DR Diritto del Risparmio

A CRITICAL ANALYSIS OF THE EU GREEN TAXONOMY: IS IT FIT FOR PURPOSE?

di Luca MENEGHINI*.

The paper discusses the most debated topic currently unfolding in the European sustainable finance space, the EU Green Taxonomy. In a nutshell, the EU Taxonomy is a "green list", setting out uniform definitions for environmentally sustainable economic activities. The aim of the paper is twofold. On the one hand, we seek to educate the reader on the key features of the Taxonomy, shedding light on its environmental objectives, scope of application, disclosures framework (with a focus on the SFDR and the Green Asset Ratio), and the impact on both green bonds (specifically, on the EU Green Bond Standard) and investment funds, arguably the two most impacted asset classes. On the other hand, we take the approach of analyzing such features from a critical standpoint in order to shed light on regulatory gaps, expose inconsistencies and test whether the Green Taxonomy as a legal tool can succeed in facilitating the transition to a low-carbon economy. Against this backdrop, the paper argues that the EU Taxonomy is not fit to achieve its ambitious purposes

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A Critical Analysis of the EU Green Taxonomy: Is It Fit For Purpose?[*]

di Luca MENEGHINI[**]

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Abstract

The paper discusses the most debated topic currently unfolding in the European sustainable finance space, the EU Green Taxonomy. In a nutshell, the EU Taxonomy is a "green list", setting out uniform definitions for environmentally sustainable economic activities. The aim of the paper is twofold. On the one hand, we seek to educate the reader on the key features of the Taxonomy, shedding light on its environmental objectives, scope of application, disclosures framework (with a focus on the SFDR and the Green Asset Ratio), and the impact on both green bonds (specifically, on the EU Green Bond Standard) and investment funds, arguably the two most impacted asset classes. On the other hand, we take the approach of analyzing such features from a critical standpoint in order to shed light on regulatory gaps, expose inconsistencies and test whether the Green Taxonomy as a legal tool can succeed in facilitating the transition to a low-carbon economy. Against this backdrop, the paper argues that the EU Taxonomy is not fit to achieve its ambitious purposes.

A Critical Analysis of the EU Green Taxonomy: Is It Fit For Purpose?

SUMMARY: 1. Introduction. – 2. Background and legislative history. – 3. Environmental objectives and environmentally sustainable activities. – 3.1. Substantial contribution to an environmental objective. - 3.2. Do not significant harm principle. – 3.3. Minimum social safeguards. – 3.4. Compliance with technical screening criteria. - 4. Scope of application. – 5. Financial disclosures. – 6. Non-financial reporting. – 6.1. KPIs for non-financial undertakings. – 6.2. KPIs for financial undertakings. – 7. Green bonds. – 8. Asset management. – 9. A New "Brussels Effect"? – 10. Conclusion.

1. Introduction.

Defining what is "green" and "sustainable" is arguably at the top of the global regulatory agenda to meet the increasing investors' demand for clear guidance on the sustainability performance of financial assets. Sustainable finance taxonomies are a useful regulatory tool in this respect. Specifically, a green taxonomy can be understood as a set of classification criteria meant to gauge to what extent any given asset is environmentally sustainable and whether funneling capital into such asset can lead to a sustainable outcome. The rationale behind this regulatory tool is to translate environmental objectives into comparable metrics in order to assist investors in their decision making and curb "greenwashing" practices. If properly operationalized, a green taxonomy should enhance the appetite for sustainable assets and eventually boost the flow of capital into climate-friendly investments.

The most ambitious, sophisticated and comprehensive green taxonomy framework currently adopted in the world is the EU Green Taxonomy. The EU Taxonomy is at the epicenter of the European sustainable finance strategy, and it is acknowledged as the main regulatory tool needed to achieve the environmental targets embedded in the European Green Deal. For this reason, we shall endeavor to assess the provisions and impact of the Taxonomy Regulation and its Delegated Acts from a legal and economic standpoint. The analysis is intentionally critical in nature throughout the whole discussion, but our aim is not

to disavow entirely the merits of this piece of legislation, which we implicitly recognize. On the contrary, by focusing our discussion on the criticalities and shortcomings of the Regulation we intend to educate the reader on the (too) many loopholes and inconsistencies that underpin its provisions. This is of utmost importance because the Taxonomy Regulation does not amount to a compartmentalized set of rules, but rather is to be understood in the broader context of the EU sustainable finance legislative landscape. On the one hand, the Taxonomy classification framework is designed to being applied well beyond its scope, shaping the whole spectrum of EU environmental regulation and impacting a number of paramount EU financial laws. On the other hand, a large plethora of financial market participants, including sovereign entities, credit institutions, rating agencies, corporations, insurance companies and asset managers will need to familiarize themselves sooner rather than later with the cross-sectoral dimension of the rules and learn how to feed them into their legal, compliance and risk assessments.

The paper is structured as follows. The first part summarizes the legislative history that led to the adoption of the Taxonomy Regulation and offers a detailed overview of the environmental objectives underpinning the Green Taxonomy. We survey the criteria under which an economic activity is considered environmentally sustainable, shedding light on the practical steps needed to conduct the relevant assessment. We then analyze the scope of application in order to determine whether the Taxonomy can become a useful legal tool to achieve European environmental targets. To this end, we evaluate whether the list of users, products and economic activities encompassed in the framework is comprehensive enough. We then endeavor to rationalize the disclosure requirements enshrined in the Taxonomy and to shed light on the various key performance indicators (KPIs) used to measure financial market participants' alignment with the EU Green Taxonomy. Firstly, we analyze the financial disclosures and their interplay with the provisions of the Sustainable Finance Disclosure Regulation (SFDR). Secondly, the analysis is devoted to examining non-financial reporting under art. 8 of the Taxonomy Regulation and the different set of rules applicable to non-financial and financial companies, respectively. Particular attention is paid to the Green Asset Ratio (GAR), a KPI used by credit institutions to indicate their Taxonomy-alignment. Finally, we assess the usability of the Taxonomy against the two most impacted asset classes. On the one hand, we ask whether the Taxonomy can facilitate the issuance of green bonds and we assess the practicality of the EU Green Bond Standard (EUGBS). On

the other, we survey existing research to test the impact of the Taxonomy on the investment funds' industry. Finally, we assess whether the Taxonomy can strive to become a universal green labelling standard and shape global environmental regulation accordingly.

2. Background and legislative history.

Climate change represents one of the biggest challenges humanity has ever faced. There is now ample evidence that human-induced activities are contributing to the widespread changes in the atmosphere, oceans, and lands.[1] Besides impacting the environment, the disruptive effects of the climate emergency pose tangible risks to the economy and the financial system as well.[2] To mitigate climate-driven risks and their impact on assets and financial institutions, global efforts to foster sustainable development have resulted in the conclusion of the 2015 Paris Climate Agreement, a legally binding global climate agreement which *inter alia* emphasizes the urge to channel financial flows towards climate-resilient development, and the United Nations 2030 Agenda for Sustainable Development, which sets seventeen Sustainable Development Goals (SDGs) tied to environmental, social and governance (ESG) considerations.[3]

In the wake of the global momentum on climate action, for its parts the European Union has boosted efforts to become the leading global powerhouse of sustainable development. Amongst the most notable initiatives, in December 2019 the European Commission launched the European Green Deal, a legislative and regulatory action plan aimed at tackling climate change and coping with a broad range of environmental-related challenges.[4] In a

[1] See IPCC, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,* (2021), available at https://www.ipcc.ch/report/ar6/wg1/#FullReport.

[2] For an overview of the potential (financial) risks posed by climate change see BASEL COMMITTEE ON BANKING SUPERVISION, *Climate-related Risk Drivers and their Transmission Channels*, (2021), available at https://www.bis.org/press/p210414.htm.

[3] BUSCH, FERRARINI, VAN DEN HURK, *The European Commission's Sustainable Finance Action Plan and Other International Initiatives*, EUSFiL Research Working Paper n. 3/2020, (2020), p. 5, available at https://www.eusfil.eu/working-papers. Also see UNITED NATIONS, *Transforming Our World: the 2030 Agenda for Sustainable Development*, (2015), available at https://sdgs.un.org/2030agenda. The seventeen SDGs are the following: (i) no poverty; (ii) zero hunger; (iii) good health and well-being; (iv) quality education; (v) gender equality; (vi) clean water and sanitation; (vii) affordable clean energy; (viii) decent work and economic growth; (ix) industry, innovation and infrastructure; (x) reduce inequalities; (xi) sustainable cities and communities; (xii) responsible consumption and production; (xiii) climate action; (xiv) life below water (xv) life on land; (xvi) peace, justice and strong institutions; (xvii) partnerships for the goals.

[4] See EUROPEAN COMMISSION, *The European Green Deal*, (2019), available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0640&from=IT.

nutshell, the EU Green Deal delineates a new growth strategy that aims to transform the EU into a resource-efficient and competitive economy with no net greenhouse gases emissions by 2050 and a 50/55% reduction by 2030, which would make Europe the first climate-neutral continent.[5] However, delivering EU sustainable growth and meeting the EU climate and energy targets as enshrined in the Green Deal will require hundreds of billions of investment turnaround for the years to come, requiring a solid legal and regulatory framework underpinning sustainable financing.[6] To this end, in 2016 a High-Level Expert Group on Sustainable Finance (HLEG) was appointed by the EU Commission to develop an overarching EU roadmap on sustainable finance, with the ambitious goal of leveraging the allocative role of financial markets to build the world's most sustainable financial system.[7] In 2018, the HLEG published its final report, listing eight key recommendations, the first being the establishment of a common European sustainability taxonomy framework. A common "green" classification system would provide clarity and guide market participants on what investments and/or financial products will contribute to the EU's sustainability objectives, ensuring altogether comparability across standards and products, ultimately fostering economic growth.[8] In other words, the policy goal was to provide a regulatory tool that could shed light on the definition of the "E" in the ESG acronym. According to the HLEG, the EU Green Taxonomy should be applicable to all types of assets and all types of capital allocation and should be aligned with European environmental public policy goals.[9] The table below summarizes key features of the taxonomy according to the HLEG:

[5] *Ibidem*. The Green Deal is part if the EU Commission strategy to implement the UN 2030 Agenda and the SDGs and outlines an action plan for: (i) increasing the EU's climate ambitions for 2030 and 2050; (ii) supplying clean, affordable and secure energy; (iii) mobilizing the industry for a clean and circular economy; (iv) building and renovating in an energy and resource efficient way; (v) accelerating the shift to sustainable and smart mobility; (vi) designing a fair, healthy and environmentally-friendly food system; (vii) preserving and restoring ecosystems and biodiversity; (viii) creating a toxic-free environment with zero pollution.
[6] *Ibidem*, p. 15.
[7] HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE, *Financing a Sustainable European Economy. Final Report*, (2018), p. 6, available at https://ec.europa.eu/info/files/180131-sustainable-finance-final-report_en.
[8] *Ibidem*, p. 15. The other seven key recommendations are: (i) clarify investor duties to better embrace long-term horizon and sustainability preferences; (ii) upgrade disclosure rules to make sustainability risks fully transparent, starting with climate change; (iii) key elements of a retail strategy on sustainable finance: investment advice, ecolabel and SRI minimum standards; (iv) develop and implement official European sustainability standards and labels, starting with green bonds; (v) establish "Sustainable Infrastructure Europe"; (vi) Governance and Leadership; (vii) include sustainability in the supervisory mandate of the ESAs and extend the horizon of risk monitoring.
[9] *Ibidem*.

What the Taxonomy would be:	What the Taxonomy would not be:
A classification system identifying activities, assets and revenue segments that deliver on key sustainability goals based on the eligibility conditions set out by the taxonomy. Designed as a 'meta' framework onto which existing (and future) definitions can be mapped, enabling comparability of different standards and products.	A standard by itself. A standard will need a system of thresholds, reporting, management and oversight. Standard-setters are expected to use the taxonomy to inform their respective standards.
Designed to provide a level of granularity that minimizes ambiguity to the extent possible.	Populated with specific, quantified metrics.
An evolving tool. The science around sustainability is dynamic and evolving, as are social expectations as well as investor and market needs. The taxonomy should be considered to represent the best of currently available knowledge and will require continuous review.	Set in stone.
A neutral framework applicable to a variety of financial instruments, including project finance, bonds and equity. It provides insight at the individual activity level.	The complete picture for a portfolio of assets. Decisions will need to be taken as to what proportion of assets need to meet the eligibility criteria in order for a bundle to be deemed sustainable, or whether to account solely for the parts that are.
Built on existing understanding schemes developed by hundreds of scientific, technical and financial experts.	Not a means of prioritising or ranking investments where multiple benefits are possible, or exploring potential optimal mixes of outcomes and impacts for individual investments.

Focused on assets, revenue segments and activities related to financial assets and services.	Covering the conduct or management of a company or entity.

Source: HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE,
Financing a Sustainable European Economy. Final Report, (2018), p. 17.

In response to the recommendations formulated by the HLEG, in March 2018 the EU Commission released its Action Plan on Sustainable Finance, aimed at channeling capital flows towards sustainable investments, tackling the financial risks stemming from climate change and fostering transparency and long-termism in the financial sector.[10] Ten concrete actions were listed, the most important and urgent being the commitment to embed into EU law a unified, science-based classification system for sustainable activities and develop methodological guidance for using it.[11] Making good on its commitment, in May 2018 the Commission announced a legislative package, including a proposal for a EU Green Taxonomy and the establishment of a Technical Expert Group on Sustainable Finance (TEG), mandated by the Commission *"[...] to develop recommendations for technical screening criteria regarding economic activities that make a substantial contribution to certain environmental objectives*".[12] The TEG published its final report in March 2020, formulating recommendations for companies and financial market participants and designing a set of technical screening criteria (TSC) - a form of performance thresholds - for climate change mitigation and climate change adaptation activities.[13] In June 2020, the European Parliament and the Council adopted Regulation (EU) 2020/852 "on the establishment of a framework to facilitate investment

[10] EUROPEAN COMMISSION, *Action Plan: Financing Sustainable Growth*, (2018), p. 2, available at https://eur-lex.europa.eu/legal-content/ET/TXT/?uri=CELEX:52018DC0097.

[11] *Ibidem,* p. 4. The other nine actions are: (i) creating standards and labels for green financial products; (ii) fostering investment in sustainable projects; (iii) incorporating sustainability when providing financial advice; (iv) developing sustainability benchmarks; (v) better integrating sustainability in ratings and market research; (vi) clarifying institutional investors' and asset managers' duties; (vii) incorporating sustainability in prudential requirements; (xiii) strengthening sustainability disclosure and accounting rules; (ix) fostering sustainable corporate governance and attenuating short-termism in capital markets.

[12] TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Taxonomy: Final Report of the Technical Expert Group on Sustainable Finance*, (2020), p. 10, available at https://ec.europa.eu/info/files/200309-sustainable-finance-teg-final-report-taxonomy_en. *Also* see EUROPEAN COMMISSION, *Technical Expert Group on Sustainable Finance (TEG) – Frequently Asked Questions*, (2018), available at https://ec.europa.eu/info/files/sustainable-finance-teg-frequently-asked-questions_en.

[13] See https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en.

and amending Regulation (EU) 2019/2088", which entered into force in July 2020.[14] The Regulation is the legal basis for a EU Green Taxonomy framework and is aimed at "*establish[ing] the criteria for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable*".[15]

A permanent advisory body, the Platform on Sustainable Finance, was established with the task of assisting the Commission in assessing usability, impact, costs and benefits resulting from the TSC's application, improving their data quality and availability and, more broadly, with the mandate of further developing and amending the Taxonomy framework where appropriate.[16] In addition, the Platform is tasked with receiving feedback from stakeholders and Taxonomy users in order to develop or revise TSC for any given economic activity, and generally with appraising any further governance issues.[17]

Essentially, the EU Taxonomy is a regulatory tool to incentive investors to take part in the sustainable finance transition, trying to clearly frame what the EU considers as "green" to steer informed investments decisions. In other words, it is the world's first comprehensive attempt to sketch a "green list". The underlying rationale is that the financial sector needs clear guidance on which activities are deemed sustainable from an environmental perspective, in order to channel capital flows towards the economic and social transition to a climate-resilient and environmentally neutral economy.[18] This, in turn, should foster cross-border sustainable investments within the European Union.[19] This framework is logically embedded in the European efforts to build a Capital Markets Union (CMU), in which (green) funds

[14] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, (hereinafter, the Taxonomy Regulation), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020R0852&qid=1628970940578.

[15] Taxonomy Regulation, art. 1(1).

[16] *Ibidem*, art. 20. The Platform members include, *inter alia,* representatives of the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), the European Insurance and Occupational Pensions Authority (EIOPA), the European Investment Bank (EIB) and experts from the private sector.

[17] *Ibidem,* art. 20(6). In addition, to enhance the review process, under art. 26 of the Taxonomy Regulation the Commission shall publish a report on the application of the Regulation by 13 July 2022 and subsequently every three years, in order to evaluate the implementation progress and the potential need to revise criteria for economic activities to qualify as environmentally sustainable and, more generally, to revise the definitions contained in the Regulation.

[18] BODELLINI, SINGH, *Sustainability and Finance: Utopian Oxymoron or Achievable Companionship?* 10(1) Law and Economics Yearly Review, (2021), p. 167, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3949373&download=yes.

[19] *Ibidem,* p. 168.

should flow across the EU in order to benefit consumers, investors and companies regardless of their location.[20]

While its provisions on product alignment and regulatory reporting are binding, the EU Taxonomy does not yet *per se* create any enforceable obligation upon investors to invest in Taxonomy-aligned assets, nor it is meant as a tool to assess the financial performance of an investment, but rather is designed to guide decision-making.

The EU Commission was further empowered to formally adopt the TSC through Delegated Acts to clarify the obligations arising from the law.[21] TSC must be based on conclusive scientific evidence and shall identify economic activities that mostly contribute to environmental objectives, specify minimum requirements to avoid jeopardizing sustainability goals and, to the extent possible, be quantitative in nature and evidenced by measurable thresholds.[22] TSC must also take into account the market impact of the transition to a sustainable economy and whether their establishment would cause assets becoming stranded due to such transition, as well as the risk of creating inconsistent investment incentives.[23] The first draft of the Delegated Act, some 593 pages long, containing guidelines on climate change mitigation and adaption activities, was submitted for public consultation due by December 2020 and received a staggering amount of 46.591 answers and thousands of pages of vocal criticism, forcing the Commission to halt the adoption of the Act.[24] The first draft of TSC even somehow deviated from the TEG's advice as expressed in its final report, while also raising widespread concerns on the scope of application, criticized by some for being too narrow and by others for not being ambitious enough.[25]

In response, the Commission sought further advice from the Platform on Sustainable Finance and has since then hastily come forward with its obligation by publishing the Climate Delegated Act in April 2021 (formally adopted in June 2021 for scrutiny by the co-legislators

[20] For an overview of the CMU project see https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/what-capital-markets-union_en.
[21] Taxonomy Regulation, artt. 10(3), 11(3), 12(2), 13(2), 14(2) and 15(2).
[22] *Ibidem,* Art 19(1).
[23] *Ibidem.*
[24] See SIMON, *Brussels Postponed Green Finance Rules After 10 EU States Wielded Veto*, Euractiv, (18 January 2021), available at https://www.euractiv.com/section/energy-environment/news/brussels-postponed-green-finance-rules-after-10-eu-states-wielded-veto/.
[25] *Ibidem* and see also VAN STEENIS, *Climate Change Won't be Stopped by 593 Pages on Green Tape*, Bloomberg, (18 March 2021), available at https://www.bloomberg.com/opinion/articles/2021-03-18/european-green-deal-climate-change-won-t-be-stopped-by-reams-of-esg-tape.

and published in the Official Journal of the European Union in December 2021) to define TSC for specific economic activities that substantially contribute to climate change mitigation and climate change adaptation, which entered into force in January 2022.[26] The Commission is also planning to approve an Environmental Delegated Act some time in 2022 to cover the four remaining environmental objectives, expected to be applicable as of January 2023.[27] To this end, in March 2022, the Platform on Sustainable Finance published a set of recommendations on TSC on the four remaining non-climate environmental objectives, covering water, circular economy, pollution prevention and biodiversity and ecosystems, alongside some additional activites connected to the climate objectives.[28] In July 2021, the Commission further announced the launch of a Renewed Sustainable Finance Strategy, and adopted another Delegated Act supplementing article 8 of the Taxonomy to specify content, methodology and presentation of information to be disclosed by Taxonomy-users (*see infra*).[29] The legislative process underpinning the Regulation is still undergoing multiple phases of implementation, creating considerable confusion on its usability.

3. Environmental objectives and environmentally sustainable activities.

To trace the contours of what is environmentally sustainable, article 9 of the Taxonomy Regulation lays out a list of six environmental objectives:

[26] See EUROPEAN COMMISSION, *Sustainable Finance and the EU Taxonomy: Commission takes further steps to channel money towards sustainable activities [press release],* (21 April 2021), available at https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1804. The Climate Delegated Act is available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM:C(2021)2800.
[27] *Ibidem.*
[28] See 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.
[29] See EUROPEAN COMMISSION, *Commission puts forward new strategy to make the EU's financial system more sustainable and proposes new European Bond Green Standard [press release],* (6 July 2021), available at https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3405. The new strategy includes six clusters of policy action: (i) extend the existing sustainable finance toolbox to facilitate access to transition finance; (ii) improve the inclusiveness of small and medium-sized enterprises and consumers, by giving them the right tools and incentives to access transition finance; (iii) enhance the resilience of the economic and financial system to sustainability risks; (iv) increase the contribution of the financial sector to sustainability; (v) ensure the integrity of the EU financial system and monitor its orderly transition to sustainability; (vi) develop international sustainable finance initiatives and standards, and support EU partner countries.

1. climate change mitigation, i.e. the process of holding the increase in the global average temperature to well below 2 ºC and pursuing efforts to limit it to 1.5 ºC above pre-industrial levels;[30]
2. climate change adaptation, i.e. the process of adjustment to actual or expected climate change and its impacts;[31]
3. sustainable use and protection of water and marine resources;[32]
4. transition to a circular economy;[33]
5. pollution preventional and control;[34]
6. protection and restoration of biodiversity and ecosystems.[35]

The list of environmental objectives is comprehensive and ambitious. However, it can be argued that an overarching list such as the above brings heightened implementation costs of compliance and transition risks that could undermine the signalling value of the Taxonomy framework.[36] In any case, there should be uniform criteria for the purpose of determining whether any given economic activity contributes substantially to one of the objectives.[37] This is meant to avoid greenwashing, i.e. "*the practice of gaining an unfair competitive advantage by marketing a product as environmentally friendly, when in fact basic environmental standards have not been met*".[38] In other words, the risk is that an investment could formally qualify as environmentally sustainable, but the economic activity benefitting from that investment would cause harm to

[30] Taxonomy Regulation, art. 9(a) and art. 2(5). These are the Paris Agreement's targets.
[31] *Ibidem,* Art. 9(b) and art. 2(6).
[32] *Ibidem,* Art. 9(c).
[33] *Ibidem*, art. 9(d). According to art. 2(9) circular economy means an economic system whereby the value of products, materials and other resources in the economy is maintained for as long as possible, enhancing their efficient use in production and consumption thereby reducing the environmental impact of their use, minimizing waster and the release of hazardous substances at all stages of their life cycle including through the application of the waster hierarchy.
[34] *Ibidem*, art. 9(e). According to art. 2(12), pollution include the direct or indirect introduction of pollutants into air, water and land as a result of human activity. According to art. 2(10) a pollutant is a substance, vibration, heat, noise, light or other contaminant present in air, water or land which may be harmful to human health or the environment, which may result in damage to material property, or which may impair or interfere with amenities and other legitimate uses of the environment. Specific reference is also made to both marine environment and water environment pollution.
[35] *Ibidem,* art. 9(f). According to art. 2(13) "ecosystem" means a dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit. According to art. 2(15), "biodiversity" means the variability among living organisms arising from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and includes diversity within species, between species and of ecosystems.
[36] EHLERS, GAO, PACKER, *A Taxonomy of Sustainable Finance Taxonomies*, pp. 4-5.
[37] Taxonomy Regulation, recital 34.
[38] *Ibidem*, recital 11.

the environment to a degree that outweighs the investment's contribution to an environmental objective.[39]

In order to properly design such criteria, the life cycle assessment of the products and services of each economic activity should be considered, as well as the environmental impact of the activity itself, with specific consideration to factors such as production, use and end of life.[40] In light of the above, under article 3 an economic activity shall qualify as environmentally sustainable where it meets - cumulatively - the four following conditions:[41]

1. contributes substantially to at least one environmental objective;
2. does not significantly harm any other environmental objective.
3. complies with minimum social safeguards;
4. complies with applicable TSC.

3.1. Substantial contribution to an environmental objective.

With regard to the first condition, the Taxonomy Regulation extensively lists key principles (but no detailed activities) shedding light on what "substantially contributing" to an environmental objective means.[42] The contribution threshold is repeatedly defined as "substantial" to clarify that limited improvements to the current state of environmental performance are not sufficient, especially in view of the colossal investment efforts required to advance the transition of the EU economy towards sustainability.[43] Similarly, activities that can have marginal, albeit positive, incremental improvements on the environment are not deemed Taxonomy-aligned. Substantial contribution can be achieved under three scenarios: (i) when an economic activity has either a low environmental impact or can replace existing higher-impact activities; (ii) when an activity has the potential to reduce adverse climate impact from other existing activities; (iii) when an activity can make a positive environmental

[39] GORTSOS, *The Taxonomy Regulation: More Important than just as an Element of the Capital Markets Union*, EBI Working Paper n. 80/2020, (2020), p. 13, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3750039.
[40] *Ibidem.*
[41] Taxonomy Regulation, art. 3.
[42] See Taxonomy Regulation artt. 10, 11, 12, 13, 14, 15.
[43] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* (2021), p. 6, available at https://ec.europa.eu/info/files/sustainable-finance-taxonomy-faq_en.

contribution.[44] By way of illustration, we shall discuss selected examples. An economic activity substantially contributes to climate change mitigation if it promotes the phasing-out of greenhouse gas emissions in the atmosphere (e.g. emissions from solid fossil fuels) through, *inter alia,* deployment of renewable energies, improvement of energy efficiency or production of clean fuels.[45]

In addition, with regard to the climate change mitigation objective only, the Taxonomy Regulation recognizes so-called "transitional activities". These are activities for which no technologically and economically feasible low-carbon alternatives are yet available. They are eligible to make a substantial contribution if they support the transition to a climate-neutral economy consistent with a pathway to limit the temperature increase to 1.5° C above pre-industrial levels, provided that their greenhouse gas emission levels correspond to best performance in the sector or industry, they do not hamper the development of "greener" alternatives and they do not lead to a lock-in of carbon intensive assets.[46] An economic activity can substantially contribute to climate change adaptation by providing adaptation solutions that alternatively reduce the risk of adverse climate impact on the activity itself or on people, nature and assets.[47] Substantial contribution to the transition to a circular economy may be achieved by using natural resources in production more efficiently, through an increase in durability, reusability and recyclability of products, as well as through waste generation reductions.[48]

Any given substantial contribution to one of the environmental objectives may also be generally achieved by means of so-called "enabling activities", which directly enables other economic activities to make a substantial contribution to one of the objectives (e.g. renewable energy manufacturing), provided that such activities do not lead to a lock-in of assets that undermine long-term environmental goals and have a substantial positive environmental impact on the basis of life-cycle considerations.[49]

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[44] *Ibidem*, p. 5
[45] Taxonomy Regulation, art. 10(1)(a), (b) and (h).
[46] *Ibidem,* art. 10(2). Also see EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 5.
[47] *Ibidem,* art. 11(1)(a) and (b).
[48] *Ibidem,* art. 13(1)(a), (b), (c) and (g).
[49] *Ibidem*, art. 16. Examples of enabling activites include manufacturing of renewable energy technology, information and communications technology for climate change mitigation, and installation of energy efficiency

3.2. Do not significant harm principle.

The second cumulative criteria that an economic activity must meet is the "do not significant harm" (DNSH) principle, the rationale of which is for an activity falling within one of the substantial contribution categories not to qualify as environmentally sustainable if it causes more harm than benefits to an environmental objective (e.g. reduction of fossil fuel emissions comes at the expenses of biodiversity).[50] The Taxonomy Regulation expressly lists how an economic activity may significantly harm each environmental objective, taking into account an holistic approach to the life cycle assessment (i.e. production, use and end of life) of products and services provided by each activity.[51] Namely, an activity shall be considered to significantly harm climate change mitigation if it leads to significant greenhouse gases emissions and to significantly harm climate change adaptation if it increases adverse climate impact on people, nature or assets.[52] Significant harm to sustainable use and protection of water and marine resources is caused when an activity is detrimental to the good environmental status of bodies of waters, whereas inefficiencies in the use of material or natural resources and increases in waste generation lead to significant harm to the circular economy objective.[53] Finally, activities leading to an increase in pollutants emissions and causing detrimental effects to the resilience and conservation status of natural habitats and species may cause harm to the pollution prevention and control objective and to the protection and restoration of biodiversity and ecosystem objective, respectively.[54] TSC for DNSH to climate change mitigation and climate change adaptation were adopted in the

equipment in buildings, see EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 5.

[50] GORTSOS, *The Taxonomy Regulation: More Important than just as an Element of the Capital Markets Union*, p. 18. Note that the "do not significant harm" principle is also mentioned with a slightly different meaning in art. 2(17) of Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (i.e. the Sustainable Finance Disclosure Regulation) and extensively referenced in the EU Commission technical guidance on the application of "do not significant harm" under the Recovery and Resilience Facility, the key instrument of the NextGenerationEU making available EUR 672.5 billion in loans and grants to support investments undertaken by EU Member States following the Covid-19 pandemic, see https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en.

[51] *Ibidem.*

[52] Taxonomy Regulation, art. 17(1)(a) and (b).

[53] *Ibidem*, art. 17(1)(c) and (d).

[54] *Ibidem*, art. 17(1)(e) and (f).

Climate Delegate Act, together with generic DNSH guidance for the other four environmental objectives.[55]

3.3. Minimum social safeguards.

The third aggregate condition for meeting the environmental sustainability requirement is for an economic activity to be compliant with minimum social safeguards as defined in article 18 of the Taxonomy Regulation. In a nutshell, these are procedures implemented by companies to ensure alignment with a set of social and governance standards related to human and labor rights. These procedures need to be aligned with OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights, the declaration on Fundamental Principles and Rights at Work of the International Labor Organization (ILO), the eight fundamental conventions of the ILO and the International Bill of Human Rights, as enshrined in the European Pillar of Social Rights Action Plan.[56]

3.4. Compliance with technical screening criteria.

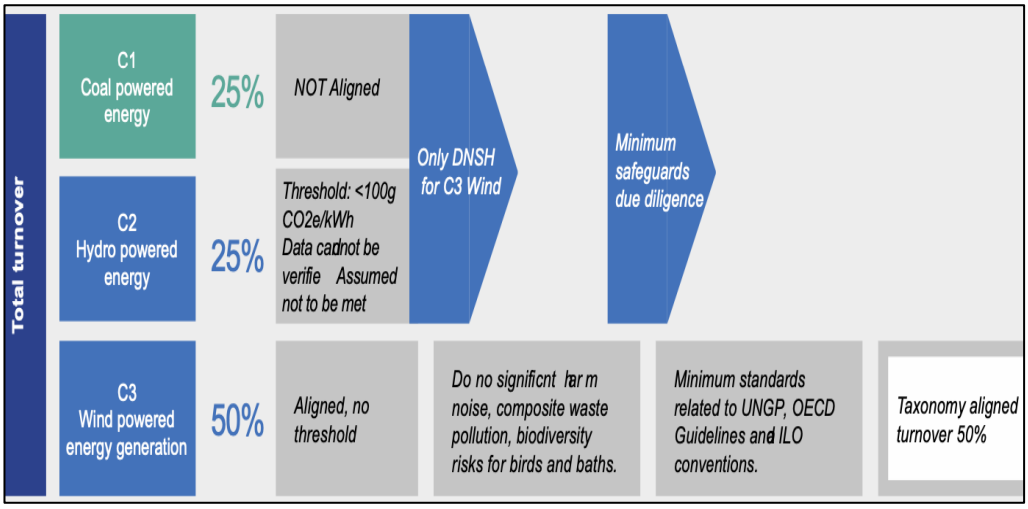
Finally, the fourth cumulative condition is compliance with TSC. Since the EU Taxonomy does not defined types of activities but rather set a conceptual framework, the Commission has so far tried to define in the Climate Delegated Act the actual "green" list of activites that can make a substantial contribution to the two climate-related environmental objectives, i.e. mitigation and adaptation.[57] As a result, the Delegated Act contains a detailed and lengthy list of some 85 eligible activities divided according to their macro-sectors, including forestry, transport, energy, information and communication technology, waste and water, and

[55] See Climate Delegated Act.
[56] *Ibidem*, art. 18(1). The OECD Guidelines for Multinational Enterprises can be accessed at *https://www.oecd.org/corporate/mne/* and the UN Guiding Principles on Business and Human Rights at https://www.unglobalcompact.org/library/2. The European Pillar of Social Rights Action Plan is available at https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/european-pillar-social-rights/european-pillar-social-rights-action-plan_en.
[57] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 2. As argued above, a second Delegated Act to cover the other four environmental objectives will presumably be adopted in 2022.

manufacturing.[58] Given the span of the Delegated Act, the Commission has developed an IT tool, the Taxonomy Compass, to make its content easier to access, enabling users to virtually assess whether an investment in any given activity is Taxonomy-aligned by displaying economic activities broken down by their contribution to each environmental objective.[59]

In light of the above, practically speaking any Taxonomy-user will need to cumulatively assess whether the economic activity conducted is covered by the Taxonomy and its Delegated Acts and for which environmental objective(s), whether the activity meets the substantial contribution qualitative and/or quantitative thresholds embedded in the performance requirements set out in the TSC and finally conduct due diligence to ensure compliance with the DNSH criteria and with minimum social safeguards.[60] Once these steps are completed, it is possible to calculate Taxonomy-alignment and display evidence of the results by means of disclosure indicators, which we shall discuss *infra*. The table below provides a visual example of the process for applying the Taxonomy, based on a fictious company operating in the energy sector that has three revenue streams: coal powered energy, hydro powered energy and wind powered energy generation. In the example, only the wind powered energy generation revenue stream would cumulatively pass the Taxonomy test.

[58] The list of activities substantially contributing to climate change mitigation is enshrined in Annex I to the Climate Delegated Act, whereas the list for climate change adaptation in Annex II, both available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=PI_COM:C(2021)2800&from=EN.
[59] The Taxonomy Compass is available at https://ec.europa.eu/sustainable-finance-taxonomy/.
[60] BONNET, PETER, *Supporting Sustainable Investment with the EU Taxonomy*, IFLR ESG Europe Report, (2021), p. 2, available at https://www.iflr.com/article/b1sq3qs34h5t9f/supporting-sustainable-investment-with-the-eu-taxonomy.



Source: TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Taxonomy: Final Report of the Technical Expert Group on Sustainable Finance*, (2020), p. 44.

If an economic activity does not pass the "environmentally sustainable" assessment under the EU Taxonomy, this does not automatically mean that it is unsustainable.[61] This could happen for a number of reasons. Firstly, the TSC are by definition an evolving regulatory tool and are subject to re-evaluation over time by means of amendments to encompass new activities and to reflect that state of the art of technological development[62]. The Commission shall in fact review the TSC every three years and amend the Delegated Acts accordingly.[63] Secondly, the initial focus of the Taxonomy is on those industries considered to contribute the most to greenhouse gas emissions, whereas entire economic sectors (e.g. aviation) are simply not yet taken into account, either because an assessment has not been yet conducted or because the technology to shift to a more sustainable course simply does not exist at this time.[64] Finally, activities that either only marginally contribute to one of the environmental objectives or that do not meet all four criteria cumulatively are not considered Taxonomy-compliant, even if to all appearances (and often even in substance) might seem beneficial to the environment.

[61] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 5.
[62] EUROPEAN COMMISSION, *Q&A: Taxonomy Climate Delegated Act and Amendments to Delegated Acts on Fiduciary Duties, Investment and Insurance Advice*, (2021), p. 2, available at https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1805.
[63] Taxonomy Regulation, art. 19(5).
[64] HUMPHREYS, *The EU Taxonomy for Sustainable Finance: FAQs for Financial Market Participants*, Bloomberg, (9 March 2020), available at https://www.bloomberg.com/professional/blog/the-eu-taxonomy-for-sustainable-finance-faqs-for-financial-market-participants/.

4. Scope of application.

The Taxonomy Regulation aims to create a unified, cross-sectoral European lexicon to define economic activities that are deemed to foster environmentally sustainable investments. To effectively reach this objective, the Regulation identifies a plethora of Taxonomy users, namely:

1. Members States and the EU itself in their legislative capacity, with the result that any measure adopted to introduce requirements on "green" standards for financial products needs to be Taxonomy-aligned and apply the criteria set out in article 3, in order to prevent Member States from developing their own criteria, thereby discouraging cross-border investments opportunities;[65]
2. financial market participants offering financial products;[66]
3. undertakings required to publish a non-financial statement under the Non-Financial Reporting Directive (NFRD).[67]

At the entity level, the list of financial undertakings that fall within the scope of the law includes credit institutions and investment firms offering portfolio management services, issuers of securities, insurance companies selling insurance-based investment products, manufacturers of pension products and both alternative investment fund managers (AIFM) and management companies of undertakings for collective investment in transferable securities (UCITS).[68] At product level, the meaning of financial products encompasses portfolios managed under MiFID II rules, pension products and pension schemes, pan-European Personal Pension Products (PEPP), insurance-based investment products (IBIP), alternative investment funds (AIF) - including real estate, private equity and venture capital funds - and UCITS, including equity and bond funds and exchange-traded funds (ETFs).

[65] Taxonomy Regulation, art. 1(2)(a).
[66] *Ibidem*, Art. 1(2)(b).
[67] *Ibidem*, Art. 1(2)(c). The NFRD is 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 at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095.
[68] *Ibidem*, Art. 2(1).

Bank lending currently does not fall within the scope of application, but credit institutions are free to apply the Taxonomy to their lending business on a voluntary basis.[69]

In addition, EU companies with more than 500 employees, including listed companies, banks, insurance companies and large public-interest corporates (i.e. NFRD entities), need to integrate the Taxonomy into their reporting analysis framework. In its current form, the NFRD only covers some 11.700 companies, however in April 2021 the Commission has come forward with a proposal to amend the NFRD with a new Corporate Sustainability Reporting Directive (CSRD) which would extend the non-financial reporting levy on virtually 40.000 companies, encompassing every EU large company (i.e. companies that are not legally defined as SMEs) and every undertaking listed on a regulated market, including listed SMEs, with the exception of listed micro-enterprises.[70] Specifically, all companies meeting at least two of the following criteria, i.e. (i) +250 employees, (ii) total balance sheet >EUR 20 million and/or (iii) total turnover >EUR 40 million would be in scope of Taxonomy application. Albeit *de facto* extending the breadth of the EU Taxonomy to more companies in the range of tens of thousands, in our view the CSRD proposal still seems to fail to encompass a large enough stall of Taxonomy-users. SMEs roughly constitute 99% of the EU economic fabric and as a consequence account for the largest GDP contribution (listed SMEs are likely a negatable percentage of the total).[71] This also intuitively means that SMEs should have a greater cumulative environmental footprint than all large corporations combined, although individual environmental impact will be naturally smaller. Quantitative data on SMEs' footprint on the EU environment is very scarce, but a 2010 report suggests that around 60/70% of the environmental impact relates to SMEs, while an estimated

[69] GORTSOS, *The Taxonomy Regulation: More Important than just as an Element of the Capital Markets Union*, p. 10. For an overview of the challenges posed by Taxonomy to core banking activities see EBF, *Testing the Application of the EU Taxonomy to Core Banking Products: High Level Recommendations*, (2021), available at https://www.ebf.eu/wp-content/uploads/2021/01/Testing-the-application-of-the-EU-Taxonomy-to-core-banking-products-EBF-UNEPFI-report-January-2021.pdf.

[70] See EUROPEAN COMMISSION, *Q&A: Corporate Sustainability Reporting Directive Proposal*, (2021), available at https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_1806. An SME is legally defined as an enterprise which employs fewer than 250 persons and which has an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet of EUR 43 million. A micro-enterprise is defined as an enterprise with fewer than 10 employees and an annual turnover of balance sheet below EUR 2 million. Both definitions can be found in the Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32003H0361.

[71] See EUROPEAN COMMISSION, *SME Annual Report 2020/2021*, (2021) available at https://ec.europa.eu/docsroom/documents/46062. Also see https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/reporting-non-financial-information-smes-europe.

40/45% of SMEs operate in sectors that have a high impact on the environment.[72] This flawed scope of application is poorly counterbalanced by the fact that the EU Commission encouraged SMEs, and generally all undertakings not subject to the law, to voluntarily apply the Taxonomy to their investment decisions and to their non-financial reporting (if applicable and if at all possible from a cost-benefit standpoint).

With regard to scope of application in terms of economic sectors, the EU Commission claims to have prioritized the inclusion of activities that are instrumental in reaching the EU's climate objectives and in building climate resilience, with a focus on sectors that mostly contribute to CO2 emissions.[73] However, according to Eurostat, the TSC only have a restricted scope. Albeit encompassing activities from public companies that operate in sectors accountable for almost 80% of direct greenhouse gas emissions in Europe, the TSC are in fact only applicable to around 40% of EU listed companies.[74] In this regard, a study commissioned in 2020 by the German Federal Ministry for the Environment, using the first draft of the Climate Delegated Act as a benchmark, found that among members of three European stock indexes only a small share of their total revenues was estimated to be fully Taxonomy-aligned (2% for EURO STOXX 50, 1% for DAX and a little less than 2% for CAC 40), despite a much larger percentage of their revenues (around 20%) deriving from economic sectors covered by the TSC, exposing the lack of flexibility envisaged in drafting the criteria.[75] The study explains that low alignment is mainly a result of high emission intensity thresholds and failure to meet the DNSH test despite substantial contribution to climate-related environmental objectives. Another recent study conduct by Moody's highlights a considerable gap that exists between eligible and aligned activities across the EU.[76] The study assessed 2346 companies from 27 countries and found that only 970 are conducting Taxonomy-aligned economic activities. Among these companies, the average EU

[72] CONSTANTINOS, SØRENSEN, LARSEN, ALEXOPOULOU ET AL., *SMEs and the environment in the European Union*, PLANET SA and Danish Technological Institute, [published by European Commission], (2010), available at https://op.europa.eu/en/publication-detail/-/publication/aa507ab8-1a2a-4bf1-86de-5a60d14a3977.
[73] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 6.
[74] *Ibidem.* The EU Commission cites these Eurostat estimates in its Q&As.
[75] See ADELPHI, ISS ESG, *European Sustainable Finance Survey 2020*, (2020) available at https://sustainablefinancesurvey.de/survey-2020.
[76] MOODY'S, *EU Taxonomy: The State of Plat in Europe's Largest Economies*, (2022), available at https://assets.website-files.com/5df9172583d7eec04960799a/61e5a5eb7c80a2f69996587f_BX10537_EU%20Taxonomy_infographic_Final_Jan22.pdf?cid=YJZ7YNGSROZ5414.

eligible turnover linked to at least one activity falling under the scope of the Taxonomy Regulation is on average 60.33%.[77] However, the average aligned turnover - i.e. the actual turnover which meets all the four cumulative criteria required by the Taxonomy Regulation - is on average only 17% (and in a major polluting country like Italy is as low as 14.22%).[78] Overall, the average difference between eligibility and alignment across the EU is 36%. The study found that in the majority of cases, the manifest mispositioning between eligibility and alignment reflects the failure to meet the substantial contribution to at least one environmental objectives (70% of the cases), whereas in the remaining cases this can be attributed to the failure to meet one of the other criteria. Another study conducted in 2020 by Morgan Stanley, to estimate Taxonomy-alignment of firms listed in its Sustainable Solutions database, sampled 1300 companies and found that only 94 firms have underlying economic activities that can qualify as Taxonomy compliant with regard to the climate mitigation objective and only 6 engage in activities that would fully qualify for the climate change adaption objective.[79] The Commission itself seems to acknowledge these shortfalls by noting that estimates and early testing of the criteria show an alignment in companies' activities and investment portfolios between 1% and 5%.[80] Similarly, the European Securities and Markets Authority (ESMA) estimates levels of alignment for investment funds to be equally lower, since less than 3% of EU fund portfolio holdings have an estimated Taxonomy-alignment of 5% or higher.[81] Such low levels of alignment will prevent the Taxonomy from becoming an effective capital allocation tool for sustainable financing. Ideally, a higher level of Taxonomy-alignment would allow ESG-oriented investors to convey market signals in secondary markets with the effect of allocating large shares of capital to green asset classes.[82] However, the regulatory toolbox in its current form seems to fall

[77] Average eligibility in selected countries: 52.94% in Germany, 69.87% in France, 58.46% in the Netherlands, 51.59% in Italy, 65.55% in Spain.
[78] Average alignment in selected countries: 17.43% in Germany, 21.98% in France, 30.98% in the Netherlands, 25.93% in Spain.
[79] The study conducted by Morgan Stanley can be accessed at https://www.environmental-finance.com/content/news/100-eu-taxonomy-eligible-firms-identified-by-morgan-stanley.html. These results are also summarized in the appendix of the following paper: BVI, *How Taxonomy-aligned are ESG-Strategy Funds? A Practical Example*, (2021), p. 19, available at https://www.bvi.de/en/services/statistics/research/
[80] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 6.
[81] ESMA, *Final Report – Advice on Article 8 of the Taxonomy Regulation*, (2021), p. 101, available at https://www.esma.europa.eu/press-news/esma-news/esma-proposes-rules-taxonomy-alignment-non-financial-undertakings-and-asset.
[82] EUROSIF, *Eurosif Report 2021*, (2021), pp. 34-35, available at https://www.eurosif.org/news/eurosif-report-2021/.

short from its goals. To this point, it was quite rightfully argued that "*the Taxonomy starts to look more like a goal to strive for rather than a tool ready to be used today*".[83]

In scope environmentally eligible economic activities are labelled according to their macro sectors, based on the EU NACE (Nomenclature des Activités Économiques dans la Communauté Européenne) classification system of industries, spanning from forestry, bioenergy, manufacturing, water management and supply, transport and construction.[84] However, this approach entails that if a certain sector does not have its own NACE industrial classification code it will be excluded altogether from the Taxonomy's scope of application. To best identify economic sectors that contribute to the achievement of environmental objectives, the principle of technological neutrality has been adopted, by which only facts and science-based assumptions should be considered in assessing what is environmentally sustainable, leaving aside biases against any given technology or economic activity.[85]

However, differences in energy supply strategies across EU member states have bound the determination of several economic activities to be a political exercise.[86] Inclusion of nuclear energy and natural gas in the green taxonomy has spurred a ferocious debate among experts and civil society. The overarching labelling exercise underpinning the EU Taxonomy "*has become bogged down in the sensitive politics of energy sovereignty*"[87] and "*the EU has erroneously mixed-up the taxonomy debate with a different conversation on the structure of Europe's future energy mix*".[88] The TEG itself could not reach a conclusive agreement on the DSNH implications of nuclear energy with regard to the other environmental objectives, but a separate review has been

[83] Quoting KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect*, in DOMBRET, KENADJIAN, "Green Banking and Green Central Banking, De Gruyter, (2021), p. 75.
[84] For an overview of NACE rules, see https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Statistical_classification_of_economic_activities_in_the_European_Community_(NACE).
[85] AFME, *State of Play. Status of European Regulatory Developments on Sustainable Finance,* (2020), p. 7, available at https://www.afme.eu/publications/reports/details/State-of-Play-Status-of-European-Regulatory-developments-on-Sustainable-Finance.
[86] See THE ECONOMIST, *The EU's Green Rules Will Do Too Little To Tackle Climate Change*, (8 January 2022), available at https://www.economist.com/leaders/2022/01/08/the-eus-green-rules-will-do-too-little-to-tackle-climate-change.
[87] Quoting KHAN, DOMBEY, *Brussels faces threat of legal challenge over sustainable finance rules,* The Financial Times, (23 January 2022), available at https://www.ft.com/content/48d44c9a-298e-4203-a160-772a032d1c36.
[88] Quoting TAGLIAPIETRA, *The EU's Green Taxonomy is a Missed Opportunity",* Financial Times, (7 February 2022), available at https://www.ft.com/content/00f1f852-856a-4cb4-8429-26f80848a93c.

conducted.[89] Similarly, natural gas has also been conditionally neglected, but in the midst of debates on its role in supporting the climate transition, the Commission has pledged to adopt complementary Delegated Acts to cover activites currently out of scope in order to encompass missing energy sectors.[90] Recently, the EU Commission approved in principle a Taxonomy Complementary Delegated Act covering certain gas and nuclear gas activities.[91] Back in January 2022, the Platform for Sustainable Finance published its much awaited feedback, recommending to avoid the inclusion of nuclear power as it does not meet the DNSH criteria and to include fuel gas only under stringent substantial contribution criteria.[92] Eventually, however, the EU Commission decided to include nuclear and natural gas in the Taxonomy Complementary Delegated Act, angering several opposing Member States.[93] Without delving into the scientific debate pertaining to the pros and cons of these energy supply sources, we simply note that there is great legal uncertainty on whether a commonly accepted green framework will eventually be endorsed by all EU Member States. Luxembourg and Austria have threatened legal action against the Commission following the decision to include gas and nuclear, while Spain has claimed they will implement their own taxonomy for the purposed of issuing green bonds excluding such activities form the classification.[94] Other countries may follow suit. Even if a political compromise should be eventually reached, it is unlikely that this version of the Taxonomy will become a widely agreed market standard across the Union. Chances are that this decision will further hamper the credibility of the Taxonomy due to uncertainties regarding the TSC for economic activities related to natural gas and nuclear power. In addition, another source of fragmentation could derive from the revision of the Common Agricultural Policy and the potential inclusion in the Taxonomy of the much-debated eco-schemes (i.e. instruments to

[89] JOINT RESEARCH CENTRE, *Technical assessment of nuclear energy with respect to the 'do no significant harm' criteria of Regulation (EU) 2020/852 ('Taxonomy Regulation')*, (29 March 2021), available at https://publications.jrc.ec.europa.eu/repository/handle/JRC125953.

[90] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy and How Will it Work in Practice?,* p. 7.

[91] See *https://ec.europa.eu/info/publications/220202-sustainable-finance-taxonomy-complementary-climate-delegated-act_en*.

[92] PLATFORM ON SUSTAINABLE FINANCE, *Response to the Complementary Delegate Act*, (2022), available at https://ec.europa.eu/info/files/220121-sustainable-finance-platform-response-taxonomy-complementary-delegated-act_en.

[93] See https://www.eurosif.org/news/the-inclusion-of-gas-and-nuclear-undermines-the-credibility-of-the-eu-taxonomy/.

[94] The position of Austria and Luxembourg is summarized at https://www.esgtoday.com/eu-member-states-threaten-legal-action-against-inclusion-of-gas-nuclear-in-green-investment-taxonomy/ and the Spanish statement is reported by KHAN, DOMBEY, *Brussels faces threat of legal challenge over sustainable finance rules.*

reward farmers that implement environmental practices in agriculture), should Member States implement different eligibility criteria to the activities being included in such schemes.[95]

The EU Taxonomy scope of application is also flawed under a different angle, in that in its current form the law only proactively defines opportunities for "green" investments, but it is not equipped with a list of corresponding unsustainable activities (a "brown" taxonomy). Excluding explicit legal provisions to regulate "brown" activities negatively affects the space for green finance for those carbon intensive economic sector that are currently irreplaceable, but would benefit the most from a round of investments in greener technological development.[96] The scope of the law also seems to lack enough regulatory flexibility as it only draw the line on a gold-plated definition of what qualifies as "dark green", seemingly forgetting Mark Carney's "50 shades of green" adage.[97] Despite the adoption of a first Delegated Act, clarity on the greenness of transition activities still does not suffice and it can be argued that the framework " *defines what is "green", it does not define what if "greening*".[98] A Taxonomy assessment that can only produce a binary output - green vs non-green, Taxonomy-compliant vs non-compliant - inherently limits the range of investment strategies that can be pursued by an investor with an appetite for sustainable returns.[99]

In light of this, the EU Taxonomy framework is often - and rightfully - criticized for its binary and static nature, since any economy activity that is not explicitly considered "green" is thus at risk of being perceived by the market as unsustainable - even though this is not necessarily the case as we have previously clarified. This in turn could influence capital allocation decisions and discourage many companies from tapping the financial markets for funding, fearing accusations of greenwashing if they do not invest in Taxonomy-aligned products and/or companies. The TEG had already indicated in its final report that a fully realized Taxonomy would also need to include TSC for "brown" activities that cause

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[95] PUTWAIN, *EU Taxonomy's Climate Credentials Under Threat from "Eco-schemes"*, ESG Investor, (26 January 2022), available at https://www.esginvestor.net/potential-for-unsustainable-agricultural-practices/. For an overview of eco-schemes, *see* https://ec.europa.eu/info/news/commission-publishes-list-potential-eco-schemes-2021-jan-14_en.

[96] EHLERS, GAO, PACKER, *A Taxonomy of Sustainable Finance Taxonomies*, p. 4.

[97] Mark Carney's full speech can be found at https://www.imf.org/external/pubs/ft/fandd/2019/12/a-new-sustainable-financial-system-to-stop-climate-change-carney.htm.

[98] Quoting MIJS, *Financing Transition*, in DOMBRET A., KENADJIAN P., "*Green Banking and Green Central Banking,* De Gruyter, (2021), p. 115.

[99] EHLERS, GAO, PACKER, *A Taxonomy of Sustainable Finance Taxonomies*, p. 15.

significant levels of harm to the environmental objectives.[100] Against this backdrop, in March 2022, the Platform on Sustainable Finance has published a report on an Extended Environmental Taxonomy, with the aim of examining the options to extend the EU Taxonomy's scope "beyond green" to include significantly harmful activities (i.e. a "brown taxonomy" although the term used in the report is actually "red", as in activities there are strictly prohibited) and no significant impact activities (i.e. an "amber" taxonomy to encompass those economic activities with an intermediate environmental output).[101] In addition, in February 2022, the Platform published its final report assessing the potential extension of the EU Taxonomy to social objectives, in an effort to provide clear definitions for the "S" in the ESG acronym and to advance the social agenda around the sustainable transition.[102] A common understanding of social objectives would certainly benefit investments in this space, but defining acceptable metrics could pose many challenges, since social issues' perceptions are often defined by cultural and historic factors that may differ across EU jurisdictions.[103] It can also be argued that social standards should be dealt with by social policy and not through financial market regulation.

At the time of writing, these additions are still at an early discussion stage and therefore a legal and economic assessment of the revised "traffic light" taxonomy framework and of the social taxonomy is not yet feasible. We simply note that the Platform is suggesting that the recommendations embedded in both reports could already be implemented in the form of voluntary reporting, but without any further legislative actions taken by Commission at the time of writing the Green Taxonomy is currently unchanged. Besides, it also remains entirely to be seen how the Social Taxonomy report will feed into the EU Commission's strategy to encompass social issues into the European ESG framework.

Overall, for the time being, we note that the EU Green Taxonomy documentation alone is now (at least) some 1200 pages strong, accounting for a regulatory leviathan that entities

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[100] TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Taxonomy: Final Report of the Technical Expert Group on Sustainable Finance*, p. 51.

[101] See 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.

[102] See PLATFORM ON SUSTAINABLE FINANCE, *Report on Social Taxonomy,* (2022), available at https://ec.europa.eu/info/files/280222-sustainable-finance-platform-finance-report-social-taxonomy_en.

[103] AFME & LINKLATERS, *Sustainable Finance in Europe: Regulatory State of Play: Key Impacts for Banks and Capital Markets*, (2021), p. 9, available at https://www.afme.eu/News/Press-Releases/details/AFME-and-Linklaters-publish-guide-to-navigating-sustainable-finance-regulation.

in scope of application will hardly be able to fully comply with and are certainly struggling to fully understand.

5. Financial disclosures.

The EU Taxonomy is not only a "green list" certification system. Besides establishing a product/entity alignment framework, it is also a regulatory reporting tool to enhance transparency, mandating a number of disclosure requirements upon users falling within its scope of application. It can be argued that disclosure obligations are the primary regulatory tool employed by EU legislation to stimulate investment appetite for "green" products.[104] In a nutshell, disclosure aims to influence firms' behaviour by leveraging the power of market discipline, avoid the undersupply of information and create an incentive mechanism that ensures investor protection through the provision of comparable information on the climate footprint of their investments.[105] The disclosure framework envisaged by EU regulation is in principle intended to have behavioral effects on market participants. The economic rationale is to correct information asymmetries and to nudge rational investors into using the superior information available to them to channel capital supply into "green" investments and de-fund unstainable activities.[106] In principle, a green disclosure framework should ultimately create market discipline by penalizing those financial firms that fail to understand market sentiment and thus impose additional costs through higher interest rates or lesser yields on those products whose underlying economic activity is environmentally unstainable.[107]

The EU market-based approach towards disclosure is peculiar as it builds on both available regulatory strategies in this domain: the Sustainable Finance Disclosure Regulation (SFDR) mandates a set of standardized disclosures of granular, unevaluated quantitative and/or qualitative data falling upon the intermediary and its portfolio, whereas the Taxonomy encapsulates a normative, qualitative framework to steer investments with green features

[104] TRÖGER, STEUER, *The Role of Disclosure in Green Finance*, ECGI Working Paper n. 604/2021, (2021), p. 5, available at https://ecgi.global/working-paper/role-disclosure-green-finance.
[105] On this and generally on the law and economics of disclosure requirements see ARMOUR, AWREY, DAVIES, ENRIQUES, GORDON, MAYER, PAYNE, *Principles of Financial Regulation*, Oxford University Press, (2016), pp. 160 ff.
[106] TRÖGER, STEUER, *The Role of Disclosure in Green Finance,* p. 5.
[107] *Ibidem.*

based on a uniform methodology.[108] In order to ensure accountability and avoid harming investor interests, the Taxonomy Regulation requires financial markets participants that make available environmentally sustainable financial products to disclose how and to what extent they align with the Regulation and its implementing TSC.[109] This disclosure ecosystem is largely intertwined with the provisions of the SFDR and supplements the rules on disclosures enshrined therein. The Taxonomy Regulation amended parts of the disclosures in place under the SFDR in an attempt to create an aligned, comprehensive disclosure framework with the purpose of fostering investor protection by offering better data comparability and enhanced transparency.[110] Thus, we shall briefly outline some of the SFDR main features to the extent required to understand the EU Taxonomy provisions.

The SFDR, applicable form March 2021, is an integral part of the EU Commission Sustainable Finance Action Plan and has created a new ESG reporting framework for financial market participants (including credit institutions and investment firms providing portfolio management services, asset managers and insurers offering insurance-based investment products) and financial advisers, both at entity and product level.[111] At entity level, the SFDR requires financial disclosure, either in periodic reports, pre-contractual documentation (e.g. a prospectus), marketing materials or on the company's website depending on the type of service provided, on two set of indicators:[112]

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[108] For an overview and concrete implications of the two regulatory strategies, see TRÖGER, STEUER, *The Role of Disclosure in Green Finance*. The SFDR is Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector (hereinafter "SFDR"), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R2088.

[109] Taxonomy Regulation, recital 18.

[110] See CONLON, O'SHEA, *Challenges for Asset Managers Complying with SFDR and EU Taxonomy Regulations*, IFLR ESG Europe Report, (2021), available at https://www.iflr.com/article/b1ss0lxcbwrdh7/challenges-for-asset-managers-complying-with-sfdr-and-eu-taxonomy-regulations.

[111] For an overview of the SFDR, *see* BUSCH, *Sustainable Finance Disclosure in the EU Financial Sector*, EBI Working Paper Series, (2021), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3650407. Also note that SFDR, art. 2(1) defines financial market participants as insurance companies which make available insurance-based investment products (IBIPs), investment firms and credit institutions providing portfolio management services, manufactures of pension products and asset managers (both UCITS and AIFM). Financial advisors are defined under SFDR, art. 2(11) as insurance intermediaries that provide insurance advice regarding IBIPs, credit institutions and investment firms providing investment advice and asset managers. Finally, financial products are defined under SFDR art. 2(12) as individually managed portfolios, collective investment schemes, IBIPs, pension products and schemes, including PEPPs.

[112] *Ibidem. See* SFDR, artt. 2, 3, 4, 5, 6, 10, 11, 13.

1. the integration of sustainability risks in the investment decision making process (or in the provision of investment advice), i.e. any environmental, social or governance event that could cause an actual or potential material negative impact on the value of the investment;
2. the principal adverse impact (PAI) of investments on sustainability factors, i.e. any environmental, social and employee matter, respect for human rights, anti-corruption and anti-bribery matters.

The SFDR further discerns amongst two sets of product level disclosure, under which entities in scope (mainly asset managers) need to disclose the Taxonomy-alignment of their products. The first set include so-called "light green" financial products, i.e. those products promoting environmental or social characteristics in pre-contractual disclosures.[113] The second one applies to so-called "dark green" financial products, i.e. those that claim to have a sustainable investment as their objective.[114] The shade of green of the latter category is purposely classified as "dark", because the SFDR has incorporated the EU Taxonomy environmentally sustainable economic activities classification in its definition of sustainable investments. The difference between these products lies in their design and marketing. Whereas dark green products have an intended sustainable target (e.g. reduction of CO2 emissions), light green products only encompass to some extent environmental or social characteristics in their investment decision.[115] Consideration of their characteristics and/or their sustainable target should be quantifiable and compared through an index or benchmark if possible.[116] Where sustainability risks or PAI on sustainability factors are not deemed relevant, the disclosure must include an explanation of the assessment that has led to this conclusion on the basis of a "comply or explain" principle.[117]

The EU Taxonomy builds upon the aforementioned dichotomy. Firstly, art. 5 requires dark green financial products claiming to invest in economic activities that contribute to one of the six environmental objective to include a description - either in pre-contractual documentation and/or in periodic reports - of which environmental objective underlies the investment and how and to what extent the investment meets the four cumulative criteria

[113] SFDR, art. 8.
[114] *Ibidem,* art. 9.
[115] See https://www.carnegroup.com/esg-regulatory-update.
[116] *Ibidem.*
[117] SFDR, art. 6(2) and 7(2).

for environmentally sustainable activities.[118] By showing the proportion of the investments in environmentally sustainable activities as a percentage of all investments underlying the financial product, the disclosure shall enable investors to understand the environmental sustainability of the product.[119] The proportion of enabling and transitional activities, if any, also needs to be clearly referenced in the description of the financial product.[120] Secondly, art. 6 outlines disclosure obligations for light green financial products, stating that the rules specified in art. 5 apply *mutatis mutandis.*[121] Art. 6 further clarifies that the information to be disclosed should also include a statement explaining that the DNSH principle only applies to those investments underlying the financial product that take into account the four criteria for environmentally sustainable activites and that a certain portion of the financial product may not take into account such criteria.[122] If a given financial product does not fall within the light green or dark green categories, art. 7 of the EU Taxonomy then still requires disclosure of a statement to this effect, namely that "*the investments underlying this financial product do not take into account the EU criteria for environmentally economic activities*".[123] Practically speaking, the four cumulative conditions test has to be conducted to determine whether a product falls under the dark green or light green category. Compliance with the abovementioned requirements is to be monitored by national competent authorities, which shall be empowered with the necessary supervisory and investigatory tools, including product intervention powers to curb mis-selling practices and to detect misleading disclosures of sustainability-related information.[124]

In October 2021, the European Supervisory Authorities (ESAs) published a final report on Level 2 draft Regulatory Technical Standards (RTS) on the content and presentation of pre-contractual and periodic Taxonomy-related disclosures for products falling under article 5 or article 6 of the Taxonomy Regulation.[125] The aim was to create a "single rulebook" to

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[118] Taxonomy Regulation, art. 5.
[119] *Ibidem.*
[120] *Ibidem.*
[121] *Ibidem,* art. 6.
[122] *Ibidem.*
[123] *Ibidem,* art. 7.
[124] GORTSOS, *The Taxonomy Regulation: More Important than just as an Element of the Capital Markets Union,* p. 27. These powers shall be exercised together with the three European supervisory agencies.
[125] JOINT COMMITTEE OF THE EUROPEAN SUPERVISORY AUTHORITIES, *Final Report on Draft Regulatory Technical Standards with regard to the Content and Presentation of Disclosures Pursuant to Article 8(4), 9(6) and 11(5) of Regulation (EU) 2019/2088*, (2021), available at https://www.esma.europa.eu/press-news/esma-news/esas-propose-new-rules-taxonomy-related-product-disclosures.

merge Taxonomy-related and SFDR product disclosures. The RTS shall become effective as of January 2023, a delay to the original kick off date of July 2022, due to the length and technical details enshrined in the RTS.[126] We consider this is a positive development as this will allow financial firms more time to assess the regulatory risks arising from the new rules. However, the missed deadlines also raise concerns on the effects that the different implementation sequences will have on the financial reporting output. The Taxonomy's climate objectives - and thus Artt. 5 and 6 of the Taxonomy Regulation - became binding as of January 2022. Specifically, disclosure of Taxonomy-alignment in relation to climate change mitigation and adaption for "light" and "dark" green SFDR products (i.e. artt. 8 and 9 SFDR) is a legal requirement as of January 2022, but the templates on how to report are not yet applicable, and complete information on Taxonomy-alignment and SFDR products disclosures will not yet be available in August 2022, the cut-off date when clients' sustainability preferences must be ascertained for the purposes of MiFID II and IDD requirements.[127] This staggered approach seemingly burdens firms with Level 1 compliance without Level 2 clarifications, exposing once again the regulatory mayhem underpinning EU sustainable finance regulation. The product disclosure templates for light and dark green funds will eventually apply as of January 2023 and in January 2024 additional disclosure will be required for the Taxonomy-alignment in relation to the four remaining objectives.[128] The RTS left SFDR-based disclosure rules largely unchanged, but the focus has shifted from the normative categorization between "dark" and "light" green products to a broader question of whether the underlying investment is actually sustainable according to a binding statement on asset allocation, what are its objectives and performance thresholds, and whether the EU Taxonomy criteria are actually being used.[129] Financial products shall incorporate pre-contractual and periodic disclosures in templates to identify the environmental objectives

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126 TRAVERS SMITH, *EU Sustainable Finance Regulatory Technical Standards Delayed Again – To January 2023*, (2021), available at https://www.traverssmith.com/knowledge/knowledge-container/eu-sustainable-finance-regulatory-technical-standards-delayed-again-to-1-january-2023/.

127 For a visual overview of the implementation sequences see the Eurosif's infographic on EU disclosure requirements available at https://www.eurosif.org/news/infographic-on-sustainable-finance-disclosure-requirements/.

128 EUROSIF, *Infographic on Sustainable Finance Disclosure Requirements*, (2021) https://www.eurosif.org/news/infographic-on-sustainable-finance-disclosure-requirements/.

129 ARENDT & MEDERNACH, *The New Taxonomy-Related Disclosures RTS*, (2021), available at https://vimeo.com/640037008

pursued and their alignment with the Taxonomy.[130] Two graphs need to be used to show the Taxonomy-alignment based on a specified calculation methodology and to indicate whether compliance with the criteria of Article 3 of the Taxonomy Regulation will be subject to an assurance or review by a third party.[131] The RTS also include new calculation rules on the treatment of sovereign exposures, requiring to assess Taxonomy-alignment twice, once including and once excluding them.[132] A first key performance indicator (KPI) will be the result of the calculation of the ratio between a weighted average of Taxonomy-aligned investments (the numerator) divided by all investments (the denominator).[133] The second KPI will be calculated in the same way, but excluding all exposures to governments, central banks and supranational issuers, which will be detracted from both the weighted average of Taxonomy-aligned investments in the numerator and from all investments in the denominator.[134] This dual approach was adopted to overcome the criticism that a large exposure to sovereigns would lead to low sustainable KPIs, due to the challenge in measuring the Taxonomy-alignment of sovereign bond portfolios, whose proceeds are generally used to fund general government expenditure, rather than identifiable green projects. However, we maintain that this approach further magnifies the complexity of the disclosure framework and creates an additional layer of reporting burdens and operational costs.

In April 2022, the Commission initially announced the adoption of the RTS – which at the time of writing are under scrutiny by the European Parliament and Council of the European Union. However, shortly after, the Commission also asked the ESAs to review and propose amendments to the very same RTS at the latest by 30 September 2022.. The ESAs, in turn, submitted several queries to the Commission in relation to the interpretation of European law affecting both the SFDR and the Taxonomy Regulation.[135] Importantly, with respect to Taxonomy-related products disclosures, the Commission clarified to the ESAs that financial market participants may only disclose under artt. 5 and 6 of the

130 See JOINT COMMITTEE OF THE EUROPEAN SUPERVISORY AUTHORITIES, *Final Report on Draft Regulatory Technical Standards with regard to the Content and Presentation of Disclosures Pursuant to Article 8(4), 9(6) and 11(5) of Regulation (EU) 2019/2088*. The disclosure templates are available from p. 35 ff
131 *Ibidem.*
132 *Ibidem,* p. 6.
133 *Ibidem.*
134 *Ibidem,* p. 7.
135 For an overview of the queries, see https://www.lexology.com/library/detail.aspx?g=73019b27-dec6-48d8-9d0c-4b13827efd9c.

Taxonomy Regulation if in possession of reliable data, otherwise they would risk infringing EU law, incurring in liability and seeing the contracts voided under national law.[136] As a consequence, should market participants be unable to collect reliable data, they have to disclose zero alignment.[137] Intuitively, we argue that this legislative back-and-forth is seriously hindering the likelihood of timely regulatory compliance, especially since it is occurring after the go-live date of several SFDR and Taxonomy provisions.

In light of all the above, it has been argued that the successful implementation of the EU Taxonomy among market participants will be largely measured by the effectiveness of the financial disclosure obligations, at least for as long as environmentally harmful activites will not be fully banned.[138] In the first instance, we note that the two applicable pieces of legislations are not perfectly aligned and therefore cannot amount to a coherent reporting system. The SFDR has a broader scope of application compared to the (current) EU Taxonomy, as it considers all three dimensions of the ESG spectrum in its sustainable investment definition.[139] The DSHN test under the SFDR includes social objectives as well, not merely environmental ones like the Taxonomy, which at the time of writing lacks an endorsed classification of social factors.[140] This can result in materially different compliance requirements, and, intuitively, disclosure outcomes can substantially differ. In fact, under the RTS, a Taxonomy-aligned investment would not automatically be SFDR compliant, because the financial firm would still need to apply the SFDR-specific DNSH test and conduct the PAI assessment on top of its Taxonomy assessment.[141] It has also been argued that the definitions underpinnings "dark" and "light" green products "*turn out to be borderline tautological*".[142] Regardless of all the regulatory efforts to build a solid legal framework, a disclosure-based system can only work in practice if markets and market participants react

[136] See https://www.linkedin.com/company/eurosif/posts/?feedView=all.
[137] *Ibidem.*
[138] BODELLINI, SINGH, *Sustainability and Finance: Utopian Oxymoron or Achievable Companionship?,* p. 177.
[139] Note that the SFDR, under art. 2(17), includes in its definition of sustainable investment *"[...] an investment in an economic activity that contributes to a social objective, in particular an investment that contributes to tackling inequality or that fosters social cohesion, social integration and labour relations, or an investment in human capital or economically or socially disadvantaged communities, provided that such investments do not significantly harm any of those objectives and that the investee companies follow good governance practices, in particular with respect to sound management structures, employee relations, remuneration of staff and tax compliance"*
[140] BODELLINI, SINGH, *Sustainability and Finance: Utopian Oxymoron or Achievable Companionship?,* p. 183.
[141] LINKLATERS, *EU SFDR: ESAs Publish Revised Draft RTS on Taxonomy Alignment Disclosures,* (2021), available at https://sustainablefutures-linklaters-com.translate.goog/post/102h99b/eu-sfdr-esas-publish-revised-draft-rts-on-taxonomy-alignment-disclosures?_x_tr_sl=en&_x_tr_tl=it&_x_tr_hl=it&_x_tr_pto=op,sc.
[142] TRÖGER, STEUER, *The Role of Disclosure in Green Finance,* p. 47.

positively to its adoption and adapt accordingly.[143] To this point, it has indeed been shown that investors have a robust investment appetite for sustainability, for both financial and non-financial motives.[144] But even if we assume that over time sustainable investments will become mainstream, it is fair to estimate that a meaningful enough, widespread market reaction triggered by disclosures to steer behavioral changes in investment decisions might not happen in due time to meet the climate and environmental targets embedded in the Green Deal or/and in the Paris Agreement, resulting in a *de facto* failure of the financial disclosure-based approach.[145] In parallel, it seems unrealistic to expect that all rational investors would fully surrender all unstainable investments yielding positive weights in their portfolios.[146] After all, there are no inherent, clear economic incentives to go fully "green".[147] Despite an investor possessing superior information, these investments are nevertheless a source of asset diversification and risk adjustment (albeit potentially fetching a higher risk premium).[148] From the foregoing analysis we can assert that the market-based approach for disclosure envisaged in the Taxonomy will be at least partially ineffective, and certainly insufficient, in spurring a transition to a sustainable economic system.

6. Non-financial reporting.

To further enhance transparency standards on the environmental footprint of a company's assets, art. 8 of the Taxonomy Regulation requires undertakings subject to the obligation to publish a non-financial statement pursuant to the NFRD to include in the statement detailed information on how and to what extent their business is associated with environmentally sustainable economic activities, and therefore to what extent the business is Taxonomy-aligned.[149] As previously mentioned, the NFRD requires large public-interest companies with more than 500 employees (e.g. listed companies, banks, insurance companies) to disclose their sustainability performance on an annual basis as part of their

[143] M. BODELLINI, D. SINGH, *Sustainability and Finance: Utopian Oxymoron or Achievable Companionship?,* p. 187.
[144] See KPMG, *The Numbers thar are Changing the World*, (2019), available at https://assets.kpmg/content/dam/kpmg/uk/pdf/2019/07/numbers-that-are-changing-the-world.pdf. Also see TRÖGER, STEUER, *The Role of Disclosure in Green Finance,* pp. 23 ff.
[145] M. BODELLINI, D. SINGH, *Sustainability and Finance: Utopian Oxymoron or Achievable Companionship?,* p. 187.
[146] *Ibidem.*
[147] TRÖGER, STEUER, *The Role of Disclosure in Green Finance,* p. 27.
[148] *Ibidem.*
[149] Taxonomy Regulation, art. 8.

non-financial disclosure obligations, including details on environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters.[150] Entities that are not in scope, such as SMEs and non-EU undertakings, may still choose to disclose under art. 8 on a voluntary basis, possibly to gain broader access to sustainable financing.[151] Once the CSRD proposal will be replace the existing NFRD, art. 8 provisions will apply *mutatis mutandis* to an enlarged plethora of users.

Article 8 leverages to some extent the concept of "double materiality", introduced by the NFRD in the EU reporting framework. This means that companies need to report how sustainability matters affect their business from a financial standpoint, but at the same time how the company itself impacts people, society at large and the environment. The rationale of this approach is that while investors are mostly interested in the former, other stakeholders such as customers, civil society, local communities and governments are rather concerned by the latter. The double materiality approach underpins the design of non-financial disclosures in the Taxonomy and therefore deserves an assessment of its practicality. We recognize the merits of this approach, but we argue that in the current policy environment it seems quite unrealistic to successfully enforce a sustainability reporting standard that can accurately measure both the environmental impact on corporate profitability and at the same time can be a useful metric for society at large. Yet, there is evidence that investors are largely keen on understanding material issues and demand better data quality to draw meaningful comparisons between companies.[152] The issue in this respect is that current ESG metrics often lack consistency across data sets and may produce unreliable outcomes. However, reaching consensus on standard comprehensive corporate ESG reporting system poses many challenges. Each company has a unique business model and making comparisons is a difficult - and sometime pointless - endeavor. The regulatory challenge seems to converge over the very definition of "materiality", because companies need to assess the ESG factors that do matter to their business across their entire value chain before they can accurately disclose their sustainability performance.[153] However, notwithstanding the foregoing, the double

[150] NFDR, art. 1.
[151] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, (2021), p. 3, available at https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en.
[152] MURRAY, *Measuring What Matters: the Scramble to Set Standards for Sustainable Business*, The Financial Times, (14 May 2021), available at https://www.ft.com/content/92915630-c110-4364-86ee-0f6f018cba90.
[153] *Ibidem.*

materiality approach seems to be deep-rooted in EU regulatory approach. The CSRD proposal adopted by the Commission to amend the existing reporting requirements under the NFRD sill leverages the double materiality principle. An alternative approach is enshrined in the concept of "enterprise value", where the focus is merely on the impact of sustainability factors on the financial health of the company and on what is material to the reporting entity.[154] In other words, the latter concept is closer to that of "financial materiality", which is the kind of information most valued by lenders, creditors and all types of investors at large, but with a sustainability related twist. This approach is far from accurate since it may omit information on the company's negative externalities on the environment if they are financially immaterial, but may still attract more consensus due to its similarities with existing financial reporting rules.[155] In light of the recent developments in the world of ESG investing, the double materiality approach seems to be the preferred solution by asset owners, but it is indeed the more challenging alternative, at least for as long as quality, quantity and comparability of sustainability-related data will be hard to gather.[156] In this regard, we argue that a transitional rulebook built around the concept of enterprise value would have been a second-best, albeit more effective, solution to enhance disclosures in the short and medium term, before gradually designing a double materiality framework on top of that.

Article 8 further specifies quantitative indicators in the form of KPIs that non-financial undertakings shall disclose but does not set out explicit performance thresholds for banks, asset managers, investment firms and insurance companies. The EU Commission was tasked to adopt a Delegated Act to specify the content, calculation methodology, and presentation of the indicators to be disclosed, considering the specificities of both financial and non-financial undertakings.[157] In July 2021, a Delegated Act supplementing Article 8 of the Taxonomy Regulation was adopted. The Delegated Act is operational as of January 2022; however its implementation schedule spans across several years, casting doubts on the effectiveness of these disclosures in bolstering corporate environmental performance in the short-medium run due to the complexity of the rules. For a thing, firms are required to report

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154 VAN HOORN, *The EU, the ISSB and the Quest for Better Sustainability Data: Substance and Materiality are More Important than International Alignment*, Responsible Investor (3 December 2021), p. 2, available at https://www.responsible-investor.com/articles/the-eu-the-issb-and-the-quest-for-better-sustainability-data-substance-and-materiality-are-more-important-than-international-alignment#.

155 *Ibidem.*

156 *See* https://www.esginvestor.net/stepping-from-enterprise-value-to-double-materiality/.

157 Taxonomy Regulation, art. 8(2) and (4).

on their Taxonomy compliance before the companies they invest in are required to provide the underlying data sets.[158] At the time of writing, the implementation schedule is confirmed to unfold as follows. As of January 2022, both non-financial companies and financial entities are burdened by a lighter reporting requirement, in that they need to disclose the Taxonomy-eligibility of their business in relation to the 2021 financial year, somehow a lighter burden compared to a full-fledged Taxonomy-alignment.[159] As of January 2023, non-financial undertakings will disclose both eligibility and alignment for the previous calendar year, while financial firms will still only report on eligibility.[160] Starting from January 2024, all types of undertakings shall be subject to full reporting duties.[161]

6.1. KPIs for non-financial undertakings.

Art. 8 requires non-financial undertakings to disclose the proportion of their turnover derived from products or services associated with Taxonomy-aligned economic activities, as well as the proportion of their capital expenditure (CapEx) and the proportion of their operating expenditure (OpEx) related to Taxonomy-aligned assets or processes.[162] In parallel, companies in scope shall provide qualitative information on the way they comply with the disclosures, including explanations on calculation methodologies, composition of indicators, and the nature of eligible and aligned activities.[163] The regulatory aim underpinning such provision is to steer investors' appetite towards environmental sustainability by educating them through the annual publication of KPIs associated with environmentally sustainable activities.[164] Specifically:

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158 THE ECONOMIST, *The EU's Green-Investing "Taxonomy" Could Go Global*, (8 January 2022), available at https://www.economist.com/finance-and-economics/2022/01/08/the-eus-green-investing-taxonomy-could-go-global.

159 See https://www.amf-france.org/en/news-publications/news/taxonomy-article-8-amf-informs-issuers-about-phased-application-reporting-requirements.

160 EUROPEAN COMMISSION, *FAQs: How Should Financial and Non-Financial Undertakings report Taxonomy-eligible Economic Activities and Assets in Accordance with the Taxonomy Regulation Article 8 Disclosures Delegated Act,* (2021), p. 4, available at . https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en#documents.

161 *Ibidem.*

162 Taxonomy Regulation, art. 8(2).

163 See https://www.amf-france.org/en/news-publications/news/taxonomy-article-8-amf-informs-issuers-about-phased-application-reporting-requirements.

164 EUROPEAN COMMISSION, *Staff Working Document Accompanying the Art. 8 Delegated Act*, (July 2021), p. 4, available at https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en

1. The turnover KPI offers a static view of the company's contribution to environmental goals by measuring the net percentage of sales derived from Taxonomy-aligned products and/or services.[165] The turnover KPI shall generally reflect how and to what extent the activities of an undertaking are aligned with the EU Taxonomy by way of aggregating information from the economic activity level to the company level;[166]
2. The CapEx KPI represents the proportion of capital expenditures (i.e. funds used to buy, improve or extend the life of fixed assets) in activities that are either already Taxonomy-aligned or are part of a credible plan to extend or reach alignment and measures the company's forward-looking strategic efforts to transform its business into a climate-resilient one;[167]
3. The OpEx KPI evaluates current activities by measuring the proportion of non-capitalized costs associated with assets' maintenance, such as R&D and day-to-day asset servicing to plants and equipment, including costs either undertaken to ensure the assets' efficient use in relation to environmentally sustainable activites and/or costs incurred under a strategic plan to enhance such use.[168]

In a nutshell, the CapEx and OpEx KPIs reflect the efforts made by a company to enhance environmental performance in its corporate processes and infrastructures with the goal of further increasing corporate transparency. The plan mentioned in both CapEx and OpEx shall be disclosed at the economic activity aggregated level, shall be forward looking and approved by the management body.[169] Practically speaking, these financial variables shall allow non-financial entities to publicly disclose quantitative economic performance indicators in order to translate into digestible data the TSC embedded in Climate Delegated Act (and once it is adopted, the Environmental Delegated Act).[170] The KPIs shall be

[165] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, (2021), p. 8.
[166] ZETZSCHE, ANKER-SØRENSEN, *Regulating Sustainable Finance in the Dark,* EBI Working Paper n. 97/2921, (2021), p. 8, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3871677.
[167] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, (2021), p. 8.
[168] *Ibidem.*
[169] *Ibidem.*
[170] Art. 8 Delegated Act, p. 2.

presented in tabular form using standardized templates provided in Annexes to the Delegated Act to facilitate the comparability of the reporting.

State-of-the-art evidence suggests that these disclosure requirements will pose a significant operational challenge for companies, mainly in terms of commitment of human resources and accounting judgements.[171] A number of issues have been flagged by the industry, casting doubts on the practicability and usability of this corporate disclosure framework. The first set of criticism lies in the lack of clarity and resources for applying the disclosure rulebook. Many corporations perceive a mismatch between their activities and the classifications embedded in the Taxonomy and consider insufficient the guidance provided in the law to assess CapEx and OpEx related to Taxonomy-alignment.[172] Conducting the actual Taxonomy assessment is perceived as burdensome, which it is a paradox for a legal framework whose declared aim was to foster clarity and steer meaningful reporting. Secondly, many companies do not collate the kind of data that needs to be used for calculating Taxonomy alignment in the first place, either because accurate data sets are not available, or because the Green Taxonomy is not applicable to their activities, or even because the data would be ultimately misleading as the Taxonomy categories do not necessarily reflect the reality and complexity of business practices.[173] Finally, compliance with art. 8-based KPIs will require expensive operational adjustments to internal processes in order to adjust corporate data collection protocols (for instance separating revenue streams to reflect the Taxonomy structure).[174] While companies already report extensively, the existing international and/or national frameworks are not designed to capture data at the economic activity or NACE code level as required by the Taxonomy.[175] Thus, reconciliation and allocation of data into the KPIs categories will prove onerous at best, and simply unfeasible in some scenarios. Besides, a survey found that only 25% of companies believe that disclosure of turnover, CapEx and OpEx KPIs will help increasing their revenue or ease their access to green funding facilities.[176] Realistically, a more practical approach would have

[171] BUSINESSEUROPE, *Taxonomy Disclosure Obligations (Art. 8),* (2021), p. 1, available at https://www.businesseurope.eu/search?keyword=taxonomy.
[172] ADELPHI, ISS ESG, *European Sustainable Finance Survey 2020*, p. 5. Also *see* ADELPHI, ISS ESG, *European Sustainable Finance Survey 2021,* (2021), available at https://sustainablefinancesurvey.de/survey-2021.
[173] *Ibidem*, p. 6.
[174] *Ibidem.*
[175] BUSINESSEUROPE, *Taxonomy Disclosure Obligations (Art. 8),* p. 8.
[176] ADELPHI, ISS ESG, *European Sustainable Finance Survey 2020*, p. 7.

been the implementation of fewer, practice-oriented KPIs to allow companies to leverage existing data sources, combined with a legally clear, phased-in approach ensuring compliance with more detailed disclosure obligations at a later time. This once again proves the limited benefit of the EU Taxonomy as a usable regulatory disclosure tool, mostly a result of its binary design and its inadequacy in encompassing a broad-enough percentage of revenue streams associated with Taxonomy-eligible activities.[177]

6.2. KPIs for financial undertakings.

Mindful of the peculiarities characterizing financial undertakings, in 2020 the European Commission sought advice from the European Supervisory Authorities (ESAs) on content and methodology for alternative KPIs considered more appropriate to the financial sector than turnover, CapEx and OpEx.[178] As a result, the quantitative metrics for financial companies shall be computed by reference to the Taxonomy-alignment of their client base.[179] With regard to credit institutions, the European Banking Authority (EBA) came up with a set of indicators that should in principle show the extent to which credit institutions are marshalling their balance sheets towards environmentally friendly investments. Specifically, credit institutions shall disclose a main KPI in the form of a Green Asset Ratio (GAR) to represent the proportion of their Taxonomy-aligned on-balance sheets exposures.[180] While the GAR is intended to evidence alignment at EU level, credit institutions shall make efforts to encompass non-EU exposures - although this is likely to be undermined by a lack of granular data capturing the environmental performance of assets located outside the Union. The GAR measures the proportion of a credit institution's assets financing and/or investing in Taxonomy-aligned activities as a share of total covered assets (including loans and advances, debt securities, equity holdings and repossessed collateral), with the notable exclusion of sovereign exposures, on-demand interbank loans and the trading portfolio.[181]

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[177] See *ibidem*.

[178] See https://www.eba.europa.eu/eba-advises-commission-kpis-transparency-institutions'-environmentally-sustainable-activities.

[179] AFME & LINKLATERS, *Sustainable Finance in Europe: Regulatory State of Play: Key Impacts for Banks and Capital Markets*, p. 30.

[180] These exposures include those to non-financial corporates subject to NFRD, financial corporates, retail exposures, non-financial corporates not subject to NFRD, loans and advances financing public housing and repossessed real estate collateral.

[181] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, p. 8. For the purposes of determining total covered assets, the following accounting categories of

Such ratio does not allow the use of proxies or estimates in the calculation and is to be based on balance sheet exposures according to the prudential consolidation under the Capital Requirements Regulation (CRR).[182] It shall include both the aggregate GAR for covered on-balance sheets assets and a breakdown for the environmental objective pursued (e.g. climate change mitigation and/or adaptation) and by type of counterparty, as well as a subset of transitional and enabling activities.[183] The GAR is calculated as a percentage by dividing a numerator covering loans, advance, debt securities, equities and repossessed collateral financing Taxonomy-aligned activities and a denominator covering the total on-balance sheet covered assets.[184] In simpler terms:

$$\text{GAR} = \frac{Total\ Taxonomy-aligned\ assets}{Total\ on-balance\ sheet\ covered\ assets}\ \%$$

In other words, this ratio is ultimately intended to provide evidence of the Taxonomy-alignment of the credit institution's balance sheet as a function of the level of Taxonomy-aligned assets financed through its lending and investing operations. Rather than a standalone metric, banks will need to disclose both a backward-looking "GAR stock" indicator to provide a snapshot of their assets' Taxonomy-alignment at a fixed reporting date, and a supplementary dynamic, forward-looking, "GAR flow" metric intended to highlight climate-friendly investment trends.[185] In light of the fact that data on new lending activities over time are more likely to be readily available, the GAR flow ratio will seemingly increase faster than the GAR stock metric, at least at the outset.[186] On the other hand, banks' off-balance sheets exposures to Taxonomy-aligned activities shall be disclosed by means of complementary ratios, namely a green ratio for financial guarantees backing loans, advances and other debt instruments towards corporates (FinGuar KPI) and a green ratio for assets under

financial assets should be considered: (i) financial assets at amortized cost; (ii) financial assets at fair value through other comprehensive income; (iii) investments in subsidiaries; (iv) joint ventures and associates; (v) financial assets and non-trading assets designated at fair value through profit or loss; (vi) real estate collaterals obtained by credit institutions by taking possession in exchange for the cancellation of debts.

[182] *Ibidem.*

[183] Annex V to the Art. 8 Delegated Act, pp. 19-20, available at https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en.

[184] *Ibidem.*

[185] See FITCH RATINGS, *Final Green Asset Ration Rules to Improve EU Bank Comparability*, (2021), available at https://www.fitchratings.com/research/banks/final-green-asset-ratio-rules-to-improve-eu-bank-comparability-09-07-2021.

[186] *Ibidem.*

management (AuM KPI).[187] As of January 2026, banks shall also disclose a separate KPI to inform on the Taxonomy compliance of fees and commission-generated income linked to brokerage services associated with Taxonomy-aligned activities (F&C KPI), and a trading book KPI to determine Taxonomy-alignment of the investment policy applicable to their trading portfolio (if the latter plays an important role in the business model of the credit institution), although the trading portfolio is to be excluded from the denominator and coverage of the total GAR.[188]

We have prepared the following simplified example to shed more light on the GAR calculations that a fictious credit institution with three main lines of banking business should perform. In our example, we are assuming EUR 1200 of total assets, EUR 200 of loans to a corporate, EUR 100 of exposures to a central bank and EUR 100 of exposures to a sovereign. This means that the EUR 200 worth of exposures towards the central bank and the sovereign will not be counted towards covered assets and only EUR 1000 will be calculated in the denominator. As a result, the GAR will be computed as follows: (25% x 200) / 1000 = 5%, since only Business Unit A is fully Taxonomy compliant:

	Business Unit A	**Business Unit B**	**Business Unit C**
Revenue	50%	20%	30%
Taxonomy-eligible	Yes	Yes	No
Climate change mitigation	0%	50%	-
Climate change adaptation	50%	0%	-

[187] Annex V to the Art. 8 Delegated Act, p. 28. The FinGuar KPI shall measure the proportion of financial guarantees backing debt instruments financing Taxonomy-aligned undertakings compared to all financial guarantees supporting debt instruments to all undertakings. The AuM KPI shall reflect the proportion of equity and debt instruments under management from undertakings financing Taxonomy-aligned economic activities, compared to total assets under management.

[188] *Ibidem*, pp. 29-30. Specifically, the F&C KPI is the proportion of fees and commissions derived from Taxonomy-aligned products and services other than lending compared to the total fees and commission income from undertakings from products or services other than lending.

DNSH	Yes	No	-
Taxonomy-aligned revenue	25%	0%	0%

The remaining types of financial services firms shall disclose a similar set of KPIs, following the joint advice given by the EBA, ESMA and EIOPA, respectively. Without claiming to be exhaustive, we shall provide an overview of the applicable rules. Firstly, investment firms shall disclose their Taxonomy-alignment performance by way of two main KPIs, one for their core investment services and activities when dealing on own account and one for services and activities when not dealing on own account, mirroring MiFID II categories, although ancillary services are left out of scope.[189] The disclosures shall give an overview of the proportion of assets invested in Taxonomy-aligned activities, relying on the turnover and CapEx KPIs of the underlying investee undertakings to compute their GAR.[190] Secondly, asset managers shall disclose a main KPI in the form of a Green Investment Ratio (GIR), where the numerator consists of the weighted average of the value of investments in Taxonomy-aligned activities of the investee companies, and the denominator consists of the value of all assets under management (both collective and individual portfolio management activities), once again excluding sovereign exposures.[191] One KPI shall be based on the turnover KPI of the investee companies and a second one shall be based on the CapEx KPI, relying on the investee companies to compute the GIR.[192] In addition, asset managers shall include in their disclosure templates a breakdown of the numerator and denominator of the KPI per type of investment, including details for each environmental objective, aggregated details on environmentally sustainable activities and information on transitional and enabling

[189] Annex VII to the Art. 8 Delegated Act, p. 1, available at https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en.
[190] *Ibidem,* p. 2.
[191] Annex III to the Art. 8 Delegated Act, p. 14, available at https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en.
[192] EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, p. 10.

economic activities.[193] Finally, insurance and reinsurance companies shall disclose a similar set of KPIs related to their investments and underwriting activities.[194]

Unhelpfully, under Art. 8-based disclosures, sovereign exposures of financial undertakings - i.e. those to central governments, central banks and supranational issuers - are excluded from the calculations used to compute the ratios. The reason of the exclusion seems to be rooted in the difficulty to come up with an appropriate methodology to assess the environmental performance of such exposures. However, we believe this policy choice negatively impacts both the effectiveness of the KPIs, particularly the GAR and the GIR, and the market for sustainable finance at large. On a practical level, this means that any green and/or sustainable bond issued by a sovereign or supranational issuer will not be computed to the GAR and GIR of credit institutions and asset managers, respectively. This could reduce the comparability of portfolios. As already noted by industry associations, this approach may have unintended consequences, namely discouraging issuance of sovereign/supranational green and sustainable bonds and creating price distortions.[195] Paradoxically, non-financial disclosure rules could potentially undermine the development of the sovereign green bond market. The exclusion creates an incentive for financial companies to accumulate exposure to the corporate green market in an effort to increase Taxonomy-alignment, potentially resulting in an excess of demand for such products that could either lead corporate issuers to behave opportunistically or create unhinged arbitrage opportunities.[196] Estimates suggest that bonds and debt securities issued by sovereigns, central banks and supranational issuers currently account for 25% of the green fixed income market.[197] A lower demand for these products would hence result in a significant halt to sustainable financing flows and more broadly hinder the provision of liquidity in the market.[198] The treatment of sovereign exposures under art. 8 exposes yet another inconsistency in the Taxonomy framework, that is the discrepancy between GAR and GIR

193 Annex III to the Art. 8 Delegated Act, p. 15.
194 For more details on the rules applicable to insurance and reinsurance companies, see Annexes IX and X to the Art. 8 Delegated Act, p. 14, available at https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852/amending-and-supplementary-acts/implementing-and-delegated-acts_en.
195 See ICMA, *Analysis of the Draft Delegated Act Supplementing Article 8 of the Taxonomy Regulation*, p. 2, (2021), available at https://www.icmagroup.org/News/news-in-brief/eu-taxonomy-regulation-article-8-and-unintended-negative-consequences-for-the-development-of-the-green-bond-market/.
196 *Ibidem.*
197 *Ibidem.*
198 *Ibidem.*

calculations and the rules for calculating Taxonomy alignment of financial products under the SFDR and pursuant to artt. 5 and 6 of the Taxonomy Regulation (*see supra*). In fact, the regulatory approach taken at product level is to calculate the percentage of Taxonomy alignment both with and without sovereign exposures, creating a dual set of information to disclose to the market, whereas at entity level these are excluded altogether. We argue there is the need for a consistent methodology both at the entity and product level in order for the disclosure framework to be effective. However, at the time of writing, it seems that the EU Commission has only committed to perform a new assessment to develop appropriate methodology for sovereign and central banks exposures by 30 June 2024, leaving the issue currently unaddressed.

Another notable exclusion concerns derivatives, which are excluded from the calculations that financial companies need to perform to compute the KPIs numerator but are included in the green ratios' denominators. The official reasoning is that derivatives are primarily used to mitigate counterparty risk rather than to finance economic activities.[199] However, this approach might produce an economic backlash in that it could nudge banks to structure climate-unfriendly deals in the form of derivatives to keep them out of their GAR calculations.[200] Ironically enough, a post-crisis piece of financial regulation could have the effect of encouraging financial institutions to add more derivatives to their balance sheet.[201]

We also argue that the GAR and the other green indicators alike will most likely fail to supply investors and depositors with an accurate picture of a financial undertaking's efforts towards a climate-resilient transition. The reason is that several activities undertaken by financial firms simply do not meet the strict compliance criteria envisaged in the Taxonomy Regulation and this will reverberate in the accuracy of the information provided under the green ratios, both in terms of jurisdictions and assets' representations.[202] Another concerns relates to the narrow view offered by these metrics which do not seem to effectively account for transition finance efforts. In addition, most businesses and real estate assets financed by

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199 EUROPEAN COMMISSION, *FAQ: What is the EU Taxonomy Article 8 Delegated Act and How Will It Work in Practice?*, pp. 13-14.
200 MARTINUZZI, *Bankers Face a Dirty New Temptation,* Bloomberg, (7 June 2021), available at https://www.bloomberg.com/opinion/articles/2021-06-07/green-asset-ratio-bankers-face-a-new-temptation-on-dirty-derivatives.
201 *Ibidem.*
202 See FURNESS, *What the Green Asset Ratio Will Mean for Banks*, Capital Monitor, (10 August 2021), available at https://capitalmonitor.ai/institution/banks/what-the-green-asset-ratio-will-mean-for-banks/.

European banks are not yet encompassed by the prescriptive umbrella of EU Taxonomy.[203] EBA's estimates gathered from its pilot EU Taxonomy and climate risk stress test conducted in May 2021 from a sample of 29 banks from ten EU Member States (covering roughly half of the EU banking sector's assets) show an average GAR of 7.9%, a staggering low alignment level.[204] Besides, at this time banks are required to report on data that will need to be disclosed only in 2023.[205] Another fundamental flaw of a standardized, single metric is the structural impossibility to produce a comparable outcome of the greenness of credit institutions which operate with different business models. Intuitively, a European commercial bank whose clients are mostly EU-domiciled corporations subject to the NFRD will have a significantly different ratio compared to a multinational investment bank operating in non-EU markets where the Taxonomy Regulation is not applicable.[206] Non-EU GAR calculations being encouraged on a best effort basis is clearly not enough to overcome this shortcoming. Besides, inclusion of estimates on Taxonomy-alignment for DNSH assessment of non-EU countries exposures is only required as of January 2025.[207] In addition, the fact that these metrics are designed to be computed by reference to the financial firm's client base presupposes a well-functioning underlying corporate disclosure framework, which is currently lacking, and hence poses another significant challenge for banks looking for good-quality data sets to feed into their ratios' calculations. Exposures to SMEs and non-NFRD entities in general are excluded and as a result those financial institutions that provide non-NFRD corporate loans will necessarily have very low green ratios and will be at a disadvantage.[208] Different business models can also lead in regulatory arbitrage opportunities should international banks decide to move non-green assets in jurisdictions with less rigid climate reporting standards, *de facto* "greenwashing" their balance sheet to improve their GAR

[203] See FITCH RATINGS, *Low Green Asset Ratio Estimates for EU Banks are No Surprise*, (2021), available at https://www.fitchratings.com/research/banks/low-green-asset-ratio-estimates-for-eu-banks-are-no-surprise-28-05-2021.
[204] See EUROPEAN BANKING AUTHORITY, *Mapping Climate Risk: Main Findings from the EU-wide Pilot Exercise*, (2021), available at https://www.eba.europa.eu/eba-publishes-results-eu-wide-pilot-exercise-climate-risk.
[205] See FURNESS, *What the Green Asset Ratio Will Mean for Banks.*
[206] *Ibidem.*
[207] EUROPEAN COMMISSION, *FAQs: How Should Financial and Non-Financial Undertakings report Taxonomy-eligible Economic Activities and Assets in Accordance with the Taxonomy Regulation Article 8 Disclosures Delegated Act,* p. 4.
[208] See KNOX, *Disclosures under Taxonomy Regulation Article 8 Delegated Act*, ESG Investor, (8 July 2021), available at https://www.esginvestor.net/disclosures-under-taxonomy-regulation-article-8-delegated-act/. Also *see* https://www.fitchratings.com/research/banks/final-green-asset-ratio-rules-to-improve-eu-bank-comparability-09-07-2021.

sustainability performance.[209] Notwithstanding the foregoing, many investors welcomed the introduction of a set of comparable metrics to assess the greenness of banks and financial firms. It has even been argued that at one point the GAR could feed into the share price of banks.[210] In theory, over time green ratios might have the benefit of easing peer-to-peer comparisons, capturing risk and reward opportunities of a green portfolio and becoming useful Pillar III tools to guide regulators in understanding which sectors suffer the most from sustainable capital shortfalls.[211] To this end, in January 2022 the EBA published its final draft of the Implementing Technical Standards (ITS) on prudential disclosures for ESG risks under the CRR, clarifying expectations on ESG-related Pillar III requirements and introducing a supplementary ratio alongside the GAR, the Banking Book Taxonomy Alignment Ratio (BTAR).[212] The BTAR should be calculated separately to account for the Taxonomy-alignment of banks' exposures towards SMEs and other companies not subject to disclosure obligations under the NFRD, which are currently excluded from the GAR numerator.[213] However, notwithstanding the added value that the BTAR might bring in ascertaining a fuller picture of the Taxonomy-alignment of banks, the GAR will likely remain the key metric leveraged by portfolio managers and bond investors in light of the fact that under the SFDR RTS *(see supra)* financial firms shall consider the share of Taxonomy-aligned activities disclosed under art. 8 (i.e. the GAR).[214]

Overall, the GAR effectiveness as a policy tool will be measured by its role in driving a behavioral change in capital allocation decisions. Ideally, financial institutions with low GAR levels should be put under refinancing pressures when investors and depositors with strong sustainability preferences examine the disclosure documents.[215] But as many other features of the EU Taxonomy, the GAR and the other ratios do not appear to be immediately fit for use. Rather, we argue they could become effective only when (and if) financial firms will be able to rely on more complete data sets, which in turn will only materialize when mandatory

[209] See FURNESS, *What the Green Asset Ratio Will Mean for Banks.*
[210] *Ibidem.*
[211] *Ibidem.*
[212] See https://www.eba.europa.eu/eba-publishes-binding-standards-pillar-3-disclosures-esg-risks.
[213] SCHULLER, BROSENS, KOSONEN, *Bank Pulse: Perfecting ESG Disclosures Via the Banking Book Taxonomy Alignment Ratio,* ING Economic and Financial Analysis, (2022), available at https://think.ing.com/articles/bank-pulse-btar-to-supplement-gar-as-taxonomy-alignment-measure/.
[214] *Ibidem.*
[215] See LPA, *Green Asset Ratio – It's "All Go" for Launch!,* (2021), available at https://www.l-p-a.com/news/green-asset-ratio-its-all-go-for-launch.

and widespread corporate climate disclosures pave their way into EU regulation. Another compelling question - which we do not feel can be answered yet - is whether in the long run the GAR and the other ratios will remain mere disclosure tools or whether they will have an impact on the determination of the capital adequacy of financial assets, becoming integral part of risk management assessment.[216] In our view, we should also not exclude the possibility that these metrics will simply fail to deliver any material results due to the operational challenges faced in producing meaningful calculations. In any case, even if green ratios will eventually succeed as regulatory tools, it is hard to predict whether this will happen in due time to meet the stringent climate targets enshrined in the Green Deal

7. Green bonds.

In our view, one of the pivotal test to determine whether the EU Taxonomy Regulation is truly fit for purpose is to assess whether it can effectively be applied to reorient private financial resources in driving the transition from "brown" economic activities to (various shades of) green investments. Due to the increasingly important role played across the world by the allocative function of the debt market in financing green assets, we shall assess whether the provisions embedded in the EU Taxonomy can be translated in a widely usable set of labelling rules that can foster the issuance of green bonds, *"the most popular form of eco-friendly debt"*.[217] In sum, a green bond is one issued by a corporation, a sovereign entity or a financial institution whose use of proceeds is targeted at financing or re-financing environmental objectives, entailing a process for evaluating the "greenness" of the proceeds and including rules on proceeds management and reporting.[218] Addressing the EU green bond framework in full would exceed the scope of our analysis, therefore in the following we shall only conduct a critical assessment of those provisions directly linked to Taxonomy.[219] On a preliminary note, it is important to clarify that in light of its "green" dimension, the EU

[216] *Ibidem.*
[217] Quoting THE ECONOMIST, *What is the Point of Green Bonds?*, (19 September 2020), available at https://www.economist.com/finance-and-economics/2020/09/19/what-is-the-point-of-green-bonds.
[218] ICMA, *Green Bond Principles*, (2021), available at https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf.
[219] For more details on EU green bonds and specifically on the disclosure requirements for issuers and registration and supervision of external reviewers, see MARAGOPOULOS, *Towards a European Green Bond: a Commission's Proposal to Promote Sustainable Finance*, EBI Working Paper Series (2021), pp. 18 ff., available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3933766.

Taxonomy - in its present form - is only apt to influence the design of the green bonds' asset class, but not social or sustainability bonds, due to the lack of an established Social Taxonomy framework at the time of writing.[220] This substantially narrows the usefulness of the Taxonomy in the first place, because failing to encompass sustainable and sustainability-linked bonds leaves aside a major growth area in the debt finance space. According to AFME, in 2021 the year-on-year growth of sustainable bonds was 65%, amounting to EUR 42 billion in 2021 compared to EUR 25 billion in 2020.[221] Similarly, sustainability-linked bonds experienced a rapid growth in the range of 7.2x the amount issued in 2020 and together with transition bond issuance contributed to the EU market with a quarterly supply of EUR 116 billion per quarter during 2021.[222] Social bonds' issuance also experienced a notable increase form EUR 94.3 billion in 2020 to EUR 124 billion in 2021.[223] Effectively, the Taxonomy will not shape these asset classes and will thus provide little help in transitioning to a low-carbon economy.

The Green Deal explicitly mentions the need to employ green bonds as a mean to nudge capital allocation towards sustainable large-scale investments and to close the investment gap by reorienting private financial flows into projects aligned with the EU's climate and environmental objectives.[224] To this end, in July 2021 the EU Commission proposed the adoption of a European Green Bonds Regulation as the legal basis for a European Green

[220] Social bonds are any type of bond used to raise funds to finance or re-finance new or existing projects that achieve positive social benefits. Social projects include - but are not limited to – promotion of employment generation, food security, socioeconomic advancements, affordable housing and access to essential services such as health and education. See ICMA, *The Social Bond Principles*, (2021), available at https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/. On the other hand, sustainability bonds are bonds where the proceeds are used to finance or re-finance a combination of both green and social projects. See ICMA, *The Sustainability Bond Guidelines*, (2021), available at https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg/. In the interests of providing fuller information, another category is sustainability-linked bonds, forward-looking performance-based instruments where the issuer commits to future improvements in sustainability outcomes within a predefined timeframe. See ICMA, *The Sustainability-Linked Bond Principles*, (2020), available at https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/.

[221] AFME, *ESG Finance Report. Q4 2021 and 2021 Full Year,* (2022), available at https://www.afme.eu/Publications/Data-Research/Details/-ESG-Finance-Q4-and-Full-Year-2021---European-Sustainable-Finance.

[222] *Ibidem.*

[223] *Ibidem.*

[224] See EUROPEAN COMMISSION, *The European Green Deal,* p. 17.

Bond Standard (EUGBS).[225] This announcement followed the HLEG's recommendation to include such standard in the EU regulatory framework, which was later embedded in the EU Commission's Action Plan on Financing Sustainable Growth and was assessed in detail by the TEG.[226]. The EU is already a global leader in the market for green bonds. According to the EU Commission, in 2020, when worldwide issuances of green bonds accounted for almost EUR 250 billion, 51% stemmed from either the EU private sector or the EU official sector and 49% of the total were denominated in euros.[227] An analysis conducted by the Climate Bonds Initiative also places Europe as the leading region for green finance issuances, estimating an European total issuance of over USD 800 billion of green debt since market inception in 2007, with France and Germany leading this market.[228] A recent study conducted by PwC expects green bonds to make up for 50% of the EU issuance by 2026, projecting total issuance volumes around EUR 1.4 to 1.6 trillion.[229] However, the Commission notes that green bonds still only represent a 2.6% of the total EU bond issuance.[230] The barriers to the development of a sufficiently deep green bond market seems to be rooted in the lack of uniform, accepted labels and definitions of green assets and uncertainty with regard to transparency safeguards and the role of external reviewers, which ultimately lead to greenwashing concerns among investors.[231] We note that another obstacle may be inherently connected with the lack of pure green projects to invest in, as some elements of the broader social or sustainability dimensions are often present in environmental projects.

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[225] Proposal for a Regulation of the European Parliament and of the Council on European green bonds COM/2021/391 final (hereinafter "EUGBR Regulation Proposal"), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0391.

[226] See HIGH-LEVEL EXPERT GROUP ON SUSTAINABLE FINANCE, *Financing a Sustainable European Economy. Final Report,* and EUROPEAN COMMISSION, *Action Plan: Financing Sustainable Growth.* Also *see* TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Report on EU Green Bond Standard,* (2019), available at https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-green-bond-standard_en.pdf, and TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Usability Guide. EU Green Bond Standard*, (2020), available at https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/200309-sustainable-finance-teg-green-bond-standard-usability-guide_en.pdf.

[227] EUROPEAN COMMISSION, *Q&A: European Green Bonds Regulation*, (2021), p. 2, available at https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/european-green-bond-standard_en.

[228] The Climate Bonds Initiative report can be accessed at https://www.climatebonds.net/2022/01/500bn-green-issuance-2021-social-and-sustainable-acceleration-annual-green-1tn-sight-market.

[229] See https://www.investmentweek.co.uk/news/4049096/pwc-green-bonds-eu-issuance-2026.

[230] EUROPEAN COMMISSION, *Q&A: European Green Bonds Regulation*, p. 2.

[231] MARAGOPOULOS, *Towards a European Green Bond: a Commission's Proposal to Promote Sustainable Finance*, p. 13.

In an effort to encourage private market participants to issue and invest more in these instruments, the TEG initially proposed the creation of a "*voluntary, non-legislative EUGBS to enhance the effectiveness, transparency, comparability and credibility*" of this niche market.[232] Intuitively, the policy goal here is to incentive green bonds' issuance by betting on the lower cost of debt incurred by those who endeavor to make their business more sustainable.[233] The initial proposal set forward by the EU Commission in July 2021 largely followed the TEG's recommendation and the EUGBS was articulated as follows. Firstly, use of proceeds under the EUGBS must be fully and exclusively allocated to projects aligned with the EU Taxonomy by the time the bond matures.[234] Secondly, the standard shall be voluntary and open to all EU and non-EU issuers, including corporations, sovereigns, financial institutions, and issuers of covered bonds, asset-backed securities and project bonds.[235] This means that issuers are free to choose alignment with the EUGBS - and thus automatically with the EU Taxonomy - or elect other voluntary market-based frameworks, such as the Green Bond Principles (GBP) sponsored by the International Capital Markets Association or the Climate Bonds Standard (CBS) launched by the Climate Bonds Initiative.[236] Thirdly, to ensure transparency on the allocation of proceeds, issuers shall be subject to mandatory disclosure obligations, the content and quality of which shall be evaluated and confirmed by an external reviewer accredited and supervised by the ESMA.[237] Finally, bonds issued under the EUGBS may fund projects up to 10 years of duration.[238] Should the applicable Taxonomy's TSC change during the life of a bond, the issuer may take advantage of a grandfathering provision to rely on pre-existing criteria for five more years.[239] The EU Commission declared aim was to create a "gold standard" for green bonds to protect investors from greenwashing and to

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[232] See TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Summary of the TEG Report on EU Green Bond Standard*, (2019), p. 1, available at https://ec.europa.eu/info/files/190618-sustainable-finance-teg-report-overview-green-bond-standard_en.

[233] SCHÜTZE, STEDE, *EU Sustainable Finance Taxonomy – What Is Its Role on the Road Towards Climate Neutrality*, Deutsches Institut für Wirtschaftsforschung Discussion Papers, (2020), p. 4, available at https://www.diw.de/documents/publikationen/73/diw_01.c.806768.de/dp1923.pdf.

[234] TECHNICAL EXPERT GROUP ON SUSTAINABLE FINANCE, *Summary of the TEG Report on EU Green Bond Standard*, p. 1.

[235] EUROPEAN COMMISSION, *Q&A: European Green Bonds Regulation*, p. 1.

[236] For an overview of the Green Bond Principles, *see* https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf and for an overview of the Climate Bond Standard *see* https://www.climatebonds.net/standard.

[237] EUROPEAN COMMISSION, *Q&A: European Green Bonds Regulation*, p. 1.

[238] *Ibidem.*

[239] *Ibidem.*

allow both private and public issuers to rely on the definitions of green investments embedded in the EU Taxonomy and its TSC.

Notably, the key feature of the EUGBS is its underlying linkage to the EU Taxonomy labelling. The proceeds of a European green bond should be fully allocated to either fixed assets, CapEx, OpEx or financial assets (debt or equity) related to economic activities that meet the EU Taxonomy requirements or will meet them within a pre-defined period set out in a Taxonomy-alignment plan, which shall not exceed five years from bond issuance (but may be extended up to ten years if justified by specific features of the economic activity financed through the green bond).[240] Such provision entails that use of proceeds can either target directly projects aligned with the TSC or be indirectly employed to financing environmentally sustainable activities through financial assets that invest in such activities. Sovereign issuers may be exempted from demonstrating project-level alignment for certain public expenditure programs (e.g. tax relief schemes or subsidies programs), provided they can show evidence that the funding program is Taxonomy-aligned in its overarching terms and conditions.[241] In this context, we note a first potential obstacle impacting bonds that finance climate transition activities. While the EU Commission claims that European green bonds are well suited for supporting climate transition in light of the multi-year Taxonomy-alignment target, we find that little flexibility has been granted for those sectors not yet covered by the Taxonomy and we also note that the TSC's limited scope might curb the number of economic activities that can claim eligibility for financing.[242] The other distinct feature of the EUGBS is embedded in the provisions regulating transparency and external review. Specifically, private bond issuers will need to publish a "green bond factsheet" to summarize their funding goals, which shall be subject to a pre-issuance review performed by a registered external reviewer to assess EUGBS-alignment.[243] During the life of the bond, issuers are required to publish yearly reports to demonstrate Taxonomy-alignment of the

[240] EUGBR Regulation Proposal, art. 4 and art. 6.
[241] EUROPEAN COMMISSION, *Q&A: European Green Bonds Regulation*, p. 4.
[242] AFME, *Response to Consultation on Establishment of EU Green Bond Standard*, (2020), p. 1, available at https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME%20response%20to%20the%20EU%20GBS%20consultation_02102020_Final%20Response.pdf.
[243] *Ibidem*, p. 2 and EUGBR Regulation Proposal, art. 8. Fr more details on the practical interaction between the EUGBS and the Prospectus Regulation *see* https://www.whitecase.com/publications/alert/new-eu-green-bond-regulation-fortune-green-or-fortress-green.

proceeds.[244] Once the bond matures, issuers will also need to obtain a post issuance review to confirm proceeds have indeed financed Taxonomy-compliant activities and have been fully allocated before maturity.[245]

The voluntary nature of the EUGBS label - and its capability to coexist with non-regulatory market standards - was generally welcomed by the industry. This was key as most of the bonds issued under the ICMA's GBP and the Climate Bond Initiative's CBS would in any case fail the Taxonomy test.[246] However, in December 2021 the Rapporteur of the European Green Bonds Regulation at the European Parliament released draft amendments, most notably that the EUGBS designation shall become mandatory for all green bonds between 2025 and 2028.[247] This announcement followed an opinion issued by the European Central Bank which suggested that in order to become the prime green bond standard in the EU the EUGBS should become mandatory.[248] A mandatory framework would contradict the recommendations put forward by the TEG and other industry stakeholders, casting serious doubts on the credibility and usability of such regulatory-mandated label. This legislative shift reflects the EU Commission's long-term plan to regulate the whole spectrum of EU sustainable debt finance (including social and sustainability bonds). However, this would effectively mean that all green bond issuers - including non-EU issuers - would necessarily need to become Taxonomy-compliant when issuing in the EU and would not be able to elect other existing market standards.[249] Under the previous proposal, non-EU issuers were in any case originally bounded by the mandatory Taxonomy-alignment in the use of proceeds but could at least rely on the option of tapping the EU capital markets under existing market-based labels.

It is our opinion that a mandatory EUGBS would likely result unappealing to non-EU market actors. It might cause market retraction and force the migration of many international

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[244] *Ibidem*.
[245] *Ibidem* and EUGBR Regulation Proposal, art. 9.
[246] See VAN STEENIS, *Climate Change Won't be Stopped by 593 Pages on Green Tape*.
[247] The proposed amendments can be accessed here: https://www.europarl.europa.eu/doceo/document/ECON-PR-700638_EN.html.
[248] Opinion of the European Central Bank of 5 November 2021 on a proposal for a regulation on European green bonds (CON/2021/30) 2022/C 27/04, available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021AB0030&home=ecb
[249] See ICMA, *Analysis of the Amendments to the EuGB Regulation Proposed by the Rapporteur of the EU Parliament*, (2022), available at https://www.icmagroup.org/assets/ICMA-update-to-its-analysis-of-the-EuGB-Regulation-05012022.pdf.

issuers to other markets with less stringent requirements, *de facto* undermining the growth of the EU as a leading player in the international green capital market and turning the EU bond market into a "*green fortress*".[250] It has also been argued that replacing the current framework with a mandatory one would likely result in "light green" issuers - i.e. those not aligned with the ambitious requirements set forth under a mandatory EUGBS - disengaging from the bond market altogether due to the lack of inclusivity criteria, which currently seems to reward issuers in more developed EU Member States, reinforcing the North-South divide that characterizes the EU economy.[251] Many issuers might even decide to revert to traditional funding sources, including bank finance, in order to avoid bearing the additional costs and liability resulting from a mandatory EUGBS designation, undermining provision of liquidity and the scale of the continental bond market.[252] This implies that a Taxonomy-based EUGBS would not have the desired policy effect to become a "gold standard" that can compete with - and eventually replace - the GBP and CBS in the EU. Under the draft proposal, we contend that issuance is disincentivized to the point that it would be reasonable to assume that eventually the EUGBS would only be used by those European issuers that are driven by non-financial and/or reputational motives, such as showing environmental commitment to their shareholders or to the regulatory authority.[253] This outcome is *per se* not entirely different from the typical reasons for which issuers choose green bonds, since the existence of a pricing advantage (a "greenium") is still debated in the literature, although there is evidence that some investors are willing to pay a premium for green bonds.[254] In this respect, we note the example of the German "green twin bond", which is a government issued side-by-side green and conventional bond.[255] The green bond is a separate bond with a smaller issuer volume than the conventional one to ensure the "green part" does not negatively influence

[250] *Ibidem,* p. 3 and quoting GARGARO, WÖCKENER, FEDOSOVA, HAUMAN, *The New EU Green Bond Regulation – Fortune Green or Fortress Green?*, White & Case Alert, (2021), available at https://www.whitecase.com/publications/alert/new-eu-green-bond-regulation-fortune-green-or-fortress-green.

[251] HENIDE, *The European Central Bank's Vision for Green Bond Standards Forgoes Inclusivity*, LSE Business Review, (2022), available at https://blogs.lse.ac.uk/businessreview/2022/01/17/the-european-central-banks-vision-for-green-bond-standards-forgoes-inclusivity/.

[252] ICMA, *Analysis of the Amendments to the EuGB Regulation Proposed by the Rapporteur of the EU Parliament*, p. 3.

[253] *Ibidem*, p. 1.

[254] MARAGOPOULOS, *Towards a European Green Bond: a Commission's Proposal to Promote Sustainable Finance*, p. 11.

[255] On the Bund's "green twins" see https://www.deutsche-finanzagentur.de/en/institutional-investors/federal-securities/green-federal-securities/ and also see https://www.marketsmedia.com/germany-introduces-concept-of-green-twin-bond/.

the overall liquidity of the *Bund* market.[256] What is peculiar is that the green tranches trade at a premium to the conventional bond.[257] Finally, we contend that mandatory Taxonomy-alignment would have unintended effects on the ECB's monetary policy and its efforts "to green" corporate asset purchases. In fact, the Eurosystem is already purchasing green bonds under the corporate sector purchase program, the asset-backed securities purchase program and the public sector purchase program, as well as accepting green bonds as collateral in credit operations.[258] However, a mandatory EUGBS would put those market participants that engage in economic activities falling outside the scope of the Taxonomy - that is, for legitimate reasons - at a critical disadvantage, hampering their liquidity supply and creating market disruptions.

The proposed mandatory nature of the EUGBS is not however the only regulatory flaw that might hinder widespread adoption of the standard and disincentivize issuance. The fact that the allocation of proceeds is anchored to the Taxonomy's TSC implies that issuers cannot rely on legal certainty considerations. As discussed in other parts of this paper, TSC are meant to constantly change and adapt to scientific developments and eventually should encompass all industries where a sustainable enhancement is feasible. Amendments to the TSC during the life of a bond would force issuers to re-allocate use of proceeds before maturity if the economic activity financed under the EUGBS suddenly loses Taxonomy-alignment status. Failure to do so would result in the loss of the EUBGS designation. The five-year grandfathering provision only partially mitigates this risk. For instance, it remains unclear what should happen during the grace period to the reallocation of proceeds if they have already been fully or partially invested in fixed assets or in OpEx and CapEx.[259] And if an issuer should indeed reallocate these funds to new eligible proceeds, it is not clear what would happen if there are no eligible allocation options under the amended TSC and whether the reallocation would impact only the outstanding amount or the full proceeds.[260] It seems

256 *Ibidem.*
257 *Ibidem.*
258 Opinion of the European Central Bank of 5 November 2021 on a proposal for a regulation on European green bonds (CON/2021/30) 2022/C 27/04.
259 GARGARO, WÖCKENER, FEDOSOVA, HAUMAN, *The New EU Green Bond Regulation – Fortune Green or Fortress Green?*.
260 ICMA, *Analysis of the Draft EuGB Regulation,* (2021), p. 4, available at https://www.icmagroup.org/assets/documents/Sustainable-finance/Responses/ICMA-analysis-of-the-EuGB-Regulation-080721.pdf.

also unrealistic to expect that an issuer would be able to reallocate the full proceeds in due course, in a manner that is consistent with the original investment program outlined in the Taxonomy-alignment plan.[261] Under the Rapporteur's draft amendments, failure to achieve annual intermediate Taxonomy-alignment targets twice would lead to the loss of the EUGBS designation and national competent authorities would be empowered to prohibit issuance of any sustainable bond for up to ten years as a sanctioning measure.[262] The potential reputational risk arising from this approach would constitute a further deterrent to issuance.[263] On the one hand, issuers might face unbudgeted costs to adapt or reallocate the proceeds, which would in turn create a negative impact on the secondary market pricing of the green bond and its liquidity during the grace period.[264] This poses quite a challenge from a practical standpoint and further increases the uncertainty that already surrounds many of the Taxonomy's provisions. On the other hand, investors might also become hesitant to finance green bonds, fearing that a change in the existing TSC might lead what was before a green investment in their portfolio to lose Taxonomy-eligibility. The ECB itself acknowledged that this provision might impair the completeness of markets if issuers decide to postpone issuance under EUGBS if changes to the TSC are expected, leading to a structural preference for green bonds with shorter maturities and hence less useful in funding long-term sustainable activities.[265] Practically speaking, an investor should therefore constantly monitor that the EUGBS designation is still valid and if this is not the case be forced to liquidate the position, with the consequence of devaluating the outstanding bond.[266] While performing due diligence needs to be part of the investment decision-making process of any investor, we find unreasonable that what is supposed to be a new standard of transparency to avoid greenwashing would require this level of constant scrutiny.

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[261] *Ibidem.*
[262] ICMA, *Analysis of the Amendments to the EuGB Regulation Proposed by the Rapporteur of the EU Parliament,* p. 3.
[263] *Ibidem.*
[264] GARGARO, WÖCKENER, FEDOSOVA, HAUMAN, *The New EU Green Bond Regulation – Fortune Green or Fortress Green?*.
[265] Opinion of the European Central Bank of 5 November 2021 on a proposal for a regulation on European green bonds (CON/2021/30) 2022/C 27/04.
[266] MARAGOPOULOS, *Towards a European Green Bond: a Commission's Proposal to Promote Sustainable Finance*, p. 17.

8. Asset management.

Besides green bonds, in our view the funds and asset management industries represent the other notable case study to assess impact and application challenges. This industry is arguably the biggest driver of private sustainable development and demand for sustainable funds in the EU is skyrocketing. Bloomberg estimates the global market for ESG assets at around $40 trillion, expecting it to jump up to $50 trillion by 2025.[267] According to AFME's and Lipper's estimates, funds with an ESG mandate (including ETFs and mutual funds) totaled more than $6 trillion as of Q4 2021.[268] The same estimates classify ESG equity funds the largest fund assets class (over 50%), ahead of fixed income funds which represent around 22% of the total.[269] Therefore, the importance of clear guidance on ESG performance in this industry is particularly significant in light of the market size. Just recently, Morningstar stripped off the sustainable tag from around 1200 funds representing more than $1 trillion in assets, citing light or ambiguous ESG language and the lack of integration of ESG factors in the investment process in a determinative way as the root causes for such correction.[270] Against this backdrop, asset managers (including EU AIFMs, non-EU AIFMs marketing in the EU under national private placement regimes, UCITS and their EU management companies, as well as MiFID investment firms that provide portfolio management) are required to use the EU Taxonomy for the purposes of integrating labelling standards into their investment selection process, enhancing reporting to asset owners and marketing new funds' portfolios as Taxonomy-aligned (and artt. 8 or 9 SFDR-compliant).[271]

We have extensively discussed the challenges that European asset managers face in terms of enhanced product disclosure obligations in a previous section of this paper, and we have also noted a discrepancy between SFDR disclosures at the investment level and the broader Taxonomy compliance assessment. In this respect, we simply refer to what we have already highlighted. Without claiming to be exhaustive, there are further issues. For instance, as TSC evolve and reflect state-of-the-start scientific evidence they will likely impose higher incremental thresholds for economic activities to qualify as environmentally sustainable,

[267] SCHWARTZKOPFF, KISHAN, *ESG Funds Managing $1 Trillion Are Stripped of Sustainable Tag by Morningstar*, Bloomberg, (10 February 2022), available at https://www.bloomberg.com/news/articles/2022-02-10/funds-managing-1-trillion-stripped-of-esg-tag-by-morningstar.
[268] See AFME, *ESG Finance Report. Q4 2021 and 2021 Full Year.*
[269] *Ibidem.*
[270] SCHWARTZKOPFF, KISHAN, *ESG Funds Managing $1 Trillion Are Stripped of Sustainable Tag by Morningstar.*
[271] UHRYNUK, BURDULIA, *How Asset Managers Are Using New Sustainability Taxonomies.*

negatively impacting those funds that invest in non-liquid assets such as real estate.[272] It also remains unclear how asset managers should monitor compliance with thresholds and requirements for assets located outside the EU, and whether after making an investment they should look for equivalent attestation regimes in non-EU jurisdictions or should maybe instead bear the costs of an expert assessment to monitor compliance with the Taxonomy-alignment of the assets.[273] Another paramount challenge has to do with the lack of accurate and comparable data to assess product alignment of the funds. This is a particularly pressing issue for asset managers who suffer mostly from information asymmetries as they tend to rely more heavily on third party data compared to other financial firms.[274] The impact of the EU Taxonomy on asset managers also offers some interesting food for thought on the role that the latter might play in shaping sustainable corporate governance through shareholder activism. It has been argued that - should the Taxonomy be effective in curbing greenwashing and cater to the preferences of sustainability-minded asset owners - institutional investors such as large index funds and actively managed mutual funds might eventually play a role in pressing boards to purse a more environmentally sustainable course of action, although there is currently not enough data to empirically prove this theoretical insight.[275]

We have previously noted that funds in the EU tend to have significantly low levels of alignment with the Taxonomy and its TSC (3% of EU fund portfolio holdings have an estimated Taxonomy-alignment of 5% or higher according to ESMA estimates). However, drawing on existing research in this field, we seek to demonstrate that such apparent negative outcome is in fact a result of the poor design of the rules, rather than an inherent negative signal of the low sustainability performance in the funds industry. The BVI (German Investment Funds Association) conducted a study to assess the Taxonomy compliance of a global equity portfolio based on the FTSE World Total Return Index and aligned with Art.

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[272] J. VERGAUWEN, *EU Taxonomy – Challenges for Asset Managers*, Linklaters, (2021), available at https://sustainablefutures.linklaters.com/post/102h7j7/eu-taxonomy-challenges-for-asset-managers.
[273] *Ibidem.*
[274] ICMA, *Ensuring the Usability of the EU Taxonomy*, (2022), p. 15, available at https://www.icmagroup.org/News/news-in-brief/icma-makes-proposals-to-address-usability-concerns-over-the-eu-taxonomy/.
[275] See PACCES, *Will the EU Taxonomy Regulation Foster a Sustainable Corporate Governance?*, ECGI Working Paper n. 611/2021, (2021), available at https://ecgi.global/working-paper/will-eu-taxonomy-regulation-foster-sustainable-corporate-governance.

8 of the SFDR (*see supra*), i.e. one that promotes environmental and social characteristics.[276] In order to construct an ESG-strategy portfolio, the BVI implemented a best-in-class approach (i.e. selecting companies with the best sustainability performance across the industry) and used a value investing strategy, before eventually rebalancing sector and stock weights to create a final, diversified portfolio.[277] The BVI has found that despite having assembled a sustainable portfolio, the Taxonomy-alignment is only 3.93% of the portfolio weight and the share of the portfolio's eligible revenues under the Taxonomy is only 8.4%.[278] The poor levels of alignment seems to be mostly due to the current Taxonomy's legal design, which encompasses a narrow definition of sustainable economic activities and insufficient industry sector coverage.[279] The fact that the Taxonomy Regulation also lacks a social framework accounts for some aspects of the low alignment.[280] To this point, it also remains unclear how compliance with minimum social safeguards may be achieved, and whether is it sufficient for fund managers to ensure the investee has in place appropriate policies or they should instead monitor the application of such policies.[281] In addition, the BVI highlighted another potential cause in the lack of granular disclosures at the company level, which creates data issues with regard to CapEx and OpEx, transition activities and exposures to SMEs and more broadly to non-EU companies.[282] The latter is a particularly concerning factor for the asset management industry, as many funds hold investments in non-EU companies but are still required to report on their overall alignment in the EU.[283] Similarly, other studies have exposed the misalignment between "green" investment funds and the stringent criteria embedded in the EU Taxonomy. According to a study conducted by MSCI, 85% of green bonds by market value would be eligible for inclusion in the Bloomberg Barclays MSCI Green Bond Index, largely used by investment funds, but only 17% of the market value would qualify as Taxonomy-compliant.[284] MSCI also estimated that only 9% of the constituents of the MSCI All Countries World Investable Market Index - covering a set of

[276] For the details and methodology behind the full study see BVI, *How Taxonomy-aligned are ESG-Strategy Funds? A Practical Example*, (2021), available at https://www.bvi.de/en/services/statistics/research/.
[277] *Ibidem*, p. 6.
[278] *Ibidem*, p. 12.
[279] *Ibidem*, p. 15.
[280] *Ibidem.*
[281] VERGAUWEN, *EU Taxonomy – Challenges for Asset Managers.*
[282] BVI, *How Taxonomy-aligned are ESG-Strategy Funds? A Practical Example*, p. 15.
[283] *Ibidem,* p. 16.
[284] *Ibidem,* p. 19.. The MSCI study can be accessed at https://www.environmental-finance.com/content/news/just-17-of-bonds-in-msci-green-bond-index-would-satisfy-eu-gbs-criteria.html.

global equity investment opportunities - have Taxonomy-eligible equity.[285] Another study conducted by Novethic analyzed European green equity funds and found that the average share of Taxonomy-eligible activities in the portfolios is 29%.[286] The latter result might even be overestimated since the research was conducted by only completing the first of the four cumulative criteria required to assess Taxonomy-compliance, suggesting that the actual share of fully eligible green activities would be far lower.[287] According to a study conducted by the Principles for Responsible Investment (PRI) Taxonomy Practitioners Group on a sample of 40 funds across several asset classes, including listed equity, fixed income and real estate funds, full Taxonomy compliance would be impaired by the impossibility to assess the DNSH criteria.[288] This is the result of the unavailability of granular data at project level.[289] While the issue could be overcome by using proxies and assumptions, we note however that they do not necessarily produce exact results and might not be sufficient to determine an acceptable level of Taxonomy alignment.[290]

Funds' compliance with the Taxonomy can also be tested against the current legislative efforts aimed at creating an EU Ecolabel Regulation for retail financial products, which would be applicable to retail investment funds as well.[291] This seal-type label is being developed at portfolio level and intends to create an overall green threshold for each retail financial product in scope.[292] The label is awarded if the Taxonomy-alignment of turnover and/or CapEx of the investee companies included in the portfolio meets minimum "greenness" thresholds based on weighted average calculations (e.g. 70% for UCITS bond funds and 50% for qualifying equity funds).[293] However, once again, these thresholds might be too demanding to be practically used. The Directorate-General for Financial Stability, Financial Services and Capital Markets Union (FISMA) at the European Commission conducted a study on a sample of 101 green equity funds to assess Taxonomy-alignment of

[285] *Ibidem.*
[286] *Ibidem,* p. 20. The Novethic study can be accessed at https://www.novethic.com/sustainable-finance-trends/detail/european-green-funds-taxonomy-challenge-october-2020.html.
[287] *Ibidem.*
[288] ICMA, *Ensuring the Usability of the EU Taxonomy*, pp. 11-12. The study is cited by ICMA, and the full PRI assessment is available at https://www.unpri.org/download?ac=11662.
[289] *Ibidem.*
[290] *Ibidem.*
[291] For an overview of the documents published in the context of the EU Ecolabel development, see https://susproc.jrc.ec.europa.eu/product-bureau//product-groups/432/documents.
[292] TRÖGER, STEUER, *The Role of Disclosure in Green Finance,* p. 18.
[293] ICMA, *Ensuring the Usability of the EU Taxonomy*, p. 9.

the funds' constituents' revenues, only taking into consideration the climate mitigation objective.[294] The results show that more than 50% of the turnover is not Taxonomy-eligible and that only 3 funds in the sample would meet the current Ecolabel criteria.[295]

9. A New "Brussels Effect"?

The European Union has never hidden its ambitions to become a global standard-setter in the realm of sustainable finance and thus, implicitly, for its EU Green Taxonomy to serve as the "gold standard" labelling scheme for climate-friendly investments across the world. The precedent of the EU General Data Protection Regulation (GDPR) - which has become the *de facto* international standard for data privacy rules - led many to bet on yet another "Brussels Effect", this time with regards to the EU sustainable finance rules.[296] The expression was coined by law professor Anu Bradford to describe the EU's unilateral power to regulate global markets when market forces voluntarily decide to apply European standards in their global operations.[297] Increasing demand for global sustainable investments, combined with the lack of ambitious climate policy action in the United States seemed to pave the way for another European success story.[298] However, we argue that the universal adoption of the EU Taxonomy as a "gold standard" label is hampered by its tight alignment with the EU's own climate goal and by its complex legal design, which make it unfit to go global and ultimately characterize the Taxonomy as "*a very European project*".[299]

For one thing, economic activities in scope are tailored to the achievement of European climate goals, which means that they are not necessarily aligned with universal climate resilience principles.[300] This curbs the cross-jurisdictional interoperability of the European Taxonomy across non-EU firms and global markets. The EU's 2030 and 2050 sustainability goals and the 55% reduction of greenhouse gas emissions target are extremely ambitious and

294 BVI, *How Taxonomy-aligned are ESG-Strategy Funds? A Practical Example*, p. 19. The study conducted by DG-FISMA can be accessed at https://op.europa.eu/en/publication-detail/-/publication/91cc2c0b-ba78-11ea-811c-01aa75ed71a1/language-en/format-PDF/source-137198287.
295 *Ibidem.*
296 KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect*, p. 73.
297 See BRADFORD, *The Brussels Effect: How the European Union Rules the World*, Oxford University Press (2020).
298 KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect,* p. 73.
299 Quoting *ibidem,* p. 84
300 *Ibidem,* p. 74.

will be unlikely achieved by the rest of the world.[301] Besides, this time the circumstances do not meet Anu Bradford's criteria for success. When it came to the GDPR, the parties subject to the rules could not escape them, mostly because they were consumers resident in the EU. The adoption of the GDPR as global standard largely depended on the decisions of a handful of actors - the platform operators - for whom it was easier to operate globally on a single set of standards. However, in the case of the EU Taxonomy the issuers and other entities in scope are not all necessarily forced to remain legally based in the EU and the investors may also be largely located outside the Union. This means that coercing firms to comply with European environmental rules as a condition of preserving their EU licenses - or at least their access to European green finance - might eventually not prove successful. In addition, whereas under the GDPR the decision to use EU rules as a benchmark relied solely on the data platforms, the Taxonomy assessment requires financial firms to obtain data from companies on their non-EU operations, which they might be hesitant to collect in light of the complex nature of the reporting under the Taxonomy and the SFDR.[302]

EU rules also underpin the design of the whole Taxonomy structure. While the SFDR might be somehow familiar to many international issuers and financial advisors selling or advising on financial products marketed in the EU, the whole spectrum of environmental legislation, the NACE codes and the NFRD (and, once adopted, the CSRD) are inherently EU-centric. This conflicts with the internationalization efforts and cross-border operations of many European firms and poses a comparability hurdle for non-EU companies who would struggle to accomplish their reporting duties to European investors.[303] An implicit recognition by the EU Commission itself of the territorial limits of the Taxonomy can be inferred from the efforts undertaken to develop a Common Ground Taxonomy in cooperation with China under the umbrella of the International Platform on Sustainable Finance.[304] The fact that the EU Taxonomy is not transposable internationally has also been widely acknowledged across the industry. As an example, the ICMA pointed out that TSC for certain economic activities are not universally understood (e.g. energy performance

[301] *Ibidem.*
[302] *Ibidem,* p. 88.
[303] ICMA, *Ensuring the Usability of the EU Taxonomy,* p. 14.
[304] KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect*, p. 86. For more details on the Common Ground Taxonomy see https://www.regulationtomorrow.com/eu/ipsf-common-ground-taxonomy-package/.

certificates and environmentally performing installations in buildings), but the TSC do not envisage any flexibility in the form of country-specific thresholds nor they recognize any form of third country equivalence criteria.[305] Some of the Taxonomy requirements for activities to qualify as sustainable, including the "minimum social safeguard" requirement, reference international standards and agreements that have not yet been adopted by many jurisdictions (e.g. the ILO Declaration on Fundamental Principles and Rights at Work).[306] Ironically, the fact that TSC sometimes make reference to EU Directives (e.g. the NFRD and the CSRD) - rather than directly applicable Regulations - could even lead to a fragmented application of the Taxonomy assessment within the European Union itself, depending on how each Member State has elected to transpose the Directives into its local or regional rules.[307]

Another obstacle to the cross-jurisdictional transplant of the EU Taxonomy lies in the propagation of competing alternative frameworks. To be fair, most of the existing labels, green standards and private initiatives that have a sustainable objective are far from being truly useful and/or effective in spurring a real green transition. Nevertheless, we note that their mere existence could undermine all Taxonomy's claims of universality, since non-EU market actors could simply choose to elect less stringent, more user-friendly requirements and still claim ESG compliance to some extent. In this regard, the bureaucratic outlook and binary nature of the EU Green Taxonomy could be intentionally cited to justify a lack of efforts to align with the Taxonomy's ambitious targets in those jurisdictions where the Regulation is not a binding legal standard. A notable example of a competing system are the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) established under the aegis of the Financial Stability Board, which seem to come the closest to claiming global reach.[308] Just as the Taxonomy Regulation established reporting obligations, the TCFD was created to improve and increase reporting of climate-related financial information both from a qualitative and a quantitative angle, building on four thematic areas that represent core elements of how organizations operate (governance,

[305] ICMA, *Ensuring the Usability of the EU Taxonomy,* p. 14.
[306] *Ibidem.*
[307] *Ibidem.*
[308] KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect*, p. 79.

strategy, risk management and metrics/targets).[309] Research on the application of the TCFD highlighted a negligible increase in sustainability disclosures and even where the increase was spotted it was mostly qualitative in nature, leaving the much more needed quantitative information demand largely unaddressed.[310] However, the TCFD rulebook could nevertheless serve as a useful canon of minimum best practices on which to build a more ambitious ESG framework. Countries like the United Kingdom and Switzerland have chosen to pursue exactly this plan of action.[311] Competing frameworks have also been adopted or are in the process of being developed in the form of full-fledged local taxonomies. As an example, in China, several ministries and the People's Bank of China published in 2019 a Green Industry Guidance Catalogue to enumerate a list of industries considered environmentally sustainable for the purposes of setting ESG standards in the financial sector and also to guide the implementation of macroeconomic policies and tax incentives.[312] The Catalogue was further used as a basis to enact a revised Green Bond Endorsed Project Catalogue in 2021 in order to create a uniform national green bond standard.[313] Other environmental taxonomies have been implemented by the official sector in Malaysia, Singapore, Bangladesh and South Africa, while Australia, Canada and Colombia are working on similar projects.[314] These initiatives are not always as sophisticated as the EU Taxonomy and differ to a large extent from the European approach. Dissimilarities include, *inter alia,* the scope of application, a "project-based" approach rather than an activity-based classification of economic activities, the inclusion of social elements or the lack of some form of industrial classification codes.[315] Besides official sector initiatives, market-based taxonomies have also been developed. These include for instance the Climate Bonds Initiative Taxonomy and a

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309 For more details on the TCFD framework see https://www.fsb-tcfd.org/ and also see TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES, *Recommendations of the Task Force on Climate-related Financial Disclosures. Final Report*, (2017), available at https://www.fsb-tcfd.org/publications/.

310 KENADJIAN, *What We Meant by "The Chance for Europe": Betting on the Brussels Effect*, p. 79. The piece of research cited is a paper written in 2021 by Bingler, Kraus and Leippold titled "Cheap Talk and Cherry-Picking: What ClimateBert has to Say on Corporate Climate Risk Disclosures" and can be accessed at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3796152.

311 See the Swiss announcement at https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-84741.html and the UK statement at https://www.gov.uk/government/news/uk-to-enshrine-mandatory-climate-disclosures-for-largest-companies-in-law.

312 ICMA, *Overview and Recommendations for Sustainable Finance Taxonomies*, pp. 10-11. (2021), available at https://www.icmagroup.org/News/news-in-brief/icma-publishes-overview-of-taxonomies-for-sustainable-finance-and-recommends-success-criteria/.

313 *Ibidem.*

314 *Ibidem,* p. 13.

315 *Ibidem,* pp. 15-16.

taxonomy conceived by the International Organization for Standardization (ISO) to evaluate the environmental performance of green debt instruments.[316] This proliferation of taxonomies might lead us into thinking that after all a labelling scheme is a regulatory solution worth pursuing, but certainly undermines the likelihood of global adoption of the European initiative.

The "Brussels effect" could also be curbed by the inherent design of the EU Taxonomy. Whereas the EU has chosen to pair disclosure rules under the SFDR and/or NFRD with a normative approach in the form of a taxonomy-based label promulgated by the official sector, other legal systems might simply take a different stance on how to best address the demand for environmental standards. For example, historically market-friendly jurisdictions could decide to vest market forces with the responsibility of channeling sustainable guidance as long as they meet certain minimum requirements. These jurisdictions are therefore likely to endorse corporate disclosures as their leading sustainable finance regulatory strategy. Notable examples include once again the United Kingdom and the likely future course of policy action in the United States. Incidentally, these jurisdictions are also the ones that, together with the EU, harbor the largest quota of ESG assets and account for the greatest financing power. This intuitively means that any aspirations of the Taxonomy to go global need to come to terms with the fact that it might not be influential enough to capture English and American assets. In any case, while the EU Taxonomy might be used as a source of inspiration to fill an existing regulatory gap in some jurisdictions, it is not obvious in our view that every country is interested in adopting a green taxonomy in the first place. The preference for policy solutions that privilege a regulatory reporting framework over a product and/or entity alignment label might in fact be bolstered by the recent creation of the International Sustainability Standards Board (ISSB) - a new standard-setter establish by the International Financial Reporting Standards Foundation (IFRS).[317] The ISSB was created to put an end to the seemingly endless quest for better sustainability data and to create a coordinated, coherent and globally acclaimed sustainability reporting framework.[318] Should the ISSB succeed in promoting a global baseline of sustainability-related disclosure standards,

[316] *Ibidem,* pp. 19-23.
[317] See https://www.ifrs.org/groups/international-sustainability-standards-board/.
[318] VAN HOORN, *The EU, the ISSB and the Quest for Better Sustainability Data: Substance and Materiality are More Important than International Alignment,* p. 2.

international market actors could find themselves equally satisfied with the quality, granularity and comparability of the information supplied by companies compliant with international standards. This would reduce the need to look at the European experience to export a best-in-class approach. After all, the effectiveness of any taxonomy is ultimately dependent on the investors' interest in the assets that are labelled according to the taxonomy's criteria.[319] Markets could simply decide to lobby governments and financial supervisors into adopting corporate disclosure standards as their main regulatory strategy. Besides, the lukewarm reception initially received by the current version of the EU taxonomy among market participants might as well be the catalyst factor that will convince other jurisdictions to look elsewhere for policy solutions and choose mandatory reporting, rather than adopting a flawed, Eurocentric Regulation.

10. Conclusion.

In light of the arguments discussed throughout this paper, it is our opinion that the EU Green Taxonomy is not fit for purpose. While there will be further ground for discussion should the Taxonomy be revised in the future, at the time of writing we cannot avoid conveying a negative assessment of the rules. Below, we shall endeavor to summarize the main findings leading to this conclusion.

For a thing, we argued that Taxonomy's scope of application is too narrow, as it fails to encompass a large enough stall of EU listed companies and completely neglects the environmental footprint of SMEs, which account for the largest percentage of the economic activity in the EU. A small share of EU companies' and asset managers' activities are estimated to be fully Taxonomy-aligned. The inclusion of gas and nuclear energy raises the political question on whether a commonly accepted green labelling framework will eventually be endorsed by all EU Member States. Besides, the Taxonomy only proactively defines opportunities for "green" investments, but it is not equipped with a list of corresponding unsustainable activities. The scope of the law also lacks enough regulatory flexibility as it only draws the line on a gold-plated definition of "dark green". Clarification on the greenness of transition activities still does not suffice and a Taxonomy assessment that can only produce

[319] EHLERS, GAO, PACKER, *A Taxonomy of Sustainable Finance Taxonomies*, p. 3.

a binary output (green *vs* non-green, compliant *vs* non-compliant) inherently limits the range of investment strategies that can be pursued by investors. As a result, the binary and static nature of the framework seriously curbs the space for transition finance. In addition, the scope of application is also flawed in that it fails to regulate social elements.

Secondly, the disclosure framework embedded in the Taxonomy, both at the financial the non-financial reporting level, is inconsistently structured, too complex and unfit to appropriately capture and communicate relevant information. The fact that KPIs are designed to be computed by reference to the firm's client base presupposes accurate data sets that are either yet unavailable or operationally challenging to gather. On the one hand, the missed deadlines of the financial disclosures' rules implementation have burdened firms with immediate Taxonomy compliance without Level 2 clarifications. There are also misalignments between the SFDR and the Taxonomy's financial reporting requirements that can lead to materially different compliance assessments. As a results, disclosure outcomes can substantially differ. On the other hand, corporations required to disclose under art. 8 perceive a mismatch between their activities and the classifications embedded in the Taxonomy and will thus need expensive operational adjustments in order to calibrate corporate data collection protocols. Similar issues have arisen in relation to the business activities of credit institutions, asset managers and investment firms and the Taxonomy's criteria. In addition, the different treatment of sovereign exposures under the SFDR and the GAR could reduce the comparability of portfolios and curb the market for sovereign green bonds. The GAR is structurally unfit to compare the Taxonomy-alignment of financial firms operating in non-EU markets and with different business models, potentially leading to regulatory arbitrage. Overall, the financial and non-financial disclosure tools do not appear to be immediately fit for use and the KPIs may fail to deliver any material results due to the operational challenges faced in producing the calculations.

Finally, the flawed legal and regulatory design of the EU Taxonomy ends up negatively affecting its application to the market for green bonds and the investment funds industry. Failing to encompass sustainable and sustainability-linked bonds, the major growth area for transition finance, substantially narrows the usefulness of the Taxonomy in the first place. The proposal to anchor a mandatory EUGBS to the EU Taxonomy might seriously hinder widespread adoption of the standard and disincentivize green bonds' issuance in the EU. In

addition, investments funds report staggering low levels of Taxonomy-alignment for their portfolios and products, not because of low sustainability performance, but rather because they are seemingly unable to understand and operationalize the stringent criteria embedded in the Taxonomy. We also noted how EU Taxonomy is unlikely to become a global environmental standard as it won't benefit from a new "Brussels effect", due to the absence of those circumstances that could lead to such result, the establishment of competing policy frameworks and the inherently European features of the Taxonomy.