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OPINION PIECE

Sustainability Reporting: Is Convergence Possible?

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ABSTRACT In this essay, we discuss the factors influencing the likelihood of convergence in corporate sustainability reporting. We identify several factors that negatively influence the probability of convergence in the short term. The first factor is the heterogeneity of concepts and definitions surrounding sustainability (e.g. ESG, CSR). This heterogeneity of definitions is pervasive at three levels: (1) across organizations claiming legitimacy in sustainability reporting standard-setting, (2) within standard-setting organizations over time, and (3) across firms reporting about their activities. A second factor is the large number of organizations claiming legitimacy in sustainability reporting. A third factor is related to a diversity of reporting requirements among three influential international standard setters (i.e. EFRAG, ISSB, SEC), leading to various corporate reporting choices. A fourth factor is the diversity in the objectives of standard-setting organizations. Overall, we believe that due to these sources of diversity, the probability of convergence in sustainability reporting appears limited, at least in the short term, although we identify progress in carbon emissions reporting.

Keywords: sustainability reporting; ESG; corporate social responsibility; standard setters; ISSB; EFRAG

1. Introduction

Sustainability has become, over the years, a major concept influencing how firms operate and communicate with their stakeholders (Anonymous, 2005; Business Roundtable, 2019). This trend is particularly strong in Europe, where European firms frequently report sustainability information (Stolowy & Paugam, 2018). In parallel, following the 2008–09 financial crisis, investors have looked to deploy increasingly more capital toward sustainable investments (Global Sustainable Investment Alliance, 2014, 2021). Sustainable finance generates considerable revenues for asset managers and advisors who follow a sustainability ‘gold rush’. The promise of sustainable finance is appealing because it is rooted in an investment narrative

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according to which investors can address environmental and social issues while earning a fair or even excess return on their capital (Berg et al., 2021; Damodaran, 2021; Heath et al., Forthcoming). Information is central to efficient capital allocations; therefore, investors' demand for sustainability reporting has grown tremendously over time. For example, in 2021, 590 investors with over $110 trillion in assets under management and over 200 major purchasing organizations with over $4 trillion in buying power requested sustainability information through the Carbon Disclosure Project (CDP).[1]

This fundamental change in how businesses should integrate sustainability into their activities was accompanied by discussions about sustainability reporting among academics, initially from a relatively niche literature (e.g. Epstein et al., 1976) to more recently being the focus of many empirical archival studies (for literature reviews, see Adams & Larrinaga, 2019; Berthelot et al., 2003; Christensen et al., 2021; Dienes et al., 2016; Erkens et al., 2015; Fiandrino et al., 2022; Gillan et al., 2021; Grewal & Serafeim, 2020; Rezaee, 2016; Tsang et al., 2023; Zhou, 2022).

Unfortunately, despite considerable attention in the academic community, how to precisely define sustainability reporting and how to understand its role in capital markets and for other stakeholders remains difficult, at least due to three factors (e.g. Anonymous, 2022). First, many overlapping yet slightly different concepts about sustainability (and sustainability reporting) coexist: corporate social responsibility, ESG (environment, social and governance), integrated reporting, and non-financial reporting, to name a few. These concepts are all related but frequently are vaguely defined and/or cover different realities (e.g. is governance included? How about intangible assets? Is corporate tax policy related? Is nuclear energy production a green investment?). As a result, the concept of sustainability leads to operational measurement issues, as evidenced by disagreements among major sustainability rating agencies, although raters catering to asset managers exhibit a relatively similar view of sustainability performance (Berg et al., 2022; Chatterji et al., 2016; Kimbrough et al., Forthcoming; Serafeim & Yoon, Forthcoming).

Second, several international organizations involved in either sustainability reporting or promoting sustainable activities coexist: the Global Reporting Initiative (GRI), the Sustainability Accounting Standard Board (SASB, now absorbed by the ISSB) or the Carbon Disclosure Project (CDP), to name only three international organizations that benefit from a high level of legitimacy. All of these organizations claim sovereignty over corporate sustainability reporting.

Third, some jurisdictions require mandatory sustainability disclosures, whereas others follow a voluntary sustainability disclosure approach. Furthermore, in certain countries, mandatory sustainability-related disclosures exist in certain industries (e.g. extraction industries in the US) for certain sustainable activities (e.g. corporate philanthropy activities in the UK or in India) but not in other areas (Christensen et al., 2017; Cohen et al., 2022; Darendeli et al., 2022; Rauter, 2020). Conversely, certain jurisdictions such as the EU require firms to disclose information about several dimensions of sustainability (Fiechter et al., 2022). Finally, further complicating the analysis of sustainability disclosures is that certain countries allow firms to choose among various sustainability reporting frameworks (e.g. GRI, SASB), even for mandatory sustainability disclosures.

Considering the above factors, we are far from observing a level-playing field in sustainability reporting, which creates complexities for firms, market participants, stakeholders, and researchers analyzing corporate sustainability-related activities. This situation has been criticized, for example, in Buhr et al. (2014), who used the term 'zustainabullity' to describe organizational activity and reporting about sustainability (for a critical approach, see also Burritt & Schaltegger, 2010).

Stolowy and Paugam (2018) survey various definitions of sustainability-related concepts and provided evidence of diversity in 'sustainability reporting'.[2] In this essay, we posit that given the reporting landscape described above, the state of confusion and lack of compatibility is likely to persist with no solution foreseen at present. In other words, we believe that convergence in sustainability reporting is unlikely, given the coexistence of numerous concepts around the very idea of sustainability and, above all, the often competing actions of several international organizations pursuing different objectives but all claiming to be legitimate in the field of sustainability.

We argue that the diversity in the definitions and organizations involved in sustainability and reporting practices do not constitute a favorable environment for convergence to occur—at least in the short term. Nevertheless, we discuss three recent ambitious attempts to make sustainable reporting converge: the involvement of the IFRS Foundation with the creation of the International Sustainability Standards Board (ISSB), the European Union with the creation of the Sustainability Reporting Board (SRB), a committee within EFRAG, and the SEC proposal for environmentally related financial disclosures. Today, these institutions appear to be on a collision course. This is particularly striking, as the EU decision in 2000 to adopt the International Financial Reporting Standards (IFRS) was a major factor for the worldwide legitimacy of IFRS (see European Union, 2002). We show that, in our view, the hope in the likelihood of convergence in sustainability reporting in the short term is, unfortunately, limited. However, one exception may be carbon emissions disclosure with convergence in the GHG emission protocol being adopted by most organizations.

2. Diversity of Definitions and Concepts Surrounding Sustainability

At the broader level, sustainability can be defined as generating economic development (or business profits) while maintaining or improving a level of available resources over time for future generations (see Brundtland Report, 1987). However, in this essay, our objective is not to define this construct at the theoretical level but to describe how various standard setters and policy-makers define it (or not!) in practice and comment on this state of affairs. Practical definitions proposed by standard setters are performative because they impact how stakeholders understand and act related to business activities. At the practical level, defining sustainability implies defining what firms should be doing to achieve what is valued by society, or as Damodaran (2021) puts it, corporate 'goodness'. There is diversity in the definitions of sustainability at least at three levels: (1) across standard-setting organizations, (2) within standard-setting organizations over time, and (3) among firms reporting sustainability information.

2.1. Diversity across Organizations

Major international standard-setting organizations rely on various definitions or even do not mention any definition of sustainability. For the SASB, 'The concept of sustainability or sustainable development is defined in the Brundtland Report (Our Common Future) as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."'[3]

The GRI (2021, p. 33) refers to the same definition taken from the Brundtland Report (1987) but adds an important note: 'The terms "sustainability" and "sustainable development" are used interchangeably in the GRI Standards' (GRI, 2021, p. 33).

We find similar concepts for these two standard setters; however, practically, there are major differences in what is included in the definitions. For instance, the SASB is based on financial materiality (SASB, 2017, p. 9), whereas the GRI has a different approach by making the double materiality concept the '"guiding principle" in the GRI Standards' (Adams & PhD students, 2021, p. 2). For instance, a business practice in the global shipping industry consists of the controversial (yet legal) practice of abandoning old ships on beaches (a practice known as 'beaching') in countries such as Bangladesh and Pakistan (Vuillemey, 2023). Currently, this practice has limited direct financial materiality but clearly has adverse consequences on the environment. Shipping firms may not provide the same information depending on whether they follow the SASB or the GRI framework. We explain the implications of the financial and double materiality concepts later in this essay.

Another organization, Accounting for Sustainability (A4S, 2022, p. 2), writes that the 'broad set of environmental and social risks and opportunities are frequently referred to as sustainability or sustainable business factors.' This organization promotes a risk-opportunity framework of sustainability, which caters to the corporate finance community.[4]

It is worth noting that neither the original ISSB draft standard (ISSB, 2022a) nor the EU new directive (European Union, 2022) provides a definition of 'sustainability'. These texts refer to 'sustainability reporting', 'sustainability matters' and 'sustainability information'[5], or 'sustainability-related financial information.'[6] Nevertheless, the directive (article 1) defines 'sustainability matters' as 'environmental, social and human rights, and governance factors, including sustainability factors defined in point (24) of Article 2 of Regulation (EU) 2019/2088 [environmental, social and employee matters, respect for human rights, anti-corruption and anti-bribery matters]'.[7] In addition, in its session on December 13, 2022, the ISSB agreed that sustainability is described in the ISSB's General Sustainability-related Disclosures Standard (S1) as 'the ability for a company to sustainably maintain resources and relationships with and manage its dependencies and impacts within its whole business ecosystem over the short, medium and long term.'[8]

Diversity in the definitions of sustainability is not limited to standard setters and industry associations. Harvard Business School, following the impulse of Professor George Serafeim, created a methodology called 'impact-weighted accounts.'[9] This approach aims to measure corporate sustainability performance. Interestingly, the approach does not rely on a unique definition of sustainability. The following excerpt describes quite accurately why it is impossible to rely on a unique definition of sustainability: 'this impact accounting methodology should take shape through a series of choices about how to define value. The inclusion or exclusion of different stakeholders is a choice. The inclusion or exclusion of different sources of impact is a choice. The tradeoff between accuracy and generalizability of impact metrics is a choice.' This mechanically leads to measurement differences in corporate sustainability performance among stakeholders making different choices due to their belief of what 'value' is.

2.2. Diversity within Standard-Setting Organization over Time

Sustainability is not a fixed concept. It may evolve over time. For example, Stolowy and Paugam (2018) present the definition of the concept of 'sustainability' based on SASB (2013, p. 7): 'Sustainability refers to *environmental, social and governance* (ESG) dimensions of a company's operation and performance. More specifically, sustainability includes both the management of a corporation's environmental and social impacts and the management of the environmental and social capital necessary to create long-term value. It also includes the impact of environmental and social factors on innovation, business models, and corporate governance.' Interestingly, the most recent SASB Conceptual Framework (SASB, 2017, p. 2) proposes a different definition: 'sustainability refers to *corporate activities that maintain or enhance the ability of the company to create value over the long term*.'

Sustainability reporting may overlap and even be confused with non-financial reporting, such as the use of non-GAAP measures and CSR reporting. Stolowy and Paugam (2018) review evidence on non-financial reporting and focus on CSR; however, we note a significant evolution of the EU perspective vis-à-vis its non-financial directive (European Union, 2014) since the period reviewed in Stolowy and Paugam (2018). In 2021, the European Commission issued a proposal for a new directive (European Union, 2021), which was followed by the adoption of a directive in 2022 (European Union, 2022). In this text (§ 8 of the introduction), the EU criticizes the term ‘non-financial reporting’ because ‘non-financial’ implies that the information in question has no financial relevance. However, the information in question does have financial relevance. The European Union concludes that ‘Many organizations, initiatives and practitioners in this field refer to “sustainability” information. It is therefore preferable to use the term ‘sustainability information’ in place of ‘non-financial information’.’ This criticism relates to the idea that certain sustainable activities are financially material (i.e. they frequently impact financial performance measures such as earnings or liabilities).

To better grasp the evolution of the European Union’s thinking about sustainability, we find it is interesting to compare the European definitions of non-financial reporting vs. sustainability information from the 2014 directive and the 2022 new directive.

What is striking from Table 1 is that the 2022 ‘sustainability definition’ is longer, more detailed, and broader than the 2014 ‘non-financial definition.’ For instance, the non-financial definition had 159 words, whereas the 2021 definition had 634 words (the number of words grew by a factor of 4). The 2014 ‘non-financial definition’ considered the following dimensions of sustainability: ‘environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters.’ In comparison, the ‘sustainability definition’ refers to ‘sustainability matters’ defined earlier in the directive (see above in this essay). We note an increase in accuracy with the addition of the reference to the Paris Agreement target of limiting the increase in world temperature to 1.5 °C compared to that during the preindustrial era. Interestingly, if the 2021 definition also covered intangible assets—strangely placed at the end of the list of sustainability reporting requirements as if it were an afterthought—this requirement has been moved elsewhere in the 2022 directive. It is now part of article 19(1).[10]

Furthermore, the 2022 sustainability definition explicitly integrates the notion of ‘double materiality’, i.e. reporting how sustainability matters influence organizations and how organizations influence sustainability matters[11] (see Section 6). In conclusion, we note that the definition of sustainability is subjective and can evolve over time even within the same organization (i.e. the EU).

2.3. Diversity of Definitions among Firms Reporting Sustainability Information

Stolowy and Paugam (2018, pp. 529–530) identify the following terms used by issuers to report information about sustainability: sustainability reporting, sustainability corporate social responsibility reporting, integrated report, integrated reporting, and non-financial reporting. They present the definitions of these main concepts revolving around sustainability. Many other names of sustainability reports exist. As reflected by the diversity of the various names of sustainability reports, there is considerable diversity in the definitions implicitly or explicitly relied on by firms. Overall, the content and quality of sustainability reporting by firms vary greatly (Diouf & Boiral, 2017; KPMG, 2020, 2022). We develop the reporting of firms in more detail in Section 4.

3. Diversity of Organizations

Standard setting influences how power is distributed among various stakeholders (De Lange & Howieson, 2006; Hoarau, 2009). The creation and worldwide adoption of IFRS is a clear example of how a private organization gained considerable power over thousands of firms. Considering the demand for clear guidelines to report sustainability information, many international organizations have been created to answer that demand, hoping to establish their legitimacy and

Table 1. Comparison of European definitions: non-financial reporting vs. sustainability information (our emphasis in bold).

European Union (2014, article 19a)	European Union (2022, article 19a)
1. Large undertakings which are public-interest entities exceeding on their balance sheet dates the criterion of the **average number of 500 employees during the financial year** shall include **in the management report a non-financial statement** containing information to the extent necessary for an understanding of the undertaking'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**, including: (a) a brief description of the group's business model; (b) a **description of the policies** pursued by the group in relation to those matters, including due diligence processes implemented; (c) the **outcome** of those policies; (d) 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**; (e) **non-financial key performance indicators** relevant to the particular business.	1. Large undertakings, and small and medium-sized undertakings, except micro undertakings, which are public – interest entities as defined in point (a) of point (1) of Article 2 shall include in the **management report** information necessary to understand the **undertaking's impacts on sustainability matters**, and **information necessary to understand how sustainability matters affect the undertaking's development, performance and position**. The information referred to in the first subparagraph shall be clearly identifiable within the management report, through a dedicated section of the management report. 2. The information referred to in paragraph 1 shall contain in particular: (a) a brief description of the undertaking's business model and strategy, including: (i) the **resilience** of the undertaking's business model and strategy in relation to risks related to sustainability matters; (ii) the **opportunities** for the undertaking related to sustainability matters; (iii) the plans of the undertaking, including implementing actions and related financial and investment plans, 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 under the United Nations Framework Convention on Climate Change adopted on 12 December 2015 (the 'Paris Agreement') and the objective of achieving climate neutrality by 2050 as established in Regulation (EU) 2021/1119 of the European Parliament and of the Council, and, where relevant, the exposure of the undertaking to coal-, oil- and gas-related activities; (iv) how the undertaking's business model and strategy take account of the interests of the undertaking's stakeholders and of the impacts of the undertaking on sustainability matters; (v) how the undertaking's strategy has been implemented with regard to sustainability matters; (b) a **description of the time-bound targets related to sustainability matters** set by the undertaking, including, where appropriate, absolute greenhouse gas emission reduction targets at least for 2030 and 2050, a description of the **progress** the undertaking has made towards achieving those targets, and a statement of whether the undertaking's targets related to environmental factors are based on conclusive scientific evidence; (c) a description of the role of the administrative, management and supervisory bodies with regard to sustainability matters, and of their expertise and skills in relation to fulfilling that role or the access such bodies have to such expertise and skills; (d) a description of the undertaking's policies in relation to sustainability matters;

(e) information about the existence of incentive schemes linked to sustainability matters which are offered to members of the administrative, management and supervisory bodies;

(f) a description of:

    (i) the **due diligence process** implemented by the undertaking with regard to sustainability matters, and, where applicable, in line with Union requirements on undertakings to conduct a due diligence process;

    (ii) the principal actual or potential adverse impacts connected with the **undertaking's own operations and with its value chain**, including its products and services, its business relationships and its supply chain, actions taken to identify and monitor those impacts, and other adverse impacts which the undertaking is required to identify pursuant to other Union requirements on undertakings to conduct a due diligence process;

    (iii) any actions taken by the undertaking to **prevent, mitigate, remediate or bring an end to actual or potential adverse impacts, and the result of such actions**;

(g) a description of the **principal risks** to the undertaking related to sustainability matters, including a description of the undertaking's principal dependencies on those matters, and how the undertaking manages those risks;

(h) **indicators relevant to the disclosures** referred to in points (a) to (g).Undertakings shall report the process carried out to identify the information that they have included in the management report in accordance with paragraph 1 of this Article. The information listed in the first subparagraph of this paragraph shall include information related to short-, medium- and long-term time horizons, as applicable.

obtain the support of issuers and users of sustainability-related information. There are considerable profits involved considering the army of consultants and finance professionals eager to provide services to investors and managers to navigate sustainability reporting (e.g. sustainability raters).

We present in Table 2 a list and a description of the organizations involved in sustainability. We show in Panel A the organizations with sustainability reporting initiatives, and we show in Panel B the organizations focusing on promoting sustainable corporate activities. Organizations promoting sustainable activities often indirectly influence sustainable reporting. For instance, firms often report information using the 17 Sustainable Development Goals (SDGs) promoted by the United Nations.

We identified no fewer than 12 organizations proposing sustainability reporting standards or guidelines and seven international organizations promoting sustainable corporate activities. Table 2 shows the abundance of organizations, which is clearly a major obstacle for convergence in sustainability reporting. Some firms may be able to shop around organizations and various sustainability concepts that serve best their interest. For instance, opinion shopping exists in areas such as auditing or credit rating (Flynn & Ghent, 2018).

For more details on some of these organizations, see Cooper and Michelon (2022), who present the origins and aims of what they consider the major organizations providing sustainability reporting standards and frameworks: the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), the Sustainability Accounting Standards Board (SASB), the Taskforce on climate-related Financial Disclosure (TCFD), and the Sustainable Development Goal Disclosure Recommendations (SDGD).

Can a convergence occur within this competing space? Will these standard-setting organizations accept controlling only a share of the market for sustainability reporting? How will that share be allocated to each organization? We argue that presently, the market appears to be particularly fragmented, which hinders the progress of the convergence of sustainability reporting standards.

4. Diversity of Reporting

4.1. Reporting Requirements

According to A4S (2022, p. 4), a recent assessment of the regulatory landscape identified 614 reporting requirements or 'instruments'[19] across 84 countries.[20] These statistics must be considered with caution because the original source (i.e. the 'Carrots and Sticks' website created by the UN and audit firm KPMG in 2006) does not take into account the enforcement of these policies. Nonetheless, it demonstrates that sustainability reporting is definitely growing in importance.

In this context, we focus on three recent sustainability reporting initiatives that can be considered significant, given the status of the organizations involved: (1) the European Union initiative through the proposal and adoption of a directive, (2) the creation by the IASB of the ISSB, and (3) the proposal of a rule by the Securities and Exchange Commission (SEC). These three initiatives are in serious competition for sustainability standard-setting at a global level.

4.1.1. The EU initiative with EFRAG

The European Union has taken the initiative in the field of sustainability reporting. On April 21, 2021, the European Commission released a proposal for a Corporate Sustainability Reporting Directive (CSRD) (European Union, 2021). This proposal was transformed into a directive on December 14, 2022 (European Union, 2022) that came into effect on January 5, 2023. EU countries must transpose it into national law before July 6, 2024.

Table 2. List of organizations.

Panel A – Organizations with sustainability disclosure initiatives					
#	Acronym	Name	Website address[12]	Date of creation	Creator/sponsor and objective(s)
1.	CDP[13]	Disclosure Insight Action, formerly Carbon Disclosure Project until 2012	https://www.cdp.net/en	2000	'Not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts'.
2.	CDSB	Climate Disclosure Standards Board	https://www.cdsb.net/	2007 First framework released in 2010 On 31st January 2022, CDSB was consolidated into the IFRS Foundation to support the work of the newly established ISSB.	'International consortium of business and environmental NGOs' Offers 'companies a framework for reporting environmental information' 'Builds on the most widely used reporting approaches, such as CDP, GRI, SASB, IFRS'
3.	CFA Institute	Global ESG Disclosure Standards for Investment Products	https://www.cfainstitute.org/en/about/press-releases/2021/cfa-institute-releases-global-esg-disclosure-standards-for-investment-products	2021	'Today's release follows an industry-wide consultation to create Standards that are based on the principles of fair representation and full disclosure of environmental, social, and governance issues within the objectives, investment process, and stewardship activities of investment products. The Standards apply to all types of investment vehicles, asset classes, and ESG approaches, and aim to support investors with information that is complete, reliable, consistent, clear, and accessible.'
4.	EFRAG SRB	European Financial Reporting Advisory Group Sustainability Reporting Board	https://www.efrag.org/ https://efrag.org/About/Governance/40/EFRAG-Sustainability-Reporting-Board	2001 (EFRAG) and 2022 (SRB)	Originally, created following a request of the European Commission to provide input into the development of IFRS issued by the IASB and to provide the European Commission with technical expertise and advice on accounting matters. Now in charge of the elaboration of the European Sustainability Reporting Standards (through the SRB)

(*Continued*)

Table 2. Continued

Panel A – Organizations with sustainability disclosure initiatives

#	Acronym	Name	Website address[12]	Date of creation	Creator/sponsor and objective(s)
5.	GRI[14]	Global Reporting Initiative	https://www.globalreporting.org/	1997	Established in partnership with the United Nations' Environment Program (UNEP). International, multi-stakeholder and independent non-profit organization that promotes economic, environmental and social sustainability. 'As a provider of the global best practice for impact reporting, our mission is to deliver the highest level of transparency for organizational impacts on the economy, the environment, and people.' Since 2016, the GRI guidelines also includes references to the UN Sustainable Development Goals (SDGs).
	GSSB	Global Sustainability Standards Board	https://www.globalreporting.org/about-gri/governance/global-sustainability-standards-board/		The GSSB has sole responsibility for setting the world's first globally accepted standards for sustainability reporting – the GRI Standards. Established as an independent operating entity under the auspices of GRI, GSSB members represent a range of expertise and multi-stakeholder perspectives on sustainability reporting.
6.	HR UNGP	Human rights UNGP UN Guiding Principles on Business and Human Rights	https://www.ungpreporting.org/ https://www.ungpreporting.org/resources/the-ungps/	2015	Launched by Shift and Mazars 'Guidance for companies to report on human rights issues in line with their responsibility to respect human rights'
7.	IIRC[15]	International Integrated Reporting Council	https://www.integratedreporting.org/	2010 Integrated in the VRF in 2021	'To advance communication about value creation, preservation and erosion'.
8.	ISSB	International Sustainability Standards Board	https://www.ifrs.org/groups/international-sustainability-standards-board/	Nov. 3, 2021	IFRS Foundation IFRS Foundation announced it would consolidate the VRF and Climate Disclosure Standards Board To help meet the

					demand for 'high quality, transparent, reliable and comparable reporting by companies on climate and other environmental, social and governance (ESG) matters.';
9.	SASB[16]	Sustainability Accounting Standards Board	https://www.sasb.org/	2011 August 1, 2022: the Value Reporting Foundation–home to the SASB Standards–consolidated into the IFRS Foundation	Launched as an independent standard-setting entity 'SASB Standards guide the disclosure of financially material sustainability information by companies to their investors. Available for 77 industries, the Standards identify the subset of environmental, social, and governance (ESG) issues most relevant to financial performance in each industry.'
10.	SEC	Securities and Exchange Commission	https://www.sec.gov	1934/2022	Proposal of rules to enhance and standardize climate-related disclosures for investors (in 2022)
11.	TCFD[17]	Task force on Climate-related Financial Disclosures	https://www.fsb-tcfd.org/	2015	'The Financial Stability Board (FSB) [of the G20] created the TCFD to develop recommendations on the types of information that companies should disclose to support investors, lenders, and insurance underwriters in appropriately assessing and pricing a specific set of risks—risks related to climate change.' 'In 2017, the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.'
12.	VRF	Value Reporting Foundation	https://www.valuereportingfoundation.org/	2010 In June 2021, the IIRC and the SASB announced their combination to form the VRF	'Global nonprofit organization that offers a comprehensive suite of resources designed to help businesses and investors develop a shared understanding of enterprise value—how it is created, preserved or eroded over time.'

Panel B – Organizations focusing on promoting sustainable corporate activities

#	Acronym	Name	Website address[18]	Date of creation	Creator/sponsor and objective(s)
13.	A4S	Accounting for Sustainability	https://www.accountingforsustainability.org/en/index.html	2004	'Registered charity'. Part of The Prince of Wales's [now King Charles III] Charitable Foundation (PWCF) Group of Charities. Three core aims: -Inspire finance leaders to adopt sustainable and resilient business models - Transform financial decision making to enable an integrated approach, reflective of the opportunities and risks posed by environmental and social issues - Scale up action across the global finance and accounting community
14.	CC	Capitals Coalition	https://capitalscoalition.org/	2012	'The Capitals Coalition is a global collaboration redefining value to transform decision making.' In January 2020, the Coalition united the Natural Capital Coalition and the Social & Human Coalition
15.	GC	Global Compact	https://www.unglobalcompact.org/	2000	United Nations 'The world's largest corporate sustainability initiative' Universal and voluntary framework of 'Ten Principles' related to human rights, labor, the environment and the fight against corruption.
16.	SDGs	Sustainable development goals	https://www.undp.org/sustainable-development-goals	2015	United Nations 'The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations (…) as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.'
17.	VPSHR	Voluntary Principles on Security and Human Rights	https://www.voluntaryprinciples.org/	2000	'Membership-based global multi-stakeholder platform dedicated to sharing best practices and mutually supporting the implementation of the Voluntary Principles'. 'In 2000, companies, governments and NGOs engaged in a dialogue to address security-related human rights abuses and violations. As a collective effort, the Voluntary Principles were developed and later became a globally recognized

					standard. The Voluntary Principles Initiative promotes the principles and its implementation by members from three pillars: corporate, government, and NGO.’
18.	WBCSD	World Business Council for Sustainable Development	https://www.wbcsd.org	1995	‘Platform for business to respond to sustainability challenges that were just beginning to break the surface of collective business consciousness.’
19.	WEF	World Economic Forum	https://www.weforum.org/	Established in 1971 as a not-for-profit foundation	

The new directive:

- ‘extends the scope to all large companies and all companies listed on regulated markets (except listed micro enterprises)
- requires the audit (assurance) of reported information;
- introduces more detailed reporting requirements and a requirement to report according to mandatory EU sustainability reporting standards; and
- 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.’[21]

A broad set of large companies, as well as listed SMEs, are now required to report on sustainability—approximately 50,000 companies in total. The first companies have to apply the new rules for the first time in financial year 2024 for reports published in 2025. The Corporate Sustainability Reporting Directive (CSRD) includes the adoption of EU sustainability reporting standards (European Sustainability Reporting Standards, ESRS). The draft standards are developed by the European Financial Reporting Advisory Group (EFRAG)[22] and, more specifically, by its newly created Sustainability Reporting Board (SRB). EFRAG already plays a major role in financial accounting standard-setting because it ensures that IFRS are responsive to European needs and concerns (Abela & Mora, 2012). For instance, EFRAG influenced how IFRS were applied in Europe for financial instruments during the 2008–09 financial crisis.[23]

This time, the EU seems to be taking a more active approach than the one they did for financial reporting standard-setting. At the time of writing this article (February 2023), EFRAG launched a public consultation on the Draft ESRS Exposure Drafts.[24] Among others, EFRAG issued European Sustainability Reporting Standard 1 General provisions.[25] The resulting first set of Draft ESRS will then be handed over to the European Commission to be considered for adoption by way of delegated acts at a later stage after its process and consultations. EFRAG will play a crucial role in global convergence and sustainability reporting.

4.1.2. The IASB initiative with ISSB

In November 2020, the IFRS Foundation published a ‘Consultation paper on sustainability reporting.’[26] On November 3, 2021, the IFRS Foundation Trustees announced the creation of a new standard-setting board, the International Sustainability Standards Board (ISSB), to help meet investor demand for high-quality, transparent, reliable and comparable reporting by companies on climate and other ESG matters.[27]

The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies’ sustainability-related risks and opportunities to help them make informed decisions.

On March 31, 2022, the ISSB issued two exposure drafts, with comments to be received by July 29, 2022:

- Exposure Draft Proposed IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information (ISSB, 2022a); and
- Exposure Draft Proposed IFRS S2 Climate-related Disclosures (ISSB, 2022b).

Notably, in the second document (draft IFRS S2), the ISSB proposed mandatory Scope 3 GHG emissions disclosures.[28] The IASB has been widely successful in promoting international accounting standards. Most developed countries, except the US for domestic firms, have adopted IFRS for larger entities. Naturally, the IASB hopes to achieve a similar outcome for sustainability reporting.

4.1.3. The SEC initiative

The SEC is the most powerful market regulator in the world, with an annual 2022 budget of $2.69 billion.[29] In comparison, the budget of ESMA, the European market watchdog, was €67 million in 2022 (although ESMA plays more a coordinating role than the SEC because capital market policing is also conducted by local market regulators). Unlike the SEC, ESMA is not actively engaged in the development of sustainability standards and relies on the work of EFRAG, as discussed above. On March 21, 2022, the SEC published a proposal[30] to enhance and standardize climate-related disclosures for investors.[31] The SEC promotes a unique focus on the environmental dimension of sustainability. The 'proposed rule changes would require a registrant to disclose information about:

(1) the registrant's governance of climate-related risks and relevant risk management processes;
(2) how any climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short, medium, or long term;
(3) how any identified climate-related risks have affected or are likely to affect the registrant's strategy, business model, and outlook; and
(4) the impact of climate-related events (severe weather events and other natural conditions) and transition activities on the line items of a registrant's consolidated financial statements, as well as on the financial estimates and assumptions used in the financial statements.'

One concern is that by requiring public firms to make climate-related disclosures, certain activities creating negative environmental externalities would become conducted by private firms, and thus outside the jurisdiction of the SEC.

Originally, according to Deloitte,[32] if the SEC had been able to adopt its climate disclosure rule by the end of 2022, the compliance date for disclosure for calendar year-end registrants would have been:

- For large, accelerated filers, 2023 (filed in 2024)
- For accelerated and nonaccelerated filers, 2024 (filed in 2025)
- For smaller reporting companies (SRCs), 2025 (filed in 2026).

However, at the time of writing this article (February 2023), it seems that the SEC will not be able to meet its deadline for several reasons, including having received a substantial number of public comments (including many critical comments) after the publication of its proposal.[33] The sole focus on climate disclosures promoted by the SEC limits the possibility of convergence with broader sustainability standards promoted by other organizations (e.g. ISSB and EFRAG). In addition, there is considerable resistance to sustainable finance from certain conservative politicians in the US who view sustainability (or 'ESG') as part of the 'woke capitalism' that threatens fundamental finance industry concepts (e.g. fiduciary duty) (Temple-West et al., 2022).

4.2. Sustainability Reporting Practices

4.2.1. Diversity of practices through corporate report issuance strategies

In a recent working paper, Durand et al. (2022) collect and analyze 5,441 corporate reports containing sustainability reporting for an international sample of firms ranked by S&P Dow Jones (the organization selecting firms for inclusion in the major sustainability stock index, the Dow Jones Sustainability World Index). Durand et al. (2022) stress the fact that these reports bear many different names. They provide an illustrative list of 31 different names for such reports in their sample, which we reproduce here: 'annual review, citizenship report, corporate citizenship, corporate social responsibility report, environmental footprint, environmental report, environmental sustainability report, environmental, social and governance report, global report, global responsibility report, global stewardship report, human rights report, impact report, management report, non-financial statement, people and planet report, progress report, responsibility highlights report, responsibility report, responsible action report, responsible business report, responsible supply chain report, sustainability data book, sustainability facts & figures, sustainability performance, sustainability report, sustainable development goals, sustainable development report, sustainable value report, and value report.'

This long list of report names is an excellent illustration of the existing diversity in sustainability reporting definition practices. This is because firms seek consistency between their sustainability reporting and the key dimensions of sustainability that they want to promote. For instance, a company may rely on the United Nations SDGs and, therefore, issue a report called 'contribution to sustainable development goals' report' (see, for instance, Danone).[34] Another firm may issue a report emphasizing a different dimension of sustainability, for instance, a positive impact on climate change. That firm may, therefore, issue a report called Climate Report to highlight its actions in that dimension (e.g. Schneider Electric).[35]

Beyond the names and terminology, this diversity is accompanied by the issuance of an increasing number of reports covering different aspects of sustainability. Stolowy and Paugam (2018, p. 538) already show that, on the basis of a small sample of South African firms, the number of reports increased from a mean of 1.1 in 2006–2.8 in 2016. In our view, the increase in the number of reports does not facilitate investors' understanding of sustainability information and ability to process sustainability disclosures (Blankespoor et al., 2020). For instance, with multiple sustainability reports, investors face higher awareness costs, defined as the costs related to monitoring the existence of certain disclosures.

Based on our knowledge of sustainability reporting, many companies publish two or three reports. For example, Redefine Properties, a South African-based Real Estate Investment Trust (REIT), publishes three reports in 2021:

- The first is an 'integrated report,' defined as the 'primary report to [the] stakeholders. It is structured to show the relationship between the interdependent elements that comprise [the] value creation story.' In South Africa, integrated reporting has been mandatory since 2010 for listed firms (Caglio et al., 2020).
- The second is an 'environmental, social and governance report', defined as a 'detailed account of the group's sustainability performance for the year. The report also includes the remuneration report, as well as the social, ethics and transformation committee report.' This leads to question the difference between sustainability performance and the 'value creation story'.
- The third is 'annual financial statements.'[36]

Another reporting strategy can be found in European countries, such as France, where the reporting of listed companies is regulated by the authority monitoring the stock market (the French *Autorité des Marchés Financiers*, AMF). In France, listed companies publish a document called Universal Registration Document (URD); the URD's contents are defined by the AMF on the basis of an EU regulation (Delegated Regulation (EU) 2019/980 on the format, content, scrutiny and approval of the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market).

For example, TotalEnergies, a French group that produces and markets energies on a global scale, presents in its 2021 URD—beyond the financial statements—several reports related to its sustainability strategy and policies:

- An integrated report (Chapter 1 of the URD) that highlights, among others, the company's ambition, business model, strategy, long-term vision and commitments;
- A non-financial performance statement (Chapter 5 of the URD); and
- A vigilance plan (Chapter 3.6 of the URD) that describes the due diligence measures implemented within the company to identify risks and prevent serious violations of human rights and fundamental freedoms, individuals' health and safety and the environment resulting from the company's activity.

The publication of all elements related to sustainability in a unique document is notable. In addition to these documents, TotalEnergies publishes dedicated thematic reports:

- A Sustainability & Climate Progress Report, published in March 2022.
- A human rights briefing document, which follows the United Nations' Guiding Principles Reporting Framework. The latest edition was published in April 2018.[37]

However, some companies provide a truly unique document encompassing all aspects of sustainability reporting. For example, adidas Group, the German group that designs, develops, produces and markets a broad range of athletic and sports lifestyle products, publishes a unique 'annual report' that states that 'with the Annual Report 2021, adidas communicates financial and non-financial information in a combined publication. The report provides a comprehensive overview of the financial, environmental, and social performance of adidas in the 2021 financial year.' Since 2000, adidas has been publishing its progress on set targets in its annual sustainability reports. It has further published a separate environmental report detailing progress made globally by its operations. As of full year 2017, the group integrated material non-financial information into its annual report.[38]

In conclusion, at the time of writing this article, publishing a unique document encompassing —with financial statements—all aspects of sustainability reporting is far from representing a common practice, which likely increases the complexity for investors.

4.2.2. Diversity in compliance with sustainability reporting standards

Given the coexistence of several organizations and different reporting standards, as mentioned above, companies face choices (and opportunities) when they prepare their sustainability reporting. Based on a preliminary study of a small sample of firms, we noticed that some refer to one set of standards (usually the GRI), whereas other companies mention more than one set of sustainability standards. It is interesting to describe the case of TotalEnergies, already mentioned, which cites no fewer than 10 sets of standards with which the firm complies. Table 3 displays these sets of standards and the year of adoption. TotalEnergies may be a specific case because it is a large firm with considerable resources dedicated to reporting. It also suffers from a legitimacy deficit due to its sector. Legitimacy theory argues that firms provide sustainability information to make their activities more acceptable by stakeholders (e.g. Michelon et al., 2019). Nonetheless, the number of sustainability reporting standards with which TotalEnergies claims compliance leads to several questions:

What is the value added for firms to comply with more than one sustainability standard? Does a firm complying with two standards provide information twice as qualitative as does a company complying with only one sustainability standard? Do stakeholders care about compliance with multiple sustainability standards? At a broader level, if a firm can claim compliance with so many sustainability standards, then why do so many standards even exist? Are sustainability standards truly enforced? Is it possible to comply with so many standards? Interestingly, this practice shows that firms interpret existing sustainability standards as not mutually exclusive. Future research could examine a larger sample of companies from different countries to investigate these questions.

5. Diversity of Objectives

Many international organizations have different objectives regarding sustainability reporting. Indeed, some international organizations focus specifically on only certain dimensions of sustainability: CDP focuses only on carbon disclosure, and the SEC proposal covers only environmental matters, whereas other organizations have the broader objective of providing standards for all sustainability matters (e.g. GRI, SASB, ISSB, EU-EFRAG).

In addition, certain sustainability reporting regulations target only certain types of entities. For instance, the EU's Sustainable Finance Disclosure Regulation (SFDR) (European Union, 2019) covers financial products only to define what should be considered a sustainable financial product. The SFDR offers a sustainability taxonomy through certain key articles: articles 6, 8 and 9 for investment products. Article 6 includes funds without a sustainability scope, article 8 includes funds that promote environmental or social characteristics (light green), and article 9 is for funds that have sustainable investments as their objective (dark green). These definitions have a substantial impact on investments in green financial products. Interestingly, fund managers must self-report whether their fund falls within a specific definition of the SFDR. This led to potential reclassification because, for instance, some fund managers are downgrading their sustainable products from article 9 to article 8 to mitigate the risk of being perceived as greenwashing their investment objectives.[39]

Other fund-related frameworks for sustainability reporting exist, such as the CFA Institute Global ESG Disclosure Standards for Investment products.[40] In comparison, the Non-Financial Reporting Directive (NFRD) (European Union, 2014), now replaced by the CSRD (European Union, 2022), or GRI cover sustainability-related information at the firm level.

6. Toward Convergence? The Role of the ISSB and EFRAG SRB

Figure 1 shows the information in Table 2 in a graphical format, providing a timeline of the creation of the different organizations. The figure illustrates the 'proliferation'—to use the word mentioned by A4S (2022, p. 17)—of reporting instruments.

The movement initiated by the IASB to consolidate several organizations within the ISSB that are acting in the field of sustainability reporting is interesting. This shows the power of this organization, which can capitalize on the legitimacy of the worldwide adoption of IFRS. Figure 2 translates the elements in Table 2, Panel A, in a graphical format. The ISSB absorbed the CDSB (on January 31, 2022) and the IIRC and SASB through the consolidation of the VRF (on August 1, 2022).

Table 3. Which sustainability reporting standards to follow? One real-life example.

Organization	Year of adoption
GRI	2014
Global Compact	2002
Sustainable Development Goals	2016
CDP	2003
TCFD	2021
WEF	2020
SASB	2020
VPSHR	2012
Human Rights - UNGP	2016
IPIECA (International Petroleum Industry Environmental Conservation Association)	2020

This table is based on the following web page of TotalEnergies: https://totalenergies.com/sustainability/reports-and-indicators/reporting-standards (Last accessed: February 27, 2023) entitled 'Our reporting standards', which presents all the standards adopted by the Group.

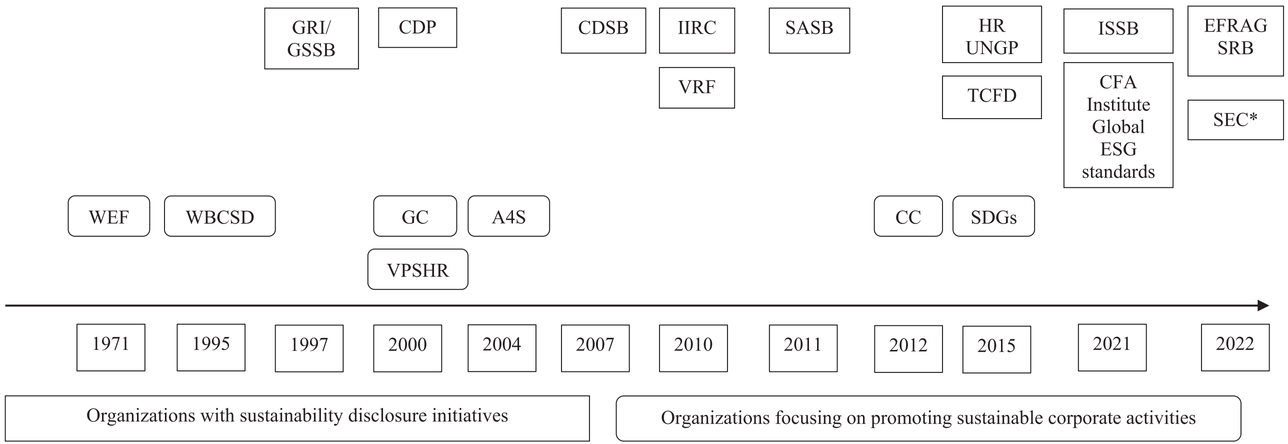
In this context, the coexistence of two major initiatives (the EU and the IASB) is puzzling. Indeed, a major factor leading to the success of the IASB is precisely the decision to adopt IAS-IFRS in the EU in 2002. The situation appears different this time, probably considering the more political nature of sustainability, whereas financial accounting can be perceived (inaccurately) as highly technical in nature.

Thus, there exist several significant differences between the EU and IASB approaches to sustainability disclosures. Giner and Luque-Vílchez (2022) and Giner (2022) compared these approaches and highlighted four key differences: target audience (investors and non-governmental associations, social partners and other stakeholders for the EU, investors, lenders and other creditors for the IASB), scope, materiality and reporting boundaries.

In this section, we focus on one important aspect: the concept of materiality, which was thoroughly studied by Abhayawansa (2022) (see also Cooper & Michelon, 2022; Edgley, 2014; Edgley et al., 2015; Jebe, 2019; Khan et al., 2016; Reimsbach et al., 2020). From a purely financial perspective, according to the revised Conceptual Framework of the IASB (2018, § 2.11), 'Information is material if omitting it or misstating it could influence decisions that the primary users of general purpose financial reports (see paragraph 1.5) make on the basis of those reports, which provide financial information about a specific reporting entity.' The ISSB, in its draft standard (ISSB, 2022a), 'requires an entity to disclose material information about all of the significant sustainability-related risks and opportunities to which it is exposed' (§ 50) and defines materiality for 'sustainability-related financial information' in the same way as it is defined in the IASB Conceptual Framework mentioned above (see § 56).

The definition adopted by the ISSB is related implicitly to the concept commonly used of 'financial materiality.' This concept represents the factors that could have a significant impact—both positive and negative—on a company's financial performance and value. In the context of financial materiality, EFRAG (2022, § 52) explains that a sustainability matter is material if 'it generates risks or opportunities that influence or are likely to influence the future cash flows and therefore the enterprise value of the undertaking in the short, medium or long term, but it is not captured or not yet fully captured by financial reporting at the reporting date.'

The EU, with EFRAG, adopts a different approach compared to the ISSB, as it implements 'double materiality.'[41] The new directive (European Union, 2022, § 29) requires that 'undertakings […] report both on the impacts of the activities of the undertaking on people and the



*The SEC proposal builds on the Commission's previous rules and guidance on climate-related disclosures, which date back to the 1970s (SEC, 2022, p. 13).

Figure 1. List of organizations involved in sustainability and timeline.

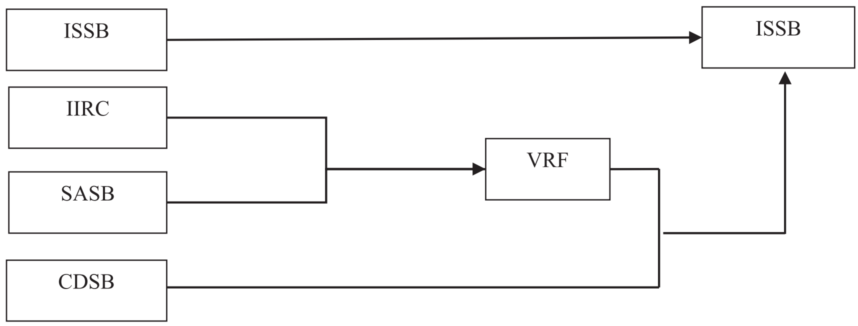


Figure 2. Consolidation of sustainability standard setting organizations.

environment, and on how sustainability matters affect the undertaking. That is referred to as the double materiality perspective'. As also stated in EFRAG (2022, § 23, b), 'undertaking shall report all material information necessary to allow users of its sustainability report to understand its impacts on sustainability matters, and information necessary to understand how sustainability matters affect the undertaking's development, performance and position (double materiality)'. The second part of the paragraph corresponds to the financial materiality mentioned above. However, the first part describes 'impact materiality' (i.e. the impact of the firm on people and the environment's sustainability). Put differently, the double materiality approach intended to address the so-called 'outside-in' perspective (risks and opportunities for the entity, 'financial materiality') as well as the so-called 'inside-out' perspective (positive and negative impacts of the entity, 'impact materiality') (EFRAG, 2021, § 65).

Adopting different approaches to materiality is all the more problematic because past research has shown that parallel approaches to materiality can create confusion and may lead users of sustainability reports to draw unjustified conclusions on the basis of materiality assessments (Jørgensen et al., 2022). Having highlighted a major difference between the two initiatives in terms of materiality, we can nevertheless add that the difference is not so clear cut. For example, by requiring the disclosure of greenhouse gas emissions (ISSB, 2022b, § 21), the ISSB is interested in an impact of the firm, adopting implicitly an 'inside-out' approach in line with the impact materiality approach.

7. Conclusion

Overall, in this essay, we identified many factors limiting the possibility of convergence in sustainability reporting. These factors relate to the diversity of the definitions and concepts of sustainability, the existence of competing standard-setting organizations and organizations promoting sustainability practices. A question emerging is whether sustainability can be defined precisely. Some stakeholders consider that sustainability is in fact highly subjective in nature (e.g. the impact-weighted accounts of HBS). As a result, firms' reporting choices vary greatly. This is clear from the existence of one or many corporate reports covering sustainability matters issued by firms or by the reliance on one, two or many sustainability reporting standards. This questions the usefulness of many standards if firms can apply up to 10 sustainability standards at the same time.

In addition, one main factor limiting sustainability reporting convergence in the short term is the coexistence of the ISSB and the current approach of EFRAG. By proposing competing standards and refusing to endorse ISSB standards, the EU is indirectly undermining the legitimacy of the IASB in sustainability reporting. The ISSB either needs European firms to comply with both the EU and ISSB approach or another important economic area to adopt its sustainability standards. For European firms, complying with both sets of sustainability standards seems counterproductive.

More broadly, having a plethora of sustainability standards and organizations involved in sustainable development and sustainability reporting has adverse consequences. First, the multiplication of sustainability standards decreases the legitimacy and effectiveness of each standard. Indeed, it adds confusion to the credibility of each standard and casts doubt on the theoretical foundation of the concept of sustainability. Second, multiple standards increase disclosure processing costs for investors who may be truly looking to assess sustainable performance. Multiple standards complexify the integration of sustainability information into investment decisions. It also increases the cost for external auditors providing assurance on sustainability information. Third, multiple standards create regulatory arbitrage opportunities for firms, as they may select the standards leading to their most favorable outcomes. Finally, the proliferation of standards also creates opportunities for the management of legitimacy, as compliance with standards can be used as a stamp of approval, increasing the legitimacy of the firm's activities.

Nevertheless, to conclude this essay on a less pessimistic note, we can highlight one exception in sustainability reporting convergence. Climate-related disclosures seem different from other sustainability dimensions. Indeed, most climate-related disclosure regulations (or proposed rules) are built on the TCFD framework; therefore, the regulatory requirements are converging across standard-setting organizations.[42] Due to the factors identified in this essay, we view this as an exception rather than a sign of global convergence for other dimensions of sustainability.

Notes

[1]Source: https://www.cdp.net/en/articles/media/cdp-reports-record-number-of-disclosures-and-unveils-new-strategy-to-help-further-tackle-climate-and-ecological-emergency (Last accessed: February 27, 2023).

[2]For simplicity and clarity, we use 'sustainability reporting' as a generic term to encompass all of the other concepts, even though we later discuss some key differences between them.

[3]http://www.sasb.org/wp-content/uploads/2019/05/SASB-Conceptual-Framework.pdf?source=post_page (Last accessed: February 27, 2023).

[4]For instance: 'The annual A4S Summit is a unique global gathering to catalyze action on sustainability in the finance community'. See: https://a4ssummit22.vfairs.com/en/#about (Last accessed: February 27, 2023). On FAQ section of the website, A4S explains that global finance community professionals ranging from CFOs, CIOs, pension fund chairs, regulators and business schools are likely to attend its annual conference (see: https://a4ssummit22.vfairs.com/en/#faq Last accessed: February 27, 2023).

[5]474, 70 and 62 occurrences, respectively, in European Union (2022).

[6]84 occurrences in ISSB (2022a).

[7]See European Union (2019).

[8]Source: https://www.ifrs.org/news-and-events/news/2022/12/issb-describes-the-concept-of-sustainability/?utm_medium=email&utm_source=website-follows-alert&utm_campaign=immediate (Last accessed: February 27, 2023).

[9]See: https://www.hbs.edu/impact-weighted-accounts/design-methodology/Pages/default.aspx (Last accessed: February 27, 2023).

[10]'Large undertakings, and small and medium-sized undertakings, except micro undertakings, which are public-interest entities as defined in point (a) of point (1) of Article 2 shall report information on the key intangible resources and explain how the business model of the undertaking fundamentally depends on such resources and how such resources are a source of value creation for the undertaking.'

[11]The directive refers to 'double materiality' in § 29.

[12]Last accessed: February 27, 2023.

[13]For research on CDP, see Matisoff et al. (2013).

[14]For research on GRI, see Larrinaga and Bebbington (2021); Abeysekera (2022); de Villiers et al. (2022).

[15]For research on IIRC, see Adams (2015); Flower (2015).

[16]For research on SASB, see Grewal et al. (2021); Parfitt (Forthcoming).

[17]For research on TCFD, see O'Dwyer and Unerman (2020).

[18]Last accessed: February 27, 2023.

[19]These requirements or instruments include policies, regulations, guidance, frameworks, codes and standards.
[20]Original source: Carrots and Sticks website (https://www.carrotsandsticks.net/, Last accessed: February 27, 2023). This website, which is the result of a collaboration among GRI, the United Nations Environment Program and the University of Stellenbosch Business School, 'contains a database of mandatory and voluntary instruments that either require or encourage organizations to report sustainability-related information.'
[21]See: https://finance.ec.europa.eu/publications/sustainable-finance-package_en (Last accessed: February 27, 2023).
[22]https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en#review (Last accessed: January 12, 2023).
[23]See: https://www.efrag.org/Activities/139/IAS-39-and-IFRS-7-Amendments-Reclassification-of-Financial-Instruments (Last accessed: February 27, 2023)
[24]https://www.efrag.org/Activities/2105191406363055/Sustainability-reporting-standards-interim-draft# (Last accessed: February 27, 2023), https://www.efrag.org/lab3 (Last accessed: February 27, 2023).
[25]See: https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FWorking%2520Paper%2520ESRS%25201%2520General%2520Provisions.pdf&AspxAutoDetectCookieSupport=1 (Last accessed: February 27, 2023).
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[27]See: https://www.ifrs.org/groups/international-sustainability-standards-board/ (Last accessed: February 27, 2023).
[28]https://www.ifrs.org/news-and-events/news/2022/10/issb-unanimously-confirms-scope-3-ghg-emissions-disclosure-requirements-with-strong-application-support-among-key-decisions/ (Last accessed: February 27, 2023).
[29]Source: https://www.usaspending.gov/agency/securities-and-exchange-commission?fy=2022 (Last accessed: February 27, 2023).
[30]See : https://www.sec.gov/rules/proposed/2022/33-11042.pdf (Last accessed: February 27, 2023).
[31]See: https://www.sec.gov/news/press-release/2022-46 (Last accessed: February 27, 2023).
[32]https://www2.deloitte.com/us/en/pages/audit/articles/esg-sec-proposed-climate-disclosure-requirements.html (Last accessed: February 27, 2023).
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[35]https://www.se.com/ww/en/about-us/sustainability/sustainability-reports/ (Last accessed: February 20, 2023)
[36]Source: https://www.redefine.co.za/investors/integrated-reports/latest-integrated-reports (Last accessed: February 27, 2023).
[37]Source: https://totalenergies.com/sustainability/reports-and-indicators/csr-reports (Last accessed: February 27, 2023).
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[40]https://www.cfainstitute.org/en/about/press-releases/2021/cfa-institute-releases-global-esg-disclosure-standards-for-investment-products (Last accessed: February 27, 2023).
[41]Baumüller and Sopp (2022) outline the development of the principle of materiality in the European accounting framework.
[42]See: https://gsh.cib.natixis.com/our-center-of-expertise/articles/navigating-the-sea-of-proposed-climate-related-disclosures-a-deep-dive-into-the-sec-s-issb-s-and-efrag-s-proposals (Last accessed: February 27, 2023). This element was confirmed by Jean-Paul Gauzès in our interview.

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