

Sustainability reporting in Asia:

Are the EU's initiatives the benchmark for ESG disclosure in the region?







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by

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Disclaimer

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Preface

Corporate sustainability reporting is a dynamic space where Europe appears to have taken a lead even though many countries, including in Asia, are also progressing in this strategically important area that impacts corporate valuations, supply chains, and business models. However, a lack of convergence of regulatory frameworks in Europe and Asia risks hampering objectives of transparency, reporting quality, comparability, as well as investment and trade.

Multiple national and international ESG reporting frameworks exist. The 'equivalence' or 'convergence' of these different frameworks is top of the agenda for many regulators, as they look to address concerns over the global competitiveness of local companies, and manage the burden of overlapping and overly complex requirements for internationally active companies. The comparability of reporting frameworks provides additional reassurance to investors, regulators, and other stakeholders, as it enables them to make decisions based on the best available and most accurate data.

Over the past two decades, the EU has aimed to position itself as a global frontrunner in ESG reporting, with regulations becoming ever more stringent and, more recently, with the introduction of mandatory reporting.

The first mandatory non-financial reporting framework, the Non-financial Reporting Directive (NFRD), came into force in 2017. This is now being succeeded by a set of three legislative texts that will substantially increase the data and information companies and financial institutions have to provide on their sustainability risks and impacts. These are the Corporate Sustainability Reporting Directive (CSRD), the Sustainable Finance Disclosure Regulation (SFDR), and the so-called EU Taxonomy of environmentally sustainable economic activities.

These three pieces of regulation represent a massive shift in how economic and financial stakeholders need to evaluate sustainability risks and impacts and in what ways they need to collect and disclose any related data. Although these regulatory developments are being driven by the EU, their impact will be global as they not only create reporting requirements for international subsidiaries

of EU groups, but also will drive how EU groups organise their supply chains on a global basis.

In parallel, Asian and other jurisdictions have been developing their own ESG reporting frameworks and regulations. To reduce the reporting burden for globally active companies, the CSRD provides for an equivalence regime that will allow for substituted compliance under certain non-EU disclosure regimes. For example, under certain conditions, non-EU parent undertakings may report on a consolidated basis for their EU subsidiaries, provided that the consolidated sustainability reporting of the non-EU parent undertaking is prepared in an equivalent manner to the EU standards. However, at present, it is unclear whether substituted compliance will be available to Asian companies and their EU subsidiaries, given potential divergences between local disclosure standards.

This report aims to provide a better understanding of the EU's sustainability reporting landscape and how it compares to four key Asian jurisdictions: Japan, Korea, Thailand, and Singapore. While these four Asian jurisdictions are certainly not representative of the entire continent, they face many of the same challenges that other Asian jurisdictions, including India, China, and Indonesia, are exposed to.

We hope it helps regulators, business leaders, investors, and other interested stakeholders to gain a better insight into the EU experience, providing insights and ideas to inform their own sustainability strategies and practices, and broadening the discussion about the path to equivalence or convergence of standards.



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Sustainability reporting in Asia

Are the EU's initiatives the benchmark for ESG disclosure in the region?

These pieces of EU legislation and regulation represent a massive shift in how economic and financial stakeholders need to evaluate sustainability risks and impacts and in what ways they need to collect and disclose any related material data. While these initiatives were subject to considerable debate and negotiations across a large spectrum of affected or interested stakeholders, their advanced and mandatory nature also renders them potential templates for other non-EU jurisdictions that seek to advance sustainability reporting among their corporate and financial actors. This report should be regarded as guidance for Asian stakeholders, particularly law- and decision-makers, business

leaders and investment practitioners, to better understand the EU's sustainability reporting landscape and how it compares to those in selected Asian jurisdictions, namely, Japan, Korea, Thailand, and Singapore. While these four Asian jurisdictions are certainly not representative of the entire continent, collectively, they face several of the same challenges to which a many other Asian jurisdictions, including India, China, and Indonesia, are exposed.

This report is structured around four key pillars, which enhance a broader understanding of the obstacles and opportunities of the various sustainability reporting approaches in the EU and Asia:

- 1. An overview of the sustainability reporting landscapes in the EU and Asia and how recent developments are shaping the availability of quality corporate ESG data.
- 2. Contextual insights and perspectives from EU-based and Asia-based experts that underpin the challenges among Asian regulatory, corporate, and financial stakeholders to craft adequate responses that balance the sustainability data expectations of international investors and the often-complex domestic economic realities.
- 3. A mapping of sustainability reporting frameworks, discussing the stringency levels of the main reporting obligations across jurisdictions, thus enabling the establishment of a comparative reporting benchmark that will facilitate the identification of the current levels of ambition across the covered jurisdictions.
- 4. An evaluation of the transposability potential of the EU's sustainability reporting initiatives by exploring the case of how the EU's shifting approaches and recent adjustments towards double materiality and the establishment of a common taxonomy for green activities have gradually led to differing levels of acceptance for its plans among Asian law- and policymakers.



Sustainability reporting in Asia **Key takeaways**

Ten key takeaways for Asian law- and policymakers, as well as business leaders, in anticipation of changing global sustainability reporting landscapes that increasingly take account of shifting ESG transition risks and opportunities:

- 1. Sustainability reporting stringency is accelerating globally, including within the EU and across Asia, both in terms of stakeholder scope and materiality considerations.
- The EU's existing and planned frameworks represent the current global benchmark in sustainability reporting stringency given the focus on mandatory rules and the gradually broadening scope of stakeholders covered under them, having started with large, listed companies and now including all listed companies (and considering EU-based SMEs), EU and non-EU financial service providers, and soon even non-EU companies who are part of EU-based companies' supply chains.
- The main mandatory actions are being driven by lawmakers, regulators, and stock exchanges. The most advanced proposals originate from the EU, with plans announced by the US SEC (Securities and Exchange Commission) being fairly advanced as well.
- Asia is generally less developed in terms of sustainability reporting-related laws, rules, or regulations of mandatory nature. The majority of efforts are driven by financial regulators in coordination with local stock exchanges.
- Thailand and Singapore require sustainability reporting on a 'comply or explain' basis for the time being. Japan is planning to introduce mandatory sustainability reporting for large listed companies between FY2022 and FY2023. South Korea is maintaining voluntary ESG disclosure at least until 2025.



Key takeaways

- There is a noticeable divide in the areas and topics that companies will need to cover in their sustainability reporting, with the EU opting for a GRI GSSB-inspired multi-stakeholder approach rooted in the 'double materiality' concept¹. However, all of the observed Asian jurisdictions opted for investor-orientated 'single materiality²', mostly in line with the concepts forwarded by the IFRS' (International Financial Reporting Standards') ISSB (International Sustainability Standards Board) and the TCFD.
- 7. Whereas the EU, and the US SEC, require independent assurance of reported sustainability information, first limited and then reasonable, the observed Asian jurisdictions do not mandate external third-party verification, with only Singapore and Japan recommending it.
- 8. There are substantial economic risks for globally operating Asia-based companies and suppliers in case of sustainability reporting-related regulatory divergence and subsequent non-compliance with EU laws, rules, and regulations. On the other hand, EU-based companies could potentially face either competitive advantages as being more ESG-aligned than their peers, or competitive disadvantages, primarily due to increased costs associated with increasing corporate reporting requirements.
- The EU's rules are seen as too rigid in most Asian jurisdictions as they either do not sufficiently take into account the significant natural resource and fossil fuel exposures of local economies or the emerging economy status of many Asian countries. In terms of sustainability reporting, the key provision facing pushback is the double materiality approach of the EU, which numerous Asia-based industry groups and regulators consider challenging to integrate in the near term. Asian jurisdictions generally favour a financial materiality-orientated global baseline for sustainability reporting, closely aligned with the TCFD recommendations.
- One of the most substantial challenges for international corporations and regulators concerns the transposability of sustainability reporting-related rules. For example, the CSRD's new provision states that EU-based subsidiaries or branches of third country undertakings (i.e. non-EU companies) will also have to produce sustainability reports if they generate a net turnover of more than EUR 150 million in the Union. However, this requirement does not affect third country undertakings from jurisdictions with sustainability reporting standards considered equivalent to the EU's. This constitutes a very material example of how the EU's sustainability reporting plans will impact sustainability reporting in Asia and the potential risks of regulatory divergence.

While the CSRD plans might create new obligations for Asia-based corporations, many of the EU's sustainability reporting-related plans actually overlap with many Asian framework plans and thus present potential pathways of how to increase transposability and reduce regulatory divergence. The EU Taxonomy could serve as a template, more specifically the additional Taxonomy delegated act published in March 2022, which allows certain activities related to gas and nuclear to be considered as contributory to sustainability goals. While highly controversial and contested by many ESG stakeholders, including its own expert advisory body, it resulted in aligning the EU, intentionally or inadvertently, to a higher degree with the various 'transition taxonomies' of several Asian jurisdictions, including Japan, Korea, and ASEAN.

^{1.} Double materiality (a.k.a impact materiality or societal materiality) is defined as: Companies have to report about how sustainability issues affect their business and about their own impact on society, including people and the environment.

^{2.} Single materiality (a.k.a financial materiality or enterprise materiality) is defined as: Companies have to report how sustainability issues affect their business activities, asset-level risk exposure and enterprise value.

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List of Abbreviations (non-exhaustive)

ASEAN	Association of South East Asian Nations	KOSPI	Korean				
CDP	Carbon Disclosure Project	KRX	Korea Exchange				
CDSB	Climate Disclosure Standards Board	MAS	Monetary Authority of Singapore				
CSRD	Corporate Sustainability Reporting Directive	METI	Ministry for Economy, Trade, and Industry (Japan)				
EFRAG	European Financial Reporting	MOEJ	Ministry of Environment (Japan)				
F0.4	Advisory Group	MOTIE	Ministry of Trade, Industry and Ener				
ESAs	European Supervisory Authorities		(Korea)				
ESG	Environmental, Social, and Governance	NFRD	Non-financial Reporting Directive				
ETS	Emissions Trading Scheme	NGFS	Network for Greening the				
FDI	Foreign Direct Investment		Financial System				
FSA	Financial Services Agency (Japan)	OECD	Organisation for Economic Cooperation and Development				
FSC	Financial Services Commission (Korea)	RTS	Regulatory Technical Standards				
FSS	Financial Supervisory Service (FSS)	SASB	Sustainability Accounting				
GFIT	Green Finance Industry Taskforce	07.10.2	Standards Board				
	(Singapore)	SDGs	Sustainable Development Goals				
GHGs	Greenhouse Gases	SET	Stock Exchange of Thailand				
GRI	Global Reporting Initiative	SFDR	Sustainable Finance Disclosure				
GSSB	GRI Global Sustainability		Regulation				
	Standards Board	SGX	Singapore Exchange				
IAASB	International Auditing and Assurance Standards Board	SMEs	Small and Medium Enterprises				
IASB	International Accounting Standards Boards	TCFD	Task Force on Climate-related Financial Disclosures				
IFRS	International Financial Reporting Standards	UN SSEI	United Nations Sustainable Stock Exchanges Initiative				
IIRC	International Integrated Reporting Council	US SEC	United States Securities and Exchange Commission				
ISSB	International Sustainability	VRF	Value Reporting Foundation				
.505	Standards Board	WEF	World Economic Forum				
JPX	Japan Exchange Group	WRI	World Resources Institute				

Sustainability reporting in Asia

In recent years, the number of laws, regulations, rules, and proposals to advance for transparency around climate-related risks and sustainability impacts has slowly but steadily been growing. Thereby, one needs to differentiate between initiatives driven by international organisations and action advanced by national entities. However, one commonality is the desire to create a set of globally applicable sustainability reporting standards that constitute a baseline for internationally operating companies and investors. Uncertainty was a source of greenwashing risks, as it allowed companies to engage in selective disclosures and potentially overstate their positive sustainability impacts and underreport their negative impacts.¹

The EU has been the most active in advancing mandatory sustainability reporting, not only across EU-based stakeholders, but having gradually expanded the scope of their legal frameworks to cover non-EU based investors and suppliers as well.²,³ While the EU's plans were generally seen as well-intentioned, they were considered too ambitious and were challenged by international businesses and global governments, notably in Asia.4 Hence, the EU's plans appeared to remain relatively isolated in terms of scope and ambition. However, this changed when, on 21 March 2022, the US SEC proposed rules to enhance and standardise climate-related disclosures for investors. 5 These developments were generally welcomed by companies, although there were also criticisms of agency-level overreach or lack of competence to mandate climate-related disclosures.⁶ As the US rules would be mandatory as well, albeit less stringent than their EU counterparts that do not only focus on climate-related financial risk disclosures, but a broader sustainability impact-related double materiality approach, they open up an interesting

discussion around the need for a global sustainability reporting baseline.

The creation of the IFRS' ISSB in 2021 was facilitated through the integration of SASB (Sustainability Accounting Standards Board), the IIRC (International Integrated Reporting Council), and the CDSB (Climate Disclosure Standards Board) into the IFRS Foundation. In March 2022, the ISSB proposed two standards to create a comprehensive global baseline of sustainability disclosures: one on general sustainability-related financial disclosure requirements, and the other specifying climaterelated disclosure requirements.7 Similar to the US SEC, the ISSB focused on financial materiality and climate-related risks, and the fact that many Asian nations expressed their support for this investorfocused and enterprise value-centred approach risked creating substantial regulatory divergence between the EU and the rest of the world in terms of sustainability reporting.8,9 In order to reduce these risks, any common sustainability reporting baseline thus needs to find a balance between the EU's double materiality approach that requires the disclosure not only of climate-related financial risks, as is the case with the ISSB standards, but the reporting of corporate ESG risks and impacts, considered to be more aligned with science and better in addressing greenwashing risks.¹⁰ Subsequently, in order to determine potential avenues to align these two approaches and reduce divergence risks, we will first look at international consolidation efforts in the area of sustainability reporting. Moreover, we have solicited EU-based and Asia-based ESG disclosure experts to determine the relevance of the EU's sustainability reporting approach for Asia.

1.1. International consolidation efforts

This section explores the diverse landscape of voluntary sustainability reporting frameworks, which have often served as the basis for most non-financial and ESG-related corporate disclosures up until now. To identify the most common frameworks, the United Nations Sustainable Stock Exchanges Initiative (SSE), introduced in 2009, lists the most referenced frameworks among its members, with the GRI standards in the lead (Figure 1).^{11,12}The GRI Standards represent the momentarily most used voluntary sustainability reporting framework among listed companies and the most referenced reporting instrument among global stock exchanges.^{13,14}

Nonetheless, many stakeholders in the sustainability reporting and ESG disclosure spaces, notably business leaders and users of ESG data, lamented the existence of numerous simultaneous standards, which often cover different areas, use different metrics and indicators, and are structured differently (Figure 2).¹⁵

In September 2020, five widely-adopted standard setters, namely, SASB, IIRC, GRI, CDP, and CDSB, issued a joint statement of intent announcing a commitment to work together to create a comprehensive corporate reporting system. ¹⁶ The statement of intent does not propose to create a new or merged framework or standard but instead suggested that "the combination of their existing frameworks, standards and standard-setting processes can provide the basis for progress towards a comprehensive corporate reporting system."

In December 2020, they then published a prototype climate-related financial disclosure standard.¹⁷ The paper explains that enterprise value reporting – in other words, disclosure of how sustainability matters create or erode enterprise value, also known as financial materiality – "is not therefore a replacement for sustainability reporting, which serves a broad range of stakeholders, can offer input to public policy design and reveals issues that may emerge as material for economic decision-making

Figure 1: Written ESG guidance and standard references for stock exchanges¹²

ESG Disclosure



UN member states agreed on 17 Sustainable Development Goals (SDGs) to be accomplished by 2030. The following target is directly addressed by this topic.

Target 12.6: Encourage companies, especially large and trans-national companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

63 Exchanges with written ESG Guidance



The Progress

63 of the 114 stock exchanges tracked by the SSE have published ESG reporting guidance for their listed companies



Figure 2: Sustainability dimensions and required information across frameworks/standards^{15,iii}

		Sustainability dimensions mentioned by the framework/standard						Information required			
Framework/ standard	Division	Environment	Soclial/people	Governance	Economics (incluing profit)	Anti-corruption	Business model	Risks	Strategy/polocy	Performance	
Main analysed frameworks/standards											
GRI	3 topics ⁶	•	•	•	•	•	•		•	•	
IIRC	6 capitals ⁷	•	•		•		•	•		•	
SASB	5 dimensions ⁸	•	•	•			•	•	•	•	
UNGP RF ⁹	-		•				•	•	•	•	
Taxonomy Regulation	6 objectives¹-	•								•	
TCFD ¹¹	-	•		•			•	•	•	•	
Additional resources considered											
ISO 26000	7 core subjects ¹²	•	•	•			•			•	
WEFIBC	4 pillars ¹³	•	•	•	•					•	
 iii Figure 2 sub-references: 5 Final Report – Recommendations of the Task Force on 10 Regulation (EU) 2020/852, article 9 11 Final Report – Recommendations of the Task Force on 											

- 5 Final Report Recommendations of the Task Force or Climate-related Financial Disclosures (2017)
- 6 https://www.globalreporting.org/how-to-use-the-gristandards/gri-standards-english-language/
- 7 IIRC, The International <IR> Framework (2013)
- 8 SASB Conceptual Framework (2017)
- 9 UN Guiding Principles Reporting Framework (2015)
- 11 Final Report Recommendations of the Task Force or Climate-related Financial Disclosures (2017)
- 12 ISO 26000:2010 Guidance on social responsibility
- 13 WEF "Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation White Paper" (2020), p.12

over time." They believe, however, that consistent communication of how sustainability matters affect drivers of enterprise value can be a "complementary enabler of change, since it creates a financial incentive for companies and their investors to improve performance on some sustainability matters as much and as quickly as they can." 18

Also, the IFRS Foundation, the non-profit body in charge of IFRS, published a consultation paper in August 2021 about the need for a new global standard on sustainability reporting, the creation

of an IFRS-convened International Sustainability Standards Board (ISSB), and whether the focus should be on single or double materiality.¹⁹

Regarding the materiality question, one response by a large EU-based asset manager argued in favour of coherent ESG reporting standards that go beyond climate-related data and are based on double materiality.²⁰ Other stakeholders expressed a growing and urgent demand to improve the global consistency and comparability in sustainability reporting, as well as the strong recognition that

urgent steps need to be taken, supported by a broad demand for the IFRS Foundation to play a role in this. For example, the European supervisory authorities emphasised the following aspects:²¹

- The global challenges posed by sustainability for investors and other stakeholders and their call for a common set of standards.
- The importance of building on existing initiatives and of taking key notions such as 'double materiality' into account.
- The requirement to address environmental, social and governance aspects beyond climate.

In 2021, several standard alignment efforts culminated in the creation of a Technical Readiness Working Group, chaired by the IFRS Foundation, consisting of the WEF (World Economic Forum), the TCFD, the VRF (Value Reporting Foundation), and the CDSB, to produce a climate-related disclosures prototype. The responses were mostly positive, although some commentators questioned the additionality of the ISSB, as the GRI already offered a set of universal sustainability reporting standards, developed and overseen by its independent GSSB.²² Another point of contention was the ISSB's focus on the concept of single materiality, meaning it would require companies to disclose only sustainabilityrelated information that would be materially relevant to investors and not the broader stakeholderorientated double materiality approach of the GRI's GSSB standards.

However, in March 2022, the ISSB and the GRI announced a collaboration by adhering to a two-pillar approach that will cover both financial materiality (ISSB) and impact materiality (GSSB).²³

1.2. Sustainability reporting relevance for Asian jurisdictions

In order to regionally contextualise the analysis around a common baseline that incorporates both financial and impact materiality, it is important to obtain direct insights from relevant expert-level stakeholders. Therefore, we conducted a brief survey and semi-structured interviews with six experts active in the area of sustainability reporting or ESG disclosures. Of these, five experts were Asia-based (two from Japan, two from Singapore, one from Thailand), and one was EU-based. All of the interviewed professionals were exposed to sustainability reporting standards in some shape or

form, either actively shaping them as regulators and technical committee members or applying them at the practitioner level. iv

Thereby appeared a clear divergence between jurisdictions. Expert EU-1 stated that the EU's initiatives could be considered overly ambitious in a global context, notably in emerging countries with companies that are playing important roles in global supply chains. Expert EU-1 sees the main risk in the EU's reporting frameworks serving as a global baseline in the presence of the double materiality concept, which seems very aligned with the EU Green Deal plans but less aligned with the economic realities and ESG capacities of non-EU companies. One potential way forward could be the prospective collaboration between the ISSB and the GRI GSSB, which has already incorporated double materiality into their core universal standards, thus permitting globally operating companies to comply with more and less ambitious sustainability reporting frameworks.24,25,26

In contrast, experts from Asia displayed an existing divergence between regulatory plans, which mostly align with the financial materiality approaches of the ISSB standards and the TCFD recommendations, and the current corporate practices of many large listed companies that utilise the GRI GSSB standards and as such already take account of the broader impact materiality concept found in the EU's double materiality approach. Expert A-1 rated the EU and GRI frameworks of low importance in developing their domestic sustainability reporting rules. Expert A-1 stated that "Sustainability considerations must feed into the calculation of 'cost of capital' for corporates if it is to become mainstream. It seems to me that the double materiality concept obscures the relationship between sustainability risks and cost of capital and as a result delays the necessary transformation in thinking among corporates." Expert A-2 voiced similar views on materiality by stating that in their jurisdiction "stakeholders strongly support the single materiality approach and market participants as the primary user of the reporting information. There should be a link between sustainability reporting for investors and broader reporting, and the dynamic materiality concept is accepted widely in their jurisdiction." Nonetheless, expert A-2 sees some merit for alignment, especially across globally integrated supply chains as "some top-tier companies, especially electronics and automobiles, are highly mindful of EU prospective reporting requirements."

iv Names have been anonymised for privacy reasons as follows: EU-1, A-1, A-2, A-3, A-4, A-5

Expert A-3 rated the GRI GSSB Standards as most relevant in their current work and stated that "It is critical that there is global consensus on the reporting standards for sustainability matters, akin to that for financial reporting. The establishment of the ISSB and the merger of the ISSB with the VRF and CDSB are welcome moves that would lead to greater harmonisation." In addition, they state that they "believe that the concept of materiality is a dynamic one, and the relationship between the two lenses of materiality will continue to evolve, including convergence on some elements."

These sentiments are shared with expert A-4, who states that "While it is a challenge to design a 'one-size-fits-all' reporting standard that is applicable to corporations from diverse geographic locations, industries, market caps, business focus, ESG risks and cultures, it is highly possible to customise a 'harmonised framework' – one that is adapted to suit corporates' material ESG issues and aligns with major stakeholders' expectations. Doing so would help companies focus on managing sustainability risk and changing their business models to respond to the challenge of climate change and preserving their social licence to operate."

They differ from the previous expert opinion in that they "subscribe to the double materiality approach as they believe it presents a holistic picture of our impacts on the internal and external stakeholders, society and the environment." Hence, they utilise the GRI GSSB Standards, "which advocate for reporting on ESG impacts on the company as well as by the company." Expert A-4 considers close regulatory alignment with EU rules as a way to differentiate their jurisdiction from other Asian countries and position themselves as a leader in Asia which, in return, would attract companies and investors by reducing noncompliance risks when dealing with EU stakeholders.

Finally, expert A-5 also considered the GRI GSSB standards to be having the strongest influence in their work, the double materiality approach of the latter being reflected in expert A-5's statement that "at the end of the day, there is no such thing as non-financial information, having no relevance to a company's bottom line. In other words, environmental and social materiality definitely relates to financial performance." Therefore, regional regulatory alignment in Asia would reduce divergence risks as expert A-5 concludes that the EU's broad regulatory scope "would have direct impact on disclosure practices of multinational enterprises and companies in the supply chain of European businesses ... [and] ... would affect global financial institutions and investment communities."

2.1. The NFRD: The start of sustainability reporting in the EU with the concept of double materiality

Driven by the release of new laws and regulations on sustainability reporting, a growing number of public and private companies are required to publicly disclose the impacts of their activities on global environmental and social challenges (e.g., climate change, loss of biodiversity, global warming, social inequality, and diversity). Following the adoption of the EU 2014/95 directive in October 2014, also known as the Non-financial Reporting Directive (NFRD), companies' sustainability disclosures have become common in Europe since its entry into force in January 2018.27 However, current reporting methodologies and approaches are still too complex and diversified, requiring companies to invest in deep professional knowledge and expertise that often need to be backed up with robust sustainability strategies and risk management processes.

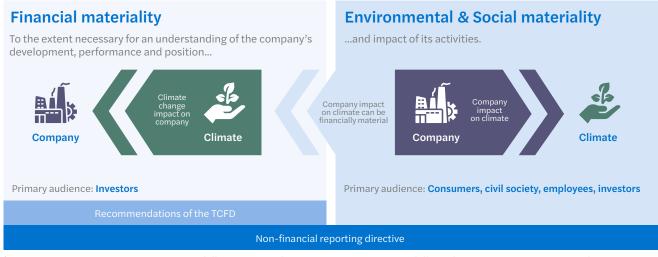
To improve global companies' awareness on disclosure of sustainability/ESG issues, this publication aims to give a snapshot of current EU initiatives in development – both at the regulatory and project levels – in the field of sustainability and corporate reporting. ²⁸ The report provides a brief introduction of the EU-level regulations and laws on non-financial disclosure and ongoing sustainability reporting-related regulatory and legislative actions.

The NFRD has brought significant conceptual and practical progress to sustainability reporting across the EU. One of the main characteristics the NFRD introduced is the double materiality approach that requires the report on "information [...] necessary for an understanding of the undertaking's development, performance, position and impact of its activity", also known as impact materiality (Figure 3).²⁹

In the process of preparation of the non-financial statement, preparers should apply a double materiality process where the following two dimensions of materiality have to be taken into account:³¹

- 1. Impacts on people and planet: "[C]ontaining information to the extent necessary for an understanding of the group's development, performance, position and impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters ..."
- 2. Sustainability risks to the company: "The principal risks related to those matters linked to the group's operations including, where relevant and proportionate, its business relationships, products or services which are likely to cause adverse impacts in those areas, and how the group manages those risks."

Figure 3: The double materiality concept as applied with the EU³⁰



^{*} Financial materiality is used here in the broad sense of affecting the value of the company, not just in the sense of affecting financial measures recognised in the financial statements

Financial materiality can be perceived through the requirement of reporting information concerning the company's "development, performance [and] position." Information relating to such questions is of primary interest to investors, as it concerns the value of the undertaking. For example, the value of a company could be reconsidered if its poorer performance is linked to the switch from non-renewable to renewable materials. Environmental and social materiality must also be reported, because the NFRD makes a reference to the "impact of [the company's] activities."

Albeit the concept of impact materiality, the underlying foundation of double materiality, was already refined over time by organisations such as the GRI, it is now solidly entrenched in the European sustainability reporting landscape.³² Not only has the European Commission itself been including it in the NFRD update, which is now known as the CSRD, it has done so with strong support from EU-level financial regulators and supervisory authorities.^{33,34} For example, in December 2020, the European supervisory authorities (ESAs) addressed the IFRS Foundation by emphasising the importance of the double-materiality concept to enhance the relevance of the disclosures.³⁵

The European Financial Reporting Advisory Group (EFRAG), which has been tasked with developing the mandatory EU sustainability reporting standards under the CSRD, also incorporates the doublemateriality concept into its conceptual guidelines for standard-setting. 36,37,38 These EU-level developments stand in contrast with the planned disclosure baseline standards by the IFRS Foundation's ISSB, which adopts a more climate-related financial riskaligned single materiality model for their March 2022 disclosures prototypes, largely inspired by the 2017 TCFD recommendations. 39,40 Therefore, the announcement that the GRI GSSB and the IFRS' ISSB would collaborate together in order to integrate double materiality through a two-pillar system, which will cover both impact materiality and financial materiality, has been seen in a positive light.⁴¹ It has been considered a major step forward to further reduce disclosure standard fragmentation and facilitate the creation of an integrated sustainability reporting baseline.42,43

2.2. Beyond the NFRD: Current and future legislative initiatives

It is recognised that the 2014 NFRD was a symbolic and important initial step. It has ensured that companies have begun their journey and invested time and resources. But the sustainability landscape has matured. Expectations have risen and will continue to rise to hold companies accountable to all their stakeholders for their value creation and contribution to sustainable development. The universe of sustainability matters keeps expanding to include new aspects of sustainable development. To sustain its bold and innovative debut and live up to the expectations it has set, the NFRD needs to keep pace with the powerful trend it has contributed since its entry into force.

However, the NFRD itself appeared outdated within the EU's plans around the Green Deal and the Sustainable Finance Action Plan. The CSRD at the centre, flanked by the SFDR, and the EU Taxonomy Article 8 disclosures around the identification of sustainable activities would aim to fill the gaps in EU existing rules on non-financial information.⁴⁴ The principal novelties of the CSRD are:⁴⁵

- to extend the scope of the reporting requirements to additional companies, including all large companies and companies listed on a regulated market (except listed micro- companies)
- to require assurance of sustainability information
- to specify in more detail the information that companies should report, and require them to report in line with mandatory EU sustainability reporting standards
- to ensure that all information is published in a dedicated section of company management reports

2.2.1 Current and future regulatory and legislative initiatives to strengthen the EU's sustainability reporting frameworks: The CSRD, the SFDR and the EU Taxonomy

While the NFRD has been the cornerstone around EU-level sustainability reporting and ESG disclosure, as several reports by the Alliance for Corporate Transparency and the CDSB have found, the quality and materiality of the reported information was highly dependent on pre-existing legislation in the respective countries. 46,47 Examples include the aforementioned independent assurance requirements for non-financial information implemented in Italy, Spain, and France, or additional climate-related disclosure legislation such as Article 173 of France's energy transition law, which mandated certain large corporate entities to first disclose key climate-related information, later supplemented with additional environment-related requirements in 2019.48,49,50,51

In 2018, as part of its Action Plan on Sustainable Finance (see Figure 4),⁵² the European Commission began considering updates to the NFRD. Several areas in need of updating were outlined in the 2021 impact assessment accompanying the document Proposal for a Revision of the Non-Financial Reporting Directive.⁵³ It lists, among others, that "currently, the information reported by companies does not meet users' needs (investors, civil society and others). Some companies from whom users need information

do not report it. Even when companies do report, the information is usually not sufficiently relevant, comparable, reliable or easy to access and use."

Furthermore, it states that "user demand for non-financial information is expected to increase significantly so these problems will intensify. The lack of adequate non-financial information for investors and civil society creates investment risks, inhibits financial flows to activities that address the sustainability crisis, and creates an accountability gap between companies and society. Preparers (reporting companies) incur unnecessary costs due to uncertainty about what to report and stakeholders' demands for information in addition to what companies report publicly. The flexibility and lack of specificity in the NFRD is one reason for this. In addition, there are many overlapping reporting standards and frameworks, and consequently no consensus on what companies should report."

The update of the CSRD, aims at addressing the issues by extending "the scope of the companies covered to all large and all listed companies, require the audit (assurance) of reported information and strengthen the standardisation of reported information by empowering the Commission to adopt sustainability reporting standards." It adds "a substantive corporate duty for some companies to perform due diligence to identify, prevent, mitigate and account for external harm resulting from adverse human rights and environmental impacts in the

Figure 4: The foundations of the EU sustainable finance framework 54

1. EU taxonomy

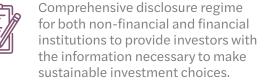
A common classification of economic activities substantially contributing to environmental objectives, using science-based criteria.

Taxonomy regulation **adopted** on 18 June 2020



2. Disclosures

3. Tools



Sustainable Finance Disclosure Regulation (SFDR) **applies** since March 2021

Corporate Sustainability Reporting Directive (CSRD) **proposed** by the Commission in April 2021

Sustainability preferences **adopted** by the Commission in April 2021



Broad toolbox for companies, market participants and financial intermediaries to develop sustainable investment solutions, while preventing green washing.



EU Climate Benchmarks Regulation **applies** since April 2020

Standard for European green bonds (EuGB) **proposed** by the Commission today

company's own operations, its subsidiaries and in the value chain." Finally, it "mandates disclosure of plans of an undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1.5 °C in line with the Paris Agreement."

The proposed CSRD is now subject to the European legislative process, through which both the European Council and Parliament are invited to suggest amendments that don't necessarily go in the same direction and can ultimately alter the initial proposal from the European Commission.⁵⁵

As of May 2022, the Council approved its main lines regarding the CSRD, which, if approved, would:⁵⁶

- be introduced through a phased-in approach to reporting, starting with large and listed companies (500 > employees) from 1 January 2024
- adopt the first set of reporting standards by 31 October 2022; the second set and SMEs proportionate standards by 31 October 2023
- mandate a statutory auditor or independent assurance service provider to conduct a limited assurance engagement:
 - Member states can either opt for a statutory auditor other than the one carrying out the financial audit to carry out assurance of sustainability reporting, or
 - Member states can opt for an independent assurance service provider to carry out assurance of sustainability reporting if they are subject to equivalent requirements as set out in the Audit Directive
- require the European Commission to adopt reasonable assurance standards no later than six years after the CSRD entered into force
- require member states to transpose the CSRD 18 months after its entry into force

Parliament also set out its main lines, which comprise the following points:⁵⁷

- Scope: All large companies (listed and nonlisted), non-EU companies operating in the EU internal market, and subsidiaries. Listed SMEs are excluded from the scope. The EP also asks the EC to establish additional reporting criteria for companies with relevant activities in high-risk sectors (textile, agriculture, mining, minerals).
- Reporting timeline: First company reporting in 2025 for 2024 financial year.

- Assurance: Mandatory limited assurance engagement; however, the statutory financial auditor or the audit firm(s) cannot carry out sustainability assurance for the same client.
- Member states shall open the market to other independent service providers considering they comply with equivalent requirements set out in the Audit Directive.
- The European Commission should adopt limited assurance standards before 1 October 2023 and reasonable assurance standards before 1 January 2026.

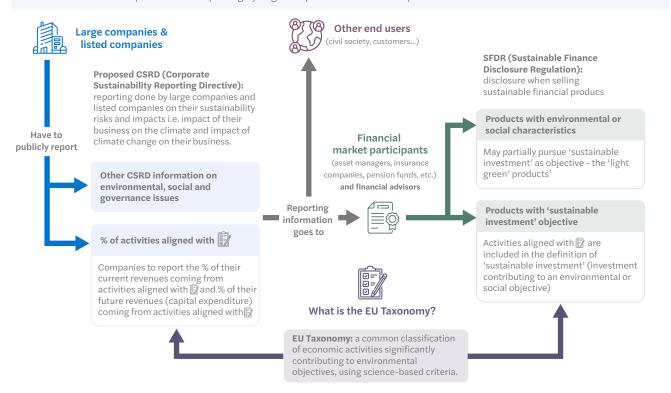
Conclusion of the legislative process is expected by mid-June 2022 and will confirm which of the Council and Parliament proposed amendments to the Commission's initial proposal are ultimately agreed upon and become EU law. Once approved, EFRAG would be tasked with developing the mandatory EU sustainability reporting standards, taking account of the double materiality principle.⁵⁸,⁵⁹

The CSRD will then act together with two other key components of the EU's sustainability disclosure regime for financial and non-financial companies: the SFDR and the EU Taxonomy. 60 Disclosure requirements include the impact of a company's activities on the environment and society, as well as the business and financial risks faced by a company due to its sustainability exposures, the aforementioned double materiality concept. In this context, the Commission has adopted a Delegated Act under the Taxonomy Regulation specifying the information to be disclosed by financial and non-financial undertakings concerning their environmental performance based on the EU Taxonomy, notably the proportion of the three indicators (turnover, CapEx and OpEx).61,62 In addition, the SFDR requires that sustainability preferences must be included in investment and insurance advice, and financial products making sustainability and climate-related claims must disclose certain key ESG information.63

In conclusion, the EU considers the CSRD, the SFDR, and the disclosures required under the Taxonomy Regulation set out in the Article 8 Delegated Act (Figure 5), as the "central elements of the sustainability reporting regime that underpins the EU's sustainable finance strategy." 64

Figure 5: How does the EU Taxonomy fit with the sustainable finance framework?⁶⁵

Two examples of when the taxonomy will be used: in disclosures of financial products and reporting by large companies and listed companies.



2.2.2 Current and future regulatory and legislative initiatives to strengthen the EU's sustainability reporting frameworks: The Corporate Sustainability Due Diligence Directive

In addition to the sustainability disclosure efforts advanced by the NFRD, CSRD, SFDR, and the EU Taxonomy, the EU is trying to close the sustainability information gaps around global supply chains. In February 2022, the European Commission announced a new proposal for a Corporate Sustainability Due Diligence Directive that aims at:⁶⁶

- improving corporate governance practices to better integrate risk management and mitigation processes of human rights and environmental risks and impacts, including those stemming from value chains, into corporate strategies
- avoiding fragmentation of due diligence requirements in the single market and creating legal certainty for businesses and stakeholders as regards expected behaviour and liability

- increasing corporate accountability for adverse impacts and ensure coherence for companies regarding obligations under existing and proposed EU initiatives on responsible business conduct
- improving access to remedies for those affected by adverse human rights and environmental impacts of corporate behaviour
- being a horizontal instrument focusing on business processes. Also applied to the value chain, this Directive will complement other measures in force or proposed, which directly address some specific sustainability challenges or apply in some specific sectors, mostly within the Union

Thereby, it would act in tandem with the EU's existing policy provisions regarding sustainability reporting by complementing the "current NFRD and its proposed amendments (proposal for CSRD) by adding a substantive corporate duty for some companies to perform due diligence to identify, prevent, mitigate and account for external harm resulting from adverse human rights

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and environmental impacts in the company's own operations, its subsidiaries and in the value chain."⁶⁷It would also underpin the SFDR, by feeding into the required statements by financial market participants on their due diligence policies with respect to principal adverse impacts of their investment decisions on sustainability factors on a comply or explain basis.⁶⁸ Finally, it would complement the mandatory public reporting requirements under the Taxonomy Regulation "by requiring companies to identify their adverse risks in all their operations and value chains," thus providing access to potentially more granular data.⁶⁹

It should be noted that on 21 June 2022, the EU Parliament and the EU governments struck a deal regarding the CSRD, agreeing on the following:^{70, 71}

- The new EU sustainability reporting requirements will apply to all large companies (with over 250 employees and a 40 million euro turnover, as defined in the Accounting directive), whether listed or not.
- EU rules on non-financial information apply to all large companies and all companies listed on regulated markets. These companies are also responsible for assessing the information at the level of their subsidiaries.
- Non-EU companies with substantial activity in the EU market (150 million euro in annual turnover in the EU) will have to follow equivalent reporting rules.
- Initially, SMEs listed on public markets will be subject to lighter reporting standards. They will have the possibility to opt out of the new system until 2028.
- The European extra-financial audit market will be standardised and opened by member states to enable both accredited independent auditors or new certifiers to certify sustainability reports. The reporting of non-European companies must also be certified, either by a European auditor or by one established in a third country.

One other key change from this agreed-upon text is the updated provision regarding sustainability reports of third country undertakings. The EU's Accounting Directive (Directive 2013/34/EU), on which the NFRD is based, currently exempts all subsidiary undertakings from the obligation to report non-financial information. However, the CSRD will now foresee a equivalence mechanism of sustainability reporting for non-EU subsidiary

undertakings of non-EU parent undertakings in line with Directive 2004/109/EC. Therefore, according to Article 40a of the CSRD, third country undertakings which generate a net turnover of more than EUR 150 million in the EU, and which have a subsidiary or a branch in the EU should be subject to EU sustainability reporting requirements, as long as the subsidiary or branch generates a net turnover of EUR 40 million in the EU.

2.2.3 Assurance of EU Non-Financial Information Disclosure under the CSRD, SFDR and the EU Taxonomy

The Council's CSRD proposal updates the NFRD by establishing an assurance requirement by amending Article 34 on "Auditing and assurance of sustainability reporting," mandating assurance of "whether the management report has been prepared in accordance with the applicable legal requirements."72 The Council has initially opted for limited assurance, however, leaving the door open for the Commission to adopt standards for reasonable assurance at a later stage, following an assessment to determine if reasonable assurance is feasible for auditors and undertakings. An important innovation is contained within paragraph three of the amended Article 34, wherein the Council states that "member states may allow a statutory auditor or an audit firm other than the one(s) carrying out the statutory audit of financial statements" to carry out assurance of sustainability reports.73 Furthermore, the Council's proposal would also enable Member States to "allow an independent assurance services provider" to perform the assurance as long as they comply with the fundamental EU Audit Directive requirements on:

- training and examination, ensuring that independent assurance service providers acquire the necessary expertise on sustainability reporting and the assurance of sustainability reporting
- continuing education
- quality assurance systems professional ethics, independence, objectivity, confidentiality and professional secrecy
- · appointment and dismissal
- investigations and sanctions
- the organisation of the work of the independent assurance services provider, in particular, in terms of sufficient resources and personnel and the maintenance of client account records and files
- reporting irregularities

The Council would require independent service providers to acquire the necessary knowledge in sustainability reporting and the assurance of sustainability reporting either via training and examination (if accreditation process is started after January 2024) or via continuing education (if accreditation process is started before January 2024).⁷⁴

The Council's CSRD proposals on assurance align partially with the International Auditing and Assurance Standards Board's (IAASB)'s assurance guidance on applying ISAE 3000 to sustainability reporting, notably the sections on 'Applying Proper Competence and Capabilities' as it is important to have appropriate assurance competence and subject matter competence in the non-financial reporting space which can cover a wide spectrum of highly technical knowledge and scientific areas.75 This becomes a relevant issue as competence greenwashing, also known as the practice of making misleading or inflated claims about one's sustainability or environmental credentials, has been identified as a serious risk among both seasoned and aspiring ESG practitioners.76,77,78

In addition, these proposals align with the GRI's recommendations on the external assurance of sustainability reports which state that "External assurance should be conducted by competent assurance providers with appropriate experience and qualifications. Assurance providers should be:⁷⁹

 independent from the organisation and therefore able to reach impartial and objective conclusions about the organisation's reporting and to publish these conclusions in a report that is publicly available

- demonstrably competent in the subject matter and assurance practices
- competent in applying quality control procedures to the assurance engagement
- able to conduct the engagement in a manner that is systematic, documented, evidence-based, and characterised by defined procedures in line with professional standards for assurance
- able to consider the selection of the information reported as well as its accuracy, and to assess whether the reporting provides a comprehensive picture of the organisation's most significant impacts and how it manages these impacts
- able to assess the extent to which the organisation has applied the GRI Standards in formulating opinions or reaching conclusions"

Finally, it should be noted that the three European supervisory authorities (ESAs) also proposed that, for the regulatory technical standards (RTS) regarding disclosures under the SFDR as amended by the regulation on the establishment of a framework to facilitate sustainable investment (Taxonomy Regulation), there should be an assurance for products under Articles 5 and 6 of the Taxonomy Regulation.80 In order to measure the extent to which activities funded by the product are aligned with the EU Taxonomy, the ESAs propose "an assurance provided by an auditor or a review by a third party that the economic activities funded by the product that qualifies as environmentally sustainable are compliant with the detailed criteria of the Taxonomy Regulation."81

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(Note: Jurisdictions listed in alphabetical order)

Asian nations, both developed and emerging, are among those with the highest degrees of reliance on carbon-intensive natural resources, particularly fossil fuels.82 It therefore has proven harder for Asian nations to decarbonise than most of their European and even North American peers, especially in energy-intensive sectors.83 The scaling of sustainable infrastructure and the growth of lowcarbon technologies, such as renewable energy installations, have been comparatively slow across Asia, often delayed by regulatory red tape and lack of infrastructure funding.84,85 Asian countries, including Japan, Korea, Thailand, and Singapore, all directly or indirectly remain highly dependent on coalpowered energy generation, which is reflected in the still-elevated levels of carbon risk exposure of Asian companies, either at the operational or investment level.86 Therefore, the ongoing operation and funding of fossil fuel-related economic activities also impact the quality of carbon-related disclosures in the Asian region, with the quality of disclosure being less granular and material than in European or North American territories.87,88

With Asian corporate stakeholders having higher sensitivities towards divestment due to their high fossil fuel exposures, the risks of inadequate carbon reporting, or carbon washing, have been highlighted in the past. ^{89,90,91} Nevertheless, Asia has been making significant progress in aligning its national sustainability-related regulatory and corporate governance structures, achieving or aiming for alignment with international standards, the area of environmental impact assessment frameworks being an example. ^{92,93} There have been regional improvements regarding sustainability reporting; however, whether these are sufficient to match the ambitions of the stringent EU frameworks will be explored in the sections below. ^{94,95}

3.1. Japan

3.1.1 Overview

Japan is the third-largest economy in the world and the second-largest in Asia in terms of nominative GDP, and is home to some of the largest companies and industrial conglomerates in the world, including 53 firms among the Global Fortune 500.96 Their global reach does expose them to significant climate-related, environmental, and sustainability risks. Moreover, their globally connected supply chains and trade activities generate significant sustainability impacts that are material in terms of Japan's international climate and SDG-related commitments.

Numerous stakeholders at the government level and industry level have embraced the SDGs and, in recent years, have been gradually intensifying their marketing and communication efforts around the SDGs.⁹⁷ These efforts align with the simultaneous push at the national level for more transparency concerning the corporate sustainability performance and company-level risk exposure to the effects of climate change.98 A multitude of recent sustainability reporting-related initiatives has been introduced by both governmental entities, industry groups, and private sector entities, ranging from existing corporate governance guidance framework updates to new rules surrounding the disclosure of climate-related and environmental data among listed companies.

The novelty of several of these actions is rooted in their mandatory nature. While most sustainability reporting or ESG disclosure-related policies and frameworks could be integrated voluntarily by companies, many newer efforts require full or at least partial disclosure of sustainability information by targeted corporate entities. We will outline the most relevant sustainability reporting-related actions in the following two sections.

3.1.2 Key stakeholders and actions

Country-level

The majority of sustainability reporting initiatives originate at the ministry and regulatory levels, notably the Ministry of the Environment (MOEJ), the Ministry of Economy, Trade, and Industry (METI), and the Financial Services Agency (FSA), which are all covering various interconnecting and often partially overlapping areas within the general sustainability reporting policy ecosystem. The main policy initiatives that should be highlighted are

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the '"Mandatory Greenhouse Gas Accounting and Reporting System' as well as the recent updates and revisions made to the country's main corporate governance frameworks, the 'Stewardship Code' and the 'Corporate Governance Code' (hereafter 'the Code').

The 'Mandatory Greenhouse Gas Accounting and Reporting System' was introduced in 2006. Administered by the MOEJ, it is part of the 'Law on Global Warming Countermeasure.'99 It targets companies and other large stakeholders (e.g., universities) with significant fossil fuel-based consumption and requires them to report their energy-related GHG emissions alongside their annual financial reports. It is therefore notable insofar that it establishes the first baseline for mandatory corporate GHG emissions reporting in Japan.

The Stewardship Code, first introduced in 2014 by the FSA, sets out best practices for institutional investors. ¹⁰⁰ It was revised in 2020 to include explicit references to the disclosure of sustainability-related information, including climate-related risks and other materially relevant ESG information. ¹⁰¹

The Corporate Governance Code is jointly issued by the FSA and the Japan Exchange Group (JPX), the national stock exchange operator, and contains both required and recommended corporate governance provisions for the country's publicly-listed corporate entities. The Code has been updated in 2021 to make explicit reference to TCFD-aligned climaterelated financial risk disclosures. 102 While strongly encouraged in the current version, the FSA is already planning to mandate TCFD-compliant climaterelated financial disclosures for the country's roughly 4000 largest listed companies. This rule has not yet been finalised at the time of the publication of this report, but with the Japanese government's strong support of the ISSB approach regarding their upcoming climate-related financial disclosure frameworks, it is highly likely that climate-related risks reporting will become mandatory in the near future. 103 In order to facilitate the roll-out of mandatory sustainability reporting rules, which will closely align with the ISSB focus on climaterelated financial materiality, Japan will create a Sustainability Standards Board Japan (SSBJ), to be launched in July 2022.104

The MOEJ had been publishing a variety of guidance documents and guidelines that directly feed into the larger scope of sustainability reporting as early as 2007, when the first iteration of the Environmental

Reporting Guidelines was published.¹⁰⁵ The publication was updated in 2018 to align with prior international developments, such as the disclosure of forward-looking non-financial data in line with the EU NFRD, and to recommend reporting the financial impacts pertaining to the major environmental issues, in line with the TCFD recommendations.¹⁰⁶ It has issued several practical guides to companies and financial institutions covering the TCFD recommendations and the Principles for Responsible Banking disclosure rules.^{107,108,109}

Finally, as to developing a taxonomy of activities, Japan is more focused on establishing a framework for credible transition pathways and underlying sectoral roadmaps for decarbonisation technology development and adoption. In early 2021, the "Basic Guidelines on Climate Transition Finance" were developed by a panel of academic experts and industry representatives with significant input from the FSA, MOEJ, and METI. In addition, "transition to net zero" roadmaps were developed for 10 hardto-abate sectors namely iron & steel, chemicals, electricity, gas, oil, cement, paper & pulp, shipping and aviation, from late 2021 to early 2022. The key element of differentiation to the EU's taxonomybased approach is the emphasis on entity-wide emissions reductions toward 2030 and 2050 without specifying what kind of activities should be deployed for achieving such emissions reduction targets. This could effectively allow certain fossil fuel related activities as long as they are able to showcase significant emissions reductions and other sustainability benefits, such as improved energy access to underserved communities. 110 However, with the EU's shift enacted through its "Delegated Regulation (EU) 2021/2139" that allowed certain gas and nuclear activities to be considered sustainable, Japan's taxonomy approach may end up exhibiting considerable overlap with the EU's.111

Corporate and financial sector-level

On top of these government-level policy efforts, it is worth mentioning several connected or adjacent policy initiatives introduced with the support of the ministries and industry organisations that contribute overall to a growing list of resources available to Japanese companies and investors to commence or improve their sustainability reporting activities. The TCFD consortium, established in 2019, stands out as it is a collaborative alliance between the METI, the MOEJ, the FSA, JPX, and Keidanren (the Japanese Business Federation). It is supposed to provide TCFD-level guidance to Japanese companies,

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increase climate-related financial risk reporting and promote ESG data disclosure, as well as highlight the progress already made among Japanese companies.

The TCFD consortium is also strongly connected to the ESG disclosure-related efforts of the JPX and the CDP, a London-based NGO that has been collecting GHG-related emission data on a voluntary basis from several thousand listed companies all over the world since 2005. The JPX has engaged with companies through its 'Survey of TCFD Disclosure in Japan,' which showed that despite the strong support for the TCFD recommendations in Japan, which counts the highest nominative support globally, material TCFD disclosure remains overall still low at the moment. The CDP has found similar results for GHG disclosures in its 'CDP Japan 500 Climate Change Report 2019.'112 While recently, some Japanese companies have topped the CDP's 'A-list' for outstanding carbon-related reporting, overall reporting levels still remain relatively low, both in terms of quantity and quality.¹¹³

3.1.3 Sustainability reporting-related assurance provisions

The MOEJ's Environmental Reporting Guidelines from 2018 state that on an entity's material issues, the entity should provide, among others, and if identified as material by its own judgement, "an assurance report, if an independent third party provided assurance to the items to be reported" (p.22) and "if multiple material environmental issues are assured by an independent third party, that should be indicated or explained with respect to each applicable material environmental issue" (p.25).¹¹⁴

The revised 2021 version of Japan's Corporate Governance Code refers to the disclosure of nonfinancial information by indicating that "Companies should appropriately make information disclosure in compliance with the relevant laws and regulations but should also strive to actively provide information beyond that required by law. This includes both financial information, such as financial standing and operating results, and non-financial information, such as business strategies and business issues, risk and governance" (p.13).115 In that context, the Code then explicitly highlights the responsibilities of companies in connection with external audits by stating that "External auditors and companies should recognise the responsibility that external auditors owe toward shareholders and investors, and take appropriate steps to secure the proper execution of audits" (p.15). One key provision in the

Code pertains to expertise: "Verify whether external auditors possess necessary independence and expertise to fulfil their responsibilities" (p.15), which in the context of the assurance of non-financial information will become a new major challenge for auditors.

However, it should be noted that the stance of the Japan Business Federation, closely linked with METI, generally argues against any mandatory audits or assurance regarding ESG disclosures, particularly climate change disclosures as recommended by the TCFD. In response to question ten on audit and assurance in the 'Request for Public Input on Climate Change Disclosures' by the SEC, Keidanren stated that: "Even if the SEC makes climate change disclosures statutory, we do not believe they should be subject to audit or another form of assurance at this time. We are concerned that if climate change disclosures are made subject to audit or another form of assurance, it would hinder flexible corporate disclosures. In addition, there is no global consensus as to the process of audit or external assurance of climate change disclosures, and discussions as to who should perform such audit or external assurance have not even started yet. Therefore, hasty introduction of audit or external assurance at this time should be avoided."116

3.2. Korea (Republic of)

3.2.1 Overview

Sustainability reporting in South Korea remains primarily state-driven. The Korean government has expressed its support of net-zero and sustainable transitions as these are pivotal in fuelling the nation's future growth engine. In 2020, the Korean government announced a Green New Deal plan mobilising large-scale investment, worth approximately KRW 114 trillion (USD 94.5 billion), in renewable energy, the phasing out of coal operations and financing, a new carbon tax, and a target of net-zero emissions by 2050. In 2021, the Ministry of Environment (MOE) Korea released a guidebook on 'K-taxonomy,' presenting principles and standards concerning environmentally friendly economic activity.

Nonetheless, sustainability reporting in Korea needs to address the critical barrier: the outstanding gap between the public and private sectors. The government and business leaders have conflicting views on whether and why sustainability transition is required. Moreover, large global companies (e.g., Samsung, LG, SK, etc.) and local small and

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medium-sized companies (i.e., SMEs) have different standpoints and responses to those pressures from the government. Except for a few companies whose businesses are globally connected, most local companies remain unmotivated and even resistant to disclosing their environmental, social, and corporate governance (ESG) performances. 119 However, there is no societal consensus or institutional mechanism to bridge these conflicting views. As a result, most of the current sustainability reporting in Korea remains voluntary. Only a handful of large companies publish sustainability reports, which are primarily for promotional purposes but do not comply with consistent reporting standards. The scope of mandatory reporting is minimal – the MOE requires companies to disclose only their direct carbon emissions.

3.2.2. Key stakeholders and actions

Country-level

To understand Korea's sustainability reporting landscape, we identify key stakeholders and specify their dynamics and (often conflicting) perspectives. The key stakeholders we discuss herein include the government sector, private companies, the financial sector, and the general public.

The Financial Services Commission (FSC), Financial Supervisory Service (FSS), Korea Exchange (KRX), and the Ministry of Trade, Industry and Energy (MOTIE) are the main entities in charge of advancing ESG disclosure and ratings of private companies. KRX, the sole securities exchange operator in South Korea, provides ESG ratings of the listed companies. As of 2021, the Korean government has mandated only the disclosure of direct carbon emissions based on two large schemes, which were both established by law: Target Management System (TMS);120 and Emission Trading Scheme (ETS).¹²¹ TMS was launched in 2012, mandating the companies to disclose their direct carbon emissions; the ETS was launched in 2015 to allow companies to trade their carbon credits. ETS mandates companies emitting over 125,000 tCO2eq per year or owning a facility emitting over 25,000 tCO2eq per year to disclose their direct carbon emissions, while TMS continues to cover smaller entities.122

Simultaneously, also in 2012, the FSC had introduced a Green Posting System, which required firms to post their GHG emissions and energy usage, as well green technology certification. Companies listed on the KRX had to include this information in their annual reports. By 2030, FSC plans to strengthen the

corporate disclosure rules by gradually making ESG disclosure mandatory for all KOSPI-listed companies, in three stages. 124 In the first phase, businesses will voluntarily file ESG disclosure reports until 2025. Then, from 2026 to 2029, companies that have total assets of KRW 2 trillion or more will be required to report their ESG management status. Ultimately, from 2030, ESG disclosure will become mandatory for all KOSPI-listed firms. 125 In 2021, MOTIE announced a plan to establish 'K-ESG guidelines' to assist companies in integrating ESG elements into their business management strategies. These guidelines will be categorised into four sections (information disclosure, environment, social and governance) with 61 evaluation criteria. The first edition of the guidelines is planned to be published in 2022, and revisions will be made every one or two years to reflect global trends and the latest developments.126

The main challenge with ESG disclosure initiatives in Korea is that several organisations are planning to publish their own ESG guidelines. Globally, the disclosure standard is being streamlined to a two-pillar system, while Korea is going against this trend to create several unique ESG evaluation standards. If these guidelines are not used in global trade and investment practice, it may cause confusion and increase the burden on companies.

Corporate and financial sector-level

Companies are at the centre of the sustainability reporting ecosystem as they create and provide the raw data points. In Korea, large companies are already voluntarily submitting sustainability reports as these companies are sensitive to the global market.¹²⁷ Several companies have established internal systems to check various ESG indicators across their supply chains: for instance, SK group, the third-largest chaebol in South Korea, and its holding company manage subsidiary companies in the energy, chemicals, telecommunications, trading, and semiconductor sectors, and has built its internal ESG evaluation criteria and collected data from its subsidy companies. Companies such as SK Group have sufficient capacity to respond flexibly to changes in sustainability reporting regimes. On the contrary, the situation is entirely different for SMEs. These companies do not have the resources or the capacity to monitor the necessary indicators for sustainability reporting. They would need to hire experts and establish a system to collect data, but these additional costs do not necessarily result in higher profit.

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While the financial sector plays a vital role in pushing global sustainability transition, local financial industry interest remains low concerning ESG and sustainability issues. Global investors are keen on changing company behaviours and have been increasing their engagement efforts in order to foster firm-level ESG integration. On the other hand, local investors currently display a low awareness and understanding of sustainability reporting as an integral part of ESG integration. State-owned banks, such as Korea Development Bank (KDB) and Industrial Bank of Korea (IBK), for example, are expanding their ESG integration by offering green finance products. Still, it is due more to governmentlevel action. Recently, commercial banks have been increasing their considerations of ESG but many aspects, including sustainability reporting, have not become mainstream yet. As the Korean government has utilised debt finance to a much greater degree than other countries in economic catch-up mode, the banking sector occupies a significant portion of the Korean financial industry. 128 Thus, fostering ESG integration and sustainability reporting practices across domestic banks will have a significant impact on overall industrial change.

Finally, Korea is one of those jurisdictions that has been developing a so-called sustainabilityrelated classification system, in this instance the 'K-Taxonomy,' that designates which economic activities can be considered sustainable and which ones are not.¹²⁹ Like the EU's Taxonomy, the K-Taxonomy classifies economic activities based on their contributions to six environmental goals: greenhouse gas reduction, adaptation to climate change, sustainable water conservation, recycling, pollution prevention, and management and biodiversity.¹³⁰ Furthermore, it states that "proper green economic activities must (i) contribute to the achievement of one or more of the six environmental goals above, (ii) not cause any serious damage to other environmental goals in the process of achieving the set environmental goal, and (iii) not violate the laws and regulations related to human rights, labour, safety, anti-corruption and destruction of cultural properties."131 However, one of the key reservations of some commentators has been the division of activities into 'green sector' and 'transition sector,' with the latter including fossil fuel-based gas activities. 132 An important difference with the EU's Extended Taxonomy, which also allows the inclusion of certain fossil fuel-based gas activities, is that the EU limits those to below 270g of CO2/kWh, whereas South Korea has no such

emission thresholds in place for gas, at this time.133

3.2.3 Sustainability reporting-related assurance provisions

Currently, the Korean Exchange does not make any explicit references towards specific sustainability information-related audits or assurances. The only requirements are those already in place in the context of mandatory disclosure of key information about corporate governance.¹³⁴

3.3. Singapore

3.3.1 Overview

Singapore is one of the world's leading financial centres and has, in recent years, engaged in numerous efforts involving green finance and ESG investing. They include several policies and initiatives aimed at increasing the level of sustainability reporting, especially for climate-related and environmental risks. The main driving forces behind these strategies are the Monetary Authority of Singapore (MAS) and the Singapore Exchange (SGX). The main driving forces behind these strategies are the Monetary Authority of Singapore (MAS) and the Singapore Exchange (SGX).

The underlying rationale was to consolidate Singapore's currently dominant position as a financial and business hub in Asia, particularly South-East Asia, by strengthening its green credentials through a series of underlying ESG-related regulatory actions and legal frameworks.

The majority of these sustainability reporting-related rules and policies remain 'comply or explain' in nature; thus technically, most companies will be exempt from disclosing ESG-related information.¹³⁸ However, there are considerations to render some national initiatives mandatory, such as the TCFD recommendations or the newly proposed ISSB disclosure standards. 139 In the meantime, a 2018 study found that roughly 60% of listed companies had an internal sustainability reporting framework, most often the GRI Standards, and that among the 327 observed companies, 55% published a sustainability report.140 Governance issues such as Occupational Health and Safety, charity work, and employee training were well covered. In contrast, more complex issues such as biodiversity, GHG emissions, and product/service stewardship had the lowest reporting levels.

3.3.2 Key stakeholders and actions

Country-level

In Singapore, it is quite difficult to separate the government policy sphere from the corporate

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policy sphere as many policy initiatives, including those pertaining to sustainability reporting, are conceived jointly and then published as laws or recommendations.

Beyond the existing legal frameworks that require companies to disclose financially material risks, Singapore has few legal stipulations that require the disclosure of climate-related financial risks, ESG data, or sustainability impacts. The government, in the form of the Monetary Authority of Singapore, supports corporate ESG disclosure and sustainability reporting, for example, by endorsing the TCFD recommendations or joining the Network for Greening the Financial System (NGFS).¹⁴¹

While the MAS is advancing the effort at the national level through the issuance of voluntary guidelines and common international framework support, the SGX has been advancing sustainability reporting in concrete ways at the corporate level. Rules 711A and 711B in the SGX Rulebook, which were introduced in 2016, specify that every listed issuer is expected to submit sustainability reporting by the financial year ending on or after 31 December 2017. It was amended in 2022, requiring listed companies to publish a sustainability report that must describe the sustainability practices with reference to the following primary components on a comply or explain basis: 143

- material environmental, social and governance factors
- climate-related disclosures consistent with the recommendations of the TCFD
- policies, practices and performance
- targets
- sustainability reporting framework
- board statement and associated governance structure for sustainability practices

In addition to these requirements, there are ESG requirements within the scope of the SGX rules:

- Issuers are to subject their sustainability reporting processes to internal review
- All directors have to undergo a one-time training on sustainability
- Sustainability reports are to be issued together with annual reports (unless issuers have conducted external assurance)

- Issuers are to set up a board diversity policy that addresses gender, skill and experience, and other relevant aspects of diversity – details such as diversity targets, plans, timelines and progress must be described in their annual reports
- There are 27 core ESG metrics that are highlighted by the SGX. These are voluntary and are intended to be a starting point for companies to determine what information to disclose in their sustainability reports

Corporate and financial sector-level

In January 2021, the Green Finance Industry Taskforce (GFIT), convened by MAS, issued a handbook that offers guidance to banks, insurers, and asset managers on best practices in environmental risk management.¹⁴⁴ It will support the financial industry's efforts to implement MAS' Guidelines on Environmental Risk Management.¹⁴⁵

The GFIT proposed a taxonomy for Singaporebased financial institutions to identify activities that can be considered green or transitioning towards green.¹⁴⁶,¹⁴⁷ GFIT comprises representatives from financial institutions, corporates, non-governmental organisations, and financial industry associations. Compared to other taxonomies, a key feature of the proposed taxonomy is that it encompasses transition activities that allow for a progressive shift towards greater sustainability while taking into account starting positions and supporting inclusive economic and social development. GFIT issued a consultation paper that seeks feedback on recommendations on the environmental objectives, focus sectors, and a 'traffic-light' system which sets out how activities can be classified as green, yellow (transition), or red according to their level of alignment with environmental objectives. 148 Singapore's taxonomy drew extensive inspiration from the EU plans for a green classification system, with a requirement for activities to contribute to the following climate change mitigation, climate change adaptation, protection of biodiversity, and promotion of resource resilience.149 The inclusion of 'resource resilience' and the exclusion of the EU's water pollution control, and circular economy categories, relates strongly to Singapore's economic and geographic contexts as a resource-poor nation with immense natural resource per capita consumption. 150

In the meantime, these national taxonomy plans have been superseded by an ASEAN (Association of South East Asian Nations) policy initiative, which was published in December 2021. 151 This streamlining

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effort unifies the various parallel taxonomy efforts by several ASEAN member states, notably Malaysia and Singapore, both of which had conceptualised taxonomy proposals that took the March 2020 EU Taxonomy draft as an inspiration, while also including 'transition technologies' that enabled companies and investors to label fossil-fuel and nuclear-related activities as contributing to broader sustainability objectives within a specific regional economic context. The ASEAN taxonomy also borrows from the EU's core taxonomy structure by listing "four environmental objectives and two essential criteria for the assessment of economic activities that act as the foundation to safeguard the environment and promote the transition to low carbon and environmentally sustainable practices."152 Similar to Japan's aforementioned transition taxonomy, the recent alterations by the EU to its taxonomy, notably the inclusion of gas and nuclear in its extended taxonomy, have led to partial alignments between the EU's legal texts and ASEAN taxonomy proposals.153

3.3.3 Sustainability reporting-related assurance provisions

The SGX' Rulebooks' Mainboard Rule 711B states that "the issuer's sustainability reporting process must be subject to internal review. The issuer may additionally commission an independent external assurance on the sustainability report". 154

3.4. Thailand

3.4.1 Overview

Among all of the observed countries, Thailand stands out as the only jurisdiction with 'middleincome country' status, according to the country's World Bank profile.¹⁵⁵ This sets the country apart as the national context, in which sustainability reporting is promoted, differs significantly from its developed Asian counterparts. Thailand is a regional economic power with a population of more than 80 million people, strategic access to both the Indian and Pacific oceans, as well as better infrastructure than most of its Indochinese neighbours to the north. The emerging economy status, elevated economic growth rates in recent years, and the rapidly developing standards of living of its domestic population bring multiple environmental, social, and governance pressures. This is exacerbated by global warming, with Bangkok being one of the global metropolises most threatened by rising sea levels. It also affects the Thai agricultural sector, with Thailand being one of the largest global exporters

of rice, which is under stress from extreme weather events including droughts and intensifying Monsoon rainfall.¹⁵⁶

These events pose several risks to Thai companies, Thai-based subsidiaries, or global corporations. Therefore, sustainability reporting can be seen as both a measure to foster confidence in Thailand as a reliable business partner inside globally-operating supply chains, and as a way to raise capital in order to foster ESG-related resilience for its economy. Given its emerging economy status, most domestic Thai policy efforts in the area of sustainability reporting have been initiated fairly recently or were part of its membership of ASEAN.

3.4.2 Key stakeholders and actions

Country-level

Like Singapore, Thailand conceptualises and coordinates a lot of its sustainable finance and ESG disclosure efforts within the scope of its ASEAN membership, thus increasing regional alignment across key sustainability policy provisions.

As observed in all the other Asian jurisdictions, the promotion of sustainability reporting is occurring primarily at three levels: the government level, the stock exchange level, and the industry group level. However, Singapore and Thailand bear similarities to EU member states wherein some of the domestic policy frameworks have been developed at the supranational level, in this instance ASEAN.

While ASEAN has not yet made any explicit recommendations in terms of corporate governance or sustainability reporting, the publication of a joint taxonomy of sustainable activities marks a crucial step towards further regional policy alignment at the sustainability policy level.¹⁵⁷

Whereas the taxonomy was undertaken at the supranational ASEAN level, the Thai government and the Stock Exchange of Thailand (SET) have announced or implemented several policies to foster and strengthen sustainability reporting, especially among large investors and listed companies. The most comprehensive efforts were the issuance of an IFC-supported sustainable finance framework in June 2020 and the announcement of joint sustainable finance initiatives between various public and private stakeholders including, among others, the Bank of Thailand and SET.^{158,159,160}

III. ESG disclosure initiatives in Asia (jurisdictions listed in alphabetical order)

Developments in East Asia and ASEAN

Corporate and financial sector-level

The SET is the main private entity to advance sustainability reporting at the moment. Nonetheless, similar to other jurisdictions, it does so in close coordination with national economic and financial regulators. The aforementioned sustainable finance framework and sustainable finance initiatives have the primary goals of establishing clear rules around what activities can be considered sustainable, and developing updated ESG disclosure rules.161 For example, in order to increase transparency and enable comparative benchmarking in a global context, the SET has been working with global ESG data vendors to highlight the ESG performance of the Thai listed companies. 162 In the 'Initiatives' document, the SET emphasises the importance of sustainability reporting to build investor confidence but does not advocate the existence of multiple standards. Therefore, it publicly expressed support for the TCFD and the ISSB plans as a way of reducing framework-level confusion and aligning global reporting with the TCFD recommendations.

The Thai SEC already mandates the reporting of sustainability-related activities, including descriptions of corporate sustainability policy and goals and various ESG metrics. The Thai SEC form 'TH SEC_Form56-1OneReport,' outlines in detail the format in which companies should report: 164

The company may disclose or prepare a plan for driving business towards sustainability, which covers essences specified in such section according to any of the following methods:

- Disclose only the essence of the policy and guidelines and the full version thereof on the company's website
- In the case where the company has incomplete information, for example, no policy or guidelines or operating results in various areas in the 'Business Sustainability Development,' specify 'have not prepared.' In the case where the company plans to publish the policy or the guidelines or the operating results, the publication year should also be specified in the report
- The company may additionally disclose the operating results, the outcomes or the action plan (if any) related to the social and environmental management in other areas as deemed to be in accordance with the company's policy

- and guidelines by studying the guidelines for sustainability reporting of Global Reporting Initiative (GRI)
- In the case where the company has prepared the sustainability development report, summarise only the essences of the contents under the four topics on the business sustainability development via 56-1 One Report and make a reference to the sustainability development report for details

Moreover, the general stance of key Thai stakeholders towards sustainability reporting, including the SET, is summarised in the following statement:¹⁶⁵

"A mandatory approach might provide details on a specific list of data points, both quantitative and qualitative, that must be disclosed. A proportionate 'hybrid' compromise might involve having a more comprehensive catalogue of potential data points, only a selection of which are mandatory. In combination, regulators can exercise judgement in the assessment of disclosures and request additional data from specific market participants where they believe there is a public interest, or probe into the absence and/or quality of data."

3.4.3 Sustainability reporting-related assurance provisions

The SET mandates independent audits for all reports, including the current provisions on sustainability reporting, which are relatively easy to comply with as they require only the description of corporate sustainability policy and goals and ESG metrics used to assess progress.¹⁶⁶

In the Sustainable Finance Initiatives document, the Thai government lists within its 'Key Features of a Successful Sustainable Finance Ecosystem for Thailand' a robust mechanism for ESG validation which, among others, "contributes to the availability of trusted and affordable ESG verification service providers to furnish and ensure investor confidence and objectivity in identifying ESG impact and the avoidance of green and sustainability washing" (p.16).¹⁶⁷ No further specifications or clarifications regarding the assurance or audit of ESG information or sustainability reports have been made by the Thai regulators and lawmakers at this stage.

Having looked at the key legal and regulatory provisions in the EU and four Asian jurisdictions, the following sections will attempt to establish a comprehensive comparative contextualisation by juxtaposing the regulatory benchmark set by the EU's sustainability reporting frameworks with the key rules and planned action in the four observed Asian jurisdictions. A major focus will lie on the consequences of regulatory divergence and how these gaps could be addressed. First, we look at various perspectives around the establishment of a

common sustainability reporting baseline. Then, we illustrate the stakeholder concerns and regulatory alignment challenges, using the EU Taxonomy for sustainable economic activities as the main example. Next, we briefly examine the contribution of assurance in securing a common global expertdriven baseline in the area of sustainability reporting. Finally, we highlight some of the key considerations that should feed into the ongoing sustainability reporting discussions in the EU, Asia, and beyond.

Figure 6: Key sustainability reporting framework timeline (since 2014)



4.1. Common sustainability reporting baseline considerations

In line with prior studies and reports that aimed at benchmarking national sustainability policies and environmental frameworks, both at the public and private levels, one of the key aspirations of this report is the establishment of a comprehensive sustainability policy benchmark through a comparative assessment of various key provisions and requirements across a number of selected jurisdictions. Therein, the EU was selected as the only extra-Asian territory given the fact that it is the first major industrialised jurisdiction that has established a mandatory ESG reporting framework for non-financial reporting, the aforementioned NFRD. As several reporting cycles have already been completed for both the pre-Brexit EU28 and the post-Brexit EU27, the obtained data served as a repository for other global jurisdictions when designing domestic sustainability reporting frameworks of their own.168

As both our in-depth framework analysis and the corresponding expert interviews illustrated, all sustainability reporting in the EU must be made on the basis of the double materiality principle, as outlined in its recent guidelines on climate-related disclosure and the series of framework proposals developed by EFRAG.¹⁶⁹,¹⁷⁰ As numerous stock exchanges already recommend the GRI Standards, the concept of double materiality will likely see a broader application in future sustainability reporting frameworks across Asia since the collaboration between the ISSB and the GRI solidifies the aforementioned two-pillar system, focusing on financial materiality (ISSB) and the broader impact materiality (GSSB).¹⁷¹ At this stage, none of the observed Asia jurisdictions makes references to double materiality as explicitly as the EU's CSRD and SFDR: the latter through the application of the principal adverse impacts disclosure obligations for financial service providers.¹⁷²,¹⁷³

However, the pushback is also coming internally from various European industry groups. One letter, sent on behalf of AFEP, the French association of large companies, and Deutsches Aktieninstitut, the association of German listed companies, to the EU Commissioner for Financial Services, is exemplary of the most common concerns that EU-based business and financial stakeholders see regarding the pace and perceived stringency of the new EU sustainability reporting standards.¹⁷⁴ Therein, they state that "Overly complex EU standards will

jeopardise their effectiveness and the information quality for users", that "EU standards will put EU companies' competitivity at stake", that "taking the international dimension into account is crucial and indispensable", and the EU should be "focusing on most urgent issues." They encourage EFRAG and the EU Commission to build on the future ISSB standards and add only strictly necessary disclosure requirements, reflecting the EU's double materiality perspective, with the initial focus on climate, then later the 14 environmental and social indicators listed in the SFDR, and ultimately address all other issues of supposed lower materiality. 175 Hence, there is a desire from a number of major European corporate business stakeholders for the EU to lower their ambitions in order to uphold existing global trade flows as much as possible instead of aiming for a higher common baseline.

Most stakeholders opt to support the plans of the ISSB of the IFRS Foundation, that will design standards to serve as a global baseline for sustainability reporting, based on financial materiality or single materiality, which are mostly in line with the TCFD recommendations. 176 The strong support from governments and industry representatives, including IOSCO and the NGFS (which the ISSB's proposed baseline standards have seen notwithstanding) are not a guarantee for global uniformity in sustainability reporting.¹⁷⁷,¹⁷⁸,¹⁷⁹ The proposed US SEC 'Rules to Enhance and Standardise Climate-Related Disclosures for Investors', for example, have only a partial overlap with proposed ISSB standards, with the common denominators being the focus on climate-related financial risks as recommended by the TCFD, and the absence of the double materiality concept. 180,181

With the EU continuing to integrate the double materiality approach into their upcoming sustainability reporting standards via the work of EFRAG and the support of GRI, the gap between the benchmark set by the EU and the ISSB's TCFDaligned approach, to develop a "comprehensive" global baseline of sustainability disclosures for the capital markets,"182 risks creating a two-speed regulatory landscape. The EU supports the double materiality approach, rooted in the inclusion of both financial and impact materialities, whereas the ISSB will initially focus on financial materiality and consider the inclusion of impact materiality at a later stage when they deem global stakeholder support to be broad enough, which is sometimes referred to as 'dynamic materiality'. 183 That would run counter to the plans of increasing the cohesion between global

sustainability standards, with the large EU single market forcing companies to either align with the EU's requirements or potentially face lower market access for non-compliance reasons. Therefore, the announcement that the GRI GSSB and the IFRS' ISSB would collaborate to establish a universally compatible two-pillar system that would incorporate both financial materiality and impact materiality, the latter being key to the double materiality approach (see Figure 3), bears the potential to enable international companies to align their sustainability reporting with both the ISSB approach and the EUcompatible GSSB approach.¹⁸⁴

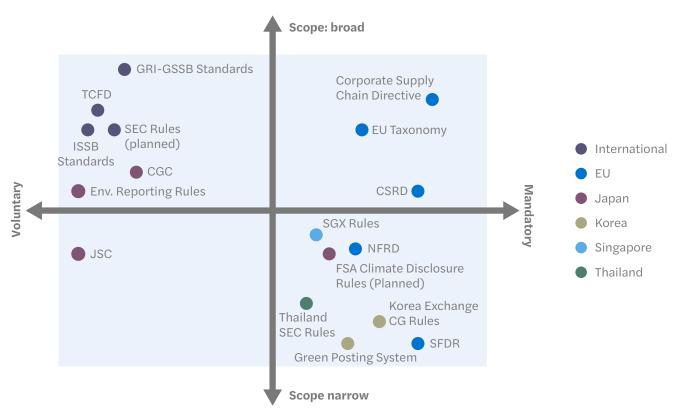
4.2. Divergence concerns and greenwashing risks: The EU Taxonomy

The current developments in Asia offer an interesting contrast to the EU, where sustainability reporting frameworks and related taxonomies had initially started very ambitiously but subsequently underwent multiple revisions and adjustments based on the feedback from several key member states that were concerned about their domestic industries and the risks of carbon or environmental leakage. The most common examples include the EU Taxonomy,

which excluded both gas and nuclear activities.¹⁸⁵ However, due to member state pressures, notably from Germany, France, and Italy, the Environmental Taxonomy was complemented with a delegated act to cover certain nuclear and gas activities in order to permit their inclusion under the EU's sustainable finance rules. 186 This decision caused a great deal of controversy, especially among civil society groups and environmental organisations, who argued that it would delay a more ambitious net-zero transition of the EU's economy. 187 Another area that has seen a lowering of earlier ambitions is the SFDR, for which the list of mandatory ESG indicators has been lowered from 32 initially to 18, and where the starting dates for full disclosure have been delayed several times as financial institutions contended that they were not ready, both in terms of data collection and in-house capacities, to comply with the required disclosures. 188,189

These developments in the EU seem to reduce the initially stark contrast surrounding the perceived levels of sustainability ambition in Asia, with the key stringency indicators being the mandatory nature of any sustainability reporting-related rules and their stakeholder scope (see Figure 7). As a consequence





of this divide, some commenters and NGOs had been reserved about the level of progress made in Asia in terms of fostering the transition towards more sustainable and transparent corporate sectors. Some efforts were labelled as greenwashing and accused of being focused on SDG-related marketing that is not backed by progress across key ESG indicators, such as the reduction of GHG emissions or plastic pollution in Japan and elsewhere in Asia. 190, 191, 192 Some international sustainability stakeholders and commenters saw the 'transition taxonomies' conceptualised across Asia – notably in Japan, Korea, and ASEAN, and other jurisdictions reliant on fossil fuels, including Canada, Australia, and South Africa – as ways to unsustainably perpetuate the use of carbon-intensive technologies. 193, 194, 195

Multiple governments and industry organisations, such as Japan's Keidanren, expressed deep concern over the exclusion of fossil fuel technologies in the EU Taxonomy. 196 However, now that the EU has lowered its ambitions for several key pieces of ESG-related legislation and regulation, there is a possibility that governments in Asia will be more willing to adopt similar frameworks at the domestic level in order to facilitate cross-border business and investment activities. Similar concerns were expressed by the JBCE (Japan Business Council in Europe) regarding ESG disclosure-related provisions in the CSRD and the Delegated Regulation on Taxonomy Article 8. The JBCE cautioned against any actions that would establish disclosure requirements that would go beyond the planned ISSB climaterelated risk and sustainability standards, which focus on financial materiality. Such requirements, according to the JBCE, would unfairly increase the reporting burden for their members under a double materiality approach.¹⁹⁷,¹⁹⁸

These examples demonstrate that the EU's approach faces stiff opposition both domestically as well as in Asia if stakeholders feel that local contextualities are not sufficiently accounted for during the prelegislative calls for comments. However, as noted by some Asia-based commenters, the example of the EU and its taxonomy has illustrated that a certain level of flexibility needs to be applied and its rigid binary stance regarding the sustainability of economic activities reduced in favour of a

multi-tiered approach, as seen in the ASEAN, Korean, and Japanese taxonomies. 199 The EU has demonstrated its shifting positions, first with the joint publication of the EU-China Common Ground Taxonomy – Climate Change Mitigation in December 2021 followed by the adoption of the Delegated Regulation supplementing the Environmental Taxonomy to include certain gas and nuclear activities among those eligible under the taxonomy. 200, 201, 202 Both the Common Ground Taxonomy and the newest text of the Environmental Taxonomy take stronger account of the respective economic and environmental contexts in which economic activities will be carried out, especially regarding the sustainability contributions in emerging economies or regions, such as China, with substantial infrastructure development deficits.²⁰³ Despite this demonstration of flexibility on behalf of the EU, it should be noted that the continued use of gas will likely push many jurisdictions past their self-determined GHG reduction goals under their 2015 Paris Agreement INDCs (Intended Nationally Determined Contributions).204

The discussions around whether or not to limit mandatory disclosure to single materiality, with a focus on the financial materiality of climate-related risks, as favoured by many Asian stakeholders and the ISSB, or a broader double materiality approach, as pursued by the EU and the GRI GSSB, represents a similar situation to the transition taxonomy debate. One of the key debates revolves around whether companies should be obliged to report their impact on the environment and society, looking at the harm and adverse impacts their activities generate irrespective of whether these are of short-term financial materiality. A growing number of investors – for whom financial materiality is claimed to be most relevant – are requesting information about the ESG impacts of investee companies on the environment and society. This is the case especially in Europe, as it facilitates implementation monitoring of their sustainability investment policies. The announced collaboration between the ISSB and the GSSB opens up an avenue for more widespread sustainability reporting efforts, with the baseline first set by the financial materiality of climate-related risks, in line with TCFD recommendations.²⁰⁵

Table 1: Key metrics of sustainability reporting framework stringency

Metrics	Best practice policies		Ambitious or emerging policies	Implementation relevance
1. Timeline for entry into force	Imminent (Active or in 2022)	VS	Medium to long-term (2023-2025 or after 2025)	High
2. Scope (Stakeholders)	Broad (All listed companies inc. SMEs)	VS	Narrow (Large listed companies only)	Medium
3. Materiality	Double materiality (impact materiality)	VS	Single materiality (financial materiality)	Medium
4. Scope (Area- level focus)	Broad focus (ESG)	VS	Narrow focus (climate	Medium
5. Legal status	Mandatory	VS	Voluntary	High
6. Location of sustainability information	Main report	VS	Sustainability Report and/or website	Medium
7. Type of assurance	Mandatory assurance (limited and/or reasonable)	VS	Voluntary assurance or no guidance	Medium
8. Assurance standard	Guidance	VS	No guidance	Low
9. Assurance provider	Guidance	VS	No guidance	Low

However, this approach bears the sizeable risk of creating non-compliant reports within the EU, which could potentially expose global companies with activities in the EU to legal liabilities or reputational harm (see Figure 9). The regulatory divergence risk was determined based on nine metrics in Table 1. These metrics are determinative of stringency of sustainability reporting frameworks and were weighted based on our literature and policy reviews, and further complemented by the discussions with national experts. They also serve as the primary evaluators to determine the corporate stakeholder impact (see Figure 7) and regulatory divergence risks (see of Figure 8). Their implementation relevance, meaning the degree to which they affect targeted stakeholders, both in time and in effort/resources required to implement them, was rated on a threegrade scale ranging from high relevance to low. The impact relevance influenced the scoring of national

mandatory sustainability reporting policies, current or planned.

Using binary impact and risk assessment methodologies, the main determinants were the presence of existing mandatory sustainability reporting rules and their scope in terms of affected stakeholders and materiality. Currently, Japan and Korea are exposing comparatively higher divergence risk against the EU's rules, as are Singapore and Thailand, given the absence of mandatory sustainability reporting frameworks.

The primary explanations for these results lie in the fact that both Japan and Korea are Organisation for Economic Co-operation and Development (OCED) countries with highly industrialised economies, which tend to be carbon intensive leading to high per capita ESG impacts, for example, per capita GHG emissions. It is therefore more challenging

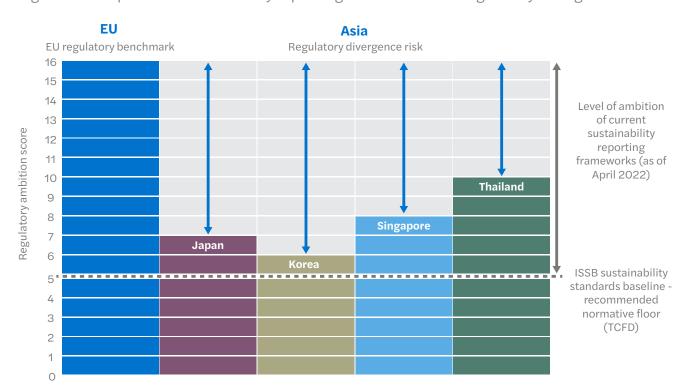


Figure 8: Comparative sustainability reporting benchmark and regulatory divergence risk

for stakeholders in these highly industrialised economies to easily transition their established corporate governance practices as multiple factors, such as internal and supply chain-level ESG data collection, need to be considered. As the carbon and natural resource intensity of companies in Japan and Korea are higher, stakeholders start from more established baselines than companies in Singapore or Thailand. In Singapore, which has few manufacturing operations as finance and trading are its major economic sectors, or Thailand, which is an emerging economy, companies start from less intensive sustainability impact baselines and can thus integrate the latest sustainability reporting standards more easily.

These results notwithstanding, Japan, in particular, and Korea have announced ambitious plans to gradually integrate sustainability reporting across all listed companies, which remains a challenge in Asia, especially for developed energy and natural resource-intensive economies.

4.3 Assurance-level considerations: The importance of subject matter expertise

The fundamental questions around greenwashing, in combination with a clear regional divergence between jurisdictions and stakeholders supporting the double materiality approach and contrasting those favouring the financial materiality approach, also raises questions about independent verification of any reported ESG or climate data required under current or upcoming sustainability reporting frameworks. The EU moved from an optional member state-dependent assurance model in the NFRD to mandatory assurance, with initial limited assurance requirements being transformed progressively into reasonable assurance requirements.

Globally, among the observed Asian jurisdictions, only Singapore and Japan recommend some form of assurance regarding sustainability reports. The aforementioned Keidanren reservations regarding the US SEC's assurance requirements in its proposed rules on mandatory climate disclosures reflect the regional challenges of conducting assurance for sustainability reports. However, the moves by the US SEC strengthen the position of those stakeholders that see assurance as being necessary to reduce

greenwashing, such as the GRI in their standards 'GRI 1: Foundation' and 'GRI 2: General Disclosures,' especially since the current quality of sustainability reports has been falling short, for example, in terms of materiality and granularity for NFRD reports.²⁰⁶,²⁰⁷,²⁰⁸,²⁰⁹ With greenwashing and carbon washing being significant issues, both acknowledged by the Sixth Assessment Report of the IPCC, it is crucial that mechanisms which maintain the integrity of sustainability reports and the information therein are put in place.²¹⁰,²¹¹ Examples such as 68% of US-based CEOs admitting their companies are guilty of greenwashing, the general lack of material ESG expertise among US corporate boards, and the growing reliance on inconsistent, obscure and highly divergent ESG ratings highlight the need for independent verification of sustainability reports by genuine ESG subject matter experts.²¹²,²¹³,²¹⁴

With the market for ESG data recently reaching \$1bn and expected to grow to \$5bn over the coming years, it is clear that numerous corporate stakeholders and financial service providers rely on external ESG data to integrate ESG factors into their decision-making but also to comply with their sustainability reporting obligations.²¹⁵,²¹⁶ In light of these developments, the importance of genuine subject matter expertise as part of any independent third-party verification, either in the form of assurance or audits, is becoming a key component in addressing any greenwashing risks. In its CSRD proposal, the EU requires financial auditors providing assurance or audit services to possess adequate sustainability expertise. For those with traditional remits in financial assurance or audit services, practical training will be required to obtain approval to carry out assurance of sustainability reporting.²¹⁷ It is stated that independent assurance service providers, including statutory auditors, "acquire the necessary expertise on sustainability reporting and the assurance of sustainability reporting," either through training and examination or continuing education.²¹⁸ These requirements align with the GRI Standards and their provisions on external assurance, which state that "external assurance should be conducted by competent assurance providers with appropriate experience and qualifications", which should be "demonstrably competent in the subject matter and assurance practices."219 In the areas of ESG risk management and sustainability reporting, the EU is establishing minimum competence and expertise thresholds, acknowledging that most practitioners and professionals across the corporate and financial sectors do not possess high levels of expertise on

non-financial sustainability matters. EBA (European Banking Authority) recommends that financial institutions build up adequate expertise on ESG matters and that "all members of the management body, on an individual basis, possess a minimum level of knowledge and understanding of ESG factors and risks."²²⁰

These sustainability expertise-related developments, the growth of the ESG market, and more stringent sustainability reporting requirements all over the world bring greater attention to an issue named 'competence greenwashing', first described in February 2020, which has seen exponential growth over the last few years.²²¹ 'Competence greenwashing' pertains to the practice by professionals or practitioners of overstating their sustainability expertise or green credentials by considering that short online introductory certificate courses on ESG or brief sustainability leadership courses are equal to thorough subject matter expertise, or by claiming that short exposure to SDG-related issues amounts to material ESG competence.222,223

To address these concerns, organisations such as the IAASB have published guidance to strengthen the presence of genuine subject matter experts in the areas of sustainability and environment in the context of sustainability reporting-related assurance. In order to apply "appropriate competence and capabilities", it is recommended that "The competence needed to perform an assurance engagement includes both competence in assurance skills and techniques ('assurance competence') and competence in the underlying subject matter of the engagement and its measurement or evaluation ('subject matter competence')."

Regarding sustainability reporting, it acknowledges that "the subject matter competence that may be needed on an assurance engagement may go beyond that ordinarily possessed by most engagement partners. In such a case, it may be necessary to use the work of a practitioner's expert."²²⁵ As an example, it describes the scenario when "an energy company reports and requests assurance on the quality of effluent associated with a power plant. An engagement partner may utilise a biologist, chemist or physicist (practitioner's expert), as appropriate, to assist in designing and performing procedures associated with measuring effluent quality."²²⁶

These examples demonstrate the need for skilled and competent sustainability assurance in order to maintain the integrity and comparability of

IV. Analysis and conclusion

sustainability reports across jurisdictions and supply chains. In the absence of proper assurance, the risks that regulatory divergence could pose to global trade are substantial, in that non-compliance with the EU's double materiality requirements could be considered a regulatory non-compliance and thus impede existing trade flows and future economic growth.

4.4 Concluding observations on trade and regulatory alignment

In conclusion, while it may seem that the EU's lowered sustainability and ESG policy ambitions could delay meaningful net-zero carbon transition and overall sustainability achievements, it opens the door for facilitating the adoption of similar frameworks in the rapidly growing and resource-intense economies of Asia, ultimately helping to foster clear and sustainability-aligned corporate behaviour and overall transparency.

The impact of the EU's sustainability reporting frameworks for Asia and Asia-based companies will depend on multiple factors - notably, whether the EU considers sustainability reports that are absent of environmental and social impact information to be non-compliant. While the immediate ramifications remain unpredictable at this stage, there is a precedent on ESG-related rules from the EU impacting Asian companies directly. In 2020, Malaysia launched a complaint against the EU's renewable energy directive under which palm oilbased fuels are to be phased out by 2030 since palm oil has been classified by the bloc as being responsible for excessive deforestation and can no longer be considered a renewable transport fuel.²²⁷ Malaysia stated that the rules are discriminatory since the EU's plans, albeit not fully implemented at this stage, are already leading to financial losses as some EU member states have started to phase out palm oil ahead of the deadline, and several ESG-aligned companies and investors have been withdrawing from palm oil-related activities or projects.²²⁸

The consequence for Asian countries in terms of sustainability reporting-related regulatory divergence, by aligning only with the climate-related financial materiality approach of the ISSB, could be competitive disadvantage for their companies and ultimately complicated trading with the EU's single market. Japan, Korea, and Singapore all have FTAs (free trade agreements) with the EU, which is among the top three trade partners for all three jurisdictions.²²⁹ Looking at trade between the EU and ASEAN:²³⁰

- ASEAN as a whole represents the EU's third-largest trading partner outside of Europe (after China and the US), with more than €189.47 billion of trade in goods during 2020. Bilateral trade in services amounted to €93.5 billion in 2019.
- The EU is ASEAN's third-largest trading partner after China and the US, accounting for around 10.6% of ASEAN trade.
- The EU is by far the largest investor in ASEAN. In 2019, the Foreign Direct Investment (FDI) stocks into ASEAN accounted for €313.6 billion. Although a more recent phenomenon, ASEAN investment in Europe has also been growing steadily and impressively to a total stock of over €144 billion in 2019.
- The EU's main exports to ASEAN are chemical products, machinery and transport equipment.
 The main imports from ASEAN to the EU are machinery and transport equipment, agricultural products, textiles and clothing.

These numbers stress the importance for Asian jurisdictions and Asia-based companies to seek at least partial alignment with the EU's double materiality approach. The consequences of regulatory non-compliance in sustainability reporting constitute a material risk that EU-based trade partners and investors will need to consider when making investment-level decisions or selecting suppliers.

In light of these risks, and due to the strong regional support for the ISSB standards, there is noticeable progress in Asia which represents a paradigm shift in a region still highly reliant on fossil fuels and carbon-intensive natural resources. These measures notwithstanding, the proposed two-pillar system, announced through a collaboration between the GRI GSSB and the IFRS ISSB, could constitute a solid foundation for Asian lawmakers and regulators in securing a common baseline with the EU's sustainability reporting standards. In turn, this would reduce regulatory divergence risks for globally operating Asia-based companies, as this approach would take account of both impact and financial materiality.²³¹

i) Key sustainability reporting standards and standard setters (see Figure 9)

- 1. The **GRI** Standards are divided into Topics, 200, 300, and 400 series, which include numerous topic-specific standards that guide companies in reporting information on impacts related to economic, environmental, and social topics.232 However, to prepare a sustainability report in accordance with the GRI Standards, an organisation has to apply also GRI 102: General Disclosures that requires companies to disclose specific information about their business model, strategy, governance and risk management.
- 2. The Integrated Reporting (IR) Framework was established by the IIRC and provides insight about the resources and relationships used and affected by an organisation these are collectively referred to as the capitals.233 The capitals are stocks of value that are increased, decreased or transformed through the activities and outputs of the organisation. They are categorised in this Framework as financial, manufactured, intellectual, human, social and relationship, and natural capital, although organisations preparing an integrated report are not required to adopt this categorisation or to structure their report along the lines of the capitals. Concerning the definition of each capital:
 - a. Financial capital is described as the pool of funds that is available to an organisation for use in the production of goods and services, and obtained through financing (such as debt, equity or grants) or generated through operations or investments.
 - b. Manufactured capital is the set of manufactured physical objects that are available to an organisation for use in the production of goods and services (buildings, equipment, infrastructure).
 - c. Intellectual capital includes intellectual property and the so-called organisational capital.
 - d. Human capital is represented by people's competencies, capabilities and experience, and their motivations to innovate.

- e. Social and relationship capital is the set of institutions and relationships within and between communities, groups of stakeholders and other networks, and the ability to share information to enhance individual and collective well-being.
- f. Natural capital represents all the environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organisation.
- 3. **SASB** sustainability topics are organised under five broad sustainability dimensions: Environment, Social Capital, Human Capital, Business Model and Innovation, and Leadership and Governance.²³⁴
 - a. The Environment dimension includes environmental impacts.
 - b. The Social Capital dimension relates to the expectation that a business will contribute to society in return for a social licence to operate.
 - c. The Human Capital dimension addresses the management of a company's human resources as key assets to delivering long-term value.
 - d. The dimension of Business Model and Innovation addresses the integration of environmental, human, and social issues in a company's value-creation process.
 - e. The dimension of Leadership and Governance involves the management of issues that are inherent to the business model or common practice in the industry and that are in potential conflict with the interest of broader stakeholder groups, therefore creating a potential liability or a limitation or removal of a licence to operate.

These five sustainability dimensions are divided into 30 General Issue Categories (that represent broad sustainability-related business issues). General Issue Categories allow for cross-industry comparisons of closely related industry-specific disclosure topics. The disclosure topics included

i) Key sustainability reporting standards and standard setters (see Figure 9)

Figure 9: Main ESG reporting standards 241

Organisation	Date introduced	Type of guidance	Objectives	Coverage	Materiality concept	Technology	Assurance	Ongoing projects
The Sustainability Accounting Standards Board (SASB)	2011	Standard	Facilitate the disclosure of sustainability inormation that is financially material	ii 🖧	áíÍ	Developed XML taxonomy SASB XBRL taxonomy under development	Recommended	Public Consultation on Human Captial and Tailings management
Global Reporting Initiative (GRI)	1997	Hybrid	Create a common language for organisations to report on their sustainability impacts	ii 🖧	ul 🔇	3rd party certified software	Recommended	Review of universal standards Sector program
The International Integrated Reporting Council (IIRC)	2013	Principles- based framework	Explain to providers of financial capital how an organisation creates value over time		aal 🔇	Launched initiative to assist in the global adoption of <ir></ir>	Recommended	Revised <ir> Framework</ir>
The Carbon Disclosure Project (CDP)	2002	Standard	Disclosure of risks and opportunities on climate change, water security and deforestation	\$ 5.0°	űÍ	Developed a XBRL taxonomy based on the CDP questionnaire	Recommended	
The Climate Disclosure Standards Baord (CDSB)	2015	Hybrid	Setting out an approach to reporting environmental information in mainstream reports	* 53	áíÍ	Developed a XBRL taxonomy based on the CDSB Climate Change Reporting Framework	Recommended	Consultation on guidance for water-related disclosures
Task Force on Climate- related Financial Disclosures (TDCF)	2017	Hybrid	A framework for financial implications of climate related aspects of an organisation's business	* \$3	áíÍ		Not required, depends on adopting states	Consultation on forward-looking climate-related metrics for financia institutions
United Nations Gloval Compact (UNGC)	2000	Principles- based framework	To implement universal sustainability principles in the areas of human rights, labour, environment, and anti-corruption	ž iji 🖧	áil 😚		Voluntary	
UN Sustainable Development Goals (UNSDG)	2015	Principles- based framework	A universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030	🍰 tội	③			
EU Commission- NFRD (Non-financial reporting disclosure)	2014	Principles- based framework	To help stakeholders to evaluate the non-financial performance of large companies	多的森	តា៍ 😚	Revised NFRD expected to have a taxonomy (tags)	Depends on member states	Revision of NFRD, Taks force on possible EU non- financial reporting standards
Sustainable Finance Disclosure Regulation	2020	Standard	To define a harmonised ESG framework for European financial services firms. Transparency obligations at product and entity level.	i i i	aal 😚			



Requires reporting of social issues



Requires reporting of governance issues



Requires limited governance related disclosures (e.g. CDP, CDSB and TCFD - only climated related, UNGC - anti-corruption related)

Source: SASB, GRI, CDSB, CDP, IIRC, TCFD, UNGC, UNSDG, EU Commission, Institute of International Finance, DWS Investment GmbH(February 2021). Refer to Annex 1 for detailed information on above standards

Sustainability reporting in Asia Mazars

Focus is on environmental and social impacts

i) Key sustainability reporting standards and standard setters (see Figure 9)

- in SASB's industry-specific standards are a subset of this universe of sustainability issues, tailored to the industry's specific context.
- 4. The **CDP** (formerly Carbon Disclosure Project) is a not-for-profit organisation founded in 2000 that runs a global environmental disclosure system with the main focus on carbon emissions. ²³⁵ Each year the CDP supports thousands of investors, companies, cities, states and regions to measure and manage their risks and opportunities on environmental impacts including climate change, water security and deforestation. They do so at the request of their investors, purchasers and city stakeholders. The CDP that runs the global disclosure system for investors, companies, cities, states and regions to manage their.
- 5. **TCFD** addresses only one dimension of sustainability reporting but does include category-specific subdivisions, which are Metrics and Targets, Risk Management, Strategy, and Governance.²³⁶ At the moment, the EU Taxonomy also addresses one dimension, although updated technical screening criteria take account of additional ecological issues, including biodiversity, water, circular economy, and pollution prevention, whereas social issues will be addressed through an upcoming social taxonomy.^{237,238}

Within the additional resources analysed:

- 6. The WEF IBC initiative is divided into four pillars: Principles of Governance, Planet, People, and Prosperity. Under each one of the four pillars, several main themes can be found, which include the core metrics and disclosures derived from various existing frameworks.²³⁹ It contains 21 sustainability metrics along with guidelines that call for companies to move details about their ESG impacts into their annual financial reports.²⁴⁰ The Stakeholder Capitalism Metrics are a set of 21 core metrics and 34 expanded metrics curated by a taskforce comprising experts from the Big Four accountancy firms.
- 7. ISO 26000 is divided into seven core subjects: organisational governance, human rights, labour practices, environment, fair operating practices, consumer issues, and community involvement and development. Subjects 2–7 include 36 subissues in total.

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ii) Current EU regulations on sustainability disclosure and reporting institutions: The NFRD

Since the publication of World Commission on the Environment and Development (WCED) report, known as the Brundtland Report, the concepts of sustainability and sustainable development have been part of a broader political discourse that has attracted the attention of a large number of national and international institutions, policymakers, crosscountry initiatives and companies worldwide. Confronted with these pressures, the European Union has developed several directives, acts, and communications to introduce environmental disclosure requirements and support publicinterest companies implementing corporate social responsibility (CSR) behaviours.

In April 2014, the European Parliament passed a legislative decree to regulate and standardise the disclosure of non-financial information for large public-interest companies. The decree, called the Non-Financial Reporting Directive (NFRD), amends the accounting directive 2013/34/EU and requires companies to release, from 2018 onwards, non-financial information in their annual reports or in a separate filing. Companies' annual reports are expected to include information on environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards.

One year later, the ratification of the Paris Agreement on climate and the adoption of the United Nations 2030 Sustainable Development Agenda provided companies with new reference frameworks to coordinate the efforts of governments on a global scale, and the private sector towards the achievement of 17 global Sustainable Development Goals (SDGs).

In 2017, the European Commission²⁴² issued a list of non-binding guidelines, within the remit of EU non-financial reporting requirements, to help companies disclose high quality, relevant, useful, consistent and more comparable non-financial (environmental, social and governance-related) information.

Further, in December 2019, the European Council²⁴³ and the European Parliament²⁴⁴ reached political agreement on the text of the Taxonomy Regulation. This regulation establishes an EU-wide classification framework intended to provide businesses and investors with a common language to identify the degree to which economic activities can be considered environmentally sustainable. It aims to "provide clarity and transparency on environmental

sustainability to investors, financial institutions, companies and issuers, thereby enabling informed decision-making in order to foster investments in environmentally sustainable activities."

On 21 April 2021, the European Commission adopted a package of measures, to support investors in reorientating their investment decisions towards more sustainable technologies and businesses.²⁴⁵ These measures include a proposal for a Corporate Sustainability Reporting Directive (CSRD) that:²⁴⁶

- extends the scope of NFRD to all listed companies, including SMEs (except listed micro-enterprises)
- requires the audit (assurance) of reported information
- introduces more detailed reporting obligations, and a requirement to report according to mandatory EU sustainability reporting standards
- requires companies to digitally 'tag' the reported information, so it is machine-readable and feeds into the European single access point envisaged in the capital markets union action plan

Since the approval of the NFRD in 2014, the landscape of disclosure requirements in the European Union has evolved significantly. Many of these requirements have been finalised or are about to be completed at the time of writing this report and are expected to transform the ecosystem of sustainability disclosures in the EU by introducing new disclosures and new use-cases for corporate sustainability reporting.

The NFRD was adopted in 2014 in the context of a global economy that was still recovering from the 2008 financial crisis and of the outcome document from the 2012 UN Rio +20 Conference, 'The Future We Want', stating the need to "ensure the promotion of an economically, socially and environmentally sustainable future for our planet and for present and future generations".

This was translated from two EU policy priorities of relevance:

- a. the Single Markets Act from 2011, intended to boost growth and strengthen confidence in the European economy
- b. the renewed EU strategy 2011–14 to promote CSR, defined as "the responsibility of enterprises for their impacts on society" to promote accountable, transparent, and

responsible business behaviour and sustainable growth. The strategy spells out that to fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of:

- 1. maximising the creation of shared value for their owners/shareholders and for their other stakeholders and society at large
- 2. identifying, preventing and mitigating their possible adverse impacts

The NFRD 2014/95/EU requires large undertakings and public-interest entities (PIEs) exceeding 500 employees on average to provide investors and other stakeholders with a more complete picture of their financial and non-financial, social, environmental, and economic performance (European Commission, 2014).

The Directive defines large undertakings as companies that exceed two out of three of the following criteria:

- a balance sheet total of EUR 20 million
- a net turnover of EUR 40 million
- average number of employees of 250

Public-interest companies are defined as:

- EU companies listed on an EU regulated market
- Credit institutions
- Insurance undertakings
- Public-interest entities designated by the member states

From 2018, the European Union Directive 2014/95/ EU requires companies falling under the scope of the NFRD to communicate at minimum through their reports published the following matters:

- environment
- social and employees matters
- human rights
- anti-corruption and bribery
- diversity on company boards (in terms of age, gender, educational and professional background)

For each of the above matters, the 2014 NFRD requires that companies include in a management report of their annual report, or in a separate report published alongside the management report, or within six months of the balance sheet date, the following information:

- a brief description of the undertaking's business model
- a description of the policies pursued by the undertaking in relation to those matters, including due diligence processes implemented
- the outcome of those policies
- the principal risks related to those matters linked to the undertaking's operations including, where relevant and proportionate, its business relationships, products or services which are likely to cause adverse impacts in those areas, and how the undertaking manages those risks
- non-financial key performance indicators relevant to the particular business

This information shall be presented in:

- the management report, or
- a separate report published alongside the management report, or within six months of the balance sheet date, made available on the undertaking's website and referenced in the management report

ii-i) Mandatory disclosure elements under the NFRD

The NFRD requires disclosure for each of the following topics: environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters. In particular:

- a. Environmental matters should contain details of the current and foreseeable impacts of the undertaking's operations on the environment and, as appropriate, on health and safety, the use of renewable and/or non-renewable energy, greenhouse gas emissions, water use and air pollution
- b. As regards social and employee-related matters, the information provided in the statement may concern the actions taken to ensure gender equality, implementation of fundamental conventions of the ILO, working conditions, social dialogue, respect for the right of workers to be informed and consulted, respect for trade union rights, health and safety at work and dialogue with local communities, and/or the actions taken to ensure protection and development of those communities
- c. Concerning respect for human rights, nonfinancial statement could include information on the prevention of human rights abuses
- d. With regards to anti-corruption and bribery matters, non-financial statements could include a description of the procedures in place to fight corruption and bribery

In order to be effective, the Directive 2014/95/EU has had to account for the varying business practices across the EU member states. As a result, the Directive allows member states to use international, European or national guidelines according to the characteristics of their business or business environment (for instance, the UN Global Compact principles, and the aforementioned international reporting frameworks, such as the Global Reporting Initiative, or Integrated Reporting). However, these guidelines vary widely in terms of scope, specification, issues covered, and methodology.

ii-ii) Assurance of EU non-financial information disclosure under the NFRD

Once companies have disclosed non-financial sustainability data, subsequent verification of this data is crucial in maintaining information integrity and avoiding greenwashing. This puts the practice

of assurance, established in the area of financial reporting, into focus for sustainability reporting.

The Council of the EU summarises the relationship between assurance and non-financial reporting in its CSRD proposal, which is now (as of April 2022) being discussed in the EU Parliament:

"The assurance profession distinguishes between limited and reasonable assurance engagements.²⁴⁷ The conclusion of a limited assurance engagement is usually provided in a negative form of expression by stating that no matter has been identified by the practitioner to conclude that the subject matter is materially misstated. The auditor performs fewer tests than in a reasonable assurance engagement. The amount of work for a limited assurance engagement is therefore less than for reasonable assurance. The work effort in a reasonable assurance engagement entails extensive procedures, including consideration of internal controls of the reporting undertaking and substantive testing and is as such significantly higher than in a limited assurance engagement. The conclusion of this type of engagement is usually provided in a positive form of expression and states an opinion on the measurement of the subject matter against previously defined criteria."

Article 19a(5) and Article 29a(5) of the NFRD require member states to ensure that the statutory auditor or audit firm checks whether the nonfinancial statement or the separate report has been provided. However, it does not require that an independent provider of assurance services verifies the information, although it allows member states to require such verification if they wish. According to the Accountancy Europe reports, all EU and EEA countries transposed the NFRD and enacted legislation regarding non-financial reporting. Still, the transposition of Article 19(a) paragraphs 5 and 6 of the NFRD is not uniformly stringent. Therefore, national regulatory requirements differ significantly in respect of provisions relating to the involvement of auditors and assurance over reported non-financial information. A factsheet published by Accountancy Europe 'Towards reliable non-financial information across Europe' shows that out of the 26 European countries covered (as of February 2020):248

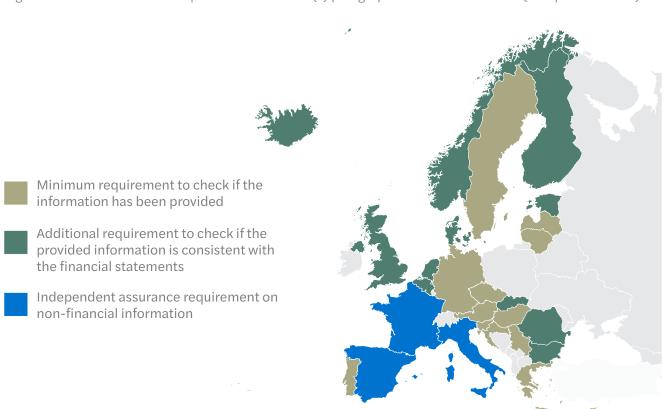
a. Twelve countries apply the minimum requirement for the statutory auditors to check whether non-financial information has been provided

- b. Eleven countries include an additional requirement for the auditors to check the consistency of non-financial information reported with the financial statements
- c. Three countries opted for mandatory independent assurance of the non-financial information reported
- d. Fourteen countries opted for voluntary independent assurance

The map in Figure 10 from the Accountancy Europe factsheet highlights the assurance requirements in force in different countries.

The NFRD aimed at enhancing consistency and comparability of non-financial information disclosed by organisations within the European Union, while respecting the necessity of organisations to use the most suitable international or national guidelines and approaches for sustainability reporting and corporate social responsibility.²⁵⁰ In this regard, organisations retain significant flexibility for disclosing relevant information using the list of standards that they may consider most useful.

Figure 10: Overview of the transposition of Article 19(a) paragraphs 5 and 6 of the NFRD (incl. pre-Brexit UK) 249



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- Schumacher, K. (2020). Green investments need global standards and independent scientific review. Nature, 584(7822), 524–524. https://doi.org/10.1038/d41586-020-02472-5)
- 2 European Commission. (2022). Corporate sustainability reporting. Brussels, Belgium. Retrieved from https:// ec.europa.eu/info/business-economy-euro/companyreporting-and-auditing/company-reporting/corporatesustainability-reporting_en
- 3 ESMA. (2022). Sustainable Finance: Implementation
 Timeline for SFDR TR CSRD MiFID IDD UCITS AIFMD.
 Paris, France. Retrieved from https://www.esma.europa.
 eu/sites/default/files/library/sustainable_finance_-_
 implementation_timeline.pdf
- JBCE. (2021). JBCE Position Paper on the Corporate Sustainability Reporting Directive (CSRD). Brussels, Belgium. Retrieved from https://www.jbce.org/images/ News IMG/JBCE-position-paper CSRD 140721 final.pdf
- 5 SEC. (2022). SEC Proposes Rules to Enhance and Standardise Climate-Related Disclosures for Investors. Washington DC, USA. Retrieved from https://www.sec.gov/news/press-release/2022-46
- 6 Rajgopal, S. (2022). Why Do Critics Claim That The SEC Has Over-Reached With Climate Risk Disclosures? Forbes. Retrieved from https://www.forbes.com/sites/shivaramrajgopal/2022/04/20/why-do-critics-claim-that-the-sec-has-over-reached-with-climate-risks/
- 7 IFRS. (2022). ISSB delivers proposals that create comprehensive global baseline of sustainability disclosures. London, UK. Retrieved from https://www.ifrs.org/newsand-events/news/2022/03/issb-delivers-proposals-thatcreate-comprehensive-global-baseline-of-sustainabilitydisclosures/
- 8 Liikanen, E., & Alder, A. (2021). Asia must join effort to develop sustainability disclosure standards. Nikkei Asian Review. Retrieved from https://asia.nikkei.com/Opinion/ Asia-must-join-effort-to-develop-sustainability-disclosurestandards
- 9 FSA. (2021). Letter to the Chair of the Board of Trustees of the IFRS Foundation regarding the International Sustainability Standards Board (ISSB). Tokyo, Japan. Retrieved from https://www.fsa.go.jp/en/news/2021/20211227/01.pdf
- 10 Adams, C., Alhamood, A., He, X., Tian, J., Wang, L., & Wang, Y. (2021). The double-materiality concept: Application and issues. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/media/jrbntbyv/griwhitepaper-publications.pdf
- 11 Further information on the respective standards can be found in the appendices
- 12 SSEI. (2022). ESG Disclosure Guidance Database. Retrieved from https://sseinitiative.org/esg-guidance-database/
- 13 KPMG. (n.d.). The time has come: The KPMG Survey of Sustainability Reporting 2020 Executive Summary.

- London, UK. Retrieved from https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/12/the-time-has-come-executive-summary.pdf
- SSEI. (2022). ESG Disclosure Guidance Database. Retrieved from https://sseinitiative.org/esg-guidance-database/
- 15 EFRAG. (2021). Conceptual framework for non-financial information standard setting Stream A3 Assessment Report (Appendix 4.3 to main report). Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?as setUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FEFRA G%2520PTF-NFRS A3 FINAL.pdf (p.10)
- 16 CDSB, SASB, GRI, CDP, & IIRC. (2020). Statement of Intent to Work Together Towards Comprehensive Corporate Reporting. London, UK. Retrieved from https://29kjwb3armds2g3gi4lq2sx1-wpengine.netdna-ssl. com/wp-content/uploads/Statement-of-Intent-to-Work-Together-Towards-Comprehensive-Corporate-Reporting. pdf
- 17 CDSB, SASB, GRI, CDP, & IIRC. (2020). Reporting on enterprise value: Illustrated with a prototype climate-related financial disclosure standard. London, UK. Retrieved from https://29kjwb3armds2g3gi4lq2sx1-wpengine.netdna-ssl. com/wp-content/uploads/Reporting-on-enterprise-value_climate-prototype_Dec20.pdf
- 18 Idem
- 19 IFRS. (2020). Consultation Paper on Sustainability Reporting. New York, USA. Retrieved from https://www.ifrs. org/content/dam/ifrs/project/sustainability-reporting/ consultation-paper-on-sustainability-reporting.pdf
- 21 Idem

20

- 22 Hawker, E. (2021). Stepping from Enterprise Value to Double Materiality. ESG Investor. Retrieved from https:// www.esginvestor.net/stepping-from-enterprise-value-todouble-materiality/
- 23 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/about-gri/news-center/ifrs-foundation-and-gri-to-align-capital-market-and-multi-stakeholder-standards/
- 24 GRI. (2022). Global Sustainability Standards Board (GSSB). Amsterdam, Netherlands. Retrieved from https:// www.globalreporting.org/about-gri/governance/globalsustainability-standards-board/
- 25 GRI. (2021). A Short Introduction to the GRI Standards. Amsterdam, Netherlands. Retrieved from https://www. globalreporting.org/media/wtaf14tw/a-short-introduction-to-the-gri-standards.pdf
- 26 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting. org/about-gri/news-center/ifrs-foundation-and-gri-toalign-capital-market-and-multi-stakeholder-standards/
- 27 European Commission. (2014). Directive 2014/95/EU of

- the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups Text with EEA relevance. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&from=EN A detailed outline of the NFRD and the double materiality
- A detailed outline of the NFRD and the double materiality concept can be found in the appendices
- 29 Adams, C., Alhamood, A., He, X., Tian, J., Wang, L., & Wang, Y. (2021). The double-materiality concept: Application and issues. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/media/jrbntbyv/griwhitepaper-publications.pdf
- 30 European Commission. (2019). Guidelines on non-financial reporting: Supplement on reporting climate-related information. Brussels, Belgium. Retrieved from https://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:5201 9XC0620(01)&from=EN
- European Commission. (2014). Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups Text with EEA relevance. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0095&from=EN
- 32 GRI. (2021). Why double-materiality is crucial for reporting organisational impacts. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/about-gri/news-center/why-double-materiality-is-crucial-for-reporting-organizational-impacts/
- 33 Council of the European Union. (2022). Directive amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting General approach. Brussels, Belgium. Retrieved from https://data.consilium.europa.eu/doc/document/ST-6292-2022-INIT/en/pdf
- European Parliament. (2022). Companies to be more accountable for their social and environmental impact.

 Brussels, Belgium. Retrieved from https://www.europarl.europa.eu/news/en/press-room/20220314IPR25409/companies-to-be-more-accountable-for-their-social-and-environmental-impact
- 35 ESMA. (2020). Report: Enforcement and regulatory activities of European enforcers in 2020. Paris, France.

 Retrieved from https://www.esma.europa.eu/sites/default/files/library/esma32-63-1101_enforcers_2020_activity_report.pdf
- 36 EFRAG. (2022). [Draft] European Sustainability Reporting Guidelines 1 Double materiality conceptual guidelines for standard-setting. Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/Appendix 2.6 WP on draft ESRG 1.pdf
- 37 European Parliament. (2022). Companies to be more

- accountable for their social and environmental impact. Brussels, Belgium. Retrieved from https://www.europarl.europa.eu/news/en/press-room/20220314IPR25409/companies-to-be-more-accountable-for-their-social-and-environmental-impact
- 38 EFRAG. (2022). [Draft] European sustainability Reporting Standard 1: General provisions. Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=%2 Fsites%2Fwebpublishing%2FSiteAssets%2FWorking%2520 Paper%2520ESRS%25201%2520General%2520Provisions. pdf
- 39 IFRS. (2022). Draft IFRS S1 General sustainability-related disclosure requirements. London, UK. Retrieved from https://www.ifrs.org/content/dam/ifrs/project/general-sustainability-related-disclosures/exposure-draft-ifrs-s1-general-requirements-for-disclosure-of-sustainability-related-financial-information.pdf
- 40 IFRS. (2022). [Draft] IFRS S2 Climate-related Disclosures. London, UK. Retrieved from https://www.ifrs.org/content/ dam/ifrs/project/climate-related-disclosures/issbexposure-draft-2022-2-climate-related-disclosures.pdf
- 41 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/about-gri/news-center/ifrs-foundation-and-gri-to-align-capital-market-and-multi-stakeholder-standards/
- 42 Rust, S. (2022). https://www.ipe.com/news/ifrs-foundation-to-coordinate-with-gri-over-sustainability-disclosures/10058842.article. IP&E. Retrieved from https://www.ipe.com/news/ifrs-foundation-to-coordinate-with-gri-over-sustainability-disclosures/10058842.articleRust
- 43 Eccles, R. G. (2022). Why Collaboration By IFRS Foundation And GRI Is A Progressive Step For Corporate Transparency. Forbes. Retrieved from https://www.forbes.com/sites/bobeccles/2022/04/07/why-collaboration-by-ifrs-foundation-and-gri-is-a-progressive-step-for-corporate-transparency/?sh=5743bb119417
- Council of the European Union. (2022). Directive amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting – General approach. Brussels, Belgium. Retrieved from https://data.consilium. europa.eu/doc/document/ST-6292-2022-INIT/en/pdf
- 45 Iden
- Alliance for Corporate Transparency. (2019). 2019 Research Report. Brussels, Belgium. Retrieved from https://www.allianceforcorporatetransparency.org/assets/2019_Research_Report_Alliance_for_Corporate_Transparency.pdf
- 47 CDSB. (2020). Falling short? Why environmental and climate-related disclosures under the EU Non-Financial Reporting Directive must improve. London, UK. Retrieved from https://www.cdsb.net/sites/default/files/falling_short_report_double_page_spread.pdf

- 48 Accountancy Europe. (2020). Towards reliable nonfinancial information across Europe. Brussels, Belgium. Retrieved from https://www.accountancyeurope.eu/wpcontent/uploads/Accountancy-Europe-NFI-assurancepractice facthseet.pdf
- 49 Green Finance Platform. (2022). Article 173-VI (for investors) and Article 173-IV (for companies) of France's Law on Energy Transition for Green Growth. Retrieved from https://www.greenfinanceplatform.org/policies-andregulations/article-173-vi-investors-and-article-173-ivcompanies-frances-law-energy
- 50 Ministère de la Transition Ecologique et Solidaire (France).
 (2019). Bilan de l'application des dispositions du décret
 n°2015-1850 du 29 décembre 2015 relatives au reporting
 extra-financier des investisseurs (Article 173-VI de la loi
 de transition énergétique pour la croissance verte). Paris,
 France. Retrieved from https://www.ecologie.gouv.fr/sites/
 default/files/Bilan Gouvernement Application Décret 173-VI
 Version Web.pdf
- 51 CDSB. (2020). Falling short? Why environmental and climate-related disclosures under the EU Non-Financial Reporting Directive must improve. London, UK. Retrieved from https://www.cdsb.net/sites/default/files/falling_short_report_double_page_spread.pdf
- European Commission. (2018). EU Action Plan: Financing Sustainable Growth. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097
- European Commission. (2021). Commission Staff
 Working Document Executive Summary of the Impact
 Assessment Accompanying the Document Proposal for a
 Directive of the European Parliament and of the Council
 Amending Directive 2013/34/EU, Directive 2004/109/
 EC, Directive 2006/43/EC and Re. Brussels, Belgium.
 Retrieved from https://eur-lex.europa.eu/legal-content/EN/
 TXT/?uri=CELEX:52021SC0151
- 54 European Commission. (2018). EU Action Plan: Financing Sustainable Growth. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097
- European Parliament. (2022). Legislative Train Schedule: A
 European Green Deal Corporate Sustainability Reporting
 Directive (CSRD). Brussels, Belgium. Retrieved from
 https://www.europarl.europa.eu/legislative-train/themea-european-green-deal/file-review-of-the-non-financialreporting-directive
- 56 Accountancy Europe. (2022). Sustainability Update March 2022. Brussels, Belgium. Retrieved from https://www.accountancyeurope.eu/good-governance-sustainability/sustainable-finance-220311/
- 57 Accountancy Europe. (2022). Sustainability Update April 2022. Brussels, Belgium. Retrieved from https://www.accountancyeurope.eu/good-governance-sustainability/sustainable-finance-220407/

- European Parliament. (2022). Companies to be more accountable for their social and environmental impact.

 Brussels, Belgium. Retrieved from https://www.europarl.
 europa.eu/news/en/press-room/20220314IPR25409/
 companies-to-be-more-accountable-for-their-social-and-environmental-impact
- 9 EFRAG. (2022). [Draft] European Sustainability Reporting Guidelines 1 Double materiality conceptual guidelines for standard-setting. Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/Appendix 2.6 WP on draft ESRG 1.pdf
- 60 European Commission. (2021). Communication From the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Empty: Strategy for Financing the Transition to a Sustainable Economy. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021DC0390&from=BG
- 61 Idem
- 62 AMF. (2021). Taxonomy Article 8: The AMF informs issuers about the phased application of reporting requirements.

 Paris, France. Retrieved from https://www.amf-france.org/en/news-publications/news/taxonomy-article-8-amf-informs-issuers-about-phased-application-reporting-requirements
- 63 Idem
- 64 European Commission. (2021). Commission Delegated Regulation supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by specifying the content and presentation of information to be disclosed by undertakings subject to Articles 19a or 29a of Directive 2013/. Brussels, Belgium. Retrieved from https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-4987 en.pdf
- European Commission. (2021). How does the EU Taxonomy fit within the sustainable finance framework? Brussels, Belgium. Retrieved from https://ec.europa.eu/info/files/sustainable-finance-taxonomy-factsheet_en
- 66 European Commission. (2022). Proposal for a Directive on corporate sustainability due diligence. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/resource.html?uri=cellar:bc4dcea4-9584-11ec-b4e4-01aa75ed71a1.0001.02/DOC 1&format=PDF
- 67 Idem
- 68 Idem
- 69 Idem
- Company Parliament. (2022). New social and environmental reporting rules for large companies. Brussels, Belgium. Retrieved from https://www.europarl.europa.eu/news/en/press-room/20220620IPR33413/new-social-and-environmental-reporting-rules-for-large-companies
- 71 Council of the European Union. (2022). New rules on corporate sustainability reporting: provisional

- political agreement between the Council and the European Parliament. Brussels, Belgium. Retrieved from https://www.consilium.europa.eu/en/press/press-releases/2022/06/21/new-rules-on-sustainability-disclosure-provisional-agreement-between-council-and-european-parliament/
- 72 Council of the European Union. (2022). Directive amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting General approach. Brussels, Belgium. Retrieved from https://data.consilium.europa.eu/doc/document/ST-6292-2022-INIT/en/pdf
- 73 Idem
- 74 Idem
- 75 IAASB. (2021). Non-Authoritative Guidance on Applying ISAE 3000 (Revised) to Extended External Reporting Assurance Engagements. New York, USA. Retrieved from https://www.ifac.org/system/files/publications/files/IAASB-Guidance-Extended-External-Reporting.pdf
- 76 Schumacher, K. (2020). 'Competence greenwashing' could be the next risk for the ESG industry. Responsible Investor. Retrieved from https://www.responsible-investor.com/ articles/competence-greenwashing-could-be-the-nextrisk-for-the-esg-industry
- 77 Fortt, S. (2021). Keepers of the Green Gate: Our Duties as ESG Professionals. The Corporate Governance Advisor.
 Retrieved from https://prfirmpwwwcdn0001.azureedge.
 net/prfirmstgacctpwwwcdncont0001/uploads/8c1e144ae4
 a10abb2e9ebc8e66a074d2.pdf
- 78 Minh, T. C. (2021). Widespread 'competence greenwashing' threatens to derail progress in sustainable finance. The Hill. Retrieved from https://thehill.com/changing-america/sustainability/environment/560255-widespread-competence-greenwashing-threatens-to/
- 79 GRI. (2021). GRI 1: Foundation 2021. Amsterdam, Netherlands. Retrieved from https://globalreporting.org/ pdf.ashx?id=12334
- 80 EIOPA. (2021). ESAs propose new rules for taxonomyrelated product disclosures. Frankfurt, Germany. Retrieved from https://www.eiopa.europa.eu/media/news/ esas-propose-new-rules-taxonomy-related-productdisclosures_en
- 81 Idem
- 82 Clark, R., Zucker, N., & Urpelainen, J. (2020). The future of coal-fired power generation in Southeast Asia. Renewable and Sustainable Energy Reviews, 121, 109650. https://doi.org/10.1016/j.rser.2019.109650
- 83 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043 0795.2020.1735219
- 84 Schumacher, K. D. G. (2015). Comparative Analysis of the Environmental Impact Assessment Procedures of Japan and New Zealand. The International Journal of

- Sustainability Policy and Practice, 11(2), 11–21. https://doi. org/10.18848/2325-1166/CGP/v11i02/55348
- 85 Schumacher, K. (2017). Large-scale renewable energy project barriers: Environmental impact assessment streamlining efforts in Japan and the EU. Environmental Impact Assessment Review, 65, 100–110. https://doi.org/10.1016/j.eiar.2017.05.001
- Auger, T., Trüby, J., Balcombe, P., & Staffell, I. (2021). The future of coal investment, trade, and stranded assets. Joule, 5(6), 1462–1484. https://doi.org/10.1016/j.joule.2021.05.008
- 87 Morikawa, T., Kimura, S., & Phoumin, H. (2021). A Study on the Impact of Financing Restrictions on New Coal-Fired Power Plants in the Asian Region. Tokyo, Japan. Retrieved from A Study on the Impact of Financing Restrictions on New Coal-Fired Power Plants in the Asian Region
- 88 Bingler, J. A., Kraus, M., Leippold, M., & Webersinke, N. (2022). Cheap talk and cherry-picking: What ClimateBert has to say on corporate climate risk disclosures. Finance Research Letters, 102776. https://doi.org/10.1016/j. frl.2022.102776
- 89 Trencher, G., Downie, C., Hasegawa, K., & Asuka, J. (2020). Divestment trends in Japan's international coal businesses. Renewable and Sustainable Energy Reviews, 124, 109779. https://doi.org/10.1016/i.rser.2020.109779
- 90 In, S. Y., & Schumacher, K. (2021). Carbonwashing: ESG Data Greenwashing in a Post-Paris World. In Settling Climate Accounts (pp. 39–58). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-83650-4_3
- 91 In, S. Y., & Schumacher, K. (2021). Carbonwashing: A New Type of Carbon Data-Related ESG Greenwashing. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3901278
- 92 Schumacher, K. (2019). Approval procedures for large-scale renewable energy installations: Comparison of national legal frameworks in Japan, New Zealand, the EU and the US. Energy Policy, 129, 139–152. https://doi.org/10.1016/j.enpol.2019.02.013
- 93 ADB. (2021). ASEAN Corporate Governance Scorecard Country Reports and Assessments 2019. Manila, Philippines. Retrieved from https://www.adb.org/sites/default/files/publication/696621/asean-cgscorecard-2019.pdf
- 94 ASEAN CSR Network. (2020). Corporate Sustainability
 Reporting In ASEAN Countries 2020. Singapore. Retrieved
 from https://bschool.nus.edu.sg/cgs/wp-content/uploads/
 sites/7/2021/07/ACN-CGS-Corporate-SustainabilityReporting-in-ASEAN-Countries-Report-2020.pdf
- ASEAN Exchanges. (2022). ASEAN Exchanges Sustainability Reporting Requirements Comparative Tables. Singapore. Retrieved from https://api2.sgx.com/sites/default/files/2022-03/AEx SR table_final.pdf
- 96 Fortune. (2021). Global Fortune 500. New York, USA.
 Retrieved from https://fortune.com/global500/2021/
 search/?fg500_country=Japan&rank=asc

- 97 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043 0795.2020.1735219
- 98 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043 0795.2020.1735219
- 99 MOEJ. (2008). Publication of GHG Emission Data of FY2006 by Mandatory Greenhouse Gas Accounting and Reporting System based on Law on Global Warming Countermeasure. Tokyo, Japan. Retrieved from https://www.env.go.jp/en/headline/742.html
- 100 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043 0795.2020.1735219
- 101 FSA. (2020). Principles for Responsible Institutional Investors (Japan's Stewardship Code) To promote sustainable growth of companies through investment and dialogue (Second revised version). Tokyo, Japan. Retrieved from https://www.fsa.go.jp/en/refer/councils/stewardship/20200324/01.pdf
- 102 JPX. (2021). Japan's Corporate Governance Code (Revision with track changes) Seeking Sustainable Corporate Growth and Increased Corporate Value over the Mid- to Long-Term. Tokyo, Japan. Retrieved from https://www.jpx.co.jp/english/news/1020/b5b4pj0000046kxj-att/b5b4pj0000046l0c. pdf
- 103 FSA. (2021). Letter to the Chair of the Board of Trustees of the IFRS Foundation regarding the International Sustainability Standards Board (ISSB). Tokyo, Japan. Retrieved from https://www.fsa.go.jp/en/news/2021/20211227/01.pdf
- 104 FSA. (2022). 7th Meeting of Financial Council Disclosure Working Group (2022). Tokyo, Japan. Retrieved from https://www.fsa.go.jp/singi/singi_kinyu/disclose_wg/siryou/20220324/01.pdf
- 105 MOEJ. (n.d.). Environmental Reporting Guidelines 2007. Tokyo, Japan. Retrieved from https://www.env.go.jp/en/ policy/economy/erg2007.pdf
- 106 MOEJ. (2018). Environmental Reporting Guidelines 2018. Tokyo, Japan. Retrieved from https://www.env.go.jp/policy/ j-hiroba/kigyo/2018Guidelines_E20190412.pdf
- 107 MOEJ. (2020). Practical guide for Scenario Analysis in line with the TCFD recommendations 2nd edition. Tokyo, Japan. Retrieved from https://www.env.go.jp/policy/policy/tcfd/ TCFDguide_2nd_EN.pdf
- MOEJ. (2021). Guidance for Principles for Responsible Banking (PRB). Tokyo, Japan. Retrieved from https://www. env.go.jp/policy/GuidancePRB.pdf
- MOEJ. (2021). Practical Guide for Scenario Analysis in Line with the TCFD Recommendations (Banking Sector). Tokyo, Japan. Retrieved from https://www.env.go.jp/policy/

- PracticalGuide.pdf
- European Commission. (2022). The Extended Environmental Taxonomy - Final Report on Taxonomy extension options supporting a sustainable transition. Brussels, Belgium. Retrieved from https://ec.europa. eu/info/sites/default/files/business_economy_euro/ banking_and_finance/documents/220329-sustainablefinance-platform-finance-report-environmental-transitiontaxonomy_en.pdf
- European Commission. (2022). COMMISSION DELEGATED REGULATION (EU) .../... of XXX amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic acts. Brussels, Belgium. Retrieved from http://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2022-631_en.pdf
- 112 CDP. (2020). CDP Japan 500 Climate Change Report 2019. Tokyo, Japan. Retrieved from https://cdn.cdp.net/ cdp-production/cms/reports/documents/000/005/322/ original/CDP2019-Japan-edition-climate-change-report-EN.pdf?1596205779
- 113 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043
- 114 MOEJ. (2018). Environmental Reporting Guidelines 2018. Tokyo, Japan. Retrieved from https://www.env.go.jp/policy/ j-hiroba/kigyo/2018Guidelines_E20190412.pdf
- 115 JPX. (2021). Japan's Corporate Governance Code (Revision with track changes) Seeking Sustainable Corporate Growth and Increased Corporate Value over the Mid- to Long-Term. Tokyo, Japan. Retrieved from https://www.jpx.co.jp/english/news/1020/b5b4pj0000046kxj-att/b5b4pj0000046l0c. pdf
- 116 Keidanren. (2021). Comments on the Request for Public Input on Climate Change Disclosures by the SEC. Tokyo, Japan. Retrieved from https://www.keidanren.or.jp/en/ policy/2021/054.html?v=p
- 117 Choi, E., & In, SY (2021). Blended Finance for State-led Decarbonization. In Heller, T., & Seiger, A. (ed.) Settling Climate Accounts: Reconciling the Road to Net-Zero. London, UK: Palgrave Macmillan.
- 118 In, S. Y. (2021). Integrating Technology, Finance and Policy Innovation for Net-Zero Emissions. Chung Ju, South Korea: Greenhouse Gas Inventory & Research Center of Korea. Retrieved from http://www.gir.go.kr/home/file/ readDownloadFile.do?fileId=5236&fileSeq=1
- In, S. Y., Zegas, G., & Baek, Y. J. (2022). "Global vs. Local Carbon Data Market." Stanford Sustainable Finance Initiative Working Paper.
- 120 The Framework Act on Low Carbon, Green Growth
- 121 The Act on Allocation and Trading of Greenhouse Gas Emissions Allowances

- 122 ICAP. (2021). Korea Emissions Trading Scheme. Retrieved from https://icapcarbonaction.com/en/?option=com_ets map&task=export&format=pdf&layout=list&systems%5B% 5D=47
- Green Finance Platform. (2012). Green Posting
 System Corporate Disclosure (Republic of Korea).
 Geneva, Switzerland. Retrieved from https://www.greenfinanceplatform.org/policies-and-regulations/green-posting-system-corporate-disclosure
- 124 Financial Services Commission. (2021). Green Finance. Retrieved from https://Www.Fsc.Go.Kr/Eng/Po060101
- 125 Idem
- MOTIE. (2021). Announcement on joint 'K-ESG line' to support ESG management of Korean companies. Retrieved from http://www.motie.go.kr/motie/ne/presse/press2/bbs/ bbsView.do?bbs_cd_n=81&cate_n=1&bbs_seq_n=164932
- 127 In, S. Y., Zegas, G., & Baek, Y. J. (2022). "Global vs. Local Carbon Data Market." Stanford Sustainable Finance Initiative Working Paper
- 128 Choi, E., & In, SY (2021). Blended Finance for State-led Decarbonization. In Heller, T., & Seiger, A. (ed.) Settling Climate Accounts: Reconciling the Road to Net Zero. London, UK: Palgrave Macmillan.
- 129 Shin&Kim. (2022). The Korean Green Taxonomy (K-Taxonomy) Guideline and Its Implications. Seoul, Republic of Korea. Retrieved from https://www.lexology.com/library/detail.aspx?g=861eba8d-0fdd-44d8-af20-2dc26ce55fbc
- 130 Idem
- 131 Idem
- 132 Tachev, V. (2022). South Korean Green Taxonomy Declared "Gas is Green." Energytracker Asia. Retrieved from https://energytracker.asia/south-korean-green-taxonomy-declared-gas-is-green/
- 133 Iden
- 134 Korea Exchange. (n.d.). Confirmation of the Guidelines on Disclosure of Corporate Governance. Seoul, Republic of Korea. Retrieved from https://global.krx.co.kr/contents/ GLB/02/0203/0203000000/GLB0203000000.jsp#ab8 758eced0475769e200e7e309baf77=1&view=20496
- Wardle, M., Mainelli, M., & Mills, S. (2021). The Global Green Finance Index 8. London, UK. Retrieved from https://www.longfinance.net/documents/2799/GGFI_8_ Report 2021.10.20 v1.2.pdf
- 136 Kitano, Y. (2021). Sustainable Finance in Singapore: A
 Blueprint for the Region. Tokyo, Japan. Retrieved from
 https://www.nomuraconnects.com/focused-thinkingposts/sustainable-finance-in-singapore-a-blueprint-forthe-region/
- Monetary Authority of Singapore. (2021). Being the Change We Want to See: A Sustainable Future – Speech by Mr Ravi Menon, Managing Director, Monetary Authority of Singapore. Singapore. Retrieved from https://www.mas.gov. sg/news/speeches/2021/a-sustainable-future

- Uhrynuk, M., & Burdulia, A. W. (2021). Singapore Regulator Prioritises TCFD, Diversity and ESG Metrics in New Disclosure Rules and Guidance. Eye on ESG. Retrieved from https://www.eyeonesg.com/2021/12/singapore-regulatorprioritizes-tcfd-diversity-and-esg-metrics-in-newdisclosure-rules-and-guidance/
- Monetary Authority of Singapore. (2022). Remarks by Ms Abigail Ng, Executive Director, Monetary Authority of Singapore, at the Stewardship Asia Roundtable 2022. Singapore. Retrieved from https://www.mas.gov.sg/news/speeches/2022/remarks-by-ms-abigail-ng-executive-director-monetary-authority-of-singapore-at-stewardship-asia-roundtable-2022-on-31-march-2022
- 140 ASEAN CSR Network. (2018). Sustainability Reporting in Singapore. Singapore. Retrieved from https://www.asean-csr-network.org/c/images/Resources/Reports/2018_Sustainability_Reporting_in_Singapore.pdf
- Monetary Authority of Singapore. (2021). What We Need to Do to Make Green Finance Work Keynote Speech by Mr Ravi Menon, Managing Director, Monetary Authority of Singapore, at Financial Times Investing for Good Asia Digital Conference. Singapore. Retrieved from https://www.mas.gov.sg/news/speeches/2021/what-we-need-to-do-to-make-green-finance-work
- 142 ASEAN CSR Network. (2018). Sustainability Reporting in Singapore. Singapore. Retrieved from https://www.asean-csr-network.org/c/images/Resources/Reports/2018_Sustainability_Reporting_in_Singapore.pdf
- 143 Singapore Exchange. (2022). SGX Rulebooks Mainboard Rules – 711B. Singapore. Retrieved from http://rulebook.sgx. com/rulebook/711b
- 144 https://abs.org.sg/docs/library/handbook-onimplementing-environmental-risk-management
- 145 https://www.greenfinanceplatform.org/financialmeasures-database/monetary-authority-singaporeconsults-environmental-risk-management
- 146 https://www.greenfinanceplatform.org/policiesand-regulations/green-finance-industrytaskforce%E2%80%99s-taxonomy-and-environmentalrisk;
- 147 https://www.mas.gov.sg/news/media-releases/2021/ industry-taskforce-proposes-taxonomy-and-launchesenvironmental-risk-management-handbook
- 148 https://abs.org.sg/industry-guidelines/gfit-taxonomy-public-consultation/
- 149 Kwok, S., Robins, C., & Lim, W. T. (2021). Singapore consults on a taxonomy for the financing of environmentally sustainable activities. Singapore. Retrieved from https:// www.allenovery.com/en-gb/global/news-and-insights/ publications/singapore-consults-on-a-taxonomy-for-thefinancing-of-environmentally-sustainable-activities
- 150 Idem
- 151 ASEAN. (2021). ASEAN Sectoral Bodies Release ASEAN Taxonomy for Sustainable Finance – Version 1. Jakarta,

- Indonesia. Retrieved from https://asean.org/asean-sectoral-bodies-release-asean-taxonomy-for-sustainable-finance-version-1/
- 152 ASEAN. (2021). ASEAN Sectoral Bodies Release ASEAN
 Taxonomy for Sustainable Finance Version 1. Jakarta,
 Indonesia. Retrieved from https://asean.org/aseansectoral-bodies-release-asean-taxonomy-for-sustainablefinance-version-1/
- 153 European Commission. (2022). Questions and Answers on the EU Taxonomy Complementary Climate Delegated Act covering certain nuclear and gas activities. Brussels, Belgium. Retrieved from https://ec.europa.eu/commission/ presscorner/detail/en/ganda 22 712
- 154 Singapore Exchange. (2022). SGX Rulebooks Mainboard Rules – 711B. Singapore. Retrieved from http://rulebook.sgx. com/rulebook/711h
- World Bank. (2022). The World Bank In Thailand: Overview.
 Washington DC, USA. Retrieved from https://www.
 worldbank.org/en/country/thailand/overview#1
- 156 IPCC. (2022). Sixth Assessment Report WGII: Climate Change 2022: Impacts, Adaptation and Vulnerability. Geneva, Switzerland. Retrieved from https://www.ipcc. ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_ FinalDraft FullReport.pdf
- 157 ASEAN. (2021). ASEAN Sectoral Bodies Release ASEAN Taxonomy for Sustainable Finance Version 1. Jakarta, Indonesia. Retrieved from https://asean.org/asean-sectoral-bodies-release-asean-taxonomy-for-sustainable-finance-version-1/
- 158 IFC. (2019). IFC and Bank of Thailand Join Hands to Accelerate Sustainable Finance in Thailand. Washington DC, USA. Retrieved from https://pressroom.ifc.org/all/pages/ PressDetail.aspx?ID=17697
- 159 Kingdom of Thailand. (2020). Sustainable Financing Framework – July 2020. Bangkok, Thailand. Retrieved from https://www.pdmo.go.th/pdmomedia/documents/2020/ Jul/KOT Sustainable Financing Framework.pdf
- 160 Bank of Thailand. (2021). Sustainable Finance Initiatives for Thailand. Bangkok, Thailand. Retrieved from https:// www.bot.or.th/Thai/SustainableBanking/Documents/ Sustainable_Finance_Initiatives_for_Thailand.pdf
- Azizuddin, K. (2021). Thailand to develop sustainable finance taxonomy and ESG disclosure rules. Responsible Investor. Retrieved from https://www.responsible-investor. com/thailand-to-develop-sustainable-finance-taxonomyand-esg-disclosure-rules/
- 162 Bank of Thailand. (2021). Sustainable Finance Initiatives for Thailand. Bangkok, Thailand. Retrieved from https://www.bot.or.th/Thai/SustainableBanking/Documents/Sustainable_Finance_Initiatives_for_Thailand.pdf
- ASEAN Exchanges. (2022). ASEAN Exchanges Sustainability
 Reporting Requirements Comparative Tables. Singapore.
 Retrieved from https://api2.sgx.com/sites/default/
 files/2022-03/AEx SR table_final.pdf

- 164 Securities and Exchange Commission Thailand.
 (2021). FORM 56-1 One Report (Attached to
 Notification No. Tor Jor. 55/2563). Bangkok, Thailand.
 Retrieved from https://view.officeapps.live.com/
 op/view.aspx?src=https%3A%2F%2Fpublish.sec.
 or.th%2Fnrs%2F8617pe.doc&wdOrigin=BROWSELINK
- 165 Bank of Thailand. (2021). Sustainable Finance Initiatives for Thailand. Bangkok, Thailand. Retrieved from https://www.bot.or.th/Thai/SustainableBanking/Documents/Sustainable_Finance_Initiatives_for_Thailand.pdf
- ASEAN Exchanges. (2022). ASEAN Exchanges Sustainability Reporting Requirements - Comparative Tables. Singapore. Retrieved from https://api2.sgx.com/sites/default/ files/2022-03/AEx SR table_final.pdf
- 167 Bank of Thailand. (2021). Sustainable Finance Initiatives for Thailand. Bangkok, Thailand. Retrieved from https://www.bot.or.th/Thai/SustainableBanking/Documents/Sustainable Finance Initiatives for Thailand.pdf
- 168 CDSB. (2020). Falling short? Why environmental and climate-related disclosures under the EU Non-Financial Reporting Directive must improve. London, UK. Retrieved from https://www.cdsb.net/sites/default/files/falling_short_report_double_page_spread.pdf
- 169 EFRAG. (2021). Proposals for a relevant and dynamic EU sustainability reporting standard-setting. Brussels, Belgium. Retrieved from https://www.efrag.org/Lab2
- 170 EFRAG. (2022). [Draft] European sustainability Reporting Standard 1: General provisions. Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=%2 Fsites%2Fwebpublishing%2FSiteAssets%2FWorking%2520 Paper%2520ESRS%25201%2520General%2520Provisions. pdf
- 171 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting. org/about-gri/news-center/ifrs-foundation-and-gri-toalign-capital-market-and-multi-stakeholder-standards/
- 172 Council of the European Union. (2022). Directive amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting – General approach. Brussels, Belgium. Retrieved from https://data.consilium. europa.eu/doc/document/ST-6292-2022-INIT/en/pdf
- 173 ESMA. (2021). Final report on draft Regulatory Technical Standards (JC 202150). Brussels, Belgium. Retrieved from https://www.esma.europa.eu/sites/default/files/library/jc_2021_50_-_final_report_on_taxonomy-related_product_disclosure_rts.pdf
- 174 European Commission. (2019). Guidelines on non-financial reporting: Supplement on reporting climate-related information. Frankfurt, Germany. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX: 52019XC0620(01)&from=EN
- 175 Idem

- 176 IFRS. (2022). ISSB delivers proposals that create a comprehensive global baseline of sustainability disclosures. London, UK. Retrieved from https://www.ifrs.org/newsand-events/news/2022/03/issb-delivers-proposals-thatcreate-comprehensive-global-baseline-of-sustainabilitydisclosures/
- 177 Eccles, R. G. (2022). Why Collaboration By IFRS Foundation And GRI Is A Progressive Step For Corporate Transparency. Forbes. Retrieved from https://www.forbes.com/sites/bobeccles/2022/04/07/why-collaboration-by-ifrs-foundation-and-gri-is-a-progressive-step-for-corporate-transparency/?sh=5743bb119417
- 178 IOSCO. (2022). IOSCO welcomes ISSB's publication of sustainability standards exposure drafts. Madrid, Spain. Retrieved from https://www.iosco.org/news/pdf/IOSCONEWS638.pdf
- 179 Hurley, M. (2022). NGFS backs ISSB in push for consistency on transition finance. Environmental Finance. Retrieved from https://www.environmental-finance.com/content/news/ngfs-backs-issb-in-push-for-consistency-on-transition-finance.html
- 180 SEC. (2022). SEC Proposes Rules to Enhance and Standardise Climate-Related Disclosures for Investors. Washington DC, USA. Retrieved from https://www.sec.gov/news/press-release/2022-46
- 181 Iacone, A. (2022). SEC Climate Plan Leaves Open Path to Use Global Green Standards. BloombergTax. Retrieved from https://news.bloombergtax.com/financial-accounting/ sec-climate-plan-leaves-open-path-to-use-global-greenstandards
- 182 IFRS. (2022). ISSB delivers proposals that create comprehensive global baseline of sustainability disclosures. London, UK. Retrieved from https://www.ifrs.org/newsand-events/news/2022/03/issb-delivers-proposals-thatcreate-comprehensive-global-baseline-of-sustainabilitydisclosures/
- 183 EFRAG. (2022). [Draft] European Sustainability Reporting Guidelines 1 Double materiality conceptual guidelines for standard-setting. Brussels, Belgium. Retrieved from https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/Appendix 2.6 WP on draft ESRG 1.pdf
- 184 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting. org/about-gri/news-center/ifrs-foundation-and-gri-toalign-capital-market-and-multi-stakeholder-standards/
- 185 European Commission. (2020). Technical annex to the TEG final report on the EU taxonomy. Brussels, Belgium. Retrieved from https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-final-report-taxonomy-annexes_en.pdf
- 186 European Commission. (2022). The Extended

- Environmental Taxonomy Final Report on Taxonomy extension options supporting a sustainable transition. Brussels, Belgium. Retrieved from https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/220329-sustainable-finance-platform-finance-report-environmental-transition-taxonomy_en.pdf
- 187 Simon, F. (2021). EU puts green label for nuclear and gas officially on the table. Euractiv. Retrieved from https://www.euractiv.com/section/energy-environment/news/eu-puts-green-label-for-nuclear-and-gas-officially-on-the-table/
- 188 Cerini, M. (2022). The EU wants to be a global leader in the fight against greenwashing, but it has a long way to go. Forbes. Retrieved from https://fortune.com/2022/03/21/the-eu-wants-to-be-a-global-leader-in-the-fight-against-greenwashing-but-it-has-a-long-way-to-go/
- 189 Azizuddin, K. (2021). EU regulators to scale down antigreenwash disclosure rules. Responsible Investor. Retrieved from https://www.responsible-investor.com/eu-regulatorsto-scale-down-anti-greenwash-disclosure-rules/
- 190 Schumacher, K., Chenet, H., & Volz, U. (2020). Sustainable finance in Japan. Journal of Sustainable Finance & Investment, 10(2), 213–246. https://doi.org/10.1080/2043 0795.2020.1735219
- 191 InfluenceMap. (2020). How Japanese Industry Lobbied Against a Strong EU Taxonomy. Tokyo, Japan. Retrieved from https://influencemap.org/report/-2a321cd8bdc7bd87c6a4 1a86fbfe62e9
- 192 Carbon Tracker. (2019). Land of the Rising Sun and Offshore Wind. London, UK. Retrieved from https://www.carbontracker.org/reports/land-of-the-rising-sun/
- 193 OECD. (2021). Transition Finance: Investigating the State of Play A Stocktake of Emerging Approaches and Financial Instruments. Paris, France. Retrieved from https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP(2021)11&docLanguage=En
- Millburn, E. (2021). Japanese academics publish "transition taxonomy" for financing greener businesses. Responsible Investor. Retrieved from https://www.responsible-investor. com/japanese-academics-publish-transition-taxonomyfor-financing-greener-businesses/
- 195 Merle, C., Gondjian, G., Gong, Y., & Azoulay, O. (2021).
 The New Geography of Taxonomies: A Global Standard-setting Race. Paris, France. Retrieved from https://gsh.cib.natixis.com/api-website-feature/files/download/12087/the_new_geography_of_taxonomies_final_version_november 2021 natixis gsh.pdf
- 196 Keidanren. (2019). Recognition of Issues Surrounding Trends in Sustainable Finance. Tokyo, Japan. Retrieved from https://www.keidanren.or.jp/en/policy/2019/069.html
- 97 JBCE. (2021). JBCE Position Paper on the Corporate Sustainability Reporting Directive (CSRD). Brussels, Belgium. Retrieved from https://www.jbce.org/images/ News_IMG/JBCE-position-paper_CSRD_140721_final.pdf

- 198 JBCE. (n.d.). JBCE Position Paper on Taxonomy disclosure obligations (Article 8). Brussels, Belgium. Retrieved from https://www.jbce.org/images/News_IMG/FINAL_JBCEposition-paper_TaxonomyArticle8.pdf
- 199 Lai, K. (2022). PRIMER: ASEAN Taxonomy for Sustainable Finance – Version 1. Retrieved from https://www.iflr.com/ article/b1w6rt1bbkbwr8/primer-asean-taxonomy-forsustainable-finance-version-1
- 200 European Commission. (2021). Common Ground Taxonomy – Climate Change Mitigation. Brussels, Belgium. Retrieved from https://ec.europa.eu/info/sites/default/ files/business_economy_euro/banking_and_finance/ documents/211104-ipsf-common-ground-taxonomyinstruction-report-2021_en.pdf
- 201 European Commission. (2022). Commission Delegated Regulation (EU) .../... of XXX amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic act. Brussels, Belgium. Retrieved from http://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2022-631 en.pdf
- 202 European Commission. (2022). The Extended
 Environmental Taxonomy Final Report on Taxonomy
 extension options supporting a sustainable transition.
 Brussels, Belgium. Retrieved from https://ec.europa.
 eu/info/sites/default/files/business_economy_euro/
 banking_and_finance/documents/220329-sustainablefinance-platform-finance-report-environmental-transitiontaxonomy_en.pdf
- 203 Gong, Y., & Merle, C. (2021). EU-China Common Ground Taxonomy, a painkiller to taxonomy headaches? Paris, France. Retrieved from https://gsh.cib.natixis.com/our-center-of-expertise/articles/eu-china-common-ground-taxonomy-a-painkiller-to-taxonomy-headaches
- 204 Brooks, C. (2022). EU Taxonomy adds gas, nuclear despite veto from EC's own experts. London, UK. Retrieved from https://cleanenergynews.ihsmarkit.com/research-analysis/ eu-taxonomy-adds-gas-nuclear-despite-thumbsdownfrom-ecs-own-e.html
- 205 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting. org/about-gri/news-center/ifrs-foundation-and-gri-toalign-capital-market-and-multi-stakeholder-standards/
- 206 GRI. (2021). GRI 1: Foundation 2021. Amsterdam, Netherlands. Retrieved from https://globalreporting.org/ pdf.ashx?id=12334
- 207 GRI. (2021). GRI 2: General Disclosures 2021. Amsterdam, Netherlands. Retrieved from https://globalreporting.org/ pdf.ashx?id=12358
- 208 CDSB. (2020). Falling short? Why environmental and climate-related disclosures under the EU Non-Financial Reporting Directive must improve. London, UK. Retrieved

- from https://www.cdsb.net/sites/default/files/falling_short_report_double_page_spread.pdf
- 209 Alliance for Corporate Transparency. (2019). 2019 Research Report. Brussels, Belgium. Retrieved from https://www. allianceforcorporatetransparency.org/assets/2019_ Research_Report_Alliance_for_Corporate_Transparency.
- 210 IPCC. (2022). Climate Change 2022: Mitigation of Climate Change – WGIII Contribution to IPCC AR6 - Chapter 15: Investment and Finance. Geneva, Switzerland. Retrieved from https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_ FinalDraft FullReport.pdf
- 211 In, S. Y., & Schumacher, K. (2021). Carbonwashing: ESG Data Greenwashing in a Post-Paris World. In Settling Climate Accounts (pp. 39–58). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-83650-4 3
- 212 Peters, A. (2022). 68% of US execs admit their companies are guilty of greenwashing. FastCity. Retrieved from https:// www.fastcompany.com/90740501/68-of-u-s-execs-admittheir-companies-are-guilty-of-greenwashing
- 213 Whelan, T. (2021). US Corporate Boards Suffer from Inadequate Expertise in Financially Material ESG Matters. SSRN Electronic Journal. https://doi.org/10.2139/ ssrn 3758584
- 214 Berg, F., Koelbel, J., & Rigobon, R. (2019). Aggregate Confusion: The Divergence of ESG Ratings. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3438533
- 215 Cox, T. (2022). ESG data market "hits \$1bn." Environmental Finance. Retrieved from https://www.environmental-finance.com/content/news/esg-data-market-hits-\$1bn.
- 216 Lester, A. (2020). ESG data market "to more than double, to \$5bn." Environmental Finance. Retrieved from https:// www.environmental-finance.com/content/news/esg-datamarket-to-more-than-double-to-\$5bn.html
- 217 Council of the European Union. (2022). Directive amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting General approach. Brussels, Belgium. Retrieved from https://data.consilium.europa.eu/doc/document/ST-6292-2022-INIT/en/pdf
- 218 Iden
- 219 GRI. (2021). GRI 1: Foundation 2021. Amsterdam,
 Netherlands. Retrieved from https://globalreporting.org/pdf.ashx?id=12334
- 220 EBA. (2021). Report on management and supervision of ESG risks for credit institutions and investment firms. Paris, France. Retrieved from https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1015656/EBA Report on ESG risks management and supervision.pdf
- 221 Schumacher, K. (2020). 'Competence greenwashing' could be the next risk for the ESG industry. Responsible Investor.

- Retrieved from https://www.responsible-investor.com/articles/competence-greenwashing-could-be-the-next-risk-for-the-esg-industry
- 222 Minh, T. C. (2021). Widespread 'competence greenwashing' threatens to derail progress in sustainable finance. The Hill. Retrieved from https://thehill.com/changing-america/sustainability/environment/560255-widespread-competence-greenwashing-threatens-to/
- 223 Fortt, S. (2021). Keepers of the Green Gate: Our Duties as ESG Professionals. The Corporate Governance Advisor. Retrieved from https://prfirmpwwwcdn0001.azureedge.net/prfirmstgacctpwwwcdncont0001/uploads/8c1e144ae4a10abb2e9ebc8e66a074d2.pdf
- 224 IAASB. (2021). Non-Authoritative Guidance on Applying ISAE 3000 (Revised) to Extended External Reporting Assurance Engagements. New York, USA. Retrieved from https://www.ifac.org/system/files/publications/files/IAASB-Guidance-Extended-External-Reporting.pdf
- 225 Idem
- 226 Idem
- 227 Reuters. (2021). WTO accepts Malaysia's request to examine EU palm oil rules. Retrieved from https:// www.reuters.com/article/us-malaysia-palmoil-wtoidUSKCN2DCODG
- 228 Idem
- 229 European Commission. (2022). Negotiations and agreements. Brussels, Belgium. Retrieved from https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/negotiations-and-agreements_en
- 230 European Commission. (2022). EU trade relations with Association of South East Asian Nations: Facts, figures and latest developments. Brussels, Belgium. Retrieved from https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/association-south-east-asian-nations-asean_en
- 231 GRI. (2022). IFRS Foundation and GRI to align capital market and multi-stakeholder standards. Amsterdam, Netherlands. Retrieved from https://www.globalreporting.org/about-gri/news-center/ifrs-foundation-and-gri-to-align-capital-market-and-multi-stakeholder-standards/
- 232 GRI. (2021). A Short Introduction to the GRI Standards.
 Amsterdam, Netherlands. Retrieved from https://www.
 globalreporting.org/media/wtaf14tw/a-short-introduction-to-the-gri-standards.pdf
- 233 IIRC. (2013). Capitals Background Paper for < IR>. London, UK. Retrieved from https://www.integratedreporting.org/wp-content/uploads/2013/03/IR-Background-Paper-Capitals.pdf
- 234 SASB. (2017). SASB Conceptual Framework. San Francisco, USA. Retrieved from https://www.sasb.org/wp-content/uploads/2019/05/SASB-Conceptual-Framework. pdf?source=post_page------
- 235 CDP. (2022). What we do: You can't manage what you don't measure. London, UK. Retrieved from https://www.cdp.net/

- en/info/about-us/what-we-do
- 236 FSB-TCFD. (2017). Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). New York, USA. Retrieved from https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf
- 237 European Commission. (2022). Platform on Sustainable Finance's report with recommendations on technical screening criteria for the four remaining environmental objectives of the EU Taxonomy. Brussels, Belgium. Retrieved from https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy_en.pdf
- 238 European Commission. (2022). Final Report on Social Taxonomy. Brussels, Belgium. Retrieved from https://
 ec.europa.eu/info/sites/default/files/business_economy_
 euro/banking_and_finance/documents/280222sustainable-finance-platform-finance-report-socialtaxonomy.pdf
- 239 WEF. (2020). Toward Common Metrics and Consistent Reporting of Sustainable Value Creation. Geneva, Switzerland. Retrieved from https://www3.weforum.org/ docs/WEF_IBC_ESG_Metrics_Discussion_Paper.pdf
- 240 WEF. (2020). Toward Common Metrics and Consistent Reporting of Sustainable Value Creation. Geneva, Switzerland. Retrieved from https://www3.weforum.org/ docs/WEF_IBC_ESG_Metrics_Discussion_Paper.pdf
- 241 Curto, F., & Lewis, M. (2021). Making Sense of a Chaotic ESG Reporting Landscape. Frankfurt, Germany. Retrieved from https://conferences.pionline.com/uploads/conference_ admin/DWS_RI_ESGReportingFramework_202103.pdf (p.6)
- 242 The European Commission (EC) is the executive branch of the European Union, responsible for proposing legislation, enforcing EU laws and directing the union's administrative operations. The Commissioners are proposed by the Council of the European Union, on the basis of suggestions made by the national governments, and then appointed by the European Council after the approval of the European Parliament.
- 243 The European Council (informally EUCO) is a collegiate body that defines the overall political directions and priorities of the European Union. It is composed of the heads of state or government of the EU member states, along with the President of the European Council and the President of the European Commission.
- 244 The European Parliament (EP) is one of three legislative branches of the European Union and one of its seven institutions. Together with the Council of the European Union, it adopts European legislation, commonly on the proposal of the European Commission. The Parliament is composed of 705 members (MEPs). It represents the second-largest democratic electorate in the world (after

- the Parliament of India) and the largest trans-national democratic electorate in the world (375 million eligible voters in 2009).
- 245 European Commission. (2021). Sustainable finance package. Brussels, Belgium. Retrieved from https://ec.europa.eu/info/publications/210421-sustainable-finance-communication en
- 246 European Commission. (2021). Directive of the European Parliament and of the Council Amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting. Brussels, Belgium. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri= CELEX:52021PC0189&from=FR
- 247 ICAEW. (2022). Limited assurance vs reasonable assurance. London, UK. Retrieved from https://www.icaew.com/ technical/audit-and-assurance/assurance/process/ scoping/assurance-decision/limited-assurance-vsreasonable-assurance
- 248 Accountancy Europe. (2020). Towards reliable nonfinancial information across Europe. Brussels, Belgium. Retrieved from https://www.accountancyeurope.eu/wpcontent/uploads/Accountancy-Europe-NFI-assurancepractice_facthseet.pdf
- 249 Idem
- 250 Eccles, R. G., & Spiesshofer, B. (2015). Integrated reporting for a reimagined capitalism. Harvard Business School General Management Unit Working Paper, (16-032).

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