year. Overall, the Americas region is at the forefront when it comes to women holding leadership positions, while both the EMEA and APAC regions exhibit comparably elevated levels of female representation in the workforce.

Table 3. The average percentage of female representation

Region	N	Board (%)	Senior Management (%)	Workforce (%)
ALL	53	20.7	32.1	42.7
AMERICAS	8	24.6	42.9	38.0
APAC	16	17.6	29.4	45.0
EMEA	30	21.5	31.0	42.8

Asked whether the exchange had targets in place to increase female representation, 16 (30.2%) respondents indicated that they had such targets. Among these 16 exchanges, twelve are in the EMEA region, two are in the Asia-Pacific region, and two are in the Americas region. Exchanges with targets to improve gender equality have, on average, 24%, 32%, and 41% female representation on their board, senior management, and workforce, respectively. Note that the female presentation on their board has greatly improved compared to last year (24% vs 15%).

Box 4: Initiatives to promote gender equality

Gender equality has emerged as a key area of emphasis in the sustainability efforts of stock exchanges. These exchanges are putting into action various initiatives to enhance female representation both within their own organisations and among the companies they list.

Hong Kong Exchanges and Clearing Limited (HKEX) introduced an amendment to the Corporate Governance Code – in which they banned single-gender boards for all new IPO applicants, with all existing issuers set to follow suit by 2024 – which came into effect on 1 July 2022. This rule is significant because it will help improve boardroom gender diversity and unlock the potential of senior female leaders in Hong Kong. To support this new policy, they introduced a new "Board Diversity & Inclusion in Focus" repository on their website, providing information on the age, gender and tenure profile of listed issuers' board of directors, improving transparency around board diversity.

Industrial processing, distribution, and services company Barloworld listed South Africa's first gender-linked bonds on the **Johannesburg Stock Exchange (JSE)** The two bonds aim to raise R1.1 billion, which would support women empowerment initiatives within the company's leadership structures and supply chain.

Luxembourg Stock Exchange (LuxSE) and UN Women signed a Memorandum of Understanding (MoU) to promote initiatives for financing gender equality and women's empowerment. A gender-focused bond flag was added to all debt securities on LGX that fund gender equality projects. This allows investors to easily identify and invest in projects that align with UN Sustainability Goal 5.

Exchanges have implemented various initiatives to enhance gender equality, such as participating in the Ring the Bell for Gender Equality event, adopting gender-blind hiring practices, encouraging gender diversity on corporate boards, reducing the gender pay gap, establishing gender-sensitive and anti-sexual harassment policies, and providing maternity and paternity leave (see **Box 4** for some examples). Among these, the Ring the Bell for Gender Equality initiative stands out as the most widespread, with 121 exchanges and CCPs reporting their involvement (see **Box 5**). Three exchanges indicated their participation in initiatives encouraging parental leave, while 84% (44/52) of respondents reported having established paternity leave policies.

In addition, the survey sheds light on gender equality in businesses listed on the stock exchanges. Out of the 51 stock exchanges that responded, 21 (41%) track the representation of women on the boards of their listed companies. On average, 56% of the listed companies that track female board representation have at least one woman on their board, which is a seven-percentage point increase from last year's 49%. As for establishing targets to encourage diversity within their boards, 44 out of the 52 responding exchanges (85%) have well-defined goals and are actively pursuing them. This represents a significant increase from last year's 38% (18/47), demonstrating a heightened commitment to promoting diversity.

Box 5: Ring the Bell for Gender Equality initiative[6]

The Ring the Bell for Gender Equality initiative, is a joint effort between the WFE, World Bank Group International Finance Corporation (IFC), Sustainable Stock Exchanges (SSE) Initiative, UN Global Compact, UN Women, and Women in ETFs. This collaboration aims to raise awareness about the role and opportunities of the private sector to promote gender equality and empower women in the workplace, marketplace, and community.

In its eighth annual 'Ring the Bell for Gender Equality event, a record number of 121 exchanges and central counterparty clearing houses (CCPs) from around the world (an increase of 17 from 2021) participated. Markets in 98 countries rang the opening or closing bells to commemorate International Women's Day 2022.

[6] For more information about Ring the Bell initiative, see: https://focus.world-exchanges.org/articles/exchanges-and-ccps-worldwide-ring-bell-gender-equality-2022.

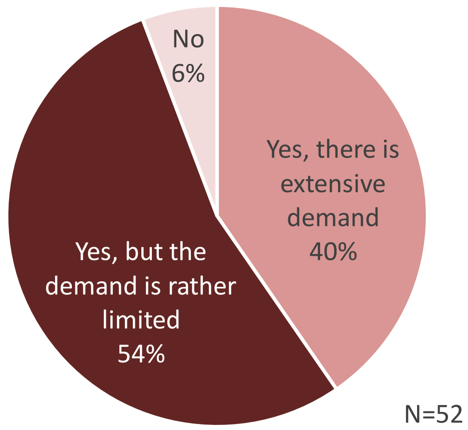
4.3 Transparency and reporting

Exchanges continue to be the major promoters of ESG disclosure, confirming their pivotal role in advancing transparency in ESG reporting

Transparency is fundamental for building trust and confidence in a market, and for this reason, timely and accurate disclosures and shared reporting standards are fundamental pillars of an efficient market. The WFE Sustainability Survey aims to gather and update information on disclosure- and reporting-related subjects, including investor demand for ESG disclosure, disclosure format, and disclosure standards.

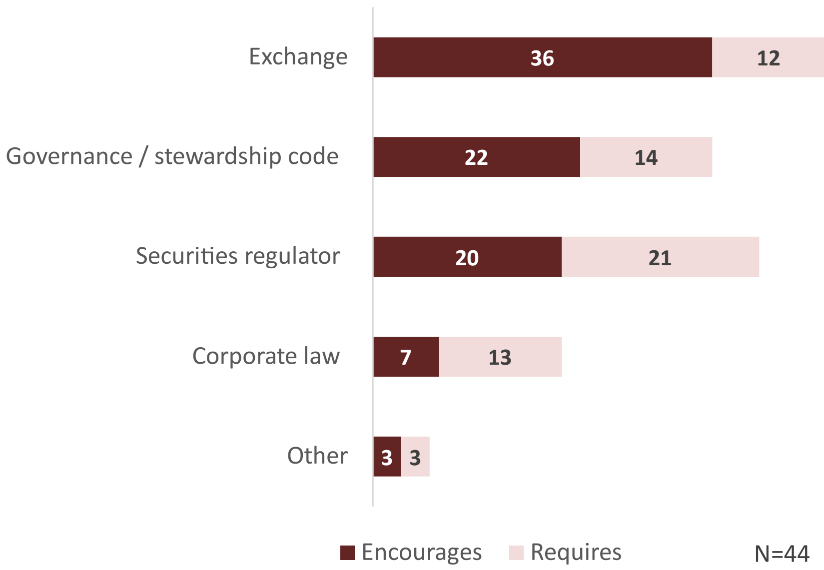
With regards to investor demand for ESG disclosure, the percentage of exchanges observing investor demand for ESG disclosure in their jurisdiction has consistently remained high at 94%, akin to the previous two years. The nature of demand for ESG disclosure is also quite similar to last year (see **Figure 14**), with 40% of respondents reporting extensive demand for ESG disclosure, while 56% indicated limited demand in their jurisdiction. Three exchanges, all located in the EMEA region, reported a lack of demand for ESG disclosure.

Figure 14. Investor demand for ESG disclosure



To pinpoint the driving forces behind ESG disclosures, the survey posed questions about the principal drivers contributing to these disclosures. **Figure 15** displays a breakdown of the responses obtained. The results show that exchanges continue to be the primary promoters of ESG disclosure, consistent with prior years. Interestingly, in three markets exchanges are the sole entity encouraging or requiring ESG disclosure.

Figure 15. Drivers of ESG disclosure*



**Multiple answers allowed*

ESG disclosure: formats and standards

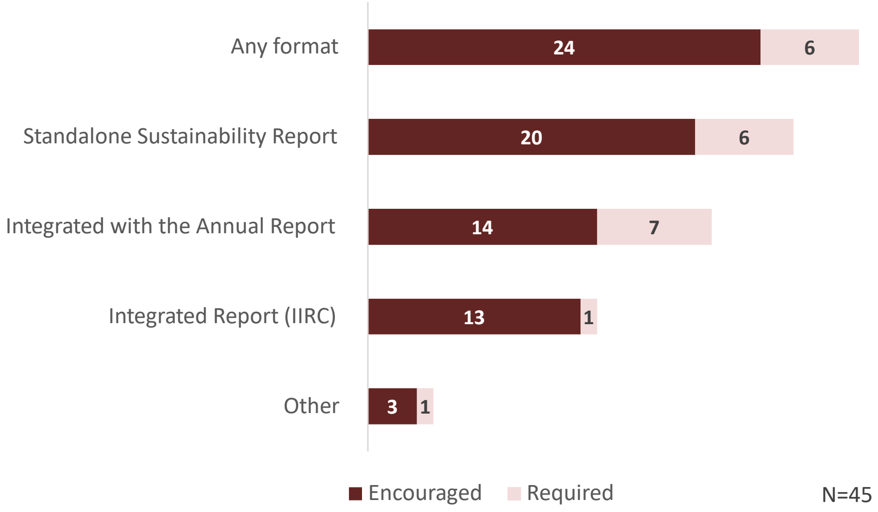
Ensuring high-quality, consistent, and comparable ESG information, which can serve the best interest of all stakeholders, is one of the main challenges reported by exchanges. To track the development of reporting approaches, we collected information on the reporting standards and formats supported by exchanges.

Figure 16 displays the exchanges' responses concerning the disclosure format they encourage or require for reporting. The results reveal that exchanges typically do not impose specific requirements, allowing companies to choose their own format, with "any format" obtaining the highest overall ranking. Out of the 45 respondents to this question, 24 exchanges encourage ESG reporting without prescribing a particular format. Additionally, six exchanges requiring ESG reporting did not specify a disclosure format.

Among the pre-defined reporting formats, a standalone sustainability report remains the most favoured option, with 20 exchanges recommending and five requiring a standalone sustainability report for their listed companies. This format has experienced significant growth in the last years, increasing from 19% of exchanges encouraging or requiring disclosure in this format in 2018 to 58% (25/45) in 2022, which suggests that exchanges are increasingly acknowledging the benefits of dedicated ESG reports, which may offer more in-depth and transparent insights into a company's sustainability performance and initiatives. Integrating ESG disclosure in the corporate annual report is the second most popular pre-defined reporting format, maintaining a similar level of popularity compared to the previous year, with 14 exchanges encouraging and six exchanges requiring its use.

Other cited reporting formats include specific formats developed by the exchange or security regulators.

Figure 16. Reporting format encouraged/required by exchanges*



Multiple answers allowed

Different from reporting format, which refers to the way ESG information is presented, reporting standards are the rules for ESG measurement and disclosure. Accounting standards-setting bodies, in general, determine the ESG standards. Some of the popular ESG standards include the Global Reporting Initiative (GRI), the Task Force on Climate Related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB), and the standard issued by the Sustainability Accounting Standards Board (SASB).[7]

Figure 17 shows which reporting standards are either encouraged or required by the exchanges. Overall, the absence of consensus on the required or recommended reporting standards among the exchanges persists in 2022. The GRI standard attracts the higher support, while TCFD, SASB, and any international standards are each encouraged by 20 exchanges. Notably, TCFD has emerged as the most commonly enforced standard by exchanges this year. Six exchanges now require listed companies to use TCFD, in contrast to the previous year when only four exchanges had the same stipulation.

[7] The SASB and International Integrated Reporting Council have now merged to create a new initiative called the 'Value Reporting Foundation.' This will help to further streamline the number of reporting initiatives that exist as well as support the work of the IFRS Foundation Trustees.

Box 6: Enhancing ESG disclosure

The following are some of the exchanges' achievements in 2022 in enhancing ESG disclosure:

In March 2022, **Athens Stock Exchange (ATHEX)** published a new edition of the ATHEX ESG Reporting Guide 2022. This updated guide was released following a review of the first ESG Reporting Guide published in 2019. The content and metrics in the new guide have been updated to align with recently published or amended international and European standards and legislation, such as the SFDR, EU Taxonomy, GRI Standards 2021, TCFD, and the Hellenic Corporate Governance Code 2021. This move underscores ATHEX's commitment to continually enhancing resources available to Greek listed and non-listed companies to ensure they adapt successfully to the evolving landscape of ESG disclosure.

The **Johannesburg Stock Exchange (JSE)** released a Sustainability and Climate Disclosure Guidance to encourage transparency, good governance, and best practice in environmental, social, and governance (ESG) disclosure among listed companies.

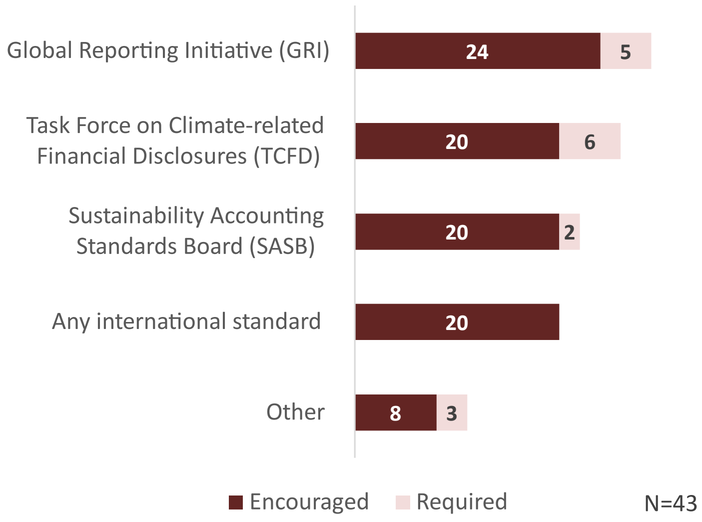
The Korea Exchange (KRX) introduced a new rule in 2022, requiring firms with total assets exceeding KRW 1 trillion to submit corporate governance disclosures. This led to a 60% increase in corporate governance disclosure compared to the previous year. KRX is actively promoting sustainable business practices among public companies, creating an environment conducive to sustainability reporting. These efforts have resulted in a significant surge in sustainability reporting, showing a 68% increase compared to the prior year.

A record high number of **Shanghai Stock Exchange (SSE)** main board companies (over 870) disclosed their ESG reports in 2022. Additionally, more than 1,300 companies established environmental protection mechanisms and over 1,200 companies adopted carbon reduction measures, reducing emissions equivalent to over 800 million tons. In the SSE STAR segment, all companies disclosed ESG-related information, with 130 publishing separate social responsibility or ESG reports.

Singapore Exchange (SGX Group) launched the Sustainable Fixed Income Initiative (SFI Initiative) in November 2022. The SFI Initiative is designed to help investors identify green, social and sustainable fixed-income securities that meet recognised standards. The securities must be verified by an external reviewer and offer public reports on their alignment with the recognised standards. To maintain recognition under this initiative, issuers must provide updates on material developments and compliance with the standards.

The **Taiwan Stock Exchange (TWSE)** has made significant progress in promoting sustainability reporting and disclosures among its listed companies in 2022. Around 50% of listed companies had filed their 2021 sustainability reports by the end of the year, with nearly 70% of these reports verified by third parties. Furthermore, TWSE has lowered the threshold for companies required to publish sustainability reports from those with a paid-in capital of over NTD 5 billion to NTD 2 billion starting in 2023.

Figure 17. Reporting standards*

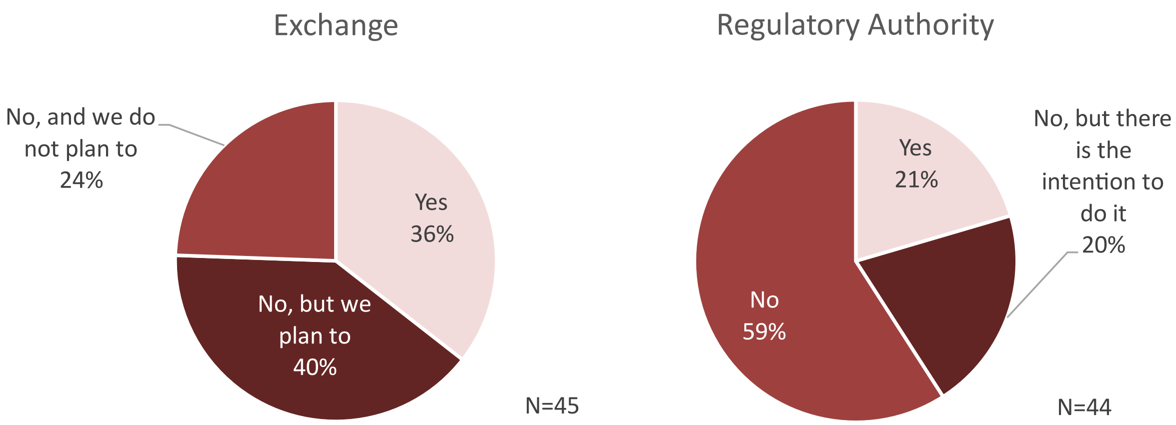


**Multiple answers allowed*

In response to the growing interest in TCFD standards, the survey gathered information on the primary organisations promoting these standards. About 36% of the exchanges surveyed expressed their support for TCFD standards, while another 40% plan to do so. Figure 18 shows the extent to which TCFD standards are being recommended or mandated by the exchanges and/or by local regulatory authorities. The proportion of respondents that have the regulatory authorities mandating corporate disclosures against the TCFD framework has increased to 21% (9/44), which represents a significant rise compared to the 12.8% observed in the prior year's survey. This trend underscores the intensified focus on climate-related financial disclosures. As an example, the UK is poised to become the first G20 nation to legally mandate that its largest companies and financial institutions report on climate-related risks and opportunities in compliance with TCFD-aligned requirements.[8]

8 For more information: https://www.gov.uk/government/news/uk-to-enshrine-mandatory-climate-disclosures-for-largest-companies-in-law

Figure 18. Including TCFD Recommendation in the reporting guidance or requirements

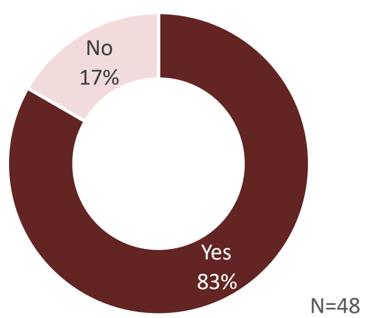


The left hand side represents the answer to the question: Has your exchange included the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in the reporting guidance or reporting requirements for listed companies? The panel on the right shows the answer to the question: Have the authorities in your jurisdiction mandated corporate disclosure against the TCFD framework?

To support ESG disclosure by listed companies, stock exchanges also provide issuers with ESG reporting guidance. The survey revealed that 63% (33/52) of respondents have guided companies on issues that are material for disclosure purposes. While 22 exchanges publish their own reporting guidance, eleven recommended or referenced existing guidance.

The International Sustainability Standards Board (ISSB) was set in 2022 as an independent, private-sector body that develops and approves IFRS Sustainability Disclosure Standards (IFRS SDS). The ISSB operates under the oversight of the IFRS Foundation. Asked about their support for the ISSB, 83% of the respondents were in favour, confirming a robust endorsement for the new ESG standard-setting board (**Figure 19**).

Figure 19. Support for the creation of the ISSB



With regards to the question of whether the exchanges require assurance or verification of listed companies' ESG data/disclosure, the results show that 38% (17/45) of respondents have no requirement for verification or did not anticipate implementing such a requirement in the future. This is a considerable drop from the previous year (60%). Three exchanges mandate the verification of issuers' ESG data, and an additional eleven exchanges indicated their intention to implement such a requirement in the future.

4.4 Sustainability products

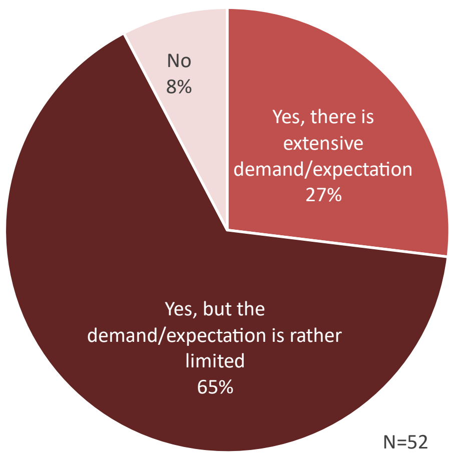
The offering of ESG products and of dedicated ESG platforms is rapidly increasing in response to an increase in demand

The growing interest in ESG products among investors has prompted exchanges to increasingly facilitate the listing, trading, and overseeing of these offerings. Exchange-listed or traded ESG products offer an effective means for directing capital towards sustainable businesses and initiatives. In response to this trend, the WFE has incorporated data on ESG-related bonds into its **Statistics Portal**, providing valuable insights into these products and their respective markets.

As in the previous years, the survey asked the respondents about the demand and offer of ESG products. This year, to support the efforts made towards achieving carbon neutrality, we have included questions about the carbon market.

First, the survey asked exchanges whether they observed demand for ESG products in their respective markets. The results, summarised in **Figure 20**, reveal that 92% (48/52) of the exchanges observed some degree of investor interest in ESG products (it was 94% in 2021). Among these exchanges, 14 reported extensive demand for such products. However, four exchanges from emerging markets in the EMEA region indicated an absence of investor interest in sustainability-related products.

Figure 20. Investor demand for ESG products

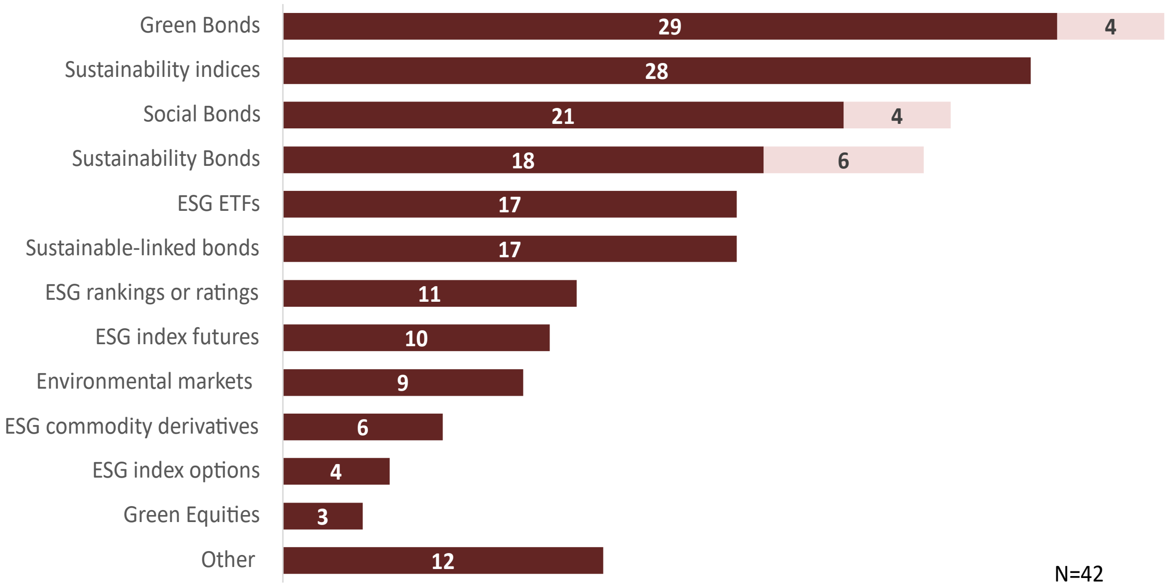


To understand how exchanges are addressing investor demand, we gathered data on the ESG products that are offered by exchanges. In 2022, 42 exchanges offered ESG-related products, an increase from 39 in 2021, representing 81% of all respondents. Additionally, four out of five derivative-only exchanges featured ESG products, covering commodity and environmental market derivatives.

Figure 21 illustrates the distribution of products provided by exchanges, with green equity added to last year's list. Like the previous year, green bonds (including green Sukuks) remained the most sought-after ESG products, with 78.6% (33/42) of respondents offering them. Sustainability indices closely trailed, becoming the second most popular ESG product (66.7%, 28/42). In terms of ESG derivatives, ESG index futures were the most offered, followed by ESG commodity derivatives.

ESG products categorised as "Other" include renewable energy-focused funds and futures; bonds with a gender-based focus; ESG-related exchange-traded notes (ETNs); indices for green bonds and responsible investment funds; and initiatives for issuer education and engagement on ESG matters.

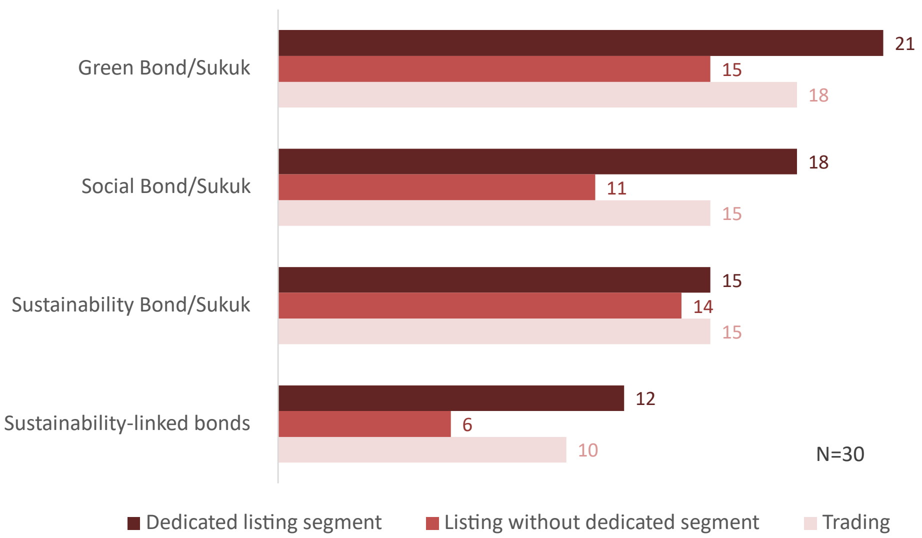
Figure 21. Exchange-offered ESG products*



**Multiple answers allowed. Segments in red indicate Sukuk products*

The survey also collected information on how the sustainability-related bond markets were set up in different exchanges (see **Figure 22**). Approximately 70% of exchanges that offer green bonds/Sukuk have a dedicated listing segment for them. In the case of other bond/Sukuk types provided by exchanges, at least 40% have a dedicated listing segment, marking an increase compared to the previous year (28%). However, not all exchanges featuring sustainability-related bond listings facilitate the trading of these bonds on the exchange.

Figure 22. Sustainability-related bond markets



**The three options (trading, listing without a dedicated segment, and dedicated listing segment) are not mutually exclusive.*

Box 7: New sustainable products and dedicated platforms

In 2022, we saw exchanges ramping up their efforts in providing more sustainable products to support the development of sustainable finance. The following are a few highlights from the year.

Borsa İstanbul (BIST) has a history of creating sustainability-themed indices, dating back to the launch of the Corporate Governance Index in 2007. In 2022, BIST introduced the Sustainability 25 Index, comprising companies with exceptional sustainability performance, market capitalisation, and liquidity. Furthermore, BIST launched its first ESG derivative contracts on this index in early 2023, offering investors a new financial product to hedge their ESG portfolios.

Hong Kong Exchanges and Clearing Limited (HKEX)'s Sustainable and Green Exchange (STAGE) welcomed more sustainable and green finance products this year and now features data and information on 100+ green, social and sustainability (GSS) bonds, as well as ESG ratings for more than 720 companies. The platform remains a central hub for data and information on sustainable and green finance products in Asia.

Several South African financial institutions have listed green, social, and sustainability-focused bonds and funds on the **Johannesburg Stock Exchange (JSE)**. FirstRand Bank and Nedbank are funding green and eco-friendly projects, while Standard Bank aims to finance affordable housing for female borrowers. Satrix has listed an Inclusion and Diversity ETF, while Transsec 5 and SA Taxi Holdings have received approval to list social bonds for public transport and economic initiatives. Sygnia has listed an ESG ETF on the JSE's Main Board. The JSE also hosted Africa's first sustainability-linked bond by Netcare and South Africa's first social bonds.

With the growing investor interest in ESG, the **Korea Exchange (KRX)** is increasing its range of ESG products. It has introduced a sustainability-linked bonds segment to overcome the limitations of existing Socially Responsible Investment (SRI) bonds and to back companies' sustainability initiatives. The number of ESG indices calculated by KRX has risen to 11, and the count of ESG-related Exchange-Traded Product (ETP) offerings has also grown, now reaching 14.

By the end of 2022, the China Securities Index, a **Shanghai Stock Exchange (SSE)** subsidiary, had released 122 ESG-related indices. There were 77 products tracking these indices with assets under management (AUM) over RMB 100 billion (USD 14.4 billion). The **SSE** has also supported low-carbon industries through equity financing, with eight new energy, energy-saving, and environmental protection sector companies listed on the SSE STAR Market in 2022. The SSE has also expanded the green bonds market, with the issuance of green bonds and green ABS reaching RMB 75.2 billion (USD 10.8 billion) and RMB 67.3 billion (USD 9.6 billion), respectively.

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Box 8: Exchanges globally agree on a framework for Green Equity

On 23 March 2023, the WFE announced its industry-wide WFE Green Equity Principles[9], which represent the first global framework for labelling stocks and shares as green. These principles form a global framework for identifying and endorsing green shares.

The WFE Green Equity Principles will improve capital accessibility for issuers with predominantly green activities, supply investors with more information for decision-making, raise the profile of issuers among sustainability-focused investors, and enhance the visibility of issuers' green credentials and commitment to the green economy.

To be eligible for the WFE Green Classification, issuers must meet certain criteria based on five pillars: Revenues, Taxonomy, Governance, Assessment, and Disclosure. These principles are designed to prevent greenwashing and channel funds towards sustainable economies.

Our survey reveals that three exchanges, including Nasdaq[10], have introduced green equity, adhering to either their own guidelines or those prescribed by national regulators. Nasdaq, in particular, contributed to the creation of the WFE Green Equity Principles, utilising its own Green Designations to enhance transparency and visibility for investors interested in sustainable investments in European markets. Moreover, two other exchanges have indicated their plans to implement the WFE Green Equity Principles in the near future.

ESG labels

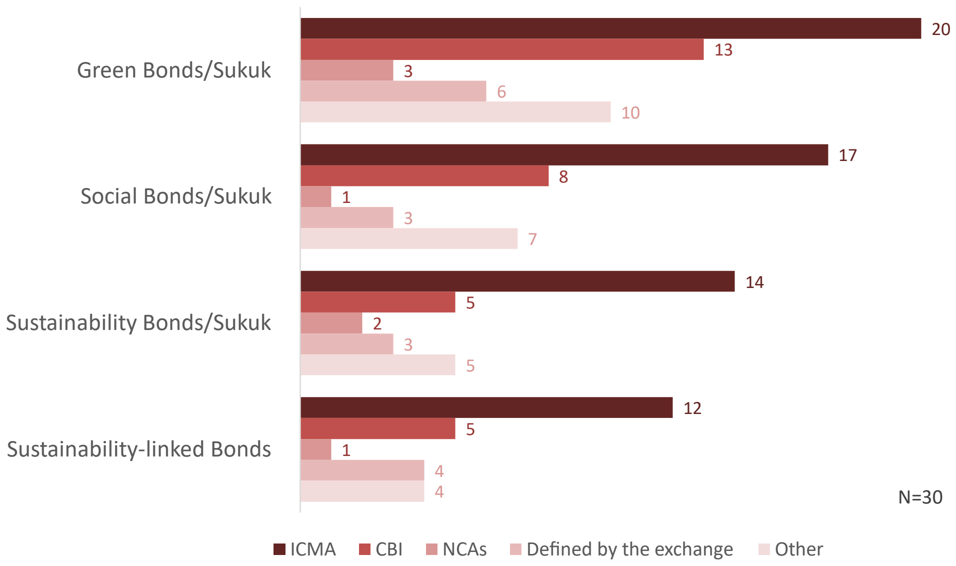
In addition to collecting information on the demand and offering of ESG products, the survey also inquired about the ESG standards and definitions used by the exchanges. Figure 23 reports which standards exchanges accept to label ESG products, and the results are very similar to last year. For each category, the standards set by the International Capital Market Association (ICMA) are the most frequently used by the exchanges in defining green, social, and sustainability bonds/sukuks. In second place come the standards set by the Climate Bond Initiative (CBI). Two exchanges also accept, in addition to ICMA and CBI standards, standards set by the National Competent Authority (NCA). Among the 30 exchanges that offer ESG bonds/sukuks, 15 (50%) rely on one definition standard, while the remaining 15 use multiple definitions in identifying the products. For those exchanges that rely solely on one standard, they generally follow the ICMA standard or issue their own standard. Other definitions identified by the respondents include the People's Bank of China Green Bond Endorsed Project

[9] You can read the WFE Green Equity Princiles in full via https://www.world-exchanges.org/storage/app/media/WFE%20Green%20Equity%20Principles.pdf

[10] Nasdaq Collaborates with World Federation of Exchanges on Launch of Green Equity Principles: https://www.nasdaq.com/articles/WFE-launches-green-equity-principles

Catalogue, ASEAN GBS, and the proposed EU Taxonomy. In one case, one exchange does not adopt any standards or definitions of green, social and sustainability bonds, but its classification is based on the issuers' self-disclaimer.

Figure 23. ESG product definition*



**Multiple answers allowed*

Carbon-conscious ESG commodities

This year, we continued tracking the progress of ESG commodities, which include spot commodities from sustainable sources, ESG commodity indices, and derivatives contracts based on sustainable spot commodities or indices. The introduction of these ESG commodities serves to address the changing risk management requirements and aid in the shift towards a greener and more sustainable economic landscape.

When inquired about the presence of investor demand for incorporating sustainability elements into derivatives contracts, 15 out of 18 exchanges confirmed that there was a demand for such sustainable products, representing 83% of the total respondents (**Figure 24**). This proportion is similar to what was observed in the previous year (82%). Among these exchanges, four reported extensive demand for such products. Regarding investors' desire for oversight and knowledge about the sustainable production of the underlying commodities, 65% of respondents acknowledged this demand, although the percentage of those reporting extensive demand has decreased compared to the previous year.

Box 9: Exchanges' role in promoting climate disclosure and net-zero commitments

Borsa İstanbul (BIST) is also supporting the capital market ecosystem by preparing guidance documents on climate-related disclosures. In 2022, BIST published an Integrated Reporting Guide for Companies and a Climate Reporting Guide, encouraging listed companies to report their climate-related information.

Cboe Global Markets (Cboe) has taken a leading role in promoting sustainability in the financial sector by becoming the first American exchange joining, in November 2022, the Glasgow Financial Alliance for Net Zero (GFANZ) and the Net Zero Financial Service Providers Alliance (NZFSPA). As a signatory to these alliances, Cboe is actively involved in creating Net Zero pathways for the financial services industry, positioning itself at the forefront of ESG efforts within the sector.

In July 2022, **Hong Kong Exchanges and Clearing Limited (HKEX)** launched the Hong Kong International Carbon Market Council, bringing corporates and financial institutions from across Hong Kong, Mainland China, and Europe together to explore the development of carbon markets in the region. Subsequently, HKEX launched Core Climate – a new carbon marketplace that connects the capital with climate-related products and opportunities in Hong Kong and beyond. Together, these two initiatives will help reshape Asia's carbon marketplace for years to come and support global efforts to address climate change.

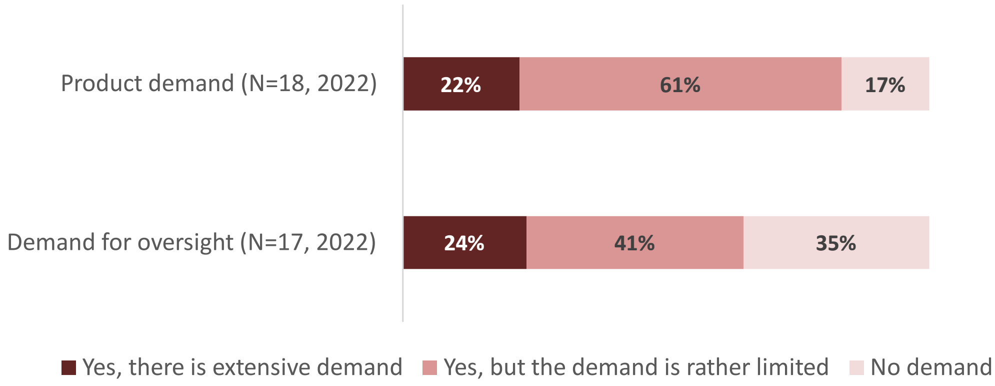
The **Johannesburg Stock Exchange (JSE)** pledged to support net zero emissions by 2050 by joining the Race to Zero Partner Initiative, the Net Zero Financial Service Providers Alliance (NZFSPA), and the Glasgow Financial Alliance for Net Zero (GFANZ).

Singapore Exchange (SGX) organised workshops and training courses to help listed issuers comply with the new climate disclosure rules and enhance their understanding of sustainability issues. These included a series of workshops in collaboration with Global Compact Network Singapore (GCNS) on the Task Force on Climate-related Financial Disclosures (TCFD), as well as a set of eight sustainability training courses for directors of listed issuers to meet the enhanced SGX listing rules.

The **Taiwan Stock Exchange (TWSE)** has also adopted international standards such as the SASB and TCFD to enhance sustainability reports. These standards require companies in specific industries to disclose sustainability indicators relevant to investors and disclose climate-related information.

The decrease in demand for oversight of sustainable sources does not necessarily indicate diminished interest in sustainable commodities, especially since the demand for products remains consistent with the previous year. Instead, this trend may imply that investors are adjusting to the ever-changing ESG investment landscape and refining their strategies based on their experiences and available resources. Factors contributing to this change may include growing familiarity with ESG investing, enhancements in transparency and reporting, and increased trust in established sustainability standards.

Figure 24. Demand for ESG commodity products and for oversight of sustainable sources



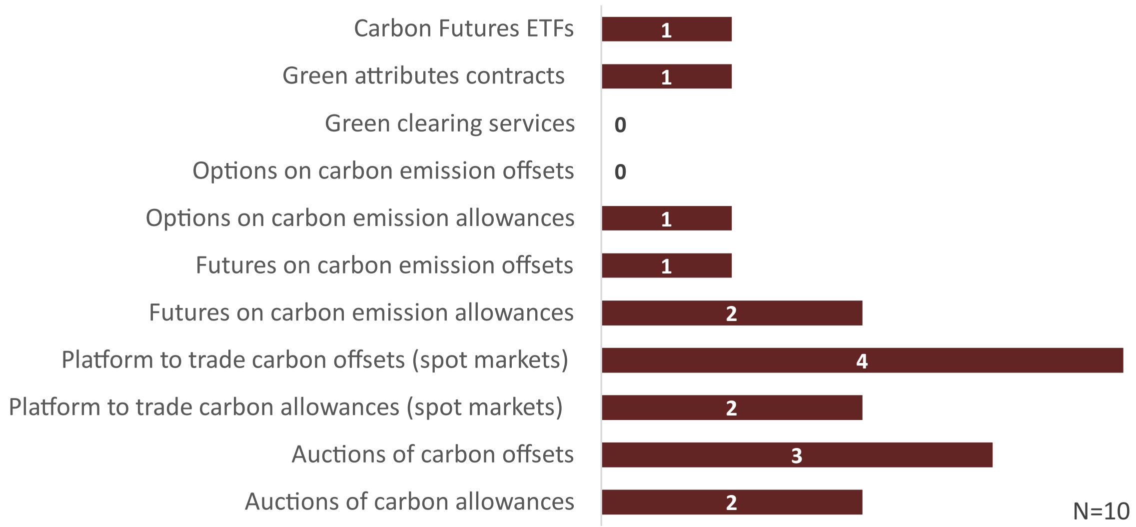
Due to the increasing demand, numerous exchanges have introduced ESG commodity products, as evidenced by 33% (17/52) of them offering these options, according to the survey results. Among the different types of ESG commodity products available, commodity derivatives are the most widespread, particularly ESG commodity futures. For example, the **CME Group** offers Global Wind Power Index futures, while the **Singapore Exchange (SGX)** features electricity futures for Asia that include contracts associated with renewable energy generation. Additionally, the **London Metal Exchange (LME)** provides a digital platform for sharing sustainability-related information, encompassing metals produced with low carbon emissions and responsible sourcing practices.

The carbon market plays a significant role in the realm of ESG commodities. By addressing the environmental aspect of ESG, which the survey indicates as the most emphasised aspect, the carbon market incentivises companies to invest in and produce ESG commodity products that contribute to a cleaner and greener future.

Carbon markets function through mechanisms like cap-and-trade systems or carbon taxes, where businesses are required to either reduce their emissions or purchase allowances or credits to offset their emissions. This creates a market demand for ESG commodity products that help reduce carbon emissions or promote carbon sequestration, such as reforestation projects, or carbon capture technologies.

Upon asking about the types of carbon markets present in the respondents' jurisdictions, six out of ten respondents mentioned the existence of voluntary carbon markets (VCMs), while two acknowledged having both compliance and voluntary carbon markets in their respective regions. Regarding the most traded environmental products, four out of ten respondents stated that their platforms facilitated trading carbon offsets through spot markets (see **Figure 25**). Certain exchanges have also shown interest in offset credits beyond carbon, such as those related to biodiversity products.

Figure 25 Carbon market products present in the respondent's jurisdiction



**Multiple answers allowed. Carbon emission allowances are typically traded in Compliance Carbon Markets (CCM). Carbon allowances are typically traded in Voluntary Carbon Markets (VCMs)*

5. Concluding remarks

The results from the **WFE Sustainability Survey 2022** demonstrate sustained progress in the industry's engagement with ESG issues. The survey, now in its ninth edition, marks the achievement of important milestones, with every exchange participating in at least one sustainability initiative. Such full engagement coincides with an increasing commitment to a balanced consideration of Environmental, Social, and Governance factors, and an increase in the diversity in ESG-related products. Furthermore, exchanges have actively engaged in discussions on the emerging voluntary carbon market, aiding in the push towards carbon neutrality.

Despite these advances, challenges remain. Limited resources for implementation, inconsistent ESG data, and the lack of standardised reporting frameworks are obstacles in the journey towards total sustainability. Moreover, despite the growth in ESG engagement, a consensus has yet to be achieved on ESG standards and formats. The Global Reporting Initiative (GRI) and the Task Force on Climate-related Financial Disclosures (TCFD) have been leading influences in ESG disclosure practices, but there remains work to do.

In a rapidly evolving finance sector, the continued success of ESG initiatives will require steadfast commitment, collaboration, and flexibility. Yet, the 2022 survey results highlight a positive trend and are an indication of the collective commitment to a more sustainable and inclusive future.

Annex 1: Survey respondents

WFE Members

Americas	Asia-Pacific	EMEA
Bolsa de Comercio de Buenos Aires	Bursa Malaysia	Abu Dhabi Securities Exchange
Bolsa de Valores de Colombia	Colombo Stock Exchange	Amman Stock Exchange
Bolsa de Valores de Lima	Dhaka Stock Exchange Ltd.	Athens Stock Exchange
Cboe Global Markets	Hong Kong Exchanges and Clearing	Bahrain Bourse
CME Group	Indonesia Stock Exchange	Borsa İstanbul
Latinex-Latin American Stock Exchange	Japan Exchange Group, Inc.	Boursa Kuwait
Nasdaq	Korea Exchange	Dar es Salaam Stock Exchange
TMX Group Limited	National Stock Exchange of India Ltd.	Deutsche Börse AG
Tunis Stock Exchange	Shanghai Futures Exchange	Dubai Financial Market
	Shanghai Stock Exchange	FMDQ Group
	Shenzhen Stock Exchange	Ghana Stock Exchange
	Taipei Exchange	Johannesburg Stock Exchange
	Taiwan Futures Exchange	Kazakhstan Stock Exchange
	Taiwan Stock Exchange	London Metal Exchange
	The Stock Exchange of Thailand	Luxembourg Stock Exchange
		Malta Stock Exchange
		Muscat Stock Exchange
		Nairobi Securities Exchange
		Nigerian Exchange Group
		Qatar Stock Exchange
		Saudi Stock Exchange
		SIX Group
		Stock Exchange of Mauritius
		Tel-Aviv Stock Exchange
		The Egyptian Exchange
		Warsaw Stock Exchange

WFE Affiliates

Americas	APAC	EMEA
	Pakistan Stock Exchange Ltd.	Baku Stock Exchange
		Botswana Stock Exchange
		Cape Town Stock Exchange

Annex 2: Sustainability Principles and corresponding sustainability initiatives

Sustainability Principle	Corresponding Initiatives*
Principle 1: Educate market participants about sustainability issues	• Run ESG capacity-building events/engagements for issuers and/or investors • Offer ESG education initiatives for issuers and/or investors • Organise workshops on ESG-related products • Produce guidance notes for green bonds issuance and listings • Offer ESG education initiatives to a wider set of stakeholders (e.g., universities) besides investors and issuers.
Principle 2: Promote the enhanced availability of ESG information	• Have issued formal ESG reporting guidance for listed companies • Have formally endorsed/supported the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) • Translate international guidance material into the local language • Engage with other stock exchanges to enhance the availability of non-financial information of listed companies. • Develop an ESG information platform for investors. • Provide ESG reporting platform for issuers.
Principle 3: Engage stakeholders to advance the sustainable finance agenda	• Engage stakeholders (regulators, policymakers and capital market participants) to advance the sustainable finance agenda. • Engage stakeholders in ESG standards setting. • Engage with other stock exchanges to enhance the availability of non-financial information of listed companies.
Principle 4: Provide markets and products that support the development of sustainable finance	• Have a dedicated listing segment for ESG-related bonds • Offer sustainability-related products (e.g., green bonds, specialised listing categories, ESG Index or related indices or ratings, carbon trading platform) • Produce guidance notes for green bond issuance and listings.
Principle 5: Embed sustainability into the exchange's governance, strategy, and organisation structures	• Publish the exchange's own sustainability report or include sustainability information in the annual report. • Have made a formal commitment to sustainability, e.g., SSE, UNPRI, UNGC, UN SDGs • Have a dedicated resources/ team to oversee the exchange's sustainability initiatives. • Run ESG capacity-building initiatives for the Board/staff of the exchange. • Include ESG issues and risks in the exchange's risk management process. • Engage in initiatives related to preventing human rights abuses within supply chains. • Have put in place net zero targets

**Some initiatives map to more than one Principle.*