Sustainable Finance in Asia: ESG and climate-aligned investing and policy considerations

Background note to the OECD-Asian Forum on Sustainable Finance

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Introduction

In recent years, environmental, social and governance (ESG) investing has evolved to become a leading approach for investors seeking to pursue forms of sustainable finance. This report takes stock of the major trends and current state of the ESG and climate-aligned investing in Asia and provides policy considerations to strengthen ESG investing and to help finance the climate transition.

Findings suggest that ESG and climate-related approaches have made significant progress in Asia (including through a high coverage of ESG ratings as a share of market capitalisation), and many jurisdictions in the region have issued ESG disclosure guidance to further strengthen practices and address challenges. However, ESG practices have developed at noticeably different speeds across Asian economies. Some Asia Pacific jurisdictions, such as Japan, have seen a strong increase in ESG coverage and investing, while various other economies have progressed less quickly, and are at varying stages of adoption.

While sustainable finance approaches are increasingly used by financial market participants, a number of challenges still undermine and hinder the efficient mobilisation of capital to support climate-related and other ESG objectives. These challenges include limited transparency and comparability of climate transition and ESG methodologies and metrics. Nonetheless, in Asia, the increasing involvement of regulators and stock exchanges, including with respect to ESG disclosure guidance, has helped improve ESG practices. To this end, this report suggests a number of policy considerations to facilitate and support financial market players for their adaptation of sustainable finance in their business activities in Asia notably through the development of quality disclosures, metrics, ratings, targets and frameworks. The policy considerations within this note serve to support Asian policymakers in discussions to voluntarily engage to strengthen ESG investing and bolster climate transition practices.

This note served as a background document to the first OECD-Asian Forum on Sustainable Finance that took place virtually on the 1st and 2nd December 2022. It builds on analysis conducted by the OECD on global ESG and climate-related approaches in financial markets and includes analyses adapted to the Asian region. The background document has been further enriched by integrating reflections from experts throughout the sessions of the OECD-Asian Forum on Sustainable Finance (see Annex A). The document has been prepared by Juan Pavajeau Fuentes and Catriona Marshall of the Capital Markets and Financial Institutions Division within the Directorate for Financial and Enterprise Affairs at the OECD. The document benefited from inputs and direction from Robert Patalano, as well as editorial and communication support from Liv Gudmundson and Greta Gabbarini. This background note and associated event were supported by the Government of Japan[1].

[1] Notably the Ministry of Finance and Japanese Financial Services Agency.

1 ESG investing in Asia: practices, progress and policy considerations

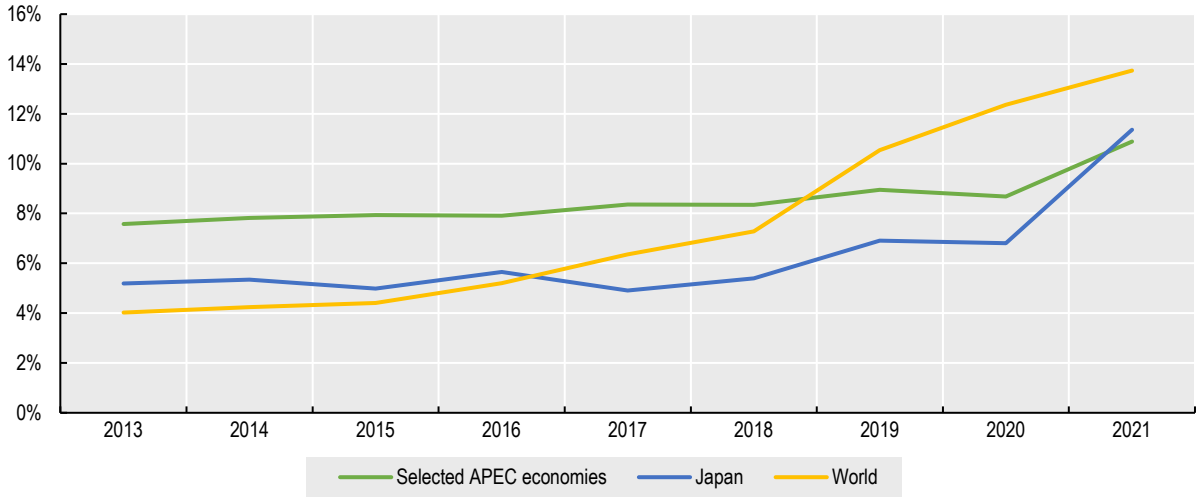
1.1. Overview of ESG rating trends in Asia

In recent years, governments, international organisations and the private sector in Asia have acknowledged that environmental, social and corporate governance considerations could affect market performance in the long-term. Hence, market participants are increasingly interested in incorporating of ESG factors in financial markets, thanks to its capacity to deliver non-financial information on sustainability concerns. This section provides an overview of practices in Asia, as well as progress and policy considerations.

As seen in Figure 1., there is an increasing trend of coverage by data providers of ESG ratings of public companies in Asia. This reflects an increasing interest by market participants to incorporate and examine sustainability considerations in the Asian financial sector. Nevertheless, ESG rating market coverage stood at 11% in 2021. This percentage is relatively low, especially because it is below the estimated global coverage (which stood at around 14% in 2021). Yet, there is progress from countries such as Japan, who has rapidly increased its coverage from 7% to 11% between 2020 and 2021, despite the global crisis caused by Covid-19.

Figure 1. Coverage of ESG ratings for public companies in Asia and the Pacific has increased

ESG rating market coverage (% share of public companies, 2013–2021)



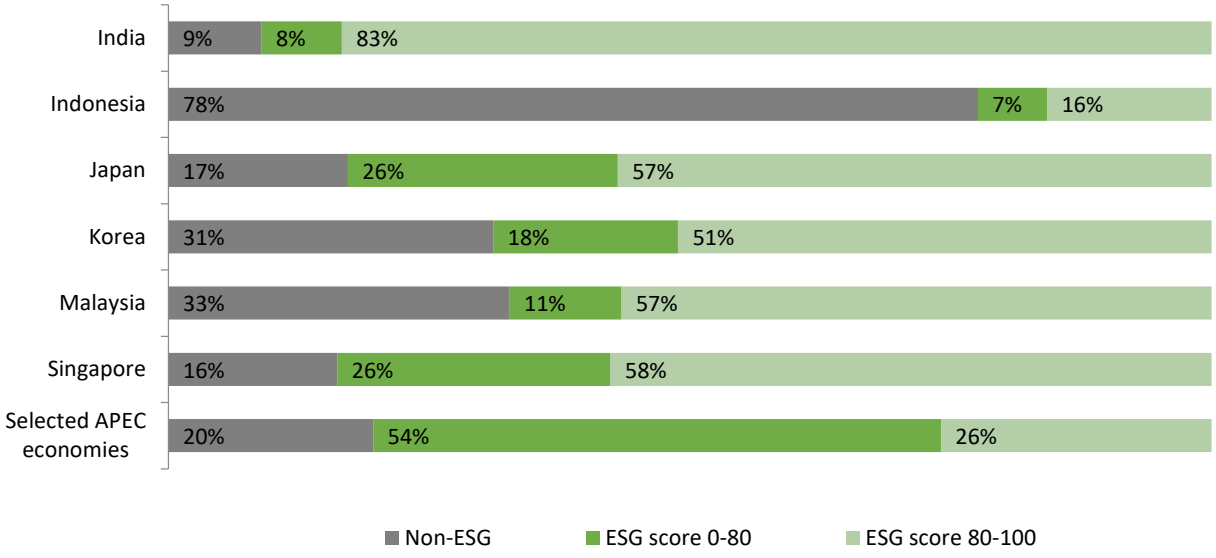
Note: Calculated as the number of public companies with an ESG score over the total number of public companies per each year. Selected APEC countries include Australia, Indonesia, Korea, Malaysia, New Zealand, Singapore, and Thailand.
Source: OECD calculations based on Refinitiv data.

While Asia is still scaling up the coverage of ESG ratings, as of 2021, they cover a large share of the region's companies in terms of market capitalisation**.** As shown in Figure 2, in 2021, ESG ratings covered companies that accounted for 80% of APEC's market capitalisation. There is a similar pattern at the country level in jurisdictions such as Japan (83%), Korea (69%), Singapore (84%), and Malaysia (67%). Nonetheless, other economies are still in an early stage of ESG rating coverage such as Indonesia (23%), which is expected to increase in the next years.

Overall, a large share of companies by market capitalisation are attributed an ESG rating, as the market is expanding to cover larger companies in the region. Moreover, as seen in Figure 3, there is a limited positive correlation between the market capitalisation and the ESG rating across different rating providers in Asia. There is only one provider showing such a positive correlation for APEC countries.

Figure 2. Coverage of ESG ratings by public companies differs across countries in Asia

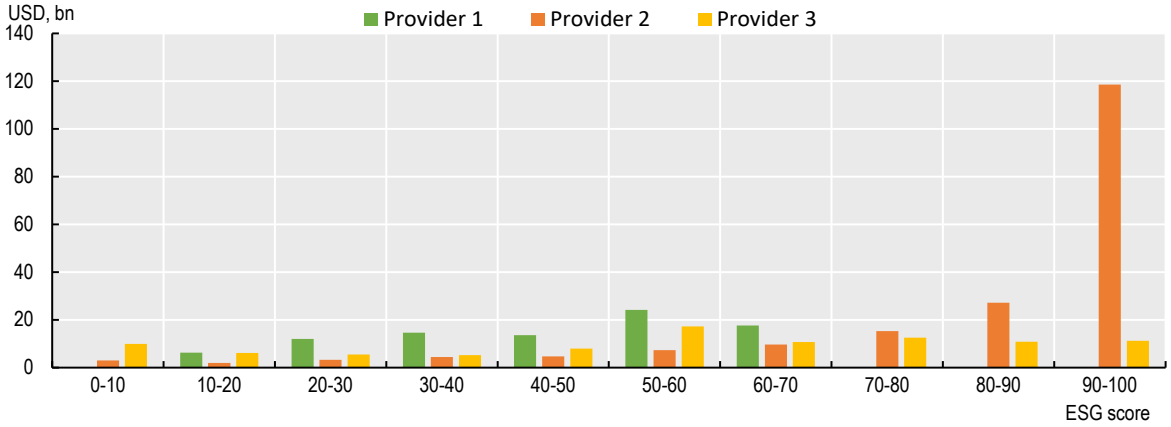
ESG rated public companies by country as a share of market capitalisation (2021)



Note: Selected APEC countries include Australia, Indonesia, Korea, Malaysia, New Zealand, Singapore, and Thailand.
Source: OECD calculations based on Refinitiv data.

Figure 3. The relationship between market capital and ESG scores is mixed in Asia

Average market capitalisation by ESG score across different rating providers in selected APEC countries, 2021



Note: One provider lacks enough data relative to ESG scores in the range from 70 to 100 to be included in the analysis. Selected APEC countries include Australia, Indonesia, Korea, Malaysia, New Zealand, Singapore, and Thailand.
Source: OECD calculations based on Bloomberg, MSCI, Refinitiv.

While these aggregate trends are positive, they represent the trend across public markets and hide considerable variation across companies in Asia. OECD research suggests that it may be possible that larger companies have an advantage, while smaller companies are not able to disclose ESG data that supports a better ESG rating (OECD, 2021[1]). A survey of 800 SMEs across six markets in Asia[2] conducted by the Development Bank of Singapore (DBS) and Bloomberg Media Studios in 2022, found that 60% of SMEs felt they had a lack of access to technical know-how and ESG specialists and 61% felt cost pressures when deploying ESG strategies.[3] The cost of reporting ESG data is still a challenge in the region; disclosing ESG data and other non-financial information represents additional costs for any company. For instance, it requires specialised staff to dedicate time on the reporting of such data. Additionally, ESG rating providers may request specific information to companies, such as climate scenario analysis, whose reporting implies additional costs for a firm. Larger companies are likely to have more extensive financial resources and reporting expertise than smaller firms, it is therefore probable that large-capitalised companies will disclose more ESG data than small and medium companies in Asia.

Moreover, regional smaller firms may not necessarily have the incentives to engage in ESG disclosure. If a firm expects to meet the criteria to obtain high ESG ratings across different providers, it will need to consider adopting a clear sustainability strategy and harnessing 'green' activities and opportunities. Nevertheless, this form of investment is relatively new and smaller companies may not necessarily be able to scale up such activities, while larger companies may be able to embrace such activities at an earlier stage.

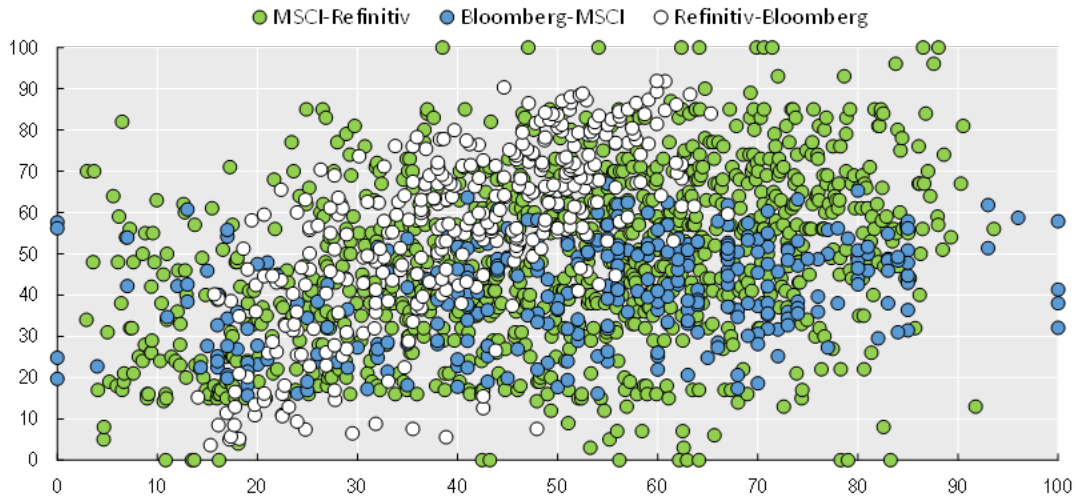
Furthermore, there is limited correlation among ESG scores across different providers (Figure 4**)**. This illustrates that it is possible for an individual company to receive a high ESG score from one rating provider and a relatively low score from another. OECD research highlights three elements that could be driving this trend (OECD, 2021[1]). First, rating providers use different frameworks and metrics to develop ESG scores. Second, there is a myriad of weighting approaches for metrics, which may skew the focus of overall

[2] People's Republic of China (China), Hong Kong (China), Singapore, India, Indonesia, Chinese Taipei.

[3] Bloomberg and DBS Bank, Survey Press Release: https://www.dbs.com/newsroom/DBS_More_than_six_in_10_SMEs_in_Singapore_find_it_challenging_to_transition_to_more_sustainable_models_while_balancing_business_growth

ESG scores. Third, qualitative judgements often factor into ESG rating methodologies, and vary across rating providers. Thus, challenges remain to assure the consistency and comparability across ESG ratings.

Figure 4.Correlation of ESG ratings in selected Asian economies across leading rating providers

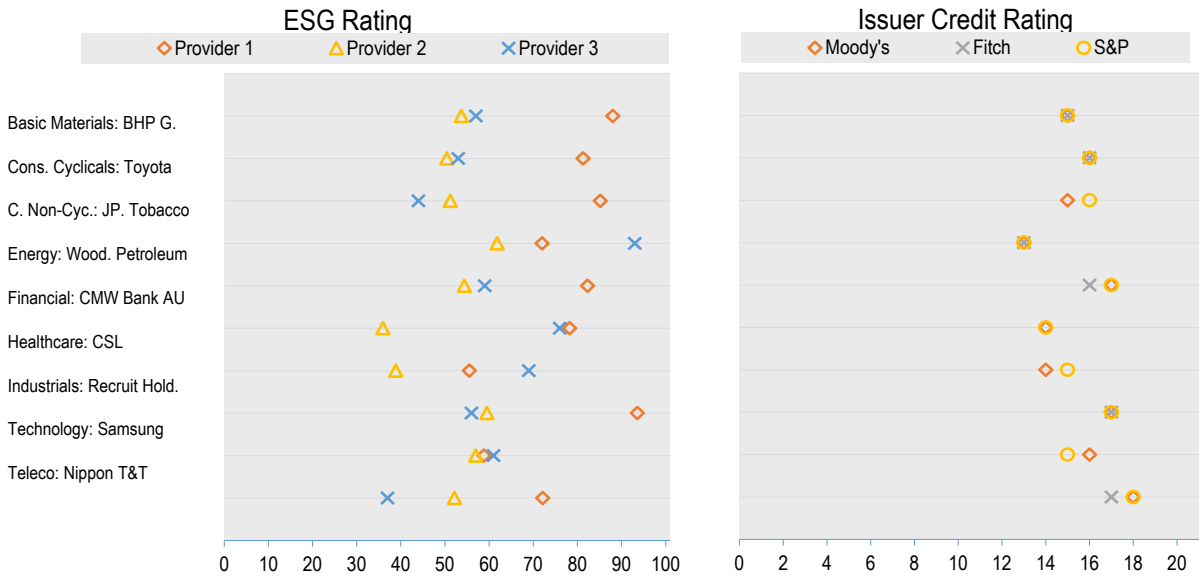


Note: Selected APEC countries include Australia, Indonesia, Korea, Malaysia, New Zealand, Singapore, and Thailand.
Source: OECD calculations based on Bloomberg, MSCI, Refinitiv.

In contrast to ESG ratings, credit scores of individual issuers are much less divergent (Figure 5). It is important to note that credit ratings have a more established history than ESG ratings. While more market participants have used credit ratings in a myriad of scenarios, ESG ratings are still at their infancy. This means, there is an objective basis to refine methodologies of credit scores, and credit defaults to test such methodologies, which is not yet evident in line with ESG risk.

Figure 5. ESG ratings differ across rating providers, while credit ratings are consistent across credit rating agencies for issuers

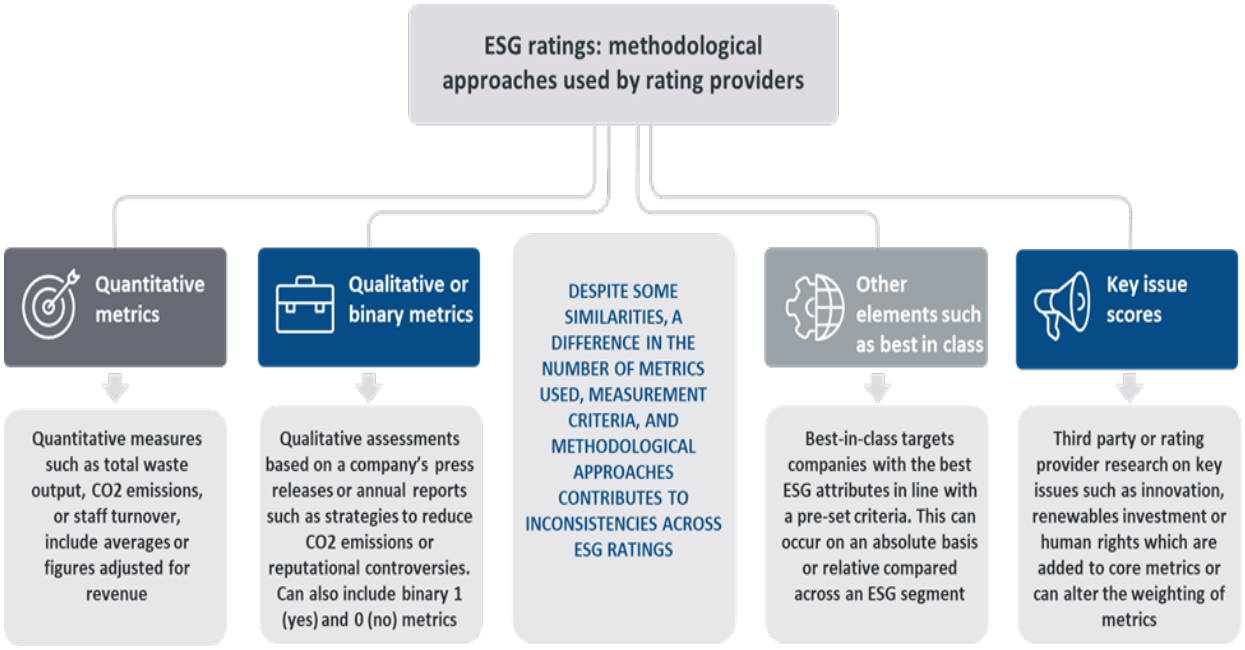
ESG Ratings and Issuer Credit Ratings for selected companies in Asian economies, 2021



Note: Sample of public companies selected by largest market capitalisation and data availability as to represent different industries in Asia. The issuer credit ratings are transformed using a scale from 0 to 20, where 0 represents the lowest rating (C/D) and 20 the highest rating (Aaa/AAA). Where ratings were not available in 2021 previous' years ratings have been used.
Source: OECD calculations based on Refinitiv, Bloomberg, MSCI, Moody's, Fitch and S&P.

ESG ratings are by definition multi-faceted, as they incorporate environmental, social and governance concepts, and there is a wide range of metrics assessed within the environmental and social factors. This can result in a multitude of difference methodologies across ESG rating providers. In addition to looking at broad ESG indicators, many also take a granular approach, using specific data on, for example, environmental issues in line with their portfolio mandates. Despite this, ESG ratings as outlined within this report can reflect these distinct approaches. For example, Figure 6 illustrates that methodologies across the three rating providers analysed show widely different numbers of metrics used, as well as different types of metrics (i.e. qualitative or quantitative) developed using different source data (i.e. company disclosure, surveys or financial filings).

Figure 6. ESG rating methodologies vary by rating provider



Source: OECD authors' illustration.

1.2. Policy and regulatory developments in Asia

The proliferation of contrasting ESG practices across the continent has hindered the promise of ESG approached to deliver comparable financial and non-financial information for companies. Considering that market participants are increasingly interested in improving the quality of ESG data, as it could support more efficient capital allocation and market functioning, there is an emergence of policies and initiatives aimed at setting disclosure guidance for reporting companies. As seen in Table 1, stock exchange guidance documents have been delivered in many Asian countries to assure that ESG data is reported in an international and standardised manner. These documents cite reporting instruments retrieved from the Global Reporting Initiative (GRI), International Integrated Reporting Council (IIRC), Sustainability Accounting Standards Board (SASB), CDP Worldwide, Task Force on Climate-related Financial Disclosures (TCFD), and Climate Disclosure Standards Board (CDSB).

Table 1. A number of stock exchanges in Asia have produced ESG disclosure guidance

ESG disclosure guidance by Asian stock exchange and cited industry guidance and frameworks

Market	Stock Exchange	ESG Guidance	GRI	SASB	TCFD	IIRC	CDSB	CDP
Bangladesh	Dhaka Stock Exchange	Guidance on Sustainability Reporting (2019)	X					
People's Republic of China (China),	Shanghai Stock Exchange, Shenzhen Stock Exchange,	Guidelines for Environmental Information Disclosure of Listed Companies in Shanghai Stock Exchange (2008 – in Chinese), Social Responsibility Instructions to Listed Companies (2006)						
Hong Kong (China)	HKEX	How to Prepare an ESG Report: A Step-by-Step Guide to ESG Reporting (2020)	X	X	X			
India	Bombay Stock Exchange	BSE Guidance Document on ESG Disclosures (2018)	X	X		X		X
India	National Stock Exchange of India	NSE-SES Integrated Guide to Business Responsibility & Sustainability Report (BRSR) (2022)	X	X	X	X		X
Indonesia	Indonesia Stock Exchange	Application of Sustainable Finance for Financial Services Institutions, Issuers and Public Companies (2017-in Indonesian)						
Japan	Japan Exchange Group	Practical Handbook for ESG Disclosure (2020)	X	X	X	X		
Kazakhstan	Kazakhstan Stock Exchange	Methodology of preparing an Environmental, Social and Governance report (2018)	X	X		X		
Malaysia	Bursa Malaysia	Sustainability Reporting Guide (2018)	X	X	X	X		X
Philippines	Philippine Stock Exchange	Sustainability Reporting Guidelines for Publicly Listed Companies (2019)	X	X	X	X		
Singapore	Singapore Exchange	Sustainability Reporting Guide (2018)	X	X	X			
Sri Lanka	Colombo Stock Exchange	Communicating Sustainability: Six Recommendations for Listed Companies (2019)	X	X		X		
Thailand	Stock Exchange of Thailand	Guidelines for the preparation of sustainability reports (2012)	X			X		X
Viet Nam	Hanoi Stock Exchange	Environmental and Social Disclosure Guide (2016)	X					

Source: OECD compilation based on (SSEI, 2022[2]).

1.3. Alignment of ESG metrics within the environmental pillar with disclosure based metrics

E pillar scores within ESG ratings have the potential to provide valuable forward-looking information on company exposure and management of risks and opportunities to support a low-carbon transition; however, OECD analysis suggests that a number of challenges undermine their use for this purpose (OECD, 2022[3]). ESG scores differ substantially in their calculation across various rating providers, not only in terms of the underlying data on which scores are based, but in terms of how these data are used, weighted and extrapolated in the calculation of the overall rating (OECD, 2021[4]). High E pillar scores do

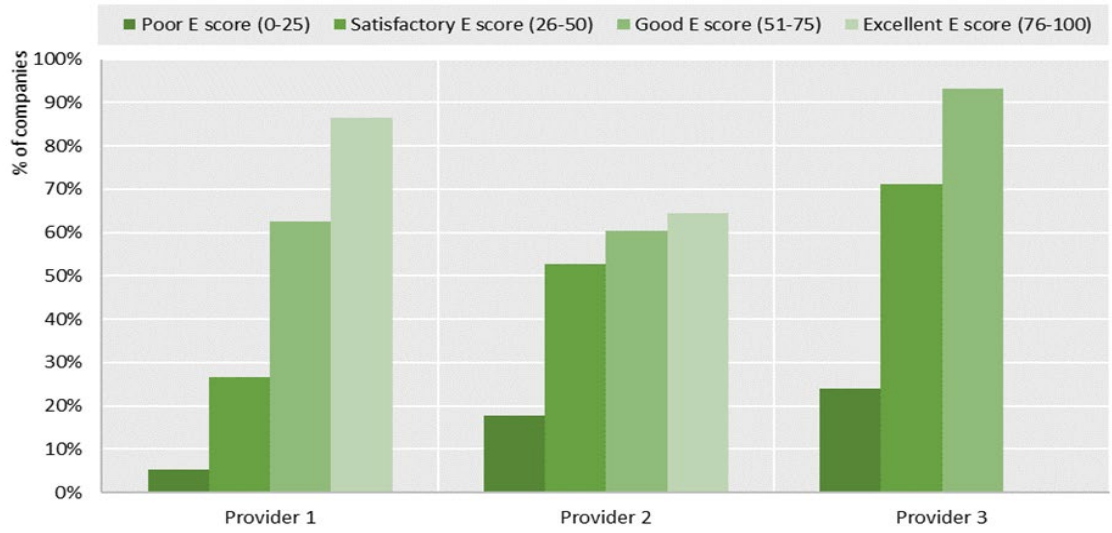
not systematically correlate with factors indicating decarbonisation, and therefore raise questions about the usefulness of such rating, and the extent to which high E pillar scores serve as an effective measure of a company's management of climate related risks and opportunities, and commitment to effectively implement a decarbonisation pathway (OECD, 2022[3]).

The analysis in this section assesses a range of metrics by ESG rating providers, such as climate change risks and opportunities including if and how these are aligned with high E pillar scores, for around 1100 companies in Asia[4] in an effort to be comprehensive given the existing data limitations. From an initial assessment, higher E-scoring companies perform more favourably on metrics that assess a company's disclosure of key decarbonisation goals, policies and commitments. This means that metrics on disclosure often only measure the existence of company policies (or the related disclosure of such) rather than quality of targets and objectives in line with the latest climate science or GHG reduction scenarios consistent with the Paris Agreement temperature goal.

Findings suggest that ESG rating providers' E pillar scores appear to place less weight on negative environmental impacts, while placing greater weight on the existence of climate related corporate policies and targets. E pillar scores also tend to be correlated with factors not directly related to climate transition actions such as market capitalisation and level of disclosure capacity. These factors could play a greater role than current or forward-looking climate-related metrics in contributing to high E pillar scores and ESG ratings. For example, Figure 7 shows that disclosing an awareness of climate change risks and opportunities correlate with higher E pillar scores.

Figure 7. Metrics that measure the awareness of climate change appear to correlate with high E pillar scores

Share of companies disclosing an awareness of climate change risks and opportunities (%)



Note: Metrics on disclosure of policies are binary (1=true (company discloses awareness); 2=false (company does not disclose awareness), as provided by ESG rating providers. Information provided for 2 870 companies. Classification is based on Refinitiv ESG scores' quartiles [Poor: E pillar score between 0 and 25; Satisfactory: 26-50; Good: 51 -75; Excellent: 76 to 100].
Source: OECD calculations based on Bloomberg, MSCI, Refinitiv.

[4] Sample includes data for ESG rated companies in China, Hong Kong (China), Indonesia, Japan, Korea, Thailand, Chinese Taipei, Singapore, Malaysia and the Philippines.

Higher E scoring companies in Asia are also more likely to disclose policies on resource and energy efficiency (see Figure 8). Resource and energy efficiency improvements can both reduce emissions and save money for companies through reductions in energy use, input costs and even improved efficiency of production and distribution processes in the medium term, (once up-front capital costs and operating expenditures are taken into consideration) (Seto, 2014[5]). Notably, companies appear to recognise this, and rating agencies may be rewarding companies for the disclosure of intentions (through internal policies) to improve resource and energy efficiency. A much lower share of companies across E pillar scoring categories disclose targets or objectives on energy efficiency, which may raise questions as to the ability of such company policies to translate into meaningful improvements in energy efficiency. Yet, it is clear that firms that do disclose targets are more likely to have higher E pillar scores.

Figure 8. High E pillar scoring companies are more likely to disclose policies and targets on resource efficiency

Share of companies disclosing a policy to improve resource efficiency and targets or objectives to implement such policies (%)

Note: Metrics on disclosure of policies are binary (1=true (company policy disclosed); 2=false (company policy not disclosed). Information provided for 2 870 companies. Classification is based on Refinitiv ESG scores' quartiles [Poor: E pillar score between 0 and 25; Satisfactory: 26-50; Good: 51 -75; Excellent: 76 to 100].
Source: OECD calculations based on Bloomberg, MSCI, Refinitiv.

While remaining low for companies in Asia, a larger share of companies with a high E pillar score disclose company policies to improve emission reduction (Figure 9). In contrast, low E pillar scoring companies tend to have a much lower rate of disclosure for both company policies and targets and objectives on emissions reduction. While disclosure is an important first step, company targets and objectives to implement emission reduction policies should be based on a credible decarbonisation approach and should be supported by the latest climate science deemed necessary to meet the goals of the Paris Agreement of limiting global warming to well-below 2 degrees above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees. Current disclosures vary and do not always meet guidance set out by TCFD Framework (TCFD, 2021[6]) and ICMA Handbook (ICMA, 2021[7]) (OECD, 2022[3]).

Figure 9. High E pillar scoring companies are more likely to disclose policies and targets on emission reduction

Share of companies disclosing a policy to improve emission reduction and targets or objectives to implement such policies (%)

Note: Metrics on disclosure of policies are binary (1=true (company policy disclosed); 2=false (company policy not disclosed). Information provided for 2 870 companies. Classification is based on Refinitiv ESG scores' quartiles [Poor: E pillar score between 0 and 25; Satisfactory: 26-50; Good: 51 -75; Excellent: 76 to 100].
Source: OECD calculations based on Bloomberg, MSCI, Refinitiv.

While disclosure and implementation of decarbonisation policies and targets are essential in addressing climate concerns, metrics on disclosure often only measure the existence of company policies and disclosure of emissions reduction plans rather than the quality of targets and objectives in line with the latest climate science and science-based targets to meet a 2- or 1.5-degree scenario. Important progress has been made to improve sustainability tools and investing approaches, including through the environmental pillar of ESG rating, yet methodologies will need to move from rewarding disclosure to rewarding alignment of company activities with sustainability and climate resilience.

1.4. Policy considerations

OECD analysis finds that despite progress, ESG approaches suffer from considerable shortcomings with respect to consistency, comparability and quality of data and transparency of associated methodologies that undermine their broader use and the trust of investors (OECD, 2021[1]). While these findings are global, they are relevant to Asian markets. In addition, greater clarity on the high-level purpose of elements in ESG ratings is warranted (OECD, 2022[8]). While some market participants may use elements of ESG ratings to support climate risk management, E scores within ratings cover a wide range of issues such as water and waste management, resource use, as well as emissions and climate considerations. In addition, some rating providers use the metrics to focus on emissions and environmental performance, while others also take into consideration aspects of systemic risk, energy management, as well as climate mitigation and transition opportunities. These observations also stand for the S and G scores of ESG ratings. Therefore, greater transparency on ESG rating methodologies could better support investment decisions based on a range of E, S and G considerations. Financial authorities (where consistent with their

mandates), ESG rating providers, as well as other relevant market participants in Asia, should consider actions to strengthen ESG approaches and in turn reduce market fragmentation. Specific policy considerations include:[5]

- Policy makers, financial authorities and central banks (where appropriate within domestic mandates) should strengthen the availability of reliable and quality ESG data and metrics in line with global baseline standards.
- Financial authorities should identify and use the tools available to them to support greater transparency of ESG rating methodologies and oversight of ESG rating providers to ensure high quality and interpretable methodologies and outputs.
- Policy makers and financial authorities should encourage transparency of ESG rating providers regarding the high-level purpose and use of individual E, S and G scores.
- Policy makers, financial authorities, central banks and other relevant authorities should (where appropriate within domestic mandates) encourage transparency and comparability of climate-related factors in the environmental (E) pillar of ESG ratings, and encourage improved quality and integrity of metrics used by ESG rating providers to achieve climate-related objectives.

[5] Adapted from OECD (2022), "Policy guidance on market practices to strengthen ESG investing and finance a climate transition", *OECD Business and Finance Policy Papers*, https://doi.org/10.1787/2c5b535c-en.

2 Climate-aligned investing in Asia: practices, progress and policy considerations

Amid the rising externalities related to climate change and growing concerns about insufficient alignment of finance with climate policy goals, ambitious and effective global action to address the impacts and emerging risks of the climate crisis is critical. A growing number of international organisations, central banks, finance and environment ministries, regulators and disclosure bodies have actively engaged in analysis and policy guidance to promote decarbonisation and net zero commitments in financial and corporate sectors. Financial institutions and institutional investors are also making increasing efforts through a range of industry-led net zero coalitions, frameworks and methodologies to assess climate risks, and to publish climate transition plans to achieve net zero emissions. In turn, financial markets are beginning to integrate climate transition risks and opportunities into investment decision making (where data exists). However, turning increased ambition into outcomes that ensure a net zero transition by 2050 remains a major challenge.

Financial markets and finance flows are critical enablers to achieving low greenhouse gas (GHG) emissions and climate-resilient development, as recognised by Article 2.1c of the Paris Agreement. For this reason, transition finance is increasingly becoming a main area of focus as the continent is engaging in a transition to low carbon economies. This form of finance has become particularly appealing to Asian market participants thanks to its capacity to align investments with environmental goals and objectives, while providing a hedge against climate-related risks. While there has been significant progress, transition finance is still at its infancy and market participants still need guidance to effectively engage in such a practice.

Several approaches such as guidance, taxonomies and frameworks have been delivered across the continent to ensure that transition finance is effectively used in support of an orderly climate transition. Such approaches aim to help market participants to identify and evaluate investments that are likely to support the transition to a low-carbon economy and spot investments that may have unintended negative consequences. Therefore, financial institutions and other market participants have more available information to make more informed investment decisions.

Moreover, transition finance approaches tend to provide guidance for the disclosure of climate-related data. While the approaches mostly focus on disclosure requirements, the inclusion of such topic provides additional guidance for financial institutions on how to disclose high-quality climate-related data. This promotes more availability of transparent, consistent and comparable climate-related data, as well as more compliance from financial institutions with relevant disclosure regulations. By providing financial institutions the right instruments on data disclosure, it is intended to improve transition finance practices across different jurisdictions and scale-up the mobilisation of resources to meet environmental goals and objectives.

Examples of relevant transition finance approaches relevant in Asia include:[6]

2.1. ASEAN Taxonomy for Sustainable Finance

Given the myriad of approaches to sustainable finance in the ASEAN region, the ASEAN Taxonomy for Sustainable Finance has been created as a common building block that supports an orderly transition and fosters the adoption of sustainable finance by ASEAN members. For this reason, the Taxonomy contributes to the harmonisation of sustainable finance practices across different jurisdictions, focusing on the labelling for economic activities and financial instruments.

The ASEAN Taxonomy for Sustainable Finance consists of two main elements:

- ***The Foundation Framework:*** Guidance for all countries in the ASEAN region to assess qualitatively economic activities and classify them based on their environmental impact. The Framework proposes a three-colour scale system that reflects the extent in which an economic activity is aligned with environmental goals and objectives.
- ***Plus Standard:*** Additional guidance for ASEAN countries to classify 'green' and transition activities aligned with the Paris Agreement. The standard proposes threshold-based screening criteria for six focus sectors (agriculture, forestry and fishing; electricity, gas, steam and air conditioning supply; manufacturing; transportation and storage; water supply, sewerage and waste management; construction and real estate) and 3 enabling sectors (information and communication; professional, scientific and technical; carbon capture, utilisation and storage).

While the ASEAN Taxonomy is focused on climate change at its initial stages, it is foreseen that additional sustainability considerations will be included after periodic reviews from ASEAN countries. These reviews will also serve as an opportunity to maintain the guidance relevant, despite technological changes as well as new international environmental goals (ASEAN, 2021[9]).

2.2. Asian Transition Finance Guidelines

Delivered by the Asian Transition Finance (ATF) study group in September 2022, the Asian Transition Finance Guidelines provide practical steps for assessing the suitability of financing as transitional finance in Asian jurisdictions. The guidelines serve as a practical playbook for Asian countries to use in the assessment of transition finance, including the use of different pathways, technology roadmaps, and technology lists. The document complements the advice for labelling debt instruments as a "transition" introduced in the International Capital Market Association (ICMA)'s Climate Transition Finance Handbook. The ATF guidelines also present real-case scenarios to answer the possible questions that financial institutions may encounter while working with transition finance (ATF Study Group, 2022[10]).

2.2.1. Japan's Basic Guidelines on Climate Transition Finance

After Japan's Prime Minister Yoshihide Suga's speech on the aim of a carbon neutral society by 2050, the Japanese government has embraced the *Green Growth Strategy* (Government of Japan, 2021[11]). As part of this strategy and in recognition that achieving net zero goals will require significant funding, an active engagement with the private sector and the government's consistent guidance, Japan has delivered *The Basic Guidelines on Climate Transition Finance.* These Guidelines' main aim is to strengthen the position

[6] Some of the mentioned transition finance approaches have been cited during the 2022 OECD Asian Forum on Sustainable Finance. See Annex A for a summary of the Forum.

of transition finance as a means of funding the transitions, including in hard-to-abate sectors. Similarly, it is intended that this document will leverage additional funds in support of achieving net zero goals by 2050.

Japan acknowledges the challenges facing the development of transition finance, which is a relatively new concept for many market participants. Hence, the Guidelines provide an overview of transition finance and address topics such as the expectations of fundraisers and strategies for managing them.

2.2.2. The Korean New Deal and the Korean-Green Taxonomy (K-Taxonomy)

In response to the crisis caused by the Covid-19 pandemic, the Korean government announced the Korean New Deal in 2020 as a strategy to make the economy more environmentally sustainable, with more digital services and stronger safety nets. Thereafter, Korea has placed significant importance on public policy developments such as the Environmental Technology and Support Act. Furthermore, the Ministry of Environment of Korea established a national green taxonomy, mostly known as the 'K-Taxonomy', which provides a standardised classification for green activities that contribute to either of the six national environmental goals: greenhouse gas reduction, adaptation to climate change, sustainable water conservation, recycling, pollution prevention and management, and biodiversity.

Aiming to help market participants with the implementation of the Taxonomy, the Ministry of Environment announced the *K-Taxonomy Guideline.* The Guideline, while it is not legally binding, lays out standards and principles that suggest that green activities can be classified into two sectors:

- The Green Sector: Economic activities related to industry, power generation, energy and transportation. This sector is further classified into subcategories such as greenhouse gas reduction, adaptation to climate change, water, circular economy, pollution prevention and treatment and biodiversity.
- The Transition Sector: Activities related to greenhouse gas reduction at SMEs, energy production based on liquified natural gas, blue hydrogen production, eco-friendly shipbuilding and eco-friendly ship transportation.

Overall, the Guidelines provide market participants the tools to improve their sustainability practices. Corporations and financial institutions, for instance, have more resources to assess whether their assets, projects and activities are aligned with environmental goals and objectives. Given that the K-Taxonomy is still in its infancy, the Ministry of Environment will be revise and update its recommendations given market trends and the private sector's review in later stages of the implementation phase (Song, 2022[12]).

2.2.3. Malaysia's Climate Change and Principle-based Taxonomy (CCPT)

Prepared by the Bank Negara Malaysia in collaboration with the Risk Management sub-committee of the Joint Committee on Climate Change (JC3),[7] the CCPT has three objectives:

- Contextualise on climate change and its impacts and dependencies on business, households and the overall economy.
- Introduce a principle-based taxonomy for financial institutions to assess and categorise economic activities based on their alignment with climate objectives, namely a transition to a low-carbon economy. The document presents five guiding principles: climate change mitigation, climate change adaptation, no significant harm to the environment, remedial measures to transition, prohibited activities.

[7] Members of the JC3 are Bank Islam Malaysia Berhad, Bank Pertanian Malaysia Berhad (Agrobank), CIMB Bank Berhad, Etiqa Insurance and Takaful, Hong Leong Bank Berhad, Institutional Investors Council Malaysia, Malayan Banking Berhad, Nomura Asset Management Malaysia Sdn Bhd, Securities Commission Malaysia, Standard Chartered Bank Malaysia Berhad, Zurich Insurance and Takaful.

- Provide a standardised classification and disclosure of climate data to support the assessment of climate-related risks and the mobilisation of additional financial flows in favour of a climate transitions. Likewise, it is intended that Financial Institutions will use the Taxonomy in the design and structuring of green finance solutions and services (Bank Negara Malaysia, 2021[13]).

2.3. The current landscape of net zero commitments

Amid growing momentum to align activities with the Paris agreement goals of limiting a global temperature increase to 1.5 degree above pre-industrial levels, net zero commitments aim to cut greenhouse gas emissions to as close to net zero as possible. For example, in 2021 more than 130 countries set a target to become carbon neutral by 2050, and People's Republic of China (China) by 2060, which covers around 70% of global emissions (IEA, 2021[14]). By end 2021, such net zero emissions targets had been adopted in law, proposed in legislation, or reflected in policy documents in 51 countries. However, countries are adopting diverse approaches to their net zero targets and many details are currently unclear, including the balance between emission reductions, removals and the use of international carbon markets in reaching net zero targets, and how this may change over the next few decades (Jeudy-Hugo, Lo Re and Falduto, 2021[15]). These concerns also pertain to the increasing number of net zero commitments put forward by other actors, including among financial institutions and corporates (Rogelj et al., 2021[16]).

Notably, net zero commitments by the financial sector are becoming mainstream, from asset owners to multi-national banks, including under the umbrella of coalitions. The UN-convened Asset Owners Net Zero Alliance launched in September 2019 covered 66 institutional investors representing over USD 10 trillion in assets under management, who committed to align their portfolios with a 1.5-degree consistent trajectory by 2050 (UNEPFI, 2019[17]). Soon thereafter, in December 2019, the Net Zero Asset Managers Initiative was launched to urge the asset management industry to commit to net zero emissions. In 2021, the Initiative had 220 signatories which represented USD 57 trillion in assets under management. The UN's Environmental Programme's Financial Initiative's Net Zero Banking Alliance was also launched in 2021, and, as of 2022, it represents around 39% (USD 20 trillion) of global banking assets, through 116 banks across 41 countries (UNEPFI, 2022[18]). Finally, ahead of the COP26 meeting in 2021, the Glasgow Financial Alliance for Net Zero (GFANZ) was launched the in partnership with the Race to Zero Campaign, which brought together existing and new net zero finance initiatives to unite 450 financial firms with a total and estimated USD 130 trillion in assets under management.

A number of initiatives set out guidance on metrics and information to be reported by investors and financial institutions in relation to their low-emissions transition and net zero strategies. These include, among others, the FSB-affiliated Taskforce for Climate-related Financial Disclosures (TCFD) to establish disclosure guidance; the creation of the IFRS International Sustainability Standards Board (ISSB) to create reporting standards. Beyond financial institutions, corporations are also increasingly embracing decarbonisation commitments and net zero targets. As of November 2021, more than 1,000 companies worldwide had joined the Business Ambition for 1.5-degree campaign, which is part of the Science-Based Target initiative (SBTi), and represents around USD 23 trillion in global market capitalisation, spanning 53 sectors across 60 countries (SBTI, 2021[19]).

Despite this progress, investment decisions remain hampered by uncertainties relating to national climate policies (e.g. support schemes, carbon pricing) and to new or unproven technologies, which will increasingly be relied upon to further reduce GHG emissions. An OECD industry survey suggests that financial market participants hesitate to provide transition financing for companies, as there is not sufficient clarity on how to assess credible corporate alignment with a pathway that is in line the Paris temperature

goal (OECD, 2022[3]).[8] The OECD's recent work shows mixed evidence as to the ways in which financial markets are starting to address climate transition risks and opportunities, and incorporating these into the valuations of corporations and sectors affected by the shift (OECD, 2021[4]). Within industries, some GHG-intensive firms that are acknowledging stranded assets and making progress against their transition plans are showing improved valuations. This progress is of vital importance to financial institutions whose own net zero targets will rely on GHG reductions by their borrowers and market investments.

Asia specific initiatives have also developed, which complement the engagement of Asian policymakers and market participants in international initiatives. Many financial institutions have signed up to international initiatives, such as GFANZ, but given the strategic important of the region and to accelerate efforts, regional initiatives have also developed. For example, GFANZ launched an APAC Network in June 2022 to support engagement with financial institutions and policymakers across the APAC region. Speakers of the OECD Forum on Sustainable Finance notes that finance can be a powerful enabler to help Asia achieve an effective and inclusive transition to net zero. The setting up of the GFANZ APAC Network is thus most timely. Catalysing green finance on the scale that is necessary to address the climate crisis will require active collaboration between the financial industry and financial regulators.[9]

While these initiatives indicate progress, further international and regional co-operation may be needed to strengthen approaches to track near, medium and long-term milestones to successfully implement overall net zero targets and commitments. In practice, many net zero initiatives take the form of coalitions or frameworks that, while putting forward overall guidance, do not provide a concrete and comparable methodological approach for tracking progress (Noels and Jachnik, 2022[20]). There are significant opportunities to dramatically reduce emissions, shift away from GHG-intensive activities and promote green growth. Financial markets across advanced and developing economies have a critically important role to play in helping to achieve climate objectives towards the path to net zero, by supporting the reallocation of capital towards greener alternatives, while discouraging capital flows to GHG-intensive projects, ensuring market efficiency and avoiding greenwashing.

2.3.1. Challenges related to the pricing of risks and opportunities in global financial markets

While the low-carbon transition is a policy imperative, the path and pace could expose financial markets to a range of transition risks. Transition risks[10] are those that result from the process of adjustment towards low-carbon economies, and the possibility that shifts in policies or technologies designed to mitigate and adapt to climate change could in turn affect the value of financial assets and liabilities, disrupting intermediation and financial stability. Transition risks can be the result of shifts in climate policy or regulation, or technological innovations that cause a decrease in the competitiveness of high-carbon technologies and infrastructures (in turn leading to increased costs, stranded assets, stranded processes, or credit losses). In this respect, a host of policy institutions, from central banks to international organisations, offer a range of perspectives on the extent to which the transition might be disorderly. Thus, capturing granular data on company-specific climate transition factors is important to inform market

[8] Based on the 2022 OECD Industry Survey on Transition Finance, financial market participants hesitate to provide transition financing for companies, as there is not sufficient clarity on how to assess credible corporate alignment with a pathway that is in line the Paris temperature goal (OECD, 2022).

[9] Press release, GFANZ Launches Asia-Pacific Network to Support Asia-Pacific Financial Institutions' Move to Net Zero, https://www.gfanzero.com/press/gfanz-launches-asia-pacific-network-to-support-asia-pacific-financial-institutions-move-to-net-zero/.

[10] Climate transition risks include: risks posed by policies aimed at decreasing greenhouse gas (GHG) emissions to meet the 2 degree target by the end of the century (e.g. carbon prices); legal risks arising as a function of climate litigation (e.g. in the context of climate damages), and; technology risks that relate to the uncertainty in technological development and deployment (presenting both risks and opportunities for financial market actors).

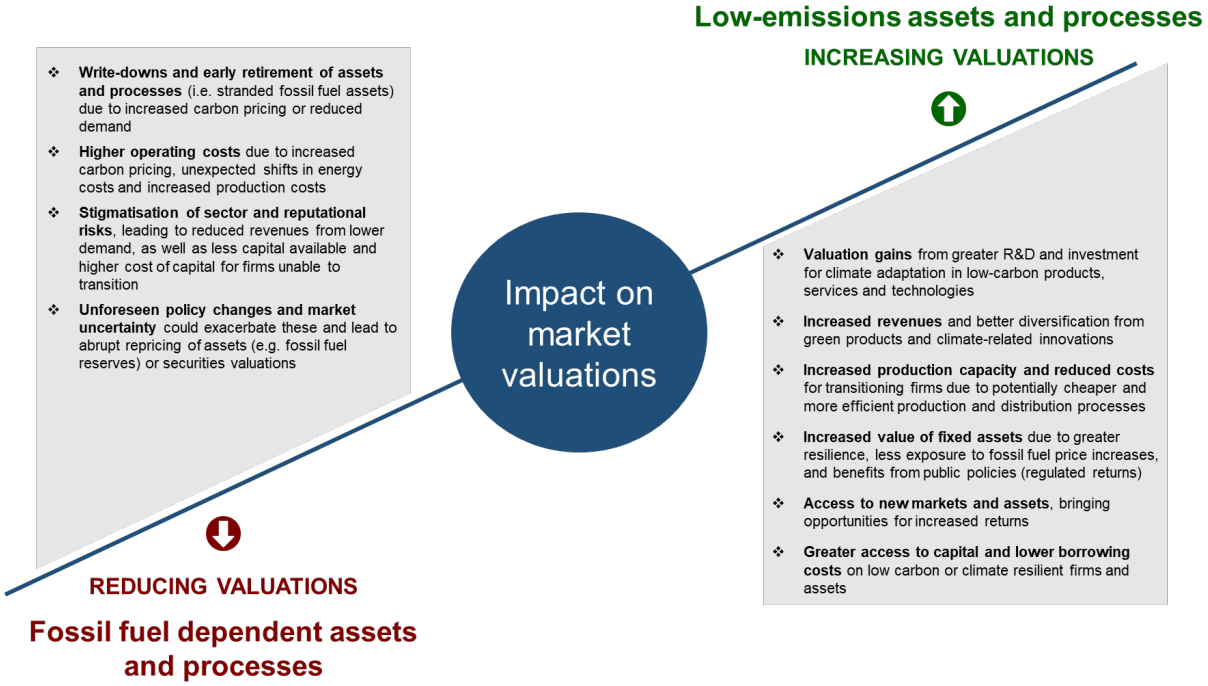
participants and policymaking institutions. As such, steps to limit the impact of transition risks on markets are needed to support a gradual transition of prices in a manner that reflects accurate information on the pace and magnitude of the transition.

Despite such risks, the low-carbon transition also provides significant opportunities through new green-aligned markets, products, and innovations. As the transition materialises, related opportunities could contribute to climate-resilient growth. OECD estimates suggest that achieving the 2-degree scenario by 2050 could have a net positive effect on global GDP of up to 5% (OECD, 2017[21]), with associated benefits for financial markets. Therefore, while policy changes and technological innovation may lead to transition risks, the resulting transparency and efficiency gains, if implemented effectively, could help markets price net benefits over time and smooth the effects of the climate transition, which could in turn reduce the likelihood of stress in the financial system. For this reason, accurate information on climate-related opportunities and the commitment of issuers to engage in the transition is important for market efficiency and integrity, combined with accuracy of public sector monitoring of net risks.

Should an orderly transition occur, changes in asset prices need not, in themselves, amount to losses that disrupt financial market stability and sustainable growth if they can be absorbed throughout the financial system. Importantly, with more assertive policies and efficient and well-functioning markets, the shift away from stranded assets and toward climate opportunities has the potential to be orderly as depreciation and write-downs of obsolete assets give way to cleaner and more efficient ways of generating economic output over time (OECD, 2021[4]). This could represent price adjustments based on efficient financial markets, in a well-functioning financial system, that channels investment towards low-carbon or carbon-neutral investments.[11] However, a disorderly transition, triggered by a sudden and unexpected change in policy or technology relevant to the transition, could cause sudden price changes and heighten volatility due to uncertainty and risk aversion, which in turn could contribute to market contagion across assets exposed to the transition. To better understand valuation dynamics in line with a low-carbon transition, Figure 10 offers a conceptual framework to assess key factors that may influence market pricing associated with a transition to low-carbon economies.

[11] This does not discount the fact that mispricing of externalities associated with carbon reflects market failures, which in turn affects market pricing where fossil fuels contribute to asset valuations or profits. Efficient markets are able to transmit new information unlocked by better climate reporting at the company and national levels (e.g. through central banks, other authorities, and industry bodies) to help investors make informed decisions about how to price transitions.

Figure 10. A number of key factors influence market pricing associated with a low-emissions transition



Note: Non-exhaustive illustration. OECD staff assessment, including aspects of TCFD reporting with respect to climate transition risks and opportunities, and other market considerations.
Source: OECD (2021), Financial Markets and Climate Transition: Opportunities, Challenges and Policy Implications, OECD Paris, https://www.oecd.org/finance/Financial-Markets-and-ClimateTransition-Opportunities-challenges-and-policy-implications.htm.

Downward pressure on market valuations can occur due to the growing likelihood of stranded assets from fossil fuel reserves, as well as stranded production processes that become obsolete as the use of fossil fuels become prohibitively expensive.[12] Increases in capital expenditure to address transition-related requirements and to support climate-related risk mitigation and adaption would increase operating costs. Factors such as accelerated decommissioning (if not managed) of machinery and plants to extract and refine carbon assets bring forward costs and could, without measures, create higher net present losses (OECD, 2021[4]). In addition, the cost of capital for carbon-intensive assets could increase both as a result of factors related to asset performance (as highlighted above) and expected changes in prudential and other investment regulation. Stigmatisation of carbon intensive sectors and reputational risks could impact sales, expenses, as well as access to and cost of capital for carbon intensive firms unable or unwilling to transition. Moreover, policies that add costs to fossil fuels or carbon emissions, or increase the cost of capital, thereby decrease valuations for firms that are laggards in the transition.

Increases in market valuations can occur due to a myriad of factors that reflect expectations of rising future cash-flows or lower cost of capital. This can include gains on any assets that become in greater demand due to the demand for and consumption of various renewables. In addition, cash-flows could increase due to greater production capacity and reduced operating expenses for transitioning firms due to potentially cheaper and more efficient production and distribution processes (especially as renewable energy costs become competitive with fossil fuels). Moreover, access to new markets could bring opportunities for new

[12] Stranded production processes relate to both assets (e.g. machinery) that use fossil fuels as energy, and also value chains that include producers that provide inputs that are carbon intensive. Switching costs and accelerated depreciation result in rendering these processes obsolete over time.

investment and increased returns due to greater demand for low-emission infrastructure, technologies and services (OECD, 2021[4]). Any policies that support the transition by further penalising fossil fuel usage and CO2 emissions, reducing fossil fuel subsidies where they exist, or incentivising renewable energy and technologies could further contribute to gains for transitioning firms (NEA/IEA, 2021[22]).

In an orderly transition, the depreciation of carbon intensive assets from the low-carbon transition could be offset by various positive effects, which could contribute to net valuation gains. In this respect, while an unanticipated increase in policy commitment to transition away from fossil fuels could contribute to widespread repricing of financial assets whose valuations would be determined in part by carbon prices, the extent to which this is not absorbed by markets and the financial system depends on several factors:

- High, unexpected or concentrated losses could have greater potential to overwhelm provisions, capital and liquidity buffers that are already being eroded from the consequences of Covid-19 (NGFS, 2020[23]), yet the duration of losses would be more manageable if absorbed over several business cycles. The global financial system is already capable of absorbing trillions of dollars in losses over multiple business cycles, through defaults on credit exposures. Likewise, corporates depreciate many trillions as they write down the economic lives of plants and equipment over business cycles, from which they reinvest in new technologies (OECD, 2021[4]). This creative destruction can occur in a relatively orderly fashion where losses are balanced against gains within companies and industries.
- The extent to which the transition is able to lower the relative cost and efficient use of renewable energy will determine the balancing effect of opportunities. Energy efficiency improvements can both reduce emissions and save money for businesses or consumers through reductions in energy use, input costs and even improve the efficiency of production and distribution processes in the medium term (once up-front capital costs and operating expenditures are taken into consideration).[13] Capital investment into energy efficient processes could also bring increased value of fixed assets due to greater resilience, and less exposure to fossil fuel price increases.
- The ability of markets and corporates to benefit from greater revenue opportunities from green investments, as well as new markets and products. Rising research and development, and capital investment, in innovations can help raise expectations of future revenues and profits associated with shifting demand from consumers for green products and services. The automobile industry offers a compelling example whereby demand for electric and hybrid cars is shaping the transition through lower Scope 1, 2 and 3 emissions.
- The likelihood that actions will contribute to lowering the cost of capital and improving its availability, which improves risk-adjusted long-term value. Firms' actions to commit to and implement effective transition plans could over time improve access to capital at a lower cost (lower debt spreads and higher equity valuations).

Beyond these factors, the effect of policy actions on market valuations will depend on the extent and timing of measures to address market failures. Policy actions to facilitate the transition by pricing the externalities from carbon emissions or subsidising decarbonisation could improve the competitive dynamics that allow transitioning firms to access better (more patient, less costly) capital to support the transition. Policies aimed at achieving structural economic change could boost innovation and investment, including in less climate-intensive technologies (NGFS, 2019[24]). This could, in theory, benefit some parts of the global economy, and result in the increase in some asset prices. Therefore, there is a need for transparency on the scale of stranded assets and on policies that support the reduction of carbon-intensive activities and

[13] For example, see: Seto, K.C. and Dhakal, S., 2014. Chapter 12: Human Settlements, Infrastructure, and Spatial Planning. In Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, et al. (eds.). Cambridge University Press, Cambridge, UK, and New York. Available at: http://www.mitigation2014.org. For a contrary perspective, see, for example, Alcott, H. and Greenstone, M., 2012. Is There an Energy Efficiency Gap? The Journal of Economic Perspectives, 26 (1).

encourage innovations, such as solar photovoltaics (OECD, 2021[4]). Importantly, such policies should enlist a variety of instruments that adapt over time.

While evidence is mixed, financial markets appear to be using the information available to them to start pricing in the low-carbon transition, however this is hampered by insufficient data and analytical tools to measure and manage climate transition risks. Sectoral or focused market studies also suggest that while there is mixed evidence as to the extent to which capital is being allocated in line with a low-carbon transition, whereby markets that are benefiting from increasing information are experiencing shifts in company valuations, in both positive and negative directions (De Haas, 2019[25]; Alessia, 2019[26]; Trinks, 2020[27]; Bernardini E., 2019[28]). Yet, the effective market pricing of climate transition is hampered by insufficient data, including financially material metrics and analytical tools to measure and manage climate transition risks, and lack of policy clarity regarding carbon pricing and support for renewables. Notably:

- Average Return on Invested Capital and the Price-to-Book Ratios of coal companies have been decreasing, reflecting the coal industry's lower profitability and rising cost of capital, while these companies have become more indebted in recent years. Covid-19 has further exacerbated the industry's challenges, with default probabilities spiking for more indebted companies, as exclusion from many ESG portfolios increases the cost of capital.
- There is some initial evidence that at least some large oil companies that have acknowledged stranded assets and offer transition strategies are benefitting from better valuations than traditional carbon-intensive peers. However at the same time, there is also evidence that oil and gas companies that invest heavily in alternative energy sources, acknowledge stranded assets or implement internal carbon practices are not yet seeing notable valuation gains. This could be due to a number of factors, for example oil company valuations being closely tied to oil prices (OECD, 2021[4]).
- Valuations and the cost of capital for automotive companies appear to be impacted by the low-carbon transition underway in automobile production. In particular, the automotive industry has seen the rapid growth of electric vehicles (IEA, 2020[29]),[14] with investors starting to reward companies for implementing transition plans over those without transition plans. In this regard, valuations in the automotive industry have decreased in the past five years for selected companies with no strategy or plan and moderately increased for those beginning to transition to low-carbon activities, due in part to a lower cost of capital and clear strategies for green (e.g. hybrid, electric automobiles). Companies exhibiting low-carbon operations as a business model, such as Tesla, have also been rewarded by investors for their forward-looking technology and electric engines.
- Valuations of renewable energy indices have more than doubled, with associated M&A deal activity increasing steadily in the past decade, as traditional energy firms compete to acquire growing renewables firms, and as the unit cost of renewable energy becomes more competitive and in greater demand. However, renewable energy activities that are the product of R&D or acquisitions from larger traditional power players may be burdened by stranded assets or processes, creating cumbersome switching costs. At the same time, the investment in renewables still remains relatively modest, and government support is still needed to ensure that scalability and efficiency can be achieved (IEA, 2020[30]).

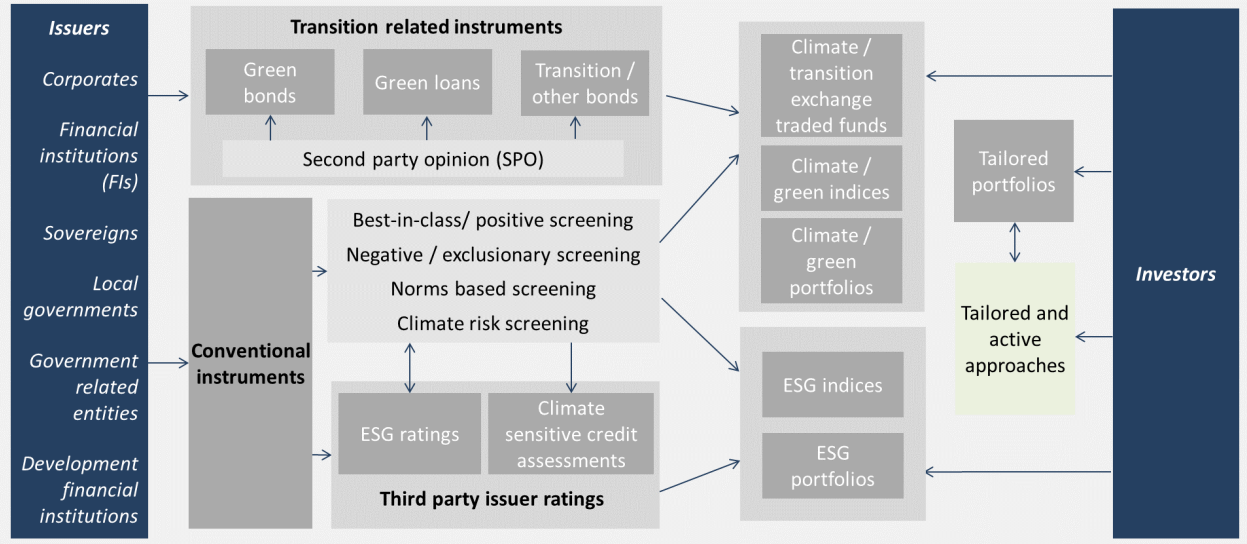
In sum, financial market actors are increasingly using the information available to make investment decisions that affect price and cost of capital, yet this information is not sufficient to fully support the capital re-allocation needed for the low-carbon transition. Importantly, guidance to improve such information remains high level and subject to a range of interpretations that will only suffer from greater inconsistencies if global consistency is not addressed.

[14] IEA (2020), Global Electric Vehicle Outlook 2020, International Energy Agency, https://www.iea.org/reports/global-ev-outlook-2020.

2.3.2. Metrics, information and methodologies

As market participants increasingly grapple with and address the pricing of a low-carbon transition, a range of tools are being made available to better support the allocation of capital in line with the transition. To the extent that they support market efficiency, further growth of tailored climate-related financial market products and practices to realign capital with low-carbon economies can help support the climate transition. Such tailored climate and transition-relevant products in Asia encompass instruments for issuers, third party ratings, as well as index and portfolio products to help channel available capital. If fit for purpose, these products have the potential to improve information flow, price discovery, market efficiency, and liquidity in support of a low-carbon transition. More importantly, in the event that the transition is disorderly and involves sudden changes in policy coordination, tailored climate and transition-relevant products could in theory help markets manage exposures, absorb losses on carbon-intensive assets, and redirect investments to parts of the market that will efficiently contribute to the transition (OECD, 2021[4]). In doing this, they can help make markets more agile in facilitating an orderly transition through price discovery and capital flows.

Figure 11. A growing number of financial market products and practices are emerging in Asia to support a climate transition



Note: Non-exhaustive illustration, OECD.
Source: Adapted from OECD (2021), Financial Markets and Climate Transition: Opportunities, Challenges and Policy Implications, OECD Paris, https://www.oecd.org/finance/Financial-Markets-and-ClimateTransition-Opportunities-challenges-and-policy-implications.htm.

The products and instruments outlined in Figure 11 have grown rapidly from relatively early stages of development, and additional policies may be needed to ensure market resilience, integrity, confidence, and to help strengthen their ability to contribute to an orderly transition. For example, climate transition benchmarks and funds, in addition to screening strategies and stewardship (including shareholder activism) show potential to help directly support the transition and can in some cases show potential to deliver higher risk-adjusted returns. Climate scenario analysis and stress testing also show benefits in terms of identifying potential climate-related financial risks, but could also be used to help financial market actors identify opportunities (e.g. from new technologies and innovations) in the context of the transition. While increased demand for products and instruments that support the low-carbon transition is promising, more efforts are needed to improve the verifiability of underlying information and strategies related to issuers' climate transitions.

Asia has been a large markets for sustainable bonds and associated labelled products, with rapid growth witnessed in recent years (representing more than 18% of the global market of sustainable bonds, which was estimated at USD 2,352 billion in 2021). In Asia, the amount of outstanding sustainable bonds (which comprise green, social, sustainable, sustainability-linked, and transition bonds) climbed to USD 431 billion in 2021 (Asian Development Bank, 2022[31]). This represented more than a 50% annual increase from USD 274 billion at the end of 2020. While green bonds continued to dominate the Asian (ASEAN+3) sustainable bond market, accounting for 68% of the regional total, interest in other types of sustainable bonds have also been rising, of which shares of social and sustainability bonds increased to 14% and 15%, respectively, from 12% and 11% at the end of 2020 (Asian Development Bank, 2022[31]).

While significant progress has been made by institutions and initiatives in Asia to outline metrics and provide disclosure guidance for financial institutions, there remains a clear need for an initiative to robustly track financial institutions' net zero commitments and support a low emissions transition in financial markets in Asia, which could help incentivise decarbonisation across industries. Given the financial sector's role in financing real-economy entities including companies, infrastructure, and governments, tracking their progress against such commitments would be an important step to track how investees and borrowers across the real economy are making progress.

2.3.3. Policy considerations

Notwithstanding important progress, there are a number of impediments that hinder the role of financial markets in facilitating an orderly transition to low-carbon economies. They include insufficient data and tracking mechanisms to ensure that companies commit to and follow-up on their transition plans, and absence of established frameworks to help market participants make sense of stranded assets, transition plans, opportunities and policy developments to efficiently price transition risk into asset valuations. Reducing uncertainties and inefficiencies can help lower the cost of capital and increase asset valuations, which would provide the right incentives for sustainable finance to flow to those firms (even current high carbon emitters) that are committed to the transition.

Therefore policies are needed to strengthen the tools, methodologies, and products for financial markets and intermediaries that support a low-carbon transition and climate-related objectives (including wider climate considerations that may include biodiversity and other areas in future). To support this, and where consistent with their mandates, policy makers can consider ways to strengthen the quality of climate-related data used by market participants and improve climate transition plans and related market products. Specific policy considerations include:[15]

- Policy makers, financial authorities and central banks (where appropriate within domestic mandates) should strengthen the availability and use of reliable, comparable and high-quality data to assess climate risks and opportunities in line with global baseline standards.
- Where within their mandates, policy makers, financial authorities and central banks should support the consistent and transparent use of climate-related metrics by third parties, in order to foster greater quality and comparability across jurisdictions and industries.
- Where within their mandates, the relevant authorities should support the development of transition plans by financial intermediaries that include overall net-zero and interim targets that are supported by up-to-date and sound scientific methodologies consistent with the goals of the Paris Agreement.
- Policy makers and market participants should collaborate within international fora to share good practices and continually strengthen the appropriate use of net-zero strategies and associated tools for financial firms who have made voluntary net-zero commitments, including by issuing guidance.

[15] Adapted from OECD (2022), "Policy guidance on market practices to strengthen ESG investing and finance a climate transition", *OECD Business and Finance Policy Papers*, https://doi.org/10.1787/2c5b535c-en.

- Financial authorities should use the mechanisms available to them to support high-quality data and the monitoring of such data, including interim targets, in transition plans, including through third-party verification of information.
- Where consistent with domestic mandates, policy makers should use the tools available to them to guide good practices of market participants that wish to improve climate aligned investing and engagement strategies. This should include, but not be limited to, greater transparency of expectations, incentives and options for accountability where implementation falls short of firms' transition plans and targets over time, when within investor objectives.

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Annex A. Summary of the 2022 OECD-Asian Forum on Sustainable Finance

The OECD-Asian Forum on Sustainable Finance took place virtually on 1 and 2 December 2022 and it provided a policy dialogue to support economic efficiency, sustainable growth and financial stability in the region. This annex presents a summary of the main insights per each of the five forum's sessions.

Session 1: Recent trends in sustainable finance in Asia

This session provided a broad overview of recent trends on the progress on sustainable finance in Asia, which served as an introduction to the forum's following sessions. There was a consensus that climate change poses risks to the financial sector, and in part driven by the need to manage such risks, there has been an expansion of sustainable finance in the region. In addition, market participants in the private sector are increasingly integrating transition finance approaches to meet climate goals and promote an orderly transition to net zero. At the same time, the private sector is increasingly disclosing ESG information to support data on sustainable practices in the financial sector.

Both public and private market participants agree that challenges remain in the region. For instance, the myriad of ESG investment approaches and disparate metrics used for ESG ratings increases the risk of sustainability- and green-washing and could impact alignment with the Paris agreement. Notably, the quality of climate disclosure varies across jurisdictions, reporting companies and economic sectors, and there is neither enough disclosure nor understanding of how biodiversity-related risks and opportunities impact financial portfolios.

As a response to such challenges, public authorities including central banks are considering the appropriate regulatory environment to incentive sustainable finance in the region, as well as to assure better reporting and disclosure practices, to strengthen ESG practices and support a transition in the region. Likewise, the private sector has called for further public actions through risk-sharing financial schemes (blended finance), which could help the achievement of transition goals.

Session 2: Strengthening ESG rating and investing practices in Asia

First, the OECD secretariat presented a general overview and challenges of ESG in Asia. The OECD highlighted that while there is an increasing ESG market coverage in the region, there is a limited correlation of ESG scores across rating providers. The OECD also raised the underlying challenges of using the E pillar to measure decarbonisation. Finally, the Secretariat presented four policy recommendations to improve the transparency and credibility of ESG rating methodologies and strengthen the tools, methodologies, and products for financial markets and intermediaries that support a low-carbon transition.

Panellists agreed that ESG disclosures and related investments are increasing in Asia, despite the challenges of Covid-19. This trend reflects the increasing awareness of the need to include sustainable considerations in the financial sector. Nonetheless, panellists highlighted challenges related to the ESG data due to a myriad of contrasting rating methodologies and metrics, which is leading to unnecessary transaction costs. Additionally, while governments are increasingly encouraging ESG disclosure through the delivery of guidelines and public funding, private companies are still highly dependent on the government's provision of guidance and information channels to disclose ESG data. The private sector

called for the harmonisation of guidelines and actions across jurisdictions to support improved ESG data and practices.

Moreover, panellists recognised that the E pillar has been the main focus of ESG, which does not exclude the need to consider the S and the G pillars. Nevertheless, some speakers pointed out that questions remain whether the E pillar serves to allocate capital in an effective manner to support net zero goals.

Session 3: Assessing green market practices in real estate finance in Asia

During the session, speakers acknowledged that the real estate sector generates a large share of global emissions mostly due the energy use in buildings. While new constructions tend to meet sustainability and environmental expectations, the main challenge revolves around adapting existing real estate property in favour of a climate transition. Speakers recognised that the green financing market and the proliferation of eco-friendly financial instruments such as green bonds only focus on new buildings. They also only address challenges such as the high costs of 'green' labelling. Thus, there is not yet enough financial incentives to engage in the transition of existing real estate assets. Nonetheless, while there are not financial incentives, speakers highlighted that current technical advancements (if utilised effectively) could support a transition. Likewise, speakers noted that political circumstances such as the European energy crisis have accentuated the need of greening real estate assets.

Speakers reaffirmed the importance of data as a fundamental tool to track progress in the transition in real estate. On the one hand, the Asian private sector is mostly relying on ESG data to set their strategies and guide their sustainability-related decisions. On the other hand, there is an emergence of new initiatives coming from the private sector to provide information on the sustainability standard of buildings.

Session 4: Emerging frameworks to assess financial risks stemming biodiversity-related losses and considerations for Asia.

The session started with a presentation about how the economy is embedded to nature; global GDP is dependent on biodiversity according to indices such as the Global Living Planet Index, yet biodiversity is being depleted at an unprecedent rate. While the concept of biodiversity-related financial risks is relatively new, there are emerging methodologies to assess impacts, dependencies and potential risk exposures such as Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE), Corporate Biodiversity Footprint, Biodiversity Footprint Financial Institutions, Species Threat Abatement and Recovery (STAR).

Similarly, panellists agreed that biodiversity underpins all economic activity, yet one of the main challenges is the lack of understanding of how to translate biodiversity losses into financial risks. While emerging methodologies and assessment tools still face challenges such as lack of quality data, these instruments stress that biodiversity-loss is one of the main risks for the financial sector. Panellists highlight that waiting for the perfect tool before Asian market participants protect biodiversity is the wrong approach. Only through the commitment to biodiversity goals within specific time frames, public policy support and the inclusion of biodiversity metrics in the E of ESG rating and investing, Asian market participants will be able to mitigate the financial risks of a biodiversity tipping point.

Session 5: Progress towards net zero commitment by market participants in Asia

Speakers highlighted that Asia is the centre of world's economic growth and the decarbonisation of the Asian economy is the only appropriate approach to mitigate the global risks of climate change. Many regional financial institutions have voluntarily engaged to meet net zero commitments by 2050 through agreements such as Glasgow Financial Alliance for Net Zero (GFANZ), recognising that climate-related risks pose major risks to the financial system. While this is a significant step towards a low-carbon regional economy, many of the largest banks in the highest-emitting countries in Asia are still not committed to a net zero transition.

Panellists have raised awareness that divestment from the brown industries cannot be the main tool to achieve net zero goals for banking groups. Instead, panellists have suggested that providing guidelines in

transition plans, the promotion of dialogues between market participants and the government's proposal of alternatives to scale-up transition finance in the region will improve the private sector's engagement to meet net zero commitments.

Moreover, panellists argue that there has been a significant increase in the reporting of emissions in the region. However, there are discrepancies among reporting standards in terms of metrics, level of disclosure and coverage of emissions. According to one speaker, a global baseline standard for reporting would be useful as it would provide standardised and transparent information for market participants and public authorities to track progress against net zero commitments in the region. Likewise, further actions are needed to improve data coverage on scope 3 emissions because available quality data for this scope is very limited.