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Green Financial Products in the EU – a critical review of the status quo

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Green Financial Products in the EU – a critical review of the status quo

Volker Brühl¹

Abstract:

The financial sector plays an important role in financing the green transformation of the European economy. A critical assessment of the current regulatory framework for sustainable finance in Europe leads to ambiguous results. Although the level of transparency on ESG aspects of financial products has been significantly improved, it is questionable whether the complex, mainly disclosure-oriented architecture is sufficient to mobilise more private capital into sustainable investments. It should be discussed whether a minimum Taxonomy ratio or Green Asset Ratio has to be fulfilled to market a financial product as “green”. Furthermore, because of the high complexity of the regulation, it could be helpful for the understanding of private investors to establish a simplified green rating, based on the Taxonomy ratio, to facilitate the selection of green financial products.

JEL Classification: G10, G20

1. Introduction

The Paris Agreement’s long-term temperature goal is to keep the rise in mean global temperature to well below 2 °C – preferably 1.5 °C – above pre-industrial levels. The IPCC (Intergovernmental Panel on Climate Change) has emphasised that global human-caused emissions of carbon dioxide (CO₂) would have to reach ‘net zero’ by 2050 in order to achieve this goal. At the same time, a significant reduction of other GHG emissions such as methane (CH₄) and nitrogen oxides (NO_x) has to take place (IPCC 2018). The European Climate Law, which entered into force on 29 July 2021 (Regulation (EU) 2021/1119), has been an important milestone on the road to implementation of the European Green Deal (EGD, European Commission 2019). The agreement sets a 55% net GHG emission reduction target compared to 1990 for 2030 and an EU-wide climate neutrality target for 2050. As such, a fundamental transformation of basically all economic sectors is necessary, requiring enormous investment volumes. For instance, it is estimated that investments into the global energy system have to be increased from currently around USD 2 trillion per year, or 2.5% of global GDP, to USD 5 trillion (4.5% of GDP) by 2030 and remain at this level until at least 2050 (IEA 2021, Lenaerts et al 2021).

Against this background, the EU has developed a Sustainable Finance Strategy to enhance transparency for investors, avoid greenwashing and channel more capital into sustainable economic activities. The European Action Plan on Sustainable Finance (European Commission 2018), which has been refined through the Renewed Sustainable Finance Strategy (European Commission 2021a) and amended by the “April package” in 2021 (European Commission 2021b), provides the regulatory framework for sustainable finance in the EU.

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This paper provides an overview and a deep dive into selected elements of the already established and the planned elements of the regulatory framework for sustainable finance in Europe. A detailed analysis is conducted on the conditions financial products have to meet to be classified as sustainable as well as the disclosure and reporting requirements of such products. There is a critical assessment of the question as to whether or not the current framework can be expected to mobilise more private capital into sustainable investments. It is suggested that a simplified “green rating” based on the taxonomy ratio could be useful in terms of avoiding greenwashing and fostering additional capital flows into green investments. It should be noted that the focus of this paper is on green finance, as the Taxonomy Regulation covers only the environmental dimension of sustainability and a social taxonomy is still in the development phase (Platform on Sustainable Finance 2022). Moreover, the green aspect of ESG is especially time critical due to the accelerated pace of climate change.

2. Economic rationale for sustainable corporate finance

In general, sustainable finance refers to the process of taking environmental, social and governance (ESG) considerations into account when making investment decisions in the financial sector (e.g. Brühl 2021, European Commission 2021c). This paper defines green finance as a subset of sustainable finance, i.e. the financing of investments that contribute to the attainment of one or more environmental objectives, which include climate change mitigation and adaptation (Berrou et al 2019, Brühl 2021, Brühl 2020, Hong et al 2020, European Commission 2017).

Initiatives to generate more capital for ESG investments implicitly rest upon the assumption that investors prefer financial products with a given financial risk-return profile that perform better on ESG criteria. Financial products could, for example, directly finance specific investment projects to achieve certain sustainability objectives, or they could provide general financing to companies whose business profile meets certain sustainability characteristics. In either case it is essential for investors that financial market participants disclose reliable and transparent information about the sustainability characteristics and impacts of financial products they offer. This will improve the comparability of investment products and will improve the information basis for portfolio decisions. Moreover, information asymmetries among financial market participants, advisors and investors will be reduced. If institutional and private investors prefer sustainable investment products, an incentive will emerge both on the issuer side and the investor side to further improve the ESG profile of the investee companies.

Investor perspective

ESG investment products have been marketed for many years by large asset managers and investment firms, as demand for ESG products is on the rise. Several institutional investors have excluded problematic sectors from their investment universe if they are associated with major environmental hazards or if fundamental principles of good corporate governance (e.g. anti-corruption, anti-money laundering) are not complied with. The same applies to important social aspects such as the respect of human rights and the assurance of fair labour conditions. Overall, investment firms today are tending to put more pressure on investee firms to actively address ESG risks due to the increased sensitivity of end investors. Rating agencies specialising in developing ESG risk scores and profiles already play an important role in marketing financial products that claim to be sustainable. Based on complex scoring methods, they include many different ESG factors along the three basic dimensions and condense them into an ESG rating. If ESG ratings reach a level of market relevance and acceptance comparable to credit ratings, such scores could become a key performance indicator (KPI) for capital-market oriented companies. Advocates of sustainable finance approaches are convinced that increased awareness among investors will lead to a further rise in the importance of ESG criteria of financial products. Hence financing costs for sustainable

investments may decrease if investors are willing to pay a premium for green securities (e.g. green bonds) with a given risk-return profile. However, there is so far no clear empirical evidence as to whether or not such a “greemium” can be observed, either at the issue date or during the term of debt securities (Bundesbank 2021).

Company (issuer) perspective

Conversely, companies operating in a business with a high ESG risk score may have to pay a higher spread in financing transactions or – in extreme cases – might find it very difficult or even impossible to finance their business at all. Furthermore, companies with a poor ESG rating could face negative impacts on their company valuations due to higher costs of capital. Such impacts could create incentives for the management team to adjust their business model and incorporate ESG aspects into their corporate strategy, thus averting a potential increase in pressure from capital providers and other stakeholders.

Whether or not such an effect materialises depends, inter alia, on investor preferences, i.e. whether or not investors are willing to sacrifice financial return for improved ESG compliance or vice versa. Clearly there is not always a trade-off between the ESG score and the financial performance. This could be the case in industries where heavy investments in new technologies are needed to transform GHG intensive industries such as steel, aluminium or cement production. On the other hand, there are several examples in sectors such as renewable energy or green tech where a high degree of sustainability can go along with strong financial performance.

In order to channel more capital into sustainable activities, investors need to get more information on the ESG profile of the respective financial products. In light of the already enhanced disclosure requirements regarding non-financial information, the topic of ESG is strategically important for capital-market oriented companies.

Greenwashing

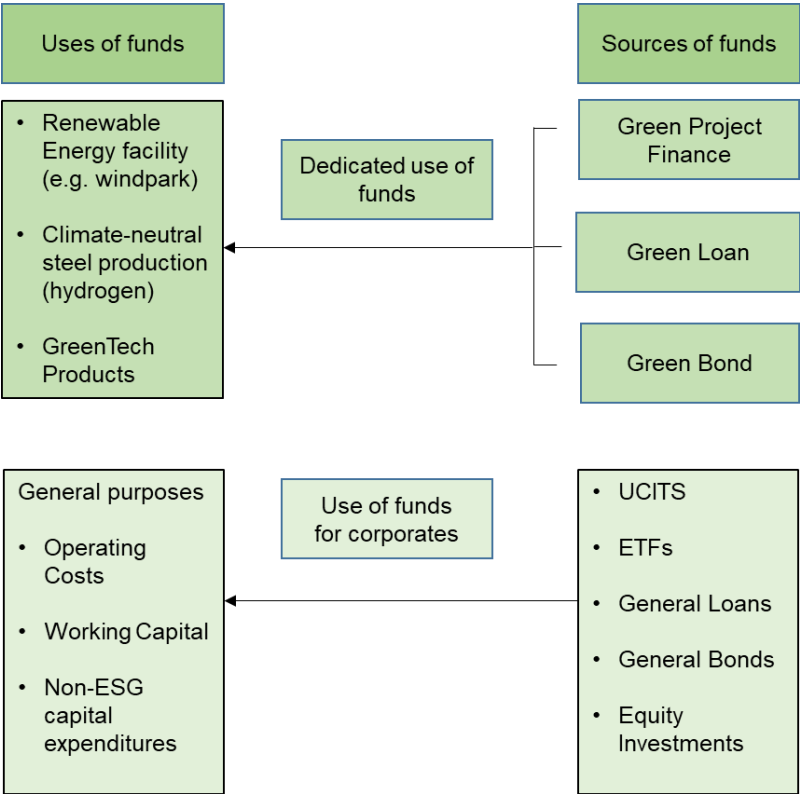
However, due to the lack of a consistent regulatory framework ensuring a high level of transparency and data quality, cases of “greenwashing” have been detected in the recent past. For instance, financial products have been positioned as sustainable, yet a closer inspection of the investment strategy and the investment portfolio revealed that they fulfil only some sustainability criteria, while at the same time causing negative impacts on other sustainability objectives. Transparency on the sustainability of economic activities is an essential precondition for equity and debt investors and for investors in portfolio-based financial products such as mutual funds or ETFs to make informed investment decisions. Conversely, a lack of transparency, comparability and data reliability may lead to unintended consequences of investor decisions, potentially even harming sustainability objectives. Furthermore, so far insufficient disclosure requirements of companies lead to a lack of primary data. This may in turn adversely affect the reliability of third-party data providers, who often have to deal with estimates themselves. Therefore, it is often unclear how meaningful the ESG ratings calculated upon these incomplete data sets are. The disclosure of reliable and testified ESG data produced by the issuers of financial products is therefore crucial to the sound integration of ESG criteria into investment processes and the generation of meaningful ESG ratings.

In order to mobilise the capital necessary for the green transformation, sustainability objectives must be clearly formulated. These are usually defined along the three dimensions ESG (Environmental, Social, Governance). Furthermore, detailed ESG criteria need to be established, according to which economic activities to be financed through the financial product can be classified as sustainable. Such a classification system (taxonomy), including science-based indicators and metrics, provides the basis for characterising financial products as being

more or less sustainable with regard to one or more ESG criteria. In order to avoid greenwashing, a regulatory framework is needed that defines the criteria to be met by financial products if they are to be legitimately marketed as sustainable.

However, there is usually no direct relationship between the sources of capital and the business activities for which the financing is used. Only in certain cases can a direct link between sources and uses of funds be identified. In project finance, for instance, the dedicated financing of e.g. a wind park or a solar park must be repaid based on the cash-flow of the respective project. Another example could be a green bond issued under the European Green Bond Standard ((EUGBS), COM (2021) 391 final), which requires that funds raised are fully allocated to economic activities that are sustainable according to the Taxonomy Regulation. On the other hand, investment funds or ETFs investing in a diversified portfolio of stocks and bonds usually have neither an influence on the governance of the companies nor a direct link to investment or operational activities conducted by the investee companies. Besides, these funds normally do not inject new cash into those companies; they usually buy the securities on the secondary market (Figure 1).

Figure 1: Sources and uses of funds for different financial instruments



Source: Own illustration

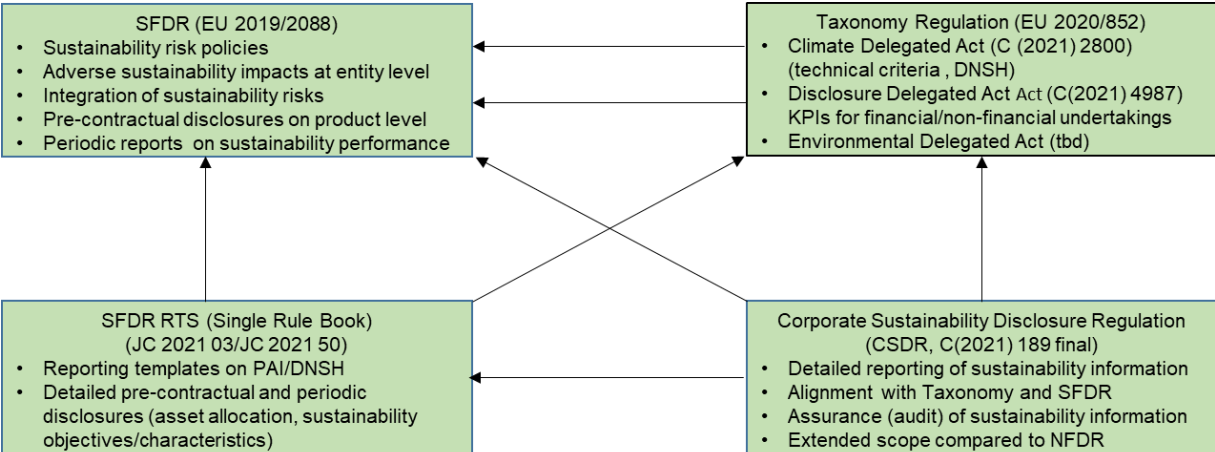
3. Green (sustainable) financial products in the EU

In the EU the regulatory framework for sustainable financial products consists of different legislative components that are closely interconnected (Figure 2). Firstly, the Sustainable Finance Disclosure Regulation (SFDR) provides the disclosure framework for sustainability information to be reported by financial market participants and financial advisors. The SFDR itself is closely related to the Taxonomy Regulation (TR), which has established a classification scheme allowing economic activities to be categorised in terms of their environmental

sustainability. The TR is so far supplemented by the Climate Delegated Act, specifying the technical screening criteria of taxonomy-aligned activities, and the Disclosure Regulation, which defines the key performance indicators such as the calculation of the Taxonomy ratio or the Green Asset Ratio. The corresponding regulatory technical standards (RTS) provide the detailed requirements in terms of methodology, indicators, metrics and reporting templates. Due to the close link between the SFDR and the TR, a single rulebook, i.e. a uniform set of RTS for both regulations is envisaged (SFDR RTS). Finally, it must be ensured that the required sustainability information is generated by the non-financial reporting standards for corporates. The Corporate Sustainability Reporting Directive (CSRD, COM(2021) 189 final) is currently in the legislative process and is intended to broaden the scope and the level of detail of sustainability information disclosed so that the reporting needs according to SFDR, TR and SFDR RTS are taken into account.

The CSRD will be based on the principle of double materiality, which stipulates that companies have to report how sustainability factors affect their business activities (“outside-in perspective”) and, conversely, how their own business activities affect the environment (“inside-out perspective”). As the reported information will be part of the management report, at least a limited assurance (audit) by a third party will be mandatory. If the legislation is finalised in the first half of 2022, the new set of reporting standards for companies could apply to reports published in 2024, covering financial year 2023.

Figure 2: Sustainability Reporting for Corporate and Financial Institutions in the EU



Source: Own illustration

In order to enable investors to consider ESG aspects in their investment decisions, suppliers of financial products need to disclose whether and in which form they integrate ESG criteria or objectives into their investment strategy (Article 6 SFDR). The comparability of financial products in terms of ESG profile is to be improved by making transparent which activities or investments are financed by the respective financial product.

Therefore, detailed disclosure obligations for financial market participants and financial advisors have been established both before the actual purchase of the financial product (pre-contractual) and periodically during the maturity of the product to ensure that promised sustainability criteria are being met throughout the lifetime of the product. In addition, suppliers of financial products have to explain the potential impacts of sustainability risks on the returns of their financial products. In addition, by 30 December 2022 financial market participants need

to provide, for each financial product, a clear and reasoned explanation of whether and how a financial product considers principal adverse impacts on sustainability factors (Article 7 SFDR).

In the following, the scope and functioning of the Taxonomy Regulation are analysed in more detail to show the complexity market participants have to cope with in the future.

4. The role of the Taxonomy Regulation

The EU Regulation on the Establishment of a Framework to Facilitate Sustainable Investments (Regulation (EU) 2020/852, “Taxonomy Regulation”) has been adopted to establish a comprehensive, transparent and consistent framework that allows for a classification of economic activities as to their environmental sustainability. The taxonomy should improve the transparency of both the investment process and the asset allocation of financial products that are either produced and marketed by financial market participants or financial advisors. Notably, the EU Green Bond Standard (EU GBS) requires that the funds raised by the bond are allocated fully to projects that are aligned with the EU taxonomy.

The Taxonomy distinguishes between six environmental objectives. An economic activity has to contribute substantially to at least one of them in order to be categorised as sustainable. These sustainability objectives comprise “climate change mitigation” (e.g. investments in renewable energies) and “climate change adaptation” (e.g. flood protection). Other objectives include the protection of water and maritime resources, the transition to a circular economy, the prevention of pollution and the protection of biodiversity and ecosystems. An economic activity can only be classified as sustainable according to the Taxonomy Regulation (Article 3 TR), if

- it contributes substantially to one or more environmentally sustainable objectives (Article 9 TR) and
- if at the same time the activity does not cause a significant negative impact on the other sustainability objectives (so called Do No Significant Harm (DNSH) principle, Article 17 TR) and
- it is carried out in compliance with the minimum safeguards laid down in Article 18 TR and
- it complies with the technical screening criteria applicable to the respective activity.

In addition, the TR distinguishes between economic activities that directly contribute to one of the defined objectives, activities that serve as “enabler” (Article 16 TR) for such direct contributions, and activities that are needed as “transitional” technologies (Article 10(2) TR) as long as a sustainable alternative is not available. Moreover, the TR, together with the corresponding delegated acts and the RTS, define exactly the scope of the respective environmental objectives as well as the definition of “substantial” in that regard.

For instance, “climate change mitigation” (Article 2(5) TR) refers to the process of limiting the increase in the global average temperature to well below 2 °C and pursuing efforts to limit it to 1.5 °C above pre-industrial levels, as laid down in the Paris Agreement. All activities are covered that substantially contribute to the stabilisation or reduction of GHG emissions through avoidance, reduction or removal of GHG (Article 10(1) TR). In particular, the following activities are considered to fulfil these requirements:

- generating, transmitting, storing, distributing or using renewable energy
- improving energy efficiency
- increasing clean or climate-neutral mobility
- switching to the use of sustainably sourced renewable materials

- increasing the use of environmentally safe carbon capture and utilisation (CCU) and carbon capture and storage (CCS) technologies
- strengthening land carbon sinks, including through avoiding deforestation and forest degradation, restoration of forests, sustainable management and restoration of croplands, grasslands and wetlands, afforestation, and regenerative agriculture
- establishing energy infrastructure required for enabling the decarbonisation of energy systems
- producing clean and efficient fuels from renewable or carbon-neutral sources

The definition of “significant harm” is laid down in Article 17 TR. For instance, all activities that lead to significant greenhouse gas emissions are detrimental to the objective “climate change mitigation”, whereas activities leading to an increased adverse impact of the current climate and the expected future climate are considered to violate the DNSH criteria for “climate change adaptation”.

The Taxonomy Regulation has been amended by three delegated acts so far. Apart from the Climate Delegated Act ((EU) 2021/2139) establishing the technical screening criteria for the environmental objectives “climate change mitigation” and “climate change adaptation”, the corresponding technical criteria for the remaining environmental objectives will be set forth in the upcoming “Environmental Delegated Act”. In addition, the Disclosure Delegated Act ((EU) 2021/2178) concretises the disclosure obligations according to Article 8 TR, which requires increased transparency in non-financial statements on how and to what extent the undertaking’s activities are associated with economic activities that qualify as environmentally sustainable under the TR. In particular, non-financial undertakings shall disclose the proportion of their turnover derived from products or services associated with economic activities that qualify as environmentally sustainable under Articles 3 and 9 TR. The proportion of their capital expenditures and of their operating expenditures related to assets or processes associated with sustainable economic activities need to be reported accordingly.

How the taxonomy works in practice is illustrated by way of three examples, one of which is “electricity generation using concentrated solar power (CSP) technology”. The second is “manufacturing of iron or steel” and the third is “coal mining” as a typical example of a non-sustainable activity (Table 1). The sector categorisation is achieved by using the NACE codes, which are the statistical classification system of economic activities in the EU. While the economic activity “electricity generation using concentrated solar power (CSP) technology” is taxonomy aligned by definition, as it contributes to climate change mitigation by using carbon-neutral technologies, “manufacturing of iron and steel” is categorised as “transitional technology” as long as an alternative carbon-neutral technology is not available. In order to qualify nevertheless as a taxonomy-aligned activity, certain technological criteria defined as upper limits of CO₂ emissions have to be met (Table 1). These criteria reflect the average emission intensity of the top 10% most efficient installations of the existing steel manufacturing operations, depending on the value chain. Hence other steel operations exceeding these emission criteria are taxonomy-eligible, as they are covered by the taxonomy, but not taxonomy-aligned. Other activities, such as coal mining, are excluded from the taxonomy by definition.

Table 1 also shows that, for both activities, it must be proven that the DNSH criteria have been fulfilled. For each environmental objective specific compliance tests have to be conducted, which are prescribed in detail in the respective annexes A to E of the Climate Delegated Act (C(2021) 2800 (Annex I)).

Table 1: Examples of taxonomy classification

Activity	NACE Code	Type	Technical criteria	Do No Significant Harm (DNHS)					
				Climate Change Mitigation	Climate Change Adaptation	Water and marine resources	Circular Economy	Pollution	Biodiversity/ ecosystems
Electricity generation using concentrated solar power (CSP) technology	D35.11 and F42.22	Taxonomy aligned	N/A	✓	Appendix A	N/A	C(2021) 2800 final (Annex I, 4.1)*	N/A	Appendix D
Iron/Steel	C24.10, C24.20, C24.31, C24.32, C24.33, C24.34, C24.51 and C24.53	transitional	(i) hot metal = 1,331112 tCO ₂ e/t product; (ii) sintered ore = 0,163113 tCO ₂ e/t product; (iii) coke (excluding lignite coke) = 0,144114 tCO ₂ e/t product;	N/A	Appendix A	Appendix B	N/A	Appendix C	Appendix D
Coal Mining	B5.1 and B5.2	Not Taxonomy eligible	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*The activity assesses availability of and, where feasible, uses equipment and components of high durability and recyclability and that are easy to dismantle and refurbish.

Appendix A. Performance of climate risk assessment

Appendix B. Risk assessment regarding protection of water and marine resources

Appendix C. Risk assessment regarding pollution and use of chemicals

Appendix D. Risk assessment regarding biodiversity and ecosystems

C(2021) 2800 final (Annex I)

Source: Own illustration

In order to consider the potential adverse impacts of the economic activities financed by the respective financial product, financial market participants need to publish, for each product, a Principal Adverse Impacts (PAI) statement. With regard to taxonomy-aligned activities, the strict criteria of DNSH have to be applied. Table 2 shows, by way of example, which indicators should be used. Adverse sustainability indicators associated with climate change mitigation could be the level of GHG emissions, the carbon footprint and the GHG intensity of investee companies. The supplier of a financial product promoting ESG criteria (Article 8 SFDR products) or even pursuing specific investment objectives (Article 9 SFDR products) therefore needs to disclose potential negative impacts on GHG emissions using these indicators.

Table 2: Principal adverse sustainability impacts statement: Selected climate-related indicators (illustrative)

Climate and other environment-related indicators (investee companies, illustrative)						
Adverse Sustainability Indicator	Calculation method	Metric	Impact (year n)	Impact (year n-1)	Explanation	Action taken
GHG-emissions (scope 1, scope 2, scope 3)	GHG	tCO ₂ e				
Carbon footprint	CFP	tCO ₂ e				
GHG-intensity of investee companies	GHGI	$\frac{\text{tCO}_2\text{e}}{\text{Revenues}}$				

Source: Draft SFDR (EU 2019/2088) Regulatory Technical Standards JC 2021 03 (Annex I)

The GHG emissions of a financial product (GHG_{FP}) are calculated as the total GHG emissions of the investee companies weighted by the relative value of the investments compared to the enterprise value of the investee company. The resulting figure is the GHG emission volume attributable to the investment portfolio measured in tCO₂e.

$$\text{GHG}_{\text{FP}} = \sum \frac{\text{current value of investment}_i}{\text{investee company's EV}_i} \cdot \text{investee company's Scope (x)GHG}_i$$

Another adverse sustainability indicator for climate change mitigation is the carbon footprint (CFP) of the financial product, which measures the GHG emissions in tCO₂e per million euro of investment value.

$$\text{CFP} = \frac{\sum \frac{\text{current value of investment}_i}{\text{investee company's EV}_i} \cdot \text{investee company's Scope (1 + 2 + 3)GHG}_i}{\sum \text{current value of investment}_i \text{ (€M)}}$$

The GHG intensity (GHGI) of the financial product refers to the GHG emissions in tCO₂e per million euro of revenues.

$$\text{GHGI} = \frac{\sum \frac{\text{current value of investment}_i}{\sum \text{current value of investment}_i} \cdot \frac{\text{investee company's Scope (1 + 2 + 3)GHG}_i}{\text{revenue of investee company (€M)}}}{1}$$

After a controversial political discussion, the Climate Delegated Act ((EU) 2021/2139) and the Disclosure Delegated Act ((EU) 2021/2178) of the TR were amended by a Complementary Climate Delegated Act (Brussels, 2.2.2022, C(2022) 631/3), which classifies certain gas and nuclear energy activities as transitional activities that could contribute to a faster transition to a climate-neutral energy sector. It is argued that nuclear energy is a low-carbon technology and that best-available existing technologies (“Generation III+” nuclear plants) will be used. However, it is questionable that the DNSH principle of the taxonomy will not be violated, as the final disposal of high-level radioactive waste has yet to be resolved. Gas-based energy activities are also viewed as transitional technology if they meet the strict technical screening criteria. Highly efficient gas-fired power plants can temporarily be helpful to decarbonise the energy sector by replacing coal-fired plants, for example, which have higher carbon emissions. Furthermore, specific disclosure requirements apply to nuclear- and gas-related activities, e.g. the amount and proportion of activities linked to natural gas and nuclear energy. In particular, it has to be reported to what extent nuclear- and gas related activities are either taxonomy-aligned, taxonomy-eligible or none of both. The Complementary Climate Delegated Act is expected to apply as of 1 January 2023.

Although the basic approach of the taxonomy is understandable and reasonable, the currently envisaged implementation is rather complex, requires lots of granular data and the technical screening criteria have to be regularly updated due to technological advances. It is questionable whether or not the required data can be collected in a reliable way, especially with regard to the value chain of manufacturing industries. Furthermore, ways to simplify compliance for smaller and medium-sized companies should be considered.

5. The role of the Sustainable Finance Disclosure Regulation (SFDR)

The SFDR (Regulation (EU) 2019/2088) is applicable as of 10/3/2021 and covers financial market participants such as investment firms (ETFs, mutual funds, UCITS), alternative investment funds, venture capital funds, insurance companies, security brokers, pension funds as well as insurance firms and banks offering portfolio management services. The regulated financial products are investment funds (e.g. UCITS, ETF), alternative funds, insurance-based

investment products (IBIP), pension funds as well as pan-European personal pension products (PEPP). Detailed and harmonised disclosure obligations regarding the integration of ESG aspects in the investment process, the characteristics of the financial product and pursued ESG objectives shall improve transparency and comparability for investors.

Transparency of sustainability risk policies

Financial market participants (FMPs) have to publish information about their policies on the integration of sustainability risks into their investment decision-making process. If they fail to do so, FMPs have to explain the reason for this. The same applies to financial advisers regarding their policies on the integration of sustainability risks into their investment advice. Sustainability risks refer to environmental, social or governance events or conditions that, if they occur, could cause an actual or a potential material negative impact on the value of the investment (Article 2 (22) SFDR).

Financial market participants have to disclose how they consider principal adverse impacts (PAI, Article 4 SFDR) of investment decisions on sustainability factors including their due diligence policies with respect to those impacts. In addition, these PAI have to be described including any actions taken to mitigate them. Furthermore, information is to be provided about policies to identify and prioritise principal adverse sustainability impacts and indicators.

Disclosure on level of financial products

FMPs shall include in pre-contractual disclosures (Article 6 SFDR) the manner in which sustainability risks are integrated into their investment decisions and the likely impacts of sustainability risks on the returns of the financial products they make available. Financial market participants need to provide by 30 December 2022, for each financial product, a clear and reasoned explanation of whether and how a financial product considers principal adverse impacts on sustainability factors (Article 7 SFDR).

Furthermore, the SFDR in connection with the TR and the respective RTS distinguishes between “light green” financial products (Article 8 SFDR) that just promote environmental or social characteristics and “dark green” financial products (Article 9 SFDR) that pursue specific sustainable investment objectives. If a reference benchmark is used, it has to be explained how the designated index is aligned with that objective and why and how the designated index differs from a broad market index. Where a financial product has a reduction in carbon emissions as an objective, the information to be disclosed shall include the objective of low carbon emission exposure in view of achieving the long-term global warming objectives of the Paris Agreement.

The Taxonomy Regulation has amended the disclosure requirements of Article 9 SFDR, both for pre-contractual information and the periodic reporting about the environmental performance. This includes information about the environmental objective(s) set out in Article 9 TR to which the investment underlying the financial product contributes. Furthermore, it has to be described how and to what extent the investments underlying the financial product are in economic activities that qualify as environmentally sustainable under Article 3 TR. Similarly, the disclosure requirements of Article 8 SFDR products that are promoting environmental characteristics have been amended by Article 6 TR.

It should be noted that the defined scope of sustainable activities pursuant to §2 (17) SFDR is broader than the precise definition of environmentally sustainable activities according to the TR. For instance, the SFDR also covers activities contributing to a social objective, e.g. by addressing equal access to healthcare and education systems or by fostering social integration of economically or socially disadvantaged communities. The TR is also more restrictive in terms of environmental sustainability. If all TR related criteria are met, the respective activity is

said to be taxonomy-aligned; if the activity per se could be eligible under the TR but violates e.g. the technical screening criteria, the activity may be called taxonomy-eligible but not taxonomy-aligned. The third category could be called sustainable but neither taxonomy-aligned nor eligible, if the activities belong to the catalogue of §17 SFDR but do not come under the TR. This would apply in particular to social activities that are so far outside the scope of the TR.

As the SFDR and TR regulations are closely interlinked, it has been decided to combine the amending regulatory technical standards (RTS) in a “single rule book” for sustainability-related disclosures in order to avoid inconsistencies or duplications. Therefore, the RTS establish detailed requirements regarding the content, methodologies, metrics, indicators and reporting templates for both regulations.

Single rule book (regulatory technical standards for SFDR and TR)

The European Supervisory Authorities (ESA) have developed draft Regulatory Technical Standards (RTS) (JC 2021 03) for the disclosure requirements according to the SFDR that have been amended by additional disclosure requirements pursuant to Articles 8(4), 9(6) and 11(5) of the TR (JC 2021 50). The final version of the SFDR RTS has yet to be adopted as of the finalisation of this article. Based on the SFDR, the TR and the current drafts of the single rule book, FMPs have to disclose extensive pre-contractual information both for so-called Article 8 SFDR (“light green”) products that explicitly promote environmental or social characteristics and for so-called Article 9 SFDR (“dark green”) financial products that pursue specific sustainable investment objectives. There are many communalities in terms of disclosure requirements between these two different types of sustainable financial products, including information on the investment strategy, integration of ESG criteria, the planned asset allocation including the selection criteria applied, and the planned minimum investments in sustainable activities. Furthermore, certain KPIs have to be disclosed such as the minimum ratio of taxonomy-aligned investments (taxonomy ratio) and the consideration of principal adverse impacts of investment decisions on sustainability objectives. Table 3 illustrates the pre-contractual disclosure requirements for Article 9 SFDR products in more detail. For financial products that pursue specific sustainable investment objectives, detailed information about the respective investment objectives, the indicators used to measure the attainment of such targets and information about the avoidance of significant harm to other sustainability objectives (DNSH) needs to be disclosed.

Table 3: Pre-contractual disclosure for financial products referred to in Article 9(1), (2) and (3) of Regulation (EU) 2019/2088 and Article 5 of Regulation (EU) 2020/852 – “dark green”

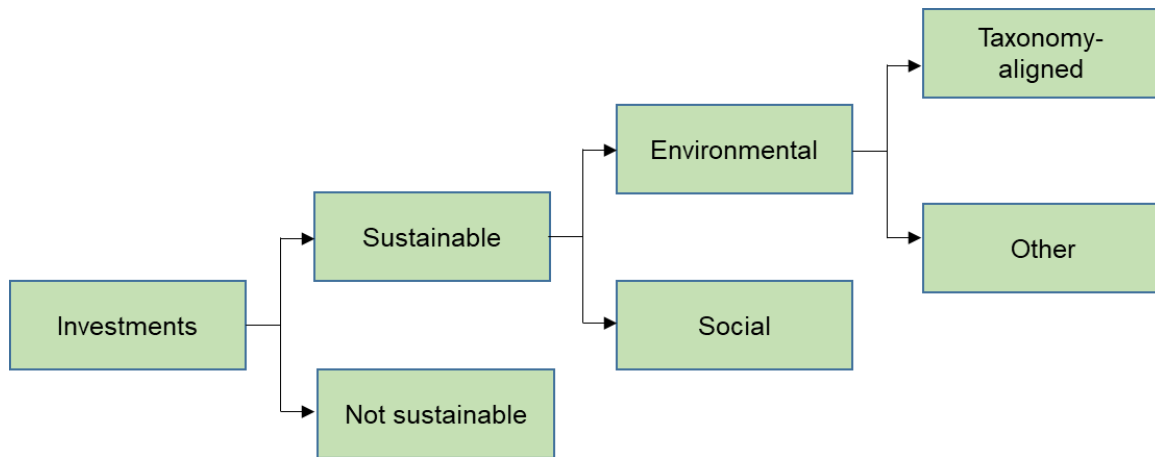
<ul style="list-style-type: none"> • Information on investment strategy and the sustainability objectives of the financial product including information on environmental objectives according to TR (EU) 2020/852) and the measurement of attaining these objectives • Information on indicators used to measure the attainment of sustainability objectives • Information on planned asset allocation and the selection criteria applied <ul style="list-style-type: none"> – Minimum investments with sustainability objectives – Minimum investments in economic activities with an environmental objective that are taxonomy-aligned – Explanation of sustainable investments that are not taxonomy aligned – Other investments (compliance with minimum environmental and social safeguards) – Explanation of taxonomy-aligned investments and calculation of taxonomy ratio based on relevant shares of revenues (alternative: capital expenditures or operating expenditures) or corresponding KPI for financial undertakings (e.g. Green Asset Ratio) – Calculation of KPIs with and without sovereign exposures – Information on external review/audit of compliance with taxonomy – Consideration of principal adverse impacts of investment decisions on sustainability objectives • Information on index as reference benchmark including methodology and alignment with the sustainability objectives; explanation of the difference to a broad market index • Information on the attainment of sustainability objectives, information on DNSH and consideration of indicators according to tables 1, 2 and 3 in Annex I of SFDR RTS • If a reduction of CO₂-emissions is intended, information on whether and how these reductions contribute to the long-term reduction target of the Paris Agreement • Declaration whether or not the applied benchmarks fulfill the conditions of EU Climate Transition Benchmark or an EU Paris-aligned Benchmark under Chapter 3a of Title III of Regulation (EU) 2016/1011 • Compliance with OECD Guidelines for Multinational Enterprises, UN Guiding Principles on Business and Human Rights • Information on minimum investments in “enabling” or “transitional” activities according to TR
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Source: Own illustration based on SFDR, TR, draft SFDR RTS

In terms of the planned asset allocation, information about the minimum investments with sustainability objectives has to be reported. Other investments have to be disclosed, including the compliance with minimum sustainability criteria. Disclosure rules require that the category of sustainable investments is divided into socially and environmentally sustainable investments. The latter sub-category is then divided once more into taxonomy-aligned and others (Figure 3). In addition, KPIs (e.g. taxonomy ratio) have to be reported, including and excluding investments in sovereign issuers.

If a financial product intends to reduce CO₂ emissions, it has to be disclosed whether and how GHG emissions will be reduced in alignment with the Paris Agreement. If reference benchmarks are used, they need to comply with the strict requirements established by the EU Paris-aligned Benchmarks or the EU Climate Transition Benchmarks, respectively. Furthermore, information about indicators used to measure potential adverse impacts and the attainment of such objectives or characteristics must be published.

Figure 3: Pre-contractual disclosure of planned asset allocation for financial products referred to in Article 9(1), (2), (3) of Regulation (EU) 2019/2088 and Article 5 of Regulation (EU) 2020/852 –“dark green”



Source: Own illustration based on SFDR, TR, Draft SFDR RTS

Periodic reporting requirements

For both types of sustainable financial products, periodic reporting (usually on a yearly basis) of ESG performance parameters is mandatory (§11 SFDR) and is closely aligned with the pre-contractual disclosure obligations. This provides incentives to financial market participants to deal with unintended impacts and gives investors the chance to dispose of financial products that are underperforming in terms of ESG. Periodic reporting is an important prerequisite for a fair pricing of ESG financial products. Therefore, it has to be reported if and to what extent the objectives (Article 9 products) or characteristics (Article 8 products) have been attained. Possible deviations and their major drivers have to be addressed. Furthermore, the performance of the financial products compared to the selected reference index has to be explained. A core element of the periodic reporting is the actual versus the planned asset allocation, which includes, inter alia, a list of the 15 largest investments and a segmentation of the portfolio according to sectors and countries. Furthermore, the proportion of the taxonomy-aligned investments has to be reported as well as the avoidance of principal negative impacts according to the taxonomy (DNSH). Important periodic reporting obligations for Article 9 SFDR products are the following:

- Information on attainment of environmental/social objectives
- Information on overall sustainability impact based on relevant sustainability indicators or comparison with the impact of reference benchmarks
- Contribution to taxonomy-based environmental objectives
- Achievement of CO₂ reduction targets (alignment with Paris Agreement)
- Information on DNSH and “principal adverse impact” indicators
- Information on actual asset allocation
- Proportion of sustainable investments
- Taxonomy ratio (based on revenues, capital expenditures, operational expenditures) or corresponding KPI for financial undertakings (e.g. green asset ratio) including and excluding sovereign exposures
- Explanation of sustainable investments that are not taxonomy aligned
- Purpose and proportion of other investments complying with minimum safeguards
- Proportion of investments with a social objective
- Proportion of investments in enabling/transitional activities

Taxonomy ratio and Green Asset Ratio (GAR)

In order to enable investors to evaluate the degree of sustainability of a given financial product, it is crucial to disclose the proportion of economic activities that are taxonomy-aligned, only taxonomy-eligible or neither. The calculation of the taxonomy ratio, which reflects the proportion of taxonomy-aligned investments in a given financial product in relation to the total investments, has to differentiate between non-financial and financial undertakings. The taxonomy ratio of non-financial undertakings is usually based on the proportion of taxonomy-aligned revenues, but can also be calculated based on capital expenditures or operational expenditures. However, companies are expected to disclose not only the overall revenue ratio, but also the allocation of the respective sustainability objectives and DNSH criteria (Table 4).

Table 4: Disclosure of taxonomy-based revenue shares for non-financial undertakings (example)

Non-financial undertakings			Substantial Contribution Criteria (Taxonomy Regulation)						DNSH-criteria	Minimum safeguards
KPI	Turnover (absolute)	Turnover (relative)	Climate Change Mitigation	Climate Change Adaptation	Water and marine resources	Circular Economy	Pollution	Biodiversity/ ecosystems		
Taxonomy-aligned	€	%	%	%	%	%	%	%	Y	Y
Taxonomy-eligible	€	%	-	-	-	-	-	-	Y/N	Y/N
Not Taxonomy eligible	€	%								

Source: Own illustration based on C(2021) 4987 final, Annex II

The calculation of the taxonomy ratio for financial undertakings depends on the business model of the respective financial institution (e.g. asset managers, investment firms, credit institutions or insurance companies). In general, the taxonomy ratio should give the investors an indication of the degree to which the investment portfolio of the financial product is taxonomy-aligned. Hence the taxonomy ratio represents the ratio between the market value of the respective financial instruments weighted against the taxonomy-aligned revenue ratio. Alternatively, the shares of capital expenditures or operational costs could be used as weighting factors.

For instance, asset management companies have to calculate their taxonomy ratio for a given financial product ($T_{ax_{FP}}$) as the sum of their taxonomy-aligned share of revenues (β_i) weighted against the market value (MV_i) of their investments in relation to the overall market value of their portfolio (§16b TR in connection with C(2021) 4987 final Annex II).

$$T_{ax_{FP}} = \frac{\sum MV_i \cdot \beta_i}{\sum MV_i}$$

For credit institutions, the green asset ratio plays an important role. The GAR reflects the proportion of taxonomy-aligned assets ($MV_{(TA)_i}$) for the objectives climate change mitigation and adaptation compared to the total assets (MV_i) covered. The financial instruments considered include loans, advances, debt securities and equity instruments.

$$GAR = \frac{\sum MV_{(TA)_i}}{\sum MV_i}$$

Financial institutions are expected to periodically report not only one aggregated GAR, but also disaggregated figures differentiating between environmental objectives and type of counterparty. Due to the complexity of the data generation and technical requirements for the reporting, the Disclosure Delegated Act applies with a limited scope as of January 1st 2022,

the remaining obligations for non-financial undertakings as of January 1st 2023. For financial undertakings, some requirements are applicable as of January 1st 2024, with other more advanced indicators, e.g. for provision income, commercial services and trading book, to apply as of January 1st 2026.

The detailed disclosure obligations introduced by the SFDR in connection with the TR, the delegated acts and the RTS are certainly useful to support investment decisions of institutional investors. However, it is questionable whether retail investors being addressed by ETFs or UCITS are able to fully understand the ESG information provided by suppliers of financial products. Therefore, it could be useful to introduce a kind of mandatory “green rating”, especially for financial products supporting environmental objectives such as “climate change mitigation” and “climate change adaptation”. The metric applied to such a rating could be the taxonomy ratio (Figure 4). Consequently, financial products directly funding investments with environmentally sustainable objectives would qualify for a green label, but financial products that merely promote sustainable characteristics (§8 SFDR products) would no longer qualify.

Figure 4: Example of “green rating” of financial products

Rating	A	B	C	D	E
Taxonomy Ratio	100% - 80%	80%-60%	60%-40%	40%-20%	20%-0%

Source: Own illustration

6. Conclusions

The regulatory framework consisting mainly of the SFRD, TR and CSRD, including the corresponding delegated acts, ensures a much higher level of transparency on ESG aspects of financial products and thus improves the information basis for investor decisions. The complex design of the disclosure obligations will create significant additional costs of collecting, evaluating and reporting sustainability data for both financial and non-financial undertakings, including for financial market participants. A taxonomy precisely defining sustainability objectives, the categories and technical criteria for sustainable activities is essential to raise more capital for sustainable investments. However, what the current architecture of the regulatory framework for sustainable finance lacks are minimum quantitative criteria measuring the degree of sustainability of financial products. For instance, the taxonomy ratio or the green asset ratio are per se meaningful indicators, but so far financial market participants are only obliged to report these figures within the planned and realised asset allocation. In order to provide stronger incentives to achieve a high taxonomy ratio, it should be discussed whether or not a minimum taxonomy ratio (e.g. 25% or even 50%) has to be achieved to market a financial products as “green”. A similar approach could be taken to “social” financial products as soon as a “social taxonomy” is in place. Based on such “green” and “social” ratings of financial products, a combined ESG rating could be established that also requires compliance with good corporate governance practices. Furthermore, it is questionable whether the complex reporting requirements will really impact the investment decisions of end investors. Especially for retail investors, a simplified “green rating” based on the taxonomy ratio could facilitate target-oriented selection of sustainable financial products.

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