

Brühl, Volker

**Article**

## Green Financial Products in the EU – A Critical Review of the Status Quo

Intereconomics

*Suggested Citation:* Brühl, Volker (2022) : Green Financial Products in the EU – A Critical Review of the Status Quo, Intereconomics, ISSN 1613-964X, Springer, Heidelberg, Vol. 57, Iss. 4, pp. 252-259, <https://doi.org/10.1007/s10272-022-1057-2>

This Version is available at:

<https://hdl.handle.net/10419/262965>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

Volker Brühl

# Green Financial Products in the EU – A Critical Review of the Status Quo

The financial sector plays an important role in supporting 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 environmental, social and governance aspects of financial products has improved significantly, 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 private investors to establish a simplified green rating, based on the taxonomy ratio, to facilitate the selection of green financial products.

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.

This paper provides a detailed analysis on the conditions financial products have to meet in order to be classified as sustainable as well as the disclosure requirements for such products. 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.

## 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. 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 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 both the comparability of investment products and the information basis for portfolio decisions. Moreover, information asymmetries among financial market participants, advisors and investors will be reduced.

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 they do not comply with fundamental principles of good corporate governance (e.g. anti-corruption, anti-money laundering). The same applies to important social aspects such as the respect

© The Author(s) 2022. Open Access: This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>).

Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

**Volker Brühl**, Center for Financial Studies,  
Frankfurt, Germany.

for human rights and the assurance of fair labour conditions. Overall, investment firms today are tending to put more pressure on the firms they invest in 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 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. 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 such a “greenium” can be observed (Deutsche Bundesbank, 2021).

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. Whether such an effect materialises depends, inter alia, on investor preferences, i.e. whether 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 greenhouse gas (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.

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 portfolio revealed that they fulfil only some sustainability criteria, while they simultaneously cause negative impacts on other sustainability objectives. Transparency of the sustainability of economic activities is an essential precondition for equity and debt investors as well as investors in portfolio-based financial products such as mutual funds or exchange-traded funds (ETFs) to make informed investment decisions. Conversely, a lack of transparency, com-

parability and data reliability may lead to unintended consequences of investor decisions, potentially even harming sustainability objectives. The meaningfulness of ESG ratings may also be negatively affected.

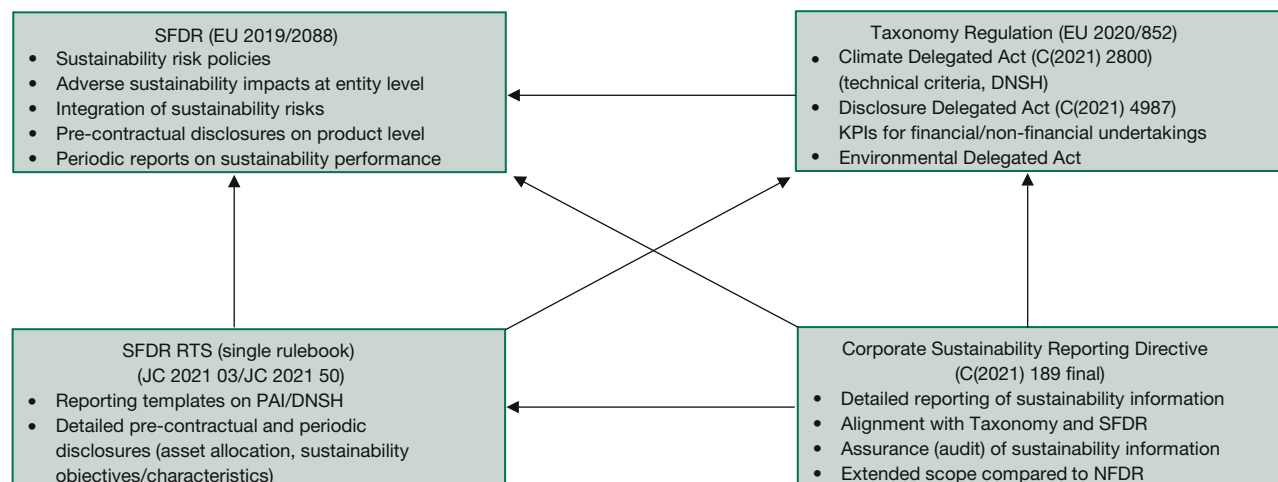
In order to mobilise the capital necessary for the green transformation, sustainability objectives must be clearly formulated. Furthermore, detailed ESG criteria need to be established according to which economic activities to be financed through the financial product can be classified as sustainable. 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.

However, there is usually no direct relationship between the sources of capital and the business activities for which the financing is used. A direct link between sources and uses of funds can only be identified in certain cases. 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, which requires that funds raised be 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.

### 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 1). 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 KPIs for non-financial and financial undertakings. 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

Figure 1

**Sustainability reporting for corporates and financial institutions in the EU**

Notes: DNSH: do no significant harm; KPIs: key performance indicators; NFRD: Non-Financial Reporting Directive; PAI: Principal Adverse Impacts; RTS: Regulatory Technical Standards; SFDR: Sustainable Finance Disclosure Regulation.

Source: Own illustration.

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) 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 role of the Taxonomy Regulation

The TR 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 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, if

- it contributes substantially to one or more environmentally sustainable objectives (Article 9 TR) and

- at the same time the activity does not cause a significant negative impact on the other sustainability objectives (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 an “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. The TR covers all activities that substantially contribute to the stabilisation or reduction of GHG emissions through avoidance, reduction or removal of GHG (Article 10(1) TR). In par-

Table 1  
Examples of taxonomy classification

Activity	NACE code	Type	Technical criteria	Climate change mitigation	Climate change adaptation	Do no significant harm			
						Water and marine resources	Circular economy	Pollution	Biodiversity/Ecosystems
Electricity generation using concentrated solar power 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 <sub>2</sub> e/t product; (ii) sintered ore = 0,163113 tCO <sub>2</sub> e/t product; (iii) coke (excluding lignite coke) = 0,144114 tCO <sub>2</sub> 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

Note: \*The activity assesses availability 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.

ticular, it is considered that the following activities 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 and carbon capture and storage 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 out in Article 17 TR. For instance, all activities that lead to significant GHG emissions are detrimental to the objective “climate change mitigation”. The TR has been amended by three delegated

acts so far. Apart from the Climate Delegated Act 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 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, the first of which is electricity generation using concentrated solar power (CSP) technology. The second is the 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 is the statistical classification system of economic activities in the EU. While the economic activity CSP 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 CO<sub>2</sub> emissions have to be met. 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).

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. 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.

The GHG emissions of a financial product (GHG<sub>FP</sub>) 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 tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e).

$$GHG_{FP} = \sum \frac{\text{current value of investment}_i}{\text{investee company's EV}_i} \times \text{investee company's scope (x) GHG}_i$$

Another adverse sustainability indicator for climate change mitigation is the carbon footprint (CFP) of the fi-

nancial product, which measures the GHG emissions in tCO<sub>2</sub>e per million euro of investment value.

$$CFP = \frac{\sum \frac{\text{current value of investment}_i}{\text{investee company's EV}_i} \times \text{investee company's scope (1 + 2 + 3) GHG}_i}{\sum \text{current value of investment}_i (\text{million euros})}$$

The GHG intensity (GHGI) of the financial product refers to the GHG emissions in tCO<sub>2</sub>e per million euro of revenues.

$$GHGI = \frac{\sum \frac{\text{current value of investment}_i}{\sum \text{current value of investment}_i} \times \frac{\text{investee company's scope (1 + 2 + 3) GHG}_i}{\text{revenue of investee company (million euros)}}}{\sum \text{current value of investment}_i}$$

After a controversial political discussion, the Climate Delegated Act and the Disclosure Delegated Act of the TR will possibly be amended by a Complementary Climate Delegated Act (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 possible that the DNSH principle of the taxonomy will 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 be temporarily 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.

Although the basic approach of the taxonomy is understandable and reasonable, the currently envisaged implementation is rather complex, requires large amounts of granular data and the technical screening criteria have to be regularly updated due to technological advances. It is questionable whether 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.

### The role of the Sustainable Finance Disclosure Regulation

The SFDR covers financial market participants (FMP) such as investment firms, 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.

FMP have to publish information about their general policies on the integration of sustainability risks into their investment decision-making process. They have to disclose how they consider PAI of investment decisions on sustainability factors including their due diligence policies and any actions taken to mitigate them. In order to facilitate sustainable investment decisions, FMP have to comply with extensive pre-contractual and periodic disclosure requirements for each financial product they make available by 30 December 2022.

The SFDR distinguishes between “light green” financial products (Article 8 SFDR, “Article 8 products”) that just promote environmental or social characteristics and “dark green” financial products (Article 9 SFDR, “Article 9 products”) that pursue specific sustainable investment objectives. The Taxonomy Regulation (Article 5 TR) has amended the disclosure obligations for Article 9 products by requiring information about the environmental objective(s) to which the investments underlying the financial product contribute. Furthermore, it has to be described how and to what extent these investments are in economic activities that qualify as environmentally sustainable in line with the strict criteria of the TR. Similarly, the disclosure requirements of Article 8 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.

As the SFDR and TR regulations are closely interlinked, they have been combined in the amending RTS in a “single rulebook” (SFDR RTS) for sustainability-related disclosures in order to avoid inconsistencies or duplications. Therefore, the European Supervisory Authorities (ESA) have developed draft SFDR RTS that establish detailed requirements regarding the content, methodologies, metrics, indicators and reporting templates for both regulations. There are many communalities in terms of disclosure requirements between the two different types of sustainable financial products (Article 8, Article 9 SFDR), including information on the investment strategy, integration of ESG criteria, the planned asset allocation including the selection criteria applied and the consideration of principal adverse impacts of investment decisions on sustainability objectives.

Figure 2 illustrates the pre-contractual disclosure requirements for Article 9 SFDR (“dark green”) products in more detail. 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. Furthermore, the planned minimum investments in sustainable activities and certain KPIs such as the minimum ratio of taxonomy-aligned investments (including and excluding investments in sovereign issuers) have to be published. If a financial product pursues the reduction of CO<sub>2</sub> emissions, it has to be disclosed whether and how such emissions will be reduced in alignment with the Paris Agreement.

For both types of sustainable financial products, periodic reporting of ESG performance parameters is mandatory (§11 SFDR) and is closely aligned with the pre-contractual disclosure obligations. Periodic reporting is an important prerequisite for a fair pricing of ESG financial products. 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. 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 as well as information about the actual ESG performance indicators (taxonomy ratio, Green Asset Ratio). Other periodic reporting obligations for Article 9 SFDR products concern the contribution to taxonomy-based environmental ob-

Figure 2

**Pre-contractual disclosure for financial products referred to in Article 9 SFDR and Article 5 TR**

- 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
- Consideration of principal adverse impacts of investment decisions on sustainability objectives
- Information on planned asset allocation and the selection criteria applied
  - 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 turnover, capital expenditures and operating expenditures or corresponding KPIs for financial undertakings (e.g. Green Asset Ratio)
  - Calculation of KPIs with and without sovereign exposures
  - Information on minimum investments in “enabling” or “transitional” activities
- 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 CO<sub>2</sub> emissions is intended, information on whether and how these reductions contribute to the long-term reduction target of the Paris Agreement
- Declaration whether 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
- Information on external review/audit of compliance with taxonomy
- Compliance with OECD Guidelines for Multinational Enterprises, UN Guiding Principles on Business and Human Rights

Notes: DNSH: do no significant harm; KPIs: key performance indicators.

Source: Own illustration based on the Sustainable Finance Disclosure Regulation (SFDR), the Taxonomy Regulation (TR), the draft SFDR Regulatory Technical Standards (SFDR RTS).

jectives and the achievement of CO<sub>2</sub> reduction targets. Information about the purpose and proportion of investments with a social objective and the proportion of investments in enabling/transitional activities needs to be provided as well.

### Key performance indicators and Green Asset Ratio

In order to enable investors to evaluate the degree of sustainability of economic activities of large undertakings, the proportion of turnover, capital expenditures and operating expenditures have to be disclosed that are taxonomy-aligned, only taxonomy-eligible or not taxonomy-eligible (Article 8 TR, C(2021)4987). However, companies are expected to disclose not only the overall ratios, but also the allocation to the different sustainability objectives and the compliance with the DNSH criteria.

The calculation of corresponding KPIs for financial undertakings measuring the degree of taxonomy alignment of their activities depends on the respective business model

(e.g. asset managers, investment firms, credit institutions or insurance companies).

For credit institutions, the Green Asset Ratio (GAR) plays an important role, which reflects the proportion of taxonomy-aligned assets compared to the total assets covered. The GAR has to be calculated both using the proportion of taxonomy-aligned turnover and taxonomy-aligned capital expenditures of the underlying assets. The financial instruments considered include loans, advances, debt securities, equity instruments and certain off-balance sheet instruments.

Credit institutions are expected to periodically report not only the aggregated GAR, but also disaggregated figures differentiating between environmental objectives and types of counterparty. Similar KPIs have been established for asset management companies and other financial institutions. 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 1 January 2022, the remaining obligations



**Table 2**  
**Example of “green rating” of financial products**

Rating score	A	B	C	D	E
Taxonomy ratio	100% - 80%	79.9% - 60%	59.9% - 40%	39.9% - 20%	19.9% - 0%

Source: Own illustration.

for non-financial and financial undertakings will have to be applied successively until 1 January 2024.

The detailed disclosure obligations introduced by the SFDR in connection with the TR, the delegated acts and the RTS are certainly useful for supporting 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 make sense 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 based on the proportion of taxonomy-aligned turnover. Consequently, the “green rating” of financial products would improve with a higher taxonomy ratio and vice versa. Table 2 illustrates a simplified example with rating intervals of 20% mapped to five green scores from A to E.

## Conclusions

The European regulatory framework for Sustainable Finance 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 GAR are per se meaningful indicators, but so far financial market participants are only obliged to report these figures within the planned and realised asset allo-

cation. In order to provide stronger incentives to achieve a high taxonomy ratio, it should be discussed whether a minimum taxonomy ratio (e.g. 25% or even 50%) has to be achieved to market a financial product as “green”. A similar approach to “social” financial products could be taken 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 a target-oriented selection of sustainable financial products.

## References

- Berrou, R., P. Dessertine and M. Migliorelli (2019), An Overview of Green Finance, in M. Migliorelli and P. Dessertine (eds.), *The Rise of Green Finance in Europe*, Palgrave Studies in Impact Finance, Palgrave Macmillan.
- Brühl, V. (2021), Green Finance in Europe – Strategy, Regulation and Instruments, *Intereconomics*, 56(6), 323-330, <https://www.intereconomics.eu/contents/year/2021/number/6/article/green-finance-in-europe-strategy-regulation-and-instruments.html> (13 June 2022).
- Brühl, V. (2020), Mehr Nachhaltigkeit im deutschen Leitindex DAX, *Wirtschaftsdienst*, 100(12), 952-957, <https://www.wirtschaftsdienst.eu/inhalt/jahr/2020/heft/12/beitrag/mehr-nachhaltigkeit-im-deutschen-leitindex-dax.html> (13 June 2022).
- Deutsche Bundesbank (2021), Green Bond Monitor.
- European Commission (2021a, 6 July), Commission puts forward new strategy to make the EU's financial system more sustainable and proposes new European Green Bond Standard, Press release.
- European Commission (2021b), EU Sustainable Finance, April Package, Factsheet.
- European Commission (2019), The European Green Deal, COM/2019/640 final.
- European Commission (2018), Action Plan: Financing Sustainable Growth, COM/2018/097 final.
- European Commission (2017), *Defining “green” in the context of green finance – final report*, Publications Office of the European Union.
- Hong, H., A. Karolyi and J. A. Scheinkman (2020), Climate Finance, *The Review of Financial Studies*, 33(3), 1011-1023.